Ndwedwe Child Survival Project
KwaZulu Natal, South Africa

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Final Evaluation

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Report prepared
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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARI	Acute Respiratory Infection
ARV	Anti-Retroviral
BCC	Behavior Change Communication
CBO	Community-based Organization
CHC	Community Health Center
C/HH-IMCI	Community and Household Integrated Management of Childhood Illness
CHW	Community Health Worker
CSHGP	Child Survival and Health Grants Program
DHIS	District Health System Management Team
DOH	Department of Health
DOTS	Directly Observed Treatment Short-course
EPI	Expanded Program of Immunization
GIS	Geographic Information Systems
GPS	Geographic Positioning Systems
HBC	Home-based Care
HBCV	Home-based Care Volunteer
HIV	Human Immunodeficiency Virus
IEC	Information Education and Communication
IMCI	Integrated Management of Childhood Illness
IT	Information Technology
KPC	Knowledge, Practice and Coverage survey
KZN	KwaZulu Natal
LOE	Level of Effort
LQAS	Lot Quality Assurance Sampling
MCDI	Medical Care Development International
MNC	Maternal and Newborn Care
MOH	Ministry of Health
MPH	Master of Public Health
MTCT	Mother-to-Child Transmission (of HIV)
NAPWA	National Association of People living With AIDS
NCHS	National Center for Health Statistics
NDCSP	Ndwedwe District Child Survival Project
NGO	Non-governmental Organization
NITHAP	Ndwedwe Integrated Tuberculosis and HIV/AIDS Project
ORS	Oral Rehydration Solution
OVC	Orphans and Vulnerable Children
PEPFAR	President's Emergency Plan for AIDS Relief
PLWHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother-to-Child Transmission (of HIV)
PVO	Private Voluntary Organization
STI	Sexually Transmitted Infection

TB	Tuberculosis
TBA	Traditional Birth Attendant
TREE	Training and Resources in Early Education
TT	Tetanus Toxoid
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing
WHO	World Health Organization

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A. Summary

1. Program Description

Medical Care Development International (MCDI) implemented a four-year Child Survival project from October 2001 until November 2005 in partnership with the Department of Health and non-governmental organizations in Ndwedwe sub-district, Ilembe district, KwaZulu Natal province, South Africa. Ndwedwe is a predominantly Zulu-speaking rural and semi-rural area 1,200 square kilometers in size and situated 80 kilometers north of Durban. Despite this proximity to a major urban and economic center, the sub-district has remained substantially underdeveloped, disadvantaged and poor as a result of inequities established during the apartheid administration and the slow rate of reform since the political shift in 1994.

The sub-district is divided into 18 tribal or traditional authorities, each governed by a tribal leader and council. With a population density of 130 per square kilometer, communities are non-nucleated and widely dispersed over hilly terrain. According to the 2001 South African Census, the population of Ndwedwe was approximately 152,000, with 38,000 women of childbearing age (15-49) and 17,000 children less than five years of age.

The goal of the project was to reduce morbidity and mortality among children less than five years of age and to improve the health status of women of reproductive age. Project interventions included control of HIV/AIDS and other sexually transmitted infections, control of diarrheal diseases, pneumonia case management, complete immunization against major childhood illnesses, and maternal and newborn care. Levels of effort for each intervention were as follows:

Intervention	**Level of Effort**
Prevention of HIV/AIDS and other sexually transmitted infections	30%
Control of diarrheal diseases	20%
Pneumonia case management	20%
Immunization	15%
Maternal and newborn care	15%

2. Accomplishments and Outcome Highlights

Despite its small staff size, the project was able to enhance its reach and capacity by building good linkages with staff from government departments and non-governmental organizations. Together, the various project partners implemented a wide range of health promotion and training activities benefiting health care workers and several target populations, including mothers, caregivers, and youth.

Mothers' and caregivers' knowledge and practices related to the control of HIV/AIDS and diarrheal diseases, as well as maternal and newborn care, demonstrated the most notable improvements during the project period.

The project had a total of 21 objectives. In the final project assessment, five (24%) of the interventions had met or exceeded their objectives. An example worth highlighting is the increase in the level of oral rehydration therapy use in the project area for children who suffered from diarrhea in the two weeks preceding the survey; the rate increased from 74% at baseline to 94% at the final survey, surpassing the target of 90%.

A large proportion (8 or 38%) of the indicators showed substantial improvement over baseline percentages. Furthermore, there was significant progress in the 11 Rapid CATCH indicators applicable to this project, with 6 indicators (55%) showing improvement over baseline, including an increase of 24 percentage points in the proportion of mothers and caregivers with children 0-23 months who could cite at least two known ways of reducing the risk of HIV infection.

Two indicators related to knowledge of HIV/AIDS among high school students did not meet their objectives; however baseline data were not available for comparison. A quasi-experimental evaluation design conducted to compare results between project and comparison schools did not find statistically significant differences between the groups (report available upon request). These interventions were conducted by a local NGO, DramAidE, with support from Johns Hopkins University/PEPFAR.

Only two indicators showed declines: children aged 0-5 months who were exclusively breastfed during the past 24 hours (-6%) and children age 6-9 months who received breastmilk and complementary foods during the past 24 hours (-67%). However, due to the small sample size (n = 19) for the subset of children aged 6-9 months (the total sample taken was for children 0-59 months) as well as the high HIV status in the area factoring into infant feeding decisions, the results were not considered generalizable to the project area. Two project indicators – percentage of mothers and caregivers who sought care for a child with ARI symptoms within 12 hours and percentage of mothers who sought antenatal care in their first trimester – could not be assessed for improvement due to discrepancies in wording between the baseline and final questionnaires that were implemented as a result of changes in DOH policy.

A major accomplishment of this project was MCDI's integration of community IMCI (C/HH-IMCI) protocols into the rural communities of Ndwedwe. MCDI also continued promoting and supporting IMCI protocols in all Ndwedwe PHC health facilities. This was the result of a very successful partnership with the Department of Health to build capacity by increasing facility health worker knowledge and skills in IMCI protocols through training and supervision. MCDI also extended IMCI protocol knowledge to a supporting network of community health workers (CHWs) and home-based care volunteers (HBCVs) affiliated with each facility. This effort was the starting point for the Ilembe District's rolling out of IMCI protocols as policy.

The establishment of a model crèche caring for 122 orphans and other vulnerable children under age six was another accomplishment of the project. Services included early childhood education, a feeding program, health screening and treatment by a mobile health team, assisting mothers and caregivers to access different government grants, and three successful income-generating projects for caregivers and the crèche. This was a collaborative initiative with participation by MCDI, eKhaya Project, KZN Interfaith Forum, Training and Resources in Early Education

(TREE), National Association of People living With AIDS (NAPWA), Mavela Community Health Committee and Department of Social Welfare.

Several substantial side projects implemented by MCDI and partners included a campaign to promote Vitamin A, a campaign to introduce zinc therapy for childhood diarrhea, and a project to support people living with HIV and AIDS (PLWHA). The Vitamin A promotion project trained key community members in the importance of bringing young children to a facility for Vitamin A. The zinc therapy campaign included major advocacy efforts at the national and provincial levels to support policy adoption of complementary zinc therapy as a care protocol for childhood diarrhea. (See Attachment L for further details). MCDI, along with the National Association of People Living with AIDS (NAPWA) conducted a study on stigma and discrimination faced by PLWHA. Guided by study results, a project funded by Community REACH/Pact was implemented to reduce stigma and discrimination through support groups and communication efforts by community leaders. To date, more than 500 PLWHA in Ndwedwe regularly participate in such support groups.

Another important achievement of the NDCSP was its scaling up of HIV/AIDS care and support and TB control strategies, resulting in the project receiving funding from the office of Child Survival and Health Grants Program (CSHGP) for an additional program, the "Ndwedwe Integrated TB & HIV/AIDS Program (NITHAP)" with the specific goal of integrating HIV/AIDS and TB activities in Ndwedwe.

MCDI and its partners will continue many health interventions that have been initiated over the last four years in Ndwedwe. MCDI has initiated a child sponsorship program that provides over $8,000 per year towards the Mavela Crèche. This project also continues to receive support from the eKhaya Project. The Department of Health is very active and has the capacity to implement maternal and child health activities. DramAidE has been able to apply for funding to continue its peer education activities in Ndwedwe. NAPWA will continue working with PLWHA in Ndwedwe. Community health committees and other CBOs will be able to supervise CHWs and HBCVs and sustain most of the C/HH-IMCI interventions.

3. Conclusions

Project strengths

- Significant improvement in mothers' and caregivers' health knowledge and practices and overall improvement in many indicators from the baseline
- Wide variety of interventions aimed at several beneficiary groups
- Innovative and beneficial project off-shoots and studies including, inter alia, the establishment of a crèche for orphans and vulnerable children, a project to support PLWHA and reduce stigma and discrimination, a Vitamin A promotion project and a large scale campaign at the national and provincial levels to support the adoption of zinc therapy for childhood diarrhea.
- Good working relationships among staff and between staff and partner organizations

- Good potential for sustainability based on continued MOH support of all interventions

Weaknesses/ Areas requiring further attention

- HIV/AIDS knowledge and positive practices still low among mothers and caregivers
- Difficult to compare some final, Knowledge, Practice, and Coverage survey data with baseline survey data because of changes in survey questions
- Ongoing training required for health providers in IMCI to account for high staff turnover
- Need to focus efforts to investigate and address reasons behind the improved but still low levels of reported condom use

Recommendations

For MCDI

Seek opportunities to:

- Design and administer expanded child survival and reproductive health projects.
- Maintain relationships with area stakeholders to advise other non-governmental organizations with community-based child health projects and HIV/AIDS prevention interventions in the region.
- Assist the Provincial Department of Health with population-based assessments.
- Participate in partners' meetings sponsored by the United States Agency for International Development (USAID).
- Disseminate evaluation findings, lessons learned, success stories, and project briefs to partners such as the Provincial Department of Health and USAID (for inclusion in newsletters and web pages).

For Department of Health

- Continue training health care providers in IMCI.
- Increase training of physicians who service primary healthcare facilities in IMCI protocols for improved quality and consistency of care.
- Continue promotion of condom use, as well as abstinence and faithfulness, in collaboration with non-governmental organizations.
- Expand services provided at the Ndwedwe Community Health Center to include management of complicated deliveries.
- Utilize MCDI (through a contract or other mechanisms, i.e. UNICEF) to implement community and household IMCI activities in other subdistricts of Ilembe.
- Utilize MCDI's role as a catalyst to establish model crèches for OVCs in other areas in Ilembe District.

B. Assessment of Results and Project Impact

1. Summary Chart[1]

Indicator	Baseline value	Final value	Target
Prevention of HIV/AIDS and other sexually transmitted infections (level of effort 30%)			
Proportion of mothers and caregivers who can name three or more symptoms of sexually transmitted infections other than HIV/AIDS in females	32%	45%	65%
Proportion of mothers who recognize at least three known ways of mother-to-child transmission of HIV/AIDS.	54%	78%	90%
Proportion of mothers and caregivers who state they are willing to allow a child under their care to play with an HIV-positive child	68%	76%	90%
Proportion of mothers who report use of a condom during last act of intercourse	30%	48%	50%
Proportion of health facilities in the project area that provide prenatal screening and counseling for HIV/AIDS and other sexually transmitted infections.	50%	87.5%	100%
Proportion of students in high schools -- in which school health clubs are active -- who have adequate knowledge of HIV/AIDS prevention as demonstrated by their ability to name at least two strategies of prevention	(Non-KPC indicator)	68%	85%
Proportion of students in high schools -- in which school health clubs are active -- who are willing to care for a family member if s/he had AIDS	(Non-KPC indicator)	73%	90%
Proportion of facilities that provide Nevirapine to AIDS-affected mothers according to protocols	10%	88%	50%
Control of diarrheal diseases (level of effort 20%)			
Proportion of mothers and caregivers who report they gave oral rehydration therapy during their child's diarrhea episode (in the last two weeks)	69%	94%	90%
Proportion of mothers and caregivers who report they gave the same or more than usual amount of liquids during their child's diarrhea episode (in the last two weeks)	53%[2]	68%	85%

[1] Baseline numbers cited in this report are based on the Baseline KPC survey conducted in 2001 (see Attachment G). Some of these values differ from those cited in the 2002 Detailed Implementation Plan (DIP), as that document chose to report data from a larger demographic group, that of mothers and caregivers of children 0-60 months of age; the Baseline KPC survey reports data from mothers and caregivers of children 0-23 months of age as recommended by the Child Survival and Health Grants Program. The DIP chose to focus on this larger age group given the local context of an enormous AIDS Orphan problem which affects a larger age range of children.

Indicator	Baseline value	Final value	Target
Proportion of mothers and caregivers who report hand washing before feeding children	9%	30%	50%
Pneumonia case management (level of effort 20%)			
Integrated management of childhood illness protocols for pneumonia diagnosis and treatment will be correctly used in all program clinics	25%	100%	100%
Immunization (level of effort 15%)			
Proportion of children aged 12-23 months whose Road to Health charts indicate that they are immunized against measles (denominator includes all children in the age group)	42%	56%	80%
Proportion of children aged 12-23 months whose Road to Health charts indicate that they are immunized against measles (denominator includes only those children whose charts were available for examination by survey team)	61%	89%	
Proportion of children aged 12-23 months whose Road to Health charts indicate that they are fully immunized (denominator includes all children in the age group)	35%	53%	70%
Proportion of children aged 12-23 months whose Road to Health charts indicate that they are fully immunized (denominator includes only those children whose charts were available for examination by survey team)	51%	84%	
Maternal and newborn care (level of effort 15%)			
Proportion of mothers and caregivers who can name two or more of the danger signs in newborns that require immediate treatment	41%	79%	60%

Source: Baseline and final Knowledge, Practice, and Coverage surveys

Rapid CATCH Findings: Baseline to Final Comparison

Indicator	Baseline KPC Percent	Final KPC Percent	Increase/ decrease from baseline
Measure of child health and well-being			
% of children aged 0-23 months who are underweight (-2SD from the median weight-for-age, according to the WHO/NCHS reference population)	N/A	2.5%	Indicator is taken from DHIS 2004 data as the NDCSP had no nutrition or growth monitoring component.
Prevention of Illness/Death			

[2] This value differs from the Baseline KPC survey value of 66%, because a decision was made to exclude exclusively breastfed children (3) from the denominator.

Indicator	Baseline KPC Percent	Final KPC Percent	Increase/ decrease from baseline
% of children aged 0-23 months born at least 24 months after the previous surviving child	N/A	39%	N/A
% of children aged 0-23 months whose births were attended by skilled health personnel	87%	97%	+10%
Analyzed for children 0-59 months of age	86%	95%	+9%
% of mothers with children age 0-23 months who received at least two tetanus toxoid (TT) injections before the birth of their youngest child	89% (based on one or more shots)	89%[3] (based on one or more shots)	No change
% of children aged 0-5 months who were exclusively breastfed during the last 24 hours	38%	32%	- 6%
% of children aged 6-9 months who received breast-milk and complementary foods during the last 24 hours	81%	14%	-67%[4]
% of children aged 12-23 months who are fully vaccinated before the first birthday.	51%	84%	+33%
% of children aged 12-23 months who received a measles vaccine	61%	89%	+28%
% of children aged 0-23 months who slept under an insecticide-treated net the previous night		N/A	
% of mothers/caregivers with children aged 0-23 months who cite at least two known ways of reducing the risk of HIV infection	68%	92%	+24%
Analyzed for children 0-59 months of age	63%	88%	+25%
% of mothers/caregivers with children aged 0-23 months who report that they wash their hands with soap/ash before food preparation, before feeding, after defecation, and after attending to a child who has defecated	5%	8%	+3%
Management/Treatment of Illness			
% of mothers/caregivers of children aged 0-23 months who know at least two signs of childhood illness that indicate the need for treatment.	71%	77%	+6%
% of sick children aged 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	1% food + fluid	26% fluid - 28% food	Comparable data not available.

[3] For purposes of comparison to the baseline, mothers who received one or more shots were selected as the indicator, though the final survey questionnaire asked about those mothers who received two or more shots.
[4] Due to the small sample size of children 6-9 months of age (n=19), this result is not generalizable to the project population

2. Technical approach

a) Project Overview

The four-year project was initiated in October 2001 in Ndwedwe sub-district, Ilembe district, KwaZulu-Natal province, South Africa. This project followed two previous MCDI-implemented Child Survival projects in Ndwedwe (implemented over a six-year period from October 1995 to September 2001) and included additional communities (living in the catchment areas of three clinics and one hospital to the north of the area of the second project). During this period, NDCSP continued the majority of its planned activities initiated during the previous project in the Ndwedwe subdistrict. However, the program also augmented its capacity building initiatives at the level of the Ilembe District Department of Health (DOH). The appointment of, for the first time, a District Program Manager stimulated collaboration with the District Office.

The breakdown of the beneficiary population is as follows:

Women of reproductive age (15-49)	38,000
Children under five	17,000
Total population of Ndwedwe sub-district	152,000

Source: Statistics South Africa – 2001 Census

The goal of the project was to reduce morbidity and mortality among children less than five years of age (see Table 1 below) and to improve the health status of women of reproductive age. Project interventions included control of HIV/AIDS and other sexually transmitted infections, control of diarrheal diseases, complete immunization against major childhood illnesses, pneumonia case management, and maternal and newborn care.

Table 1. Mortality indicators for children under five in KwaZulu Natal and South Africa per thousand live births

	Neonatal mortality	Infant mortality	Under-five mortality
KwaZulu Natal	23	52	74
South Africa	20	45	59

Source: South Africa DHS 1998.

Project objectives were:

- To reduce transmission of HIV and other sexually transmitted diseases by increasing awareness among mothers, caregivers, and high school students of symptoms and modes of transmission of HIV, and promoting the adoption of preventive practices such as condom use;

- To reduce diarrhea morbidity and mortality by promoting use of oral rehydration therapy, appropriate and timely care-seeking, and effective home care including increasing food and fluids and practicing proper hygiene such as regular hand washing;

- To improve pneumonia case management through correct use of IMCI protocols in clinics and promoting early care-seeking for pneumonia by mothers and other caregivers;

- To ensure that children are vaccinated against major vaccine-preventable diseases;

- To improve maternal and neonatal care by ensuring care-seeking by women during the antenatal period and increasing mothers' knowledge of danger signs in newborns that require immediate treatment.

Project strategies included (see Attachment M: NDCSP Training Table):

- Strengthening of the District Health System Management Team through training in IMCI protocols and supervisory skills as well as training in health information and data management systems and software such as Epi-Info and DHIS (127 CHC members trained on organizational capacity, 12 District Office and facility nurses trained on HIS/DHIS, 15 pharmacy nurses trained on IMCI drug logistics).

- Facility-based training in maternal care and HIV/AIDS counseling skills (40 facility-based staff and 55 lay counselors trained)

- Training on Vitamin A protocol (15 HIV/AIDS counselors & support group facilitators, 22 CHC members, 11 community health facilitators, 25 crèche managers, 48 nurses and 143 CHWs, HBCVs and TBAs trained)

- Implementation of IMCI protocols (including an MNC component) both in health facilities and at the community level (C/HH-IMCI) through the training of health facility workers, community health workers (CHWs), community health committees (CHCs), HBCVs, traditional birth attendants (TBAs) and traditional healers. (191 TBAs, HBCVs, CHW, CHC members and traditional healers trained on C/HH-IMCI and IMCI, 14 nurses trained on IMCI)

- Training CHWs, CHCs, HBCVs and TBAs on EPI within the framework of the 16 Key Family Practices, as well as supporting the DOH with its EPI in-service training

- Behavior change activities (based on the BEHAVE framework) directed at mothers and other caregivers

- Promotion of appropriate care-seeking by mothers and caregivers for all children under five through improved recognition of signs of illness that require urgent care at a health facility

- Working with partner organizations to establish school youth clubs, clubs for out-of-school youth, and peer education activities in primary schools focusing on HIV/AIDS prevention

- Conducting life-skills training in schools (300 students trained)

- Training traditional healers on HIV/AIDS/STIs (45 traditional healers trained)
- Training of HBCVs on the DOTS protocol (42 HBCVs trained)
- Development of orphan registers
- Training HBCVs, TBAs, CHWs, CHC members, traditional healers and HIV/AIDS counselors in accessing OVC and government grants (254 people trained)
- Assisting in the establishment of a community crèche to support orphans and vulnerable children

Evaluation methodology

The evaluation team consisted of Martha Benezet, Zanele Buthelezi, Farshid Meidany, Zandile Myeza, Thuli Ngidi, Janine Thatcher (MCDI), Janet Dalton, Sibongile Dube, Sandra Moodley (Department of Health), and Karunesh Tuli (Consultant). During a meeting at the Ilembe district Department of Health office in Stanger, Sibongile Dube, Farshid Meidany, Sandra Moodley, and Karunesh Tuli developed a list of potential respondents who could provide answers to the team's evaluation questions. This list was edited in a subsequent meeting with MCDI staff. During a meeting with Janet Dalton, Martha Benezet summarized the findings of the final Knowledge, Practice, and Coverage survey that was conducted in September 2005. Farshid Meidany provided an overview of the project to the consultant in a separate series of meetings. Evaluation team members conducted group discussions in Ndwedwe with mothers, volunteers, community health committee members, and community health workers. They also interviewed representatives of partner organizations (including the Department of Health). The consultant also met individually with project staff members to learn about their work and ask evaluation questions.

Farshid Meidany and the consultant conducted a debriefing session for the United States Agency for International Development (USAID) South Africa in Pretoria, and the consultant provided an update on project staff on December 1st.

Final KPC Sampling Design

Standard cluster sampling design was used to randomly select 300 households, each with at least one child in the identified age group of 0-59 months (only the youngest child in this category was used as the focus of survey questions). As with the baseline KPC, data were collected on children under 60 months of age rather than just those under 24 months. This was meant to provide a broader view of the impact of the HIV/AIDS crisis on child health, of particular interest in assessing the effect of changing care structures for young children, many of whom have lost one or more parents to AIDS and are then raised by non-parental caregivers.

Interviews for the 2005 KPC took place at 10 households in each of 30 clusters, representing a range of tribal authorities and population densities for a total of 300 households. All were selected using systematic random sampling methodology.

b) Progress Report by Intervention Area

- ***HIV/AIDS and Other Sexually Transmitted Infections***

Project Outcomes
Although the DIP had allocated a level of effort (LOE) of only 30% for this component, due to the magnitude of the HIV/AIDS epidemic in South Africa in general and in KwaZulu Natal in particular, a much larger LOE was actually dedicated to this component. MCDI attempted to ensure other sources of funding to cover the increased expense. These resources included: Community REACH/Pact funds to fight stigma and discrimination and PEPFAR/Johns Hopkins University funding for a youth VCT project.

In the area of HIV/AIDS, STIs and TB, NDCSP continued working with the health facilities and the Ilembe District Office to strengthen program management approaches and assist the DOH in setting up a supervisory system for HBCV and DOTS. Faith-based organizations of the Mavela/Ndwedwe Mission and Nuyswa areas collaborated regularly with MCDI in activities targeted at reducing HIV/AIDS stigma and discrimination. MCDI has also been very successful in improving the physical condition of the Mavela OVC Crèche facility through resources such as individual donors and churches. In addition, MCDI increased access to government grants for the OVCs and their families with assistance from the Department of Social Welfare.

The project has also made progress in providing counseling skills and supervision of health facility nurses and lay personnel from both the Department of Health (DOH) and the community in support of the DOH strategy to provide VCT and PMTCT services in the District, building the capacity of CBOs and CHCs to institute income generation programs, establish youth health clubs and enhance peer education programs. MCDI has also been involved in activities targeting reduction of stigma and discrimination as well as legal and human rights issues among PLWHA through establishing, strengthening, training and supervision of PLWHA support groups.

As compared to the baseline level, at project-end mothers and caregivers were more knowledgeable about symptoms of sexually transmitted diseases. In the final survey, nearly half could name at least three symptoms of such infections in females (other than HIV/AIDS). There was also greater comprehension of the modes of transmission of HIV from mother to child (see "Summary Chart") including breastfeeding. A qualitative survey performed by MCDI as part of the final evaluation indicated that a large majority of mothers knew that HIV-positive mothers should breastfeed exclusively for six months and then stop (a recommendation included in IMCI protocols). Whether this is widely practiced in the project area is not clear. The most recent Demographic and Health Survey (conducted in 1998) indicated that exclusive breastfeeding rates were very low in South Africa, and due to confidentiality laws, the HIV status of the mothers surveyed by MCDI was not known.

More mothers and caregivers knew at least two ways to reduce the risk of HIV infection (92% at the final survey compared to 68% at baseline). A greater proportion were also willing to let a child in their care play with a child known to be HIV-positive, to let the child go to a school that had an HIV-positive teacher, and to care for a family member with AIDS. A higher proportion of mothers reported using a condom during the last act of sexual intercourse in the final survey.

An assessment of health facilities conducted in 2005 (at the six clinics, one community health center and one hospital in the sub-district) found that all but one facility provided HIV counseling and testing (the one exception, Mwolokholo, provides antenatal care but does not provide PMTCT services).

A VCT education program was introduced through a peer education model into the Ndwedwe area secondary schools over the last two years. The project conducted a quasi-experimental study to examine differences between schools in the area that were exposed to the program (Group A), and those that were not (Group B).

Several points stand out and in themselves serve as recommendations:

- For most of the issues, there was not a large difference in knowledge, beliefs and attitudes between group A and group B.
- In general, in-depth knowledge of HIV and AIDS in both groups was above 60%.
- Over 50% of respondents reported that they had never had sex.
- Few respondents said they had been tested for the disease, many wished to be tested, over 50% knew about a VCT program and 84% would encourage their family and friends to be tested.
- Knowledge of which organizations run VCT programs was low.
- All respondents felt strongly that people with HIV/AIDS should be treated like everybody else or offered sympathy and support.
- Confidence about one's ability to control sexual behaviors was high.
- 85% of group A and 74% of group B believed that a person's HIV status should be disclosed to others
- Over 82% of respondents in both groups reported that the messages they had heard and seen about HIV/AIDS made them change some of their behaviors.
- Respondents often chose not to answer probing questions about condom use and sexual partners.
- Knowledge of where to get condoms was high in both groups.
- 80% agreed that condoms were the best protection against HIV/AIDS and other diseases.

Although use of a quasi-experimental design limits the validity of study findings, the apparent lack of progress in the intervention group compared to the control group merits further research into what factors may have contributed to these outcomes.

Tuberculosis

With one of the highest TB rates in the world, South Africa is a WHO TB hot spot. The number of people infected with or affected by TB is increasing due to the continuing rise in the number of immuno-suppressed people with HIV/AIDS. MCDI is implementing an additional child survival project – the Ndwedwe Integrated TB and HIV/AIDS project – over the next three years with the goal of increasing correct diagnosis, treatment and patient adherence to treatment through DOTS support throughout Ndwedwe.

Orphans and Vulnerable Children

In response to the growing problem of orphans and vulnerable children accelerated by the AIDS crisis, MCDI assisted in the establishment of a model crèche that provided daytime care and support for orphans and vulnerable children (OVCs). The crèche was organized in 2002, in conjunction with local partners in the sub-district of Ndwedwe, as a complementary intervention to the USAID-funded Ndwedwe Child Survival Project.

Activities of the crèche are very comprehensive and include care and support to 120 OVCs through education, childcare, healthcare, feeding, income-generation activities, and help in accessing childcare and educational grants. In addition, the crèche provides financial assistance for schooling to child heads of the 22 child-headed households participating in the program. By caring for all OVCs at the Mavela crèche, AIDS orphans are not singled out and one potential source of stigma is minimized as a result. In addition, by providing care for OVCs on a daytime rather than residential basis, it allows them to remain active in their communities, retain their culture, and does not single them out by placing all OVCs together in an institutional setting. Furthermore, the crèche provides the necessary support to caregivers while allowing children to stay in their communities (they only come to the crèche during the day). As part of the OVC initiative, MCDI trained CHWs, HBCVs and CHCs to gather information on orphans and enter it into a register maintained by MCDI.

The crèche is staffed by low-paid volunteer teachers and community workers, and is currently the only one in the sub-district of Ndwedwe that supports OVCs (Currently there are at least ten functional crèches in Ndwedwe). Crèche workers at Mavela have been trained to provide care for children affected by AIDS, and community health care workers have been trained to maintain orphan registers, monitor the condition of OVCs, and utilize a community-based health information system. Liaison with the Department of Social Welfare enables OVCs to access foster care grants, and allows for monitoring the condition of OVCs independently. This first model crèche is supported by the DOH local clinic and mobile team and receives financial support from MCDI's current Child Sponsorship Program.

Concerns:

- **Underreporting of condom use**

During the final KPC survey, 48% of respondents reported using condoms during their most recent act of sexual intercourse, increasing significantly from the baseline proportion of 30%, but remaining just shy of the objective of 50%. However, in interviews with the final evaluation team, Department of Health staff believed that the rate of condom use may have been underreported, due to social desirability bias resulting from a reluctance to admit to using condoms. In this culture, married women do not routinely use condoms with their husbands or are unwilling to admit to a stranger that they do use condoms as it implies a lack of trust in marital fidelity. Thus condom use may be higher than reported, meeting or exceeding the objective.

In a similar manner, the fact that survey enumerators were all under the age of 25 and two were male may have also resulted in bias due to discomfort in answering personal questions of a sexual nature. Sex is rarely discussed openly in this culture, especially with young people and in

mixed company. However, in spite of this, there were comparatively few "don't know" or "refuse to answer" responses, perhaps indicating a greater willingness to talk about sex-related matters in light of the spiraling HIV/AIDS crisis in these communities.

However, there are plausible explanations for a low actual level of coverage, including that a woman in this culture may have little or no influence on her partner agreeing to use a condom. Men often refuse to use either a male or a female condom, and women are often reluctant to press the point due to fears of abuse as well as concerns over loss of emotional support and economic and social status if the marriage fails (a married woman is regarded as a "real" woman in Zulu culture). Influencing these attitudes was beyond the scope of the project.

In addition, there is awareness that the government's provision of child support grants is inducing some women, especially teenagers and younger women, to conceive and bear children in order to receive grants, even at the risk of contracting sexually transmitted diseases by not using condoms.

Future Activities: MCDI has been implementing the Integrated Tuberculosis, HIV, and AIDS Program in Ndwedwe since 2004. Volunteers who were trained to provide home-based care to people with HIV through the Ndwedwe Child Survival Project continue to offer their services in the current program and will also assist with community-based directly observed tuberculosis treatment. MCDI is actively training and supervising these volunteers, providing needed ongoing support.

- ***Control of Diarrheal Disease and Pneumonia Case Management***

Project Outcomes

The IMCI approach, with emphasis on Community and Household IMCI (C/HH-IMCI), was the main NDCSP strategy for strengthening child health in the project area. This included establishing and strengthening supervisory systems to support clinical case management of diarrheal diseases and pneumonia through the training of HBCVs, CHWs, traditional healers and other community workers in community Key Family Practices. The two interventions were implemented in accordance with IMCI protocols at the facility and community level. MCDI was able to secure additional funding from the USAID MOST Project for some of the activities related to advocacy for the implementation of zinc therapy supplements to treat diarrhea. Both the National and KZN Departments of Health were targets of this advocacy.

As shown in the Summary Chart, use of oral rehydration therapy for diarrhea improved markedly from the baseline level, from 69% to 94% (exceeding the 90% project objective). The protocol used by the KwaZulu Natal Department of Health is to teach mothers and caregivers how to make a sugar-salt solution to give the child with diarrhea at home and to provide oral rehydration sachets only when the child has been diagnosed with dehydration. Therefore the majority (69%) gave the child sugar-salt solution as oral rehydration therapy (see Table 2 below). Encouragingly, only 11% of respondents had given their child traditional medicine, and in some of those cases it may have been given in conjunction with oral rehydration solution.

Table 2: Home care for children with diarrhea provided by mother or caregiver during two weeks prior to survey interview

(N = 55 for mothers, 26 for caregivers, 81 total)

Given to treat diarrhea at home	Mother (%)	Caregiver (%)	Total	Percent
Nothing	**2 (4%)**	**1 (4%)**	**3**	**4%**
ORS	**8 (15%)**	**12 (46%)**	**20**	**25%**
Sugar-salt solution	**43 (78%)**	**13 (50%)**	**56**	**69%**
Antibiotic	**3 (5%)**	**2 (8%)**	**5**	**6%**
Traditional medicine	**7 (13%)**	**2 (8%)**	**9**	**11%**
Other	**2 (4%)**	**2 (8%)**	**4**	**5%**
Don't know	**0 (0%)**	**0 (0%)**	**0**	**0%**

Source: MCDI 2005 KPC

There was also a significant increase in the amount of food and fluids provided to children with diarrhea. Only 27% of the respondents gave the child less fluid, a reduction of 8% from 35% at baseline, and only 28% gave less food, down significantly from 45% at baseline. Nevertheless, these percentages are still unacceptably high and justify continued attention to improving knowledge and practice of child diarrhea care. (Note that exclusively breastfed children were not included in calculating the value of the indicator for the amount of fluid and food given during diarrhea episodes, as breastmilk was not considered a fluid or food in this context).

The 2005 health facility assessment found that all sub-district health facilities had at least one health provider trained in IMCI, provided appropriate care based on recommended protocols both for diarrhea and pneumonia in children, and were well stocked with medicines required for case management.

Concerns

During discussions with the final evaluation team, the Ndwedwe Community Health Center described high staff turnover rates. It is imperative, therefore, that new health care providers be appropriately trained to ensure that children coming to health facilities continue to receive integrated case management.

In one case, the evaluation team observed Center staff members as they managed a child who had a cough and rash. The nurse followed case management protocols as she assessed and

classified the child's illness and took the child to the physician. The physician, who had not been trained in IMCI, diagnosed an upper respiratory infection but prescribed an antibiotic (in addition to treatment for eczema), which is not within IMCI protocols. Training of physicians in IMCI is likely to reduce such unnecessary antibiotic use and improve the quality and consistency of child care.

There was a threefold increase from baseline survey to final survey in the proportion of mothers and caregivers who reported hand washing before feeding children. Nevertheless, the proportion was still low (30%) at project-end. During discussions in 2002, many mothers said they would use soap only if their hands were visibly dirty. While project activities in Ndwedwe, including the training of community health workers and health facility workers in all Ndwedwe facilities in hand washing protocols and the dissemination of BCC messages, along with province-wide educational efforts following the 2001-2002 cholera epidemic have helped, further work to promote hand washing is needed. Additional effort must be made by the Department of Health and future projects to mount a behavior-change campaign and to train facility and community health workers in teaching mothers and caregivers when and how to wash their hands to prevent child diarrhea. This should also emphasize that ash can be used as a cleaning agent if clean water is not available, as is the case for some Ndwedwe households.

The baseline survey indicator for care-seeking for ARI/pneumonia was based on a series of questions directed at mothers whose children had a cough and rapid breathing. During the final survey, however, changes in the questionnaire resulted in an indicator based on data obtained from mothers whose children had a cough (whether or not it was accompanied by rapid breathing). Therefore, the two indicators could not be compared. However, it can be noted that the final KPC survey found that 82% of mothers of children aged 0-23 months who experienced a cough within the two weeks preceding the survey sought out treatment at a health facility.

Future Activities: MCDI staff members are committed to using the IMCI approach in Ndwedwe and are incorporating the approach in training and community-based work in the current health project (the Ndwedwe Integrated Tuberculosis, HIV, and AIDS Program).

- ***Immunization***

Project Outcomes

As shown in the Summary Chart, there were significant gains in vaccine coverage during the project period. MCDI was able to secure additional funding for some of the activities related to Vitamin A supplementation from USAID's MOST Project.

The 2005 health facility assessment found that Road to Health charts (which are used to record vaccines given to a child and to monitor growth) were available at all but one health facility in the sub-district. Vaccine stocks were adequate at all of the facilities.

Concerns

During the baseline survey, interviewers were not able to examine Road to Health charts for 19 of 62 children aged 12-23 months (31%). The final survey team was unable to look at charts for 33 of 90 children (37%). As the recommended denominator for vaccine coverage indicators was *all* children in the age group, and the numerator could include only those children whose charts showed that the appropriate vaccines were given, coverage indicators remained low (53% in the final survey; 35% at baseline). Survey team members said some children probably did not have charts. However, they believed that in many cases children did have charts but respondents did not have access to them at the time of the interview. This problem, however, was somewhat mitigated in the report by presenting an additional indicator: children whose charts showed that the appropriate vaccines were given, out of the population of children whose charts were accessible at the time of the interview (51% at baseline, 84% in the final survey).

Future Activities: As described in the section "Control of Diarrheal Disease and Pneumonia Case Management" above, MCDI staff members are utilizing the IMCI approach in the current health project (NITHAP); immunization activities are an important part of the approach.

- ***Maternal and Newborn Care***

Project Outcomes

The proportion of mothers and caregivers who knew about danger signs in newborns that require immediate treatment almost doubled from baseline survey to final survey (see "Summary Chart"). This success may be due to widespread dissemination of maternal and newborn care (MNC) messages through C/HH-IMCI training of HBCVs, CHWs and other community members, in addition to health facility training in IMCI (which includes an MNC component).

There was also an increase from 87% to 97% (see "Rapid CATCH Findings" chart, pp 7-8) of mothers who sought a nurse or doctor to deliver the child, and as shown in Table 3 below, 88% sought out a nurse or doctor for prenatal care (not comparable to baseline).

Table 3: Prenatal care sought by mothers
(N= 212)

	Seen for prenatal care	
	Number	Percentage
No one	13	(6%)
Health professional		
Doctor	47	(22%)
Nurse	140	(66%)
Traditional birth attendant	1	(1%)
Community health worker	1	(1%)
Traditional healer	9	(4%)
Total	**212**	**(100%)**

Source: MCDI 2005 KPC

Concerns

The Ndwedwe Community Health Center has a nurse who is qualified to manage complicated deliveries. However, she has been assigned to a mobile clinic team. Women who develop complications during labor are referred to other facilities, the nearest of which is 45 minutes away assuming no delays in transport, which are common.

Definitions of the indicators for antenatal care differed between the baseline and final surveys. While the baseline survey asked women how many times they saw someone for care during pregnancy (76%), the final survey asked women how many times they saw someone for care *during the last three months of pregnancy* (88%). This change in wording made it impossible to make an accurate comparison with regard to this indicator between baseline and final surveys; however the change in these two indicators appears to show progress towards the goal of increasing the proportion of pregnant women who seek antenatal care.

Additional information on antenatal care was available in the form of an indicator on coverage with at least one injection of tetanus toxoid during pregnancy as reported by mothers (89% at baseline and 89% at project-end). Measured in the final survey only, 58% of mothers remembered receiving at least two tetanus toxoid injections while pregnant.

Future Activities: The explosive increase in HIV prevalence in the country has made prevention of HIV transmission a priority in maternal and newborn care. This is especially important in KwaZulu Natal, where the prevalence figure among women of child-bearing age attending public health facilities has increased to 40% and the incidence rate has grown the fastest of any population group.

MCDI's ongoing Ndwedwe Integrated Tuberculosis, HIV and AIDS Project (NITHAP) is strengthening services for prevention of HIV transmission from mother to child. Project activities include training medical and nursing staff, promoting voluntary counseling and testing early on during pregnancy, and matching pregnant women with birth companions (traditional birth attendants or family members) to ensure that women take nevirapine at the appropriate time as needed. The project also trains community health workers to provide pre- and post-delivery counseling on breastfeeding and other means of reducing transmission of the virus.

c) Special Features

In 2003, project staff, with support from the National Association of People Living with AIDS, conducted a study of the extent to which people with HIV/AIDS face stigma and discrimination in Ndwedwe. Study team members interviewed 279 individuals infected or affected by HIV (of whom 83 were self-declared as HIV-positive). Stigma and discrimination were found to be common. Respondents identified family and community members as the major perpetrators. Project staff used study findings in designing activities (with funding from Community REACH/Pact) to reduce stigma and discrimination, such as the formation of support groups for people living with HIV and AIDS (to carry out advocacy work against stigma and discrimination and strengthen coping mechanisms among victims). Study details are presented in Attachment E. The results were subsequently used as input to the design of IEC materials, and project

HIV/AIDS education and training efforts in this and other MCDI projects have incorporated the issue of stigma into the curriculum.

In 2004, a group of MPH graduate students from Harvard University undertook a two-month internship with MCDI in South Africa. This group conducted an in-depth qualitative study on HIV/AIDS stigma and discrimination, using focus group interviews. This study was used to answer specific questions that were raised after MCDI's quantitative survey. Results of this study were used to increase the effectiveness of HIV/AIDS support group activities in Ndwedwe and to better address stigma and discrimination (See Attachment K).

In 2003-2004, NDCSP received a master's student of Development Studies from Oxford University, Mark Krenkauer, whose theses research was on "Churches' Response to HIV/AIDS in Two communities in KZN, South Africa". MCDI assisted him in contacting religious leaders in Ndwedwe (This report is available upon request).

In 2004, another Harvard master's student, Eliza Petrow, undertook a two-month internship with MCDI. She was requested to evaluate MCDI's OVC activities. MCDI and its partners are using her recommendations to improve the living conditions of OVCs in the project area (This report is available upon request).

The project also funded DramAidE, a University of Zululand-based NGO, to implement HIV/AIDS peer education activities using drama and arts. MCDI was later able to secure additional funding from the Johns Hopkins University/PEPFAR for DramAidE to establish eight clubs for in-school youth and two clubs for out-of-school youth to encourage youth in Ndwedwe to use voluntary counseling and testing services. A report describing a knowledge, attitude, practice, and behavior study conducted among school youth in Ndwedwe in 2005 is available upon request.

3. Cross-cutting Approaches

a) Community Mobilization

Project partners mobilized communities through a wide range of initiatives. They helped communities in the formation of community health committees, trained them in committee work, and supported their health, child care, and income generation activities. They trained youth in and out of school in drama, staged plays, and organized events to build awareness about HIV prevention. They trained volunteers to provide home-based care to HIV-infected people. They organized support groups and worked with religious leaders to tackle the stigma and discrimination that HIV-infected people face. MCDI also utilized community radio programs for broadcasting messages on community and household management of childhood illness, HIV/AIDS, and tuberculosis. In meetings with the final evaluation team, volunteers and members of the various groups described their commitment to continue their activities in Ndwedwe through the Integrated Tuberculosis, HIV, and AIDS Program.

b) Communication for Behavior Change

The project employed many methods to promote positive health behaviors among community members. Support groups and youth groups afforded project partners the opportunity to deliver health messages in a group setting. Health care providers in facilities educated and counseled mothers and other community members on a one-to-one basis. The project reinforced messages through radio broadcasts on health topics.

The diverse and mutually complementary communication techniques resulted in improvement in mothers' and caregivers' health knowledge and practices (see "Summary Chart" in the section "Assessment of Results and Project Impact" above). A striking example is the 94% oral rehydration therapy use level in the project area for children with diarrhea (the objective was 90%; the baseline level was 74%). Some results, however, such as hand washing behaviors and increasing fluids to children with diarrhea, fell short of expected goals; BCC messages and techniques in these areas should be revisited.

c) Capacity Building Approach

Project Outcomes

The project has improved capacity to deliver health care services and promotional interventions at the community level and among staff at health facilities and partner non-governmental organizations. For example, MCDI assisted DramAidE to apply for funding to continue its peer education activities in Ndwedwe. MCDI has assisted several community based organizations (CBOs) to register as not-for-profit organizations with the Department of Social Development in order to apply directly for government funding. MCDI also helped NAPWA's Provincial Manager and Financial Manager receive training in bookkeeping and financial management.

The largest gains in capacity have occurred at the Ilembe district Department of Health office. This office has replaced a fragmented, dispersed, and sometimes ineffective district health bureaucracy and currently oversees a wide variety of health functions (ranging from ambulance services to vaccination) in clinics and other facilities throughout the district. During discussions with the final evaluation team, district officials highlighted the exemplary performance of Ndwedwe sub-district health facilities and expressed their desire to improve services in the other sub-districts in Ilembe to the same level. The Ilembe District Health Office has now absorbed MCDI's IMCI and Home-based Care Coordinator, who was a former employee of the DOH. She gained valuable public health experience while working with MCDI, especially in C/HH-IMCI and supervision of HBCVs. She is now a valuable resource for the district to lead the community and household component of IMCI as well as HBC supervision.

Concerns

There is a need for a non-governmental organization to continue community-based work in the project area. The Department of Health team in Ilembe district is focused on health service delivery through facilities and will continue to depend on a non-governmental organization for community-based health interventions. The Valley Trust has been managing the community

health worker program in KwaZulu Natal province. In the future, the Valley Trust will not directly manage the program but will be asked by the Department of Health to play a mentoring role; program management will be carried out by a local non-governmental organization in each district. MCDI should seek opportunities to advise the non-governmental organization that will be identified to manage the program in Ilembe district. In addition to implementing the Integrated Tuberculosis, HIV, and AIDS Program, MCDI should explore donor funding to support continued work in maternal and child health in Ilembe, and also pursue contractual work with the Department of Health.

d) Sustainability Strategy

Project partners, including community-based volunteers and groups and the Department of Health, are likely to continue many health interventions that have been initiated over the last four years in Ndwedwe. As mentioned in the section "Community Mobilization" above, community health committees, youth groups, and volunteers who provide home-based care to HIV-positive people are committed to continuing their work in the future.

Some of the non-governmental organization partners have already identified funding for project-related interventions and others are seeking financial support to continue their work. The eKhaya project, for example, will continue to support the crèche in Mavela; the crèche looks after orphans and other children from neighboring communities and also serves as the center for community income generation activities such as beadwork. Sinosizo, the Catholic organization that helped train volunteers who provide home-based care to HIV-positive people in the project area, charges fees for its training programs and also receives funds from donors to support its HIV prevention activities. DramAidE has been able to access funding from PEPFAR through the Johns Hopkins University to work with youth in Ndwedwe. The KwaZulu Natal Coordinator of the National Association of People Living with AIDS has requested financial support from his organization's national office (to replace funding that was available through MCDI for community-based work to reduce stigma and discrimination faced by HIV-positive people). The Department of Health is the main source of funding for the organization.

The eKhaya Project as well as other contributing organizations are continuing to support the Mavela model crèche. MCDI provides significant funding to the crèche through a child sponsorship program.

C. Program Management

The project's field office employed highly skilled staff; the team was led by a knowledgeable and experienced project manager, Farshid Meidany. The team received good support from Luis Benavente, the U.S.-based Child Survival Coordinator for MCDI, and the Child Survival support team. Some project staff members had worked together for many years (during previous Child Survival projects). They functioned well as a team and developed good linkages with staff from governmental departments and non-governmental organizations. During the final evaluation, representatives of partner organizations commended project staff for their support in carrying out health activities in Ndwedwe through data analysis, networking, and community mobilization.

1. Planning

Project staff used a participatory and consultative approach in developing their work plans (including the Detailed Implementation Plan). Since many project activities were carried out through partners (including community-based volunteers and groups, non-governmental organizations, and the departments of health and social development), MCDI staff planned and implemented project initiatives in tandem with other stakeholders.

2. Staff Training

Project staff participated in a number of training events during the course of the project, including workshops on breastfeeding, HIV/AIDS counseling, Integrated Management of Childhood Illness (IMCI), financial management, geographical information systems (GIS), computer technology, geographic positioning systems (GPS), and data management. Staff members applied the knowledge and skills they gained in the workshops to project activities. An example is the mapping of the location of volunteers who provide home-based care to HIV-positive people. This application of geographical information system technology helped project staff in supervising the volunteers and identifying underserved areas. (See Attachment M, *Training Table*)

3. Supervision

Project staff visited health facilities and community health volunteers to monitor their work and to reinforce knowledge and skills gained during training workshops. The Ilembe district health office has expanded rapidly in staff size and the scope of its activities has increased greatly over the last few years. However, as described in Section B.3.c (Cross-cutting Approaches: Capacity Building Approach), Department of Health staff concentrate on health service delivery through facilities and will continue to depend on non-governmental organizations for community-based work.

4. Human Resources and Staff Management

The composition of the project team remained relatively constant during the four-year project. Some of the staff, including the project manager, stayed on at MCDI to work on the current project (Integrated Tuberculosis, HIV, and AIDS Program). The project manager assisted many of the departing staff members in finding new positions by linking them with potential employers and providing letters of reference.

Thembelihle Dludla, who was Coordinator for IMCI and home-based care at MCDI, was absorbed by the Department of Health as the head of the Mobile Team in Montebello Hospital. She is a valuable resource for the Ilembe District Office to implement community and household IMCI in the district, to assist in the supervision of the facility component of the case management strategy, and to help with the district's home-based care program.

5. Financial Management

The general bookkeeping program currently in use is Quicken Version 6 for Windows.

The project administrator entered project expenditure data into computer spreadsheets and submitted monthly reports to MCDI's Silver Spring, MD office. In July 2005, MCDI hired Janine Thatcher as the financial manager for the Durban office. Janine has a diploma in financial accounting and is responsible for financial reporting; she also prepares budgets for future programs.

6. Logistics

Supply of Home-based Care kit materials comprises one of the major logistics support functions of the project. This function has now been transferred to the NITHAP HBC/DOTS Coordinator, who is responsible for receiving the materials in bulk from the District Office and distributing them to the HBCVs on a monthly basis.

As mentioned in Section B.2.b (Progress Report by Intervention Area), the 2005 health facility assessment found that health facilities in the project area were well supplied with vaccines, drugs, and other material needed for project-related interventions.

The Field office has always been equipped with a sufficient supply of computer equipment and up-to-date software. David Jituboh, MCDI's home office IT specialist, assisted the field office by sending computer equipment and supplies as well as by providing online advice. As a means of building the capacity of community-based structures and local partners, MCDI donated computer equipment to NAPWA and a youth club in Ndwedwe. During the life of the project, there have not been any significant logistical problems. The home and field office have always been proactive in solving any predictable logistical problems.

7. Information Management

NDCSP has utilized information from the following sources for the planning, monitoring and evaluation of its activities:

- DHIS: Routine primary health care data are collected from DHIS. This system is implemented in all health facilities in Ilembe District. It is based on a minimum set of data and indicators collected routinely and reported monthly by all health facilities.
- KPC surveys for baseline & final evaluation and LQAS for mid-term evaluation
- IMCI monitoring tools and PHC supervisory tools
- HBCV/CHW reports on activities related to C/HH-IMCI
- VCT/PMTCT Data: Routine data from VCT/PMTCT and ARV sites are collected by the project and DOH staff.
- Notification System: The DOH routinely collects data from the notification of medical conditions (measles, neonatal-tetanus, maternal deaths, etc.).
- Health Facility Assessments: MCDI performed three assessments for the baseline, mid-term and final evaluation of NDCSP.
- DOH ad hoc facility surveys and audits on infrastructure and services, including laboratory and pharmacy services as well as the annual HIV Antenatal Survey.
- Qualitative Surveys and Gaps analysis

- NDCSP has also used the findings of operational research on priority health issues by local and international academic and research institutions in program planning and decision-making.

Project staff worked with Department of Health officials to assess knowledge, practice, and coverage outcomes in Ndwedwe through household surveys. The provincial Department of Health recognizes MCDI's strengths in conducting population-based assessments and has identified MCDI as a potential collaborator in future assessments in the province.

The project manager, Farshid Meidany, is an epidemiologist. He has been assisting the government and other partners in analyzing and interpreting health-related data in KwaZulu Natal and other provinces in South Africa for many years. He was instrumental in launching an epidemiological bulletin in KwaZulu Natal, which provided a forum for sharing information about population health and health services in the province. The Child Survival project provided financial support for the publication of the first issue. Subsequent issues were sponsored by Italian Cooperation.

Martha Benezet, a nutritionist from Tufts University, began working full time with the project in 2004; she facilitated the integration of vitamin A and zinc complementary therapy activities into the NDCSP.

8. Technical and Administrative Support

Many organizations and individual consultants provided technical assistance to the project. Among those who visited the project from MCDI's Silver Spring, Maryland office were Luis Benavente, Joseph Carter, Dennis Cherian, John Claude, and Alyssa Wigton. In addition, several consultants provided on-site assistance (Saha Amarasingham, Heather Doyle, Phil Harvey, Ruth Harvey, Edie McGrath, and Barbara Parker).

9. Collaboration with USAID Mission

The USAID mission in Pretoria supported MCDI in combating the HIV epidemic in Ndwedwe with funding in 2000. Mission staff members visited Ndwedwe after the Child Survival project was approved. They also endorsed MCDI's successful application for the Integrated Tuberculosis, HIV, and AIDS Program.

During a meeting with the final evaluation team, mission staff members expressed their appreciation for the project's achievements and cost-efficiency.
(Additional Information can be found in Attachment L)

10. Management Lessons Learned

Compared with Child Survival projects in other parts of the world (some of which have dozens of staff members), this project depended on a small team of half a dozen employees. In large part, this was because of the high wage level in South Africa. The small size of the team and MCDI's management philosophy resulted in a project that leveraged its resources by partnering with numerous governmental and non-governmental organizations. The success of the approach is reflected in the project's accomplishments. At the same time, the participation of a large

number of organizational partners necessitated a strong monitoring role for MCDI staff (to track inputs provided by other organizations and assess outcomes). As explained in Section B.3.c (Cross-cutting Approaches: Capacity Building Approach), Department of Health staff will continue to require assistance from non-governmental organizations for monitoring and evaluation of community-based health initiatives in the future.

D. Other Issues Identified by Evaluation Team

MCDI staff should use opportunities provided by the Department of Health and the USAID mission in Pretoria to disseminate project lessons and successes to other organizations that are working to improve maternal and child health in South Africa. They should prepare write-ups for publication in newsletters and inclusion in websites and should also make presentations at partners' meetings organized by the USAID mission.

E. Conclusions and Recommendations

The Child Survival project was well planned, leveraged its resources through several local partners, and was competently managed by the Durban-based team with help from MCDI's U.S. office. Summarized below are project strengths, issues that need to be addressed, and recommendations of the evaluation team.

Project strengths

- **Significant improvement in mothers' and caregivers' health knowledge and practices and overall improvement in many indicators from the baseline**

Mothers' and caregivers' knowledge and practices related to prevention of HIV/AIDS, control of diarrheal diseases, and maternal and newborn care improved during the project period. For example, knowledge and use of optimal breastfeeding practices was high, and oral rehydration therapy use for children with diarrhea reached 94% in the project area (the objective was 90% and the baseline level was 74%). Five (24%) of the interventions met or exceeded their objectives, and a large proportion (8 or 38%) of the indicators showed substantial improvement over baseline percentages.

- **Wide variety of interventions aimed at several beneficiary groups**

Project partners implemented a wide range of health promotion and training activities benefiting health care workers and several target populations, including mothers, caregivers, and youth.

- **Innovative and beneficial project off-shoots**

Most notable of supplementary project activities was the creation of a crèche to care for orphans and vulnerable children. While the current number of OVCs who have directly benefited from this project is 122, many more people have indirectly benefited, such as siblings who accessed supplementary meals and education from the crèche.

Other significant side projects included a vitamin A promotion project which trained numerous key community members and leaders in the importance of bringing young children to a facility for vitamin A. A substantial zinc therapy campaign included major advocacy efforts at the national and provincial levels to support policy adoption of complementary zinc therapy as a complementary care protocol for childhood diarrhea.

Throughout the project, numerous studies were carried out with the support of academic institutions, one of which resulted in the creation of support groups for PLWHAs and an ongoing communication campaign to fight stigma and discrimination.

- **Good working relationships**

Some project staff members had worked together for many years (during previous Child Survival projects). They worked well as a team and developed good linkages with staff from government departments and non-governmental organizations including religious organizations. Representatives of partner organizations commended project staff for their support in carrying out health activities in Ndwedwe through data analysis, networking, and community mobilization.

- **Good potential for sustainability**

Project partners are likely to continue many health interventions that have been initiated over the last four years in Ndwedwe. Some have already identified funding for the interventions and others are seeking financial support to continue their work.

Concerns

- **HIV/AIDS knowledge and positive practices still low among mothers and caregivers**

Although set targets were not met in the number of mothers and caregivers who know at least three symptoms of STIs other than HIV/AIDS in females (65% targeted, 45% achieved) and number of mothers who know at least three known ways for a mother to transmit HIV to her child (90% targeted, 78% achieved), it is worth noting that for the STI symptoms, 26% knew two symptoms and 11% knew one symptom. Only 4% knew no symptoms (14% refused to answer). As for MTCT, 24% of respondents knew two ways and an additional 11% knew one way (none refused to answer). As for mothers/caregivers allowing their children to play with HIV-positive children, changing attitudes based on deeply imbedded fears and social stigmatization takes a very long time. The 8% improvement from baseline at least seems an encouraging sign that attitudes are improving.

- **Difficult to compare some final, Knowledge, Practice, and Coverage survey data with baseline survey data because of changes in survey questions**

The wording, sequencing, and skip patterns in baseline and final survey questionnaires differed in some sections. This made it difficult for the evaluation team to compare data from the two

surveys and to calculate key indicators for the final survey such as medical care-seeking for children with cough and difficult breathing and antenatal care visits.

- **Ongoing training required for health providers in IMCI**

Facilities in Ndwedwe have health providers who are trained in IMCI. However, staff turnover is high and new health care providers need to be trained to ensure that children coming to facilities continue to receive integrated case management.

- **Need to focus efforts to investigate and address reasons behind the improved but still low levels of reported condom use**

During the final KPC survey, 48% of respondents reported using condoms during their most recent act of sexual intercourse, increasing significantly from the baseline proportion of 30%, but remaining just shy of the objective of 50%. As discussed previously, these proportions may have been underreported due to various types of social responsibility bias that hindered respondents from admitting to condom use. Other plausible explanations for actual low coverage include women's lack of influence in the decision not to use a condom and, to a certain extent, the trend among teenage girls and young women of avoiding all birth control and seeking pregnancy in order to receive government grants provided for mothers of young children. While some potential cultural factors have been identified, further investigation is needed.

