



Maternal Newborn Health Situational Analysis in Burma

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Acronyms and Abbreviations

3MDG	3 Millennium Development Goal Fund
AAP	American Academy of Pediatrics
AB	Abortion
ACOG	American College of Obstetrics and Gynecology
ACNM	American College of Nurse-Midwives
AMW	Auxiliary Midwife
ANC	Antenatal Care
ANCS	Antenatal Corticosteroids
ARI	Acute Respiratory Infection
ASEAN	Association of Southeast Asian Nations
BA	Birth Asphyxia
BCP	Birth Control Pill
BF	Breastfeeding
BHS	Basic Health Staff
BHS	Basic Health Services
BeMOC	Basic Emergency and Obstetric Newborn Care
CBW	Community Based Worker
CCM	Critical Care Medicine
CDA	Community Development Association
CE	Continuing Education
CeMOC	Comprehensive Emergency Obstetric Care
CHD	Community Health Development
CHI	Community Health Initiative
CME	Continuing Medical Education
CoP	Community of Practice
CPR	Contraceptive Prevalence Rate
C/S	Cesarean Section
DFID	Department of International Development (UK)
DMR	Department of Medical Research
DMS	Department of Medical Science
DoHP	Department of Health Planning
EBF	Exclusive Breastfeeding
EmOC	Emergency Obstetric Care
ENC	Essential Newborn Care
EONC	Essential Obstetric and Newborn Care
FP	Family Planning

GAVI	Global Alliance for Vaccines and Immunization
GDA	Global Development Alliance
GoB	Government of Burma
GP	General Practitioner
HA	Health Assistant
HBB	Helping Babies Breathe
HF	Health Facility
HITAP	Health Intervention and Technology Assessment Program
HIS	Health Information System
HMIS	Health Management Information System
HR	Human Resources
ICD	International Classification of Diseases
IMR	Infant Mortality Rate
INGO	International Non-governmental Organization
IPAS	International Pregnancy Advisory Services
IPPV	Intermittent Positive Pressure Ventilation
IUD	Intrauterine Device
JOICFP	Japanese Organization for International Cooperation in Family Planning
KMC	Kangaroo Mother Care
LARC	Long-acting reversible contraception
LBW	Low Birth Weight
LHV	Lady Health Visitor
MACAT	Member Association Capacity Assessment Tool
MBBS	Myanmar Bachelor of Medicine, Bachelor of Surgery
MCH	Maternal Child Health
MCHIP	Maternal Child Health Integrated Program
MDG	Millennium Development Goal
M&E	Monitoring & Evaluation
MeSH	Medical Subject Headings
MICS	Medical Information Communication System
M&M	Morbidity and Mortality
MMA	Myanmar Medical Association
MMCWA	Myanmar Maternal and Child Welfare Association
MMR	Maternal Mortality Ratio
MNCH	Maternal Newborn Child Health
MNH	Maternal Newborn Health
MOH	Ministry of Health

MPS	Myanmar Pediatric Society
MSI	Marie Stopes International
MVA	Manual Vacuum Aspiration
MW	Midwife
NGO	Non-governmental Organization
NMR	Neonatal Mortality Rate
NN	Neonatal
NSAG	Non-state Armed Group
OG	Obstetrics and Gynecology
PAC	Post-abortion Care
PATH	Program for Appropriate Technology in Health
PCPNC	Pre-conception and Post-natal Care
PE/E	Pre-eclampsia/Eclampsia
PHC	Primary Health Care
PHSII	Public Health Supervisor Grade II
PNC	Post Natal Care
PPH	Post-partum Hemorrhage
PSE	Pre-service Education
PSI	Population Services International
PTB	Pre-term Birth
QI	Quality Improvement
RH	Reproductive Health
RHC	Rural Health Centers
SBA	Skilled Birth Attendant
SDC	Swiss Development Cooperation
SES	Socio-economic Status
SOP	Scope of Practice
SRHC	Sub Rural Health Centers
S&T	Survive & Thrive
STD	Sexually Transmitted Disease
STI	Sexual Transmitted Infection
TB	Tuberculosis
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
TMO	Township Medical Officer
TOT	Training of Trainers
TS	Township
TSG	Technical Strategic Group