Recommendations

For MCDI

- Seek opportunities to:

    - Design and administer expanded child survival and reproductive health projects. MCDI should seek project funding with which it can continue to improve population health in the region.

    - Maintain relationships with area stakeholders to advise other non-governmental organizations with community-based child health projects and HIV/AIDS prevention interventions in the region. MCDI should especially seek an advisory relationship with the local non-governmental organization that will be selected by the Department of Health to manage the community health worker program in Ilembe district.

    - Assist in conducting population-based health surveys. MCDI has gained considerable experience in conducting population-based health surveys in Ndwedwe. Provincial Department of Health staff recognize this and would like MCDI to help with Knowledge, Practice, and Coverage surveys in other parts of KwaZulu-Natal province on a contractual basis.

    - Ensure consistency in wording of future baseline and final KPC survey questions that affect comparability of indicators.

- Disseminate lessons learned in project

- Participate in partners' meetings sponsored by the United States Agency for International Development (USAID).

- Disseminate evaluation findings, success stories, and project briefs to partners such as the Provincial Department of Health and USAID (for inclusion in newsletters and web pages).

For Department of Health

- Continue training health care providers in IMCI.

- Provide additional IMCI training for physicians who service primary healthcare facilities in order to improve quality and consistency of care.

- Continue promotion of condom use in collaboration with non-governmental organizations. Condom promotion should emphasize:

  - The risks men take with their health as well as their partners' health when they don't use condoms every time they have sexual intercourse.

  - The importance of fidelity as a moral and social value, and that rape and other sexual abuse is not a way to assert manhood. The department should also disseminate messages to dispel the local myth that having intercourse with a virgin is a way to cure HIV/AIDS.

  - The risk for sexually transmitted disease that teenagers and young women face when they have unprotected sex with the intention of conceiving in order to obtain child support grants.

- Expand services provided at Ndwedwe Community Health Center to include management of complicated deliveries.

- Utilize MCDI (through a contract or other mechanism) to implement community and household IMCI activities in other subdistricts of Ilembe.

- Utilize MCDI's role as a catalyst to establish crèches for OVCs in other areas in Ilembe District.

RESULTS HIGHLIGHT-- ACADEMIC LINKAGES

As with any finite project, Child Survival projects work with limited resources and within limited time boundaries. Achieving sustainability can therefore be a challenge, especially when it comes to carrying out important formative research that could help explain project successes and failures and help to scale-up successful project elements. The Ndwedwe District Child Survival Project (NDCSP) in KwaZulu Natal Province, South Africa, tapped into a resource that has proven elsewhere to be beneficial towards the sustainability of many health projects in developing countries: linking a project to universities and research organizations willing to assist in data collection and analysis and as partners for operational research.

Over the course of the project, twelve students and two faculty members from six academic institutions (one of which was a South African University) visited the project, providing assistance in:

- Qualitative research on HIV/AIDS stigma and discrimination
- Teaching GIS to the District and Provincial Department of Health information managers
- Evaluation of the Mavela crèche
- Research on the church response to AIDS in KwaZulu Natal province
- Research on HIV/AIDS stigma among religious communities
- Research on prevention of mother-to-child transmission of HIV/AIDS, ARV treatment and TB control
- Teaching at the Mavela crèche
- Research on support groups for PLWHA and on stigma and discrimination

By involving university students and faculty—preferably from a local academic institution—in important operational research, the project not only taps into continued outside funding, but also an abundance of local knowledge and interest in continuing project activities and in bettering local communities. Experience has shown that students who choose to research an interesting health project are likely to return with new grants and to make more permanent linkages with PVOs and partners involved in the original project. Much like Peace Corps volunteers whose experiences entice them to return to the areas they served in and to make a career of such service, students who are invited to conduct project research will often return to the area as a career, attracted by the excitement of the research and sustained by the 'glue' provided by local PVOs. Even if these same students do not return, connections with universities mean that many other students and faculty will have a permanent link to the project and a desire to see interventions continued until improvements in conditions can be solidified.

In KwaZulu Natal, a province that endured the many hardships of the apartheid regime, university linkages afford the area an opportunity for local students to create a long-term engagement with their communities. Research projects may involve in-depth studies of the effects of program interventions on behaviors and attitudes, or their effects on longer-term disease prevalence. It can contribute to mapping and surveillance information for various localities. These kinds of studies are critical for going beyond the short reach of the KPC and other monitoring and evaluation methods, and require greater human and financial resources than are available to a typical Child Survival project. The Department of Health is particularly

grateful to have access to more in-depth information, whether qualitative studies that help plan messages for information, communication and education campaigns, or quantitative data that contribute to disease surveillance. Additional support that stems from enthusiasm and academic curiosity can only help to increase a project's impact.

ATTACHMENT A. Evaluation Team Members

The evaluation team consisted of the following.

- Martha Benezet, HIV and Tuberculosis Coordinator, MCDI, South Africa
- Zanele Buthelezi, Social Worker, MCDI, South Africa
- Sibongile Dube, Director, Department of Health, Ilembe District Office
- Farshid Meidany, Project Manager, MCDI, South Africa
- Sandra Moodley, Program Coordinator, Department of Health, Ilembe District Office
- Zandile Myeza, Project Administrator, MCDI, South Africa
- Thuli Ngidi, Training Coordinator, MCDI, South Africa
- Janine Thatcher, Financial Manager, MCDI, South Africa
- Karunesh Tuli, External Consultant

The following people guided the team in conducting the evaluation.

- Luis Benavente, Senior Health Project Officer, MCDI, USA
- Joseph Carter, Director, International Programs, MCDI, USA
- Janet Dalton, Maternal, Child, and Women's Health, Department of Health, KwaZulu Natal
- Saha Amarasingham, Monitoring and Evaluation Advisor, MCDI

ATTACHMENT B. Assessment Methodology

The consultant and evaluation team members from MCDI developed a list of evaluation questions based on the guidelines provided by United States Agency for International Development. During a meeting at the Ilembe District Department of Health Office in Stanger, department staff, the project manager, and the consultant identified potential respondents who could provide answers to the team's evaluation questions. This list was edited in a subsequent meeting with MCDI staff. During a presentation at the KwaZulu Natal province Department of Health, MCDI staff summarized the findings of the final knowledge, practice, and coverage survey that was conducted in September 2005. The project manager provided an overview of the project to the consultant in a separate series of meetings. Evaluation team members conducted meetings in Ndwedwe with mothers, volunteers, community health workers, traditional birth attendants, and members of youth groups, support groups and community health committees. They also interviewed representatives of partner organizations (including the Department of Health). The consultant also met individually with project staff members to learn about their work and ask evaluation questions.

The Project Manager and the consultant conducted a debriefing session for USAID South Africa in Pretoria and the consultant facilitated a similar session for project staff.

ATTACHMENT C. List of Persons Interviewed and Contacted

Community
Mothers, home-based care volunteers, traditional birth attendants, community health workers, and members of support groups, youth groups, and community health committees.

Ndwedwe Community Health Center, Department of Health

- Maveshnee Govender, Nurse
- B.C. Khuluse, Nurse
- Ranga Naidoo, Pharmacist
- Themba Nodada, Physician
- Jessica Pillay, Acting Chief

Department of Social Development

- Do Nkosi, Chief Social Worker

Other Partner Organizations

- Abel Ellse, Statistician, The Valley Trust
- Roseisha Ishwardutt, Training Coordinator, Sinosizo
- Dudu Lembethe, The Valley Trust
- Paddy Meskin, eKhaya Project
- Victoria Mkhize, Facilitator, Sinosizo
- Mazwi Mngadi, KwaZulu Natal Coordinator, National Association of People Living with AIDS
- Tshitshi Ngubo, Community Based Health Manager, The Valley Trust
- Duduza Ngudbo, DramAide
- Sinikiwe Ntshangase, Facilitator, Sinosizo
- Claudia Ringewaldt, GIS/Database Support, The Valley Trust
- Keith Wimble, Executive Director, The Valley Trust
- Doris Zungu, Principal, Mavela Crèche

United States Agency for International Development, South Africa

- Nellie Makhaye-Gqwaru, HIV/AIDS, STI, and TB Specialist
- Anita Sampson, Health Project Manager

ATTACHMENT D: Diskette with Electronic Copy of Report

ATTACHMENT E. Special Report on Stigma and Discrimination

Baseline Survey of HIV Stigma and Discrimination in Ndwedwe, South Africa
August-September 2003

Farshid Meidany*, Saha Amarasingham*, Lucky Barnabas**, Thuli Ngidi*, Thembelihle Dludla*
* Medical Care Development Intl. (MCDI)
** National Association of People living With HIV/AIDS (NAPWA)

Background:

To establish baseline indicators for a PACT/USAID Community REACH Stigma and Discrimination Project in the Ndwedwe Sub-district in KwaZulu Natal Province of South Africa, a survey was conducted. South Africa is home to 4.5 million adults and children living with HIV/AIDS. About 30% of antenatal clients from visiting primary health care services were infected in Ilembe Health district in 2002 (Ndwedwe is a sub-district of Ilembe). Anecdotal reports indicate an increasing number of reported stigma and discrimination cases in the project area.

Methods:

This survey was conducted in 4 tribal authorities in Ndwedwe. A draft questionnaire was developed and in a consultative meeting with health facility personnel and PLWHA a final draft was developed, translated into Zulu and field-tested. 279 anonymous HIV infected and affected individuals were interviewed. 83 of the surveyed people were HIV positive. It was not a randomized population survey. The survey subjects were chosen from different sources, including; health facilities (53.8%), spouse and partners of PLWHA (27.3%), and family and members of households of PLWHA (18.9%). The interviewees were identified and interviewed by the health facility VCT/PMTCT counselors as well as HIV support group facilitators. Each participant had to sign a consent form after the content and the objectives of this survey were fully explained.

***Results*:**

General Characteristics:
65% of the interviewees were female. The following is a table of age distribution among the studied population.

	Age group	%
1	under 15	2.2
2	15-19	5.8
3	19-24	12.8
4	25-34	32.5
5	35-49	28.1
6	50-64	17.5
7	65& over	1.1

Knowledge of HIV Status:
70% of the interviewees did not know their HIV status. The most common reason given by this group for not knowing their status was the fear of being discriminated against by others if they were diagnosed as HIV positive (37.8%). The next most frequent cause was that respondents did not feel at risk for infection (34.2%). Other causes sited were: lack of knowledge about services (17%), unavailability of services (5.8%) and fear of death (2.6%). Five people (2.6%) mentioned that they did not go to the VCT site because there were local people who knew them.

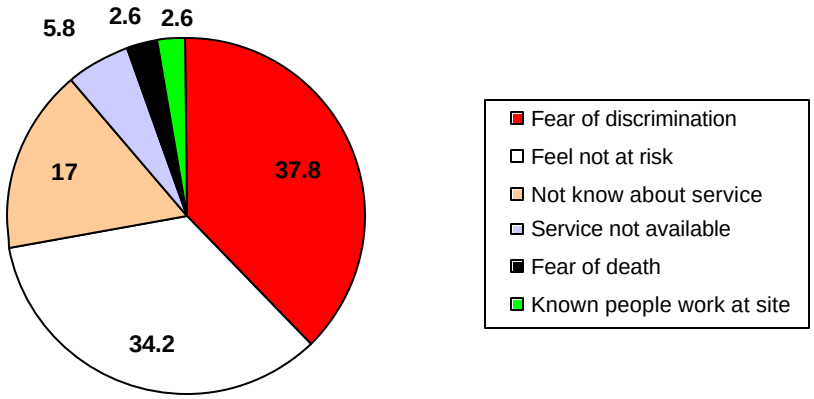


Fig 1: Reasons for not knowing HIV status

69% of the people who knew they were HIV positive had disclosed their status for the first time to the following people: family members (35%), spouse/partner (29%), health workers (15.7%) and friends (12%). Only 3 individuals disclosed to a neighbor (3.6%), 2 individuals disclosed to a religious leader (2.4%), one to a community leader (1.2%) and one to a teacher (1.2%). There was no significant relationship between gender and disclosure of one's status (OR: 0, 93).

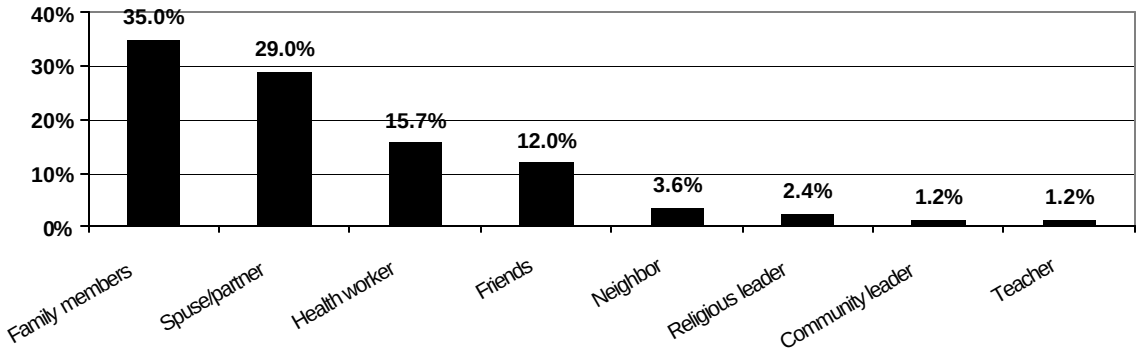
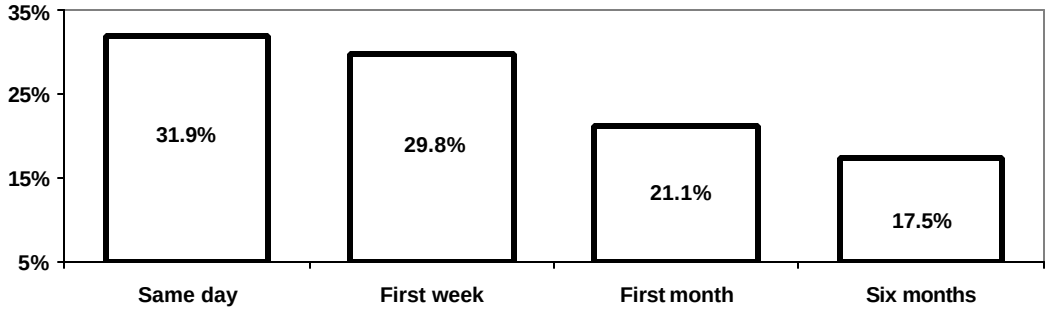


Fig 2: First person to disclose

About 30% of the above mentioned group disclosed their status on the same day of diagnosis. A similar proportion did disclose during the first week. The following graph shows the time period between knowing one's status and disclosure



F. Fig 3: Time period between diagnosis and disclosure

Answering the question "Who is the first person who should know about one's HIV status", 39.3% of the participants felt that one's partner/spouse should be the first person to know about it, followed by one's mother (16.4%), health workers (11.5%), sister (11.5%), one's friend (8.2%) and grandmother (4.9%). 1.6% of the participants gave the following individuals as the first person to whom to disclose: one's child, neighbor, one's father and no one.

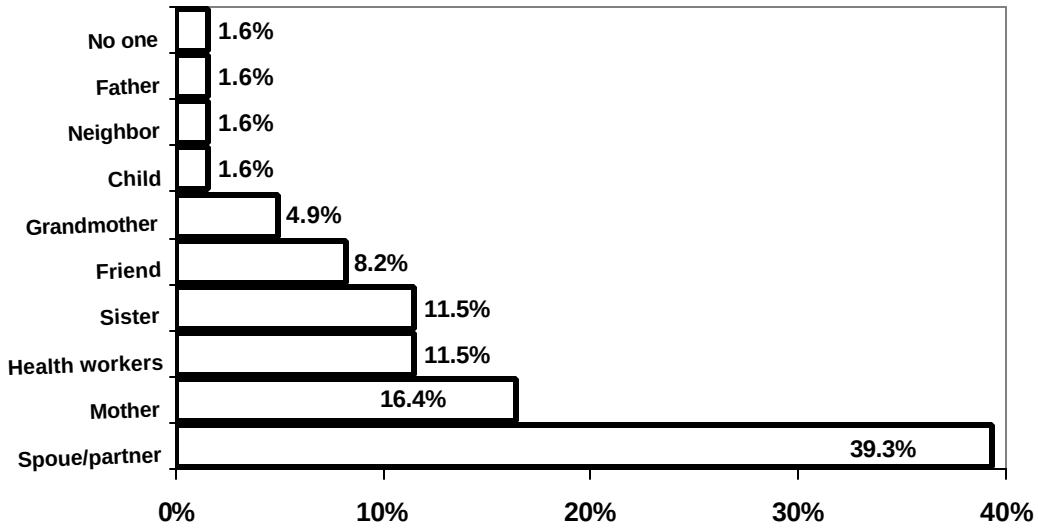


Fig 4: First person who should know about one's HIV status

Responding to the question " Who are the people that one's status will not be told", 45% of the participants mentioned neighbors and community members, 7% family members, 5.5% church leaders, 3.3% fathers and 3.5% friends. 8.8% of the interviewees stated that they should not reveal to anyone their status.

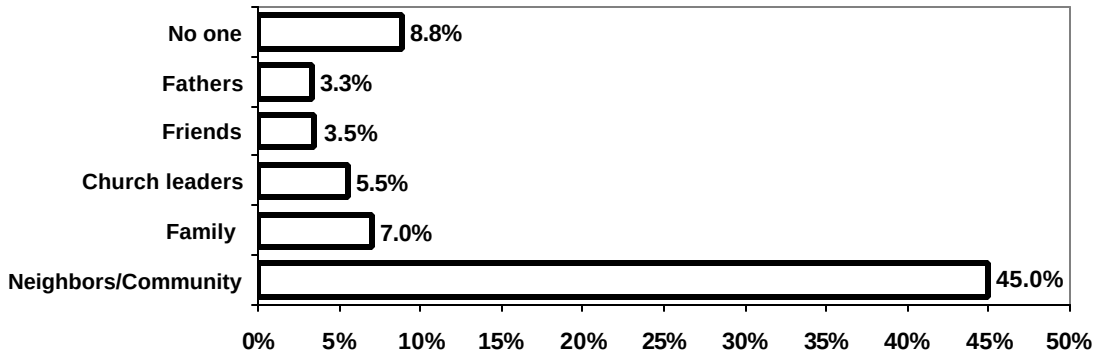


Fig 5: HIV status should not be disclosed to these individuals

Regarding how they felt about PLWHA, about 82% of the participants thought that PLWHA were isolated, 64% felt that they were socially avoided, 63% devalued, 60% neglected and 61% thought that they were blamed by society for the positive status.

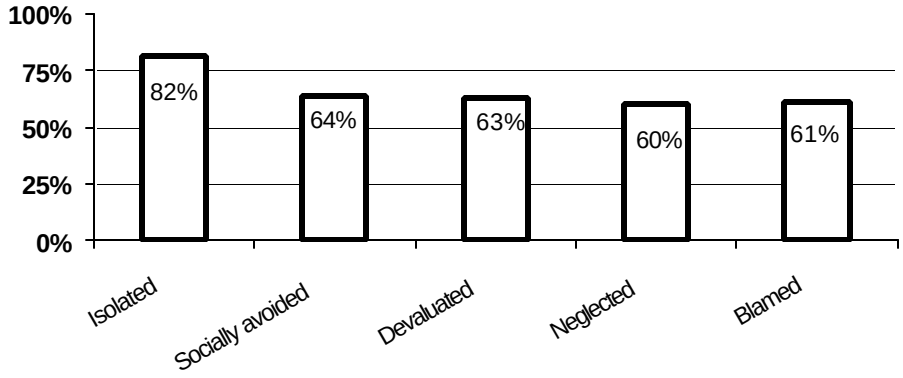


Fig 6: Perception about PLWHA in community

II. Stigma

21.7% of the individuals participating in this survey mentioned that they had experienced stigma in the past 6 months. Regarding type of stigma, 26.5% of participants experienced social exclusion, 26.5% experience physical avoidance, 24% family and household exclusion, 15.6% church exclusion, 15.6% workplace exclusion and 7.2% of participants felt health worker bias during the past six months (Fig 7).

Regarding the site where stigmatization occurred, 71% felt stigma at home, 64.5% experienced it from communities, 51.6% from neighbors, 45% at church, 35.1% at workplace, 35.1% from friends and 10% experienced it at school (Table 2).

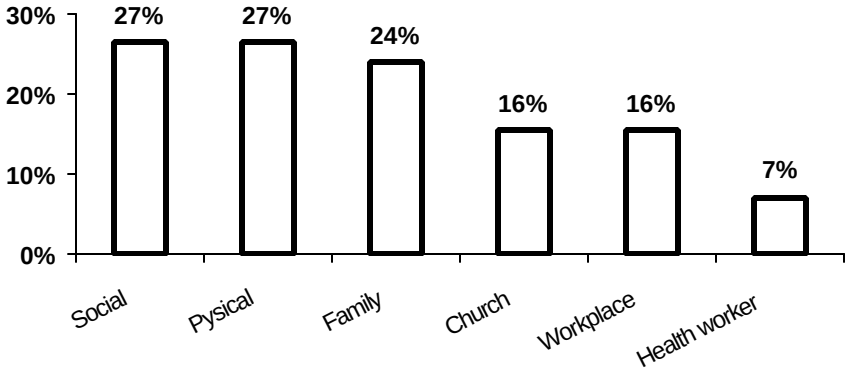


Fig 7: Experience of Stigma/Type of exclusion in the past 6 months

Table 2: Experience of stigma (Where/by who)

Where/By whom	Number	By Male	By Female	By Both
Family	22	3	4	14
Neighbor	19	0	2	17
Community	20	3	2	15
Church	14	0	1	13
Workplace	11	2	1	8
Health facility	7	0	2	5
Friends	11	3	4	4
School	3	0	0	3

Answering the question: "How often did you experience stigma?" 13% of PLWHA who experienced stigma stated that they always experienced stigma, 25% stated sometimes and 27% stated rarely. 35% of this group were not sure about it or did not answer.

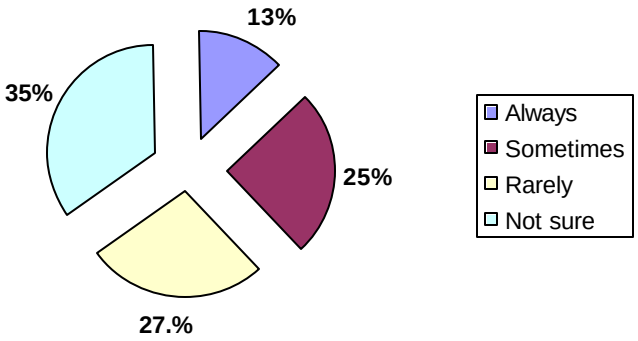


Fig 8: Frequency of experience of stigma

Only 12.9% of PLWHA were referred to a stigma reduction support group. They were referred by the health workers, community health volunteers, family members and friends.

III. Discrimination

69.5% of the participants were aware of anti-discriminatory policies. The majority received information on discriminatory policies/guidelines from radio (61.2%), television (54.3%), and health facilities (42.4%), followed by community events (18.1%), churches (17.8%), school (9.8%) and workplace (8.3%). Only 6 people (2%) mentioned newspaper as a source of information.

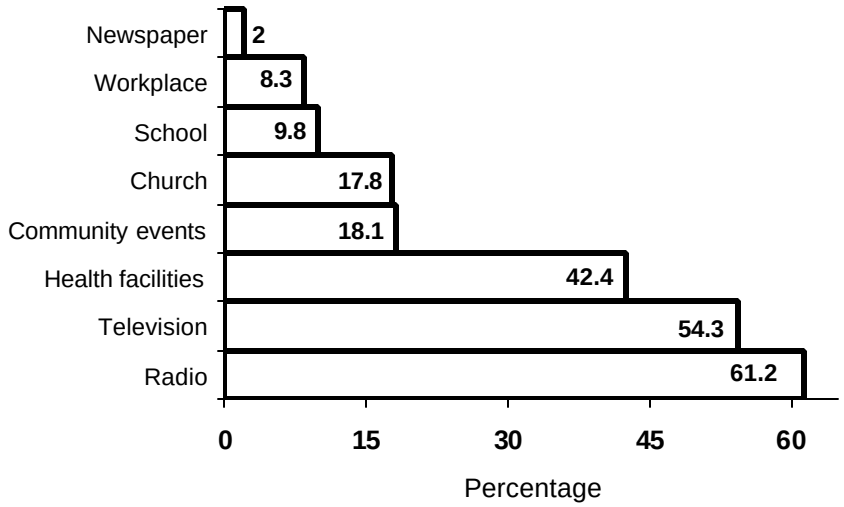
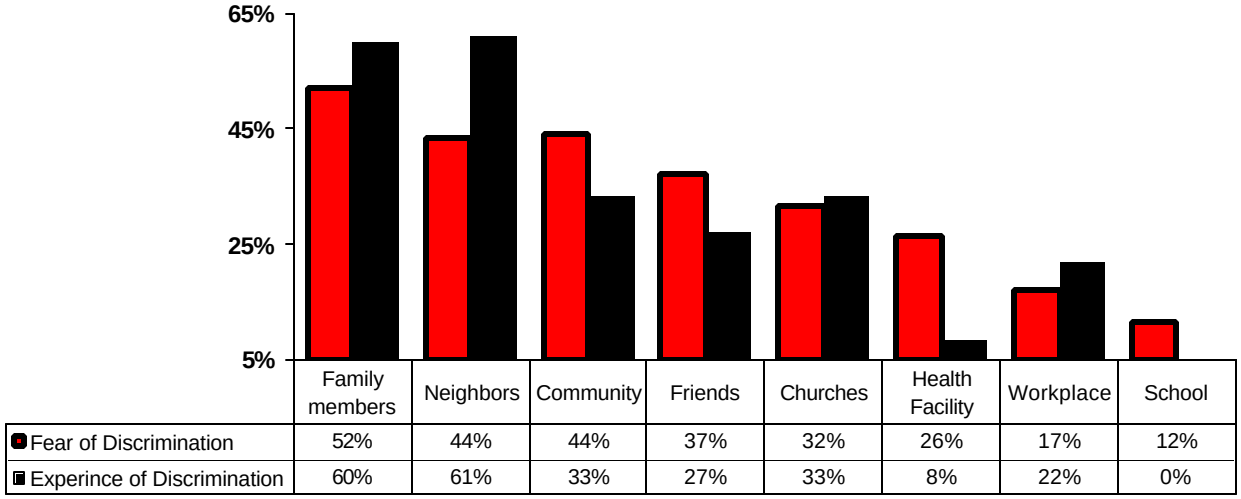


Fig 9: Source of knowledge about anti-discriminatory policies

78% of the survey population (both HIV infected and affected) possessed fear of being discriminated against. In response to the question "If you have fear of discrimination, by whom or where?" the majority mentioned family members (52.2%), neighbors (43.5%), community members (44.2%) and friends (37.3%) followed by churches (31.5%), health facility (26.4%), workplace (17.1%) and school (11.6%).

20.6% of the respondents reported having experienced discrimination (48 individuals). The majority were discriminated against by neighbors (61%), and family members (60.4%), followed by community members (33.3%), church (33.3%), friends (27.1%) and workplace (22.1%). Only 8.3% of respondents experienced discrimination at health facilities. No respondent cited any experience of discrimination at school



	Family members	Neighbors	Community	Friends	Churches	Health Facility	Workplace	School
Fear of Discrimination	52%	44%	44%	37%	32%	26%	17%	12%
Experince of Discrimination	60%	61%	33%	27%	33%	8%	22%	0%

Fig 10: Fear and experience of discrimination by who and where?

Of the 48 individuals who experienced discrimination only 22 reported it (45.8%). The health facilities were the frequently cited to report discrimination (16). 2 people reported to local officials (police), 2 reported it to their families and one person reported his/her case to workplace manager and one to a church leader. After reporting these cases only 3 respondents (13.6%) experienced end to the discrimination and 11 cases (50%) experienced less discrimination. In 6 cases (27.3%) there was not any change in discriminatory actions and 2 individuals (9.1%) experienced discrimination more frequently.

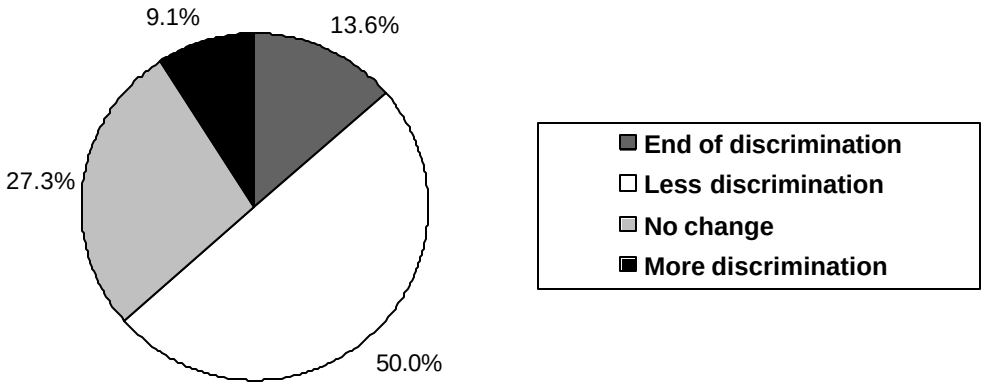


Fig 11: What happened after reporting discrimination?

Responding to the question "Have you ever been accused of infecting somebody?" 13.4% said they have been accused of infecting another individual.

IV. Conclusions

- Stigma and discrimination are likely to be problems, at least amongst the sample interviewed.

- Roughly 20% disclosed their status within the first month, and close to 20% within six months. This may be indicative of the fear of stigma and discrimination.

- There appears to be a trend that neighborhood members and the community are most feared as perpetrators of stigma (possible target group for awareness campaign).

- There appears to be a trend that partners/spouses of those stigmatized may be considered most important sources of support.

- As would be expected, self-reported HIV-positive respondents were much more likely to report experiencing both stigma and discrimination than those who were categorized as being HIV-affected.

- There were multiple sources of stigma and discrimination experienced by the respondents, though family and community were most often quoted.

- The participants surveyed appear to be quite knowledgeable about anti-discriminatory policies. This may indicate a greater awareness of the presence of discrimination.

- Results of this survey support activities targeted at reducing stigma and discrimination by forming support groups for PLWHA.

- These activities have two aims; to increase coping mechanisms of PLWHA when they are encountered with incidences of stigma and discrimination as well as anti stigma and discrimination advocacy among the population of Ndwedwe.

ATTACHMENT F. Project Data Sheet Form – Updated Version

Child Survival and Health Grants Program Project Summary

Feb-21-2006

Medical Care Development Inc./Int'l. Division (South Africa)

General Project Information:

Cooperative Agreement Number:	FAO-A-00-97-00025-00
Project Grant Cycle:	17
Project Dates:	(9/30/2001 - 11/30/2005)
Project Type:	Cost XT
MCDI Headquarters Technical Backstop:	Luis Benavente
Field Program Manager:	Dr. Farshid Meidany
Midterm Evaluator:	
Final Evaluator:	Karunesh Tuli
USAID Mission Contact:	Anita Sampson

Field Program Manager Information:

Name:	Dr. Farshid Meidany
Address:	Maritime House, Suite 1401 Durban , South Africa 4000
Phone:	27-31-304-0357, 0365/6
Fax:	27-31-304-0386
E-mail:	meidany@webmail.co.za

Funding Information:

USAID Funding:(US $): 51,194,824 PVO match:(US $) 5409,026

Project Information:

Description:

This is Phase II (a cost extension) of the Ndwedwe Child Survival Project which expands the project to other areas of the Ndwedwe sub-district of KwaZulu Natal. The goal is to reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of reproductive age (WRA) in the project area. The interventions address HIV/AIDS/STIs, control of diarrheal diseases, immunizations, pneumonia case management, and maternal/newborn care. Strategies include improving access to care, improving the quality of care, and developing community-level partnerships.

Location:

Kwazulu Natal Province Ilembe District, Ndwedwe SubDistrict

Project Partners:

General Strategies Planned:

Private Sector Involvement
Advocacy on Health Policy
Strengthen Decentralized Health System

M&E Assessment Strategies:

KPC Survey
Health Facility Assessment
Organizational Capacity Assessment with Local Partners
Organizational Capacity Assessment for your own PVO
Participatory Rapid Appraisal
Lot Quality Assurance Sampling
Community-based Monitoring Techniques
Participatory Evaluation Techniques (for mid-term or final evaluation)

Behavior Change & Communication (BCC) Strategies:

Mass Media
Interpersonal Communication
Peer Communication
Support Groups

Groups targeted for Capacity Building:

PVO	Non-Govt Partners	Other Private Sector	Govt	Community
US HQ (General) US HQ (CS unit) CS Project Team	Local NGO	Traditional Healers	Dist. Health System Health Facility Staff	Health CBOs

Interventions/Program Components:

Immunizations (15 %)

Pneumonia Case Management (20 %)

Control of Diarrheal Diseases (20 %)

Maternal & Newborn Care (15 %)

HIV/AIDS (30 %)

Target Beneficiaries:

Children 0-59 months:	29.829
Women 15-49 years:	78.829

Rapid Catch Indicators:

Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	0	0	0.0%	0.0
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	9	23	39.1%	32.4
Percentage of children age 0-23 months whose births were attended by skilled health personnel	118	122	96.7%	17.7
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	71	122	58.2%	16.1
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	6	19	31.6%	32.8
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	6	43	14.0%	15.2
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	48	57	84.2%	25.6
Percentage of children age 13-23 months who received a measles	51	57	89.5%	25.8

vaccine				
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	0	0	0.0%	0.0
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	131	170	77.1%	14.6
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	9	41	22.0%	19.1
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	156	170	91.8%	15.0
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	13	170	7.6%	5.8

ATTACHMENT G: Baseline Knowledge, Practice and Coverage Survey Report

Ndwedwe District Child Survival
Cost Extension Project
Baseline KPC Report

Medical Care Development International
1742 R Street, NW
Washington, DC 20010 USA
Tel: (202) 462-1920
Fax: (202) 265-4078
Email: mcdi@mcd.org

Ndwedwe District Child Survival Project
1401 Maritime House
143 Victoria Embankment, Durban, RSA
Tel: 27-31-304-0365
Fax: 27-31-304-0386
Email: mcdi@mweb.co.za

ACKNOWLEDGMENTS

The authors of this report would like to thank the following persons for their contributions to the preparations and conduct of this survey:

1. Mr K Mungwe, Health Manager - Ndwedwe Sub-District

2. Illembe Regional Council, Amakosi and Nduna of Ndwedwe

3. Ministry of Health, KwaZulu Natal Province

4. Gita Gidwani, Consultant

5. Field Team and Supervisors: Farshid Meidany, Thuli Ngidi, Thoko Radebe, Esme Cakata, Zandile Myeza, Christopher Mohatsela, Zanele Buthelezi, Social Worker, Gugu Mabaso, and Theresa Mntombi Khumabo

6. Survey Enumerators: Mthokozisi Mbonambi, Fakazi Ngwane, Dudu Shandu, Jabulile Ntetha, Zanele Gumede, Nhlanhla Goba, Zandile Ndlovu , Mbongeni Mthembu, Buyisile Hlophe, Rebecca Nyuswa, Ntokozo Muthwa, Kenneth Msomi, Mgabiseni Ngcobo, Louisa Mtshali, Nontobeko Mthembu, Zanele Ndlela, Lungile Skhakhane, Sthembile Nzama, Fikile Mkhize, Khulili Mcanyana, Bonisiwe Zungu, Margaret Mavundla, Sbongile Mvubu

7. Data Entry: Ncengizwe Hlambisa and Hlengiwe Mhlungu

EXECUTIVE SUMMARY

The Ndwedwe District Child Survival Project, located in the KwaZulu Natal province of South Africa, has been awarded a four-year cost-extension grant from USAID/BHR/PVC. A baseline Knowledge, Practices and Coverage (KPC) Survey was carried out in the Ndwedwe District over a five-day period from November 27-December 1, 2001. This activity was implemented with the cooperation of MCDI, Ndwedwe Sub-District, Tribal Authorities, Illembe Regional Council, and the Department of Health.

The total population of the area is 231,776 and includes 29,829 children 0-59 months of age and 78,803 women of childbearing age. The goals of the NDCSP are unchanged in Phase II: To reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of reproductive age (WRA).

The objectives of the survey were to: 1) obtain population-based information on key knowledge, practices and coverage of mothers and caregivers of children age 0-23 months, 2) obtain population–based information on key knowledge, attitudes, practices and coverage of mothers and caregivers with children age 0-59 months, particularly relating to HIV/AIDS, 3) prioritize interventions and refine targets for the Ndwedwe District Child Survival Project based on the current KPC data, and 4) facilitate the design of qualitative research tools for an in-depth understanding of the gaps in knowledge, practice and coverage identified through the KPC.

Major findings include the following:

- Knowledge about HIV/AIDS and STIs other than HIV/AIDS is somewhat erratic and there is a low use of condoms as a means of preventing transmission. Approximately 26% of the mothers/caregivers interviewed knew at least three symptoms of STIs other than HIV/AIDS in females, while roughly twice as many (54% of mothers) could recognize at least two known ways in which a mother could transmit HIV/AIDS to her child. A low 30% reported using a condom on last act of sexual intercourse. Besides assessing knowledge, mothers/caregivers attitudes were also assessed. 68% of mothers/caregivers were willing to allow children under their care to play with an HIV-positive child.

- None of the mothers/caregivers of children who experienced a diarrheal episode in the two weeks prior to the survey increased the amount of food given to the child during the diarrheal episode. 45% actually reduced the amount of food given, while an estimated 39% gave the same amount as usual to eat. Similarly, 35% of the mothers/caregivers reduced the amount of fluids given to their child during the diarrheal episode, while an additional 48% gave the same volume of fluids as usual. Only 7% increased the fluids given to their child during the diarrheal episode. In spite of the fact that very few mothers/caregivers increased the fluids provided to their children during diarrheal episodes and none increased the quantity of food provided, 74% of the mothers/caregivers reportedly practiced administration of ORT (ORS, SSS) when the child had diarrhea. This suggests that mothers/caregivers have not learned that the benefit

of ORT is derived from rehydration, and that they therefore presumably administer ORT as a cure for diarrhea in the same way as they would administer antibiotics.

- Hygiene practices are relatively poor, particularly as they relate to food preparation and the feeding of children; only 15% of the mothers/caregivers reported washing their hands before feeding the child under their care.

- Breast feeding is widely practiced: 97% of mothers of children 0-23 months of age reported that they breastfed their child and 41% reported exclusively breastfeeding their child.

- 56% of children 0-23 months had experienced an episode of coughing and fast breathing in the two weeks prior to the survey. The care-seeking behaviors among the mothers and caregivers of these children was found to be very inadequate, with as few as 10% seeking care the same day the child's symptoms appeared.

- Although BCG immunization coverage for a child in Ndwedwe age 12-23 months is high (95%), coverage decreases to 61% immunized for measles. There is also considerable dropout, resulting in only 51% of children being fully immunized.

- Three quarters of the mothers interviewed sought antenatal care during their last pregnancy. Of these, roughly 21% sought antenatal care from a doctor, 68% a nurse, and 12% Community Health Workers, Traditional Birth Attendants and others. In spite of this, only 20% of the mothers began their antenatal visits during the first trimester and then made at least three subsequent visits.

- Only 7% of the mothers/caregivers were aware of three or more of the danger signs in newborns that require immediate treatment.

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ANNEXES

I. BACKGROUND

A. Description of the Program Location

Ndwedwe is part of what has been termed the "Durban collar region"– a rural and semi-rural area that was particularly underserved under the apartheid regime. At that time, what is now the KwaZulu Natal (KZN) Province was divided into a number of administrative areas, classified by race and with unequally apportioned public services. Ndwedwe itself was included in the administrative area of the KwaZulu "non-independent homeland." Ndwedwe received few public services in comparison with the rest of the "homeland" due to its distance from the KwaZulu heartland.

The program area is primarily rural with a dispersed settlement pattern; the population is Zulu. (See Annex 1 for a map of the project area.) There are no nucleated villages; instead, the area is conventionally divided into a series of 18 Tribal Authorities (TAs), each governed by an Nkosi (pl. Amakosi), or chief, and his Councilors and headmen (Nduna). The TAs are informally divided into a series of Isigodi with no fixed boundaries. The current project works with 13 TAs (the local NGO Valley Trust works with the other five); there are about 4 more TAs in the new area, however, boundaries have not been set. See Table 1 for population figures for the present Ndwedwe District.

Table 1: Population Figures for the Ndwedwe District

Total Population (Present Ndwedwe District).	144,795
Population of Children 0-4	18,648
Population of Women 15-49	49,073

Source: GIS Unit, Infomatics Section, KZN Department of Health, Pietermaritzburg

The province of KZN has recently announced that, due to a reorganization of the city of Durban's boundaries, a number of nearby rural areas, including the southern half of Ndwedwe, will become part of the Durban "Unicity" by the end of 2000. At that time, new territory to the north of the current Ndwedwe District will be added to the District. In Phase II, the NDCSP will continue to work in the areas of the present Ndwedwe District and, after discussions with DOH representatives, will expand into the new Ndwedwe territory as well. The new district boundaries are still uncertain, but the population of the total Phase II area can be estimated (see Table 2 below).

Table 2: Population Figures of the Total Phase II Area

Total Population of Phase II area	231,776
Population of Children 0-4 in Phase II area	29,829
Population of Women 15-49 in Phase II area	78,803

Source : GIS Unit, Infomatics Section, KZN Department of Health, Pietermaritzburg

B. Health Status of the Target Population

According to the Preliminary Report of the 1998 South Africa Demographic and Health Survey (DHS), the infant mortality rate (IMR) for KwaZulu-Natal was 52.1 per 1000 live births during the five years before the survey, compared with a national IMR of 45.4 during the survey. Nearly half of this mortality (23.2 per 1000 live births) occurred during the neonatal period in KZN, while the post-neonatal infant mortality rate was 28.9. The child mortality rate for the province was 23.6 per 1000 children surviving to 12 months of age. The total under-five mortality for KZN during this period was 74.5. The DHS reports an alarming trend for the nation, in which both the IMR and mortality in the 1-4 year age group, after declining steadily during the 1986-1990 period, began to display a gradual but steady increase after 1991.[1] The current HIV/AIDS epidemic is the most likely cause of the increase. Another alarming development in KZN is a recent outbreak of cholera in the north of the province. Although there have been no confirmed cases in Ndwedwe, the NDCSP will exercise vigilance in the context of its diarrhea intervention and will be prepared to take action as required.

A recent national DOH report on maternal deaths[2] states that a reliable estimate of the national Maternal Mortality Ratio (MMR) is impossible to calculate due to poor reporting. Reliable estimates were developed for three provinces other than KZN however. For the Free State, the estimated MMR was highest at 135 per 100,000 live births. The MMR in KZN is likely to be even higher, since neonatal, infant, and child mortality, as well as most other health indicators, are worse in KZN than in the Free State. The MMR of the program area, then, can be assumed to be above 135 per 100,000 live births. The same report identifies the "big five" causes of maternal death in South Africa as complications of hypertensive conditions in pregnancy (23.2%), AIDS (14.5%), obstetric hemorrhage (13.3%), pregnancy-related sepsis (11.9%) and pre-existing medical conditions, especially cardiac disease (10.4%). The report notes that the percentage of maternal deaths from AIDS-related causes is likely to be much higher than reported, since HIV status was unknown in 75.8% of the maternal deaths.

The major causes of infant and child mortality in the province of KZN[3] include diarrhea (estimated at 14.7% of under-five mortality) and respiratory tract infections (9.3%). In the main referral hospital, Osindisweni Hospital, serving the program area, 172 deaths occurred among children under age five in 1999 and the first quarter of 2000. Of these, the greatest number (86 children) died of diarrhea and the second highest cause of death (25 children) was respiratory illness. Twenty-three deaths each were attributed to malnutrition-related causes and meningitis. Neonatal causes accounted for 8 deaths, dysentery for 5, AIDS for 4, and "herbal intoxication" (generally due to herbal enemas administered by untrained TBAs) for 5. There were no deaths from measles, tetanus or acute flaccid paralysis.

Major causes of infant and child morbidity in the program area may be deduced from clinic service statistics on outpatient diagnoses collected by the NDCSP and DHSMT from all clinics serving the District. From July 1999 to June 2000, 33,030 pediatric cases under 60 months of age were seen and diagnosed in the clinics. Of these, 3,600 (11%) were cases of watery diarrhea and

[1] Preliminary Report of the 1998 South Africa Demographic and Health Survey
[2] Saving Mothers: Report on Confidential Enquiries into Maternal Deaths in South Africa. 1998.
[3] Health Systems Trust. South African Health Review 1999. Durban, RSA.

228 were bloody diarrhea. 1,053 (3%) cases were diagnosed as pneumonia and 241 as marasmus/kwashiorkor. Among immunizable diseases, there were 18 diagnosed cases of measles, 11 cases of pertussis and 2 cases of tetanus. The remainder were classified as "other causes;" mostly colds, flu, minor injuries and gastric disturbances. Of the common threats to child health and survival, watery diarrhea and pneumonia appear to be most common. The low number of immunizable diseases, particularly tetanus, suggests that new EPI protocols introduced in 1997 may have had a positive impact. It should be noted, however, that there has been a slight increase in all these conditions since the previous year (when 2,947 cases of watery diarrhea, 183 cases of bloody diarrhea, 739 cases of pneumonia, 93 cases of marasmus/kwashiorkor, 7 cases each of measles and pertussis, and no cases of tetanus were diagnosed). This slight increase could reflect increased use of the clinics (30,818 cases were seen), or it could be a result of the increasing number of children who are affected by HIV/AIDS.

C. Socioeconomic Characteristics of the Population

The area's economy is based on subsistence agriculture, with a small amount of cash cropping (sugar cane). A large proportion of households, however, receive remittances from one or more family members employed in Durban or Gauteng Province. Most of those employed outside the District are men, but some women are employed in Durban as domestic servants. Paternal absence, therefore, is very common and maternal absence is not uncommon. The disruption of family residence patterns through migrant labor is thought to be one of the primary causes of the current explosion of HIV rates in KZN; and as noted above, results of the KPC 2000 study have indicated that the relegation of children to non-maternal caregivers often results in inferior child care and slower treatment-seeking during episodes of illness.

Literacy in the District is high by developing country standards, in that about 40% of KPC sample mothers report that they have some secondary education.[4] Only Zulu language education has been provided to the adult population, however; and so very few speak or read English or Afrikaans (the main languages of business and administration in the country). The religious affiliations of Ndwedwe area residents are primarily Christian, although only a minority are members of mainstream churches (Roman Catholic, Methodist and Baptist).[5] The remainder belongs to local churches, such as the Zionist, that combine Christianity with traditional beliefs. The District is sacred to the Shembe religion, and many Ndwedwe residents are Shembe adherents.

D. National Standards/Policies

1. HIV/AIDS

The DOH has policies on prevention of mother-to-child HIV transmission (MTCT), management of HIV positive pregnant women, rapid HIV testing, testing for HIV, feeding of infants of HIV positive mothers, tuberculosis and HIV/AIDS, management of occupational exposures to HIV, and the syndromic case management of STIs. Testing for HIV may be conducted under certain circumstances and requires informed consent, as well as pre-test and post-test counseling. The standard adult guidelines for rapid HIV testing discuss the ethical and legal rights of patients, and

[4] Macro KPC Survey 2000
[5] Ibid.

the role and indications for rapid HIV testing, which includes HIV testing and counseling, diagnosis of HIV infection, diagnosis of HIV infection in areas without local diagnostic laboratories, occupational exposure to blood or body fluids that may be infected with HIV and epidemiological surveillance and screening. The guidelines also discuss the issues to consider such as home test kits, performing and interpreting rapid test results, predictive value of rapid tests in low HIV prevalence communities and issues regarding confirmatory tests for all patients who test positive on the rapid tests. Pre- and post- test counseling and rapid HIV test results, its implications for health care workers, counselors, and patients are also addressed

2. Diarrheal Disease

The DOH protocol for standard case management of childhood diarrheal diseases, including management of dysentery and of persistent diarrhea in children, follows the February 2001 KZN IMCI guidelines. These guidelines detail assessment, classification, treatment, and counseling protocols for children ages 2 months to 5 years and children ages 1 week to 2 months with varying severity of illnesses. The DOH policies are consistent with WHO/UNICEF guidelines, and the NDCSP's case management strategies are consistent with DOH policies. The DOH has an active ORT promotion program in which clinic health educators teach mothers of diarrhea victims to mix sugar-salt solution. Packets of ORS are also available free of charge from all clinics, and they are sold in the many small stores that are scattered throughout the District. The main emphasis is on SSS and use of porridge, soup, or plain water. The DOH has very tight control over antibiotics and anti-diarrheal medications, with clear prescription protocols. Currently, antibiotics are fairly well restricted to use in cases of bloody diarrhea, and anti-diarrheal medications are not heavily used in the management of childhood diarrhea. Unfortunately, discussions with the IMCI facilitator for the district indicate that there is an irregular supply of drugs. For example, the district had no IMCI drugs during February 2002. This issue is understood as more of a logistics management problem rather than shortage of supplies.

3. Pneumonia Case Management

The DOH follows the IMCI protocols adapted as the KwaZulu Natal IMCI Guideline for pneumonia case management, February 2001. These protocols are consistent with and based on WHO protocols. The NDCSP is a facilitator in implementation of IMCI and the DOH protocols in the region. Professional nurses have been trained in the use of IMCI for case management whereby they (a) assess, (b) classify, (c) treat, and (d) counsel children. Included in the protocols are steps to recognize the signs that indicate the need for antibiotic treatment for infants 1 week to two months of age, and for children 2 months to 5 years of age, as well as the signs, which will result in referral to a higher level of care. Also included are the cut-offs for fast breathing for each of the three age groups, and the antibiotics to be used for pneumonia. Counseling regarding antibiotic use and home care for children with pneumonia is done by clinic nurses when the child is brought in for diagnosis and treatment.

4. Immunization

Prior to 1995, immunization policy in South Africa was inconsistent due to the fragmented health system. The current routine childhood immunization schedule in South Africa is based on a National Policy that was adopted in 1999 and, although it includes Hib and HBV, it is otherwise consistent with WHO guidelines.

5. Maternal and Neonatal Care

The 2000 National Guidelines for Maternity Care in South Africa (a manual for clinics, community health centers and district hospitals), and a policy and management guideline for common causes of maternal deaths entitled "Saving Mothers," provide extremely clear instructions and protocols on maternal and newborn care. The National Guidelines manual clearly defines the functions, staffing and facilities at the clinic, community health center, level 1, 2, 3 hospitals and emergency transport systems. According to the Guidelines, all women that attend ANC should be issued with an antenatal card. This is the principal record of the pregnancy and should be completed at each antenatal clinic visit and retained by the mother until delivery.

All Ndwedwe area clinics and hospitals provide prenatal care which includes weight and blood-pressure monitoring, iron and folic acid supplementation, TT vaccination, blood tests (including blood count and RPR), and treatment of infections (including STIs).

E. Goals and Objectives

The goals of the NDCSP are unchanged in Phase II: **To reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of reproductive age (WRA).** The Phase II objectives for the principal interventions are as follows:

HIV/AIDS/STIs: 1) 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females; 2) Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%; 3) 90% of mothers can recognize at-least three known ways in which a mother can transmit HIV/AIDS to her child; 4) 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child; 5) 100% of the DOH health facilities in the project area will provide appropriate HIV/AIDS/STIs prenatal screening and counseling according to protocols; 6) 75% of households caring for OVCs will be aware of and know how to access Department of Social Welfare (DSW) grants and services; 7) 85% of high school students in schools with active school health clubs (SHCs) will be able to name at-least two strategies of HIV/AIDS prevention; and 8) 60% of high school students in schools with active SHCs report adopt of one of the three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use).

Control of Diarrheal Diseases: 1) 90% of mothers and non-maternal caregivers whose child experienced a diarrheal episode during the previous two weeks will provide oral rehydration therapy (ORS, SSS or available home fluids) to the child under their care during diarrheal episodes; 2) 50% of mothers and caregivers will report that they wash their hands before feeding the child under their care; 3) 85% of mothers and caregivers whose child experienced a diarrheal episode during the previous two weeks will give the same of or more liquids than usual during diarrhea episodes.

Pneumonia Case Management: 1) 35% of mothers and caregivers whose child experienced cough with rapid or difficult breathing during the previous two weeks of children will seek medical attention by the end of the day after the onset of symptoms; 2) IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the project clinics.

Immunization: 1) 70% of children aged 12-23 months are fully immunized per RTH card; 2) 80% of children aged 12-23 months will have received a measles vaccination per RTH card.

Maternal/Neonatal Care: 1) At least 60% of mothers/caregivers will be aware of two or more of the danger signs in newborns that require immediate treatment; 2) 40% of CHCs will have established a cost recovery/financial system or loan system for different priority PHC activities (e.g., transporting obstetrical emergencies, incentives for CHWs, HBCVs, etc.) 3) During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter; and 4) 80% of midwives in program area health facilities will be trained in the PEP modules.

F. Intervention Activities

The NDCSP's Phase II strategies to achieve these goals and objectives are based on building capacity of the program's primary partners–the DHSMT, local NGOs (Oakford, TREE, and DramAidE) – and on establishing strong and sustainable community institutions such as the Community Health Committees, Community health workers and the Home Based Care Volunteers. The program's capacity building strategy relies on its multi-faceted training program that includes management and organizational strengthening for the DHSMT and for CHC members, as well as training for these partners in mounting an effective behavior change campaign. The capacities of health facilities personnel will be improved through the NDCSP's support to the effective implementation and supervision of the new IMCI protocol and through the planned training program to teach maternal and HIV/AIDS counseling skills to facility-based personnel. At the community level, the NDCSP will facilitate the organization of the new CHCs, assist them to undertake periodic community health assessment using PLA methods, and build their Behavior Change capabilities by providing them with up-to-date health information and teaching them effective communication skills. All previously trained nurses will be provided refresher training in essential obstetric care using the PEP module. Furthermore, the HBCVs, who have already received basic training with NDCSP support, will receive additional and refresher training as indicated by the planned training needs assessment, in order to establish them as a resource to households affected by HIV/AIDS.

G. Objectives of the KPC Survey

The purpose of the survey was as follows:

1. To obtain population-based information on key knowledge, practices and coverage from mothers and caregivers of children age 0-23 months.
2. To obtain information on key knowledge, attitudes, practices and coverage relating to HIV/AIDS from mothers and caregivers with children age 0-59 months.
3. Based on the current KPC data, to prioritize interventions and refine targets for the Ndwedwe District Child Survival Project.
4. To facilitate the design of qualitative research tools for an in-depth understanding of the gaps in knowledge, practice and coverage identified through the KPC.

II. PROCESS AND PARTNERSHIP BUILDING

Participation of the community in the planning and implementation of a KPC survey serves to increase the community's "ownership" of, and commitment to, the survey and its results.

A. Methods of Identifying and Engaging Local Partners/Stakeholders

The Illembe Regional Council was informed of the survey and provided valuable assistance in the form of maps for the KPC as well as the most current lists of tribal authorities. Information on the tribal authorities, along with the associated population figures is very critical, especially as the boundaries of the tribal areas are constantly changing. Local project staff identified and contacted the tribal chiefs (*Amakosi*) for each tribal authority in which the KPC was planned. Local project staff including, the community mobilizer, explained the Child Survival Project and purpose of the KPC to the *Amakosi*. The *Amakosi* gave their approval for the KPC survey.

B. Specific Roles of Local Partners/Stakeholders in the KPC Survey

The enumerators for the KPC were drawn from a pool of home-based care volunteers (HBCVs) for people living with AIDS (PLWA) that have been working with the NDCSP. Many of these home-based care volunteers also worked on the KPC that was carried out in 2000. Most of the enumerators were residents of Ndwedwe District, enhancing community involvement in the process. Six supervisors were needed to manage the KPC survey; of these four of the supervisors were NDCSP staff, while the other two were nurses from the District Health Services. MCDI program staff supervisors included the project AIDS/Primary Health Care Training Supervisor, the HBCV Coordinator, the Social Worker, and the Community Outreach Organizer. The two data entry persons had served as enumerators on the KPC survey conducted in 2000, so both were very familiar with the entire survey process. In addition, one of the data entry persons worked on the design of the questionnaire in the EPI INFO EPI 6 software program for the KPC survey done in 2000. He was involved with creating the data entry file in EPI INFO for this current KPC.

C. Constraints in the KPC process

An effort was made to include all of the HBCVs in the KPC survey. The remaining home-based care volunteers who did not qualify as enumerators were hired as cooks to work at the Umsunduze Training Center, where the training of the enumerators was undertaken. All of the enumerators and cooks were also housed at the Umsunduze Training Center for the period of the KPC survey. In the future, it would be more cost-effective to completely outsource the catering function. Although the home-based care volunteers who served as cooks were using their skills and earning wages, there was no transfer of knowledge, and as such, there was no potential for any capacity-building to occur. In addition, in the future, it would also be helpful to apply more stringent criteria to selection of the enumerators. Some sort of qualifying written test or interview would serve well to select the most promising enumerators. Additionally, two of the supervisors were drawn from the clinics in the project area, which meant that they had to be excused from their normal duties. In the face of the staffing shortage at the clinics, many times these supervisors had to split their time between their normal duties and the KPC survey, and as a result were overburdened.