TT	Tetanus Toxoid
UHC	Urban Health Center
U5M	Under 5 Mortality
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
US	United States
USAID	United States Agency for International Development
VHW	Village Health Worker
WCH	Women and Child Health
WHO	World Health Organization

I. Background

Burma is in the midst of a social and political transformation affecting all aspects of life and health and health systems in particular. After decades of isolation, Burma is now engaging more substantially with the world and building partnerships that will foster improved health and wellness. The United States Agency for International Development (USAID) has demonstrated a readiness to assist the government and people of Burma to improve their health service delivery system and health workforce educational programs. Under the umbrella of Survive and Thrive (S&T) Global Development Alliance (GDA), USAID's flagship program in maternal, newborn, and child health program, MCHIP, is ready to assist USAID/Burma and the Government of Burma (GoB) to achieve its stated goals.

Rates of maternal and newborn mortality have declined over the last twenty years in Burma. According to the World Health Organization (WHO), the country is "making progress"; however, it is not on target to meet either UN Millennium Development Goal 4 or 5, which are related to child and maternal mortality. As of 2008, the maternal mortality ratio (MMR) in Burma was estimated at 280/100,000 live births, and the current newborn mortality rate is 33/1,000 live births. These indicators are well above regional averages and are attributable, in part, to educational systems that have not been able to keep pace with technical advances realized in other parts of the world; public sector health service delivery systems that were stretched under the weight of a growing population of suboptimal infrastructure; and community health systems that were unable to flourish in recent years. Together, these factors have resulted in alternate formal and informal health care systems that are unable to meet the enormous needs of the people and under-resourced with the efficiencies and interventions proven to increase access, enhance quality, and expand capacity.

The USAID S&T GDA will initiate partnerships between the GoB, the National Maternal and Child Health Program (MCHIP), and technical assistance partners including the 3 Millennium Development Goal Fund (3MDG fund), UN agencies including UNFPA, UNICEF and WHO, the professional associations in Burma related to maternal and newborn health including Myanmar Nurse and Midwives Association, Myanmar Medical Association, Myanmar Pediatric Society, General Practice Society, and Obstetrics and Gynecology Society, and the US professional associations of pediatricians, obstetricians, and midwives: the American Academy of Pediatrics (AAP), the American College of Obstetricians and Gynecologists (ACOG), and the American College of Nurse-Midwives (ACNM). These strategic partnerships will allow Burma to benefit from outstanding technical knowledge, programmatic

experience, and institutional capacity to enhance the role of Burma's professional associations in moving the health agenda forward.

The S&T program objectives are two-fold.

1. **Objective 1:** Collaborate with the Ministry of Health (MOH) to provide national technical assistance for maternal and newborn health
2. **Objective 2:** Strengthen health systems and service delivery capacity in selected townships and communities to expand the coverage of high-quality and high-impact maternal newborn services

In order to successfully program activities that will meet these objectives, it was determined a situational analysis of maternal and newborn health in Burma be conducted. To that end, a team of three S&T GDA representatives traveled to Burma from September 22-October 8, 2013 to conduct the situational analysis. They included Dr. Neena Khadka from Save the Children/MCHIP, Angie Fujioka from ACNM, and Dr. Doug Laube from ACOG.

Myanmar colleagues contributing to the situation analysis include: Dr. Kyi Kyi Ohn, Dr. Wai Lwin, and Alyssa Davis from Save the Children and Dr. Hnin Wai Hlaing, Dr. Kyaw Kyaw Cho, and Dr. Khin May Oo from Jhpiego.