III. METHODS

A. Questionnaire

The questionnaire for the survey was designed to collect information from mothers or caregivers of children under 60 months of age, and is composed of the following modules: (a) childhood immunization; (b) diarrhea case management; (c) pneumonia case management; (d) maternal and newborn care; (e) delivery practices; (f) postpartum care; (g) IMCI; (h) HIV/AIDS and other sexually transmitted diseases; and (i) health contacts and sources of health information. A single version of the questionnaire was administered to both mothers and caregivers, though instructions were provided to enumerators to skip questions such as those related to pregnancy and the post-partum period when interviewing caregivers given that they were not relevant.

Given that a large number of children in the project area are cared for by non-maternal caregivers, consideration was initially given to administering two separate questionnaires - one for mothers, and one for caregivers. However, as sampling both mothers and caregivers independently would have increased the costs of administering the survey considerably[6], it was determined that it would be more cost-effective to administer a single questionnaire to a combined sample of mothers and caregivers.

The questionnaire was drafted by the home office and then adapted and translated into Zulu by the field team and the MOH. See Annex 2 for a copy of the questionnaire.

B. Ndwedwe District Child Survival Indicators

A listing of the child survival indicators that will be used as the basis for evaluating the Project's performance are summarized in the ensuing table.

INDICATORS	DEFINITION
HIV/AIDS/STIs	
Indicator 1: 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.	Percentage of mothers who can name three or more symptoms of STIs in females.
Indicator 2: Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.	Percentage of mothers who report use of a condom during the last act of intercourse.
Indicator 3: 90% of mothers will be able to recognize at least three known ways in which a mother can transmit HIV/AIDS to her child	Percentage of mothers who are able to recognize at-least three known ways of mother to child transmission of HIV/AIDS
Indicator 4: 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child	Percentage of mothers and caregivers who state they are willing for a child under their care to play with an HIV-positive child.
Indicator 5: 100% of DOH health facilities in the project area will provide appropriate HIV/AIDS/ STIs prenatal screening and counseling according to protocols.	Percentage of clinics and hospitals providing HIV/AIDS/ STIs screening and counseling.
Indicator 6: 75% of households caring for OVCs will be aware of and know how to access DSW grants and services.	Percentage of caregivers caring for OVCs who have established contact with DSW.

[6] MCDI's estimates indicated that we would have to double the sample size to be able test the difference in behavior between mothers and caregivers.

INDICATORS	DEFINITION
Indicator 7: 85% of high school students in schools with active School Health Clubs (SHCs) are able to name at least two strategies of prevention	Percentage of school students in schools with active SHC can name at-least two strategies of HIV/AIDS prevention
Indicator 8: 60% of high school students in schools with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use)	Percentage of school students in schools with active SHC adopting at-least one of the three methods of HIV/AIDS prevention
CONTROL OF DIARRHEAL DISEASES	
Indicator 1: 90% of mothers and caregivers whose child experiences a diarrheal episode during the previous two weeks will provide oral rehydration therapy(ORS, SSS, or home available fluids) to the child under their care during diarrheal episodes.	Percent of mothers and caregivers who report they gave ORT during their child's last episode of diarrhea
Indicator 2: 50% of mothers and caregivers will report that they wash their hands before feeding the child under their care.	Percent of mothers and caregivers who report hand-washing before feeding children
Indicator 3: 85% of mothers and caregivers whose child experiences a diarrheal episode during the previous two weeks will give the same amount of or more liquids than usual during diarrheal episodes.	Percent of mothers and caregivers who report that they gave the same or more than usual liquids during the child's last diarrhea episode.
PNEUMONIA CASE MANAGEMENT	
Indicator 1: 35% of mothers/caregivers whose child with cough experiences rapid or difficult breathing during the previous two weeks will seek medical attention by the end of the day after the onset of symptoms.	Percent of mothers/caregivers who report they sought medical treatment for their child with cough and rapid or difficult breathing by the end of the day after the onset of symptoms.
Indicator 2: IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the project clinics	Percent of clinics treating children who correctly diagnose and treat children with cough and difficult breathing according to IMCI protocols during supervisory visits.
IMMUNIZATION	
Indicator 1: 70% of children aged 12-23 months will be fully immunized per RTH card	Percent of KPC children 12-23 months of age whose RTH Cards indicate that they are fully immunized.
Indicator 2: 80% of children aged 12-23 months will have received a measles vaccination per RTH card	Percent of KPC survey children 12-23 months of age whose RTH Cards indicate that they are immunized for measles.
MATERNAL AND NEONATAL CARE	
Indicator 1: At least 60% of mothers/caregivers will be aware of two or more of the danger signs in newborns that require immediate treatment.	Percentage of mothers/caregivers who can name two or more of the danger signs in newborns.
Indicator 2: 40% of CHCs will have established a cost recovery/financial system or loan system for different priority PHC activities(e.g., transportation for obstetrical emergencies, incentives for CHWs, HBCVs, etc.)	Percentage of community based health funds established in CHC catchment areas
Indicator 3: During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter	Percent of mothers who report they made one antenatal visit during their first trimester and that they made at least 4 antenatal visits in all.
Indicator 4: 80% of midwives in program area health facilities will be trained in the PEP modules.	Percentage of midwives in program area health facilities who are trained in the PEP modules.

C. Sampling Design

In keeping with standard cluster sample survey design, a sample of 300 households was drawn from the expanded project area in Ndwedwe Sub-District. Households with children under the age of five were selected for the survey (as opposed to the usual KPC selection criteria that identifies households with children under 2) in an attempt to capture more households with children that have been affected by HIV/AIDS, that is, households in which the child has lost one or both parents and is being cared for by a non-maternal caregiver. Though it was recognized that expanding the selection criteria to the under-5 age cohort would likely reduce the reliability of the point estimates for the under-2 age group, it was felt that net benefit was positive given the anticipated increased reliability with respect to households with children that have been affected by HIV/AIDS – a critically important, yet relatively poorly understood, epidemiological factor in the project area.[7] Although a sample size larger than 300 would have enabled the team to obtain estimates with smaller confidence limits, this was neither logistically nor financially feasible because of the large distances between households in Ndwedwe, particularly in the new expansion area. These factors, combined with the fact that the NDCSP had undergone a KPC survey fairly recently (in 2000), led the team to decide to limit the sample size to 300 households.

Ten households were selected in each of 30 clusters. Clusters were selected using a systematic random sampling methodology that selected the clusters from the tribal authority areas and associated enumerator area codes (equivalent to housing areas in areas for which there is mapping available) in proportion to the population size of the tribal area. Thus larger tribal areas had a higher probability of having clusters drawn. 1998 population projections based on the 1996 census were provided to the NDCSP by the Human Sciences Research Council. See Annex 3 for a listing of the clusters sampled.

Once the survey teams reached the designated cluster site, the initial household surveyed within the cluster, as well as the direction from the initial household was randomly selected. A start-point near the center of the cluster was designated. The team members spun a pencil to randomly select a direction. Households were visited in the direction the pencil was pointing in. They then visited the next nearest household in that direction until they came to the end of the limits of the cluster, defined by enumerator area code. Households were selected for interview if they had a child under 5 living in it.

When a household was chosen that had more than one child under 5 living in it, the enumerator was instructed to ask the mother questions relating to the youngest child. If there were two or more mothers living in the household with children under five, again the mother with the youngest child was chosen to answer the questionnaire.

D. Training of Supervisors and Interviewers

Training of supervisors and enumerators was carried out by MCDI's KPC consultant, Gita Gidwani. The supervisors for the KPC Survey consisted of both NDCSP and DOH staff,

[7] The loss in precision for questions pertaining to the under-2 population expected as a result of change in our selection criteria was not deemed to be overly problematic given the relatively wide confidence intervals typically generated using the cluster sampling methodology as a result of the design effect associated with intra-cluster homogeneity.

including individuals with previous supervisory work experience from the NDCSP's 1996 baseline survey. The NDCSP and DOH staff agreed that this exercise would be an important learning opportunity for the DOH staff. Because of the NDCSP's strong emphasis on community participation, the enumerators were selected from the NDCSPs group of home-based care volunteers (HBCVs). Involving the HBCVs in the KPC process was not only seen as a means of enhancing community participation, but was also seen as a means of providing them with the opportunity to earn money and gain skills.

Supervisors received a day of specialized training prior to the onset of joint training for supervisors and interviewers. The first day of supervisor training was very participatory, and the entire questionnaire was reviewed. During this time, the supervisors were encouraged to ask questions and provide suggestions regarding the entire KPC survey process, as well as regarding the questionnaire. As a result of this first day of training, a few changes were made to the questionnaire.

The joint training of supervisors and interviewers took place over five days and also employed a participatory approach where four of the supervisors led the training. Prior to the first day of training, the MCDI team reviewed the training curriculum and delegated responsibility for the various sessions among the four senior supervisors, who are all nurses.

The first day of training was dedicated to survey administration, methodology, and understanding the questionnaire. The MCDI team instructed the interviewers in the following: (a) purpose and objectives of the survey, (b) selection of the sample size, (c) selection of the starting household and survey direction, (d) community protocols and taboos, and (e) a thorough review of the customized questionnaire. The second day of training continued with a detailed review of the entire questionnaire to ensure that the interviewees understood the questions.

The remaining two days of training were also structured around the questionnaire. The interviewees were instructed to study the questionnaire as their homework, and to come to class the next day with any questions or issues that needed clarification. The definition of a caregiver as someone other than the parent who has permanent or long-term responsibility for a child was also explained to the interviewees during this time. In addition, as stated previously, in households with more than one child under the age of five, the enumerators were instructed to select the mother/caregiver of the youngest child in the household. Interviewing techniques, including role-playing, as well as selection of households within the clusters was also reviewed.

On the fifth day of training, the questionnaire was pilot-tested by each group on a household near to the training center. Although only one of the enumerators from each group administered the survey, the other enumerators in the group were instructed to follow along and take any notes as needed. Any outstanding issues were clarified through the pre-testing of the survey. See Annex 4 for an overview of the training schedule.

E. Method of Data Collection

The survey was conducted over a five-day period from November 27-December 1, 2001. Teams were guided to the cluster sites by the drivers of the transport vehicles, all of whom were residents of the district. There were six teams with four enumerators and one supervisor for each

team. The supervisor of each team was responsible for the selection of the starting household and the survey direction.

The supervisors observed at least one complete interview each day, and tried to accompany and directly supervise those enumerators whose performance demonstrated that they needed more direct attention. The length of time for each survey was approximately 45 minutes. In addition, both of the data entry persons reviewed many of the written surveys before any data was entered as a quality control mechanism. This also led to a faster and easier data entry process, as the data entry persons were very familiar with the survey.

In order to ensure consent and confidentiality, a consent form was attached to each survey. Each interviewer was instructed to read the consent form to the mother before commencing with the survey. The consent form from the Rapid KPC Survey was used. The form advised the potential respondent that she was not obligated to participate in the survey, that all information would be held in confidence, and that the information would be used to help health workers plan health activities. The interviewers were required to sign each form verifying that it had been read to the mother/respondent, and that she had consented to participate. In spite of our best efforts we experienced greater than usual problems with quality control, which has caused a much higher proportion of missing values in our dataset than has occurred when MCDI has administered similar surveys in the past. Though the reliability of our results have clearly been adversely impacted to some degree, we believe that a lot of useful information has been gained from the survey and that the process will serve as a learning device both for MCDI and the NDCSP and DOH staff.

F. Method of Data Analysis

The data was tabulated and analyzed using the EPI INFO EPI6 software program. EPI/INFO EPI6, developed at the Centers for Disease Control (CDC) in Atlanta, was designed specifically for the analysis of health surveys. For the purposes of this report, frequency distributions for each of the variables were generated. In addition, a number of bi-variate cross-tabulations were also derived. The findings from this analysis are presented in the sections that follow. Point estimates derived from the survey for each question are presented in Table 3 in the ensuing section.

As can be seen from the table, the 95% confidence intervals for a number of the point estimates are rather large – a phenomenon that is not unusual in this type of small sample cluster survey design. To some degree, however, the confidence intervals are larger than they might have been given that the sub-sample sizes related to some of these questions was restricted by our sample design. As has been explained elsewhere, the sampling design sought to obtain information not just on the 0-23 aged population typically focused on in the Rapid Catch surveys but, given the enormous AIDS orphan problem in the project area, to collect information on the 0-5 year cohort as well. This necessarily meant that the 0-23 sub-sample size was reduced to some degree. The wider confidence limits were considered a necessary trade-off for obtaining a broader and more relevant set of indicators upon which to formulate our overall project strategy.

IV. RESULTS

The survey consisted of 92 questions, which are discussed below. The use of different denominators for different questions reflects whether (1) the questions were addressed to mothers and caregivers together, or mothers alone, (2) questions were addressed to particular cohorts of the survey population selected for specific health-related criteria such as whether their child had been ill with diarrhea during the preceding two weeks, and (3) missing data caused by quality control problems. Three hundred (300) questionnaires were entered into EPI/INFO for analysis.

Table 3: 2001 Baseline KPC Results
Ndwedwe District Child Survival Project

Cost Extension Proposal Objectives	Numerator/ Denominator	Percent	Confidence limits
HIV/AIDS/STIs Objectives (30% of LOE), by EOP:			
1. 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.	43/164	26%	20%-33%
2. Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.	52/174	30%	23%-37%
3. 90% of mothers can recognize at least three known ways in which a mother can transmit HIV/AIDS to her child.	136/254	54%	47%-60%
4. 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child.	172/252	68 %	62%-74%
5. 100% of the DOH health facilities in the project area provide appropriate HIV/AIDS/STIs prenatal screening and counseling according to protocols.	Not KPC		
6. 75% of households caring for OVCs will be aware of and know how to access DSW grants and services.	Not KPC		
7. 85% of high school students in schools with active School Health Clubs (SHCs) have adequate knowledge of HIV/AIDS prevention as demonstrated in their ability to name at least two strategies of prevention.	Not KPC		
8. 60% of high school students in schools with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use).	Not KPC		
Control of Diarrheal Diseases Objectives (20% of LOE), by EOP:			
1. 90% of mothers/caregivers whose child experiences a diarrheal episode during the previous 2 weeks will provide oral rehydration therapy (ORS, SSS or available home fluids) to the child under their care during diarrheal episodes	23/31	74%	55%-88%
Analyzed for children 0-59 months of age	*44/64*	*69%*	*56%-80%*

Cost Extension Proposal Objectives	Numerator/ Denominator	Percent	Confidence limits
2. 50% of mothers/caregivers will report that they wash their hands before feeding the child under their care	20/135	15%	9%-22%
Analyzed for children 0-59 months of age	*27/299*	*9%*	*9%-21%*
3. 85% of mothers/caregivers whose child experiences a diarrheal episode during the previous 2 weeks will give the same or more liquids than usual during diarrhea episodes	19/29	66%	41%-76%
Analyzed for children 0-59 months of age	*30/60*	*50%*	*37%-63%*
Pneumonia Case Management Objectives (20% of LOE), by EOP:			
4. 35% of mothers/caregivers whose child with cough experiences rapid or difficult breathing the previous two weeks will seek medical attention by the end of the day after the onset of symptoms	3/30	10%	2%-27%
Analyzed for children 0-59 months of age	*9/68*	*13%*	*6%-24%*
5. IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the project clinics	Not KPC		
Immunization Objectives (15% of LOE), by EOP:			
1. 70% of children aged 12-23 months are fully immunized per RTH card	22/43	51%	36%-66%
2. 80% of children aged 12-23 months will have received a measles vaccination per RTH card	26/43	61%	45%-75%
Maternal/Neonatal Care Objectives (15% of LOE), by EOP:			
1. At least 60% of mothers/caregivers will be aware of two or more of the danger signs in newborns that require immediate treatment	122/300	41%	35%-47%
2. 40% of CHCs will have established a cost recovery/financial system or loan system for different priority PHC activities (e.g., transporting obstetrical emergencies, incentives for CHWs, HBCVs, etc.)	Not KPC		
3. During their last pregnancy, 50% of mothers will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter	40/196	20 %	13%-28%
4. 80% of midwives in program area health facilities will be trained in the PEP modules	Not KPC		

Rapid CATCH Findings

INDICATOR	Numerator/ Denominator	Percent	Confidence limits
Measure of child health and well-being			
% of children aged 0-23 months who are underweight (-2SD from the median weight-for-age, according to the WHO/NCHS reference population	N/A[8]		
Prevention of Illness/Death			
% of children age 0-23 months who were born at-least 24 months after the previous surviving child	N/A		
% of children age 0-23 months whose births were attended by skilled health personnel	101/116	87%	80%-93%
Analyzed for children 0-59 months of age	*217/252*	*86%*	*81%-90%*
% of mothers with children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	77/87[9] result based on one TT injection	89 %	80%-94%
Analyzed for children 0-59 months of age	*166/194*	*84%*	*78%-89%*
% of children age 0-5 months who were exclusively breastfed during the last 24 hours	12/32	38%	21%-56%
% of children aged 6-9 months who received breast-milk and complementary foods during the last 24 hours	13/16	81%	54%-96%
% of children age 12-23 months who are fully vaccinated before the first birthday	22/43	51%	36%-66%
% of children 12-23 months who received a measles vaccine	26/43	61%	45%-75%
% of children 0-23 months who slept under an insecticide-treated net the previous night	N/A		
% of mothers/caregivers with children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	66/97	68%	58%-77%
Analyzed for children 0-59 months of age	*147/234*	*63%*	*57%-69%*

[8] The KPC survey did not measure weight-for-age to estimate under-weight and neither was a nutritional survey conducted

[9] The KPC survey did not report maternal tetanus toxoid (TT) coverage since mothers reported that the Maternal Health Cards are held at the facilities. According to the DOH, there were no cases of tetanus in KwaZulu Natal between 1998 - 2000 (Directorate: Health Systems Research and Epidemiology Notification System, Pretoria, 2000). National DOH data also shows a high percentage of pregnant women in the province (75%) receiving tetanus toxoid immunizations.

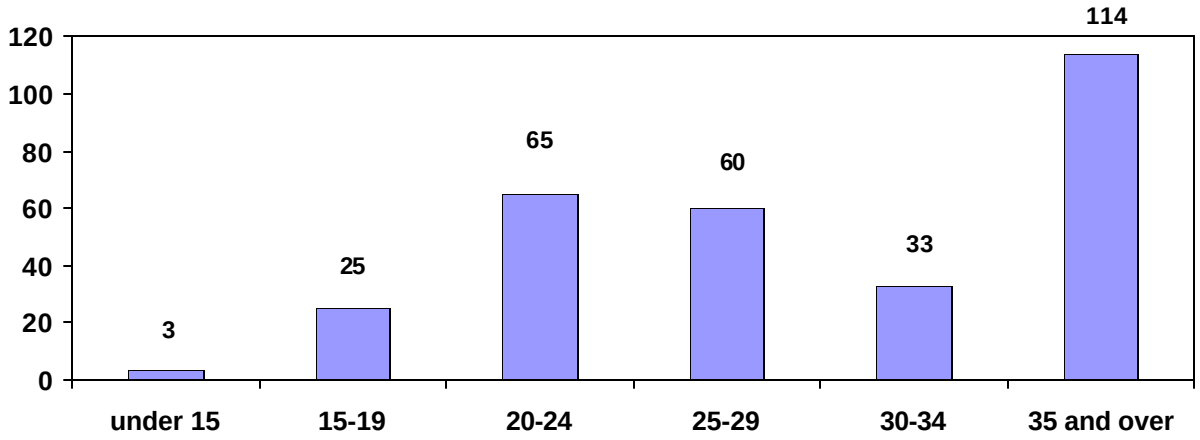
INDICATOR	Numerator/ Denominator	Percent	Confidence limits
% of mothers/caregivers with children age 0-23 months who report that they wash their hands with soap/ash before food preparation, before feeding, after defecation, and after attending to a child who has defecated	7/135	5%	2%-10%
Analyzed for children 0-59 months of age	*8/300*	*3%*	*1%-5%*
Management/Treatment of Illness			
% of mothers/caregivers of children age 0-23 months who know at least two signs of childhood illness that indicate the need for treatment	95/135	71%	62%-78%
Analyzed for children 0-59 months of age	*206/300*	*69%*	*63%-74%*
% of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	1/73	1%	0%-5%

The rapid catch indicators above are included in this report as suggested in the KPC 2000+ Tool and Field Guide. The Breastfeeding subsection C, discussed in the results section below includes catch indicators. Although NDCSP project will not directly measure the breastfeeding practices, the best practices of exclusive breastfeeding and appropriate complementary feeding will be an overarching message that will be disseminated with mothers/caregivers.

A. Demographics

In the Ndwedwe District Child Survival Project target area, the mean age reported by mothers/caregivers surveyed is 32.77 years. Graph 1 below illustrates the age group of mothers/caregivers who were interviewed.

Graph 1: Age Distribution of Mothers and Caregivers



Among the children in the survey, roughly 24% are under the age of one year (11 months of age or younger), 21% of the children are 12-23 months of age and 55% are between two and five years of age. The mean age of children in the survey is 28.17 months. Based on the age and sex distribution of the 300 households, 49% of the children aged 0-59 months are females and 51% are male. Age and sex of the children in the sample are presented in Table 5.

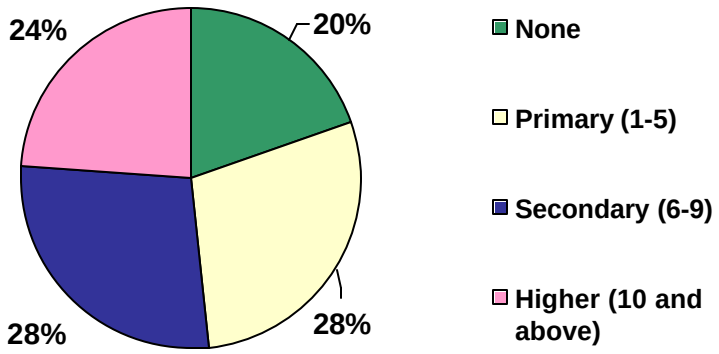
Table 5: Age and Sex of the Children Sampled

AGE	MALE	FEMALE	TOTAL
Less than 5 months	18	19	37
5-11 months	17	19	36
12-23 months	39	23	62
24-59 months	79	86	165
TOTAL	153	147	300

Most of the children surveyed were being cared for by their mothers. Among the 15% who were under the care of caregivers other than their mother, the majority (85%) were being cared for by their grandmother. 87% of the mothers/caregivers were found to be working outside the home.

As shown in Graph 2, the educational attainment of mothers and caregivers is relatively high. Only 20% had no formal education whatsoever while over half had secondary education or above. This is a significant finding for the Project since it establishes that modern forms of information dissemination (print media, radio and TV) are likely to be quite effective for a sizeable proportion of the target population. Never the less, the fact that nearly half of the mothers and caregivers had a primary education or none at all suggests the need to continue with less modern forms of outreach.

Graph 2: Caregivers' Level of Education



B. HIV/AIDS/STIs

Knowledge

All mothers/caregivers with children age 0-59 months were asked, "Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?" 26 respondents did not answer the question, but of those who did, roughly 86% reported in the affirmative. Among these, slightly over half (54%) were aware of at least two ways of prevention. A similar percentage knew of at least three ways of transmission of HIV/AIDS from a mother to the child. See Table 16 below.

Table 16: Percent of mothers aware of at least two ways HIV/AIDS can be transmitted from mother to child

# OF WAYS HIV/AIDS CAN BE TRANSMITTED FROM MOTHER TO CHILD	NO. (%) OF MOTHERS
0	52 (21%)
1	28 (11%)
2	38 (15%)
3	136 (54%)[10]
TOTAL	254

Mothers only were also asked whether they had heard about other infections transmitted through sexual contact, apart from AIDS. Of the 254 mothers in the sample, 252 mothers answered this question. Of these, 58% reported that they had heard about other infections. Less than a third of the mothers who had heard about other infections (26%) knew three or more signs and symptoms of this type of sexually transmitted infection.

Although mothers/caregivers knowledge that HIV/AIDS can be avoided was found to be high, knowledge about multiple ways of transmission and prevention was less pervasive. Given the relatively high incidence of HIV/AIDS in KwaZulu Natal province it will be important for the Project to focus on increasing knowledge and practice of appropriate ways of prevention. The project will continue to use multiple strategies for HIV/AIDS education such as DramAide, in-

[10] Throughout the report percentages in tables may not equal to 100% due to rounding

school education and community worker outreach provided by home based care volunteers (HBCVs), and community health workers (CHWS).

All mothers/caregivers were asked whether there is a cure for AIDS. Of the 300 mothers/caregivers in the sample, 248 mothers responded to this question; approximately 19% reported "yes," while another 10% did not know.

Attitudes and Practice

In addition to assessing knowledge, several questions in the KPC measured mothers'/caregivers' attitudes towards people living with HIV/AIDS. If a relative of the mother/caregiver became sick with the AIDS virus, 77% reported they would be willing to care for him/her in their own household if they could afford it while 18% reported they would not be willing to do so. Approximately 78% of mothers/caregivers stated that if their child's teacher had the AIDS virus but was not sick, the teacher should be allowed to continue teaching school. Although more than half of the mothers/caregivers said that they would allow their child to play with another child who had the AIDS virus, a relatively large percentage (32 %) reported they either did not know or would not allow their child to play with another child who has AIDS. The survey evidence reveals that although progress has been made in educating the general population about the risks of living with people affected by HIV/AIDS, prejudice still exists among a non-negligible proportion of the population. The stigma associated with HIV/AIDS still forms a barrier to effectively curtailing the epidemic. The Project's HBCVs supervisors corroborated these perceptions by reporting that most patients still do not reveal their sero-status, and thus do not benefit from the quality of care they could obtain. It is anticipated that the Project's strategies of using HBCVs and DramAide will result in creating more awareness and a change in the social stigmas, especially in care of the sick and the acceptance of the person with HIV/AIDS.

According to those who were willing to answer questions about their sexual practice and that of their husbands, approximately 45% believed that their partners had multiple sexual partners[11]. Although a high percentage of mothers reported that they believed their husbands had multiple partners, besides the existing social stigmas stated above, traditional cultural values result in mothers' inability to influence their partners' sexual behaviors. This was also reflected in the fact that only 30% reported using a condom the last time they had sexual intercourse. Table 17 provides the main reasons these mothers gave for using a condom.

Table 17: Reasons for using a condom on the last sexual act (multiple answers allowed)

REASONS FOR USING A CONDOM ON LAST SEXUAL ACT	% OF MOTHERS
To prevent STDs/HIV	33 (64%)
To prevent pregnancy	25 (48%)
To prevent both STDs/HIV and pregnancy	14 (27%)
Partner has other partners/doesn't trust partner	6 (12%)
Partner insisted	1 (2%)
TOTAL	52 (100%)

Note: Because multiple answers were permitted for this question, the total (52) represents the number of women who reported using a condom and therefore does not add up to the numbers in the column.

[11] Responses were not provided for 111 mothers among whom 46 constituted outright refusals to answer.

C. Control of Diarrheal Diseases

Knowledge

24% of the mothers and caregivers with children less than 24 months of age reported that their child had experienced an episode of diarrhea in the two weeks prior to the survey. Information related to the care of these 32 children during the diarrheal episode is presented below. Nearly three quarters (74%) of these mothers/caregivers had correct knowledge of how to make a sugar salt solution (SSS), while the remaining mothers/caregivers either did not know how to make the solution or stated an incorrect way of making the solution. A cross-tabulation of knowledge of SSS preparation and the level of maternal/caregiver education revealed that better educated mothers/caregivers are no more likely to know how to prepare SSS than those who are less well educated. This seems to suggest that increasing knowledge of correct SSS preparation will depend principally on gaining access to those who do not know how to properly mix SSS rather than on changing the information provided.

Practice:

Table 6 below summarizes the feeding practices of mothers/caregivers during the child's diarrheal episode. It reveals that *a large proportion (84%) of mothers/caregivers whose child experienced a diarrheal episode during the two weeks prior to the interview, either reduced or did not increase the quantity of food given to the child during the illness episode. None of the children were given more to eat as recommended under rehydration therapy!*

Table 6: Feeding Practices by Mothers/Caregivers for Children with Diarrhea

FEEDING DURING DIARRHEA EPISODE	No. (%) OF MOTHERS/CAREGIVERS
Less Quantity of Food	14 (45 %)
Same Quantity of Food	12 (39%)
Greater Quantity of Food	0 (0%)
Exclusive Breastfeeding	5 (16%)
TOTAL	**31 (100%)**
Missing	*1*

Table 7 describes in detail the practice of mothers/caregivers in providing liquids during their child's diarrheal episode. Again, as in the case of feeding above, it is evident that *a large percentage (83%) either provided less than the usual amount of liquids, or did not increase the volume of liquids administered*. Only 7% actually increased the volume of liquids provided to their child during their diarrheal episode as intended under rehydration therapy!

Table 7: Percent of Mothers / Caregivers who Reported Giving the Same or More Liquids than Usual During Diarrheal Episodes

LIQUIDS DURING DIARRHEA EPISODE	No. (%) OF MOTHERS/CAREGIVERS
Less Volume of Liquids	10 (35%)
Same Volume of Liquids	14 (48%)
Greater Volume of Liquids	2 (7%)
Exclusive Breastfeeding	3 (10%)
TOTAL	**29 (100%)**
Missing	*3*

The finding that very few mothers/caregivers increased food and liquid intake during their child's diarrheal episodes is surprising given that 74% of the mothers/caregivers whose child experienced a diarrheal episode during the previous two weeks reported administering ORT (either ORS or SSS). In order to investigate this apparent contradiction in practice further, a cross-tabulation of ORT use with increased food and liquid intake is presented in Table 8.

Table 8:ORT Use and Increased Food and Liquid Intake During Diarrheal Episodes

ORT USE	INCREASED FOOD AND LIQUID INTAKE DURING DIARRHEAL EPISODE			
	YES		NO	
	N	(Row %)	N	(Row %)
YES	2	12%	16	88%
NO	1	23%	2	67%

Table 8 reveals that only 12% of the mothers/caregivers who used ORT actually increased the volume of food and liquids administered to their child during a diarrheal episode! Evidently, there is a widespread misunderstanding about rehydration therapy, and mothers/caregivers appear to be administering ORT in much the same way as they would antibiotics – as a treatment for diarrhea rather than as a therapy for combating dehydration associated with diarrhea. This is clearly a misconception that the Project will need to address within its information/education strategy.

In order to ascertain whether the contradictory practice of administering ORT while restricting food and fluid intake during diarrheal episodes is largely an informational problem (i.e., mothers/caregivers have not been informed of the purpose of ORT and the benefits of rehydration) or a comprehension problem (i.e., certain mothers/caregivers do not understand the purpose of ORT and the benefits of rehydration), a cross-tabulation of maternal/caregiver educational attainment by food and liquid intake is presented in Table 9. The hypothesis here is that the strategy needs to be largely informational (i.e., broad-based dissemination of appropriate information on ORT and rehydration) if increased food and liquid intake is unrelated to educational attainment, whereas the strategy needs to be largely one of targeted education if increased food and liquid intake is positively correlated with educational attainment. In the latter case, the evidence would suggest that mothers/caregivers with little or no education need to be targeted for education on the need for and benefits of rehydration and that this is the purpose of ORT as well as increased food and liquid intake.

Table 9: Educational attainment of mothers/caregivers and increased liquid intake during diarrheal episode

EDUCATIONAL ATTAINMENT OF MOTHERS / CAREGIVERS	INCREASED FOOD AND LIQUID INTAKE DURING DIARRHEAL EPISODE			
	YES		NO	
	N	(Row %)	N	(Row %)
SECONDARY OR HIGHER	2	20%	8	80%
PRIMARY	0	0%	5	100%
NONE	1	17%	5	83%

Table 9 suggests that maternal/caregiver educational attainment is not positively correlated with increased food and liquid intake during their children's diarrheal episodes. This further suggests that the Project will need to focus largely on a broad-based informational strategy that seeks to disseminate to all mothers/caregivers correct information concerning ORT and rehydration. Developing distinct targeted educational strategies for less educated mothers/caregivers will not apparently be necessary.

Another potentially beneficial consequence of effective ORT use for management of diarrheal disease could be a reduction in the demand for institutionally based clinical care in these cases. As reported earlier, 74% of mothers/caregivers whose child experienced a diarrheal episode during the previous two weeks reported administering ORT (either ORS or SSS). A smaller percentage (66%) of these same mothers/caregivers reported that they sought advice/treatment outside the home when their child had diarrhea. The question is therefore, were mothers/caregivers who use ORT less likely to seek advice treatment outside the home when their child had diarrhea? This is investigated in Table 10, which presents the results of a cross-tabulation between ORT use and care seeking at hospitals and clinics for diarrheal cases.

Table 10: Care Seeking Behavior and ORT Use in Cases of Diarrhea

ORT USE	SOUGHT HOSPITAL OR CLINIC CARE WHEN CHILD SICK WITH DIARRHEA			
	YES		NO	
	N	(Row %)	N	(Row %)
YES	18	67%	9	33%
NO	3	60%	2	30%

Table 10 suggests that mothers/caregivers who administer ORT are just as likely to seek treatment at hospitals or clinics when their child suffers from diarrhea as mothers/caregivers who do not administer ORT.[12] Given the fact that ORT use is not positively correlated with increased food and liquid intake, it is possible that the results presented in Table 10 simply confirm the tendency for mothers/caregivers to view ORT as a cure for diarrhea and that if it does not stop the diarrhea soon after being administered they feel the need to seek out medical care. This tentative hypothesis appears to be supported to some degree by the evidence reported in Table 11, which reveals that 84% of the mothers/caregivers waited at least one day to seek medical care for their child suffering from diarrhea, while only 17% waited two or more days.

Table 11: The time taken to seek treatment for the child with diarrhea

TIME TAKEN TO SEEK TREATMENT DURING DIARRHEA EPISODE	NO. (%) OF MOTHERS/CAREGIVERS
Same Day	3 (17%)
Next Day	12 (67%)
2 Days	1 (6%)
3 or more Days	2 (11%)
TOTAL	18 (100%)

The question then arises, did mothers/caregivers who increased the volume of food and liquid administered to their child during a diarrheal episode seek out care at a clinic or hospital less

[12] The small number of observations for mothers/caregivers who do not administer ORT prevents us from testing whether the small observed difference in proportions is statistically significant.

frequently than mothers/caregivers who did not increase food and liquid intake? Table 12 evaluates this phenomenon by cross tabulating whether mothers/caregivers sought clinic or hospital care for their child's diarrhea with the use of ORT and increased food and liquid intake.

Table 12: Care Seeking Behavior and Increased Food and Liquid Intake in Cases of Diarrhea

ORT USE AND INCREASED FOOD AND LIQUID INTAKE DURING DIARRHEAL EPISODE	SOUGHT HOSPITAL OR CLINIC CARE WHEN CHILD SICK WITH DIARRHEA			
	YES		NO	
	N	(Row %)	N	(Row %)
YES	8	67%	4	33%
NO	11	61%	7	39%

Table 12 suggests that mothers/caregivers who increased the volume of food and liquids administered to their child during diarrheal episodes are just as likely to seek care at a clinic or hospital when their child suffers from diarrhea as mothers/caregivers who do not increase food and liquid intake. This finding could be the result of a number of factors. First, it may be a function of the fact that most clinics have ORT Corners and that mothers/caregivers frequent these to obtain ORT assistance. Second, it is possible that mothers/caregivers who use ORT and increase food and liquid intake take their child to the clinic or hospital if the diarrhea is particularly severe. Or third, it could reflect the underlying need for better education as to the fact that most diarrheas are self-limiting and that ORT is not a cure for diarrhea.

The survey also examined sanitation practices and hand washing in particular. Mothers/caregivers of children under 24 months were asked when they washed their hands "before cooking", "before eating", "before feeding," and/or "after defecation." Table 13 presents the frequency of mothers/caregivers who reported that they did wash their hands at these times.

Table 13: Percent of mothers/caregivers who reported when they wash their hands*

WHEN RESPONDENTS USUALLY WASH HANDS	NO. (%) OF MOTHERS/CAREGIVERS
Before Feeding Children	20 (15%)
Before Eating	36 (27%)
Before Cooking	69 (51%)
After Defecation	105 (78%)
TOTAL	135

*Multiple responses permitted; therefore total percentages will exceed 100%

Table 13 reveals that a very small percentage of mothers/caregivers wash their hand before feeding their children, and that approximately half also do not wash their hands before cooking. The Project will clearly need to focus attention on educating mothers/caregivers on the etiology of diarrheal disease and the benefits of hand washing before cooking, eating and feeding their children.

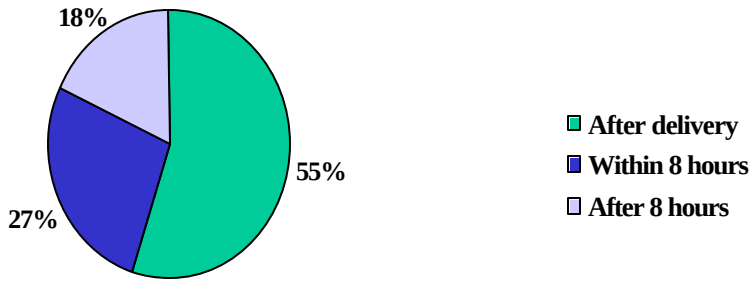
D. Breastfeeding

Practice:

A very high percentage (97%) of mothers with children under the age of two, reported that they

breastfed their child. As shown below in graph 3, of all the mothers who reported breastfeeding their child, 55% said that they put their child to the breast soon after delivery. 27% said that they put the child to the breast within 8 hours after birth, while 18% did so after 8 hours.

Graph 3: Time Taken to Initiate Breastfeeding



The data for exclusive breastfeeding were obtained by asking mothers what they had fed their child in the previous 24 hours. Those who indicated only "breast milk" were considered as having exclusively breastfed their child (this is the conclusion suggested in the KPC 2000+ Tool and Field Guide). Using these criteria, it is evident that approximately 63% of the mothers did not exclusively breastfeed their child. Mothers/caregivers are probably introducing complementary foods and top feeds at an early age. Although promotion of breastfeeding and complementary practices is not a direct intervention of the Project, it is an overarching message that is integrated as a practice when the child is sick with diarrhea, pneumonia or any childhood ailments. The child survival messages will promote appropriate practices of exclusive breastfeeding to reduce episodes of diarrhea and increase feeding when the child has diarrhea or pneumonia, which is apparently low according to the KPC.

E. Pneumonia Case Management

Knowledge:

Only 11% of mothers/caregivers for children age 0-23 months had knowledge of fast and difficult breathing as a sign of illness requiring immediate care. This finding is corroborated by the qualitative research results that identified that mothers/caregivers were unable to define pneumonia by a set of distinct symptoms thus making it difficult for them to recognize it as a dangerous condition requiring attention by medical personnel. This is probably the reason that only 10% of the mothers/caregivers actually sought medical attention for the child by the end of the day after the onset of symptoms (see Table 17).

Practice:

46 % of mothers/caregivers reported that their child under the age of 2 had an illness with cough in the last two weeks prior to survey, of which 55% reported that the cough was accompanied by short fast breaths.

Table 14 examines the percentage of mothers/caregivers who administered varying quantities of liquids to their child suffering from a cough with fast breathing. It reveals that *a high percentage*

(88%) of mothers/caregivers reported either reducing or not increasing the volume of fluids they gave to their child with cough and fast breathing. *None reported that they increased the volume of liquids administered* during the illness event contrary to recommended practice!

Table 14: Percent of mothers/caregivers who offered less than usual, about the same or more than usual to drink when the child had cough with fast breathing

AMOUNT OF LIQUIDS GIVEN WHEN CHILD HAD COUGH WITH FAST BREATHING	NO. (%) OF MOTHERS/CAREGIVERS
Less liquids than usual	19 (56%)
Same liquids as usual	11 (32%)
More liquids than usual	0 (0%)
Exclusively breastfeeding	3 (9%)
Don't know	1 (3%)
TOTAL	34 (100%)

Table 15 reports on mothers/caregivers breastfeeding practices during a child's respiratory illness. As in the case of liquids in general, it reveals that *a very high percentage (89%) either reduced or did not increase the amount of breast milk given during the child's respiratory illness*. Only 7% actually increased the amount of breast milk given during the illness!

Table 15: Breastfeeding practices when child had cough with fast breathing

BREASTFEEDING PRACTICES WHEN CHILD HAD COUGH WITH FAST BREATHING	NO. (%) OF MOTHERS
Stopped Breastfeeding completely	1 (4%)
Breastfed less	16 (59%)
Breastfed same	8 (30%)
Breastfed more	2 (7%)
Not breastfeeding	1 (4%)
TOTAL	27 (100%)
Missing	*8*

Table 16 reports on the feeding practices of mothers/caregivers when their child suffered from a cough and fast breathing. It reveals that *an extremely high percentage (94%) of mothers/caregivers reduced or did not increase the amount of food given to their child suffered from a cough and fast breathing*. None of the mothers/caregivers reported giving their child more food to eat contrary to recommended practice!

Table 16: Percent of mothers/caregivers who offered less than usual, about the same or more than usual to eat when the child had cough with fast breathing

AMOUNT OF FOOD GIVEN WHEN CHILD HAD COUGH WITH FAST BREATHING	NO. (%) OF MOTHERS/CAREGIVERS
Less to eat than usual	24 (73%)
Same to eat as usual	7 (21%)
More to eat than usual	0 (0%)
Exclusively breastfeeding	1 (3%)
Don't know	1 (3%)
TOTAL	33 (100%)
Missing	*2*

The preceding analysis confirms the practice reported earlier in the case of diarrheal disease case management by mothers and caregivers. Very few mothers/caregivers evidently understand the need for increasing the quantity of food and fluid (including breast milk) when their child is experiencing respiratory illness. The Project will clearly need to develop a broad-based and comprehensive education strategy aimed at educating mothers as to the benefits of increased food and fluid intake during respiratory illness events.

Coverage:

All mothers/caregivers with children who experienced a cough and or fast breathing were asked whether they sought advice or treatment outside the home. A high percentage of mothers/caregivers (87%) reported that they sought treatment outside the home for their child when sick with a cough and fast breathing. In all these cases care was sought either from a hospital, a health center or clinic. However, as shown in Table 17, only 10% of the mothers/caregivers sought medical attention for the child by the end of the day after the onset of symptoms. Approximately 44% of mothers/caregivers waited for 2 or more days. This has clear implications for the Project, as it is essential for mothers/caregivers to seek early and appropriate care for respiratory illnesses. The project will therefore, emphasize the importance of seeking care on the same day and measure this as a key indicator in the pneumonia case management.

Table 17: Time taken by mothers/caregivers to seek treatment for their child with cough and fast breathing

TIME TAKEN TO SEEK TREATMENT FOR CHILD WITH COUGH AND FAST BREATHING	NO. (%) OF MOTHERS/CAREGIVERS
Same day	3 (10%)
Next day	14 (47%)
2 days	5 (17%)
3 more days	8 (27%)
TOTAL	30 (100%)
Missing	*5*

F. Immunization

The interviewers were instructed to record immunization dates from the child's immunization card or Road to Health Card (RHC). The data on immunization status for children 12- 23 months of age, therefore, is based on the RHCs actually seen by the interviewers. There were 62 children in the survey 12-23 months of age, of these 43 had a RHC seen by the interviewer. The following are coverage figures for OPV, DPT, measles and full immunization.

Knowledge:

When mothers were asked at what age a child should receive a measles immunization. Only 11% reported a correct answer (9-12 months were considered a correct answers, however all 11% reported 9 months).

Coverage:

The following table reports the coverage for specific antigens for children age 0-23 months.

Table 18: Immunization Coverage for Children 12-23 Months of Age

BCG IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	5 %(2/43)	95% (41/43)	43
POLIO 1 IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	7 %(3/43)	93% (40/43)	43
POLIO 2 IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	12%(5/43)	88% (38/43)	43
POLIO 3 IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	201% (9/43)	79% (34/43)	43
DPT 1 IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	12% (5/43)	88% (38/43)	43
DPT 2 IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	12% (5/43)	88% (38/43)	43
DPT 3 IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	16% (7/43)	84% (36/43)	43
MEASLES IMMUNIZATION STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	40% (17/43)	60% (26/43)	43
FULLY IMMUNIZED STATUS			
AGE GROUP	NO	YES	TOTAL
12-23	49% (21/43)	51% (22/43)	100% (43)

While BCG, Polio 1-III and DPT 1-III coverage rates were fairly high, roughly 61% children age 12-23 months were immunized with a measles antigen and only 51% of children age 12-23 months were fully immunized.

G. Maternal and Newborn Care

Knowledge:

In the case of maternal care, approximately 33% of the mothers did not know of the danger signs such as fever, excessive bleeding or smelly discharge as post partum danger signs indicating the need for clinical care.

In the case of newborn care, roughly 60% of the mothers/caregivers did not know at least two of the critical signs of infant illness such as poor feeding, fast-breathing, sluggish, irritable crying and fever.

The Project will need to put particular emphasis on educating mothers about signs of illness in newborns while re-enforcing their knowledge of signs of post partum maternal complications. TBAs and CHWs will receive further training in this regard and will serve as key educators in this area.

Coverage:

1. Antenatal Care

The survey revealed that 76% of the 254 mothers interviewed sought antenatal care during their last pregnancy. 68% of these reported seeking antenatal care from a nurse, 21% from a doctor, and approximately 3% from a TBA. Only one fifth of the mothers reported that they began their antenatal visit during the first trimester and had at least three visits thereafter. Clearly, this is an area where the Project will hope to have a significant impact by substantively increasing early and regular antenatal care use throughout pregnancies. In this regard, the Project will continue to train TBAs and CHWs to educate mothers on the benefits of seeking timely and appropriate antenatal care. TBAs and CHWs will also continue to be trained to refer obstetric complications and those requiring emergency care to hospitals in the area.

2. Tetanus Toxoid Immunizations

84% of the mothers reported that they received a TT injection when they were last pregnant. Given that there were a relatively high number of missing observations for this question (60 of the 254 mothers), the question arose whether these missing observations were for mothers who reported that they had not used antenatal care? If this were the case, then the 84% TT vaccination coverage rate would be selectivity biased in an upward direction.[13] In order to test for potential selectivity bias, TT responses were cross tabulated with Antenatal care use responses. Observing a high proportion of the missing values for TT in the NO category for antenatal care would confirm selectivity bias.

Table 19: Test for selectivity bias in TT coverage

TT	ANTENATAL CARE		
	YES	NO	MISSING
YES	116	44	3
NO	19	11	1
MISSING	*2*	*1*	*57*

As can be seen from Table 19, there is no evidence of selectivity bias in the TT coverage result presented earlier. Interestingly, however, 44 mothers who reported not seeking antenatal care reported having received a TT vaccination. This suggests either that there is recall error in TT vaccinations (which would mean that the TT coverage rate is understated) or that there is recall error in the use of antenatal care (which would mean that antenatal care utilization rates are higher than reported).

3. AIDS Testing

Of the 192 mothers who provided an answer to whether they had been tested for HIV/AIDS, over half (57%) reported that they were tested while pregnant, while the rest said that they were either never tested or did not know if they had been tested[14]. Taken at face value, these results would appear to suggest that there is a relatively high acceptance among women to be tested for AIDS, and that tests are relatively common as part of antenatal care. Given that HIV/AIDS testing is only administered at the hospital level in Kwazulu Natal, however, a cross-tabulation of the AIDS test with delivery location (hospital or other site) was evaluated to attempt to confirm the validity of this finding. Though the cross-tabulation revealed that women who delivered in a hospital were 10% more likely to have reported being tested for HIV/AIDS than women who

[13] To see this, note that since TT is administered at antenatal care visits, mothers who did not use antenatal care would not have been vaccinated, and thus the percentage actually vaccinated would be substantially lower than the 84% reported here.

[14] Sixty-two (62) of the mothers did not provide an answer for this question.

delivered in other locations[15], this result was not found to be statistically significant[16]. Moreover, 34 women in the sample (23% of the women) reported that they had been tested for HIV/AIDS while having delivered in a non-hospital setting. This either indicates that these women were tested at some point in the antenatal process before delivery at a hospital, or that they were misinformed and believed they were tested when in reality they were not. What is more certain is that with the high prevalence and incidence of HIV/AIDS in the Project area, there will be a need to continue advocating for HIV/AIDS testing, supplying rapid HIV test kits to Ndwedwe district hospitals and clinics, and for educating mothers on the benefits of anti-retrovirals during pregnancy as a means of reducing mother-to-child transmission of the virus.

4. Place of Delivery, Delivery Attendants and Postpartum Period

The survey revealed that women make relatively extensive use of modern care facilities for deliveries – a finding that stands in contrast to findings from elsewhere in the southern Africa region. Over two-thirds (68%) of the mothers reported they gave birth in a hospital while 17% gave birth at a clinic. By contrast, only 15% of the respondents gave birth in their own homes. Mothers were also asked who assisted them during their last birth. Only 14% reported that they delivered without assistance from a doctor, nurse or TBA. In these cases, the majority were assisted by a family member, but a small percentage reported delivering alone.

H. Integrated Management of Childhood Illness (IMCI)

Knowledge

Roughly 70% of the mothers/caregivers with children 0-59 months said that they knew two or more of the indicators of need for treatment in cases of childhood illness (e.g., not playing normally, not eating or drinking, lethargic or difficult to wake, high or low fever, fast or difficult breathing, excessive crying, change of color, vomits everything and convulsions). While this is an encouraging finding, there is clearly scope for increasing maternal/caregiver knowledge in this domain.

Practice

Table 20 on the next page reports mother/caregiver practice in administering fluids to their children when sick. As can be seen, of those children who were sick in the two weeks prior to the survey interview, *a very high percentage (92%) were either given less to drink or were offered same amount of liquids when sick*. These results are comparable to those reported earlier for cases of coughs with fast breathing (see Table 14), and underscore the need for developing an effective and broad-based educational intervention related to fluid intake during childhood illness events.

Table 20: Percent of mothers/caregivers who offered less than usual, about the same or more than usual to drink when the child was sick

AMOUNT OF LIQUIDS GIVEN WHEN CHILD WAS SICK	NO. (%) OF MOTHERS/CAREGIVERS
Less liquids than usual	51 (55%)
Same liquids as usual	34 (37%)
More liquids than usual	4 (4%)

[15] 76% of women who reported that they delivered at a hospital said that they were tested for HIV/AIDS as compared to 66% of the women who delivered elsewhere.

[16] A Chi-square value of 1.74 was obtained with an associated p value of 0.18.

Don't know	4 (4%)
TOTAL	93 (100%)
Missing	*1*

Table 21 further illustrates feeding practices when the child was sick. Here a slightly lower percentage of mothers/caregivers reported reducing the amount of food given when the child was sick as compared to the cough with fast breathing case alone, though the percentage is still unacceptably high.

Table 21: Percent of mothers/caregivers who offered less than usual, about the same or more than usual to eat when the child was sick

AMOUNT OF FOOD GIVEN WHEN CHILD WAS SICK	NO. (%) OF MOTHERS/CAREGIVERS
Less to eat than usual	56 (60%)
Same to eat as usual	31(33%)
More to eat than usual	1 (1%)
Don't know	5 (5%)
TOTAL	93
Missing	*1*

The Project supports the DOH in implementing IMCI as a strategy in Ndwedwe district. It has assisted the DOH in training the clinic staff in the district and will expand its training assistance to cover the new target areas. In this second phase of the Project, community and household IMCI will be pilot tested and implemented in Ndwedwe and the lessons learnt will be replicated in the province. The KPC IMCI questionnaire will supplement and strengthen the key information of the diarrhea and pneumonia subsections.

I. Communication and Media

Table 22 reports the sources of health messages reported by mothers and caregivers. The most common source of information for of the mothers/caregivers was the radio, with 45% stating that it was their main source of information. The next most common information source was newspapers while community-based channels such as Health Educators, CHWs and TBAs together serve as the principal source of health messages for nearly half the mothers and caregivers.

Table 22: Sources of health messages

SOURCES OF HEALTH MESSAGES	% OF MOTHERS/CAREGIVERS
Radio	134 (45%)
Newspaper	61 (20%)
Health Educator	48 (16%)
TBA	41 (14%)
Community Health Worker	49 (16%)
Traditional Healer	25 (8%)
Television	0 (0%)
TOTAL	299 (100%)
Missing	*1*

In the second phase of the Project, more emphasis will be placed on the use of community-based IMCI and extensive community based education creating more opportunity for a two-way dialogue in sharing of key messages between the community and the providers.

IV. DISCUSSION

A. HIV/AIDS/STIs

A vast majority of the mothers/caregivers surveyed said that they were aware of AIDS and reported that a person could do something to avoid getting infected with HIV/AIDS. However, there is still scope for increasing knowledge about the ways of avoiding transmission. On fifth of the mothers/caregivers interviewed didn't know any means of avoiding transmission, while approximately half knew two or fewer ways. Nearly one third of mothers and caregivers interviewed either believed there was a cure for AIDS or did not know.

While knowledge about AIDS is relatively high, effective preventive practice is very low, with less than a third of the mothers reporting that they had used a condom the last time they had sexual intercourse. The low condom prevalence rate gains particular significance in the light of the fact that many mothers reported they believed that their partners had multiple sexual partners.

The low use of condoms cannot be attributed to lack of awareness about condoms and their use, or to a lack of availability. Free condoms are easily available throughout the Project area. The Project's qualitative research has determined instead that low condom use is attributable to the fact that their use is assumed to imply infidelity or mistrust. The Project's qualitative research has also revealed that economic dependency on the part of young girls and women as well as exploitation of schoolgirls in Ndwedwe district inhibits condom use.

The KwaZulu Natal Province has the highest HIV prevalence rate and the highest number of HIV positive people among the nine provinces in South Africa. According to the Annual Antenatal HIV survey, 33.5% of all first visit pregnant women in KwaZulu Natal in 2001 were HIV positive.

Voluntary testing and counseling has been initiated in the project target area and the NDCSP will aim to enable 100% of the appropriate health facilities in the project area to provide HIV/AIDS/STIs prenatal screening and counseling by training counselors. The DOH has trained 82 lay counselors in Ndwedwe who will be affiliated with clinics to provide counseling. In addition, MCDI has introduced rapid and simple STI/HIV testing (developed by the Program for Appropriate Technology in Health – PATH) in Ndwedwe. This is being used in a district hospital and a few clinics in the project area and a cost-effectiveness study of this initiative showed that by reducing the time requirements and travel costs for pregnant women seeking to know their HIV status, participation rates in testing pregnant women increased markedly, while improving the diagnosis and management of STIs and HIV-related diseases. The baseline KPC data indicate that more than half of the mothers were tested for HIV/AIDS when pregnant with their last child. This testing will be expanded during the cost-extension phase of the Project. VCT services will also be initiated at clinics after sufficient staff is trained as counselors. This project activity will aim to prevent the transmission of HIV/AIDS from the mother to the child, and will include a supply of Nevirapine once the new policy is implemented by the DOH.

A qualitative survey was conducted by MCDI between March and May 2000 with technical assistance from a consultant anthropologist. The findings of the discussions and interviews led to

the identification of a number of factors that contribute to the spread of HIV, and a set of conclusions that are pertinent to the objectives of the NDCSP. The study found that Ndwedwe community members hold conflicting (and compartmentalized) beliefs to the effect that HIV is always acquired through sexual "misconduct" and, simultaneously, that there is danger of HIV contamination through casual means such as sitting on a chair used previously by PLWA. In addition, informants believe that an infant is invariably HIV positive if he/she has been born to a woman who is HIV positive, and such a child is believed to present a danger to any potential foster or adoptive family.

The KPC Survey also revealed that there is a non-negligible proportion of mothers/caregivers (approximately ¼ of those interviewed) who express an unwillingness to care for a household member living with HIV/AIDS even if they could afford to do so. A slightly higher percentage (38%) indicated that they would be unwilling to have their child play with a child who had the AIDS virus. Clearly, therefore, although progress has been made in terms of reducing the stigma associated with AIDS there is work that needs to be done to fully inform the population about HIV/AIDS and its transmission.

These data support the NDCSP team's belief that HIV/AIDS is more than a medical problem and that there is the need for an integrated comprehensive package (economic, human rights, etc.) oriented towards effectively addressing this issue. In addition, "best practices" strategies of care for HIV/AIDS infected persons need to be expanded beyond the confines of clinics. Home-based care services provided by HBCVs trained by the DOH at the community level can have a significant impact on access to care. The NDCSP in partnership with the DOH has trained 150 HBCVs to provide Home-Based care of PLWA. Moreover, with the expectation that many young teenagers will become agents-of-change at the household/community level, NDCSP has partnered with DramAidE in forming school health clubs and educating children in schools and neighboring communities, using drama as a media of communication.

Other community based approaches that are in place or under development involve CHWs, Traditional Healers (THs), and TBAs who are being trained to address psycho-social needs of orphaned and vulnerable children (OVCs). CHCs that have been formed have identified HIV/AIDS as a priority concern, and the NDCSP community outreach organizer is assisting them to develop an action plan to include behavior change campaigns. In addition, a model Crèche is being developed and orphan registers are being maintained to provide care for the orphans and vulnerable children. The CHCs will be prepared to tap financial resources from the Department of Social Welfare and University of Natal Center for Rural Development to access grants for the OVCs.

In summary, the project's comprehensive approach to addressing HIV/AIDS will comprise voluntary counseling, testing and the distribution of anti-retrovirals, promoting use of contraceptives as a preventive method, preventing MTCT, promoting active involvement of school health clubs, and increased community support and household care for people living with AIDS.

B. Control of Diarrheal Diseases

Since the prevalence of diarrhea varies seasonally, the results pertain only to the pattern during the summer period of December, when the survey was conducted. It is likely, however, that seasonal factor have resulted in the relatively small percentage of children experiencing diarrhea. In spite of this potential seasonal bias, the data do provide unbiased insight into the current knowledge, behaviors and practices of mothers and caregivers when the child under their care experiences an episode of diarrhea.

Surprisingly, none of the mothers/caregivers who were interviewed gave more than the usual amount of food to eat when their child had diarrhea, and less than ten percent increased the child's fluid intake. Clearly, therefore, the Project's behavior change strategies and messages during Phase II will need to emphasize educating mothers and caregivers on the risks of dehydration and the benefits of giving more fluids during diarrheal episodes. The need for educating mothers on the implications of dehydration and the fact that ORT is administered to prevent dehydration and its consequences, is further evidenced by the seemingly contradictory fact that a relatively high percentage of mothers/caregivers reported administering ORT (ORS or SSS) during their child's diarrheal episode while a relatively small proportion increased the total fluid volume administered. This apparent contradiction suggests that mothers/caregivers are probably administering ORT as a cure for diarrhea rather than as a means of rehydration, or that they are not properly educated on the need for increasing food and liquids besides ORT. The project will thus continue to promote the practice of treating a child's diarrhea with ORT, while placing particular emphasis on teaching mothers why it should be administered and that it should increase the total fluid and food intake of the child. An increased percentage of mothers/caregivers in the project area who can correctly prepare and administer oral rehydration solution will result in quality household practices in control of diarrhea. The NDCSP will advocate promotion and increased use of ORS at the community level.

Control of diarrhea in early ages also requires delaying the early introduction of supplementary foods as well as improving exclusive breastfeeding practices, especially for children 0-5 months of age, which is currently practiced by less than half of the mothers surveyed.

Mothers and caregivers will also be educated on basic household sanitation practices, such as hand washing prior to food preparation and eating as a simple measure to control diarrheal diseases and other infections. Evidence from the KPC supplemented by discussions with field staff have revealed that diarrhea often results from lack of clean drinking water and toilet practices, poor personnel hygiene, improper feeding (e.g., early introduction of food), and bottle feeding using dirty bottles. In addition, the practice of administering enemas "uchatho" to get rid of spirits accentuates the ill effects of diarrheal episodes. The NDCSP staff feel that general hygiene must be emphasized as a key practice (e.g., proper hand washing). Through inter-sectoral collaboration with the Department of Water and Sanitation, provision of clean water and increased use of HH/C-IMCI protocols, behavior change regarding the treatment and prevention of diarrhea at the community level can be achieved.

To effectively control outbreaks of diarrhea and cholera, activities at the clinical and facility levels are being carried out. Community Health Workers (CHWs), Home Based Care Volunteers (HBCVs), and Traditional Birth Attendants (TBAs) form the front line of health workers and are

responsible for caring for families with sick children and ensuring prompt and proper referrals. These health workers will be trained in critical household practices, recognition of sign/symptoms of illness, and counseling of mothers/caregivers to properly care for their child with diarrhea. The Household-Community (HH-C) IMCI approach to diarrhea control will be introduced and adapted to the needs of Ndwedwe District. At the facility level, clinic staff will be trained to follow prescribed IMCI protocols for diarrhea case management. The specific activities include establishing ORT corners at clinics, creating rehydration centers (i.v.) for treatment of diarrhea and cholera, supplying ORS to mothers/caregivers and educating mothers/caregivers on how to prepare ORT.

All the preceding activities will help educate mothers/caregivers the best practices and reinforce current efforts in diarrhea control.

C. Pneumonia Case Management

Pneumonia is estimated to be one of the three leading causes of death among black children in South Africa. The baseline survey revealed that a little more than half of the children age 0-23 months experienced a cough and fast breathing in the two weeks prior to the survey – an alarmingly high level. The high prevalence of respiratory illnesses including pneumonia is confirmed by health facility utilization data from the district. Even though pneumonia is an illness that is often under-diagnosed, there were 5,874 cases among children under 5 years of age reported in Ndwedwe during 2001 (District Health Information System).

The KPC Survey revealed that a very low percentage of mothers/caregivers sought immediate treatment (same day) and care for their child who experienced cough and fast breathing. Moreover, none of the mothers/caregivers increased the quantity of food or liquids given to their child during these respiratory illness episodes. The reasons for these low care-seeking and care-giving practices could be failure to recognize the signs and symptoms and/or inadequate clinic and outreach services in terms of health education and case management. Qualitative research conducted by the Project has indicated that mothers/caregivers are unable to define pneumonia by a set of distinct symptoms, thus that making it difficult for them to recognize it as a dangerous condition requiring attention by medical personnel. While mothers/caregivers are unable to identify a set of distinct symptoms of pneumonia, many are able to recognize severe chest in-drawing as a danger sign, and recognize that this would indicate the need for clinical care.

The Project staff believe that pneumonia is a disease that requires prompt treatment and that it is crucial that (a) mothers/caregivers recognize the key danger signs and take the children for treatment, (b) clinic nurses recognize the signs/symptoms and assess and provide treatment using IMCI protocols, and (c) adequate drug supply is assured at health facilities.

To address these issues, the Project strategy for pneumonia case management is to: (a) implement IMCI protocols for diagnosis and treatment in 100% of the program clinics, (b) educate mothers/caregivers to identify signs of illness and seek medical attention on the same day of onset of symptoms, and (c) educate mothers on the need to increase food and fluid intake during episodes or respiratory illness. The Project will also pilot test and facilitate implementation of HH/C-IMCI for PCM by adapting to the specific needs of Ndwedwe District. CHWs, HBCVs, TBAs will be responsible to care for families with sick children and ensuring

prompt and proper referrals. As mentioned previously, these health workers will also be trained to assess the sick child, classify the illness, counsel the mother and make necessary referrals. Follow-up care will be emphasized as well. The Community Health Committee (CHC) members will play an active role in ensuring that the IMCI strategies are communicated to the families, as well as ensuring active participation in planning and decision making at the community level.

D. Immunization

A comparison of the KPC 2001 data with the KPC 1996 data indicates that there has been a statistically significant increase in immunization coverage in the interim period. According to these data full immunization coverage has increased 26% (CI: 19% - 33%) to 51% (CI: 36% - 66%)[17]. The evidence suggests that the Project's interventions in this area along with the efforts exerted by the DOH have yielded significant positive results, although there is clearly a need to continue exerting effort in this domain to further increase full immunization coverage. Particular effort will need to be exerted to increase measles immunization coverage since it has the lowest coverage of all antigens.

Discussions with the Project staff indicate that traditional Zulu families have an explanation and an intervention for every child ailment including measles. Although measles is recognized as a severe and contagious illness, few families believe that immunization is an effective prophylactic. To the extent that these beliefs explain the lower measles immunization coverage rates observed in the KPC Survey, the Project will need to exert particular effort in attempting to educate families to the contrary.

NDCSP Project staff perceive immunization as one of the most important child survival interventions and believe that effective implementation of IMCI will make clinic nurses appreciate immunization services. The team also feels that intense health education at the community/household level is critical. The Project is assisting the DOH, in particular the DHSMT, in the design and establishment of community health committees (CHCs), whose role includes community mobilization. Individuals/families will be informed about immunization services through community meetings, and CHWs and HBCVs will also carry out necessary follow-up at the household level. Following review of the existing tools, a community based monitoring tool for use by the community-based workers will be developed. These strategies will ensure that all eligible children are tracked and follow-up of defaulters or case follow-up is done.

E. Maternal and Neonatal Care

Antenatal Care

Though three quarters of the mothers surveyed indicated that they had sought antenatal care at some point during their last pregnancy, relatively few (only 1/5th) both initiated antenatal care visits in the first trimester and had at least three follow-up visits thereafter. This is clearly an area that the Project will need to focus on during the second phase, and this is reflected in the

[17] The fact that the immunization coverage data have been obtained from Road to Health Cards, and that not all children in the 0-23 month age range had a card could indicate that immunization coverage rates are being under estimated. However, the Health Systems Trust 2001 estimates that immunization coverage in 1998 for children 12-23 months of age in KwaZulu Natal was 50%. This is consistent with the KPC 2001 data reported here. Moreover, there is no statistically significant difference in the percentage of children with Road to Health Cards between the 1996 and 2001 KPC surveys. As such, there is no reason to believe that immunization coverage rates in one year are any more biased than in the other year.

antenatal care objective that seeks to increase this percentage from 20% to 50% by the year 2005.

Tetanus Toxoid Immunization
The KPC data reveal that a large percentage of the mothers reported that they had received a tetanus toxoid injection when they were pregnant with their last child. Although there is no card-documented evidence to validate the TT coverage estimated derived from the KPC Survey, evidence from larger and more representative surveys corroborate this finding. According to the 2001 Health Systems Trust Report, 74.9 % of pregnant women in KwaZulu-Natal received a TT vaccine in 1998. Moreover, Ndwedwe District health statistics from the National Department of Health show that no cases of tetanus have been reported in clinics since 1997. As a result, the Project will not include reduction of tetanus toxoid as a results-based objective; however the project will continue to place an emphasis on TT immunizations among pregnant women educate mothers and monitor antenatal care as a key activity of the maternal and newborn care intervention.

Breast Feeding
Interestingly, a large proportion of mothers reported breastfeeding their child, however exclusively breastfeeding practices was low. The Project will thus promote exclusive breastfeeding as part of its strategies for maternal/neonatal care as well as for control of diarrheal diseases.

Place of Delivery, Delivery Attendants and Postpartum Period
A large percentage of mothers in the KPC survey were found to have delivered at a hospital or clinic. Data from the Health Systems Trust 2001 Report confirms the KPC finding that most women do not deliver at home or without help.

The comprehensive approach that the Project has initiated to address broader issues relating to maternal and newborn care will continue to include: (a) increasing the availability of clinic level antenatal care for pregnant women; (b) providing mobile clinic services that conduct deliveries and obstetric emergencies; (c) supporting community based maternal and newborn care provided by trained TBAs; (d) training CHWs, HBCVs, and CHCs in maternal and newborn care danger signs, enabling them to advise mothers to seek early medical care and conduct health education activities in their respective communities; and (e) training TBAs in the Project area to conduct safe deliveries and making timely and appropriate referrals.

TBAs trained by the Project will also be charged with educating mothers on the danger signs during pregnancy and during the neonatal period and with encouraging mothers to deliver at a health facility and to seek appropriate care when necessary.

F. Integrated Management of Childhood Illness (IMCI)

Using the IMCI structured KPC questionnaire it was revealed that a very high percentage of the children who were sick in the 2-week period prior to the survey were either given less to drink or were offered the same volume of liquids when sick. This finding was confirmed separately for diarrheal disease management and respiratory illness case management. The Project will seek to address this practice within the context of a comprehensive IMCI strategy implemented both at

the facility and community levels.

The NDCSP has supported the DOH in pilot testing the IMCI approach for implementation in Ndwedwe district with logistics and training conducted in collaboration with other local partners. At the facility level, the Project will aim to strengthen facilities to ensure that 100% of program clinics correctly use IMCI protocols for diagnosis and treatment of childhood illness. The specific components the NDCSP IMCI strategy are based on the adapted KwaZulu Natal IMCI guidelines (2001), which include diarrhea, pneumonia case management, immunization, HIV and care of the sick child ages 1 week to 2 months as well as ages 2 months to 5 years.

At the district level, NDCSP will strengthen health systems to effectively implement IMCI. Specific elements of the health systems strengthening component that the NDCSP will be involved with include strengthening the health information system, drug supply and logistics systems and organizing IMCI trainings and supervision for clinics nurses.

At the community level, the NDCSP will play a critical role in supporting implementation of HH/C-IMCI approach within Ndwedwe as well. The NDCSP will work to ensure that the HH/C-IMCI approach implemented will incorporate the key messages of the project interventions. The project's partner community providers will be trained on key family practices using this package, which will empower them to educate families/mothers to adopt positive behaviors. This will include active involvement of HBCVs, CHCs and CHWs to strengthen household recognition of the signs and symptoms of childhood illness and enable households to seek early treatment.

G. Communication and Media

Most mothers and caregivers surveyed have a primary education level or above, and newspapers and radios are the most used sources of information for health messages. In collaboration with local non-profit organizations working on health media issues, the NDCSP is discussing promotional strategies for broadcasting key health messages. Although the educational level among mothers and caregivers is quite high, previous qualitative research in Ndwedwe shows that traditional and cultural beliefs still form a significant part of behavior models. It is imperative, therefore, that the project's behavior change strategies are cognizant of these local beliefs.

The Project will continue to train and empower community-based workers (CHWs, HBCVs, TBAs, and CHCs) to be primary contacts with mothers and caregivers, and to help them adopt key behavior change practices. The NDCSP's approach to behavior change involves going beyond information dissemination to embracing a more comprehensive strategy based on identification of the specific factors that influence the adoption of key behaviors. The NDCSP will use the BEHAVE Framework for Behavior Change Programming.

In addition, the findings suggest that most mothers and caregivers work outside the home, which could have a significant impact on the care provided to children. Therefore, the project's behavior change strategies should be implemented in different settings (e.g., worksites, farms, etc.) rather than just in homes.

ATTACHMENT H: Final Knowledge, Practice, and Coverage Survey Report

Ndwedwe District Child Survival Project
Cost Extension Project
Final KPC Report

November 2005

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List of Abbreviations

AIDS	Acquired Immuno Deficiency Syndrome
BCC	Behavior Change Communication
CBO	Community Based Organization
CDD	Control of Diarrheal Diseases
CHC	Community Health Committee
CHW	Community Health Worker
CMR	Child Mortality Rate
CS	Child Survival
DHM	District Health Manager
DHS	Demographic and Health Survey
DHIS	District Health Information System
DHSMT	District Health System Management Team
DOH	Department of Health
HBCV	Home-Based Care Volunteer
HH/C-IMCI.	Household and Community Integrated Management of Childhood Illnesses
HIV	Human Immunodeficiency Virus
HO	Home Office
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
KZN	KwaZulu-Natal
KPC	Knowledge, Practices and Coverage (Survey)
LOE	Level of Effort
MCDI	Medical Care Development International
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
NDCSP	Ndwedwe District Child Survival Program
NGO	Non-Governmental Organization
ORS	Oral Rehydration Solution/Salts
ORT	Oral Rehydration Therapy
OVC	Orphans and Vulnerable Children
PHC	Primary Health Care
PLWA	People Living with AIDS
PLWHA	People Living with HIV/AIDS
QRI	Quarterly Reporting Instrument
RTH	Road to Health
SSS	Sugar-salt solution
STI	Sexually Transmitted Infections
TA	Traditional Authority (Tribal Authority)
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

The Ndwedwe District Child Survival Project, located in the KwaZulu Natal province of South Africa, has completed the terms of a four-year cost-extension grant from USAID/BHR/PVC. A final Knowledge, Practices and Coverage (KPC) Survey was carried out in the Ndwedwe District over a six-day period from September 15-22, 2005. This activity was implemented through the cooperation of MCDI, the Ilembe District Department of Health and Ndwedwe tribal leaders and councils.

The total population of the project area is 152,479, including 17,161 children 0-59 months of age and 38,485 women of childbearing age. Throughout the life of the project, the goals of the NDCSP have been to reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of reproductive age.

The objectives of the survey were to: 1) obtain population-based information on key knowledge, practices and coverage of mothers and caregivers of children age 0-23 months, 2) obtain population–based information on key knowledge, attitudes, practices and coverage of mothers and caregivers with children age 0-59 months, particularly relating to HIV/AIDS, and 3) assess the possible impact of interventions under the Ndwedwe District Child Survival Project based on baseline KPC data.

Major findings include the following:

- Knowledge about HIV/AIDS and STIs other than HIV/AIDS has improved within the project period, especially among mothers (who tend to be younger than nonmaternal caregivers). Use of condoms increased from 30% at baseline to 48%, and mothers who knew at least three ways to transmit HIV to a child increased from 54% to 78%. A full 45% of mothers and caregivers knew at least 3 symptoms of STIs in females, a 19% improvement. And 78% of mothers/caregivers were willing to allow the child under their care to play with an HIV-positive child, compared to 68% at baseline. Knowledge of at least two valid ways to reduce risk of HIV contraction also increased from 63% to 88%.

- Regarding diarrhoeal disease care and control, there was marked improvement: 97% of mothers and caregivers of children who had had diarrhea in the two weeks prior to the interview had given the child oral rehydration therapy, 28% above the 69% in the baseline survey. Also, 23% had given the child more food compared to 0% at baseline; 26% were getting more fluid compared to 1% at baseline. Those who reduced fluids during the diarrheal episode dropped from 35% to 27%; food reducers dropped from 45% to 28%, a distinct improvement. Handwashing practices, however, remain poor: Although 73% wash after toileting and 56% before food preparation, only 30% wash before feeding the child and only 8% wash at all key times. Although these are improvements from the baseline KPC survey, this is a continuing challenge in Ndwedwe and perhaps requires increased behavior change efforts.

- Breastfeeding is widely practiced: 33% of mothers of children 0-6 months of age reported exclusively breastfeeding their child, and 67% had fed their child colostrums immediately after birth. Although 75% of mothers had breastfed the child as some point, breastfeeding remains a controversial practice in Ndwedwe. With the expansion of the AIDS crises, many mothers either know or suspect they have the HIV virus and are reluctant to breastfeed for fear of transmission.

- Immunization figures were also higher, and 84% of children who a year old were fully immunized, as validated by a check of available Road to Health (RTH) immunization cards. The baseline figure was 51%. Also in the current KPC, 89% of children had received at least one measles shot, an increase of 28% from baseline, also based on cards seen.

  Full immunization coverage of all one-year-old children in the sample (90 total), whether or not a RTH card was seen, was 53% compared to 35% at baseline. Percentage of all 12-23 month children who had received at least one measles shot, also whether or not the card was available, was 56%. The baseline figure was 42%.

- An evaluation of maternal and neonatal care data indicates that knowledge of three or more danger signs of serious illness in newborns grew from 41% in the baseline report to 79% in the final report. Also, more than 50% of pregnant women are making 3 or more antenatal visits, and 97% of mothers were attended by a nurse or doctor during delivery.

The results of the survey will be presented to NDCSP stakeholders, including the Ilembe District Department of Health, tribal leaders and council members, clergy and other interested community members over the next three months.

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A. Description of Project Location

The geographic focus of the project has been Ndwedwe, a sub-district of the Ilembe District in KwaZulu Natal province of South Africa. Ndwedwe is a predominantly Zulu-speaking rural and semi-rural area 1,153 square kilometers in size and situated 80 kms north of Durban. Despite this proximity to a major urban and economic center, the sub-district has remained substantially underdeveloped, disadvantaged and poor as a result of inequities established during the Apartheid administration and the slow rate of complex reform since the political shift in 1994.

The sub-district is divided into 18 tribal or traditional authorities, each governed by a tribal leader and council. With a population density of 127 per square kilometer, communities are non-nucleated and widely dispersed over a hilly terrain. According to the 2001 South Africa Census, the population of Ndwedwe is approximately 152,479 with 38,485 women of childbearing age (15-49) and 17,161 children under five years old. (See Table 1 below).

Table I: Number of children under five years old and women of child-bearing age living in Ndwedwe

	NDWEDWE POPULATION
Children <5 years	**17,161**
Women of child-bearing age	
15-19	10,133
20-24	7,196
25-29	5,582
30-34	4,301
35-39	4,325
40-44	3,780
45-49	3,168
Total	**38,485**

Source: SA Census 2001

B. Health status of the population

Data specifically for Ndwedwe, other than those collected by the NDCSP, are for the most part unavailable. However, national, provincial and district statistical resources can provide an accurate depiction and realistic appreciation of child health and other indicators in the region.

According to the results of the most recent Demographic and Health Survey (DHS) in South Africa[1], administered in 1998, neonatal, infant, child and under-five mortality rates in KwaZulu Natal are consistently above the national average. The province has the highest child mortality rate in the country at 23.6 per thousand live births and the second highest under-five mortality rate at 74.5 per thousand live births. Mortality rates are defined as:

- Neonatal mortality: the probability of dying within the first month of life;
- Infant mortality: the probability of dying in the first year of life;
- Child mortality: the probability of dying between exact age one and five;
- Under-five mortality: the probability of dying between birth and exact age five.

A comparison of mortality rates between national and provincial averages is provided in Table 2 below.

Table 2: Mortality indicators for children under five in KwaZulu Natal and South Africa per thousand live births.

	NEONATAL MORTALITY	INFANT MORTALITY	CHILD MORTALITY	UNDER-FIVE MORTALITY
South Africa	19.8	45.4	14.7	59.4
KwaZulu Natal	23.2	52.1	23.6	74.5

Mortality figures may underestimate actual rates as it is common to not report an infant's death if it occurs shortly after birth.

Subsequent to the 1998 DHS, a 2001 study commissioned by the KwaZulu Natal Department of Health[2] set the provincial infant mortality rate even higher, at 92 per thousand live births, and the rate for Ilembe District alone at 102 per thousand. Similarly, the provincial under-five mortality rate was 132 per thousand; in Ilembe District, it was 148 per thousand. Allowing for differences in methodology between the two surveys, the increases from 1998 to 2001 may also reflect the growing toll of the expanding HIV/AIDS pandemic.

[1] Full report of the 1998 South Africa Demographic and Health Survey

[2] *Child Mortality in KwaZulu Natal*, A. Hoque, Epidemiology Unit - UKZN, 2001

The major causes of death among children under five in South Africa, assessed by the Medical Research Council in 2000[3], are lead by HIV/AIDS (40.3%), low birth weight (11.2%), diarrheal disease (10.2%), lower respiratory infections (5.8%), and protein-energy malnutrition (4.3%).

Five years later, it is reasonable to assume that the proportion of child deaths from HIV/AIDS has increased, particularly in KwaZulu Natal. At 38%, the province has the highest percentage of overall deaths due to AIDS in the country[4]. And according to a 2004 study done by the national Department of Health[5], the HIV prevalence rate among antenatal clinic attendees in KwaZulu Natal increased from 36.5% in 2002 to 40.7% in 2004, the highest of any province in South Africa.

The constraints on healthcare provision are manifest. A population of 152,479 in Ndwedwe is served by only seven primary health care (PHC) clinics, one community health center (CHC) and one referral hospital. Three area hospitals located proximate to the sub-district boundaries are also available to residents (although with additional transport cost). Ilembe District as a whole has the highest percentage of people living outside a 5km radius of a health facility (42%) and had the lowest health care expenditures per capita in the province for both 2002 and 2003. Post-Apartheid governments have developed policies and plans to upgrade primary health care and other public services. Progress continues to be slow and to have little actual impact on community members.

Adding to the challenge is the growing burden of care on healthcare professionals. Nurses in Ilembe District have the highest clinical patient load in the country at 59.3 per day, substantially above the provincial average of 33.8 per day. There is also a continuing shortage of trained healthcare workers as many are leaving the sub-district for better income opportunities. In addition to the increased patient load, the impact of HIV/AIDS is also noticeable in the reduced number of health workers available to work due to illness. As a result, Ndwedwe PHC facilities are chronically understaffed.

C. Socioeconomic status

Economic activity in Ndwedwe mainly is limited to subsistence farming and some cash cropping of sugarcane (the predominant commercial crop in KwaZulu Natal). Many residents are informal merchants who run spaza or food shops, shoe repair businesses and other small concerns within the communities. The formal unemployment figure hovers around 56%.

[3] What are the leading causes of child death in South Africa? South African National Burden of Disease Study, Medical Research Council, 2000.
[4] South African Health Review, Health Systems Trust, 2005.
[5] National HIV and Syphilis Antenatal Sero-Prevalence Survey in South Africa, Republic of South Africa Department of Health, 2004.

Ndwedwe historically has been considered a "dormitory area," providing a cheap labor supply for Durban and other affluent coastal communities. As such, there has been little in the way of manufacturing and other employment opportunities developed within the sub-district. Many of the men leave Ndwedwe to earn income in more employment-rich provinces such as Gauteng and send remittances back home. Many of the women are employed as live-in domestic help in Durban and are home only periodically. The impact of these trends has been an increase in the number of young children reared by someone other than a mother or father, an effect compounded by the growing number of parental losses due to HIV/AIDS (and maternal losses in particular as prevalence among women is increasing at a greater rate).

According to the current KPC survey, literacy rates are reasonably high in Ndwedwe as 45% of respondents have at least a secondary school education and 20% have at least completed primary school. Many residents, however, are taught and speak only Zulu, placing them at a pronounced disadvantage in the employment market beyond manual labor and domestic work. English and Afrikaan remain the primary languages of commerce in South Africa.

Seventy-nine percent (79%) of households in Ndwedwe earn less than R1,500 ($250) per month, with more than 20% receiving no regular income at all. Mothers of young children are eligible to receive a monthly government grant of up to R700 ($117) per month, and for many households this is the sole source of steady income. However, households in which orphaned children are raised by relatives or other caregivers don't always have access to these grants because they lack the child's birth certificate or the parents' death certificates, both of which are required for grant application.

D. National Standards and Practices

1. HIV/AIDS

The DOH has policies on prevention of mother-to-child HIV transmission (MTCT), management of HIV positive pregnant women, rapid HIV testing, testing for HIV, feeding of infants of HIV positive mothers, tuberculosis and HIV/AIDS, management of occupational exposures to HIV, and the syndromic case management of STIs. During this phase of the project, the Department of Health has developed and implemented new national policy on ART and continues country-wide rollout of ant-retroviral drugs.

Testing for HIV requires informed consent as well as pre-test and post-test counseling. The standard adult guidelines for rapid HIV testing discuss the ethical and legal rights of patients, and the role and indications for rapid HIV testing, which includes HIV testing and counseling, diagnosis of HIV infection, diagnosis of HIV infection in areas without local diagnostic laboratories, occupational exposure to blood or body fluids that may be infected with HIV and epidemiological surveillance and screening.

The guidelines also discuss the issues to consider such as home test kits, performing and interpreting rapid test results, predictive value of rapid tests in low HIV prevalence communities and issues regarding confirmatory tests for all patients who test positive on

the rapid tests. Pre- and post- test counseling and rapid HIV test results, its implications for health care workers, counselors, and patients are also addressed. The KZN Department of Health is providing a comprehensive guideline on ARVs. These guidelines serve to assist the clinic team in the management of patients on anti-retroviral drugs as outlined in the comprehensive plan for HIV and AIDS care, management and treatment of the national Department of Health.

2. Diarrheal Disease

The DOH protocol for standard case management of childhood diarrheal diseases, including management of dysentery and of persistent diarrhea in children, follows the 2002 KZN IMCI guidelines. These guidelines detail assessment, classification, treatment, and counseling protocols for children ages 2 months to 5 years and children ages 1 week to 2 months with varying severity of illnesses. The DOH policies are consistent with WHO/UNICEF guidelines, and the NDCSP's case management strategies have been consistent with DOH policies. The DOH has an active ORT promotion program in which clinic health educators teach mothers of diarrhea victims to mix sugar-salt solution (SSS or *sorol*). Packets of ORS are also available free of charge from all clinics and are dispensed to children who come in with dehydration. The main emphasis is on home care with SSS and increased intake of appropriate foods and fluids.

The DOH maintains very tight control over antibiotics and anti-diarrheal medications, with clear prescription protocols. Currently, antibiotics are fairly well restricted to use in cases of bloody diarrhea, and anti-diarrheal medications are not heavily used in the management of childhood diarrhea. A previous problem with irregular facility drug supplies seems to have been resolved, according to facility assessment conducted concurrently with the final KPC survey.

3. Pneumonia Case Management

The DOH follows the 2002 KwaZulu IMCI protocols for pneumonia case management. As with all KZN IMCI protocols, these are based on and consistent with WHO IMCI protocols, and the NDCSP has facilitated implementation. Professional nurses have been trained by the DOH in IMCI protocols for case management to (a) assess, (b) classify, (c) treat, and (d) counsel caregivers, message that the NDCSP has reinforced during training sessions for clinic staff. Included in the protocols are steps to recognize the signs that an antibiotic is needed for two ages groups: infants 1 week to two months of age and children 2 months to 5 years of age. Nurses are also trained to recognize the signs that the child must be referred to a higher level of care. Also included are the cut-offs for fast breathing for each of the three age groups and the antibiotics to be used for pneumonia. Facility nurses counsel caregivers regarding antibiotic use and home care for children with pneumonia when the child is brought in for diagnosis and treatment.

4. Immunization

Prior to 1995, immunization policy in South Africa was inconsistent due to the fragmented health system. The current routine childhood immunization schedule in South Africa is based on a national policy that was adopted in 1999 and is consistent with WHO guidelines. In 2003, Vitamin A supplementation was added to IMCI guidelines. There are periodic campaigns to address coverage gaps for all immunizations. A recent

successful polio, measles and Vitamin A campaign in Ilembe District achieved 36% coverage of children under five.

5. Maternal and Neonatal Care

The 2000 National Guidelines for Maternity Care in South Africa (a manual for clinics, community health centers and district hospitals), and a policy and management guideline for common causes of maternal deaths entitled "Saving Mothers," provide extremely clear instructions and protocols on maternal and newborn care. The National Guidelines manual clearly defines the functions, staffing and facilities at the clinic, community health center, level 1, 2, 3 hospitals and emergency transport systems. According to the Guidelines, all women that attend ANC should be issued with an antenatal card. This is the principal record of the pregnancy and should be completed at each antenatal clinic visit and retained by the mother until delivery.

All Ndwedwe area clinics and hospitals provide prenatal care which includes weight and blood-pressure monitoring, iron and folic acid supplementation, TT vaccination, blood tests (including blood count and RPR), and treatment of infections (including STIs).

E. Goal and objectives

The overall goal of the NDCSP has been the same throughout the life of the project: To reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of reproductive age.

Objectives by principal intervention categories are as follows:

HIV/AIDS/STIs: 1) 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females; 2) Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%; 3) 90% of mothers can recognize at-least three known ways in which a mother can transmit HIV/AIDS to her child; 4) 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child; 5) 100% of the DOH health facilities in the project area will provide appropriate HIV/AIDS/STIs prenatal screening and counseling according to protocols; 6) 75% of households caring for OVCs will be aware of and know how to access Department of Social Welfare (DSW) grants and services; 7) 85% of high school students in schools with active school health clubs (SHCs) will be able to name at-least two strategies of HIV/AIDS prevention; and 8) 60% of high school students in schools with active SHCs report adopt of one of the three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use).

Control of Diarrheal Diseases: 1) 90% of mothers and non-maternal caregivers whose child experienced a diarrheal episode during the previous two weeks will provide oral rehydration therapy (ORS, SSS or available home fluids) to the child under their care during diarrheal episodes; 2) 50% of mothers and caregivers will report that they wash their hands before feeding the child under their care; 3) 85% of mothers and caregivers whose child experienced a diarrheal episode during the previous two weeks will give the same of or more liquids than usual during diarrhea episodes.

Pneumonia Case Management: 1) 35% of mothers and caregivers whose child experienced cough with rapid or difficult breathing during the previous two weeks of children will seek medical attention by the end of the day after the onset of symptoms; 2) IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the project clinics.

Immunization: 1) 70% of children aged 12-23 months are fully immunized per RTH card; 2) 80% of children aged 12-23 months will have received a measles vaccination per RTH card.

Maternal/Neonatal Care: 1) At least 60% of mothers/caregivers will be aware of two or more of the danger signs in newborns that require immediate treatment; 2) 40% of CHCs will have established a cost recovery/financial system or loan system for different priority PHC activities (e.g., transporting obstetrical emergencies, incentives for CHWs, HBCVs, etc.) 3) During their last pregnancy, 50% of women will have made an antenatal visit

during the first trimester of pregnancy and at least three antenatal visits thereafter; and 4) 80% of midwives in program area health facilities will be trained in the PEP modules.

F. Intervention activities

The Ndwedwe District Child Survival Project has been functioning in close collaboration with the KwaZulu-Natal Department of Health and the recently created Ilembe District Health Office. The NDCSP has established a strong working relationship with both the district and provincial Departments of Health, has built collaborative partnerships with local NGOs and CBOs, and has executed an array of interventions that include building the capacity of health workers at all levels, organizing communities to assume greater responsibility for their own health, and carrying out prevention and mitigation activities related to HIV/AIDS. It has initiated the introduction of facility-based IMCI in Ndwedwe and assisted the DOH in piloting an IMCI model in KZN and subsequently introduced HH/C-IMCI.

In addition, NDCSP's accomplishments include the integration of HIV/AIDS modules into training for health workers, community health committees (CHCs) and TBAs; training of 48 HIV/AIDS lay counselors; training of 28 TBAs on PMTCT; training of 40 HBCVs and 20 community volunteers on the DOT (define) TB (define) protocol; training of 91 HBCVs in accessing grants for OVCs; establishment of a model inter-sectoral program for assisting households caring for OVC; and supported training of professional nurses in the Perinatal Education Program (PEP). The NDCSP has also worked with the Diakonia Council of Churches to involve church leaders in fighting the HIV/AIDS epidemic and organizing care and support activities for OVC and PLWHA. It has developed a guide for assessing community implementation of IMCI Key Family Practices using the GAPS Analysis Manual that is now used for training TBAs, HBCVs and Community Health Workers (CHWs) by the DOH. The supervisory system of HBCVs implemented by MCDI is the only one operating effectively in Ndwedwe.

G. Objectives of KPC Survey

The KPC Survey for the final evaluation of the NDCSP was based on established KPC objectives:

1. To obtain population-based information on key knowledge, practices and coverage from mothers and caregivers of children age 0-59 months;

2. To obtain information on key knowledge, attitudes, practices and coverage relating to HIV/AIDS from mothers and caregivers with children age 0-59 months.

3. To assess the possible impact of interventions under the Ndwedwe District Child Survival Project.

II. Survey process and partnership building

Participation of community stakeholders.
Community-based survey partners were contacted by KPC project staff to provide input for the survey process, as desired and appropriate.

The Maternal Child and Women's Health Project Manager and District Manager of the Ilembe District Department of Health were invited to review the KPC questionnaire and submit additional questions for data collection as an opportunity to gain insight from the community on a subject or subjects of interest related to child health and mother/caregiver knowledge, attitudes and practices.

Project staff also met with tribal leaders (or *ankosi*) and council members (or *induna*) in each of the three authorities randomly selected for the survey. Permission was sought to conduct the KPC survey in their areas, and the topics covered by the survey were discussed. This gave tribal leaders and council members the chance to air their concerns about child health in their communities. All authorities subsequently gave their approval for survey activities and requested that results be presented to the council and other interested community members.

Twelve survey enumerators were selected from youth VCT and support groups in Ndwedwe organized by MCDI as part of a separate project. The age range was 17 to 25 years old, and all had participated in similar data collection for MCDI in the past. Participation in the survey was an opportunity to build their capacity as enumerators and community liaisons as well as to earn income. All enumerators were selected based on possession of a matric or high-school-level degree, as they were therefore both literate and educable. All had the advantage of familiarity with local language and customs, as well as knowledge of geography and physical terrain. Although some of the enumerators were HIV-positive, all were fit to carry out their responsibilities.

Three supervisors oversaw the efforts of enumerators. One was the environmental officer from the Ilembe District Department of Health, well-experienced in survey work. One is a retired registered nurse from Nyuswa in Ndwedwe. The third was MCDI's HBCV supervisor, also a registered nurse and previously Sister in Charge of another Ndwedwe clinic, Mwolokholo. All supervisors were very familiar with the NDCSP, its activities and objectives. A fourth supervisor, also an Ndwedwe clinic nurse, was unable to participate at the last minute due to an unexpected clinic staff shortage during the survey period.

The data capturer on the project was a Health Information Manager for the KwaZulu Natal Department of Health, highly experienced in working with health data collection and analysis within the province.

Constraints in the process.

Due to budget limitations, and because this KPC survey had 41 fewer questions than the original baseline version, it was decided to hire a smaller number of enumerators than the 24 hired for the 2001 baseline survey. The training and actual survey periods were completed within the planned 9 days and on budget. However, due to the physical distance between communities and between households within each community, hiring additional enumerators might have improved initial data quality as enumerators would have had more time to conduct each interview. A significant number of questionnaires initially handed in by enumerators were missing key sections of information due to skipped or incorrect recording, as enumerators pushed to meet the daily quota set by their supervisor. As a result, some interviewees had to be revisited to complete their questionnaires thoroughly and accurately.

Another possible limitation was that enumerators might have benefited from some additional healthcare knowledge and a greater understanding of the topics covered by the questionnaire. Although the supervisors were all healthcare professionals, and the enumerators had been trained and displayed a grasp of what was being asked in each module, a deeper awareness of the purpose behind each question might also have improved their ability to fully elicit information from interviewees.

Also, there were two young men among the enumerators, which may have made the women they interviewed reluctant or unwilling to answer the more culturally- and gender-sensitive questions, such as use of a condom and knowledge of STI symptoms.

III. Methods

The questionnaire was designed to collect information from mothers and nonmaternal primary caregivers of children under 60 months of age in the following areas: (a) IMCI knowledge, practice and coverage of (1.) childhood immunization, (2) diarrhea case management, (3) pneumonia case management, and (4) child feeding; (b) maternal and newborn care, including delivery practices and postpartum care; and (c) HIV/AIDS and other sexually transmitted diseases. The questions were selected from the initial baseline

to address all NDCSP and Rapid CATCH indicators. Questions to determine demographic characteristics and socioeconomic status were also included.

One questionnaire was used to interview both mothers and caregivers, asking for information relating to the youngest child in their care who was under five years old. As with the baseline KPC survey, it was decided that administering separate questionnaires was neither cost-efficient nor effectively necessary. Questions on maternal care and delivery practices were posed only to mothers, as indicated on the questionnaire itself and stressed in enumerator training.

The English version was translated into Zulu and checked for accuracy by four native Zulu speakers. All questions had been vetted with local stakeholders and were deemed locally relevant and appropriate. A field test was conducted in three locations prior to the formal survey period, and changes were introduced into the questionnaire as a result.

See Appendix E for a copy of the questionnaire in English and in Zulu.

A. Training of supervisors and interviewers.

Enumerator and supervisor training took place over a four-day period and was conducted by the MCDI Training Manager. All training was participatory, with ample time for questions and other feedback relevant to the interview process.

The first day was for supervisors only and consisted of an overview of the NDCSP, the purpose of the KPC survey, and the training and survey period schedule. Also covered were their roles and responsibilities as supervisors and a detailed review of the questionnaire itself (including another check of local relevance and Zulu translation accuracy).

Days two and three were for the enumerators and were conducted primarily by the supervisors, all of whom are experienced trainers, to emphasize community-based participation in the survey process and build team communication. (Each supervisor was given a randomly selected team of four enumerators to oversee throughout the training and survey process.) Training focused on an overview of the project, the methodology of selecting households and interviewees, interviewing techniques, and a detailed review of the questionnaire. Enumerators also spent considerable time in active role-playing exercises to rehearse the interview process and gain confidence in handling the questions and reactions that would likely arise in the actual interviews.

During the training, handouts were provided and reviewed that included instructions on how to fill out a questionnaire, good interviewing techniques, the method of selecting households and interviewees, and a copy of the survey and consent form to review during training. (See copies of the training curriculum and all training handouts in Appendix F.)

Day four was the field test day. Supervisors and interviewers were taken to one of the identified survey clusters and went through the survey process as team. Completed questionnaires were collected at the end of the day and reviewed by the supervisors to assess enumerator performance and data quality. Supervisors then met with their teams to express support for work well done and discuss any problems and clarifications needed

B. Project indicators

The following table lists the child survival indicators that have been used as the basis for evaluating the Project's performance:

INDICATORS	DEFINITION
HIV/AIDS/STIs	
Indicator 1: 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.	Percentage of mothers who can name three or more symptoms of STIs in females.
Indicator 2: Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.	Percentage of mothers who report use of a condom during the last act of intercourse.
Indicator 3: 90% of mothers will be able to recognize at least three known ways in which a mother can transmit HIV/AIDS to her child	Percentage of mothers who are able to recognize at-least three known ways of mother to child transmission of HIV/AIDS
Indicator 4: 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child	Percentage of mothers and caregivers who state they are willing for a child under their care to play with an HIV-positive child.
Indicator 5: 100% of DOH health facilities in the project area will provide appropriate HIV/AIDS/ STIs prenatal screening and counseling according to protocols.	Percentage of clinics and hospitals providing HIV/AIDS/ STIs screening and counseling.
Indicator 6: 75% of households caring for OVCs will be aware of and know how to access DSW grants and services.	Percentage of caregivers caring for OVCs who have established contact with DSW.
Indicator 7: 85% of high school students in schools with active School Health Clubs (SHCs) are able to name at least two strategies of prevention	Percentage of school students in schools with active SHC can name at-least two strategies of HIV/AIDS prevention
Indicator 8: 60% of high school students in schools with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use)	Percentage of school students in schools with active SHC adopting at-least one of the three methods of HIV/AIDS prevention
CONTROL OF DIARRHEAL DISEASES	
Indicator 1: 90% of mothers and caregivers whose child experienced a diarrheal episode during the previous two weeks will provide oral rehydration therapy(ORS, SSS, or home available fluids) to the child under their care during diarrheal episodes.	Percent of mothers and caregivers who report they gave ORT during their child's last episode of diarrhea
Indicator 2: 50% of mothers and caregivers will report that they wash their hands before feeding the child under their care.	Percent of mothers and caregivers who report hand-washing before feeding children
Indicator 3: 85% of mothers and caregivers whose child experienced a diarrheal episode during the previous two weeks will give the same amount of or more liquids than usual during	Percent of mothers and caregivers who report that they gave the same or more than usual liquids during the child's last diarrhea episode.

INDICATORS	DEFINITION
diarrheal episodes.	
PNEUMONIA CASE MANAGEMENT	
Indicator 1: 35% of mothers/caregivers whose child with cough experienced rapid or difficult breathing during the previous two weeks will seek medical attention by the end of the day after the onset of symptoms.	Percent of mothers/caregivers who report they sought medical treatment for their child with cough and rapid or difficult breathing by the end of the day after the onset of symptoms.
Indicator 2: IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the project clinics	Percent of clinics treating children who correctly diagnose and treat children with cough and difficult breathing according to IMCI protocols during supervisory visits.
IMMUNIZATION	
Indicator 1: 70% of children aged 12-23 months will be fully immunized per RTH card	Percent of KPC children 12-23 months of age whose RTH Cards indicate that they are fully immunized.
Indicator 2: 80% of children aged 12-23 months will have received a measles vaccination per RTH card	Percent of KPC survey children 12-23 months of age whose RTH Cards indicate that they are immunized for measles.
MATERNAL AND NEONATAL CARE	
Indicator 1: At least 60% of mothers/caregivers will be aware of two or more of the danger signs in newborns that require immediate treatment.	Percentage of mothers/caregivers who can name two or more of the danger signs in newborns.
Indicator 2: 40% of CHCs will have established a cost recovery/financial system or loan system for different priority PHC activities(e.g., transportation for obstetrical emergencies, incentives for CHWs, HBCVs, etc.)	Percentage of community based health funds established in CHC catchment areas
Indicator 3: During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter	Percent of mothers who report they made one antenatal visit during their first trimester and that they made at least 4 antenatal visits in all.
Indicator 4: 80% of midwives in program area health facilities will be trained in the PEP modules.	Percentage of midwives in program area health facilities who are trained in the PEP modules.

C. Sampling design.

Standard cluster sampling design was used to randomly select 300 households, each with at least one child in the identified age group of 0-59 months. (Only the youngest child in this category was used as the focus for survey questions.) As with the baseline KPC, data was collected on children under 60 months of age rather than just those under 24 months. This is meant to provide a broader view of the impact of the HIV/AIDS crisis on child health, of particular interest in assessing the effect of changing care structures for young children. HIV/AIDS is affecting approximately 1 in every 10 Ndwedwe households and is changing care patterns for young children, and an increasing number of children lose

one or more parents to the disease and are then raised by nonparental caregivers. According to the results of MCDI's KPC 2000 project survey, this effect may be compromising the quality of care and subsequent health status of young children in Ndwedwe.

Interviews for the 2005 KPC took place at 10 households in each of 30 clusters representing a range of tribal authorities and population densities for a total of 300 households. All were selected using systematic random sampling methodology.

Enumerators were taken to the more populated area of each cluster (deemed the center) and had been instructed to then spin a pencil on a notebook. Enumerators then went in the direction in which the pencil pointed and stopped at the first house they reached. Continued instructions for household selection were as follows:

- If no one is home at the first household, face out from the front door and turn to the right. Walk in that direction until you reach the next household. Use this method each time you reach a household where no one is available to interview.

- If someone is home, introduce yourself and your purpose and ask if there is a child under 5 years old living in the household. If not, turn right at the front door and go to the next household. If there is a child under 5, ask to speak to the person who takes care of the child most of the time. Ask her or his consent to conduct the interview.

- Once an interview has been successfully completed and you're satisfied that all the answers are correct, complete, consistent and clear, turn right at the front door and go on to the next household.

- Continue until you either complete your quota of questionnaires or run out of households to visit. Contact your supervisor to check your work and transport you to the next survey area.

All enumerators used their own cell phones to stay in contact with supervisors in order to ask questions on the survey, arrange transportation or discuss problems. Supervisors accompanied enumerators who were having difficulty as needed and also administered questionnaires themselves to help meet the total daily quota of completed questionnaires.

D. Method of data collection.

The formal survey period was from September 15th through 22nd, 2005. To complete 300 questionnaires within the budgeted timeframe, enumerators and supervisors were required to complete a total of 50 questionnaires each day.

Interviews took approximately 30-45 minutes each. Throughout each survey day, enumerators submitted questionnaires to their supervisors post-interview who reviewed them for errors or omissions. Those that needed corrections or additional information

were given back to the enumerator to re-interview that mother or caregiver while still in the vicinity of the home. All questionnaires were reviewed by the MCDI field office staff at the end of each day and any errors addressed with supervisors to improve the quality of the next day's survey work. This was particularly valuable as inconsistencies in the questionnaire not previously noted were identified and successfully addressed while the survey process was still underway.

At the end of the survey period, supervisors and MCDI field office staff quality-checked all questionnaires again before delivering them to the data capturer.

E. Method of data analysis.

Survey data was tabulated and analyzed using the EPI INFO EP16 software program developed at the Centers for Disease Control and Prevention (CDC) in Atlanta, the standard software used to analyze health surveys. For this survey, frequency tables were produced and indicator percentages calculated. The resulting point estimates are in the tables below.

Because sub-sample sizes were fairly small for some questions (such as mothers-only questions, immunizations under age 1, and child feeding trends among children 0-9 months), the confidence intervals are larger than ideal to provide robust results. This is also the result of a sample of 300 that includes children 0-59 months instead of only children 0-23 months, an effect that was considered in the survey design process. However, because of the project's broader population focus on children affected by HIV/AIDS, the compromise in accuracy was deemed a necessary trade-off for a more regionally relevant set of indicators.

RESULTS

The final project KPC was based on a questionnaire with 51 questions total, a shorter and more focused version of the baseline questionnaire, which consisted of 92 questions. It was decided that due to the smaller number of enumerators and the distance between households in survey areas, a shorter questionnaire would be more efficient and would still address data needs for all project indicators.

Survey results are listed by indicator in Table 3, and a comparison between baseline and final KPC results by indicator and module follows in Table 4. Results are presented only for those indicators evaluated by the KPC survey. Results for the full list of NDCSP indicators are in a separate report on the comprehensive NDCSP final evaluation.

The use of different denominators for different questions reflects whether (1) the questions were addressed to mothers and caregivers together, or mothers alone, and (2) questions were addressed to particular cohorts of the survey population selected for specific health-related criteria, such as whether their child had been ill with diarrhea during the preceding two weeks. Three hundred and four (304) questionnaires were entered into EPI/INFO for analysis.

Table 3: 2005 Final KPC Results - Ndwedwe District Child Survival Project

Proposal Objectives	Numerator/ Denominator	Percent	Comments
HIV/AIDS/STIs Objectives (30% of LOE), by EOP:			
1. 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.	137/304	45%	
2. Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.	102/212	48%	
3. 90% of mothers can recognize at least three known ways in which a mother can transmit HIV/AIDS to her child.	166/212	78%	
4. 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child.	231/304	76%	
Control of Diarrheal Diseases Objectives (20% of LOE), by EOP:			
1. 90% of mothers/caregivers whose child experienced a diarrheal episode during the previous 2 weeks will provide oral rehydration therapy (ORS, SSS or available home fluids) to the child under their care during diarrheal episodes.	76/78	97%	

2. 50% of mothers/caregivers will report that they wash their hands before feeding the child under their care.	92/304	30%	
3. 85% of mothers/caregivers whose child experienced a diarrheal episode during the previous 2 weeks will give the same or more liquids than usual during diarrhea episodes	53/81	65%	
Pneumonia Case Management Objectives (20% of LOE), by EOP:			
35% of mothers/caregivers whose child with cough experienced rapid or difficult breathing during the previous two weeks will seek medical attention by the end of the day after the onset of symptoms.	64/78	82%	This refers only to those who sought treatment for cough, not for rapid or difficult breathing.
Immunization Objectives (15% of LOE), by EOP:			
1. 70% of children aged 12-23 months are fully immunized per RTH card	48/57	84%	
Analyzed for all children 12-23 months of age, card seen or not.	48/90	53%	
2. 80% of children aged 12-23 months will have received a measles vaccination per RTH card	50/57	89%	
Analyzed for all children 12-23 months of age, card seen or not.	50/90	56%	
Maternal/Neonatal Care Objectives (15% of LOE), by EOP:			
1. At least 60% of mothers/caregivers will be aware of two or more of the danger signs in newborns that require immediate treatment	239/304	79%	
2. During their last pregnancy, 50% of mothers will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter	109/212	51%	Indicator is based on 3+ antenatal visits only.

Rapid CATCH Findings

INDICATOR	Numerator/ Denominator	Percent	Comments
Measure of child health and well-being			
% of children aged 0-23 months who are underweight (-2SD) from the median weight-for-age, according to the WHO/NCHS reference population	All children <5 seen at PHC facilities who are underweight / all children <5 in Ndwedwe population	2.5%	Indicator is taken from DHIS 2004 data as the NDCSP had no nutrition or growth monitoring component.
Prevention of Illness/Death			
% of children age 0-23 months who were born at least 24 months after the previous surviving child	9/23	39%	
% of children age 0-23 months whose births were attended by skilled health personnel	118/122	97%	
Analyzed for children 0-59 months of age	201/212	95%	
% of mothers with children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	71/122	58%	89% of mothers received at least one injection.
Analyzed for children 0-59 months of age	129/212	61%	
% of children age 0-5 months who were exclusively breastfed during the last 24 hours	6/19	32%	Because a high percentage of women are HIV+, and choose not to breastfeed due to MTCT concerns, this indicator lacks relevancy for Ndwedwe.
% of children aged 6-9 months who received breastmilk and complementary foods during the last 24 hours	6/43	14%	Because a high percentage of women are HIV+, and choose not to breastfeed due to MTCT

INDICATOR	Numerator/ Denominator	Percent	Comments
			concerns, this indicator lacks relevancy for Ndwedwe. Also, measured for 5-9 months.
% of children age 12-23 months who are fully vaccinated before the first birthday	48/57	84%	Coverage is 75%, according to DHIS 2004.
% of children 12-23 months who received a measles vaccine	51/57	89%	Coverage is 83.6%, according to DHIS 2004.
% of children 0-23 months who slept under an insecticide-treated net the previous night	N.A.		Malaria was not included in the project as Ndwedwe is not a malaria-endemic area.
% of mothers/caregivers with children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	156/170	92%	
Analyzed for children 0-59 months of age	268/304	88%	
% of mothers/caregivers with children age 0-23 months who report that they wash their hands with soap/ash before food preparation, before feeding, after defecation, and after attending to a child who has defecated.	13/170	8%	

Management/Treatment of Illness			
% of mothers/caregivers of children age 0-23 months who know at least two signs of childhood illness that indicate the need for treatment	131/170	77%	
% of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	9/41	22%	Only data on more fluid is available.

Table 4: Comparison of indicator result percentages between baseline and final KPC

Cost Extension Proposal Objectives	Final KPC percent	Baseline KPC percent	Increase/ decrease from baseline
HIV/AIDS/STIs Objectives (30% of LOE), by EOP:			
1. 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.	45%	26%	+19%
2. Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.	48%	30%	+18%
3. 90% of mothers can recognize at least three known ways in which a mother can transmit HIV/AIDS to her child.	78%	54%	+24%
4. 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child.	76%	68%	+8%

Control of Diarrheal Diseases Objectives (20% of LOE), by EOP:			
1. 90% of mothers/caregivers whose child experienced a diarrheal episode during the previous 2 weeks will provide oral rehydration therapy (ORS, SSS or available home fluids) to the child under their care during diarrheal episodes	97%	69%	+28%
2. 50% of mothers/caregivers will report that they wash their hands before feeding the child under their care.	30%	9%	+21%
3. 85% of mothers/caregivers whose child experienced a diarrheal episode during the previous 2 weeks will give the same or more liquids than usual during diarrhea episodes	65%	50%	+15%
Pneumonia Case Management Objectives (20% of LOE), by EOP:			
35% of mothers/caregivers whose child with cough experienced rapid or difficult breathing the previous two weeks will seek medical attention by the end of the day after the onset of symptoms.	22% - fluid only	10%	Comparable data not available.

Immunization Objectives (15% of LOE), by EOP:			
1. 70% of children aged 12-23 months are fully immunized per RTH card	84%	51%	+33%
Analyzed for all children 12-23 months of age, card seen or not.	53%	35%	+18%
2. 80% of children aged 12-23 months will have received a measles vaccination per RTH card	89%	61%	+28%
Analyzed for all children 12-23 months of age, card seen or not.	56%	42%	+14%
Maternal/Neonatal Care Objectives (15% of LOE), by EOP:			
1. At least 60% of mothers/caregivers will be aware of two or more of the danger signs in newborns that require immediate treatment	79%	41%	+38%
2. During their last pregnancy, 50% of mothers will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter	51%	20%	Final indicator is based on 3+ antenatal visits only.

Rapid CATCH Findings baseline to final comparison

INDICATOR	Final KPC Percent	Baseline KPC Percent	Increase/ decrease from baseline
Measure of child health and well-being			
% of children aged 0-23 months who are underweight (-2SD from the median weight-for-age, according to the WHO/NCHS reference population).	2.5%	N/A	Indicator is taken from DHIS 2004 data as the NDCSP had no nutrition or growth monitoring component.
Prevention of Illness/Death			
% of children age 0-23 months who were born at least 24 months after the previous surviving child	39%	N/A	N/A
% of children age 0-23 months whose births were attended by skilled health personnel	97%	87%	+10%
Analyzed for children 0-59 months of age	95%	86%	+9%
% of mothers with children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	89% (based on one or more shots)	89% (based on one or more shots)	For purposes of comparison to baseline, mothers who received one or more shots was selected as the indicator.
Analyzed for children 0-59 months of age	61% (based on two or more shots)	84% (based on one shot)	
% of children age 0-5 months who were exclusively breastfed during the last 24 hours	32%	38%	- 6%
% of children aged 6-9 months who received breast-milk and complementary foods during the last 24 hours	14%	81%	-67%
% of children age 12-23 months who are fully vaccinated before the first birthday.	84%	51%	+33%
% of children 12-23 months who received a measles vaccine	89%	61%	+28%

INDICATOR	Final KPC Percent	Baseline KPC Percent	Increase/ decrease from baseline
% of children 0-23 months who slept under an insecticide-treated net the previous night	N/A		
% of mothers/caregivers with children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	92%	68%	+24%
Analyzed for children 0-59 months of age	88%	63%	+25%
% of mothers/caregivers with children age 0-23 months who report that they wash their hands with soap/ash before food preparation, before feeding, after defecation, and after attending to a child who has defecated	8%	5%	+3%
Management/Treatment of Illness			
% of mothers/caregivers of children age 0-23 months who know at least two signs of childhood illness that indicate the need for treatment.	77%	71%	+6%
% of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	26% fluid - 28% food	1% food + fluid	Comparable data not available.

A. Demographics

The KPC survey conducted to evaluate the impact of the Ndwedwe District Child Survival Project included interviews with 212 mothers and 92 caregivers of a child under the age of five years, a total of 304 interviews (out of a planned 300). All interviewees were female. The age breakdown of respondents is below in Table 5a.

Table 5a: Age ranges of respondents by caregiver type.

Age Range	Mothers (%)	Caregivers (%)	Total
15 - 19 years	19 (9%)	4 (4%)	23 (8%)
20 - 24 years	62 (29%)	10 (11%)	72 (24%)
25 - 29 years	49 (23%)	9 (10%)	58 (19%)
30 – 34 years	35 (17%)	7 (8%)	42 (14%)
35 years and over	46 (22%)	58 (63%)	104 (34%)
Total	**211 (100%)**	**88 (97%)**	**299 (98%)**
Missing	1	4 (3%)	5 (2%)

Source: MCDI KPC 2005

The age ranges of children is broken out in Table 5b below by gender and type of caregiver.

The majority of sample children (81%) were between the ages of 0 and 23 months. The remaining 19% was in the 24-59 month range. Mothers accounted for 70% of the sample, caregivers 30%. While 100% of mothers and caregivers were female, child gender were almost evenly split between 52% boys and 48% girls.

Table 5b: Age ranges of children in sample by gender and caregiver type.