II. Purpose of Situational Analysis

The purpose of the situation analysis is to review select high-impact maternal and newborn health practices in facilities around labor and birthing practices including postpartum hemorrhage (PPH), post-abortion care (PAC), preterm birth (PTB), newborn resuscitation, and essential newborn care (ENC) practices to determine proximate causes of morbidity and mortality.

III. Methods

The methods employed to conduct the situational analysis involved a desk review of all available documents across policy, clinical guidelines, education (both pre and in service)/training, and regional program assessments/reviews as well as key informant interviews with stakeholders across a diverse range of perspectives.

The desk review includes documents collected from August 1-October 8, 2013 primarily through a Jhpiego short term consultant, Dr. Khin May Oo, who was given detailed guidance on the types of documents to gather by the S&T team. Local partners also contributed key documents that are included in the desk review. Review of all documents was a three-phase

process. First, each document was reviewed for appropriate content and relevant date of publication by a S&T reviewer. Second, local experts from Jhpiego, Save the Children, the Program for Appropriate Technology in Health (PATH), and Burnet Institute reviewed the documents and contributed additional relevant documents to review. Third, the S&T reviewers approved 30 documents of the 79 documents identified from Phase I & II to review based on relevance to analysis criteria, source, and date of publication.

The second component of the situational analysis is key informant interviews which were conducted September 23-October 8th, 2013 by the three S&T team members for a total of 22 interviews. A wide-range of informants working in maternal newborn health were interviewed including the GoB, professional associations, UN agencies, international non-governmental organizations (ingo), donor agencies, and local non-governmental organizations (ngo).

IV. Assessment

Findings from the assessment is summarized in three sections including the health service delivery system, health care workers involved in the Day of Birth, and maternal newborn child health (MNCH) technical areas.