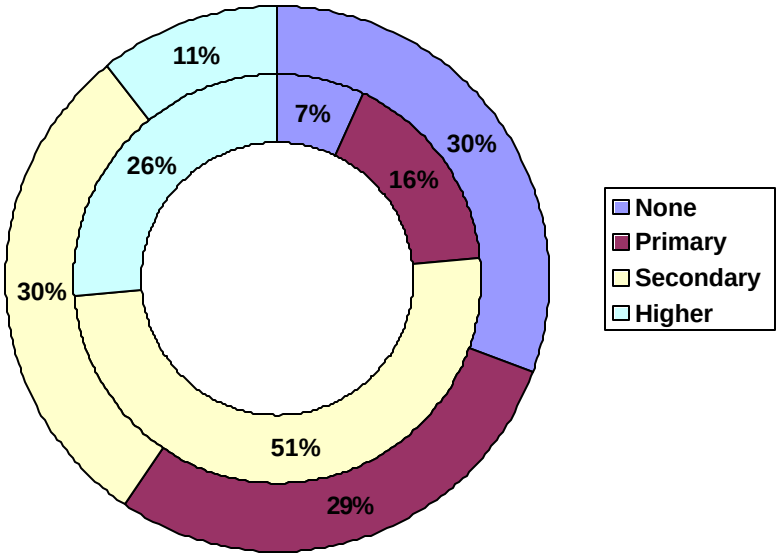
Age	Total (%)	Male	Female	Mother	Caregiver
0 – 5 mos.	26 (9%)	14	12	24	2
6 – 11 mos.	54 (18%)	29	25	38	16
12 – 23 mos.	90 (30%)	47	43	60	30
24 – 59 mos.	127 (41%)	65	62	87	40
Total	**297 (98%)**	**155 (52%)**	**142 (48%)**	**209 (70%)**	**88 (30%)**
Missing	7 (2%)				

Source: MCDI KPC 2005

The majority of respondents (93%) did no work outside the home. A larger percentage of caregivers were employed outside (16%) than mothers (4%).

As standards of education for women in underdeveloped areas go, the mothers and caregivers in the Ndwedwe sample were well educated overall, with 44% having secondary school educations and 22% above secondary school. When the data is disaggregated into type of caregiver, mothers tend to have a higher education level than nonmaternal caregivers, as illustrated in Graph 1 below: 26% of mothers versus 11% of caregivers had been educated at higher than secondary level; 50% of mothers versus 30% of caregivers had a secondary school education; and 7% of mother versus 31% of caregivers had no formal schooling. It is worth noting, however, that Zulu is the idiom of education in Ndwedwe, and a higher educational level does not necessarily produce as broadly useful an education as English-based learning.

Graph 1 : Educational Attainment for mothers and caregivers
Inside ring - mothers
Outside ring - caregivers



B. HIV/AIDS/STIs

Knowledge

Both mothers and caregivers of children in the 0-59 month age range were asked 11 questions relating to HIV/AIDS and sexually transmitted illnesses. Because of the highly sensitive nature of the questions (HIV and AIDS are still widely stigmatized in Ndwedwe, and there is also a deeply-ingrained cultural aversion to discussing anything related to sexual activity), interviewees were given the opportunity to refuse to answer any or all of these questions. It was encouraging that for the majority of questions, only a small percentage of respondents, if any, chose this option. This willingness to discuss these topics may point to both a growing readiness to talk about HIV/AIDS more openly, especially in light of its devastating impact on families and communities throughout Ndwedwe.

Interviewees were asked if they thought there were ways to avoid getting AIDS or the virus that causes AIDS. Only 7 out of 304 people refused to answer the question. Of those who did answer, 226 or 74% agreed that yes, there were ways to protect against HIV/AIDS. A larger percentage of mothers (81%) gave answered yes than caregivers (59%). Although the survey didn't identify the relationship of the caregiver to the child, it is well known to MCDI through knowledge of the project area that non-maternal caregivers are often the child's grandmothers who tend to more rooted in the traditional and so may have less awareness of HIV/AIDS information and other more recent health education messages than the generally younger mothers. Also in the age breakout for

respondents, 63% of caregivers versus 22% of mothers were in the 35 years and older age range (see Table 5a in Demographics section above).

Respondents were then asked how a person might avoid getting HIV/AIDS, and no answers were prompted. Eighty-one percent (81%) were aware of condom use for prevention, 68% of abstinence, and 31% of staying faithful to one partner, the three most widely promoted avoidance methods. Knowledge of abstinence and fidelity was higher among mothers (69% and 34%, respectively) than caregivers (65% and 22%), but more caregivers mentioned condom use (87%) than mothers (78%). Methods such as avoiding sex with prostitutes (10% overall) and avoiding sex with someone who has many other partners (15% overall) were substantially less likely to be mentioned, perhaps indicating how effective communication of the "big three" has been in these communities. Only 2% mentioned seeking out a traditional healer. The comprehensive results are presented below in Table 6.

Table 6: Mother and caregiver answers on how to avoid HIV/AIDS

	What can a person do to avoid contracting aids?		
	Mothers (%)	**Caregivers (%)**	**Total (%)**
Abstain from sex	119 (69%)	35 (65%)	154 (68%)
Use condoms	135 (78%)	47 (87%)	182 (81%)
Stay faithful to one partner	58 (34%)	12 (22%)	70 (31%)
Limit number of sexual partners	30 (17%)	11 (22%)	41 (18%)
Avoid sex with prostitutes	13 (7%)	9 (17%)	22 (10%)
Avoid sex w/person w/many partners	26 (15%)	9 (17%)	35 (15%)
Intercourse with same sex	9 (5%)	2 (4%)	11 (5%)
Avoid sex with intravenous drug users	6 (3%)	2 (4%)	8 (4%)
Avoid blood transfusions	31 (18%)	15 (28%)	46 (20%)
Avoid injections	8 (5%)	1 (2%)	9 (4%)
Avoid kissing	2 (1%)	0 (0%)	2 (1%)
Avoid mosquito bites	0 (0%)	4 (7%)	4 (2%)
Seek traditional healer's protection	3 (2%)	1 (2%)	4 (2%)
Avoid sharing razors, blades	27 (16%)	11 (22%)	38 (17%)
Refused to answer	7 (4%)	2 (4%)	9 (4%)

N = 172 for mothers; 54 for caregivers; 226 total. Note: Multiple answers allowed; no total provided.

Mothers only were asked under which of four circumstances the AIDS virus might be passed from a mother to her baby: during pregnancy, during delivery, during breastfeeding and during mixed feeding of breastmilk and solid food. 78% chose at least three answers correctly, 24% two answers, and 22% a single or no answer.

When asked what signs other than HIV/AIDS might indicate an STI in a female, 50% of mothers and 34% of caregivers were able to list three or more symptoms unprompted. When asked about signs in a male, 33% of mothers knew three or more symptoms as were 28% of caregivers. Unlike the other questions in this module, however, there was a significant number of refuse-to-answer responses - 14% for the question on symptoms of STIs in females, 17% for the question on STI symptoms in males. It is unclear whether this was due to discomfort with the question matter or just a lack of knowledge.

Attitudes and practices

Mothers alone were asked if they had used a condom the last time they had sexual intercourse. Forty-eight percent (48%) said they had used a condom, 43% said they hadn't. Surprisingly, only 4% refused to answer this rather personal question. The fact that almost half didn't use a condom is probably related to the fact that those women were married and had at least an expectation of fidelity. There is also a strong trend among men in the community to refuse to use a condom, especially with their wives if they're married.

Asked whether they would allow their child to play with another child who had HIV/AIDS, 76% of the sample said they would, 23% said they wouldn't. Mothers were more likely than caregivers to say yes (79% versus 66%, respectively), and no one refused to answer the question. When asked whether she would be willing to let the child go to school where one of the teachers had HIV/AIDS, 82% of mothers and 68% of caregivers said yes they would allow this.

Mothers and caregivers were also asked whether they would take care of a family member who had AIDS. Eighty-seven percent (87%) overall said they would be willing to do this. Mothers lead the percentages with 91% compared to 77% of caregivers expressing their willingness. Again, only a very small percentage refused to answer.

IMCI

1. Control of Diarrheal Disease

Knowledge

Only 81 mothers and caregivers had children who'd experienced diarrhea sometime in the two weeks prior to the interview. These respondents were asked what actions should be taken to help a child recover from diarrhea and were not prompted with answers. Of the four actions recommended by the WHO and mandated by the KwaZulu Natal IMCI guidelines for control of diarrheal disease – giving the child smaller and more frequent feeds, giving the child more food than usual, giving the child food with higher caloric content, and giving the child more fluids such as ORS, SSS and breast milk - percentages on correct responses varied from 46% for feeding the child food with higher caloric

content to 31% for offering the child more food than usual. The detail on all responses is in Table 7 below. Percentage of correct responses was fairly equitable between mothers and caregivers as represented in Graph II below.

Table 7: Correct actions to take when child is recovering from diarrhea.

Actions for recovery after diarrhea	Mother (% of 55)	Caregiver (% of 26)	Total	Percent of 81
Give the child smaller and more frequent feeds	19 (35%)	9 (35%)	28	35%
More food usual	17 (31%)	8 (31%)	25	31%
Give food with higher caloric content	23 (42%)	14 (54%)	37	46%
Give more fluids like sorol (sugar-salt solution), ORS, breastmilk, water	26 (47%)	9 (35%)	35	43%
Don't know	4 (7%)	1 (4%)	5	6%

N = 55 for mothers; 26 for caregivers; 81 total. Note: Multiple answers allowed; no total provided.

Attitudes and practices:

The recent-diarrhea sub-sample was asked how the child was cared for at home while ill, whether given ORS, sugar-salt solution, antibiotics or traditional medicine. Only 4% of the total sub-sample said that nothing was done, and only 11% used remedies from a traditional healer (13% of mothers and 8% of caregivers). At 69%, the majority provided sugar-salt solution (correct preparation of the solution was not queried but was assumed). And overall, 97% of respondents who were not exclusively breastfed had provided some additional oral rehydration therapy, whether ORS or sugar-salt solution. All responses are listed by treatment and caregiver type in Table 8 below.

Table 8: Home care for children with diarrhea during two weeks prior to survey interview provided by mother or caregiver.

Given to treat diarrhea at home	Mother (% of 55)	Caregiver (% of 26)	Total	Percent of 81
Nothing	2 (4%)	1 (4%)	3	4%
ORS	8 (15%)	12 (46%)	20	25%
Sugar-salt solution	43 (78%)	13 (50%)	56	69%
Antibiotic	3 (5%)	2 (8%)	5	6%
Traditional medicine	7 (13%)	2 (8%)	9	11%
Other	2 (4%)	2 (8%)	4	5%
Don't know	0 (0%)	0 (0%)	0	0%

N = 55 for mothers; 26 for caregivers; 81 total. Note: Multiple answers allowed; no total provided.

When asked about quantities of breastmilk, other liquids and food offered during the diarrheal episode, responses were mixed. According to WHO and KZN IMCI guidelines, more of everything should be offered to the child during a diarrheal episode. According to data collected, a slight majority of breastfeeding babies were given additional feeds (30%), while 27% were fed about the same amount as usual. Almost a quarter of the sub-sample (23%) were given less breastmilk. Just over a quarter of the children (26%) were offered additional liquids during diarrhea while more than half (56%) were offered about the same amount and 27% were offered less liquid. As to food offered, 22% were given more food and 44% about the same amount as usual. Only 27% were given less food. The usual explanations for reduced intake is the child's refusal to take in additional food and fluid and the caregiver's fear of causing the child to vomit from too much intake. (See Tables 9, 10 and 11 below for more detail.)

Table 9: Frequency of breastfeeding during diarrheal episode.

	Breastfeed more, less, about the same amount or stopped during diarrhea?		
	Mothers (%)	**Caregivers (%)**	**Total (%)**
Less	15 (27%)	4 (15%)	19 (23%)
About the same amount	15 (27%)	7 (27%)	22 (27%)
More	16 (29%)	8 (31%)	24 (30%)
Stopped completely	3 (5%)	0 (0%)	3 (4%)
Nonbreastfeeder	5 (9%)	5 (19%)	10 (12%)
Don't know	0 (0%)	2 (8%)	2 (2%)
Missing	1 (2%)	0 (0%)	1 (1%)
Total	**55 (100%)**	**26 (100%)**	**81 (100%)**

N = 55 for mothers; 26 for caregivers; 81 total

Table 10: Amount of fluids offered during diarrheal episode.

	Offered more, less, or about the same amount to drink during diarrhea?		
	Mothers (%)	**Caregivers (%)**	**Total (%)**
Less	18 (33%)	4 (15%)	22 (27%)
About the same amount	21 (38%)	11 (42%)	32 (52%)
More	11 (20%)	10 (38%)	21 (26%)
Exclusively breastfed	3 (5%)	0 (0%)	3 (4%)
Don't know	0 (0%)	1 (4%)	1 (1%)
Missing	3 (5%)	0 (0%)	3 (4%)
Total	**55 (100%)**	**26 (100%)**	**81 (100%)**

N = 55 for mothers; 26 for caregivers; 81 total

Table 11: Amount of food offered during diarrheal episode.

	Offered more, less, or about the same amount to EAT during diarrhea?		
	Mothers (%)	**Caregivers (%)**	**Total (%)**
Less	16 (29%)	7 (27%)	23 (28%)
About the same amount	24 (44%)	12 (46%)	36 (44%)
More	11 (20%)	7 (27%)	18 (22%)
Exclusively breastfed	2 (4%)	0 (0%)	2 (3%)
Don't know	0 (0%)	0 (0%)	0 (0%)
Missing	2 (4%)	0 (0%)	2 (2%)
Total	**55 (100%)**	**26 (100%)**	**81 (100%)**

N = 55 for mothers; 26 for caregivers; 81 total

Good sanitation practices are critical to diarrhea care and prevention and is an established key family practice. The survey included questions on handwashing practices in particular. Respondents were asked when they tended to wash their hands, with no answers prompted. The desired times include "before food preparation," "before eating," "before feeding child," "after toileting," and "after cleaning child's waste." Responses for these were worrisomely low. Although 73% mentioned washing their hands after toileting, only 42% mentioned doing so after cleaning the child's waste. Of greater concern, however, is that only 30% mentioned washing their hands before feeding the child, a key time to introduce diarrhea-causing bacteria into the child's system from soiled hands and utensils. Fifty-six percent (56%) did however mention washing their hands before food preparation. Only 8% of respondents with children in the 0-23 month age group washed their hands at all desired times. (See Table 12 below.)

Table 12: Identification of routine hand-washing practices among mothers and caregivers.

	when do your wash your hands?		
	Mothers (%)	**Caregivers (%)**	**Total (%)**
Before food preparation	121 (57%)	50 (54%)	171 (56%)
Before eating	90 (42%)	45 (49%)	135 (44%)
Before feeding child	62 (29%)	30 (33%)	92 (30%)
After toileting	151 (71%)	70 (76%)	221 (73%)
After cleaning child's waste	93 (44%)	34 (37%)	127 (42%)
Other	5 (2%)	3 (3%)	8 (3%)
Never	2 (1%)	1 (1%)	3 (1%)

2. Child feeding

Practice and coverage

Although the project did not have a specified nutrition module, good feeding practices are an important component of the IMCI approach to maintaining and promoting child health in KwaZulu Natal. These practices were therefore promoted as part of NDCSP activities, especially with regard to breastfeeding and appropriate timing of an appropriate weaning diet. As such, the current KPC survey asked mothers whether or not they had ever breastfed their child and if so, how soon after birth the child was put to the breast. Also, both mothers and caregivers of children 9 months and under were asked what the child was fed during the previous 24 hours.

Seventy-five percent (75%) of mothers had breastfed their child at some point, and 68% had put the child to the breast either within the first hour after birth, indicating that the child was fed health-enriching colostrum. The remaining 32% had first breastfed the child within or after the first 8 hours, after the colostrum was likely to have been expressed and discarded.

The WHO and KZN IMCI guidelines recommend that children be exclusively breastfed for the first 4 to 6 months of life with the addition of appropriate complementary foods during the weaning period (5 to 9 months). To evaluate these practices in Ndwedwe, the KPC survey asked mothers and caregivers of children 0-9 months what the child had consumed in the previous 24 hours. The 0-5 month-olds ideally should still be exclusively breastfed and therefore receiving nothing but breastmilk. The 5-9 month olds should be weaning and receiving clean water and other liquids as well as mashed, pureed solid or semi-solid foods in addition to breastmilk.

The 0-5 month sub-sample was particularly small with only 19 children total and 9 of the mother/caregivers as nonrespondents (for unknown reasons). Of those who did answer, 33% of the babies had received only breastmilk in the previous 24 hours. The 5-9 month sub-sample was slightly larger with 43 children total, and the majority (42%) had consumed only breastmilk while only 14% had consumed breastmilk and food, the desired diet for this age group.

Table 13: Exclusive breastfeeding rate among children under 6 months old.

	What did the child consume in the last 24 hours? (age 0-5 months) (N = 19)		
	Mothers (%)	**Caregivers (%)**	**Total (%)**
Breastmilk only	5 (28%)	1	6 (33%)
Breastmilk and plain water	1 (5%)	0	1 (5%)
Breastmilk and other liquids	1 (5%)	0	1 (5%)
Mashed, pureed solid or semi-solid foods	2 (11%)	0	2 (11%)
No response	9 (50%)	0	9 (50%)

Table 14: Complementary food diet among children 5-9 months old.

	What did the child consume in the last 24 hours? (age 5-9 months) (N = 43)		
	Mothers (%)	**Caregivers (%)**	**Total (%)**
Breastmilk only	13 (30%)	5 (12%)	18 (42%)
Breastmilk and plain water	2 (5%)	1 (2%)	3 (7%)
Breastmilk, plain water and other liquids	1 (2%)	0	1 (2%)
Breastmilk, plain water and mashed/pureed food	1 (2%)	1 (2%)	2 (5%)
Breastmilk and food	5 (12%)	1 (2%)	6 (14%)
No response	2 (5%)	2 (5%)	4 (9%)

3. Pneumonia Case Management

<u>Knowledge</u>

Unprompted, 77% of mothers and caregivers of children in the 0-23 month age group knew at least 2 of the signs of illness in a young child that require urgent care. Of single responses, the most widely known signs were a high fever (58%), excessive crying (38%), lethargic or difficult to wake (29%), and vomits everything (28%). The least mentioned sign was convulsions (1%). Only 1% could not name at least 1 sign.

Practice

A total of 78 children had had a cough within the previous 2 weeks. (Due to an error in the questionnaire, respondents were not asked about fast breathing.) This sub-sample was asked how soon professional treatment was sought, ideally by the end of the first day of illness. Eighty-two percent (82%) had sought out treatment at a health facility for their child. The majority of those (53%) brought the child to a clinic. However, it should be noted that since treatment was sought for a cough that may not have been caused by pneumonia, this may indicate an overuse of health facilities for minor illnesses.

Of those with cough during the prior two weeks, 22% received more fluid than usual.

4. Immunization

By the age of 1 year, Ndwedwe children should have received at least one dose of all essential childhood vaccinations recommended both by the WHO and the KZN DOH.

To collect certified data on the immunization status of children 12-23 months old, survey enumerators were instructed to ask the mother or caregiver if she had a Road to Health card for the child. If the answer was yes, the interviewer asked to see it. All immunization data was therefore collected from actual RTH cards, which had been filled in by clinic nurses or other healthcare professionals.

Of the 90 children in this age group included in the sample, 57 mothers and caregivers were able to produce a Road to Health card and became the sub-sample for this module.

Knowledge

All mothers and caregivers were asked when a child should get a measles shot. A total of 107 respondents or 36% of the total sample responded: 94% of this sub-sample correctly stated 9 months as the timing for the first measles shot, and 82% correctly placing the second shot at 18 months.

Coverage

The coverage figures for OPV, DPT, measles and full immunization for children 12-23 months old are below in Table 15.

Table 15: Immunization Coverage for Children 12-23 Months of Age

IMMUNIZATION TYPE	TOTAL (%)
BCG	55 (97%)
Polio 1	54 (95%)
Polio 2	55 (97%)
Polio 3	53 (93%)
DPT 1	54 (95%)
DPT 2	52 (91%)
DPT 3	50 (88%)
Measles 1	**51 (89%)**
Fully immunized by age 1	**48 (84%)**

N = 57

Coverage rates for this sub-sample were excellent with 84% of the children fully immunized by their first birthdays; 89% had received at least one measles shot, a substantial increase from the 61% coverage reported from the baseline survey. There may be self-selecting implications of such high coverage rates, i.e., mothers and caregivers who could locate and produce their child's Road to Health card may be more conscientious about the child's care and thus more likely to bring the child in for vaccinations at the scheduled times.

However, it is as likely that immunization coverage has markedly improved from a fully immunized rate of 51% in 2001 (based on RTH cards seen) due to the efforts of the NDCSP to support not only correct stocking and administration of vaccinations by facility nurses, but also to train nurses to distribute RTH cards and to record those immunizations consistently and accurately on the cards.

Full immunization coverage of all one-year-old children in the sample (90 total), whether or not a RTH card was seen, was 53% compared to 35% at baseline. Percentage of all 12-23 month children who had received at least one measles shot, also whether or not the card was available, was 56%; the baseline figure was 42%.

D. Maternal and newborn care

Knowledge

Of the 212 mothers interviewed, only 36 or 17% did not know any of the danger signs to watch for during pregnancy, such as fever; shortness of breath; bleeding; and swelling of the face, hands or body. This compares to approximately half of the 33% in the 2001 baseline survey who didn't know any of these possible symptoms of a compromised

pregnancy. In the current survey, bleeding was the most known with 48% of the sample mentioning this danger sign. (See Table 16 for details.)

Table 16: Knowledge of danger signs during pregnancy.

SYMPTOMS OF URGENT CARE NEEDED WHILE PREGNANT	TOTAL (%)
Fever	46 (22%)
Shortness of breath	45 (21%)
Bleeding	101 (48%)
Swelling of body/hands/face	82 (39%)
Other	31 (15%)
Don't know	17 (8%)

N = 212. Note: Multiple responses allowed; no totals provided.

As to the five signs of serious illness to watch for in a newborn baby – poor feeding, fast breathing, sluggishness, irritable crying, and fever – 79% could name at least two signs, and only 3% of mothers and 2% of caregivers could not name at least one sign. Irritable crying was the most mentioned sign, identified by 58% of the sample. Full response details in total and by respondent type are below in Table 17.

Table 17: Signs of serious illness in newborns known by mothers and caregivers.

SIGNS OF SERIOUS ILLNESS	MOTHERS (%)	CAREGIVERS (%)	TOTAL (%)
Poor feeding	93 (44%)	32 (35%)	125 (41%)
Fast breathing	27 (13%)	9 (10%)	36 (12%)
Sluggishness	82 (39%)	52 (57%)	134 (45%)
Irritable crying	120 (57%)	54 (59%)	174 (58%)
Fever	112 (53%)	50 (54%)	162 (54%)
Other	15 (7%)	6 (7%)	21 (7%)
Don't know	7 (3%)	2 (2%)	9 (3%)

N = 212. Note: Multiple responses allowed; no totals provided.

Coverage

1. Antenatal Care

The current KPC survey revealed that 88% of the 212 mothers in the sample had gone to a doctor (22%) or nurse (66%) for at least 1 prenatal visit. Only 9% had gone to a traditional healer and only 6% had not gone to see anyone at all about their pregnancy. Of these 187 women, 51% had gone to a health provider for 3 or more prenatal visits. This is

again a notable improvement from the 76% of the baseline sample who had seen a professional for antenatal care. The current KPC did not measure timing of the first antenatal visit, however the fact that 51% of the sample had made 3 or more antenatal visits perhaps supports the idea that more pregnant women are aware of the benefits of antenatal care and, with the support of NDCSP training and educational activities, are seeking it out earlier in their pregnancies.

2. Tetanus Toxoid Immunizations

Mothers in the current sample were asked if they remembered receiving an injection in the arm during their last pregnancy (with a clear distinction made between that and a blood draw). The question made the assumption that these were likely to have been tetanus toxoid (TT) vaccinations.

All pregnant women should get at least two TT injections. Of the 122 mothers of children in the 0-23 month age group, 58% remembered getting at least two injections.

3. AIDS Testing

When asked whether they had been counselled and tested for HIV/AIDS during their most recent pregnancy, 73% said they had, which is an increase from the baseline coverage figure of 57%. Only two women in the current sample said they didn't know whether they had been counselled and tested, and the remaining 24% said they had not.

4. Place of Delivery, Delivery Attendants and Postpartum Period

When asked where they delivered their last baby, 93% of mothers had given birth in either a hospital (61%) or a community health center (29%) or a clinic (8%). Only 5% had given birth in their own home, and only 3% had given birth in a location listed under "other." (At least one mother reported giving birth to her baby in a taxi.)

A full 85% of the sample had been assisted in delivering their baby by either a nurse (75%) or a doctor (20%). Only 5% had gotten help from a family member, and no one in the sample had delivered her baby by herself.

This again shows improvement over baseline as in 2001, 85% of mothers gave birth in a health facility, 15% had given birth at home, 14% had no professional assistance during delivery, and a small percentage did give birth alone.

V. DISCUSSION

A. HIV/AIDS/STIs

Responses to questions on HIV/AIDS and STI knowledge and attitudes in the current KPC were very encouraging and overall displayed a movement away from traditional attitudes toward HIV/AIDS – that people get it because of they're either sexually promiscuous or the victims of witchcraft – toward more enlightened views and practices. Results of the KPC show an increased and more sophisticated awareness of HIV/AIDS, including its WHO-supported and KZN DOH-promoted methods of prevention (as well as a reduced reliance on traditional healers for protection).

- 75% agreed that there were ways to avoid getting HIV/AIDS;
- 81% were aware of condom use for prevention, 68% of abstinence, and 31% of staying faithful to one partner; only 2% mentioned seeking out a traditional healer for help;
- 45% knew at least three symptom of STIs other than HIV/AIDS in females (an increase of 19% from the baseline survey).
- 76% of mothers and caregivers would allow the child to play with a friend who has HIV/AIDS; 78% would allow the child to go to a school with an HIV+ teacher, and 87% would take care of a family member with AIDS.
- 73% of mothers remembered being counseled and tested for HIV while pregnant.

Although condom usage during last sexual intercourse was only 48%, this is a promising 18% increase from baseline. Women in Ndwedwe continue to be reluctant to insist on condom use as men in Ndwedwe are generally still adverse to it, even in a monogamous relationship. Although the women may be concerned about the man having other sexual partners and putting them at risk, they often feel powerless to demand fidelity, dependent as they are on the man's financial and/or emotional support. Women also resist provoking confrontation in order to maintain even fragile marital ties, as there is a deeply ingrained precept in Zulu culture that a female is not a "real woman" unless she's married.

Knowledge levels were equivalent between mothers and caregivers, although mothers tended to have attitudes that reflected more openness to social interaction with people who have HIV/AIDS. As mentioned earlier, this is possibly due to the tendency of caregivers to be older women - grandmothers or aunts - who more deeper rooted in traditional attitudes. (The majority of caregivers in the sample were in the over-35 year age group, while the majority of mothers were in the 20-24 year age group.)

The project has had three main approaches to HIV/AIDS/STIs: 1) preventing new cases through community-based prevention and treatment programs, such as continued training of nurses on WHO/KZN DOH protocols for providing VCT, treatment and support for PLWHA, as well as on PMTCT, and supporting implementation of VCT centers in health

facilities; 2) strengthening the capacity of families and communities to meet the needs of orphans and children affected by AIDS through project such as the Mavela model crèche that provides a roster of services specifically for OVCs, including assistance with social grants and household food security support; and 3) providing support to and supervision of home-based care for PLWHA through training of CHWs and HBCVs, community elders, clergy and traditional healers on the facts of the disease, available treatments, effective precautions against the virus, and care of PLWHA within the community.

It appears that these efforts have already begun paying off in the general and significant improvement in related knowledge, practices and coverage. It is expected that the investment of education and training in Ndwedwe communities will continue to improve the status of both child and maternal health.

B. Control of Diarrheal Diseases

Data from the current KPC survey is based on responses from mothers and caregivers whose child had experienced diarrhea only in the two weeks prior to the survey. However this is likely to be representative of trends in diarrheal prevention and treatment throughout the year.

According to South Africa Health Review for 2005, KwaZulu Natal had the highest incidence of child diarrhea in the country at a rate of 244.2 per thousand children under 5 years old. The national average is 128.7 per thousand. Ilembe DHIS figures from 2004 indicate that in Ndwedwe alone there were 29.5 new cases of child diarrhea per 1,000 children under 5 reported at health facilities and 6.44 cases of diarrhea with dehydration seen. This doesn't account for cases of diarrhea, dehydration and dysentery that go unreported when children aren't brought in for care.

Most encouraging to see was a marked improvement in home-based care, especially in the amount of food and fluids provided to a child with diarrhea to combat critical loss of fluids and nutrients that place an already vulnerable child at increased risk. Only 27% of the sample gave the child less fluid, a reduction of 8% from baseline, and only 28% gave less food, down significantly from 45% in the baseline. Use of ORS and SSS increased as well, displaying the possible impact of the project's focused efforts to train healthworkers and community members on knowledge of dehydration signs and correct rehydration methods recommended in the C/HH IMCI protocol for control of diarrheal disease in young children.

Of continued concern, however, is the improved but still low levels of basic preventive sanitation habits, such as handwashing at all key times recommended in C/HH IMCI protocol. In particular, the combined mother and caregiver level for handwashing prior to feeding was only 30%, and although this was an increase from 15% in the baseline the rate could be higher. The level for after cleaning child waste was only 42% (not measured in the baseline KPC). This points to the need for continued education and reinforcement of behavior change messages to improve home sanitation practices and

decrease incidence of child diarrhea, still a major cause of child morbidity and mortality in Ndwedwe.

C. Child Feeding

In assessing child feeding practices, current KPC data revealed that 75% of mothers had breastfed their babies at some point and 67% of those mothers had fed the child colostrum. This is roughly comparable and an apparent improvement of the 1998 DHS figure of 37% in KwaZulu Natal who had given their colostrum to the child. Looking at exclusive breastfeeding rates for the first 5 months), although the KPC subsample was very small (only 19 babies between 0-5 months), only 33% had consumed only breastmilk in the previous 24 hours. This is higher than 1998 DHS rates for KZN for this age group, which were roughly 20%.

The 33% exclusive breastfeeding rate in Ndwedwe is still far below the ideal 100% rate set by the WHO and promoted through KZN DOH IMCI guidelines. A likely justification for this, again, is the high rate of HIV prevalence in Ndwedwe and the fact that a mother who either knows or suspects that she might be HIV+ may choose not to breastfeed her baby for an extended period of time if at all due to fears of transmitting the virus through her breastmilk. As such, the NDCSP has continued to facilitate PMTCT programs throughout Ndwedwe health facilities.

To evaluate whether children 5-9 months old were consuming an appropriate weaning diet of clean fluids and soft, nutrient-rich foods in addition to continued intake of breastmilk, a subsample of children in this age group was identified (N = 43) and their mother or caregiver asked what the child has consumed in the previous 24 hours. The results were slightly contradictory to those from the younger group as a larger 42% were exclusively breastfed. Only 14% were receiving breastmilk plus soft food, as recommended by WHO infant feeding standards. However, it still remains a question whether either of these child-feeding results is relevant to Ndwedwe, both because of the effect of HIV prevalence on feeding choices and the very small sample sizes from the survey.

D. Pneumonia Case Management

South Africa Health Review figures from 2002 show that KwaZulu Natal has the highest incidence of under-5 pneumonia in the country at 523 new cases per 1,000 children in this age group. The national average for that year 241 cases per 1,000 children. DHIS figures from 2004 for Ilembe indicate that with a rate of 10.45 new cases of pneumonia per 1,000 children under 5, Ndwedwe had the highest rate in the district.

There are implications that the training of facility and community healthcare workers in the need for prompt, professional treatment of a cough or fast breathing - the primary symptoms of acute respiratory infection (ARI) in children – has delivered results. A full 82% of the sub-sample brought to a health facility within the first day of evident

symptoms. The majority of these (86%) consulted the nurse at their local clinic or community health center, where NDCSP training efforts had been focused throughout Phase II. No one in the sample took the child to a traditional healer.

However, due to an error in the questionnaire, only mothers and caregivers of children who had had a cough in the prior two weeks, not necessarily rapid breathing, were asked about treatment followup. Because it is unclear how many of these children had pneumonia or just had a cough, this high response rate may indicate an overuse of clinic services for minor illness and should be investigated further.

E. Immunization

To address the question of how many children were fully immunized by their first birthday – having received all the recommended child vaccinations up to that point, including their first measles vaccination at or around 9 months – a sub-sample of children 12-23 months old was selected.

To qualify data on immunizations, information on what the child had received was collected only from mothers and caregivers who were able to produce the child's actual Road to Health card (RTHC) to show to the enumerator, regardless of whether or not they said the child had a card. The enumerator then recorded the dates of all vaccinations received in a form included in the questionnaire.

Only 57 of 90 mothers and caregivers of children in this age group were able to produce a card for the enumerator. Of these, 48 children or 84% had been fully immunized, slightly below the national target of 90% but substantially above the 50% measured in KwaZulu Natal in the 1998 DHS and markedly above the 2003 rate of 74.5% full coverage in Ndwedwe measured by DHIS. This high coverage figure reflects the improved training of facility healthworkers in correct administration of vaccines as well as regular and accurate recording of immunization and other data on the Road to Health card that every young child should have.

To gain a larger sense of coverage, full immunization status was also assessed against the total 0-23 sub-sample of 90. The resulting 53% is an increase of 18 percentage points from 35% at baseline. Similarly, measles coverage was 56% compared to 42% at baseline. Although not as dramatic, this is still indicative of significantly increased immunization coverage of children in this population.

F. Maternal and Neonatal Care

Antenatal Care

Antenatal care coverage has improved in Ndwedwe over the project period. Although the timing of the first antenatal visit was not provided for this sample in the current KPC, 87% said they had gone to a health facility for antenatal care and 51% had made 3 or more antenatal visits prior to giving birth. The rate for Ndwedwe measured in 2004 by DHIS was an average of 5.1 antenatal visits per pregnancy.

Tetanus Toxoid Immunization
Maternal cards are kept at health facilities in Ndwedwe. As such, the data on tetanus toxoid or TT shots received was based on maternal recall only. A very high percentage (58%) of mothers reported getting 2 or more injections in the arm during pregnancy, assumed to be TT injections, comparing favorably to the 75% coverage reported for Ndwedwe by DHIS data from 2004.

Place of Delivery, Delivery Attendants and Postpartum Period
Ninety percent (90%) of the mothers in the current KPC gave birth at a health facility with the help of a skilled professional, similar to baseline results.

Only 23% of mothers didn't know any of the danger signs during pregnancy, a reduction of 10% from the baseline. And only 10% knew no signs of urgent care needed in a newborn. This is perhaps the result of the Project's successful efforts to (a) increase the availability of clinic level antenatal care for pregnant women; (b) provide mobile clinic services that conduct deliveries and obstetric emergencies; (c) support community based maternal and newborn care provided by trained TBAs; (d) train CHWs, HBCVs, and CHCs in maternal and newborn care danger signs, enabling them to advise mothers to seek early medical care and conduct health education activities in their respective communities; and (e) train TBAs in the Project area to conduct safe deliveries and making timely and appropriate referrals.

DISSEMINATION OF SURVEY FINDINGS

All Project stakeholders have expressed a keen interest in learning the results of the current evaluation. As such, MCDI has made the following plans to disseminate the results in the appropriate format to each group. Report timing will be arranged in agreement between stakeholder and MCDI staff schedules. To maximize time and resources, opportunities at established centralizing events will be pursued.

KwaZulu Province and Ilembe District Department of Health
Distribution of the full report to program managers and delivery of a PowerPoint presentation summarizing findings to be delivered at a monthly district managers meeting for Ilembe at the District's Department of Health offices.

It will be left to the PHC managers at this meeting to disseminate a copy or present a summary of the results to the Ndwedwe facility staff under their supervision.

A preview of the report will be provided prior to the presentation to Ms. Janet Dalton, Maternal Child and Women's Health Program Manager for KwaZulu Natal province, Ms. Sandra Moodley, Maternal Child and Women's Health Program Manager for Ilembe District, and Ms. Sibongile Dube, Ilembe DOH District Manager.

Partner NGOs and CBOs
MCDI will arrange for representatives of Project partners to meet at MCDI's offices and view a the PowerPoint presentation on results and to receive an abbreviated copy of the full Project report, focusing on the outcomes related to their efforts on the Project.

Traditional leaders and council members
MCDI will give a short oral presentation of the Project results to all Ndwedwe tribal leaders and council members attending one of the monthly meetings arranged by the municipality. Timing to be arranged.

MCDI will also deliver a handout with results appropriately presented in basic points for leaders to distribute to members of their community. MCDI will also be available to present results to large gatherings of community members – including clergy members and traditional healers who had participated in Project training - per request of tribal authorities.

V. APPENDICES

A. Population data.

B. Survey sampling frame.

C. Project resource requirements

D. DHIS data from 2002-2004.

E. Questionnaires (English and Zulu).

F. Training curriculum and materials.

Appendix A

Population Data for Ndwedwe

1. Population of Ndwedwe Municipality per Area/Village (Census 2001)

Tribal Authority/Areas	Estimated Population	Estimated Number of Households
Amalanga	6,075	949
Chili	2,124	332
Cibane	495	77
Gcwensa	10,981	1716
Hlophe	1,469	230
Inkumba/KwaNyuswa	25,229	3942
Iqadi	7,978	1247
Khumalo	1,661	260
Luthuli	4,411	689
Mangangeni/Vumazonke	2,063	322
Mathonsi	545	85
Mlamuli Nyuswa	21,735	3396
Ndwedwe Mission	9,957	1556
Ngcolosi	2,458	384
Ngongoma/Mavela	11,642	1819
Nhlangwini	7,785	1216
Nodunga	3,012	471
Nyuswa/Nodwengu	11,574	1808
Qadi	3,163	494
Qwabe (Madundube)	2,680	419
Qwabe N	3,547	554
Shangase	7,800	1219
Wosiyane	4,112	643
Total	**152,496**	**23,828**

2. Primary Health Care Facility Catchment Population
Mid-Year Estimates for 2004 (DHIS)

Name of Health Facility	Total Cachment Population	Under 1	Under 5	Women 15-49	Youth 15-24
Chibini Clinic	13724	334	1462	3456	3125
Esidumbini Clinic	15834	385	1687	3985	3604
Kearsney Clinic	14827	360	1580	3731	3375
Nyuswa Clinic	10736	261	1144	2702	2444
Molokohlo Clinic	9769	238	1041	2458	2224
Thafamasi Clinic	7559	184	806	1902	1721
Wosiyane Clinic	7957	193	847	2003	1810
Ndwedwe CHC	63167	1536	6730	15900	14381
Montebello PHC / OPD	12471	303	1329	3138	2839
Total	**156,043**	**3,795**	**16,627**	**39,274**	**35,523**

Appendix B - Survey Sampling Frame

Attachment Cluster Sample: NDCSP KPC 2005

Enumeration Area Code	Tribal Authority	Izigodi	Est. Population	Estimated number of Households	Area	Cluster Number
	Inkumba/Nyuswa					
5436006		Abajuti	2530	395	Nyuswa Clinic	1
					Hlomantethe	2
					Mgazini	3
					Esigedleni	4
5436077		Mgetane	2350	362	Wartburg Road	5
					Matholampevu	6
5436085		Ezinyanthini	1480	228	Nyuswa North	7
					Nodwengu	8
					Sonkombo	9
	Shangase					
5436000		Ngcolosi	1480	228	Galile Community Training Centre	10
					Madlizinyoka	11
5436107		Shangase	3725	573	Tribal Court	12
					Mbuyeni	13
5436100		Ezimpondweni	1563	240	Upper Shngase	14
					Edulini	15
5436102		Nsingweni	2400	369	Thafamasi Clinic	16
					Nguza	17
5436017		Thafamasi	2700	415	Lower Shangase	18
					Nhlabaknye	19
	Ngongoma/Mavela					
5436036		Mozokhulayo	2109	324	Ndwedwe Central	20
					Mona	21
					Msunduze Reserve	22
5436044		Mpungeni	972	150	Ikhulowa	23
					Ndwedwe North	24
					Hlope	25
					Hlathikhulu	26
5436037		Mavela	2500	385	Ndwedwe South	27
					Ezidlovini	28
					Mavela Tribal Court	29
					KwaBlose	30

Appendix C

Project resource requirements

Budget & Expenditure for KPC survey - September - October 2005
(US$ = ZAR 6.20)

Activity/Item	Quantity	Budget	Expenses
Catering	12 days	5823	4690
Accommodation	12 days	1370	1130
Honorarium for interviewers during training period	12 interviewers X 3 days X R50	1800	3710
Honorarium for interviewers during survey period	12 interviewers X 6 days X R80	5760	3840
Honorarium for supervisors	2 supervisors X 10 days X R250	7500	4250
Driver fee	1 x 8 days X 200	1600	1836.9
Consultant Fee: Epi-info programming, data capturing, tabulation & tables	R500 X 8days	4000	5500
Car Hire	R500 X 1 X 12 days	6000	5134
Other	Photocopy, stationeries, etc	1500	598.19
Petrol	900 X 3 X 2 weeks	3000	1043
Contingency = R2,500		2500	0
T O T A L	ZAR	40853	31731.75
	US$	6589.19	5118.02

Appendix D

DHIS data from 2001-2004.

Indicator	Definition	Year	eNdondakusuka	KwaDukuza	Maphumulo	Ndwedwe	Grand Total
PHC total headcount	Total number of PHC headcount (Number)	2001	168,938	278,861	201,387	262,678	911,864
		2002	227,715	224,166	253,753	270,446	976,080
		2003	291,893	307,314	218,950	226,946	1,045,103
		2004	326,202	348,756	207,453	207,745	1,090,156
PHC headcount under 5 years	Total number of PHC headcount for under 5 (Number)	2001	53,394	58,550	50,498	79,147	241,589
		2002	56,080	73,645	60,626	78,837	269,188
		2003	58,619	74,309	57,604	58,138	248,670
		2004	57,037	66,327	52,333	54,889	230,586
Utilisat rate fac yy	Numerator: Total PHC headcount Denominator: Total Catchment population (%)	2001	2.04	1.49	1.70	1.55	1.68
		2002	1.74	1.73	1.85	1.66	1.74
		2003	2.16	1.76	1.77	1.48	1.78
		2004	2.4	2.0	1.7	1.4	1.9
Utilization rate <5 yy	Numerator: PHC headcount under 5 years Denominator: Catchment population under 5 years (%)	2001	3.51	3.59	3.94	4.13	3.81
		2002	3.37	4.09	4.46	4.46	4.11
		2003	4.05	4.24	3.64	3.63	3.90
		2004	3.90	3.79	3.42	3.78	3.72
Child case load	Numerator: PHC headcount under 5 years Denominator: PHC total headcount (%)	2001	19.06	24.10	30.67	30.27	25.70
		2002	21.14	23.63	31.56	29.34	26.30
		2003	20.14	24.29	26.80	25.71	23.93
		2004	17.5	19.0	25.4	26.6	21.2
DOTS Case Load	Numerator: TB patient headcount on DOTS Denominator: PHC total headcount (%)	2001	1.04	1.52	0.22	0.02	0.72
		2002	1.14	2.72	1.28	0.13	1.37
		2003	1.10	4.81	1.37	0.14	1.78
		2004	1.24	4.16	1.40	0.50	1.90
Measles 1st covr yy	Numerator: Measles 1st dose under 1 year Denominator: Target population under 1 year	2001	64.96	92.98	90.57	52.42	75.35
		2002	58.95	84.01	119.66	65.41	81.32
		2003	66.80	97.94	90.53	75.40	83.63

	(%)	2004	74.9	83.5	93.7	83.6	84.8
Imm coverage yy	Numerator: Children fully immunized under 1 year Denominator: Target population under 1 year	2001	64.00	92.85	87.25	50.40	73.83
		2002	58.52	83.44	113.76	62.48	79.06
		2003	66.76	93.29	105.02	73.24	84.87
		2004	74.7	93.5	110.0	74.5	89.3
Tet Tox rate	Numerator: Tet Tox 2/Booster dose to pregnant women Denominator: Potential ANC clients in catchment population	2001	56.96	75.45	124.61	69.78	76.11
		2002	53.83	167.83	174.24	74.39	113.48
		2003	88.66	90.61	180.81	98.76	100.58
	(%)	2004	96.48	124.74	103.75	91.02	106.50
ANC visits / client	Numerator: All antenatal visits Denominator: Antenatal 1st (booking) visits	2001	3.80	2.08	3.74	3.28	2.99
		2002	4.16	2.38	3.63	3.39	3.36
	(%)	2003	4.04	2.99	3.42	3.39	3.35
		2004	3.8	4.4	5.4	5.1	4.5
Weighing coverage yy	Numerator: Children under five years weighed Denominator: Target weightings of children under five years	2001	23.18	46.42	38.16	88.48	50.11
		2002	28.80	49.85	53.70	93.11	56.48
		2003	53.64	51.50	45.59	77.41	56.58
	(%)	2004	61.2	69.4	54.9	67.9	63.7
Not gain weight rate	Numerator: Not gaining weight under 5 years Denominator: Children under 5 years weighed	2003	0.16	0.13	1.00	0.33	0.38
	(%)	2004	2.2	2.2	1.1	2.1	2.0
Underweight <5 rate	Numerator: Underweight for age under 5 years - new cases Denominator: Children under 5 years weighed	2003	0.17	0.41	1.77	7.39	2.16
	(%)	2004	3.1	1.8	2.3	2.5	2.4
Severe malnu rate <5	Numerator: Severe malnutrition under 5 years - new ambulatory Denominator: Catchment population under 5 years	2001	2.41	1.18	2.26	2.04	1.91
		2002	2.41	1.51	2.36	1.94	1.99
		2003	0.69	1.84	1.74	2.47	1.76
	(%)	2004	3.62	1.87	2.35	2.48	2.54
Incid diarr w dehydr	Numerator: Diarrhoea with dehydration under 5	2003	7.91	4.37	6.85	6.44	6.32

	years - new ambulatory Denominator: Catchment population under 5 years (per 1000)	2004	10.4	8.2	6.7	11.2	9.0
Diarrhoea incidence	Numerator: Diarrhoea cases with and without dehydration under 5 years Denominator: Catchment population under 5 years (per 1000)	2001	27.19	23.61	39.24	24.51	28.60
		2002	21.13	20.44	34.49	24.45	25.17
		2003	19.21	23.94	27.15	34.18	26.18
		2004	30.4	32.8	25.6	29.5	29.7
Pneum inc <5	Numerator: Pneumonia under 5 years new Denominator: Catchment population under 5 years (per 1000)	2003	4.77	1.73	1.12	10.45	4.45
		2004	8.7	12.9	4.0	17.2	10.7
Women yr prot yy	Numerator: Contraceptive years dispensed Denominator: Female target population 15-44 years (%)	2001	17.05	22.02	11.13	10.30	15.60
		2002	17.15	26.30	21.21	11.69	19.32
		2003	16.92	19.35	17.15	12.01	16.51
		2004	17.63	19.35	13.72	13.43	16.45
STI part trace rate	Numerator: STI partners treated - new Denominator: STI partner notification slips issued (%)	2001	12.38	18.48	29.84	21.02	19.07
		2002	34.72	28.72	34.43	24.17	30.53
		2003	23.92	23.12	34.66	38.67	27.42
		2004	40.1	20.4	43.2	42.2	32.6
STI part notif rate	Numerator: STI partner notification slips issued Denominator: STI treated - new episodes (%)	2001	30.43	34.64	37.56	41.58	34.85
		2002	86.17	62.78	69.44	96.12	73.98
		2003	83.94	84.14	68.51	95.92	83.48
		2004	132.7	108.3	70.7	139.3	112.5
STI part treat rate	Numerator: STI partners treated - new Denominator: STI treated - new episodes (%)	2001	3.77	6.40	11.21	8.74	6.65
		2002	29.92	18.03	23.90	23.23	22.59
		2003	20.08	19.46	23.75	37.09	22.89
		2004	53.2	22.1	30.5	58.8	36.7
BCG coverage YY	Numerator: BCG doses under 1 year Denominator: Target population under 1 year (%)	2001	65.49	116.30	75.55	31.19	73.30
		2002	50.85	117.76	74.84	36.75	72.79
		2003	54.56	99.31	67.04	35.58	67.47
		2004	61.7	144.6	78.6	46.5	90.3

Male condom distribution rate	Numerator: Male condoms distributed Denominator: Male target population 15 years and older (%)	2001	3.97	5.78	6.05	3.44	4.80
		2002	4.33	6.87	4.87	3.72	5.16
		2003	3.08	4.55	4.17	3.87	3.97
		2004	2.96	4.11	3.23	3.36	3.52

Appendix E

KPC Consent forms and questionnaires (English and Zulu)

KPC SURVEY - INFORMED CONSENT

Hello. My name is _____, and I am working with an organisation called MCDI. We work with the Department of Health to train health workers to take better care of the children in your community.

We are conducting a survey and would appreciate your participation. I would like to ask you about your health and the health of your youngest child under the age of five. This information will help the Department of Health to plan health services and see whether it is meeting its goals to improve children's health.

The survey usually takes 45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?

Signature of interviewer:

_____

Date: _____

RESPONDENT AGREES TO BE INTERVIEWED 1

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED 2

MCDI SOUTH AFRICA

Ndwedwe Child Survival Project

KNOWLEDGE, PRACTICES AND COVERAGE (KPC) SURVEY

IDENTIFICATION

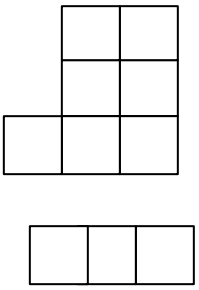
CLUSTER NUMBER.....

HOUSEHOLD NUMBER.....

MCDI only:

QUESTIONNAIRE NUMBER.....

ENUMERATION AREA NUMBER .....