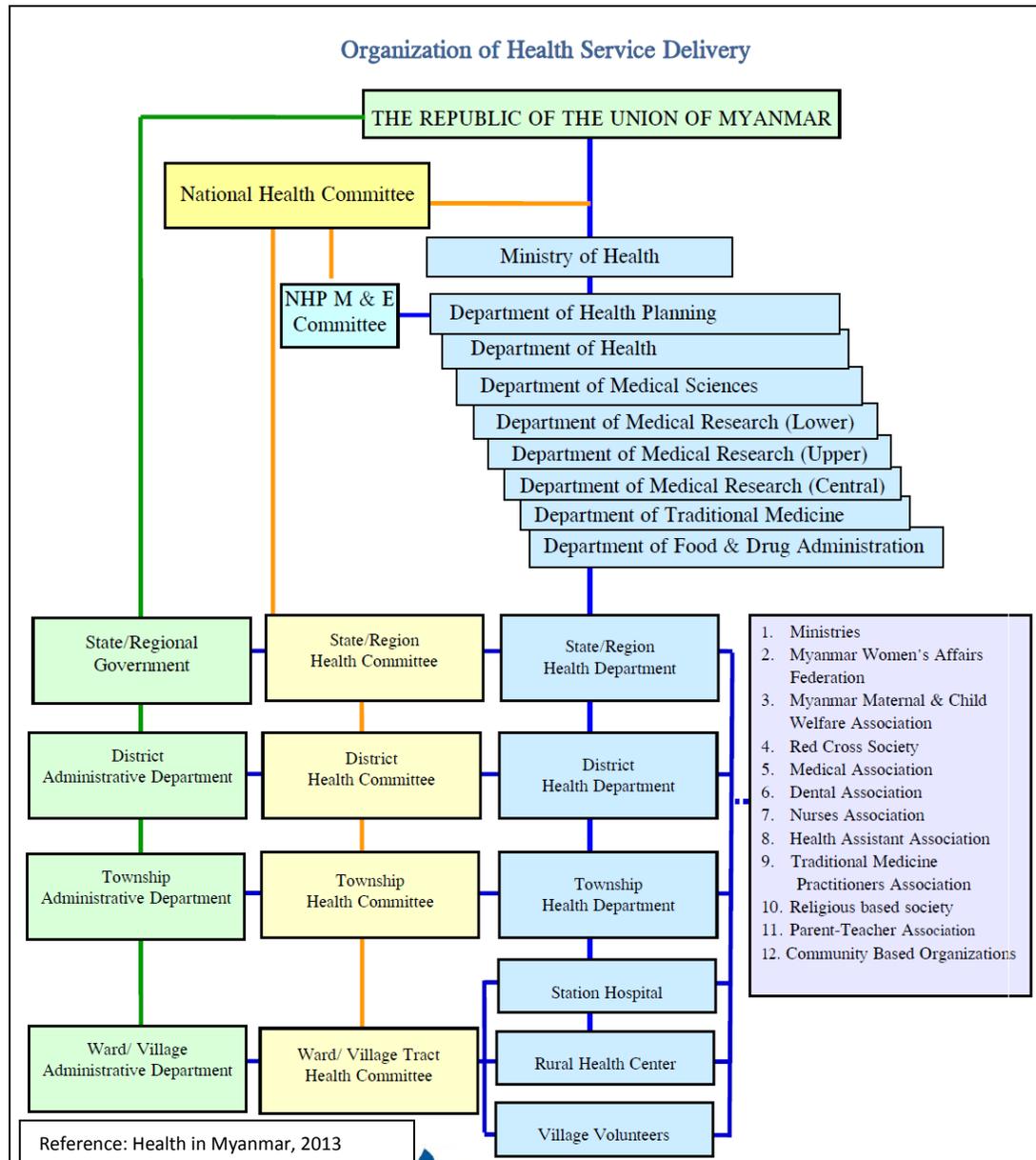
A. Health service delivery system

Public sector health services are structured in a three level system: central, state and regional, and township. The central level is responsible for formulation of policy, planning, training, supervision, and monitoring and evaluation (M&E) of health services throughout the country. The Department of Health is the body charged with responsibility for health care services in the areas of maternal and child health, birth spacing, and reproductive health as well as all HMIS activities. Activities such as planning, training, and monitoring are undertaken by the central, state, regional, and township level staff.

The health system is organized according to boundaries of the administrative system, which position Township hospitals at the Township level of administration, and Urban Health Centers (UHC), Maternal and Child Health (MCH) Centers, Station Hospital and Rural Health Centers (RHC) within the catchment areas of the Township. Beneath the RHC there is a network of sub rural health centers (SRHC) staffed by midwives and public health supervisor 2 (PHS-2), although there are severe shortages of these staff across the country. The township health system is governed by a Township Health Committee, represented and chaired by the local authorities and community leaders, with resident Township Medical Officers (TMO) taking a leadership administrative role on the committee and in operations at the hospitals and health centers. The Township catchment area can comprise of between

100,000 and 300,000 population, and smaller populations in remote areas. National and Region/State levels of the system technically guide, administer, and resource the Township health authorities to implement programs in the Township (Press Briefing on FP Summit, 2012, UNFPA).

Graph 1: Organization of Myanmar Health Service Delivery



B. Health care workers involved in Day of Birth

Throughout the health care system of Burma, there are various different health care cadres whom are involved in caring for mothers and babies around the day of birth. In order to better understand maternal, newborn and child health in the context of Burma, it is critical to understand the workforce providing services.

Table 1: Health care workers involved in Day of Birth

Health care worker	Scope of work	Level of facility/ care	Education
Obstetrician	Antenatal care (ANC), Birth – vaginal & caesarian (CS) (both normal and complicated), PNC, family planning (FP)	State/Regional, District hospital and very few township hospitals	Pre-service Education (PSE) (PSE = 6 years MBBS ISE = 3 years MSc)
Pediatrician	Newborn care (Basic + Advanced) and child care, management of childhood illnesses	State/Regional, District hospital and very few township hospitals	Same as Obstetrician
General Practice Doctor	ANC, Birth – vaginal delivery, PNC, family planning + all basic health care services : prevention, treatment and referral	Private sector, community level especially urban and peri-urban	PSE = 6 years MBBS
Township Medical Officer	ANC, Birth – vaginal & CS, PNC, family planning, all basic health care services : prevention, treatment and referral	Township hospital	PSE= 6 years MBBS
Station Medical Officer	ANC, Birth – vaginal & CS, PNC, family planning, all basic health care services: prevention, treatment and referral	Station hospital	PSE = 6 years MBBS
Nurse	Health education, immunizations, primary health care of women, men, children, ANC, vaginal delivery, PNC, family planning	State/Regional, Township and Station hospital (village)	PSE= 3 years diploma, 4 years bachelor (post-secondary school)
Public Health Assistant	Lead of RHC, health education, immunizations, primary medical health care for women, men and children, environmental sanitation, prevention and management of communicable diseases, data management, supervision of LHV, MW and PHSs	Rural Health Center (village)	2 types: <u>Basic Community Health Assistant</u> PSE = 4 years for (post secondary school) <u>Condense Health Assistant</u> PSE = 2 years and 3 months (post secondary school)
Lady Health	Health education,	Station health unit, Rural	Same as MW + 9

Visitor (LHV)	immunizations, all MCH activities and supervision of midwives	Health Center and home (village)	months training course for LHV
Midwife (MW)	Health education, immunizations, primary health care of women, men, children, ANC, vaginal delivery, postnatal care, family planning, nutrition promotion, environmental sanitation, prevention and control of communicable diseases- Tuberculosis (TB), Malaria, HIV, supervision and monitoring of Village Health Workers (VHWs) especially auxiliary midwives (AMWs)	Rural health center and rural health sub-center (village)	PSE=24 months (post-secondary school)
Auxiliary Midwife (AMW)	ANC, vaginal delivery, postnatal care, health education and referral	Home (village)	PSE=6 months (post-secondary school)
Traditional Birth Attendants	Normal delivery, recognize problems and appropriate referral	Home (village)	PSE highly variable between informal and formal sector

C. MNCH technical areas

Based on findings from the desk review and key informant interviews, a summary of current facility based practices and supplies, proximate causes of morbidity and mortality, existence of national clinical guidelines or standards, and opportunities for the S&T GDA are outlined by focal technical area including preterm birth, newborn resuscitation, essential newborn care, postpartum hemorrhage, and post-abortion care. (See Appendix 1 & 2 for the detailed desk review and list of key informants interviewed).

Table 2: Summary of desk review and key informant interviews

Technical area	Current facility based practices/ supplies	Proximate causes of morbidity/ mortality	National clinical guidelines/ standards	Opportunities for the S&T
PTB (maternal prevention/ management)	No organized facility based programming at this time; no formal “packaging” of educational materials available	30-50% of Newborn mortality; referral to major centers difficult [neonatologist at Children’s Hospital of Yangon— personal communication]	None	Much discussion for the need for this program among all professional associations interviewed and the MOH; uniform interest among professional associations including MW’s for demonstration of “pre-term package” at the January 2014 meeting of the Myanmar Medical