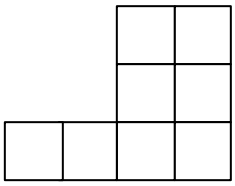
INTERVIEW DATE

RESCHEDULE INTERVIEW _____/_____/_____
(dd/mm/yy)

DAY

MONTH

YEAR



INTERVIEWER'S NAME _____

SUPERVISOR'S NAME _____

Supervisor only:

TRIBAL AUTHORITY _____

ISIGODI NAME _____ _____

RESPONDENTS ARE MOTHERS OR CAREGIVERS OF A CHILD LESS THAN 5 YEARS OF AGE

TICK ONE OF THE FOLLOWING:

NAME OF INTERVIEWEE:

A. MOTHER ☐

B. CAREGIVER ☐

C. AGE OF THE MOTHER (IN YEARS) IF INTERVIEWED

D. AGE OF CAREGIVER (IN YEARS) IF INTERIVEWED ☐☐

E. NAME OF YOUNGEST CHILD LESS THAN 5 YEARS OLD

F. SEX OF CHILD (1=MALE, 2=FEMALE) .....

G. DATE OF BIRTH DAY

MONTH

YEAR

H. AGE OF THE CHILD (IN MONTHS)

HOUSEHOLD WATER AND SANITATION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1.	First I would like to ask some questions about your household. What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING/ YARD/PLOT ..... 10 PUBLIC TAP ..... 11 ..... 12 WATER FROM OPEN WELL OPEN WELL IN DWELLING YARD/PLOT ..... 21 OPEN PUBLIC WELL ..... 22 WATER FROM COVERED WELL OR BOREHOLE PROTECTED WELL IN DWELLING/ YARD/PLOT ..... 31 PROTECTED PUBLIC WELL ..... 32 SURFACE WATER SPRING/RIVER/STREAM ..... 41 POND/LAKE/DAM ..... 42 RAINWATER ..... 51 OTHER_____ 96 (SPECIFY)	
2.	Does your household have a special place for hand washing?	YES ..... 1 NO 2	- - ? 4.
3.	*ASK TO SEE THE PLACE USED MOST OFTEN FOR HAND WASHING AND OBSERVE IF **EACH** OF THE FOLLOWING ITEMS ARE PRESENT*	**YES NO** (I) WATER/TAP ..... 1 2 (II) SOAP OR OTHER	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
		CLEANSING AGENT ..... 1 2 (III) BASIN 1 2	
4.	When do you usually wash your hands? *CIRCLE ALL MENTIONED.*	BEFORE FOOD PREPARATION.....A BEFORE EATING .....B BEFORE FEEDING CHILDREN.....C AFTER OWN DEFECATION.....D AFTER CLEANING CHILD'S WASTE.....E NEVER……F OTHER_____ X (SPECIFY)	

BACKGROUND CHARACTERISTICS OF MOTHER/CAREGIVER

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
5.	Now, I would like to ask some questions about yourself. Have you ever attended school? *IF NO: CIRCLE 1 [NONE]* *IF YES, ASK:* What is the highest level of school you have attended: primary, secondary, or higher?	NONE ..... 1 PRIMARY (standards 1-5) ..... 2 SECONDARY(standards 6-9)..... 3 HIGHER (standard 10 and above)..... 4	
6.	Do you work to earn money? *IF NO, CIRCLE A* *IF YES*, ASK: What kind of work do you do? *CIRCLE ALL MENTIONED.*	NO OUTSIDE WORK .....A HANDICRAFTS .....B AGRICULTURAL WORKER .....C SELLING FOODS .....D SHOP KEEPER/STREET VENDOR..... E SERVANT/HOUSEHOLD WORKER ..... F SALARIED WORKER.....G OTHER_____ X (SPECIFY)	- - ? 8
7.	Who takes care of (NAME) when the mother is away from home? *CIRCLE ALL MENTIONED.*	HUSBAND/PARTNER .....A OLDER CHILDREN .....B OTHER RELATIVES .....C NEIGHBORS/FRIENDS .....D MAID..... E NURSERY SCHOOL ..... F GRANDMOTHER……..G OTHER_____ X (SPECIFY)	
8.	During the past 12 months, have you been very sick or bedridden?	YES.....1 NO 2	- - ? 1 0
9.	For how many months were you sick? *IF LESS THAN ONE MONTH, RECORD 'OO' MONTHS.*	☐☐ MONTHS	

CHILDHOOD IMMUNIZATION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
10.	Do you have a Road to Health Card for (NAME)? *IF YES, ASK:* May I see it please?	YES, SEEN ..... 1 YES, NOT SEEN ..... 2 NO, CARD LOST……..……..3 LEFT AT THE CRECHE ..... 4 NEVER HAD A CARD 5	<12

11. *FOR EACH VACCINE, COPY VACCINATION DATE WRITTEN ON THE CARD.*

			PRIMARY			BOOSTERS		
IMMUNISATIONS		Date given	Signature			Date given	Signature
B.C.G.	**1**			**2**			
Polio	**0**			**4**			
	1			**5**			
	2						
	3						
DTP	**1**			**4**			
	2			***D T***			
	3						
Hep.B	**1**						
	2						
	3						
Meas	**1**			**2**			
Vit A	**1**			**3**			
	2			**4**			
HiB	**1**			**4**			
	2			**5**			
	3						

12.	Do you know what age should a child receive a measles immunisation? 9 MONTHS; 1YEAR = 12 MONTHS ; 1 & 1/2 YEARS = 18 MONTHS; 2 YEARS = 24 MONTHS; 3 YEARS = 36 MONTHS; 4 YEARS = 48 MONTHS; 5 YEARS = 60 MONTHS	SPECIFY IN MONTHS … ☐☐ SPECIFY IN MONTHS … ☐☐ DON'T KNOW 88	

DIARRHOEA CASE MANAGEMENT

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
13.	Has (NAME) had diarrhoea in the last 2 weeks?	YES ..... 1 NO ..... 2 DON'T KNOW 8	-<19.
14.	What was given to treat the diarrhoea at home? Anything else? *CIRCLE ALL MENTIONED.*	NOTHING .....A ORS .....B SOROL (SALT-SUGAR SOLUTION) .....C ANTIBIOTIC……..……D TRADITIONAL ……..…E OTHER_____ X (SPECIFY) DON'T KNOW……8	
15.	When (NAME) had diarrhoea, did she/he breastfeed less than usual, the same, more than usual, or did he/she stop completely?	LESS ..... 1 SAME ..... 2 MORE..... 3 STOPPED COMPLETELY ..... 4 NON-BREASTFEEDER..... 5 DON'T KNOW 8	
16.	When (NAME) had diarrhoea, was he/she offered less than usual to drink, about the same amount, or more than usual to drink?	LESS ..... 1 SAME ..... 2 MORE..... 3 EXCLUSIVELY BREASTFED..... 4 DON'T KNOW 8	
17.	Was (NAME) offered less than usual to eat, about the same amount, or more than usual to eat?	LESS ..... 1 SAME ..... 2 MORE..... 3 EXCLUSIVELY BREASTFED..... 4 DON'T KNOW 8	
18.	What are important actions a mother should take when her child is recovering from diarrhoea? CIRCLE ALL MENTIONED.	GIVE THE CHILD SMALLER AND MORE FREQUENT FEEDS .....A MORE FOOD THAN USUAL..... B GIVE FOOD WITH HIGHER CALORIC CONTENT ..... C GIVE MORE FLUIDS LIKE SOROL, ORS, BREASTMILK, WATER……..…D OTHER_____ X (SPECIFY) DON'T KNOW ..... Z	

ACUTE RESPIRATORY INFECTIONS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
19.	Has (NAME) had an illness with a cough at any time in the last two weeks?	YES ..... 1 NO ..... 2 DON'T KNOW 8	]-?25.
20.	Did you seek advice or treatment outside the home for the cough/fast breathing by the end of the first day that (NAME) got sick?	YES ..... 1 NO 2	--?22.
21.	Where did you seek advice or treatment? Anywhere else? *CIRCLE ALL MENTIONED.* IF SOURCE IS HOSPITAL, COMMUNITY HEALTH CENTER, CLINIC, OR OTHER FACILITY, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HEALTH FACILITY HOSPITAL.....A COMMUNITY HEALTH CENTER .....B CLINIC .....C OTHER HEALTH FACILITY_____ D (SPECIFY) COMMUNITY HEALTH WORKER…….E TRADITIONAL BIRTH ATTENDANT…….F TRADITIONAL HEALER.....G OTHER_____ X (SPECIFY)	
22.	When (NAME) was ill with a cough, did she/he breastfeed less than usual, the same, more than usual, or did he/she stop completely?	LESS ..... 1 SAME ..... 2 MORE..... 3 STOPPED COMPLETELY ..... 4 NON-BREASTFEEDER..... 5 DON'T KNOW 8	
23.	When (NAME) was ill with a cough, was he/she offered less than usual to drink, about the same amount, or more than usual to drink?	LESS ..... 1 SAME ..... 2 MORE..... 3 EXCLUSIVELY BREASTFED..... 4 DON'T KNOW 8	
24.	Was (NAME) offered less than usual to eat, about the same amount, or more than usual to eat?	LESS ..... 1 SAME ..... 2 MORE..... 3 EXCLUSIVELY BREASTFED..... 4 DON'T KNOW 8	

MATERNAL AND NEWBORN CARE

<u>QUESTIONS 25-32 TO BE ASKED OF THE MOTHER ONLY.</u>

(IF THE RESPONDENT IS NOT THE MOTHER, SKIP THIS SECTION AND GO ON TO THE NEXT ONE.)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
25.	Did you see anyone for prenatal care while you were pregnant with (NAME)? *IF NO: CIRCLE A [NO ONE]* *IF YES, ASK:* Whom did you see? Anyone else? *PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS MENTIONED BY THE MOTHER.*	NO ONE……A HEALTH PROFESSIONAL DOCTOR……B NURSE……C OTHER PERSON TRADITIONAL BIRTH ATTENDANT……D COMMUNITY HEALTH WORKER ……E TRADITIONAL HEALER……F OTHER_____ X (SPECIFY) DON'T KNOW……Z	---<27. ----<27.
26.	How many times did you see someone for care during the last three months of pregnancy? *IF THE MOTHER CANNOT RECALL THE NUMBER OF TIMES SHE SAW SOMEONE FOR CARE DURING HER PREGNANCY, RECORD '98' FOR DON'T KNOW.*	NUMBER OF TIMES ..... | | | | | | | |	
27.	While you were pregnant with [NAME] were you tested for AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
28.	Did you receive any injections in the arm while you were pregnant?	YES.....1 NO .....2 DON'T REMEMBER…… 8	-<30.
29.	*IF YES, ASK:* How many injections do you remember receiving while you were pregnant?	ONE……...1 TWO…… 2 THREE ……..3 DON'T REMEMBER……8	
30.	What are the symptoms during pregnancy indicating the need to seek health care? *CIRCLE ALL MENTIONED.*	FEVER .....A SHORTNESS OF BREATH .....B BLEEDING .....C SWELLING OF THE BODY/HANDS/FACE.....D OTHER_____ X (SPECIFY) DON'T KNOW .....Z	

PLACE OF DELIVERY AND DELIVERY ATTENDANTS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
31.	Where did you give birth to (*NAME*)?	HOME YOUR HOME .....A OTHER HOME .....B	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
	IF PLACE OF BIRTH IS HOSPITAL, COMMUNITY HEALTH CENTER, CLINIC, OR OTHER HEALTH FACILITY, WRITE THE NAME OF THE FACILITY. _____ (NAME OF FACILITY)	HEALTH FACILITY HOSPITAL.....C COMMUNITY HEALTH CENTER.....D CLINIC.....E OTHER HEALTH FACILITY _____ F (SPECIFY) OTHER_____ X (SPECIFY)	
32.	Who assisted you with the delivery? *CIRCLE ALL MENTIONED.*	HEALTH PROFESSIONAL DOCTOR.....A NURSE/MIDWIFE.....B TRADITIONAL BIRTH ATTENDANT…… C COMMUNITY HEALTH WORKER .....D FAMILY MEMBER ..... E OTHER _____ X (SPECIFY) NO ONE .....Y	

INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESSES (IMCI)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
33.	What are the signs to watch for that may indicate that a newborn baby is ill? *CIRCLE ALL MENTIONED.*	POOR FEEDING .....A FAST BREATHING.....B SLUGGISH.....C IRRITABLE CRYING.....D FEVER ..... E OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW .....Z	
34.	Sometimes children get sick and need to receive care or treatment for illnesses. What are the signs of illness that would indicate your child needs treatment? *DO NOT LEAD BUT PROMPT. CIRCLE ALL MENTIONED.*	LOOKS UNWELL OR NOT PLAYING NORMALLY.....A NOT EATING OR DRINK ING .....B LETHARGIC OR DIFFICULT TO WAKEC HIGH FEVER.....D LOW FEVER……E FAST OR DIFFICULT BREATHING ... ...F EXCESSIVE CRYING……...G CHANGE OF COLOUR…….H VOMITS EVERYTHING.....I CONVULSIONS .....J OTHER _____ V (SPECIFY) OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW .....Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
33.	What are the signs to watch for that may indicate that a newborn baby is ill? *CIRCLE ALL MENTIONED.*	POOR FEEDING ..... A FAST BREATHING ..... B SLUGGISH ..... C IRRITABLE CRYING ..... D FEVER ..... E OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW ..... Z	
35.	When (NAME) was sick, was he/she offered less than usual to drink, about the same amount, or more than usual to drink?	LESS ..... 1 SAME ..... 2 MORE ..... 3 DON'T KNOW 8	
36.	When (NAME) was sick, was he/she offered less than usual to eat, about the same amount, or more than usual to eat?	LESS ..... 1 SAME ..... 2 MORE ..... 3 DON'T KNOW 8	

HIV/AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
37.	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW ..... 8 REFUSED TO ANSWER 9	- + --?39.
38.	What can a person do to avoid contracting AIDS? Anything else? *DO NOT PROMPT. CIRCLE ALL MENTIONED.*	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER ..... C LIMIT NUMBER OF SEXUAL PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS ..... F AVOID INTERCOURSE WITH PERSONS OF THE SAME SEX ..... G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY ..... H AVOID BLOOD TRANSFUSIONS ..... I AVOID INJECTIONS ..... J AVOID KISSING ..... K AVOID MOSQUITO BITES ..... L SEEK PROTECTION FROM TRADITIONAL HEALER ..... M AVOID SHARING RAZORS, BLADES .. N OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW ..... Z REFUSED TO ANSWER 9	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
39.	Can the virus that causes AIDS be transmitted from a mother to a child? During pregnancy? During delivery? During breastfeeding? When breastmilk is mixed with other foods and liquids for the child?	**YES NO DK** DURING PREGNANCY ..... 1 2 8 DURING DELIVERY ..... 1 2 8 DURING BREASTFEEDING ..... 1 2 8 MIXED FEEDING…… ….1 2 8	
40.	If a mother is infected with the AIDS virus, is there any way to avoid transmission to the baby?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
41.	In a man, what signs and symptoms would lead you to think that he has sexually transmitted infections? Any others? *CIRCLE ALL MENTIONED.*	ABDOMINAL PAIN.....A GENITAL DISCHARGE/DRIPPING.....B FOUL SMELLING DISCHARGE.....C BURNING PAIN ON URINATION.....D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS .....G GENITAL WARTS .....H BLOOD IN URINE .....I LOSS OF WEIGHT .....J IMPOTENCE .....K NO SYMPTOMS ..... L OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW .....Z REFUSED TO ANSWER..... 9	
42.	In a woman, what signs and symptoms would lead you to think that she has sexually transmitted infections? Any others? *CIRCLE ALL MENTIONED.*	ABDOMINAL PAIN.....A GENITAL DISCHARGE.....B FOUL SMELLING DISCHARGE.....C BURNING PAIN ON URINATION.....D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS .....G GENITAL WARTS .....H BLOOD IN URINE .....I LOSS OF WEIGHT .....J INABILITY TO CONCEIVE.....K NO SYMPTOMS ..... L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW .....Z REFUSED TO ANSWER..... 9	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
43.	The last time you had sexual intercourse, did you use a condom?	YES ..... 1 NO ..... 2 DON'T KNOW ..... 8 REFUSED TO ANSWER..... 9	
44.	What are good reasons for people to use a condom? DO NOT PROMPT.	TO PREVENT STDS/HIV ..... 1 TO PREVENT PREGNANCY ..... 2 TO PREVENT BOTH STDS/HIV AND PREGNANCY ..... 3 DOESN'T TRUST PARTNER/ PARTNER HAS OTHER PARTNERS ... 4 PARTNER INSISTED..... 5 OTHER _____6 (SPECIFY) DON'T KNOW ..... 8 REFUSED TO ANSWER..... 9	
45.	Would you allow your child to play with a child who has the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW ..... 8 REFUSED TO ANSWER..... 9	
46.	Would you allow a HIV positive teacher to work in a school where your child is?	YES ..... 1 NO ..... 2 DON'T KNOW ..... 8 REFUSED TO ANSWER…… …. 9	
47.	Would you care for a family member who has AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW ..... .8 REFUSED TO ANSWER… …….. 9	

CHILD FEEDING

48.	I'd like to ask you about how you feed (NAME). Did you ever breastfeed (NAME)?	YES ..... 1 NO 2	- - ? 50.
49.	How long after birth did you first put (NAME) to the breast?	IMMEDIATELY/WITHIN FIRST HOUR AFTER DELIVERY ..... 1 WITHIN FIRST 8 HOURS ..... 2 AFTER FIRST 8 HOURS……3	
50.	I would like to ask you about the types of liquids and foods that (NAME) consumed yesterday during the day or at night. Did (NAME) have. . .	**LIQUID/FOOD CONSUMED IN LAST 24 HOURS?**	

	READ EACH OF THE FOLLOWING AND CIRCLE EACH ITEM CONSUMED.	A Breastmilk? B Plain water C Other liquids D Mashed, pureed, solid, or semi-solid foods? E Anything else? SPECIFY: _____ _____	

CHILDREN'S NAMES AND BIRTHDATES

51. What are the names and birthdates of all your children who are less than five years old?

Name:	**Date of birth: DD/MM/YYYY**
1.	
2.	
3.	
4.	

THANK YOU VERY MUCH FOR YOUR ASSISTANCE AND YOUR PATIENCE IN ANSWERING THESE QUESTIONS.

WE VALUE YOUR ANSWERS AND WILL TREAT THEM COMPLETELY CONFIDENTIALLY.

NONE OF THE INFORMATION YOU'VE GIVEN US TODAY WILL BE SHARED WITH ANYONE ELSE IN YOUR COMMUNITY.

Medical Care Development International

KPC SURVEY - INFORMED CONSENT

Sawubona, igama lami ngingu _____, ngisebenza nenhlangano ebizwa ngokuthi u-MCDI. Sisebenza noMnyango wezeMpilo ukuqeqesha izisebenzi zezempilo ekunakekeleni kangcono izingane emphakathini owakhele.

Senza uphenyo/ucwaningo, ngakho singakuthakasela ukubamba kwakho iqhaza. Ngizothanda ukukubuza ngempilo yakho kanye nempilo yomntwana wakho omncane ongaphansi kweminyaka emihlanu ubudala. Lolu lwazi luzosiza uMnyango wezeMpilo ekuhleleni izinhlelo zezempilo nokubheka ukuthi uyahlangabezana yini nezinhloso zawo zokuthuthukisa ukubhekelelwa kwempilo yengane.

Lemibuzo yophenyo ijwayele ukuthatha imizuzu engu-45 ukuyigcwalisa. Noma ngabe yiluphi ulwazi olunikayo luzogcinwa luyimfihlo futhi angeke lutshengiswe muntu.

Ukuzibandakanya kwakho kuloluphenyo kuyinto esuka kuwe ngokuzinikela futhi ungakhetha ukungaphenduli eminye yemibuzo noma yonke imibuzo. Noma kunjalo, siyathemba ukuthi uzozibandakanya naloluphenyo ngoba imibono yakho ibalulekile

Kulesikhathi, ingabe kukhona yini ofuna ukungibuza kona mayelana nophenyo?
Isayini yobuzwayo:

_____

Usuku: _____

OPHENDULAYO UYAVUMA UKUTHI ABUZWE……...…1

OPHENDULAYO AKAVUMI UKUTHI ABUZWE…….2

MCDI SOUTH AFRICA

Ndwedwe District Child Survival Project

KNOWLEDGE, PRACTICES AND COVERAGE (KPC) SURVEY

IDENTIFICATION

INOMBOLO YESIXUKU.....

INOMBOLO YOMUZI.....

OKUKA MCDI KUPHELA:

INOMBOLO YENDAWO ECWANINGWAYO……

INOMBOLO YOMQULU.....

USUKU OKUBUZWA NGALO

USUKU

INYANGA

UNYAKA

USUKU OKUYOBUYE KUBUZWE NGALO

_____/_____/_____

(dd/mm/yy)

IGAMA LOBUZAYO _____

IGAMA LOKUBHEKILE _____

OKWALOWO OBHEKA ABABUZAYO KUPHELA:

IGAMA LENDAWO _____

IGAMA LESIGODI _____

ABABUZWAYO OMAMA ABANEZINGANE EZINGAPHANSI KWEMINYAKA EMIHLANU

YENZA UMAKA KOKUKODWA KULOKHU OKULANDELAYO:

IGAMA LOBUZWAYO:

A. UMAMA

_____

B. UMZANYANA

UBULILI (OWESILISA 1, OWESIFAZANE 2) .....

USUKU LOKUZALWA

USUKU

INYANGA

UNYAKA

_____ C. UBUDALA BUKAMAMA NGEMINYAKA, UMA KUNGUYE OBUZWAYO D. UBUDALA BOMZANYANA NGEMINYAKA UMA KUNGUYE OBUZWAYO E. IGAMA LOMNTWANA OMNCANE KUNABO BONKE UMA ENEMINYAKA ENGAPHANSI KWEMIHLANU. _____	UBUDALA BOMNTWANA (IZINYANGA).....

AMANZI NEZINDLELA ZOKULAHLA IZIBI NENDLE

NO.	IMIBUZO	IZIMPENDULO	SKIP
10.	OKOKUQALA NGIZOCELA UKUKUBUZA IMIBUZO EQONDENE NEKHAYA LAKHO NIWATHATHAPHI AMANZI OKUPHUZA ASETSHENZISWA UMNDENI WAKHO?	AMANZI EZA NGAMAPAYIPI IPAYIPI ELIZA ENDLINI/ . 10 EGCEKENI..... 11 UMPOMPI WOMPHAKATHI..... 12 AMANZI AVELA EMTHONJENI OVULIWE UMTHOMBO OSEKHAYA EGCEKENI..... 21 UMTHOMBO WOMPHAKATHI..... 22 AMANZI AVELA EMTHONJENI OVALIWE UMTHOMBO OVALIWE OSEKHAYA/ OSEGCEKENI ..... 31 UMTHOMBO OVALIWE WOMPHAKATHI..... 32 AMANZI AGELEZAYO UMTHOMBO/ UMFULA ..... 41 IDAMU..... 42 AMANZI EMVULA..... 51 OKUNYE_____ 96 (CHAZA)	
11.	UMUZI WAKHO UNAYO INDAWO ETHIZE EBEKELWE UKUGEZA IZANDLA?	YEBO ..... 1 CHA 2	- - ? 4
12.	*CELA UKUBONA INDAWO ESETSHENZISELWA UKUGEZA IZANDLA UBHEKE NOKUTHI ZIKHONA YINI LEZINTO EZILANDELAYO*	**YEBO /CHA** (I)UMPOMPI WAMANZI ..... 1 2 (II) INSIPHO NOKUNYE KOKUGEZA..... 1 2 (III) INDISHI YOKUGEZELA 1 2	
13.	UVAME UKUZIGEZA NINI IZANDLA ZAKHO? *BHALA KONKE OKUSHIWO.*	NGAPHAMBI KOKULUNGISA UKUDLA ..A NGAPHAMBI KOKUDLA ..... B NGAPHAMBI KOKUFUNZA IZINGANE ... C NGEMUVA KOKUZIKHULULA..... D EMVA KOKUSHINTSHA INGANE……E ANGIKWENZI……F OKUNYE_____X	

NO.	IMIBUZO	IZIMPENDULO	SKIP
		(CHAZA)	

IZIMPAWU EZIBALULEKILE NGOMAMA

INO.	IMIBUZO	IZIMPENDULO	SKIP
14.	MANJE NGIZOCELA UKUKUBUZA IMIBUZO EQONDENE NAWE-WAKE WAYA ESIKOLENI? *UMA ENGAKAZE AYE ESIKOLENI BHALA KU-CHA* *UMA ETHI YEBO WAGCINA KUBANI ESIKOLENI?*: primary, secondary, or higher?	CHA ..... 1 PRIMARY (standards 1-5)..... 2 SECONDARY(standards 6-9)..... 3 HIGHER (standard 10 and above)..... 4	
15.	UYASEBENZA UKUTHI UHOLE EKUPHELENI KWENYANGA? *UMA ETHI CHA KOKELEZELA U-A* UMA ETHI YEBO BUZA UKUTHI WENZA MSEBENZI MUNI? *KOKELEZELA KONKE OKUSHIWO*	ANGISEBENZELI IMALI.....A UMSEBENZI WEZANDLA .....B NGIYALIMA .....C NGIDAYISA UKUDLA .....D NGIYADAYISA/ ESITOLO/PHANDLE..... E NGISEBENZA ENDLINI..... F NGIQASHIWE .....G OKUNYE_____X (CHAZA)	- - ? 8
16.	UBANI OBHEKA U—(IGAMA) UMA UMAMA WAKHE ENGEKHO EKHAYA? *KOKELEZELA KONKE OKUSHIWO*	UMKHWENYANE/ MASIHLALISANE.....A IZINGANE EZINDALA ----------B EZINYE IZIHLOBO .....C OMAKHELWANE /ABANGANI .....D ISISEBENZI..... E E-CRECHE..... F UGOGO----------G OKUNYE_____X (CHAZA)	
17.	KULEZINYANGA EZIWU 12 UKE WAGULA KAKHULU WALALA PHANSI?	YEBO.....1 CHA 2	- - ? 10
18.	UGULE IZINYANGA EZINGAKHI? *UMA KUNGAPHANSI KWENYANGA BHALA "00".*	☐☐ MONTHS	

UKUGONYWA KOMNTWANA.

NO.	IMIBUZO	IZIMPENDULO	SKIP
10.	UNALO IKHADI LASEMTHOLAMPILO LIKA--------? UMA ETHI YEBO—NGICELA UKULIBONA?	YEBO, NGILIBONILE ……..1 YEBO ANGILIBONANGA ..... 2 LALAHLEKA……..3 LISALE E-CRECHE..... 4 AKAZE ABE NALO..... 5	<12
11.	*KULOWO NALOWO UMJOVO BHALA USUKU AWUJOVA NGALO.*		

NO.	IMIBUZO	IZIMPENDULO	SKIP

		IMMUNISATIONS		**PRIMARY** Date given	**Signature**	**BOOSTERS**	Date given	**Signature**
		B.C.G.	**1**			**2**		
		Polio	**0**			**4**		
			1			**5**		
			2					
			3					
		DTP	**1**			**4**		
			2			***D T***		
			3					
		Hep.B	**1**					
			2					
			3					
		Meas	**1**			**2**		
		Vit A	**1**			**3**		
			2			**4**		
		HiB	**1**			**4**		
			2			**5**		
			3					

12.	UYAZI UKUTHI UMNTWANA UWUTHOLA ENGAKANANI UMGOMO WESIMINGUMUNGWANA? 9 MONTHS; 1YEAR= 12 MONTHS ; 1 & 1/2 YEARS= 18 MONTHS; 2 YEARS= 24 MONTHS; 3 YEARS= 36 MONTHS; 4 YEARS= 48 MONTHS; 5 YEARS= 60 MONTHS	BHALA IZINYANGA … ☐☐ BHALA IZINYANGA … ☐☐ ANGAZI..... 88	

UKULASHWA KWESIFO SOHUDO

NO.	IMIBUZO	IZIMPENDULO	SKIP
13.	U----------UKE WAKHISHWA ISISU EMASONTWENI AMABILI EDLULE?	YEBO ..... 1 CHA ..... 2 ANGAZI..... 8	 - + - - ? 19
14.	WAMNIKANI UKUNQANDA ISIFO SOHUDO ESEKHAYA? OKUNYE? *BHALA KONKE OKUSHIWO.*	LUTHO .....A ORS.....B SOROL (INGXUBE KASHUKELA NOSAWOTI) ....C OBULALA AMAGCIWANE.....D UMUTHI WESIZULU..... F	

NO.	IMIBUZO	IZIMPENDULO	SKIP
		OKUNYE_____ X (CHAZA) ANGAZI……..……8	
15.	NGESIKHATHI U-----EKHISHWA ISISU WAMNCELISA NGAPHANSI, NGOKUFANAYO, NGAPHEZULU, NOMA WAVELE WAMYEKISA IBELE?	NGAPHANSI ..... 1 NGOKUFANAYO..... 2 NGAPHEZULU..... 3 NGAMYEKISA IBELE..... 4 AKANCELI..... 5 ANGAZI..... 8	
16.	NGESIKHATHI U----EKHISHWA ISISU WAMNIKA OKOKUPHUZA OKUNGAPHANSI KOKUJWAYELEKILE NOMA NGOKUJWAYELEKILE KUMBE NGAPHEZULU KOKUJWAYELEKILE?	NGAPHANSI ..... 1 NGOKUFANAYO..... 2 NGAPHEZULU..... 3 UYANCELA KUPHELA..... 4 ANGAZI..... 8	
17.	NGESIKHATHI EKHISHWA ISISU U----WAMNIKA UKUDLA OKUNGAPHANSI KOKUJWAYELEKILE NOMA NGAPHEZULUNOMA NGOKUJWAYELEKILE?	NGAPHANSI ..... 1 NGOKUFANAYO..... 2 NGAPHEZULU..... 3 UYANCELA KUPHELA..... 4 ANGAZI	
18.	IZIPHI IZINTO EZISEMQOKA OKUFANELE UMAMA AZENZELE UMNTWANA NGESIKHATHI ELULAMA ESIFENI SOHUD? BHALA KONKE OKUSHIWO.	YIPHA UMNTWANA UKUDLA OKUNCANE NJALO NJALO ..... A MUPHE UKUDLA OKUNGAPHEZU KOKUJWAYELEKILE..... B MUPHE UKUDLA OKUNOMSOCO KAKHULU ..... C MNIKE ISOROL LOMA INGXUBE KASAWOTI NOSHUKELA……..……D OKUNYE_____X (CHAZA) ANGAZI ..... Z	

IZIFO ZAMAPHAPHU / ZOKUPHEFUMULA

NO.	IMIBUZO	IZIMPENDULO	SKIP
19.	U---UKE WAPHATHWA ISIFO SOFUBA KUMBE UKUKHWEHLELA KULAMASONTO AMABILI EDLULE?	YEBO ..... 1 CHA ..... 2 ANGAZI..... 8	- + - - ?25
20.	WALUFUNA USIZO NGAPHANDLE KWASEKHAYA NGOKUKHWEHLELA NOKUPHEFUMULA NGOKUSHESHA?	YEBO ..... 1 CHA 2	- - ???
21.	WALUFUNAPHI USIZO LOKWELULEKWA KUMBE UKWELAPHA UMNTWANA? KWENYE INDAWO? *BHALA KONKE AKUSHILO.* UMA AYA ESIBHEDLELA KUMBE EMTHOLAMPILO BHALA IGAMA LENDAWO. _____ (IGAMA LENDAWO)	EZIKHUNGWENI ZEMPILO ESIBHEDLELA.....A EMTHOLAMPILO OMKHULU.....B EMTHOLAMPILO.....C EZINYE IZIKHUNGO ZEMPILO_____ D (CHAZA) KUNOMPILO……..E KUMBELETHISI WASEKHAYA……F ENYANGENI KUMBE KUMTHANDAZI....G OKUNYE_____ X (CHAZA)	

NO.	IMIBUZO	IZIMPENDULO	SKIP
22.	NGESIKHATHI U (IGAMA) EKHWEHLELA WAYENCELA KANCANE KUNOKUJWAYELEKILE, NJENGOKUJWAYELEKILE NOMA NGAPHEZU KOKUJWAYELEKILE NOMA WAYEKA UKUNCELA?	NGAPHANSI----------1 NGOKUFANAYO----------2 NGAPHEZULU----------3 WAYEKA UKUNCELA----------4 AKANCELI----------5 ANGAZI----------8	
23.	NGESIKHATHI U----EKHWEHLELA WAMNIKA NGAPHANSI KWAJWAYELE UKUKUPHUZA, OKUJWAYELEKILE, OKUFANAYO NOMA NGAPHEZULU KOKUJWAYELEKILE?	NGAPHANSI----------1 NGOKUFANAYO----------2 NGAPHEZULU----------3 WAYEKA UKUNCELA----------4 AKANCELI----------5 ANGAZI----------8	
24.	KWAKUTHATHA ISIKHATHI ESINGAKANANI UKUTHI UYOFUNA USIZO EMVA KOKUBA USUBONILE UKUTHI U-----UYAGULA?	NGALOLOSUKU ..... 0 NGAKUSASA ..... 1 IZINSUKU EZIMBILI..... 2 IZINSUKU EZINTATHU KUMBE NGAPHEZULU..... 3 ANGAZI..... 8	

UKUNAKEKELWA KUKAMAMA NOMNTWANA OZELWE.

IMIBUZO 25-34 IBUZWA UMAMA KUPHELA

UMA OPHENDULAYO ENGEYENA UMAMA WOMNTWANA YEQA UYE KOKULANDEL AYO

NO.	IMIBUZO	IZIMPENDULO	SKIP
25.	UKHONA OWAKE WAMBONA UKUTHI AKUNIKE USIZO LWEZEMPILOMGESIKHATHI UKHULELWE U---------? *UMA ETHI CHA KOKELEZELA (ANGIBONANGA MUNTU)* UMA ETHI YEBO BUZISISA UKUTHI WABONA BANI? *BUZISISA UKUTHI WABONA BANI UBHALE LABO ATHI WABABONA.*	ANGIBONANGA MUNTU……A ABEZEMPILO UDOKOTELA……..B UMHLENGIKAZI……C OMUNYE UMUNTU UMBELETHISI WASEKHAYA..... D UNOMPILO ..... E INYANGA KUMBE UMTHANDAZI……F OKUNYE_____ X (CHAZA) ANGAZI……Z	---<27. ----<27
26.	NGESIKHATHI UKHULELWE U----WAMBONA KANGAKHI OZOKUNIKA USIZO? *UMA UMAMA ENGAZI UKUTHI WAMBONA KANGAKH9I OZOMNIKA USIZO BHALA U—"98" OSHO UKUTHI AKAZI.*	+ - - - - - - - + IZIKHATHI AMBONA NGAZO¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ + - - - - - - - +	

NO.	IMIBUZO	IZIMPENDULO	SKIP
27.	NGESIKHATHI UKHULELWE U---WALWENZIWA YINI UCWANINGO LWESANDULELA NGCULAZI?	YEBO----------1 CHA----------2 ANGAZI----------8	
28.	UKHONA UMJOVO OWAWUNIKWA ENGALWENI NGESIKHATHI UKHULELWE?	YEBO----------1 CHA----------2 ANGISAKHUMBULI----------8	-<30.
29.	UMA ETHI YEBO: USAKHUMBULA UKUTHI WANIKWA IMIJOVO EMINGAKHI NGESIKHATHI UKHULELWE?	OWODWA----------1 EMBILI----------2 EMITHATHU----------3 ANGIKHUMBULI----------8	
30.	IZIPHI IZIMPAWU NGESIKHATHI UKHULELWE EZINGENZA UYE KOBONA ODOKOTELA NABONESI? *KOKELEZELA KONKE AKUSHILO.*	UKUSHISA KOMZIMBA----------A IPHIKA----------B UKOPHA----------C UKUVUVUKA KOMZIMBA NEZANDLE NOBUSO .....D OKUNYE_____X (CHAZA) ANGAZI----------Z	

INDAWO ABELETHELA KUYO NABAMSIZA EBELETHA

NO.	IMIBUZO	IZIMPENDULO	SKIP
31.	WABELETHELAPHI? *UMA ABELETHEL ESIBHEDLELA KUMBE EMTHOLAMPILO BHALA IGAMA LALEYONDAWO* _____ (IGAMA LESIBHEDLELA KUMBE UMTHOLAMPILO)	EKHAYA EKHAYA LAKHE .....A KOMUNYE UMUZI.....B ESIKHUNGWENI SEZEMPILO ESIBHEDLELA .....C EMTHOLAMPILO OMKHULU.....D EMTHOLAMPILO OMNCANE..... E KWEZINYE IZIKHUNGO ZEMPILO--- _____ F (CHAZA) OKUNYE_____ X (CHAZA)	
32.	UBANI OWAKUSIZA NGESIKHATHI UBELETHA? *BHALA KONKE OKUSHIWO.*	ABEZEMPILO UDOKOTELA .....A UMHLENGIKAZI .....B UMBELETHISI WASEMAKHAYA..... C UNOMPILO .....D OWOMNDENI ..... E OKUNYE _____X (CHAZA)	

NO.	IMIBUZO	IZIMPENDULO	SKIP
		ANGISIZWANGA MUNTU.....Y	

IZIFO EZIKHUNGETHE IZINGANE (IMCI)

NO.	IMIBUZO	IZIMPENDULO	SKIP
33.	IZIPHI IZIMPAWU EZIKHOMBISA UKUTHI UMNTWANA OSANDAKUZALWA UYAGULA? *BHALA KONKE OKUSHIWO.*	UKUNGANCELI KAHLE.....A UKUPHEFUMULA NGOKUSHESHA .....B UKUCOBEKA .....C UKUKHALA OKUKHULU.....D UKUSHISA ..... E OKUNYE_____ W (CHAZA) OKUNYE_____ X (CHAZA) ANGAZI.....Z	
34.	NGESINYE ISIKHATHI UMNTWANA UYAGULA ADINGE UKWELASHWA, IZIPHI IZIMPAWU EZINGAKWENZA UMHAMBISE KWADOKOTELA KUMBE EMTHOLAMPILO UMNTWANA? *UNGAMHAMBELI PHAMBILI KODWA UMBUZISISE UKOKELEZELE KONKE AKUSHILO.*	UBUKEKA ENGAPHILILE AKADLALI NJENGOKUJWAYELEKILE.....A AKADLI AKAPHUZI LUTHO .....B UCOBEKILE AKAVUSEKI NGOKUSHESHA .....C UYASHISA KAKHULU.....D UYASHISA KANCANE…….……E UPHEFUMULA NGOKUSHESHA NOMA KALUKHUNI..... ...F UKHALA KAKHULU…….....G USHINTSHE UMBALA.……H UPHALAZA YONKE INTO.....I UYADLIKIZA.....J OKUNYE _____ V (CHAZA) OKUNYE _____ W (CHAZA) OKUNYE _____ X (CHAZA) ANGAZI.....Z	
35.	NGESIKHATHI U---EGULA WAMNIKA NGAPHANSI KWALOKHO AVAME UKUKUPHUZA NOMA OKULINGANAYO NOMA NGAPHEZULU?	NGAPHANSI..... 1 OKULINGANAYO..... 2 OKUNGAPHEZULU..... 3 ANGAZI……..….8	
36.	NGESIKHATHI U---EGULA WAMNIKA UKUDLA OKUNGAPHANSI KOKUJWAYELEKILE, NOMA OKUNGANGOKUJWAYELEKILE NOMA OKUNGAPHEZULU KOKUJWAYELEKILE?	OKUNGAPHANSI..... 1 OKULINGANAYO..... 2 OKUNGAPHEZULU..... 3 ANGAZI……..….8	

INGCULAZI NEZIFO ZOCANSI

NO.	IMIBUZO	IZIMPENDULO	SKIP

NO.	IMIBUZO	IZIMPENDULO	SKIP
37.	KUKHONA YINI UMUNTU ANGAKWENZA UKUZIVIKELA EGCIWANENI ELIYISANDULELA NGCULAZI NAKUYO INGCULAZI UQOBO?	YEBO ..... 1 CHA ..... 2 ANGAZII ..... 8 UYALA UKUPHENDULA..... 9	- + - - < 39
38.	UMUNTU ANGENZENJANI UKUZIVIKELA ANGATHOLI INGCULAZI? OKUNYE? MUSA UKUMGUBHA NGEMIBUZO BHALA LOKHO AKUSHILO	YITHI CHA OCANSINI.....A SEBENZISA IJAZI.....B THEMBEKA KUMNGANE WAKHO UYE NOMUNTU OYEDWA OCANSINI .....C YEHLISA INANI LALABO OYA NABO OCANSINI .....D MUSA UKUYA OCANSINI NABADAYISA UMZIMBA ..... E MUSA UKUYA OCANSINI NOMUNTU OYA OCANSINI NABANTU ABANINGI..... F BALEKELA UKULALA NABONGQINGILI .....G BALEKELA UKULALA NALABO ABAJOVA IZIDAKAMIZWA.....H BALEKELA UKUTHOLA IGAZI LOMUNYE UMUNTU .....I BALEKELA UKUJOVA.....J BALEKELA UKUQABULANA .....K BALAKELA UKULUNYA OMIYANE ..... L FUNA USIZO LOKUZIVIKELA ENYANGENI NOMA KUMTHANDAZI.....M UNGASEBENZISI IZINSINGO ESEZIKE SATSHENZISWA ABANYE ABANTU ...N OKUNYE_____ W (CHAZA) OKUNYE_____ X (CHAZA) ANGAZI.....Z WALILE UKUPHENDULA 9	
39.	IGCIWANE ELIYISANDULELA NGCULAZI LINGADLULELA KUMNTWANA? NGESIKHATHI UMAMA EKHULELWE? NGESIKHATHI EBELETHA? NGESIKHATHI ENCELISA? UMA UBISI LWEBENE LUXUTSHWA NOKUNYE UKUDLA KWENGANE?	**YEBO CHA NGAZI** EKHULELWE..... 1 2 8 EBELETHA..... 1 2 8 ENCELISA..... 1 2 8 LUXUTSHWA……1 2 8	
40.	UMA UMAMA ENEGCIWANE ELIYISANDULELA NGCULAZI KUKHONA OKUNGENZIWA UKUVIKELA UMNTWANA UKUTHI ANGALITHOLI?	YEBO ..... 1 CHA ..... 2 ANGAZI..... 8	
41.	EMNWTINI WESILISA YINI ENGAKWENZA UCABANGE UKUTHI UNEZIFO ZOCANSI?	UKUPHATHWA ISISU.....A UKUVUZA NGAPHAMBILI.....B AMANZI ANUKAYO APHUMA KUYE....C UKUSHISA KOMCHAMO.....D	

NO.	IMIBUZO	IZIMPENDULO	SKIP
	OKUNYE? *BHALA KONKE OKUSHIWO..*	UKUVUVUKA NOKUBA BOMVU ENDAWENI YANGASESE ..... E IZILONDA NGAPHAMBILI.....G IZINSUMPA NGAPHAMBILI.....H IGAZI EMCHAMENI .....I UKUNCIPHA EMZIMBENI .....J UKUWA KWENDUKU.....K AKUKHO ZIMPAWU..... L OKUNYE_____W (CHAZA) OKUNYE_____ X (CHAZA) ANGAZI.....Z WALILE UKUPHENDULA 9	
42.	EMNTWINI WESIFAZANE IZIPHI IZIMPAWU EZINGAKWENZA UBONE UKUTHI UNESIFO SOCANSI? KUKHONA OKUNYE? *BHALA KONKE OKUSHIWO.*	UBUHLUNGU BESISU.....A UKUPHUMA KWAMANZI NGAPHAMB--B AMANZI ANUKAYO NGAPHAMBILI .....C UKUSHISA KOMCHAMO.....D UKUBA BOMVU NGAPHAMBILI..... E UKUVUVUKA ..... F IZILONDA NGAPHAMBILI.....G IZINSUMPA NGAPHAMBILI.....H IGAZI EMCHAMENI .....I UKUZACA .....J UKUNGATHOLI BANTWANA .....K AKUKHO ZIMPAWU..... L OKUNYE _____ W (CHAZA) OKUNYE _____ X (CHAZA) ANGAZI.....Z UYALA UKUPHENDULA..... 9	
43.	NGESIKHATHI UGCINA UKUHLANGANA NOBABA WA SEKHAYA NAYISEBENZISA IKHONDOMU NA?	YEBO ..... 1 CHA ..... 2 ANGAZII ..... 8 UYALA UKUPHENDULA..... .9	
44.	IZIPHI IZIZATHU EZENZA UMUNTU ASEBENZISE IKHONDOMU? *UNGAMHAMBELI PHAMBILI.*	UKUVIMBELA IZIFO ZOCANSI----------1 UKUVIMBELA UKUKHULELWA----------2 UKUVIMBELA INGCULAZI NEZIFO ZOCANSI NOKUKHULELWA..... ..3 AKAMTHEMBI UMLINGANI WAKHE UNABANYE……4 KWASHO UMLINGANI WAKHE……...5 OKUNYE_____6 (CHAZA) ANGAZI----------8 ANGIFUNI UKUPHENDULA----------9	

NO.	IMIBUZO	IZIMPENDULO	SKIP
45.	UNGAMVUMELA UMNTANAKHO ADLALE NOMNTWANA ONEGCIWANE LESANDULELA NGCULAZI?	YEBO ..... 1 CHA ..... 2 ANGAZI ..... 8 UYALA UKUPHENDULA..... .9	
46.	UNGAMVUMELA UTHISHA UNEGCIWANE LESANDULELANGCULAZI AFUNDISE ESIKOLENI ESIFUNDA INGANE YAKHO?	YEBO ..... 1 CHA ..... 2 ANGAZI ..... 8 UYALA UKUPHENDULA……9	
47.	UNGAMHLENGA OWOMNDENI ONESIFO SENGCULAZI?	YEBO ..... 1 CHA ..... 2 ANGAZI ..... 8 UYALA UKUPHENDULA…… 9	

UKONDLA INGANE

48.	NGICELA UKWAZI UKUTHI UMUPHA KANJANI UKUDLA U---- WAMNCELISA U--------?	YEBO ..... 1 CHA 2	- - ? 50.
49.	WAMNCELISA EMVA KWESIKHATHI ESINGAKANANI EZELWE?	EMVA KOKUMBELETHA NGEHORA LOKUQALA EBELETHIWE----------1 EMAHORENI ANGU8 OKUQALA ----------2 NGEMUVA KWAMAHORA ANGU8 OKUQALA----------3	
50.	UMA UMNTWANA EPHAKATHI KWEZINYANGA EZINHLANU NEZINGU 9 BUZA UMAMA NOMA UMZANYANA LEMIBUZO: NGIZOCELA UKUKUBUZA NGEZINHLOBO ZEZIPHUZO EZIPHUZWE U-----IZOLO EMINI NASEBUSUKU *MFUNDELE ZONKE LEZINHLOBO UKOKELEZELE KONKE AKUSHOYO*	**OKUPHUZWAYO NOKUDLIWAYO AKUTHATHE KULAMAHORA ANGU 24?** A. UBISI LWEBELE? B. AMANZI? C. OKUNYE OKUPHUZWAYO? D. UKUDLA OKUCUTSHUZIWE? E. OKUNYE? CHAZA:	

AMAGAMA EZINGANE NEZINSUKU ZOKUZALWA KWAZO

51. Obani amagama ezingane zakho ezincane azingaphansi kweminyaka emihlanu, kanye nezinsuku zazo zokuzalwa?

Igama:	**Usuku lokuzalwa: DD/MM/YYYY**
1.	
2.	
4.	
3.	

NGIYABONGA KAKHULU NGOSIZO LWAKHOEKUPHENDULENI LEMIBUZO SIZOYIGCINA KAHLE LENKULUMO IBE IMFIHLO YETHU.

AKUKHO OSITSHELE KONA ESIZOKUXOXELA ABANYE EMPHAKATHINI .

Appendix F

Training curriculum and materials.

KPC Survey
Training Curriculum
12-15 September 2005

Day 1: Supervisor Training – Osindisweni Hospital

Time	Topic	Personnel
8:30 – 9:00	▪ Welcome and orientation to training and survey schedule. ▪ Overview of MCDI Ndwedwe Child Survival Project - Objectives and activities. ▪ Overview of survey and purpose. ▪ Review of schedule for training and survey period. *Handout:* Schedule for training and survey period. ▪ Distribution of folders.	**Thuli**
9:00 – 10:15	▪ Explanation of supervisor's role. *Handouts:* - List of supervisor tasks - List of selected communities and number of households in each community. ▪ Discussion of household/respondent selection method *Handout:* - Decision criteria for selecting households/ respondents. ▪ Questions and discussion (throughout)	**Martha**
10:15 – 10:30	Tea break	

Time	Topic	Personnel
10:30 – 12:00	▪ Overview of questionnaire - areas of inquiry ▪ Questionnaire review – through diarrhoea case management ▪ Questions and discussion (throughout)	**Martha**
12:00 – 1:00	Lunch	
1:00 – 2:30	▪ Questionnaire review – remainder of questionnaire. ▪ Discussion of data collection, quality control and the 4C concept – correctly, completely, consistently and clearly. ▪ Discussion of consent form. *Handout:* - Questionnaire quality control checklist - Consent form ▪ Questions and discussion (throughout)	**Martha**
2:30 – 2:45	Break	
2:45 – 4:00	▪ Discussion of good interviewing techniques *Handout:* - Outline of good interviewing techniques ▪ Overview of plan for Tuesday and Wednesday's interviewer training. **Conclusion of Day 1**	**Thembelihle**

Day 2: Interviewer Training – Osindisweni Hospital

Time	Topic	Personnel
8:30 – 9:30	▪ Welcome and orientation to training and survey schedule *Handout:* - Training and survey schedule ▪ Ice-breaker exercise	**Thuli**
9:15 – 10:15	▪ Overview of survey and purpose ▪ Explanation of supervisor's role ▪ Explanation of interviewer's role ▪ Breaking into teams – 4 interviewers for each of 3 supervisors. ▪ Questions and discussion (throughout)	**Thuli**
10:15 – 10:30	Tea break	
10:30 – 12:00	▪ Questionnaire review – through diarrhoea case management: - How to fill out questionnaires properly. - How to quality check questionnaires. - Understanding of questions and what's being asked. ▪ Questions and discussion (throughout)	**Supervisor**
12:00 – 1:00	Lunch	
1:00 – 2:30	▪ Questionnaire review – remainder of questionnaire: - How to fill out questionnaires properly. - How to quality check questionnaires. - Understanding of questions and what's being asked. ▪ Questions and discussion (throughout)	**Supervisor**
2:30 – 3:15	▪ Discussion of household/respondent selection criteria.	**Thembelihle**

Time	**Topic**	Personnel
3:15 – 4:00	▪ Discussion of confidentiality, consent and how to administer consent form. *Handout:* - Consent form ▪ Review of training topics covered in Day 2. ▪ Overview of next day's training ▪ Question and answer period. **Conclusion of Day 2**	**Thuli**

Day 3: Interviewer Training – Osindisweni Hospital

Time	**Topic**	Personnel
8:30 – 9:30	▪ Review of previous day's training activities. ▪ Question and answer period.	**Thuli**
9:30 – 10:15	▪ Discussion of good interviewing techniques. *Handout:* - Guidelines on good interviewing techniques.	**Thembelihle**
10:15 – 10:30	Tea break	
10:30 – 11:00	▪ Interview role playing - demonstration ▪ Questions and discussion (throughout)	**Thuli, Thembe, and supervs.**
11:00 – 12:00	▪ Practice interview session – triad exercise with supervisors and teams – one person is the interviewer, one is the respondent, the others are the supervisor and/or observer. One full interview is completed and questionnaire reviewed for quality control.	
12:00 – 1:00	Lunch	
1:00 – 3:00	▪ Practice interview session – triad exercise with supervisors and teams (roles switched). Two completed interviews and quality checks.	
3:00 – 3:15	Break	
3:15 – 4:00	▪ Group discussion of interviewing exercises – questions and issues raised, points clarified. ▪ Overview and logistics of Day 4 field exercise.	
	Conclusion of Day 3	

Day 4: Interviewer Training – Field Test in Mavela

Time	Topic	Personnel
8:00 – 8:15	▪ Interviewer teams meet with supervisors to: - Discuss plan for the day. - Get questionnaire copies and folders with pens.	
8:15 - 9:00	▪ Supervisors and interviewers transported to Mavela clusters	
9:00 – 4:00	▪ Interviewers conduct survey on randomly selected households that fit criteria – at least one child less than 5 years old, focusing on the youngest child and interviewing the child's primary caregiver. ▪ Supervisors to observe one interview per team member. ▪ Expectation of results: 16 questionnaires per team completed.	
4:00 – 4:30	▪ Teams transported back to Osindisweni – opportunity to discuss questions and issues that arose. ▪ MCDI staff available telephonically to answer questions and resolve problems. **Conclusion of Day 4 and KPC Training Period**	

KPC 2005 Training Handouts

Supervisor responsibilities

- Oversees a team of 3 to 4 interviewers. Takes an active role in motivating and improving the performance of interviewers.
- Assists in training interviewers beginning on Day 2.
- Responsible for observing at least 1-2 interviews each day, identifying where help is needed and providing it.
- Responsible for quality-checking all questionnaires, making sure questions have been answered correctly, completely, consistently and clearly.
- Reviews all of the completed interview forms before the Interview Team leaves the community to gather additional information or correct errors, as needed.
- Provides on-site assistance to Interviewers regarding interviewing techniques and answers to survey-related questions.
- **Responsible for 16 completed questionnaires from her team for each day of the survey.**
- Has a thorough understanding of the MCDI KPC questionnaire – what questions are being asked and why the information is important.
- Understands who is to be interviewed and how respondents are selected within MCDI-designated communities.
- Understands the training and survey schedule.
- Understands the logistics involved in team transport, selecting households in survey areas, and delivery of quality-checked questionnaires to MCDI.
- Registers unusual events, situations or problems to be discussed with MCDI personnel at earliest opportunity (see contact numbers below).

MCDI contact numbers

Martha Benezet
072 947 6723

Thuli Ngidi
082 710 6565

Thembelihle Dludla
083 263 4282

KPC Survey 2005

The role of the interviewer

The interviewer has *the most important role* in the KPC survey process. He or she is the one who asks questions and collects the information that indicates how successful the MCDI Child Survival Project in Ndwedwe has been in reaching its goals.

The data you collect over the next 10 days will be compiled, analysed and reported to the Department of Health in KwaZulu Natal, tribal leaders in Ndwedwe communities, and the project's funders in Washington DC.

So we're relying on you and your abilities, because we need you to do your work according to the 4 C's - correctly, completely, consistently and clearly.

- Correctly – you must make sure you're asking the questions and recording the answers correctly. If you're unsure about a question, your interviewee will be confused as well. Ask your supervisor if you're not sure about a question or how to record the answer on the questionnaire form.

- Completely – make sure the answers you get are the whole answer to the whole question. Don't leave anything out. Ask your interviewee to repeat her answer if you didn't get it all the first time. Keep asking her to repeat it until you get it all down. It's worth risking some minor irritation to get all the information needed.

- Consistently – make sure you're asking the right questions and skipping those that don't apply to your interviewee. Follow the form in order, question by question, and only skip questions where the form indicates that you should. Every question and every questionnaire is important and should be treated as such.

- Clearly – make sure the answers that you record are easy to read. Print all responses and make letters and numbers distinct. Otherwise the information is unusable and the time has been wasted.

Interviewer responsibilities

- Works as part of a 3 to 4 person team with 1 supervisor.

- Understands and follows the criteria on how to select households for interviews in MCDI-designated communities – the criteria for how a mother/caregiver should be selected and approached.

- Understands the purpose of the consent form and how to present it to respondents and obtain their permission to be interviewed.

- Understands the questionnaire THOROUGHLY – what questions are being asked, how the answers should be recorded, what questions to ask each respondent and what questions should be skipped according to that respondent's relationship to the child.

(continued)

- Complies with directions provided by his/her team supervisor and completes the number of questionnaires required.
- Asks questions of the supervisor WHENEVER something is confusing or unclear.
- Always uses good interviewing techniques, as presented in training.
- Reviews the questionnaire before leaving the household to make sure all answers have been correctly, completely, consistently and clearly recorded.
- Delivers the questionnaire to the Supervisor who checks it immediately for completeness or unclear responses while still in the field.
- Notifies the Supervisor of any problems experienced in the field.
- Returns to the household if the Supervisor requests clarification of any item on the questionnaire.

Thank you. We couldn't do this without you!

Contact numbers for questions:

Sister Florence Kunene
072 495 4399

Sister Thokozani Mbatha
072 676 3382

Sister Thuli Ngidi
082 710 6565

Sister Thembelihle Dludla
083 263 4282

Proper interviewing techniques

Good Interviewers:

1. Introduce themselves, the name of the organization with which they work and the purpose of the survey.

3. Maintain the confidentiality of the survey. If there are people around the person being interviewed, they politely ask onlookers to leave.

4. Explain to interviewees that they do not have to take part in the survey and that their answers will be kept confidential and obtain their consent before commencing the interview.

5. Ask the questions exactly as they are written.

6. Speak loudly and clearly. Ask the questions in a respectful manner.

7. Make eye contact with the interviewee. (Do not just stare at the questionnaire.)

8. Be professional and objective. Remain neutral as the answers are given. (Do not laugh, compliment, or correct a response. Do not imply that some answers are better than others.)

9. Ask "Anything else?" after each answer in a question allowing multiple responses.

10. Repeat the question exactly as it is written if the respondent is silent after a particular question is asked.

11. Reword the question without changing the meaning, if the respondent still does not understand it after it has been repeated exactly as written.

12. Ask questions with patience and wait for the response. Never try to suggest or lead a respondent to a specific answer. (Ask "where did you seek advice when your child got sick?," not "Did you take your child to the clinic when he was sick?"

13. Never assume a response without asking. For example, if a respondent reports not giving water to a child, do not assume that the child is NOT getting teas.

14. Never ask a closed-ended question when an open-ended question is possible. For example, instead of asking, "Is this child under 5 years old?" good Interviewers ask, "How many years of age is this child?"

15. Use the child's name and/or correct sex (he or she) when asking a question, when possible.

16. Probe for accurate answers. For example, if an answer seems to be inconsistent with previous information given by the interviewee or if there is some reason to doubt an answer, good Interviewers try to discover the truth by asking the interviewee another question. However, good Interviewers are not overly persistent because the interviewee may change the answer thinking the Interviewer is dissatisfied with the response.

Selecting KPC Interviewees

The people who must be interviewed for this survey are mothers who have at least one child under 5 years old who they care for. If the mother isn't available, whoever is the child's main caregiver will do.

If there is more than one child under 5 in the household, find out which child is the youngest and interview only that child's mother or caregiver.

What is random interviewing?

To make sure the information being collected is a reflection of the general community, choosing what houses to interview must be done randomly throughout that community.

This avoids bias, or results that don't accurately reflect what the majority of people in the community know and think, or how they act in caring for their children.

How to select a household for an interview

Once the survey team has reach the designated cluster site, try to identify the centre of the cluster (or the most populated area) and go there.

Choose a direction to start looking for households to interview. Spin a pen on a flat surface and go in the direction that it points to. Stop at the first house you see.

IF no one is home…

> Turn right at the front door and go to the next household you see.

IF someone is home…

> Introduce yourself and your purpose, and ask if there is a child under 5 years old living in the household.
>
> IF no – turn right at the front door and go to the next household.
>
> IF yes – ask to speak to the child's mother or caregiver and ask her or his consent to be interviewed.

Once an interview has been completed and you're satisfied that all the answers are correct, complete, consistent and clear, turn right at the front door and go on to the next household. Continue until your either complete your quota of questionnaires or run out of households to visit. Contact your supervisor to transport you to the next survey area.

ATTACHMENT I: Final Health Facility Assessments

Ndwedwe District Child Survival Project – Final Evaluation
Health Facility Assessment

October 2005

The six clinics, one community health center and one district hospital providing primary health care in Ndwedwe were assessed for staffing, training, procedures, services and supplies used in the care and treatment of the children under five and women of childbearing age in their individual catchment populations. The assessments took place between June and November 2005.

The Head Nurses or Sisters-in-Charge were interviewed at most facilities and taken through the lengthy assessment questionnaire by MCDI staff. Facility drug supplies were evaluated by MCDI staff via inventory of each facility's supply cabinet or room. Each full assessment took an average of 1 1/4 hours.

An overview of the results are as follows:

Clinics

The six clinics in Ndwedwe are Chibini, Esindumbini, KwaNyuswa, Mwolokholo, Thafamasi, and Wosiyana. All are rural clinics are located on unpaved roads, each servicing catchment populations of between 900 and 1,900 children under five and between 2,500 and 5,000 women of childbearing age. Total catchment populations per facility range from 9,600 to just under 20,000.

Each facility had an average of four staff members. All aired their frustrations with staff shortages, and the resulting increased workload and compromises in patient care. Four clinics were open 8 hours a day, two were open for 24 hours. There is continuing discussion at the District level of expanding to 24 hours at additional clinics.

All facilities have basic facilities with electricity, running water, and regular waste collection. The last is an improvement from baseline when most clinics used on-site incinerators.

Most clinic staff have received some form of in-service training in recent months, primarily for the nurses, although there were few if any supervisory visits from Montebello Hospital staff to follow up. This has not changed since baseline because the problem of poor roads and transport difficulties in Ndwedwe remains. Also because of persistent staff shortages, supervisory functions tend to fall down the list of priorities.

Provision of maternal care has expanded in most facilities from the baseline report. All provide basic obstetric care, while KwaNyuswa provides comprehensive care, and both KwaNyuswa and Wosiyana provide some post-abortion services, including counseling and psychosocial support. None conduct vacuum aspirations which, according to provincial policy, are done only in hospital settings. All except for Mwolokholo perform voluntary HIV counseling and testing. Most facilities also provide the full range of antenatal care services, excluding Wosiyana and Esindumbini who refer blood screening

and syphilis testing to area hospitals. Mwolokholo provides no antenatal care at all, referring all pregnant patients to other local facilities (except for emergency deliveries).

Most deliveries still take place at Montebello Hospital and Ndwedwe Community Health Center, or other larger facilities just outside of Ndwedwe. Most facilities, except for Thafamasi and Mwolokholo provide emergency obstetric care although none perform blood transfusions or cesarean sections, again per policy guidelines. Two facilities had emergency deliveries with complications in the past year; there were no resulting deaths. (Esindumbini data on this is missing from the assessment.)

Care of sick children is fairly consistent among the clinics and in accordance with provincial IMCI guidelines. Only Mwolokholo offers an analgesic instead of Nalidixic Acid for shigella. A note: MCDI has noticed some problems with consistent application of IMCI protocols at this particular facility throughout the project period.

Only KwaNyuswa does not provide HIV counseling and testing, and only Mwolokholo and Thafamasi don't have a support group for HIV+ patients. All are stressing condom use as a prevention method and advise patients on this "daily."

Status of infrastructure and equipment was very good overall. Most clinics had available and satisfactory supplies of all basic items, including private examination areas, telephones or transmitters, protocols, and immunization and maternal cards. Only KwaNyuswa was missing most of the last three. All basic equipment was also well supplied in all facilities with only a few exceptions in one or two clinics. Esindumbini, for example, was missing protective clothing such as plastic aprons.

Almost all facilities were very well supplied with drug stocks. Only Mwolokholo was lacking about 10 percent of standard drugs available in other facilities. Since baseline, drug supply has been centralized and stockouts are now rare. KwaNyuswa had had stockouts of three drugs for two weeks in June 2005 but was the only facility to experience this.

Other supplies such as vaccines, tests, tongue depressors were all adequately stocked at all facilities. Missing or "not seen" items were usually because they weren't appropriate for that facility. For example syphilis rapid test kits are out of stock because all samples for this test are sent to a referral laboratory.

There is nearly a 100% rate of compliance with current Department of Health policies and IMCI protocols, although there is still a lack of supervision following training. Also, HIV testing and care has expanded almost to all facilities. Although there are difficulties in making comparisons to the baseline assessments, as the questionnaire used for the final assessment was significantly changed from the original, there were apparent overall improvements in antenatal and obstetric care and the lack of drug stockouts.

Ndwedwe Community Health Centre

Ndwedwe CHC services a population of over 43,000 with 87 beds and a staff of 97. Built in 2002, the center is a completely modern facility with full plumbing, electricity and regular waste removal. This facility excels at training its staff, with almost every category

trained in a relevant area within the last 6 months. As a large, centrally located facility on a paved road, supervisory visits from Montebello Hospital are also much more regular.

All antenatal and obstetric services are provided with the exception of post-abortion services, referred to Montebello Hospital. The only significant data not available is number of emergency deliveries in the past year and number of resulting deaths.

All supplies and equipment are available and satisfactory. A few standard drugs, such as Haemacel and Aminophyllin were not seen, but supplies of most drugs were observed. There is a pharmacy is on site.

Montebello Hospital

The only hospital in Ndwedwe Sub-district, Montebello has a catchment population of approximately 180,000. Montebello Hospital serves as the referral hospital for all the primary health care facilities in Ndwedwe as well as a primary health care facility for the surrounding areas. The PHC/OPD's catchment population is 12,470. Although the total staff figure was not provided, there are 168 beds in the facility. Also missing from this assessment was staff numbers by category and training information.

All antenatal and obstetric services are provided. Most deliveries take place here or at Ndwedwe CHC. Of the 17 obstetric emergencies in the past year at Montebello, none resulted in a death. Child care is on par for the sub-district, and all HIV/AIDS services are provided. Montebello has been an ARV center just since September 2005, and as of October 2005 137 patients were on ARV. The only challenge to service noted so far is staff shortages to counsel, administer and follow up with patients.

All necessary equipment is available and in satisfactory condition. All standard drugs were seen at the facility.