				Association (MMA)
PTB (newborn management)	<ul style="list-style-type: none"> • Preterm babies receive incubator care at tertiary level hospitals. • Kangaroo Mother Care (KMC) recognized and interest for practice expressed by some neonatologists, but reservations expressed by others. Yankin Children's hospital making efforts to practice KMC, but finding it difficult to convince families and health providers. Pediatric Society of Myanmar open to support study for feasibility of KMC in suburban hospital in Myanmar 	Burden of prematurity high with 30.9% of newborn mortality contributed by preterm births (UNICEF, 2012).	Two key guiding documents on tertiary level pediatric care (Management of Critically Ill Children, 2nd edition, 2005) (Pediatric Management Guidelines) do not provide much space for this area of intervention.	<ul style="list-style-type: none"> • Support the Pediatric Society to update relevant manuals for pediatric care to include latest evidence based interventions on preterm baby care, including KMC. • Develop a KMC demonstration site in close coordination with MOH and partners and generate local evidence on feasibility of KMC in Myanmar hospitals and acceptability among families
Newborn Resuscitation	<ul style="list-style-type: none"> • WHO guidelines followed to develop training materials for birth asphyxia management. • Midwives were using tube and mask for resuscitation, recently changed to bag and mask. • Births not attended by Skilled Birth Attendants (SBAs) high, no interventions to support breathing in home births without skilled attendance. • HBB training recently initiated 	Birth asphyxia contributes to 24.5% of neonatal mortality (UNICEF, 2012)	Two key guiding documents on tertiary level pediatric care (Management of Critically Ill Children, 2nd edition, 2005) (Pediatric Management Guidelines) provide much space for this area of intervention. However gap is on skills transfer and practice	Support MOH and partners to develop a national strategic implementation plan for the roll out of the Helping Babies Breathe (HBB) training, including strengthening of systems to ensure regular on the job skills' refreshers, monitoring and adequate support for commodities as required.

	at township level, however gap in follow up skills retention, monitoring, supervision and logistics management			
ENC including skin to skin care	<ul style="list-style-type: none"> • Immediate and ongoing newborn care not seen to be provided as a package of care for all newborns. Components of it, such as immediate breastfeeding, cord care are mentioned in most documents. • Immediate skin to skin not mentioned as component of ENC 		ENC is not highlighted as a package of care to be emphasized for all newborns	Support MOH and partners to incorporate immediate and ongoing newborn care as the primary preventative package of care for all newborns in all MNH pre and in-service materials and training
PPH (prevention/management)	<ul style="list-style-type: none"> • Ergometrine injection used instead of oxytocin • Patients bring/ pay for all supplies • Midwife scope of practice (SOP) excludes manual removal of placenta • Cesarean section and blood transfusion services lacking and/or not 24hr/day in many places • Most births occur at home (70-80%), utilization of facility mostly in cases of serious complications (MOH, 2013) 	Rate of PPH has not been tracked. 57.4% deaths occur at home, 3.7% en route to facility, and 37% in facilities (UNFPA, 1999)	Guidelines for PPH prevention and management are reportedly in Basic Emergency and Obstetric Newborn Care (BEmOC): A manual for Basic Health Services (however this document was not reviewed in this analysis)	<ul style="list-style-type: none"> • Introduce use of Manual Vacuum Aspiration (MVA) for management of abortion (AB) at lower levels of health care system • National in-service and pre-service training on updated management of PPH • Policy work on midwife scope of practice
Post-abortion care (PAC) (prevention/management)	Facility based practice inconsistent and limited by incompletely trained providers	National statistics not available, but based on studies and assessments	PAC guidelines for Basic Health Services reportedly in	<ul style="list-style-type: none"> • Expressed interest from GP and Ob societies to collaborate on PAC

	among physician cadres [mostly General Practitioners (GP's)] and policy limitations extending to non-physician providers, including midwives	reviewed, range 10-50% of maternal mortality (UNFPA, 2007, MOH 2010)	BEmOC: A manual for Basic Health Services but it does not include Misoprostol role in PAC (only MVA and D&C)	activities <ul style="list-style-type: none"> • PAC program being developed by Marie Stopes International (MSI) to train GP's and Ob's to perform MVAs • IPAS to initiate PAC program in Mandalay Region in conjunction with GP society
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V. Programmatic recommendations and next steps

Based on findings from the situational analysis, key recommendations and next steps are detailed for each focal technical area.