Ndwedwe Sub-district
PHC Clinic and Community Health Center Facility Assessments

October 2005

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esidumbini
GENERAL INFORMATION						
Staff member interviewed	N.K.E. Ngubane Chief PN	T.R. Gumede Chief PN	T.C. Mbatha, Chief PN	W.D. Luthuli Sister in Charge	V.N. Gumede Sister in Charge	Sister Lungile Dlamini
Total Staff	9	11	11	14	9	14
Overnight patients?	No	No	No	No	No	No
Total # of beds	6	3	4	4	0	3
Maternity beds	1 delivery bed	1	2	1	0	1 delivery bed
Pediatric beds	4 basinets	1	3	0	0	2
Estimated total population served	9,682	8,506	8,164	10,774	8,501	19,811
Estimated 0-11 months population served	120	450	102	134	106	245
Estimated <5 population served	927	815	783	1,032	815	1,897
Estimated Women 15-49 population served	2,451	2,152	2,064	2,726	2,150	5,012
Estimated area served by this facility	5 amakozi areas (isigodis): -Wosiyana - Cibane/ Ngoza -Esimpondweni -Maphephetheni	SHANGASE TRIBAL AUTHORITY: Thafamasi Ensingweni Emangangeni Embuueni nouimba Maphofu	Isigodis: Mary-Grey Mona Manzaduma Sokombo Dukwayo Mwolokholo Sigudu Matholampery Nkuve Mgezane Gcwarsa Esigodi	Mgcowga Ngoonga Nsuze Bhamshela Chibini noodsburg Deda Makhebeleni Holongo Mahlabathini Mnyewele Sogiyi Mathwaza	19 isigodis: Inanda Manyaseni Matikwe Matabetule Matata Maphephetheni Gugwini Ngoza Goqo Ngonweni Manyaseni New River Thafamasi Mquku	Mgetane Gogouuma Masibuko Mvoti Nyuswa Matholampenu Mary-grey Vuthwane Waterfall Mbilini Thayela Wave Ntabamhlophe Swarifini

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esidumbini
					Ezimpondweni Mngeni Amaoti Kwabhulushe Umzinyathi	
Daily hours	8 hours	24 hours	9 hours (8 am – 5 pm)	24 hours	8 hours (7 am – 4 pm)	8 hours
Sheltered waiting area?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes
Running water?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes
If no, source of water?					Yes.	
Electricity?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes
Functional toilet/latrine?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes
Functional waste disposal area/pit?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes
How often is waste collected	Once a week.	Weekly	Twice a week.	Once a week.	Once a week.	Twice a week
Nearest Referral facility	Montebello Hospital; 1 hour drive.	Montebello - 45 minutes away	Appelbosch – transit time unknown.	Montebello or Appelbosch hospitals – transit time unknown.	Osindisweni Hospital – 45 kms.	Appelbosch hospital – 20 minutes; Montebello – 30-35 minutes
How is transport handled for referrals?	Private car Bus Government ambulance –toll free call 10177	Private car Bus Government ambulance –toll free call 10177	Metro hospital ambulance.	Private car Hospital ambulance Government ambulance –toll free call 10177	Hospital ambulance "but it takes a long time."	Government ambulance (toll free call 10177). Comes from Pietermaritzburg.
PERSONNEL TRAINING AND SUPERVISION						
No. of Doctors	1 who comes once a month	1 who comes once a month	0	0	0	0
Last in-service training	Not available	Not available				
Subject of training	Not available	Not available				

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esidumbini
PN/ Midwife	1	3 (All PNs)	3 (all 2 PNs)	3	2	Not available
Last in-service training	May 2005	Not available	Not available	August 18, 2005	none	June 6, 2005
Subject of training	HIV/AIDS, PMTCT	Not available	Not available	Interview criteria	none	IMCI Performance management
Professional Nurses (PN)	0	3	3	0	2	Not available
Last in-service training	N/A	August 2005	June 2005	N/A	Not available	June 6, 2005
Subject of training	N/A	Hypertension, diabetes, stress management	TB statistics	N/A	Not available	IMCI Performance management
Enrolled Nurses/ Midwife	0	0	0	3	1	Not available
Last in-service training	N/A	N/A	N/A	August 18, 2005	Not available	June 6, 2005
Subject of training	N/A	N/A	N/A	Interview criteria	Not available	IMCI Performance management
Enrolled Nurses	3	2	0	0	0	Not available
Last in-service training	July 2005	Not available	N/A	N/A	N/A	June 6, 2005
Subject of training	EPI	Not available	N/A	N/A	N/A	IMCI Performance management
Enrolled Nursing Assistants	0	0	0	0	0	Not available
Last in-service training	N/A	N/A	N/A	N/A	N/A	June 6, 2005
Subject of training	N/A	N/A	N/A	N/A	N/A	IMCI Performance management
ADMs	0	0	0	0	0	0
Last in-service training	N/A	N/A	N/A	N/A	N/A	N/A
Subject of training	N/A		N/A	N/A	N/A	N/A
AIDS Counselor	1	1	1	2	1	0
Last in-service training	June 2005	October 2005	Not available	Not available	Not available.	N/A
Subject of training	ARV rollout	Not available	Not available	Not available	Not available	N/A

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esidumbini
Medical Social Worker	0	0	0	0	0	0
Last in-service training	N/A	N/A	N/A	N/A	N/A	N/A
Subject of training	N/A	N/A	N/A	N/A	N/A	N/A
Lab Technician	0	0	0	0	0	0
Last in-service training	N/A	N/A	N/A	N/A	N/A	N/A
Subject of training	N/A	N/A	N/A	N/A	N/A	N/A
Radiographer	0	0	0	0	0	0
Last in-service training	N/A	N/A	N/A	N/A	N/A	N/A
Subject of training	N/A	N/A	N/A	N/A	N/A	N/A
Pharmacist	0	0	0	0	0	0
Last in-service training	N/A	N/A	N/A	N/A	N/A	N/A
Subject of training	N/A	N/A	N/A	N/A	N/A	N/A
Pharmacy Assistant	0	0	0	0	0	0
Last in-service training	N/A	N/A	N/A	N/A	N/A	N/A
Subject of training	N/A	N/A	N/A	N/A	N/A	
Total # of staff treating children	4	3	3 (all nurses treat children)		3	6
TRAINING SUBJECTS, NUMBER OF STAFF TRAINED AND NUMBER OF SUPERVISION VISITS IN LAST 6 MONTHS						
HIV Testing						
Number trained	2	0	2		1	4
Supervision visits in last 6 months	0	N/A	0		0	2
HIV/AIDS clinical diagnosis (Bangui Criteria)						
Number trained	2	2	2		1	4
Supervision visits in last 6 months	0	0	0		0	2

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Counseling, psychological support and coping w/PLWHA						
Number trained	2	1	0		0	4
Supervision visits in last 6 months	0	0				2
Universal precautions and asepsis/antisepsis measures related to handling biological products and working with AIDS patients (infection control)						
Number trained	4	8	3		1	3
Supervision visits in last 6 months	0	2	1-2 times each month.		0	2
Care of pregnant women and newborns (KZN DOH protocol)						
Number trained	1	3	3		1	2
Supervision visits in last 6 months	0	2	1-2 times each month.		0	2
IMCI protocol						
Number trained	2	1	1		1	3
Supervision visits in last 6 months	0	2	N/A		0	2
Case management of childhood diarrhea (if no IMCI training)						
Number trained	2	N/A	3		0	3
Supervision visits in last 6 months	0	N/A	Once in 2 months.			2
Case management of childhood ARI (if no IMCI training)						
Number trained	2	N/A	1		0	3
Supervision visits in last 6 months	0	N/A	Once in 2 months.			2
Administration of childhood vaccinations						
Number trained	4	5	3		0	6
Supervision visits in last 6 months	0	2	Once in 2 months.			2

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
ANTENATAL / MATERNAL / POST-NATAL HEALTHCARE						
Training:						
Basic Essential Obstetric Care (EBO)						
Parenteral antibiotics	No (part of IMCI training)	Yes.	1 nurse	Yes.	1 (midwife)	Yes
Parenteral oxytocic drugs	Yes.	Yes.	1 nurse	Yes.	Yes.	No
Parenteral sedatives/anticonvulsants for eclampsia	Yes.	Yes.	1 nurse	Yes.	Yes.	No
Manual removal of placenta	Yes.	Yes.	1 nurse	Yes.	Yes.	Yes
Manual removal of retained products	Yes.	Yes.	1 nurse	Yes.	Yes.	Yes
Comprehensive Essential Obstetric Care						
All of the above	Yes.	Yes.	1 nurse	Yes.	Yes.	No
Blood transfusion	No	No	1 nurse	No	No	No
Cesarean section	No	No	1 nurse	No	No	No
Nurses received refresher training on EBO?	No	No	No, “wasn’t invited.”	No	No	No
Anyone trained in post-abortion care services?	Yes.	Yes.	1 nurse	No	No	No
Manual removal or placenta	Yes.	Yes.	1 nurse			
Manual removal of retained products	Yes.	No	1 nurse			
Vacuum aspiration of uterus	No	No	1 nurse			
Post-abortion counseling and psychological support	Yes.	No	1 nurse			

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Counseling and provision of family planning services	Yes.	Yes.	1 nurse			
If Yes., how many staff trained?	2	3	1 nurse			

Services provided:						
What activities provided during ANC visit?						
History taking	Yes.	Yes.	Yes.	Yes.	No ANC service provided.	Yes
Weight	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Blood pressure	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Urinalysis	Yes.	Yes.	Yes.	Yes.	N/A	Yes
General exam, including mental state assessment	Yes.	Yes.	Yes.on gen'l exam; No on mental assessment.	Yes.	N/A	Yes
Abdominal exam, including measurement of symphysis fundal height	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Pap smear, if indicated	Yes.	Yes.	No	Yes.	N/A	Yes
Screening test for hemoglobin	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Screening test for syphilis serology (RPR)	No– hospital referral	Yes.	Yes.	Yes.	N/A	No
Screening test for blood group	No– hospital referral	Yes.	Yes.	Yes.	N/A	No
Screening test for HIV (if recommended)	Yes.	Yes.	Yes.	Yes.	N/A	Yes

	Wosiyana	**Thafamasi**	**Nyuswa**	**Chibini**	**Mwolokohlo**	**Esindumbini**
Risk assessment	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Antimalarial medications (if advised)	Yes.	No	Yes.(tablets in stock but never used).	No	N/A	No
Iron folate	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Pregamal	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Deworming	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Treatment of specific diseases	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Health education	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Teach need for additional prenatal visits	Yes.	Yes.	Yes.	Yes.	N/A	Yes
At least 2 TT injections	Yes.	Yes.	Yes.	Yes.	N/A	Yes

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
At least 4 antenatal care visits recommended	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Do you recommend pasteurization of breastmilk for HIV + mothers?	Yes.	No	No	Yes.	N/A	Yes
Do deliveries occur at this facility?	Yes., emergencies only.	Yes.	No	Yes.	Yes, emergencies only.	Yes, emergencies only.
If not, where do they occur?	Osindesweni & Montebello Hospitals.	N/A	-Tongaat Clinic -Appelsbosch Hospital		Osindesweni Hospital, Ndwedwe CHC, Tongaat Clinic.	"In nearest hospitals" – Osendisweni, Montebello.
How many deliveries occurred in this facility in the past year?	15	3	0	3	0	6
ADM present?	No	No	No	No	N/A	Yes.
Are TBAs in the community supervised?	Yes.	No	Yes.	Yes.	N/A	No
PEP program in place?	Yes.	No	Yes.	No	N/A	No
HIV/AIDS/STI/RTI counseling integrated w/ ANC activities?	Yes.	Yes.	Yes.	Yes.	N/A	Yes
Follow-up with mother after delivery?	Yes.	Yes.	N/A	Yes.	N/A	Yes
If so, for how long?	Between 2 and 6 weeks	8 weeks	N/A	6 weeks	N/A	6 weeks
If so, where does the followup occur?	At clinic.	At clinic	N/A	At clinic	N/A	At clinic
After delivery, are mothers referred to family planning?	Yes.	Yes.	N/A	Yes.	Yes.	Yes

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
What family planning services offered?	Pill Injectibles condoms	Pill Injectibles condoms	Pill Injectibles condoms	Pill Injectibles condoms	Pill Injectibles condoms	Pill Injectibles condoms
Emergency obstetric care provided?	Yes.	No	Yes.	Yes.	No	Yes
Parenteral antibiotics	Yes.		Yes.	Yes.	N/A	Yes
Parenteral oxytocic drugs	Yes.		Yes.	Yes.	N/A	Yes
Perenteral sedatives/anti-convulsants for eclampsia	Yes.		Yes.	Yes.	N/A	Yes
Manual removal of placenta	Yes.		Yes.	Yes.	N/A	Yes
Manual removal of retained products?	Yes.		Yes.	Yes.	N/A	Yes
Blood transfusion	No		No	No	N/A	No
Cesarean section	No		No	No	N/A	No
Other gynecologic surgery	No		No	No	N/A	No
Post-abortion care services offered?	No	Yes	No	No	No	No
Manual removal of placenta		Yes			N/A	
Manual removal of retained products		Yes			N/A	
Vacuum aspiration of uterus		No			N/A	
Post-abortion counseling and psychological support		No			N/A	
Counseling and provision of family planning services		Yes.			N/A	

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Symptoms & Signs during pregnancy that would prompt referral	-previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessness -cessation of fetal movement/ baby does Not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -hemorrhage/ heavy bleeding -multiple pregnancy/ large abdomen –obstructed/ prolonged labor	-previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/pallor/ fatigue/breathlessness -cessation of fetal movement/baby does Not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -light bleeding/spotting -hemorrhage/ heavy bleeding	-previous bad obstetric history/abdominal scars/ previous stillbirth- hypertension/ swelling/fits -anemia/pallor/ fatigue/breathlessness -cessation of fetal- movement/baby does Not move---multiple pregnancy/ large abdomen - hemorrhage/heavy bleeding “if serious.” - obstructed/prolonged labor.	-previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessnes s -cessation of fetal movement/ baby does Not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -hemorrhage/ heavy bleeding -multiple pregnancy/ large abdomen –obstructed/ prolonged labor	N/A	previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/pallor/ fatigue/breathlessness -cessation of fetal movement/baby does Not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -light bleeding/spotting -hemorrhage/ heavy bleeding -multiple pregnancy/ large abdomen –obstructed/ prolonged labor
Symptoms & Signs during delivery that would prompt referral	-previous bad obstetric history - abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessness -cessation of fetal movement/ baby does Not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -hemorrhage/ heavy bleeding -multiple preg/ large abdomen –obstructed/ prolonged labor	-cessation of fetal movement/baby does Not move -sepsis /foul smelling discharge -light bleeding/ spotting - obstructed/ prolonged labor	-previous bad obstetric history/abdominal scars/ previous stillbirth- hypertension/ swelling/fits -anemia/pallor/ fatigue/breathlessness -cessation of fetal- movement/baby does Not move---multiple pregnancy/ large abdomen - hemorrhage/heavy bleeding “if serious.” - obstructed/prolonged labor.	Not available.	N/A	previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/pallor/ fatigue/breathlessness -cessation of fetal movement/baby does Not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -light bleeding/spotting -hemorrhage/ heavy bleeding -multiple pregnancy/ large abdomen –obstructed/ prolonged labor

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Symptoms & Signs after delivery that would prompt referral	- previous bad obstetric history - Abdominal scars/previous stillbirth -hypertension/ headache/ swelling/fits	- stillbirth - hypertension/ headache/swelling/ fits -light bleeding/ spotting -hemorrhage/ heavy bleeding -multiple pregnancy/ large abdomen	-previous bad obstetric history "if serious" - abdominal scars/previous stillbirth "if serious" - hypertension/ swelling fits - anemia/pallor/ fatigue/breathlessness -postpartum abdominal pain -hemorrhage/ heavy bleeding	Not available.	N/A	previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/pallor/ fatigue/breathlessness -cessation of fetal movement/baby does Not move -sepsis /foul smelling discharge -light bleeding/spotting -hemorrhage/ heavy bleeding -multiple pregnancy/ large abdomen – obstructed/ prolonged labor
How many cases of obstetric emergencies have occurred in this facility in past year?	0	2 cases total: 1 case of postpartum hemorrhage, and 1 case of prolonged/ obstructed labor	0 cases	0	0	2 cases preeclampsia/ eclampsia
How many deaths from obstetric emergencies have occurred in this facility in past year?	0	0 In any cases of prolonged or obstructed labor where the woman is Not dilating, the woman is referred to Montebello hospital.	0	0	0	Not available.
What is the met need for EOC?	0	Don't know.	0	0	N/A	Not available.

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
CHILD HEALTHCARE						
Special place for ORT	Yes.	Yes.	Yes.	Yes.		
What antibiotic would you choose in the case of dysentery from Shigella?	Nalidixic Acid	Nalidixic Acid	Nalidixic Acid – syrup for babies	Nalidixic Acid	Analgesic	Nalidixic Acid
What would you do w/ a child > 2 months w/ pneumonia?	Outpatient treatment with antibiotic. Educate mother about warning signs and home care.	Outpatient treatment with antibiotic.	Outpatient treatment with antibiotic. Educate mother about warning signs and home care.	Refer child Outpatient treatment with antibiotics Educate mother about warning signs and home care.	Refer child. Outpatient treatment with antibiotic.	Outpatient treatment with antibiotics Educate mother about warning signs and home care.
Ever unable to refer a child?	Yes.	No	No	Yes.	No	No
Why?	Caretaker/ Parents refused to go.			Not available.		

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esidumbini
HIV/AIDS						
Are STI tests provided, w/counseling and treatment?	Yes, voluntary.	Yes, voluntary.	No– referred to VCT centers.	Yes.	Yes.	Yes.
Are HIV tests and counseling provided?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes
HIV testing in this facility?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes
If so, what HIV test used?	Abbot, Determiner, Smart Check	Smart Check	Not available.	Abbott	Confirmatory	Abbott, Determine, Smart Check
Is counseling provided?	Yes.	Yes.	Yes.	Yes.	Not available.	Yes
Is HIV treatment provided?	Supplements and broad-spectrum antibiotics	No	Prophylaxis/batrim	Yes.	Not available.	Yes
Is Cotrimoxazole used as preventive therapy for OIs in people with HIV?	Yes.	No	Yes.	Yes.	Yes.	Yes
Is there any support group in the community for PLWA?	No	Yes.	Yes.	Yes.	No	Yes
In past 3 months, advised anyone to use condoms specifically for preventing RTI/STI/HIV infection?	Yes.	Yes.	Yes.	Yes.	Yes.	Yes

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
INFRASTRUCTURE AND EQUIPMENT						
Private examination room/area	Available and satisfactory	Available and satisfactory	Available and satisfactory	Available and satisfactory	Available and satisfactory	Available and satisfactory
Table & Stool for GYN Exams	Available and satisfactory	Available and satisfactory.	Not available.	Available and satisfactory	N/A	Available but not satisfactory
Storage area/cupboard for drugs and supplies	Available and satisfactory	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory	Available and satisfactory
Delivery or Labor Room w/ Bed & Lighting	Available and satisfactory	Available and satisfactory.	Available and satisfactory	Available and satisfactory	N/A	Available and satisfactory
Telephone or radio transmitter	Available and satisfactory	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory	Available and satisfactory
"Care for Pregnant Women & Newborns at Clinic and District level" Protocols from KZN DOH	Available and satisfactory	Available and satisfactory.	Not available	Available and satisfactory	Available and satisfactory	Available and satisfactory
IMCI protocols	Available and satisfactory	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory	Available and satisfactory
CDD protocols (if IMCI Not available)	N/A	N/A	N/A	N/A	N/A	N/A
ARI protocols (if IMCI Not available)	N/A	N/A	N/A	N/A	N/A	N/A
Protocols for childhood vaccinations	Available and satisfactory	Available and satisfactory.	Not available.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Protocols for HIV/AIDS testing	Available and satisfactory	Available and satisfactory.	Not available.	Available and satisfactory	Available and satisfactory	Available and satisfactory

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Protocols for HIV/AIDS counseling	Available and satisfactory	Available and satisfactory.	Not available.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Blank Road to Health cards	Available and satisfactory	Available and satisfactory.	Not available.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Blank antenatal/maternal health cards/records	Available and satisfactory	Available and satisfactory.	Not available.– only 2 as samples.	Available and satisfactory	N/A	Available and satisfactory
Basic equipment:						
Blood pressure apparatus (sphygmomaNometer)	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Stethoscope	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Fetal stethoscope	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Not available	Available and satisfactory
Oral thermometer	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Otoscope	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Watch with a second hand or other timing device	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Measuring and Mixing Utensils to Prepare ORS	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Cups &Spoons to administer ORS	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Adult weighing scale	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Infant weighing scale	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Protective Clothing (Shoes, /boots, gowns, plastic aprons)	Plastic aprons – available and satisfactory	Plastic aprons only - available and satisfactory.	Plastic aprons only – available and satisfactory.	Available and satisfactory	Plastic aprons - available and satisfactory	Not available
Gloves	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Refrigerator for vaccines	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Watch indicator	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Temperature chart up to date during the last 30 days?	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Cold boxes/ thermos	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Cold packs	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Scissors	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Suture needles and suture material	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Disposable?	Yes.	Yes.	No	Yes.	Yes.	No
If so, do you run out?	No	No	No	No	No	Yes
If Yes., how often?	N/A	N/A	N/A	N/A	N/A	Not available
Needle holder	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory
Cloth/Towel to Dry Baby	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	N/A for this facility	Available and satisfactory
Blanket to wrap baby	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	N/A for this facility	Available and satisfactory
Bag and mask for neonatal resuscitation	Available and satisfactory	Available and satisfactory.	Available and satisfactory.	Available and satisfactory	N/A for this facility	Not available
Educational materials related to child health (EPI and IMCI) – visible to clients	Available and satisfactory	Available and satisfactory	Available and satisfactory – in waiting room.	Available and satisfactory – posted in consulting rooms.	Available and satisfactory	Available and satisfactory – posted on walls
Educational Materials related to Maternal/ antenatal and newborn health	Available and satisfactory	Available and satisfactory.	Available and satisfactory	Available and satisfactory	Available and satisfactory	Not available
If so, where located (visible to clients)?	Yes.	Yes.	Yes. - outside consultation room.	Yes.	Yes.	N/A

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
ESSENTIAL DRUGS & CONSUMABLE SUPPLIES						
Paracetomol	Seen at facility – 2 week stockout in June 2005	Seen at facility.	Not seen at facility – waiting for stock to arrive	Seen at facility.	Seen at facility.	Seen at facility.
Paracodol	Seen at facility.	Seen at facility.	Not seen at facility – waiting for stock to arrive	Seen at facility.	Seen at facility.	Seen at facility.
Pethidine	Not seen at facility.	N/A for facility.	Not seen at facility – waiting for stock to arrive	N/A for this facility.	Not seen at facility.	Not seen at facility.
Amoxicillin	Seen at facility – stockout in June 2005.	Seen at this facility.	Not seen at facility – waiting for stock to arrive.	Seen at facility.	Seen at facility.	Seen at facility.
Ampicillin	Not seen at facility.	N/A for this facility.	Not seen at facility – waiting for stock to arrive	N/A for this facility.	Not seen at facility.	Not seen at facility.
Ceftriaxone	Seen at facility.	Seen at facility.	Seen at facility.	N/A for this facility.	Seen at facility.	Seen at facility.
Cotrimoxazole/ bactrim	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Erthromycin	Seen at facility – but Nosyrup available.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Metronidazole	Seen at facility – but Nosyrup available.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Benzathine penicillin	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Procain penicillin	Not seen at facility.	N/A for this facility.	Seen at facility.	N/A for this facility.	Seen at facility.	N/A for this facility.
Nalidixic Acid	Seen at facility – but no tablets.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Nitrofurantoin	Not seen at facility	N/A for this facility.	Not used at facility.	N/A for this facility.	Not seen at facility.	N/A for this facility.
Nevaripin	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Piperazine	Not seen at facility.	Not used at this facility.	Not used at this facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.
Mebendazole	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Niclosamide (Yomesan) tablets	Seen at facility.	N/A for this facility.	Not used at this facility.	Seen at facility.	Not seen at facility.	Not seen at facility.
Diazepam (Valium)	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Phenobarbital (Gardinal)	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Not seen at facility – “only for chronics”
Naloxone (Narcan)	Seen at facility.	Seen at facility.	Seen at facility.	N/A for this facility.	Seen at facility.	Not seen at facility.
Magnesium sulfate	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Not seen at facility.

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Dihydrallazine (Neprosol)	Seen at facility.	N/A at this facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Not seen at facility.
Methyldopa (Aldomet)	Not seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Nifedipine (Adalat)	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Aminophyllin	Not seen at facility.	N/A at this facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.
Hexoprenaline IVI (for asthma)	Not seen at facility.	N/A at this facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.
Salbutamol	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Prednisone	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Calcium gluconate	Seen at facility.	Not seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.
Ferrous Fumarate	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Folic Acid	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Mist potassium citrate	Not seen at facility.	Not seen at this facility.	Seen at facility.	Not seen at this facility.	Seen at facility.	Not seen at facility.
Pregamal	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Multivitamin tablets	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Vitamin A (capsules)	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
ORS Packages	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
IV kits (including tubing)	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Barrows Elecrolyte Solution	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.	Seen at facility.
5% Dextrose in Water	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
4.2% Sodium Bicarbonate	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Plasmalyte	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Haemacel or 4% Albumin	Not seen at facility.	N/A for this facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.
Syntometrine	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Syntocinon (Oxytocin)	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.
Gentian Violet	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Nystatin	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Econozole Pessaries	Seen at facility.	N/A for this facility.	Not seen at facility.	Not seen at facility.	Seen at facility.	Not seen at facility.

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
Chloramphenicol		Seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.	Seen at facility.
Lignocaine 1%	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Oral contraceptives	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Injectible contraceptives	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Condoms	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
IUDs	Not seen at facility.	N/A for this facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.
Tetanus toxoid in refrigerator	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
BCG vaccine	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
OPV	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
DPT	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
HEP B	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
HIB	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Anti-measles	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Chlorhexidine/ surgical spirit/other	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Not seen at facility.
HIV kit sceening	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
HIV kit confirmation	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Syphilis test kits	Not seen at facility.	Seen at facility.	Not seen at facility.	Seen at facility.	Not seen at facility.	Not seen at facility.
Urine dip stick/ proteinuria test supplies	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Tongue depressor	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Razors	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Disposable syringes and needles	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Blank "laborgraphs" or "partographs"	Seen at facility.	Seen at facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.	Not seen at facility.
Urinary catheters	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.
Cord ties	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.	Seen at facility.

	Wosiyana	Thafamasi	Nyuswa	Chibini	Mwolokohlo	Esindumbini
MEDICAL/SURGICAL EQUIPMENT AND SUPPLIES						
Adult ventilator bag and mask	Available and satisfactory.	Available and satisfactory.	Not Available	Available and satisfactory.	Available but not satisfactory.	Available and satisfactory.
Artery forceps	Available but Not satisfactory.	Available and satisfactory.	Available and satisfactory.	Available and satisfactory.	Available but not satisfactory.	Available and satisfactory.
Obstetric forceps, outlet, mid-cavity, breech	Not available.	N/A for this facility.	Not available.	Not applicable for this facility.	Not available.	Available and satisfactory.
Equipment and supplies for collection of blood	Available but Not satisfactory.	Available and satisfactory.	Available and satisfactory.	Available and satisfactory.	Available but not satisfactory.	Available and satisfactory.
Hemoglobinometer	Available but Not satisfactory.	Available and satisfactory.	Available and satisfactory.	Available and satisfactory.	Available but not satisfactory.	Available and satisfactory.
Measurement of hematocrit	Not available.	N/A for this facility.	Not available.	Not applicable for this facility.	Not available.	Not available.

Ndwedwe Sub-district
PHC Clinic and Community Health Center Facility Assessments

October 2005

	Ndwedwe CHC	**Montebello Hospital**
Staff member interviewed	SIbongile Khuluse, Chief PN	T.M. Nxumalo, Chief PN
Total Staff	97	Not available
Overnight patients?	Yes	Yes
Total # of beds	18	168
Maternity beds	12	31
Pediatric beds	0	40
Estimated total population served	43,522	Approx: 180,000 PHC/OPD: 12470
Estimated 0-11 months population served	540	OPD/PHC: 303
Estimated <5 population served	4,169	OPD/PHC: 1329
Estimated Women 15-49 population served	11,103	OPD/PHC: 3,138
Estimated area served by this facility	Mavela Kwahlophe Mzinyathi Shangase Sibuleni Ntuphuka Kwazini Ndwedwe Mission New Village Nombedo Mona Mutiwu Msurduze Mpungeni Manzimeleni Ngonweneni Ezindlovini Mangangeni Ogunini Madunbulu	OPD/PHC: Montebello, New Hanover, Swayimani, Fawn Leas, Ozwatini

	Ndwedwe CHC	Montebello Hospital
	Mkhukhuze Simumune Makinnurseni Mthebeni Bhetenni Ogouoinini Kwazibhanni	
Daily hours	24 hours	24 hours
Sheltered waiting area?	Yes.	Yes.
Running water?	Yes.	Yes.
If no, source of water?	N/A	N/A
Electricity?	Yes.	Yes.
Functional toilet/latrine?	Yes.	Yes.
Functional waste disposal area/pit?	Yes.	Yes.
How often is waste collected	Once a week.	One a week
Nearest Referral facility	Osindisweni and Montebello	Grey's (Pietermaritzburg), Edendale, Nkosi Albert Lithuli (Durban)
How is transport handled for referrals?	Clinic ambulance Government ambulance –toll free call 10177	Hospital ambulance Government ambulance –toll free call 10177
PERSONNEL TRAINING AND SUPERVISION		
No of Doctors	1	4
Last in-service training	Not available	Not available.
Subject of training	Not available	Not available.
PN/ Midwife	22	39.
Last in-service training	May 2005	Not available.
Subject of training	Partogram	Not available.
Professional Nurses (PN)	6	32.
Last in-service training		Not available.

	Ndwedwe CHC	**Montebello Hospital**
	June 2005	
Subject of training	Diabetes and hypertension	Not available.
Enrolled Nurses/ Midwife	1	Not available.
Last in-service training	May 2005	Not available.
Subject of training	Wound care	Not available.
Enrolled Nurses	16	15
Last in-service training	May 2005	Not available.
Subject of training	Wound care	Not available.
Enrolled Nursing Assistants	4	45.
Last in-service training	June 2005	Not available.
Subject of training	Wound care	Not available.
ADMs	1	0
Last in-service training	Not available	Not available.
Subject of training	Not available	Not available.
AIDS Counselor	26	12
Last in-service training	June-July 2005	June-July 2005
Subject of training	ARVs, PMTCT, HAST	ARV, PMTCT, Counseling
Medical Social Worker	0	1
Last in-service training	N/A	Not available.
Subject of training	N/A	Not available.
Lab Technician	0	1
Last in-service training	TB lab: TB Microscopist: 1	Not available.
Subject of training	N/A	Not available.
Radiographer	1	1
Last in-service training	Not available	Not available.
Subject of training	Not available	Not available.
Pharmacist	1	1
Last in-service training	June 2005	Not available.
Subject of training	Computer, AMDP	Not available.
Pharmacy Assistant	3	1
Last in-service training	June 2005	Not available.
Subject of training	Computer	Not available.
Total # of staff treating children	5	4 doctors and 12 nurses

	Ndwedwe CHC	Montebello Hospital
TRAINING SUBJECTS, NUMBER OF STAFF TRAINED AND NUMBER OF SUPERVISION VISITS IN LAST 6 MONTHS		
HIV Testing		
Number trained	26	55 PN
Supervision visits in last 6 months	6	6
HIV/AIDS clinical diagnosis (Bangui Criteria)		
Number trained	0	Not available.
Supervision visits in last 6 months	0	Not available.
Counseling, psychological support and coping w/PLWHA		
Number trained	26	10
Supervision visits in last 6 months	6	6
Universal precautions and asepsis/antisepsis measures related to handling biological products and working with AIDS patients (infection control)		
Number trained	97	140
Supervision visits in last 6 months	Daily	6
Care of pregnant women and newborns (KZN DOH protocol)		
Number trained	4	55 PNs
Supervision visits in last 6 months	20	6
IMCI protocol		
Number trained	5	3
Supervision visits in last 6 months	3	Not available.
Case management of childhood diarrhea (if no IMCI training)		
Number trained	N/A	Not available.
Supervision visits in last 6 months	N/A	Not available.
Case management of childhood ARI (if no IMCI training)		
Number trained	N/A	Not available.
Supervision visits in last 6 months	N/A	Not available.

	Ndwedwe CHC	Montebello Hospital
Administration of childhood vaccinations		
Number trained	2	Not available.
Supervision visits in last 6 months	Daily	Not available.

ANTENATAL / MATERNAL / POST-NATAL HEALTH CARE		
Training:		
Basic Essential Obstetric Care (EBO)		
Parenteral antibiotics	Only PNs	Yes.
Parenteral oxytocic drugs	All midwives	Yes.
Parenteral sedatives/ anticonvulsants for eclampsia	All midwives	Yes.
Manual removal of placenta	All midwives	Yes.
Manual removal of retained products	All midwives	Yes.
Comprehensive Essential Obstetric Care		
All of the above	Yes.	Yes.
Blood transfusion	No	Yes
Cesarean section	No	Yes.
Nurses received refresher training on EBO?	Yes	Yes.
Anyone trained in post-abortion care services?	Yes	Yes.
Manual removal or placenta	Yes.	Yes.
Manual removal of retained products	Yes.	Yes.
Vacuum aspiration of uterus	Only ADMs	Yes.
Post-abortion counseling and psychological support	Yes.	Yes.
Counseling and provision of family planning services	Yes.	Yes.
If Yes., how many staff trained?	22	Not available.

	Ndwedwe CHC	Montebello Hospital
Services provided:		
What activities provided during ANC visit?		
History taking	Yes.	Yes.
Weight	Yes.	Yes.
Blood pressure	Yes.	Yes.
Urinalysis	Yes.	Yes.
General exam, including mental state assessment	Yes.	Yes.
Abdominal exam, including measurement of symphysis fundal height	Yes.	Yes.
Pap smear, if indicated	Yes.	Yes.
Screening test for hemoglobin	Yes.	Yes.
Screening test for syphilis serology (RPR)	Yes.	Yes.
Screening test for blood group	Yes.	Yes.
Screening test for HIV (if recommended)	Yes – by consent.	Yes.
Risk assessment	Yes.	Yes.
Antimalarial medications (if advised)	N/A	Not available.
Iron folate	Yes.	Yes.
Pregamal	Yes.	Yes.
Deworming	Yes.	Yes.
Treatment of specific diseases	Yes.	Yes.
Health education	Yes.	Yes.
Teach need for additional prenatal visits	Yes.	Yes.
At least 2 TT injections	Yes.	Yes.

	Ndwedwe CHC	**Montebello Hospital**
At least 4 antenatal care visits recommended	Yes – 5.	Yes.
Do you recommend pasteurization of breastmilk for HIV + mothers?	No.	Yes.
Do you offer PMTCT services?	N/A	Yes.
Do deliveries occur at this facility?	Yes.	Yes.
How many deliveries occurred in this facility in the past year?	470	Not available.
ADM present?	Not always	Not always.
Are TBAs in the community supervised?	No – they refer patients to CHC.	N/A
PEP program in place?	No.	No
HIV/AIDS/STI/RTI counseling integrated w/ ANC activities?	Yes.	Yes.
Follow-up with mother after delivery?	Yes.	Yes.
If so, for how long?	6 weeks	6 weeks
If so, where does the followup occur?	At CHC	At hospital
After delivery, are mothers referred to family planning?	Yes.	Yes.
What family planning services offered?	Pill Injectibles condoms	IUDs Pill Injectibles condoms
Emergency obstetric care provided?	Yes.	Yes.
Parenteral antibiotics	Yes.	Yes
Parenteral oxytocic drugs	Yes.	Yes
Perenteral sedatives/anti-convulsants for eclampsia	Yes.	Yes
Manual removal of placenta	Yes.	Yse
Manual removal of retained products?	Yes.	Yes

	Ndwedwe CHC	**Montebello Hospital**
Blood transfusion	No	Yes.
Cesarean section	No	Yes.
Other gynecologic surgery	No	Yes.
Post-abortion care services offered?	No – referred to hospital.	No.
Manual removal of placenta	N/A	Yes
Manual removal of retained products	N/A	Yes
Vacuum aspiration of uterus	N/A	Yes
Post-abortion counseling and psychological support	N/A	Yes
Counseling and provision of family planning services	N/A	Yes
Symptoms & Signs during pregnancy that would prompt referral	-previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessness -cessation of fetal movement/ baby does not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -hemorrhage/ heavy bleeding -light bleeding/spotting -multiple pregnancy/ large abdomen –obstructed/ prolonged labor	-previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessness -cessation of fetal movement/ baby does not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -hemorrhage/ heavy bleeding -light bleeding/spotting -multiple pregnancy/ large abdomen –obstructed/ prolonged labor

	Ndwedwe CHC	Montebello Hospital
Symptoms & Signs during delivery that would prompt referral	-previous bad obstetric history - abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessness -cessation of fetal movement/ baby does Not move -abnormal lie/position of fetus -hemorrhage/heavy bleeding -multiple pregnancy/ large abdomen –obstructed/ prolonged labor	-previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessness -cessation of fetal movement/ baby does not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -hemorrhage/ heavy bleeding -light bleeding/spotting -multiple pregnancy/ large abdomen –obstructed/ prolonged labor
Symptoms & Signs after delivery that would prompt referral	-hypertension/headache/ swelling/fits - anemia/pallor/fatigue/ breathlessness	-previous bad obstetric history/abdominal scars/ previous stillbirth -hypertension/ headache/ swelling/fits -anemia/ pallor/ fatigue/breathlessness -cessation of fetal movement/ baby does not move -abnormal lie/position of fetus -sepsis /foul smelling discharge -hemorrhage/ heavy bleeding -light bleeding/spotting -multiple pregnancy/ large abdomen –obstructed/ prolonged labor

	Ndwedwe CHC	Montebello Hospital
How many cases of obstetric emergencies have occurred in this facility in past year?	6 cases	17 cases total: 3 hemorrage 6 prolonged/obstructed labor 1 complication from abortion 3 preeclampsia/eclampsia 3 ectopic pregnancies 1 ruptured uterus
How many deaths from obstetric emergencies have occurred in this facility in past year?	0	0
What is the met need for EOC?	Not available.	Don't know.

	Ndwedwe CHC	Montebello Hospital
CHILD HEALTHCARE		
Special place for ORT	Yes.	Yes.
What antibiotic would you choose in the case of dysentery from Shigella?	Nalidixic Acid	Nalidixic Acid
What would you do w/ a child > 2 months w/ pneumonia?	Refer child Outpatient treatment with antibiotic.	Outpatient treatment with antibiotic. Educate mothers about warning signs and home care.
Ever unable to refer a child?	No.	No
Why?	N/A	N/A
HIV/AIDS		
Are STI tests provided, w/counseling and treatment?	Yes.	Yes., voluntary.
Are HIV tests and counseling provided?	Yes.	Yes.
HIV testing in this facility?	Yes.	Yes.
If so, what HIV test used?	OralQuick, Elisa	Abbot, Smart Check, Elisa
Is counseling provided?	Yes.	Yes.
Is HIV treatment provided?	Yes.	Yes.
Is Cotrimoxazole used as preventive therapy for OIs in people with HIV?	Yes.	Yes.
Is there any support group in the community for PLWA?	Yes.	Yes.
In past 3 months, advised anyone to use condoms specifically for preventing RTI/STI/HIV infection?	Yes – “daily”	Yes.
Is your hospital an ARV center?	N/A	Yes.
Since when?	N/A	September 2005
Obstacles?	N/A	None except shortage of staff.

	Ndwedwe CHC	Montebello Hospital
How many patients on ARV?	N/A	137
Are medicines available?	N/A	Yes
Do you follow up ARV patients at home?	N/A	Not available.
INFRASTRUCTURE AND EQUIPMENT		
Private examination room/area	Available and satisfactory	Available and satisfactory
Table & Stool for GYN Exams	Available and satisfactory	Available and satisfactory.
Storage area/cupboard for drugs and supplies	Available and satisfactory	Available and satisfactory.
Delivery or Labor Room w/ Bed & Lighting	Available and satisfactory	Available and satisfactory.
Telephone or radio transmitter	Available and satisfactory	Available and satisfactory.
Ambulance or vehicle for emergency transfer	N/A	Available but not satisfactory.
"Care for Pregnant Women & Newborns at Clinic and District level" Protocols from KZN DOH	Available and satisfactory	Available and satisfactory.
IMCI protocols	Available and satisfactory	Available and satisfactory.
CDD protocols (if IMCI not available)	N/A	N/A
ARI protocols (if IMCI not available)	N/A	N/A
Protocols for childhood vaccinations	Available and satisfactory	Available and satisfactory
Protocols for HIV/AIDS testing	Available and satisfactory	Available and satisfactory.
Protocols for HIV/AIDS counseling	Available and satisfactory	Available and satisfactory.
Blank Road to Health cards	Available and satisfactory	Available and satisfactory.
Blank antenatal/maternal health cards/records	Available and satisfactory	Available and satisfactory.

	Ndwedwe CHC	Montebello Hospital
Basic equipment:		
Blood pressure apparatus (sphygmomanometer)	Available and satisfactory	Available and satisfactory.
Stethoscope	Available and satisfactory	Available and satisfactory.
Fetal stethoscope	Available and satisfactory	Available and satisfactory.
Oral thermometer	All rectal	Available and satisfactory.
Otoscope	Available and satisfactory	Available and satisfactory.
Watch with a second hand or other timing device	Available and satisfactory	Available and satisfactory.
Measuring and Mixing Utensils to Prepare ORS	Available and satisfactory	Available and satisfactory.
Cups & spoons to administer ORS	Available and satisfactory	Available and satisfactory.
Sterilizer (autoclave)	N/A	Available and satisfactory.
Adult weighing scale	Available and satisfactory	Available and satisfactory.
Infant weighing scale	Available and satisfactory	Available and satisfactory.
Protective Clothing (Shoes, /boots, gowns, plastic aprons)	Available and satisfactory	Available and satisfactory.
Gloves	Available and satisfactory	Available and satisfactory.
Refrigerator for vaccines	Available and satisfactory	Available and satisfactory.
Watch indicator	Available and satisfactory	Available and satisfactory.
Temperature chart up to date during the last 30 days?	Available and satisfactory	Available and satisfactory.
Cold boxes/ thermos	Available and satisfactory	Available and satisfactory.
Cold packs	Available and satisfactory	Available and satisfactory.
Scissors	Available and satisfactory	Available and satisfactory.

	Ndwedwe CHC	Montebello Hospital
Suture needles and suture material	Available and satisfactory	Available and satisfactory.
Disposable?	Yes.	Yes.
If so, do you run out?	No	Yes.
If Yes., how often?		Very rarely.
Needle holder	Available and satisfactory	Available and satisfactory.
Cloth/Towel to Dry Baby	Available and satisfactory	Available and satisfactory.
Blanket to wrap baby	Available and satisfactory	Available and satisfactory.
Bag and mask for neonatal resuscitation	Available and satisfactory	Available and satisfactory.
Educational materials related to child health (EPI and IMCI) – visible to clients	Available and satisfactory	Available and satisfactory
Educational Materials related to Maternal/ antenatal and newborn health	Available and satisfactory	Available and satisfactory.
If so, where located (visible to clients)?	Yes – on walls.	Yes.
ESSENTIAL DRUGS & CONSUMABLE SUPPLIES		
Paracetomol	Seen at facility	Seen at facility.
Paracodol	Seen at facility.	Seen at facility.
Pethidine	Not seen at facility.	Seen at facility.
Amoxicillin	Seen at facility.	Seen at facility.
Ampicillin	Not seen at facility.	Seen at facility.
Ceftriaxone	Seen at facility.	Seen at facility.
Cotrimoxazole/ bactrim	Seen at facility.	Seen at facility.
Erthromycin	Seen at facility.	Seen at facility.
Metronidazole	Seen at facility.	Seen at facility.
Benzathine penicillin	Seen at facility.	Seen at facility.
Procain penicillin	Not seen at facility.	Seen at facility.
Nalidixic Acid	Seen at facility.	Seen at facility.
Nitrofurantoin	Not seen at facility	Seen at facility.
Nevaripin	Seen at facility.	Seen at facility.
Piperazine	Not seen at facility.	Not used at this facility - mebendazole instead.

	Ndwedwe CHC	Montebello Hospital
Mebendazole	Seen at facility.	Seen at facility.
Niclosamide (Yomesan) tablets	Seen at facility.	Seen at facility.
Diazepam (Valium)	Seen at facility.	Seen at facility.
Phenobarbital (Gardinal)	Seen at facility.	Seen at facility.
Naloxone (Narcan)	Seen at facility.	Seen at facility.
Magnesium sulfate	Seen at facility.	Seen at facility.
Dihydrallazine (Neprosol)	Seen at facility.	Seen at facility.
Methyldopa (Aldomet)	Seen at facility.	Seen at facility.
Nifedipine (Adalat)	Seen at facility.	Seen at facility.
Aminophyllin	Not seen at facility.	Seen at facility.
Hexoprenaline IVI (for asthma)	Not seen at facility.	Seen at facility.
Salbutamol	Seen at facility.	Seen at facility.
Prednisone	Seen at facility.	Seen at facility.
Calcium gluconate	Seen at facility.	Seen at facility.
Ferrous Fumarate	Seen at facility.	Seen at facility.
Folic Acid	Seen at facility.	Seen at facility.
Mist potassium citrate	Seen at facility.	Seen at facility.
Pregamal	Seen at facility.	Seen at facility.
Multivitamin tablets	Seen at facility.	Seen at facility.
Vitamin A (capsules)	Seen at facility.	Seen at facility.
ORS Packages	Seen at facility.	Seen at facility.
IV kits (including tubing)	Seen at facility.	Seen at facility.
Barrows Elecrolyte Solution	Seen at facility.	Seen at facility.
5% Dextrose in Water	Seen at facility.	Seen at facility.
4.2% Sodium Bicarbonate	Not seen at facility.	Seen at facility.
Plasmalyte	Seen at facility.	Seen at facility.
Haemacel or 4% Albumin	Not seen at facility.	Seen at facility.
Syntometrine	Seen at facility.	Seen at facility.
Syntocinon (Oxytocin)	Seen at facility.	Seen at facility.
Gentian Violet	Seen at facility.	Seen at facility.
Nystatin	Seen at facility.	Seen at facility.
Econozole Pessaries	Seen at facility.	Seen at facility.
Chloramphenicol	Seen at facility.	Seen at facility.
Lignocaine 1%	Seen at facility.	Seen at facility.

	Ndwedwe CHC	Montebello Hospital
Oral contraceptives	Seen at facility.	Seen at facility.
Injectible contraceptives	Seen at facility.	Seen at facility.
Condoms	Seen at facility.	Seen at facility.
IUDs	Not seen at facility.	Seen at facility.
Tetanus toxoid in refrigerator	Seen at facility.	Seen at facility.
BCG vaccine	Seen at facility.	Seen at facility.
OPV	Seen at facility.	Seen at facility.
DPT	Seen at facility.	Seen at facility.
HEP B	Seen at facility.	Seen at facility.
HIB	Seen at facility.	Seen at facility.
Anti-measles	Seen at facility.	Seen at facility.
Chlorhexidine/ surgical spirit/other	Seen at facility.	Seen at facility.
HIV kit sceening	Seen at facility.	Seen at facility.
HIV test confirmation	Seen at facility.	Seen at facility.
Syphilis test kits	Not seen at facility.	Seen at facility.
Urine dip stick/ proteinuria test supplies	Seen at facility.	Seen at facility.
Tongue depressor	Seen at facility.	Seen at facility.
Razors	Seen at facility.	Seen at facility.
Disposable syringes and needles	Seen at facility.	Seen at facility.
Blank "laborgraphs" or "partographs"	Seen at facility.	Seen at facility.
Urinary catheters	Seen at facility.	Seen at facility.
Cord ties	Seen at facility.	Seen at facility.
MEDICAL/SURGICAL EQUIPMENT AND SUPPLIES		
Vacuum extractor	N/A	Available and satisfactory.
Suction machine/mucus extractor and related tubing	N/A	Available and satisfactory.
Adult ventilator bag and mask	Available but not satisfactory.	Available and satisfactory.
Artery forceps	Available but not satisfactory.	Available and satisfactory.
Obstetric forceps, outlet, mid-cavity, breech	Not available.	Available and satisfactory.
Uterine dilators	N/A	Available and satisfactory.
Uterine curettes	N/A	Available and satisfactory.

	Ndwedwe CHC	Montebello Hospital
Long dressing forceps	N/A	Available and satisfactory.
Equipment and supplies needed to perform cesarean section	N/A	Available and satisfactory.
Equipment and supplies for cross-matching blood	N/A	Available and satisfactory.
Equipment and supplies for collection of blood	Available but not satisfactory.	Available and satisfactory.
Hemoglobinometer	Available but not satisfactory.	Available and satisfactory.
Measurement of hematocrit	Not available.	Available and satisfactory.
Microscope	N/A	Available and satisfactory.

ATTACHMENT J: Final Qualitative Study

Medical Care Development International

Qualitative research report
Final Evaluation – Ndwedwe Child Survival Project
October 2005

As part of the Ndwedwe Child Survival Project final evaluation, MCDI conducted interviews with mothers of children less than five years old to determine knowledge, attitudes and practices applied to Key Family Practices as adapted from the GAPS analysis exercise conducted by MCDI in Ndwedwe in 2001. The questionnaire investigated caregiver practices in six areas:

- Infant and child feeding
- Well-child practices
- Home hygiene and sanitation
- Care of the sick child
- Maternal care
- HIV knowledge, preventive practices and attitudes

Methodology

Interviews were conducted individually with each caregiver in separate rooms at a local health facility. Only the two MCDI interviewers, the interviewee and her child were present during each interview. The children ranged from 6 months to 4 years old.

Interviews were conducted in Zulu and the results translated into English and recorded by qualified MCDI staff.

Results

Infant and child feeding

When asked if they breastfed their children, 60% of mothers did breastfeed, although 20% had breastfed for less than two months. Another 20% had breastfed the child for six months and then stopped. The remaining 20% had breastfed for up to two years. Reasons given for not breastfeeding were that the child didn't take to the breast. In 50% of non-breast -feeders, no reason was provided.

All the mothers agreed that breastfeeding is important for children. Reasons mentioned included helping the baby grow, protecting against illness and infection, and cost-effectiveness. 20% also mentioned emotional benefits for the child.

All the mothers also agreed that feeding the child colostrum was important because of vitamins and other "healthy things" in it that are good for the child. The breastfeeding mothers had all fed the child colostrums.

All the mothers felt that an HIV-positive mother should breastfeed exclusively for six months and then stop.

Of the mothers who had breastfed more than two months, 100% had breastfed exclusively (no other liquids or foods) for the first four to six months. Only 20% of the non-breast-feeders had begun to give their child soft foods before four months and none of the breast-feeders had. Complementary foods from four to six months included mealie or maize meal porridge, Purity (a brand of baby cereal), milk and pureed vegetables. One mother routinely put a raw egg in her child's porridge. All children older than eight months were eating a diverse diet of adult foods, including mashed potatoes and pumpkin, minced or ground beef, rice, fish, and leafy greens.

80% of the mothers had home gardens and grew spinach, carrots, pumpkin, cabbage, and potatoes that were fed to the children either in solid or pureed form.

Summary of results on infant and child feeding:

Child is breastfed	**60%**
Child fed colostrums	**60%**
Exclusive breastfeeding 4-6 months	**40%**
Breastfeeding is good because:	
Helps the baby grow	**100%**
Protects against infection	**80%**
Fresh and always available	**40%**
No cost	**40%**
Protects against diarrhoea	**20%**
Supports the child's emotional health	**20%**
HIV+ mothers should breastfeed exclusively for six months	**100%**
Complementary feeds beginning 4-6 months	**80%**

Well-child practices

All the mothers had a Road to Health card for their child. 80% of the children are weighed every month. 20% are taken to be weighed only every two months but were more than three years old. All of the mothers stated that it was important to weigh the child regularly to monitor the child's growth and make sure the child isn't losing too much weight.
According to the cards, 80% of the children had been fully immunized including Vitamin A beginning at six months. Only 20% were missing Vitamin A doses on their cards, and none of the mothers had any memory of their child getting a Vitamin A capsule.

The protocol for preventive treatments for worms begins when the child is one year old and continues with treatment once every six months. Of the children old enough to have received treatment for worms, only 50% had been treated, according to their cards.

Summary of results on well-child care:

Road to Health card	**100%**
Fully immunized	**100%**
Fully immunized and Vitamin A	**80%**
Treated for worms	**50%**

Home hygiene and sanitation

80% of the mothers had flush toilets at home and used them to dispose of both adult and child waste. 80% also used disposable diapers, which when soiled were burned in an incinerator or placed in household bins serviced by a solid waste company. The 20% without flush toilets buried all human waste in the ground outside the home.

All the mothers washed their hands regularly and at key times, such as before preparing food and feeding the child, after using the toilet, and after cleaning the child's waste. All used soap and water.

Summary of hygiene and sanitation results:

Toilet facilities	
Flush toilet	**80%**
No/pit toilet	**20%**
Handwashing	
Before preparing food	**80%**
Before feeding child	**100%**
Before eating	**80%**
After own defecation	**100%**
After cleaning child's waste	**100%**
Use soap and water	**100%**

Care of the sick child

When asked if they give their child more, less or the same amount of food when the child is sick, 60% of mothers said they give their child more food, 20% said less food, and 20% said it depends on the child's appetite. When asked about fluids offered, 60% said they give the child more fluid when ill, 40% said less.

When asked specifically about foods and fluids offered during diarrhoea, 60% said they offer more food and fluid, 20% said more fluid only, 20% said it depended on the child's ability to take in extra food and fluid (one mother mentioned her fear of too much causing the child to vomit), and 20% said the child is given less food and fluid. All the mothers give their child sugar-salt solution during diarrhoea. 60% administer the solution as soon as the child's diarrhoea starts,

20% within the first 24 hours, and 20% only after first visiting the clinic with the child. Known signs of dehydration include sunken eyes and fontanelle (60%), and lethargy (40%). 20% could only name lethargy, and 20% didn't know any signs of dehydration.

Known general signs of a sick child who needs to be taken to the clinic included fever, lethargy, diarrhoea, won't eat or drink, rapid breathing, and vomiting. 80% of mothers said they comply with the nurses instructions on administering medications at home. 20% said they stop giving the child prescribed medicine when the child is feeling better.

Summary of sick child care results:

Offers more food	**60%**
Offers more fluid	**80%**
Offers more food during diarrhoea	**60%**
Offers more fluid during diarrhoea	**80%**
Gives salt-sugar solution	**100%**
Knows at least 3 signs of dehydration	**40%**
Knows at least 3 signs of child in need of health facility visit	**80%**
Complies with nurse's instructions on medication	**80%**

Maternal care

All of the mothers had gone to their local health facility during pregnancy. 20% had made their first antenatal clinic visit during their first trimester and 80% during the second trimester. The average number of antenatal visits was six and ranged from four to eight total. All had been given tetanus toxoid injections – 40% had gotten two shots, 60% had gotten three shots.

All of the mothers had given birth in a health facility, either a hospital or a clinic, and all had been assisted by a midwife. 60% had received a post-partum dose of Vitamin A. All had been counseled and tested for HIV.

Summary of maternal care results:

Gone to health facility during pregnancy	**100%**
First antenatal visit	
First trimester	**20%**
Second trimester	**80%**
Received tetanus toxoid injections	**100%**
Two injections	**40%**
Three injections	**60%**

Health facility delivery	**100%**
Post-partum Vitamin A dose	**60%**
HIV counseled and tested	**100%**

HIV knowledge, preventive practices and attitudes

All of the mothers had heard of HIV and correctly listed abstinence, fidelity to one partner and condom use as methods of reducing infection risk. 20% stated that a traditional healer could provide protection from HIV.

All said that if a child became an orphan, they would take the child into the home and raise them, although 40% said they would do so only if it were affordable. All said they would take in an orphan whose relatives lived elsewhere, although 20% said that the relatives must agree first.

Summary of HIV knowledge, preventive practices and attitudes:

Knows at least 3 ways to prevent HIV infection	**100%**
Would take an AIDS orphan into home if a relative died	**100%**
If a non-relative living in community	**100%**
If a non-relative with family living outside community	**100%**

Discussion

The mothers interviewed displayed the effects of good education and support for optimal community and household IMCI practices. All were pro-breastfeeding, -exclusive breastfeeding, and -colostrums feeding and were knowledgeable about the benefits for the child. Of those who were not breastfeeding, either the reason was unstated or the mother said the child didn't "take to the breast." An unstated reason may have been that the mothers were HIV positive (something that wouldn't be discussed openly) and may have chosen not to breastfeed and risk transmission despite the benefits. The mothers who were breastfeeding or had breastfed for more than two months had all exclusively breastfed for the first four to six months. All the mothers were giving their children appropriate complementary foods at the appropriate time (beginning no earlier than four months), although one mother was giving her child raw egg, perhaps risking bacterial infection. And the fully immunized rate was excellent, with some lags in Vitamin A coverage.

Hygiene and sanitation practices were also very good to excellent. The mothers disposed of waste and washed their hands with soap and water after handling waste and before handling food to prevent contamination of the child's digestive system.

Although overall sick-child care was reasonably good, there were some serious lacks in knowledge of dehydration signs, the need to give the child both more foods and fluids when ill, especially during diarrhoea, and what to look for to determine whether a sick child needs to go to the health facility for urgent care. This may require increased focus in training and education.

Antenatal care and delivery practices were also very good, although with two gaps in making the first antenatal visit during the first trimester (only 20%) and administration of post-partum Vitamin A (only 60%). The latter may be the result of non-recipient mothers having given birth before the post-partum protocol was in place (established in 2002 in KwaZulu Natal). Encouragingly, all the mothers had been counseled and tested for HIV while pregnant.

HIV awareness and practice is strong, with all mothers able to list at least the three chief preventive practices – abstinence, fidelity and condom use. Only a small percentage would seek out a traditional healer for help in avoiding the virus. Another small group had mentioned avoiding a homosexual relationship as a way to protect against the virus. One woman thought infection could be the result of a mosquito bite, although she later changed her mind on this.

All the women were willing to care for a child who loses his or her parents to AIDS, whether the child is a relative or not, although some placed conditions such as affordability and permission from the child's relatives if the child was not from her own family.

Conclusion

Based on these interviews, knowledge of most IMCI protocols that prevent child illness and infection is well established, and the majority of Key Family Practices appear to be a normal part of child care. The correct health-promoting attitudes also seem to be in place even if related practices are not always carried out, such as in the case of breastfeeding. In this circumstance, for example, an HIV-positive status may lead to an infant-feeding choice other than breastfeeding to offset an increased risk of transmission. (Although it's unknown whether any of the mothers or children were HIV-positive, the generally high levels of infection in Ndwedwe make this a strong possibility.)

Familiarity with HIV prevention methods was also excellent overall, as was the 100% rate of counseling and testing for infection during pregnancy.

There are, however, critical gaps in knowledge of optimal curative care practices, such as offering a sick child both more food and fluid, as well as for urgent care, such as knowing the signs of dehydration from diarrhea and other indications that a sick child must be taken to the health facility as soon as is possible (although rates of compliance with prescribed advice was very good for the most part). This implies a pressing need for focused training of primary healthcare providers and education of caregivers in these practices to reduce child morbidity and mortality in Ndwedwe.

MCDI
Group interview questions for Child Survival Final Evaluation
17 October 2005

Interviewers: Thuli Ngidi, Martha Benezet

Note to interviewer: Answers should be recorded by individual. Take each child's age at the beginning of interview.

I. Infant and child feeding

1.1 Did you breastfeed your baby?

1.2 Do you think breastfeeding is important? Why?

1.3 How long after birth did you first put the baby to your breast?

(a) Immediately or within first hour after delivery?

(b) Within first 8 hours?

(c) After first 8 hours?

[1.4 Of those who didn't feed their baby colostrums, ask why.]

1.5 How old was the baby when you started giving him or her things to drink other than breastmilk?

[1.6 If before three months of age, ask why.]

1.7 How old was the baby when you started giving him or her things to eat other than breastmilk?

[1.8 If before four months of age, ask why.]

1.9 What kinds of food did you feed your baby at first?

1.10 Do you think mothers who are HIV+ should breastfeed their babies? Why or why not?

1.11 [If yes, ask for how long.]

2. Well-child practices

2.1 What do you feed your child now?

2.2 Which foods do you feed your child the most (3 or more times each week)?

2.3 Do you have a garden at home?

[2.4 If yes, ask what they grow and which of those foods the child eats 3 or more times each week.]

2.5 Do you have a Road to Health card for your child? May I see it?

2.6 Do you take your child to the clinic to be weighed?

[2.7 If yes, ask how often.]

2.8 Is it important for a child to be weighed regularly? Why?

2.9 Do you get your child immunized? May I see your Road to Health cards?

2.10 Fully immunized – yes

2.11 Fully immunized – no

2.12 Does your child get treated for worms?

[2.13 If yes, ask how often.]

[2.14 If she did but stopped, ask why.]

2.15 Did/do you take your child to the clinic for well-baby visits?

[2.16 If yes, ask how often.]

[2.17 If she did but stopped, ask why.]

3. Hygiene and sanitation

3.1 In your household, how do you get rid of defecation?

3.2 Is there a different way that you get rid of the child's waste?

3.3 When do you tend to wash your hands?

3.4 Before food preparation

3.5 Before eating

3.6 Before feeding children

3.7 After own defecation

3.8 After cleaning child's waste

3.9 Never

3.10 What do you use to wash your hands?

4. Care of the sick child

4.1 When your child is sick, do you usually feed your child more food, less food or about the same amount? Why?

4.2 When your child is sick, do you usually give your child more to drink, less to drink or about the same amount? Why?

4.3 When your child is sick with diarrhoea, do you usually give your child more food, less food or about the same amount? Why?

4.4 When your child is sick with diarrhoea, do you usually give your child more to drink, less to drink or about the same amount? Why?

4.5 When your child is sick with diarrhoea, do you give him or her sorol?

[4.6 If yes, ask how soon after the diarrhoea starts do they give the child sorol.]

4.7 When your child is sick with diarrhoea, do you take him or her to the clinic?

4.8 If yes, what signs do you look for to tell when the child must go to the clinic?

4.9 When your child is sick with other illnesses, do you take him or her to the clinic?

If yes, do you take the child to the clinic when:

4.10 looks unwell or not playing normally

4.11 not eating or drinking for more than an hour

4.12 lethargic or difficult to wake

4.13 has a sunken fontanelle

4.14 high fever

4.15 low fever

4.16 fast or difficult breathing

4.17 excessive crying

4.18 change of colour

4.19 vomits everything

4.20 convulsions

4.21 Other _____

4.22 When you take your child to the clinic, and the nurse gives your child medication to take home, in general when do you stop giving the medication to the child?

5. Maternal care

5.1 When you became pregnant, did you go to the clinic?

5.2 If yes, how soon after you thought you were pregnant did you go to the clinic?

5.3 If yes, how many times did you go to the clinic before the baby was born? At what months did you visit the nurse?

5.4 While you were pregnant, did the nurse give you an injection in the arm?]

5.5 If yes, how many injections did you get before delivering?

5.6 Where did you have your baby?
5.7 Who helped you deliver your baby?

5.8 Were you counseled and tested for HIV while you were pregnant?

6. HIV prevention practices

6.1 Have you heard about AIDS and the virus that causes AIDS?

6.2 Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?

[If yes, ask what? (Yes/no):]

6.3 abstain from sex

6.4 use condoms

6.5 limit sex to one partner/stay faithful to one partner

6.6 limit number of sexual partners

6.7 avoid sex with prostitutes

6.8 avoid sex with persons who have many partners

6.9 avoid intercourse with persons of the same sex

6.10 avoid sex with persons who inject drugs intravenously

6.11 avoid blood transfusions

6.12 avoid injections

6.13 avoid kissing

6.14 avoid mosquito bites

6.15 seek protection from traditional healer

6.16 avoid sharing razors, blades

6.17 Other_____

6.18 If a relative of yours died and left an orphaned child behind, would you be willing to take that child into your home and raise him or her?

6.19 If a child in your community who was no relation to you lost both parents and had no one else in the community to take care of him or her, would you be willing to take that child in and raise him or her?

6.20 If that child had a relative who lived elsewhere, would you be willing to take that child in and raise him or her so that the child could stay in your community?

ATTACHMENT K : Harvard School of Public Health Case Study Report

UNVEILING THE SILENCE:

A Case-Based Analysis of HIV/AIDS Stigma & Discrimination in the Ndwedwe Sub-district of KwaZulu Natal, South Africa

January 2004

Harvard School of Public Health ID296 Final Report

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Candice Samuel of the DOH GIS Unit presented " Fighting a War Against Disease - Our Weapon, GIS" and lent some beautiful posters of GIS mapping of disease for use in the GPS/GIS training at MCDI.

Dr. Anthony Pillay, Department of Medically Applied Psychology, Nelson Mandela School of Medicine, University of Natal and Midlands Hospital (an HSPH alumnus) along with two other psychologists and a psychology intern provided us with a view of the mental health issues. This included a discussion of a society that is stressed by HIV/AIDS stigma and discrimination, escalating incidences of rape, increases in suicide attempts, and the expatriation of many health professionals.

We thank Julie Henry, a generous alumna of the Harvard School of Public Health, for her financial support, making this experience financially feasible. We thank the Harvard School of Public Health for the financial support and the opportunity to practice public health in a case-based course in a developing country. And lastly, we thank Dr. Jane Gardner and Dick Gardner for developing this course and providing the content and logistical means to make this course possible.

This report is partial fulfillment of requirements for ID296, Practicum in Assessment, Monitoring and Evaluation in a Developing Country

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ABBREVIATIONS/ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral (Treatment)
BCC	Behavior Change Campaign
CBO	Community Based Organization
CHC	Community Health Committee
CHW	Community Health Worker
CS	Child Survival
DOH	Department of Health
DOTS	Direct Observation Therapy, Short-Course
HBCV	Home Based Care (Volunteer)
HC	Health Club
HIV	Human Immune-Deficiency Virus
HSPH	Harvard School of Public Health
IEC	Information Education Communication
IMCI	Integrated Management of Childhood Illness
KPC	Knowledge Practice Coverage (Study)
KZN	KwaZulu Natal (Province)
LOE	Level of Effort
MCDI	Medical Care Development International
NAPWA	National Association for People Living with HIV/AIDS
NDCSP	Ndwedwe District Child Survival Project
NGO	Non-Governmental Organization
OI	Opportunistic Infection
PHC	Primary Health Care
PLWA	Persons Living with HIV/AIDS
PMTCT	Preventing mother to child transmission
REACH	Rapid and Effective Approach to Combat HIV/AIDS
RSA	Republic of South Africa
SA	South Africa
SHC	School Health Club
STD	Sexually Transmitted Disease
TBA	Traditional Birth Attendant
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

EXECUTIVE SUMMARY

Background

One of the biggest challenges in addressing the HIV/AIDS epidemic in South Africa is the stigma and discrimination surrounding the disease. While many surveys measure knowledge and attitude towards HIV-related stigma and discrimination, few if any have looked at how they are experienced by those who are infected and affected by HIV/AIDS.

This report describes one such survey conducted by Medical Care Development International (MCDI), a private voluntary organization (PVO) implementing a Child Survival Project in Ndwedwe, a sub-district of the Ilembe District of KwaZulu Natal (KZN) province, South Africa. The aim of the survey was to establish baseline indicators for a Pact/USAID Community REACH Stigma and Discrimination Project in Ndwedwe.

The goal of this report is to provide a picture of how HIV/AIDS-related stigma and discrimination are perceived in the Ndwedwe community using both quantitative and qualitative methods.

Methodology

The three main components of this report are:

- Review of relevant literature
- Quantitative analysis of data collected from a survey (done before our visit by MCDI)
- Qualitative report from observations made in the field

The literature review attempts to synthesize relevant information from the limited library resources available to the team. The baseline survey was conducted from August to September, 2003, by eight members of the Zulu community. Respondents were recruited using convenience sampling in select clinics as well as from the greater community. The interviewers administered questionnaires to a total of 279 respondents, 83 of whom were categorized as HIV positive. Preliminary analysis was completed by MCDI, while members of the Harvard School of Public Health (HSPH) team drafted the final quantitative analysis presented in this report. Qualitative information was collected by the HSPH team from observations made during field visits, group discussions, and community meetings in Ndwedwe from January 6-26, 2004. The qualitative report was compiled using direct and indirect quotes from MCDI staff and community members.

Conclusions and Recommendations

Stigma and Discrimination in Ndwedwe Sub-district

Stigma and discrimination are indeed present in Ndwedwe. This is evidenced by the lag period between diagnosis and disclosure (20% disclosing HIV status only after 6 months) as well as the unexpectedly large number of respondents willing to address stigma and discrimination. The qualitative report also demonstrates the extent of the problem, summed up by one person's declaration: *"I'd rather die than get tested."*

The literature also reveals that stigma and discrimination abound. It is evident these are experienced as a result of a collective negative reaction towards the disease. It is therefore

imperative to gain the community's trust and involvement both prior to, and in conjunction with, the implementation of a stigma reduction project. Further, support groups, broadly targeted information, education and communication campaign (IEC), and an increase in voluntary, counseling and testing (VCT) centers may aid in this reduction.

It is also important to consider the future impact of antiretroviral drugs (ARVs) once these become available. As an incentive to get tested, ARVs may indirectly aid in the reduction of stigma in the community. The possibility of merging IEC campaigns to reduce stigma and discrimination with those aimed to increase awareness about ARVs should be considered.

Sources and Perpetrators of Stigma

Community and family members are most often mentioned as sources of stigma, so that a broad awareness campaign that targets the larger community should be an essential. It is also essential to mobilize as many stakeholders as possible to maximize such a project.

Awareness of Anti-discriminatory Policies and Legal Rights

Those surveyed appear to be quite knowledgeable about anti-discriminatory policies. However, less than half of those who experienced discrimination actually reported it. Bridging the gap between knowledge about policies an actual reporting of discrimination would be optimal.

Current government HIV/AIDS policies may inadvertently perpetuate the stigma and discrimination as explained in the qualitative section and these policies should be reviewed to foster a non-threatening, confidential environment for HIV/AIDS testing and disclosure of status.

Cultural Barriers

Male attitude and behavior pervasively present a huge a challenge to the prevention and control of HIV/AIDS. Establishing a sub-component in the Reducing Stigma and Discrimination through Innovative and Proven Effective Approaches in Ndwedwe District Project (Stigma and Discrimination Project) specifically targeting men may facilitate their greater participation in addressing the HIV/AIDS problem. A well-designed baseline assessment is essential in the design of a more intensive campaign that targets male behavior and attitude.

It appears that the local culture entails wanting reward or remuneration for an action. Many ask why they should get tested if there is nothing for them in return. These questions highlight the need to explain and emphasize the benefits gained through counseling, testing, and disclosure of status.

Stigma and Discrimination: Best Practice

Very few interventions aiming to reduce HIV-related stigma have been evaluated rigorously to date. MCDI should review local and international programs alike to identify current best practice. It may adopt some aspects of the more successful models (e.g. The Valley Trust's model) and learn from the less successful ones.

Given the relatively new filed of stigma reduction interventions, MCDI has a responsibility to contribute to the documentation of best practice and to facilitate the exchange of information and strategies. Thus, in its project, it should incorporate a strong evaluation component that utilizes a

valid and reliable tool. The baseline survey that has been conducted needs to be developed and expanded, so that data collected presents a more comprehensive pre- and post-intervention picture and facilitates the measurement of project indicators and results.
It is important to measure proximal outcomes of the stigma reduction project, rather than solely concentrating on indicators measuring the distal outcome.

Battling HIV/AIDS-related stigma and discrimination entails an enormous information and education campaign targeting all community members. This will be successful if it has community involvement and trust, and if it is complemented by accessible and available social and health services.

INTRODUCTION

"AIDS is not a disgrace. It is a disease... We must fight this stigma."

-- Thuli Ngidi, MCDI Training Coordinator

An eight-member team from the Harvard School of Public Health (HSPH) visited Kwazulu Natal (KZN), South Africa, from January 6-26, 2004 to participate in a case-based experiential course. Through this course, the team assisted Medical Care Development International (MCDI) in mapping and analyzing the stigma and discrimination situation in Ndwedwe district.

In South Africa (SA), in 2000, it was estimated that 40% of all deaths in the age category 15-49 were due to AIDS.[1] According to the 2001 national sentinel surveillance report, HIV prevalence was highest in the KwaZulu Natal province of South Africa (36.5%).[2] In response to this public health problem, MCDI is currently implementing a USAID-funded child survival project in Ndwedwe with 30% level of effort directed towards HIV/AIDS.[3]

Significant barriers in reducing the impact of HIV/AIDS in the community include the widespread stigma and discrimination associated with the disease. Stigma is defined as an undesirable or discrediting attribute that an individual possesses, thus reducing that individual's status in the eyes of society. Stigmatization is the societal labeling of an individual or group as different or deviant.[4] Sources of stigma include fear of the illness and its consequences, fear of contagion, fear of death, misconceptions, and erroneous beliefs, and the perception that the disease is associated with unacceptable behavior. Discrimination may be defined as unfair treatment of a person or group on the basis of prejudice. In an attempt to overcome the obstacles presented by stigma and discrimination, MCDI, in partnership with the National Association of People Living with HIV/AIDS (NAPWA), proposes to implement a program that aims to reduce stigma and discrimination related to HIV/AIDS (Reducing Stigma and Discrimination through Innovative and Proven Effective Approaches in Ndwedwe District Project).

This report aims to present an analysis of data collected from a needs assessment survey conducted by the MCDI in August-September 2003. The quantitative data is augmented by information gathered from a review of related literature, as well as qualitative information gleaned from observations made by the team during field visits and group discussions with various community stakeholders (e.g. support groups, community volunteers, health workers). This report also presents a summary of a focus group discussion with the survey interviewers (Appendix 1), which provides insight into their experience and thoughts on the process of administering the survey in their community.

LITERATURE REVIEW

"Stigma is a common human reaction to disease. Throughout history many diseases have carried considerable stigma, including leprosy, tuberculosis, cancer, mental illness, and many sexually transmitted diseases (STDs). HIV/AIDS is only the latest disease to be stigmatized."[5] Although fear, misconceptions, and erroneous beliefs have been associated with many diseases including HIV/AIDS, the literature available regarding HIV-related stigma and discrimination is sparse. Little is officially documented or rigorously measured with regards to how stigma and discrimination are experienced by infected and affected individuals.

A recent review looked at 21 interventions targeted at reducing stigma and discrimination.[6] It found that all 21 were successful, independent of the type of intervention. However, the authors suggest a possible bias towards positive results and note that the lack of rigorous evaluation of the majority of interventions surfaced as a major weakness. Nevertheless, the review does reveal a significant need to address the problem of stigma around HIV/AIDS. Although not complete, the following discussion looks at issues around HIV-related stigma and discrimination that have been highlighted in the current literature.

Forms of Stigma and Discrimination

While fear and misconceptions (as noted above) are often the root cause of stigma and discrimination, the literature also suggests that gender discrimination and disregard for women's rights are significant sources of stigma and discrimination, with women bearing the brunt of the stigma associated with HIV/AIDS, as well as the greatest burden of disease.[7] The literature also reveals that stigma and discrimination result in those at risk often refusing to test, and those who are HIV positive refusing to disclose their status. Many will avoid being tested for fear of actually having the disease and living with its consequences.[8] There is a very real perception in the community that an HIV diagnosis is tantamount to a death sentence, coupled with a strong sentiment that coping mechanisms to tackle the "mental burden" of having HIV/AIDS are lacking.[9] The fear of social, financial and personal loss, as well as the lack of perceived benefit (i.e., available treatment), inhibits many from getting tested. Many ignore the issue of HIV/AIDS until they, or the individual they are caring for, are very sick and desperately in need of care.[10]

The literature also reveals that disclosure of one's status is the big hurdle that follows testing. A 2003 survey of 726 HIV positive individuals at two different sites in the Ndwedwe, found that 65% and 92% of respondents had not disclosed their status to anyone for fear of stigma, discrimination, blame, and collective denial.[11] The fear of rejection from a partner, family, community, or religious group is a strong incentive to remain quiet about one's status.[12] For example, men will often desert their female partners when the latter disclose their status. Furthermore, in 2000, the Knowledge Practice Coverage (KPC) survey found that only 26% of respondents were willing to look after a relative who was sick with AIDS.[13] The 2001 KPC findings also revealed that only 68.3% of mothers interviewed would allow their child to play with an HIV positive child, or the child of an HIV positive parent.[14]

Finally, there is also a reluctance to openly discuss HIV stigma and discrimination even in a clinic setting. In a recent KZN Department of Health survey, investigators found that during pretest counseling, Voluntary Counseling and Testing (VCT) for the client was discussed in 80% of sessions, but VCT for the partners of the clients in only 48% of the sessions, while the issue of

stigma and discrimination was discussed in only 32% of the sessions. In this same survey, the fear of violence upon disclosure was discussed in only 21% of the clinic sessions.[15] Thus, both staff and clients are reluctant to discuss stigma and discrimination.

Implications for the South African Population

The literature clearly shows that stigma and discrimination remain integral parts of the barriers faced in fighting the HIV/AIDS pandemic. One of their main impacts is the continued and uncontrolled spread of the disease. In a population whose prevalence is overall estimated to be around 35% and rising, the consequences of this are multifold.

The social architecture is being disrupted by families refusing close contact or to live with HIV-infected family members.[16] Parents are dying, leaving orphans and vulnerable children in need of costly foster care, often putting an unsustainable strain on very low-income families. Where there were once whole families, there are now increasing numbers of child heads of household. Subsistence then takes place by any means available, often at the cost of the children's education and/or healthcare. As these children remain vulnerable, there is also an increase in child abuse rates, as there is still a belief that coitus with virgins will cure the sufferer from HIV.[17]

The subject of HIV/AIDS remains taboo, even at funerals where it is known or suspected to be the cause of death. Reverend Davey said: "We hate the sin but we love the sinner. We must be careful to state that people with AIDS must be loved and we all make mistakes. Perhaps it is something that is not said enough."[18]

Lastly, there is a widening rift between the discriminated (those afraid to test or disclose) and those who are the perpetrators of discrimination.[19] Even with regards to receiving treatment in the hospital, patients who have or who are suspected of having HIV receive worse treatment and are often neglected by staff.[20]

Implications for Policy Making

Faced with the existing literature, policy makers cannot neglect the facts. In the Republic of South Africa Policy Guidelines for Youth an Adolescent Health, it is stipulated that a non-discriminatory environment, adequate shelter and nutrition, treatment of opportunistic infection, and support from friends, family, schools, teachers, employers, and co-workers should be ensured for all persons living with HIV.[21] New policies must, and do, include legislation and efforts toward improvements to promote safe and supportive environments.[22]

There are also extensive mass media public health and anti-stigma awareness campaigns involving TV, radio, movies, flyers (e.g. one poster reads, "My friend with AIDS is still my friend"), newspapers, puppetry, live theatre (e.g. DramAidE), magazines, videos, internet, dance and photo novellas.[23] Different types of interventions can be used, including information-based, coping skills acquisition, counseling approaches, and contact with affected groups.[24] These campaigns attempt to establish social norms and cultural practices with the hope of disseminating realistic messages that the public can relate to. Accessibility of key opportunities and commodities, such as tutoring, available condoms, health services or recreation, is a key

factor for the success of these prevention campaigns. Unfortunately, a lack of financial resources is a very real obstacle in the way of achieving this goal.[25]

Going Forward

This literature review has revealed suggestions and recommendations toward reducing the stigma and discrimination surrounding HIV/AIDS in South Africa. The first is to incorporate HIV/AIDS into the Integrated Management of Childhood Illness (IMCI).[26] An increase in the provision of information, counseling, skill building, and access to health services is also recommended.[27] Intervention settings in school, home, health facilities, work place, community-based organizations, residential centers, and in the street are being established and need to be reinforced. [28]

Further research is needed in the area of HIV/AIDS-related stigma and discrimination. The overall emphasis needs to focus on assessing the impact of implemented change in a measurable and rigorous evaluation.[29] Conclusions in the literature suggest that most interventions do work, even if in the short term and on small scale. The extent of this, however, is not yet known. More research is needed and efforts to combat stigma need to be amplified. Stigma and discrimination still remain one of the biggest hurdles for the international community to overcome in the fight against HIV/AIDS.[30]

Stigma and discrimination associated with a person's HIV status influence how affected and infected individuals, as well as the larger community and other stakeholders, react to and choose to address issues pertaining to HIV/AIDS, from prevention and care to policy and societal response. We are looking at five areas in which stigma and discrimination are expressed in the daily life of an HIV positive person. These areas are interconnected and often reinforce each other to create an environment that negates effective HIV/AIDS program development or clinical intervention. This section presents some observations and case vignettes gathered by the team during field visits and interviews with various community stakeholders.

Family and Community

> ***Ostracism***
> *"I was not allowed to use the same eating utensils as the rest of my family. My own son would have nothing to do with me."*

Stigma and discrimination towards HIV/AIDS are major barriers to prevention and treatment of the disease in that people are afraid to go for testing. It is evident that many beliefs and myths exist about how HIV is transmitted from one person to another. HIV positive clients are not willing to disclose their status for fear of social isolation. Ostracism is often experienced at the family level, as illustrated by the excerpt below from a Ndwedwe HIV support group meeting. A member of the support group reported that members of her family had ostracized her. It was subsequently decided that three members of the support group visit the family to assure them that they cannot contract HIV just from social association with an HIV positive person.

Community perception and stigmatization of HIV/AIDS are also strong determinants of whether an HIV positive individual will disclose his or her HIV status. In the minds of people, HIV is most often associated with extramarital sex, promiscuity, and prostitution- an association that is only gradually and very slowly being changed. A teenage girl tells the following story:

> ***Delinquency***
> *"I am HIV positive and have a 9-month old child. I live with my aunt and my sister. I do not know my father, and my mother died of AIDS-related tuberculosis. All my family members know that I am HIV positive, but I do not want people in the community to know about my HIV status, as they will think of me as delinquent or a prostitute."*

The stigma and discrimination associated with HIV/AIDS appears to have resulted in a highly defensive attitude in the community, especially among the youth. During a road show (an information campaign using drama), a young man introduced himself with the statement *"I am innocent,"* perhaps trying to emphasize that he attended the road show because of general interest, but that his HIV status was negative. This illustrates further that being HIV positive is often associated with guilt and shame. Terms like 'guilt' and 'innocence' are coupled with positive or negative HIV status, underpinning the common belief that HIV comes about through socially unacceptable behavior.

HIV positive individuals are not the only ones affected by the existing stigma and discrimination towards HIV/AIDS. Children rapidly adopt the perceptions of adults and make them their own, thus perpetuating stigma across generations. A father shares the following:

> ***Your Mother or Father is "Bad"***
> *"… if one or both of the parents are HIV positive, their children are stigmatized and discriminated against. Other children will not play with them because their parents have AIDS and are considered to be "bad". Some people who are HIV positive have been separated and isolated from their families, including their children. They are not allowed to live in the same house as their children and are not allowed to eat together with them."*

Due to the large number of adults dying from AIDS-related illnesses, children are being orphaned at an alarming rate, leaving an increasing number of them to fend for themselves. A woman discloses that:

> ***What Will My Daughter Think?***
> *"… I have not divulged my status to my daughter because I am afraid she will think badly of me or encounter problems in the community. She is my only daughter, and my partner left me when I disclosed my status. I know I contracted the virus from him, but there is nothing I can do about it. I know I will die. I am concerned about the future of my daughter and I want her to receive an education, so that she can survive without me."*

In general, there appears to be no or only minimal incentive for voluntary counseling and testing, and for disclosure of one's HIV status. The burden of stigma and discrimination far outweighs the personal benefits that a potential HIV positive individual can gain through disclosure. HIV positive individuals have everything to lose (partner, job, family, and friends) upon disclosure, and there are few financial benefits from the government, so that many people see very little advantage in HIV testing and disclosure.

A strong element of denial exists with people refusing to face up to the reality they know deep down is inevitable and unavoidable. It is interesting to note that an AIDS counselor has a totally different perspective on the community's attitude to HIV/AIDS. According to him:

> *"People living with HIV/AIDS are generally accepted in the community. People are aware of the various routes of transmission and that the virus is not only transmitted through sex. Men who are HIV positive are not ostracized among their peers, but rarely attend HIV support groups because they are ashamed of their predicament. It is generally migrant male laborers that contract the virus and bring it to the rural community, where their womenfolk become infected."*

The Male Sphere

Male behavior is a huge barrier to HIV prevention. In many cases, the male partner infects the woman, but then denies responsibility and the woman has to face the consequences of the disease on her own. In general terms, it is the women who become outcasts while men are the spreaders. This problem is further compounded by the mobility of the male population in its search for employment.

It is common to hear of men deserting their female partners when they learn of her HIV positive status. An HIV positive woman who recently gave birth has not divulged her HIV status to her partner for fear of him deserting her and discontinuing support for their baby. Some of the women in the support group had disclosed their status to their intimate partner. The partners, in denial, often left the woman as a result. Among those who had not disclosed their status, fear of their partner leaving them was the key reason for not disclosing. When the group was asked about how the issue of male responsibility could be addressed, one woman defiantly stated that she was going to leave her partner regardless of the consequences. Another woman started to cry and said:

The Man Takes Off

"My partner denied responsibility and left me after I confronted him with my test result."

It is commonly felt that knowing your status by taking a test brings no benefit and that testing triggers a set of negative societal responses. One of the road show actors, who has a girlfriend and son, gives us a glimpse of the existing attitudes of men towards HIV status and testing. He says:

> *"Very few people get tested because they do not want to know the result. If the result is positive, they will die and be subject to the scorn of the community. I have had sex with at least ten women, but I still do not want to take the test. If I do and the test is positive, I will suffer like the others. I have not asked my girlfriend to take the test because I trust her."*

Church

Stigma and discrimination towards HIV/AIDS are also present in the religious arena. There is a rejection of HIV positive individuals by certain churches, and there is a widespread belief that HIV positive individuals are sinners even though the illness may have been acquired through no fault of one's own (e.g. faithful wife but promiscuous husband). The following vignette illustrates the attitude of a religious leader towards an HIV positive woman who was a member of his own family:

A "Dirty" Grave

"My sister recently died from AIDS. I was very traumatized by the way my father, who is a minister in the Zionist church, ill-treated my sister during her long period of illness. He would not allow anybody to help her with her washing when she had uncontrollable diarrhea and no energy. When she ultimately died, my father refused to have her buried close to the other members of my family because she was considered "dirty". Her grave is located far from the graves of the other members of our family."

Culture

The country's history and culture may have played a role in developing and propagating stigma and discrimination towards HIV/AIDS. According to an MCDI staff member:

> *"Given the history of South Africa, there is real sensitivity around black/white discriminating behavior. Many blacks believe that revealing their HIV status may be just another way for whites to discriminate against them."*

Blacks are infected at much higher rates than whites, and some believe that the HIV/AIDS epidemic therefore may be an instrument to inflict revenge or control on the black population after democracy was introduced. While South Africa has made great strides in racial integration, some mistrust remains between the races and greatly influences perceptions and beliefs.

There are strong societal and cultural expectations around a woman's fertility. Women are expected to bear children and those who are barren are frowned upon by the rest of the community. The husband's family generally expects a "return" on the lobola, a dowry paid by the latter when the couple marries. If the couple does not produce any offspring within a reasonable time after getting married, pressure by the husband's parents grows and becomes a strain on the couple. If the couple chooses to use contraceptives because one or both of them are HIV positive, it is often impossible to explain this choice to the rest of the family. As a result, the women may feel forced to become pregnant even if she knows it will be detrimental to her health, or may leave orphan children behind.

Fertility Pressures

"I am HIV positive, and it is quite likely that my wife is HIV positive too, but she has not tested yet. She is taking a lot of pressure from my parents because we have been married for more than two years without having any children. It is because we are both HIV positive and choose to use condoms. A pregnancy would be very risky for her because all HIV positive women deteriorate after a pregnancy, and both of us would increase our viral loads by unprotected sex. We don't know how to deal with my parents, and we cannot tell them about our situation. They would simply not understand and would blame her."

Government & Providers

HIV/AIDS is a significant challenge currently facing the community. The early government reaction to this illness may have contributed to the negative attitude of the population towards HIV/AIDS. According to a hospital worker:

> *"The government should have intervened when the first cases of AIDS appeared in the late eighties and early nineties. Instead, it was tardy and suppressed the issue in a manner that contributed to the subsequent pervasive stigmatization of people living with HIV/AIDS. The government's voluntary disclosure law has contributed to stigma, because the fact that people have the right to opt not to test or disclose their status has created a situation in which, by implication, it is understood that the condition carries a stigma."*

Existing legal rights promoted by the government may also exacerbate the stigma and discrimination towards HIV/AIDS, thus hindering progress in the prevention of the illness. An MCDI staff member explains:

> *"… South Africans are well aware of their legal rights protecting them against disclosure of their HIV status. This is in part due to a mass media campaign to educate the public about these rights by the government. The laws of confidentiality serve to increase stigma. Because physicians may be sued if a person's HIV status is disclosed, they tend to be restrictive in using HIV and AIDS as classifications for statistical purposes. This is a prime reason why physicians do not enter AIDS as cause of death on death certificates, but rather other diseases, such as pneumonia or tuberculosis. Physicians are afraid of being held responsible for disclosing someone's status."*

HIV/AIDS is likely to become the all-pervasive challenge to the South African health care system in the near future. According to a hospital worker, the impact of HIV/AIDS will overburden the existing health facilities in terms of hospital bed capacity, personnel, budget, and other physical resources within the next few years. In the past year alone, 60% of in-patients at one hospital who consented to HIV testing were found to be positive. Also, hospital facilities continue to face the impact of stigma against AIDS in that patients admitted with HIV-related illnesses refuse to be tested, thus putting hospital staff at risk and adding to clinical costs.

Several government stakeholders have acknowledged that there is a need for partnership between the government health system and NGOs in combating HIV/AIDS, including the associated stigma and discrimination. An official from the provincial Department of Health (DOH) stated that, given the limited capacity of the government health care system, the Department's role in this partnership would be to act as a funding agency, while the NGOs would complement the health service delivery component as implementers and service providers. In support of this view, a hospital worker remarked that NGOs may play a significant role in community outreach and mobilization that will complement existing government programs.

Conclusions and Recommendations

The preceding discussion offers a brief look at the issues of HIV/AIDS-related stigma and discrimination. Although not exhaustive, it conceptualizes both stigma and discrimination in light of relevant literature and a quantitative analysis, and is complemented by a qualitative report of stories from the field. A summary of conclusions and recommendations generated by the report follows as it pertains to the Reducing Stigma and Discrimination through Innovative and Proven Effective Approaches in Ndwedwe District Project (Stigma and Discrimination Project).

Stigma and Discrimination in Ndwedwe Sub-district

The baseline survey results reveal that self-reported HIV positive respondents were more likely to experience stigma and discrimination compared to HIV-affected respondents. A lag period between diagnosis and disclosure also exists, with 20% disclosing only after one month, and a further 20% disclosing only after six months, which may be indicative of the fear of stigma and discrimination surrounding HIV/AIDS. The unexpectedly large number of survey participants who were willing to address stigma and discrimination suggests the gravity and magnitude of these problems, which may escalate out of control if left unchecked. The above trends are backed by people's accounts of their own experiences that may be summed up in one person's declaration: *"I'd rather die than get tested!"*

The needs assessment results and qualitative field observations from Ndwedwe demonstrate that HIV/AIDS-related stigma and discrimination are major challenges in controlling the HIV/AIDS epidemic. Awareness of HIV/AIDS is high, but misconceptions and erroneous beliefs abound. The pervasive stigma and discrimination towards HIV/AIDS, coupled with the perception that there is very little to gain in knowing one's status present stumbling blocks in both the prevention and control of HIV/AIDS. It is evident that HIV-related stigma and discrimination are experienced as a result of a collective negative reaction towards the disease, and it is therefore imperative to gain the community's trust and encourage the people's involvement and participation both prior to and in conjunction with the implementation of a stigma reduction project. Support groups may serve as a starting point for de-stigmatizing HIV/AIDS in that these sessions provide a good venue for allowing HIV positive individuals to disclose their status and talk freely about their experiences, thereby promoting greater openness about the disease and its consequences. There is a strong need for an intensive and comprehensive information and education campaign (IEC) that will increase the knowledge about the disease, its methods of transmission, and its consequences. In addition, the IEC campaign needs to clarify and emphasize the benefits and incentives that can be gained from VCT, knowing one's status and disclosure of status. Using HIV positive individuals as educators will help further in reducing the stigma and discrimination towards HIV/AIDS.

It is also important to consider the future impact of antiretroviral drugs (ARVs) once these become available. As an incentive to get tested, ARVs may indirectly aid in the reduction of stigma in the community. Given this potential, and to maximize available resources, the project could take into account the possibility of merging IEC campaigns to reduce stigma and discrimination with those aimed to increase awareness about ARVs.

Sources and Perpetrators of Stigma

In order to combat stigma and discrimination, it is imperative to identify the sources as well as the perpetrators. There appears to be a trend that neighborhood members and the community are most feared as perpetrators of stigma. Similarly, the family and community were most often mentioned as sources of stigma and discrimination experienced by HIV positive individuals during field visits. A broader awareness campaign that targets the larger community should therefore be an essential component of the program.

Churches and religious leaders are major social institutions in the community, and have a strong influence on the community's perception of HIV/AIDS. These institutions have played a role in the perpetration of stigma and discrimination. MCDI has had positive experience with the Diakonia Council of Churches, a multi-denominational group that coordinates church activities in the Durban area, and it may be helpful to target an IEC campaign towards an expanded group of religious leaders, with the aims of increasing knowledge, changing behavior, and possibly establishing church-based support groups for HIV/AIDS-infected and HIV/AIDS-affected individuals.

Due to the widespread nature of stigma and discrimination in Ndwedwe, it is necessary to mobilize as many stakeholders as possible. In addition to church leaders, traditional healers, teachers, health workers, village chiefs and other political leaders should be pursued as sources of support. This is particularly important if they are highly respected in the community. For example, traditional healers are often the first to be consulted at onset of illness. Although familiar with the signs and symptoms of HIV/AIDS, due to erroneous beliefs and fear, many will claim their patient has "bad blood" or "bad spirits." By educating the traditional healers, their patients are also indirectly educated. The partnership between government institutions and community-based NGOs, as well as interagency collaboration, should be strengthened in order to reach all levels of society.

Awareness of Anti-discriminatory Policies and Legal Rights

The participants surveyed appear to be quite knowledgeable about anti-discriminatory policies. However, less than half of those who experienced discrimination actually reported it to anyone. Future efforts should attempt to bridge the gap between knowledge about policies and reporting discrimination.

Current government HIV/AIDS policies may inadvertently perpetuate the stigma and discrimination as explained in the qualitative section and these policies should be reviewed. There may be a need to develop new policies to create a non-threatening environment for HIV/AIDS testing and disclosure of status without sacrificing the patient's right to confidentiality.

Cultural Barriers

Male attitude and behavior present a huge challenge to the prevention and control of HIV/AIDS in Ndwedwe. Establishing a sub-component in the Stigma and Discrimination Project that specifically targets men may facilitate their greater participation in addressing the HIV/AIDS

problem. Further review of the knowledge, attitudes and practices of men on HIV/AIDS, through a well-designed baseline assessment is essential in the design of a more intensive campaign that targets male behavior and attitude.

It appears that the local culture entails wanting or expecting a reward or remuneration for an action. Many people often ask why they should get tested if there is nothing for them in return. During the survey, people wondered whether they might be able to access treatment in turn for their participation. These commonly encountered questions highlight the need to clarify and emphasize the benefits and incentives to be gained through counseling, testing, and disclosure of status. The expectation of gain, in the context of high unemployment rates in the area, is an important factor to consider in formulating the project components. It may even be necessary to include a component on livelihood and income-generating activities or skills development in the project in order to facilitate and encourage the participation of the people in fighting against HIV/AIDS and the stigma and discrimination associated with the disease.

Stigma and Discrimination: Best Practice

Interventions that aim to reduce HIV-related stigma have been implemented in quite a number of countries to date, but very few have been evaluated rigorously. MCDI should review local and international programs alike to identify current best practice. In developing further its Stigma and Discrimination Project, MCDI may adopt some aspects of the more successful models (e.g. The Valley Trust's documentary video and discussion workshops) and learn from the less successful ones.

Given the relatively new field of stigma reduction interventions, MCDI has a responsibility to contribute to the documentation of best practice and to facilitate the exchange of information and strategies. Thus, the Ndwedwe Stigma and Discrimination Project should incorporate a strong evaluation component that utilizes a tool that is both valid and reliable. Clearly, the baseline survey that has been conducted needs to be developed further, and even expanded, so that data collected will present a more comprehensive picture pre- and post-intervention. This will better facilitate the measurement of project indicators and results.

Finally, it is important to consider measuring proximal outcomes of the stigma reduction project (such as knowledge, attitudes and practices of HIV/AIDS educators) rather than solely concentrating indicators measuring the distal outcome and impact on the target population. How effective will a peer educator be in reducing stigma and discrimination if s/he has never been tested?

It is clear that battling against HIV/AIDS-related stigma and discrimination entails an enormous information and education campaign that will target all members of the community. Such a campaign will only be successful if it is founded on community involvement and trust, and if it is complemented by social and health services that are easily accessible and readily available to everyone in the community.

APPENDIX I: FOCUS GROUP SUMMARY

Introduction

After reviewing the draft summary of the stigma and discrimination baseline survey, we felt it would be helpful to supplement these results with some qualitative information from the interviewers themselves. Our aim was to gain insight into their experience and thoughts on the process of administering the survey in their community.

We developed a focus group plan and arranged for a 1.5 hour discussion to take place at the MCDI office in Durban on 16 January 2004. There were 3 male and 4 female focus group participants (former interviewers) in addition to MCDI staff person and two HSPH team members. After group introductions and stating the focus group agenda and objectives, we began our discussion.

Introductions were made in English, and the rest of the discussion was conducted in Zulu with English interpretation by the MCDI staff person after each comment and question. This method worked well, and conversation flowed smoothly. Most of the participants were open and active throughout the discussion, though one of the men did not contribute anything after his self-introduction.

After reviewing the transcript of the focus group session, we identified three main themes occurring during the discussion. These were: interviewer issues, interviewee issues, and general perceptions of stigma and discrimination.

Interviewer Issues

There were three sub-themes related to the interviewer. First, we noted that interviewers often acted as informal counselors to the respondents particularly if s/he was HIV positive. For example, interviewers reported giving advice such as informing respondents of other neighborhoods where they could talk about their status more freely. Additionally, if a respondent was upset or needed consoling, the interviewer tried to soothe and allay fears and worry. Oftentimes, this occurred during informal conversations prior to administering the questionnaire. Several interviewers said this enabled better rapport and trust.

A second theme was related to increasing awareness around stigma and discrimination through the questionnaire. Focus group participants reported increased knowledge and awareness in addition to positive behavior change towards stigma and discrimination. For instance, while administering the questionnaire, one interviewer witnessed a family with one HIV positive and one HIV negative child where the parents prevented the two children from playing with each other. Some time later, the interviewer noticed the children were now playing together suggesting that the questionnaire may have increased awareness around stigma and discrimination (in addition to other factors). Furthermore, some interviewers reported increased testing and disclosure within their community post-survey.

Finally, some of the HIV positive interviewers also felt comfort in discovering that there were many other HIV positive people in their community throughout the interviewing process. One woman said she “no longer feels alone.”

Interviewee Issues

We noted two sub-themes related to the interviewee. Many focus group participants noted that respondents expected something in return for their time such as support and assistance to access treatment. Secondly, many respondents were fearful of disclosure due to issues regarding confidentiality. They were suspicious of how the information collected was going to be used. For example, some respondents thought that their status would be disclosed to their community or family. Others did not admit to knowing their status even if they did. However, interviewers did their best to reassure them that all questionnaires were anonymous and confidential.

General perceptions of stigma and discrimination

It appeared that focus group participants were knowledgeable about general definitions of stigma and discrimination, yet when asked to define the terms, they found it difficult to explain. In addition, one participant felt that stigma and discrimination was not at all present in some areas of the community. Interestingly, when posed the question: "Have you personally experienced stigma and discrimination?" the response was unanimously: "Never." It was unclear whether or not this response came from lack of trust between us and them or a difference in how each of them perceived stigma and discrimination.

Conclusion

In conclusion, it appears that the interviewing process benefited both interviewers and interviewees as described above. One focus group participant reported seeing a greater acceptance of HIV/AIDS in the community, as evidenced, for example, by the formation of support groups. However, in probing further about their own perceptions of stigma and discrimination, participants were reluctant to disclose personal experiences and thoughts, though it is unclear why this was.

The focus group allowed a more complete picture of the data collection process as well as the impact the questionnaire had on the interviewers relative to their attitudes and beliefs towards stigma and discrimination.

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ATTACHMENT L: Further information on scaling up, capacity building, innovative approaches, equity and project visibility

➢ Contribution to Scale/Scaling Up:

Due to MCDI's successful HBC program and its integration of C/HH-IMCI protocols into the rural communities of Ndwedwe, funding was sought and granted for an expansion of the Ndwedwe Child Survival Project to address one of the leading regional threats to child health and well-being - the spiraling HIV/AIDS incidence coupled with the growing prevalence of TB among PLWHA. Whether children are succumbing to one or both diseases themselves, or have lost one or more parents because of them, the increasingly grim effect of this growing dual crisis is loss of life, loss of health, and loss of quality care among the youngest and most vulnerable.

The Ndwedwe Integrated HIV/AIDS and Tuberculosis Project was designed to build on the successes of the NDCSP by focusing on the training and supervision of facility health workers as well as community health workers in Ndwedwe. In particular, the Project is conducting trainings of key community members as directly-observed treatment short-course (DOTS) supporters for TB patients to increase their adherence to treatment and improve cure rates.

The Project continues to support excellent relationships established with the district, provincial and national departments of health as MCDI has worked in partnership with them to extend their capacity building efforts to underserved rural areas. NITHAP also cultivates effective linkages with highly regarded South African partners such as Management Sciences for Health and the Medical Research Council, as well as community-based organizations such as the local chapter of the National Association for People with AIDS (NAPWA). NITHAP coordinators are in regular contact with the USAID mission in Pretoria to update them on project progress and solicit their input on how the project can better align with USAID goals for TB diagnosis and care.

As a working partner in the national HIV-AIDS/TB integration program, TASC TB, MCDI enjoys a voice in the continuing development of national TB-HIV integration policy in South Africa. Based on the success of the NITHAP project so far (one year in), MCDI is seeking funding to expand the project to the entire Ilembe District with the plan of providing a model for KwaZulu Natal province as well as contributing to the national dialogue and to program quality and policy development in South Africa.

➢ Civil Society Development

Community Health Committees (CHCs) are seen as local structures that provide a forum for discussing community health problems and as a link between health facilities and community members. All key stakeholders agree that this could be a sustainable mechanism for community participation in the health system. During the life of the project, there have been training and capacity building activities for all viable community structures in Ndwedwe, including 14 of the 18 CHCs. For example, one such CHC has been integrally involved in the planning, implementation and monitoring of the Mavela Model Crèche.

MCDI has also assisted a number of community-based organizations and youth groups in registering as NPOs (non-profit organizations), providing them with the opportunity to receive direct funding from the government for their activities. For example in Gcuensa, MCDI aided a newly formed HIV/AIDS support group in receiving funding for the implementation of a small income-generation project.

➢ Widespread development or adoption of innovative approaches

The WHO IMCI protocol of providing all children less than 60 months of age with a dose of Vitamin A every six months was the basis of a project developed and implemented by MCDI in the Ilembe District. The project trained key community members in the importance of understanding and following through on bringing young children to a facility for Vitamin A.

Program activities included:

- Training Ilembe District community health facilitators and community health workers on IMCI and Vitamin A protocols.
- Training crèche principals to advocate for partnerships with community health workers and mobile clinics in their area to get Vitamin A capsules for the children under their care.
- Training mobile clinic teams to advocate for partnerships with area crèches.
- Influencing the District Department of Health to include Vitamin A in a Measles, Polio and Vitamin A campaign.
- Conducting focus groups with community healthcare workers and caregivers to assess Vitamin A knowledge, attitudes and practices.
- Developing IEC materials for caregivers
- Message-testing KZN Department of Health Vitamin A training materials with clinic nurses and community healthcare workers.

WHO/UNICEF recently recommend the use of zinc in conjunction with ORS/ORT as an effective treatment to reduce the severity and duration of diarrheal disease. Zinc may be used to treat all forms of diarrhea. If taken to its full course of 10-14 days, it reduces the incidence and severity of diarrhea and respiratory infections over a 2-3 month period in children up to 5 years of age. Diarrhea is a leading cause of childhood illness and death in KwaZulu Natal. There are 2.4 million children under 60 months in KwaZulu Natal who would ultimately benefit from zinc therapy (SA Census 2001).

MCDI designed a pilot project to introduce zinc supplements as an adjunct to oral rehydration solution (ORS) for treating diarrheal diseases among children under 60 months old. The KwaZulu-Natal (KZN) Provincial Department of Health had requested that Ilembe Health District be used as the pilot district for launching this new protocol and that MCDI spearhead this effort.

MCDI's main planned activities were to strengthen existing Department of Health primary health care services. Utilizing successful IMCI approaches at the facility and community levels, MCDI

would support and facilitate the training of IMCI supervisors (primary health care supervisors and home-based care volunteer supervisors) for the district through a training-of-trainers format. MCDI would also team with DOH district trainers and the trained supervisors to train 110 facility-based staff and approximately 280 home-based care volunteers to administer the zinc therapy or to promote an awareness of and compliance with the zinc therapy at the household level. Project partners Rational Pharmaceutical Management (RPM) and Quality Assurance (QA) Projects were brought on to ensure availability of essential drugs and vaccines and a system of continuous quality monitoring

Although the project was not fully implemented due to a change in South Africa regulations requiring that zinc used for clinical purposes go through a registration process (lasting beyond the project's funding window), MCDI did take the lead as the advocacy organization behind this effort, developed training curricula, and revising national IMCI guidelines to include the zinc protocol.

- **Equity**

Ndwedwe, a rural and semi-rural area is one of 4 sub-districts of Ilembe District in KwaZulu Natal. Ndwedwe was particularly underserved under the Apartheid regime. At that time, what is now the KwaZulu Natal (KZN) province was divided into a number of administrative areas, classified by race and with unequally apportioned public services. Ndwedwe itself was included in the administrative area of the KwaZulu "non-independent homeland." Ndwedwe received few public services in comparison with the rest of the "homeland" due to its distance from the KwaZulu heartland. The Project area is primarily rural with a dispersed settlement pattern; the population predominately is Zulu with a very high unemployment rate. Ilembe District has the highest rural population density within South Africa, the majority of who were politically marginalized in the past in terms of physical, social and economic development. This led to a subsistence lifestyle for the majority of the population.

Although the DOH has made significant strides in improving health care policies and services for the majority black population in the past decade, KZN (particularly Ilembe/Ndwedwe) continues to be a high priority for health interventions. Ndwedwe's infant mortality ratio of 102/1000 is more than double that of the nation as a whole, and its child mortality ratio is also significantly higher than the national rate. KZN has the highest HIV/AIDS rates of any province in the country, and one of the highest in the world. In the past three years Ilembe's health budget per capita was the lowest in South Africa.

In South Africa, the Service Deprivation Index (SDI), which measures access to seven basic services of housing, energy for cooking, energy for lighting, energy for heating water, toilet facility, and refuse removal, shows that the number of households that are considered deprived of access to "good quality" services increased from 5.68 million to 7.24 million people between 1996-2001. In both 1996 and 2001, more than 50% of total deprivation as judged by the headcount index came from the three provinces of KwaZulu Natal, Eastern Cape and Limpopo. The maximum percentage contribution to total deprivation comes from KwaZulu Natal.

- **Visibility and Recognition of the Project and PVO Grantee**

The most visible activity of the project in the past year was advocacy efforts at the national and provincial levels to support policy adoption of complementary zinc therapy as a care protocol for children with diarrhea.

Due to a change in regulatory laws just prior to the launch of MCDI's pilot project in Ilembe District – the only zinc pilot project in South Africa - zinc supplements used for care of diarrhea had to be registered in South Africa as a medicine. MCDI drove the process, gaining approvals to add zinc supplements to the National Essential Drugs List from the KwaZulu Natal provincial formulary board, and championing the effort with the National Department of Health, National Formulary Board, the South Africa Medicines Control Council and the national regulatory party. WHO-approved supplement manufacturer Nutriset was also contacted and expressed willingness write and submit an application to South Africa for approval and permission to import.

There has been widespread enthusiasm for this intervention, and the review process at the national level is well underway.

In the past year, the project staff gave oral presentations at the following events:

- Micronutrient Workshop (Cape Town, South Africa), Organized by the University of the Western Cape.
  Presentation: Zinc Supplementation in a Program Context

- Johns Hopkins Mini-University (Baltimore), Organized by the CORE Group and CSTS.
  Presentations:
  Scaling Up for Child Survival Projects, Detailed Implementation Plan for NITHAP (Ndwedwe Integrated TB, HIV & AIDS Program)

- Second South African AIDS Conference (Durban, South Africa), Organized by the University of KZN & Partners.
  Presentation: Indicators to Measure HIV/AIDS Stigma & Discrimination

- Public Health Society of South Africa (Durban, South Africa), Organized by the Public Health Society of South Africa and partners.
  Presentation: A model of care for orphans, vulnerable children and families affected by HIV/AIDS

- National Home-Based Care Workshop (Gauteng, South Africa), Organized by the National Department of Health.
  Presentation: Home-Based Care Volunteers in Ndwedwe

- Frequent project presentations for the District and Provincial Department of Health, NGO forums (KZN Collaborative Group) and the University of KwaZulu Natal.

ATTACHMENT M: Trainings of NDCSP (2001-2005)

TRAINING	DURATION	TARGET	BY WHOM	DATE
HIV/AIDS counseling course for nurses	10 days	11 Prof. nurses	Thuli and Thoko	Nov2001
Peri- Natal Education Program	Cont. in-service	6 Prof. nurses	Thuli	starting Oct. '01-Oct' 03
Training Traditional Healers in HIV/AIDS issues	2 days	20 Traditional healers	Thuli	Dec. 2001
Training HBCVs of Mlamula in OVC and gov't grants	2 days	20 HBCVs	Zanele	January 2001
Training members of 8 CHCs on organizational capacity	Bimonthly 2-day workshop	85 CHC members	Christopher & The Valley Trust	Feb '02 to Nov '02
Training HBCV	15 days	29 community members from Mlamula	Thoko & Esme	Feb. 2002
Workshops for TBAs in C/HH-IMCI	3 days	25 TBAs	Thuli	March 2002
Training Traditional Birth Attendants on OVCs and govt. grants	2 days	25 TBAs	Zanele	March 2002
Training Traditional Healers on OVCs and govt. grants	2 days	27 Traditional Healers	Zanele	April 2002
Training more Counselors in HIV/AIDS	10 days	18 Lay Counselors	Thuli and Thoko	June-July 2002
Training Lay and Nurse HIV/AIDS counselors	10 days	20 lay counselors, 5 nurses	Thuli Thoko Esme	Jul-Aug 2002
Training CHCs , HBCVs & CHWs in OVCs & gov't grants	2 days	30 candidates	Zanele	Aug. 2002
Training of District office & facility nurses on HIS & DHIS	3 days	12 participants	DOH, MCDI	November 2002
Training of members of 4 CHCs on organizational capacity	Bimonthly 2-day workshop	42 CHC members	Christopher & The Valley Trust	Feb '03 to Oct '03
Training Lay HIV/AIDS Counselors	10 days	17 lay counselors	Thuli and Thoko	15-27 May 2003
Training HIV/AIDS counselors on OVCs and govt. grants	2 days	22 counselors	Zanele	June 2003
Training on key family practices and gaps analysis.	1 day	All MCDI Staff	Consultant	5 Aug. 2002
Training of school groups	cont.	10 groups (300 people)	DramAide	Aug 2002.-Dec 2003
Three workshops were conducted in Feb and two in march on maternal and child health and C/HH-IMCI	15 days	5 groups of TBA, HBCV CHW, Traditional Healers (105 people)	Thuli and Thoko	Feb. –March 2003
Training 5 groups on OVCs and govt. grants	5 days	TBAs, HBCVs, CHWs & Traditional Healers (105 people)	Zanele	Feb-March 2003

Training of nurses on C/HH-IMCI	2 days	14 Professional nurses	DOH, MCDI	May 2003
Training HIV/AIDS counselors	10 days	18 counselors	Thuli & Thoko	August 2003
Training on IMCI- Drug Logistics	2 days	15 PNs	District Pharmacist, MCDI	October 2003
Course on C/HH IMCI, Access to OVC grants & MNC	3 days	25 HBCVs	Thuli and Zanele	February 2004
Training HBCVs & CHWs on DOTS	2 days	18 participants	Thembelihle	April 2004
HBCVs Training	15 days for each of the 2 sessions	36 candidates	Sinosizo and MCDI	4-22 Oct.'04; 24Oct- 11Nov.'05
Training CHW facilitators on C/HH-IMCI	3 Days	17 facilitators	Thuli and Thembelihle	27-29 Sept 2005
Training Traditional Healers on HIV/AIDS	5 Days	25 Traditional Healers	MCDI and Valley Trust	11-14 July 2005
Advocacy/Training on the use of Zinc in Childhood diarrhea	1 day	50 National, Provincial & District DOH	MOST, MCDI,DOH	February 2005
Workshop for CHC, HBCV, TBA, CHW from Mavela, Ndwedwe and Mlamula on C/HH-IMCI	2 days	29 people	MCDI	12-13/05/05
Workshop for HIV/AIDS Counselors and Support group facilitators on Vitamin A & IMCI	2 Days	15 participants	Thuli and Thembelihle	11-12 August 2005
Workshops for community health committee members and tribal leaders in Ndwedwe on Vitamin A protocol.	N/A	22 participants	Thuli and Thembelihle	Between Oct '04 – Jan '05.
Training HBCVs & CHWs on DOTS	2 days	24 participants	Thembelihle	February 2005
CHWs, HBCVs, TBAs from Ilembe District trained on Vitamin A protocol	Ongoing	143 trainees	Thembelihle	Between Oct '04 & Aug '05
Training of nurses on Vitamin A protocol	Ongoing	48 trainees	Thembelihle	Between Oct '04 & April '05
Training of Ilembe District community health facilitators on Vitamin A	1-day workshop	11 trainees	Thembelihle	June 2005
Training of mobile clinic team members on Vitamin A	1-day workshop	12 trainees	Thembelihle	August 2005
Training of crèche managers on Vitamin A	1-day workshop	25 trainees	Thembelihle	July 2005