Table 3: Program recommendations and next steps

Technical Area	Recommendations for S&T	Next steps
PTB (maternal prevention/management)	1. Plan demonstration presentation to interested groups at the January 2014 meeting of the MMA	1. Further develop pre-term package at the in person meeting Nov. 2013 with input from ACOG, ACNM, AAP.
PTB (newborn management)	1. Support the Pediatric Society of Myanmar to strengthen existing pre & in-service curricula for care of PTB 2. Develop a KMC demonstration site in close coordination with MOH and partners and generate local evidence on feasibility of KMC in Myanmar hospitals and acceptable	1. Orientation / sensitization workshop for relevant stakeholders to discuss the burden of PTBs, evidence based solutions and recommendations for Myanmar 2. KMC concept note to be drafted with input from MPS to be submitted through USAID to possible donors in country
Newborn Resuscitation	1. Support MOH and partners to develop a national strategic implementation plan for the roll out of the HBB training, including strengthening of systems to ensure regular on the job skills' refreshers, monitoring and adequate support for commodities	1. Consultations by Myanmar project team members with all relevant departments in MOH, with key MNH partners and CDA to lay the foundation for a joint activity to develop a national strategic HBB scale up plan 2. Support the MOH to lead the organization of a workshop to develop the National Strategic Plan for the roll out of HBB
ENC including skin-skin care	1. Support MOH and partners to incorporate immediate and ongoing newborn care as the primary preventative package of care for all newborns in all MNH pre and in-service materials and training	1. Review existing MNH training materials, guidelines on newborn care, including those in the local language. Identify gaps in ENC information and seek opportunities to address those gaps in ongoing work of partners
PPH	1. Support efforts of the government to	1. Seek opportunities to participate in the

(prevention/ management)	<p>develop evidence-based, updated to global standard clinical guidelines for all health care providers involved in pregnancy/childbirth</p> <ol style="list-style-type: none"> Support updates to pre-service curriculum to reflect updated clinical guidelines and standards of practice for all health care cadres involved in mother/baby care Support national professional associations to strengthen the population-focused efforts to improve maternal, newborn, child health 	<p>government convened MNCH task force</p> <ol style="list-style-type: none"> Determine feasibility of supporting Pre-service curricula updates for midwives, nurses, pediatricians, obstetricians and general practice physicians Strategic planning with each professional society based on gap analysis generated from Member Association Capacity Assessment Tool (MACAT) needs assessment
PAC (prevention/ management)	<ol style="list-style-type: none"> Assist in development of a more comprehensive PAC program to include long-acting reversible contraception (LARC) or other family planning at time of emergency PAC visit—as per United States Agency for International Development (USAID) protocol 	<ol style="list-style-type: none"> Introduce current PAC as a technical update to the MMA at the annual meeting January 2014 [requested] Stay in contact with MSI and IPAS as they develop their PAC programs for Burma

VI. Conclusions

A rich number of opportunities exist in the Burma context for Survive & Thrive to provide meaningful contributions to the focal MNCH technical areas of PTB, newborn resuscitation, ENC, PPH, and PAC. While there were many contributing factors to the MNCH issues in Burma such as the economic, environmental, structural, human resources, community awareness and supply chain issues, some specific themes that align with the S&T objectives and capabilities included work at the national policy level including contribution to the MNCH Technical Strategic Group (TSG) soon to convene through the MOH and coordination of activities with national professional associations.

A consistent finding across all technical areas is the lack of national level clinical guidelines and protocols or guidelines that are not updated to global standard for which national level policy advocacy becomes a key priority in moving the MNCH agenda forward. Formulating creative and supportive ways to contribute to the MNCH TSG will be valuable in coordinated MNCH efforts with all partners in Burma.

Interest, experience and commitment from the national professional associations from midwifery to obstetrics, pediatrics and general practice physicians was strong and an excellent opportunity for Survive and Thrive to capitalize in their partnership in MNCH activities going forward.

Appendix 1

Desk review by document

	Document (name, date, author)	Summary Key Points	Further Lit Reviews	Gaps Interventions	Recommendations Interventions
National level Policy (maternal and newborn)					
1.	Health in Myanmar, 2013 MOH, Myanmar	<ul style="list-style-type: none"> - National Health Committee formed 1989 – high level inter-ministerial & policy making body; reorganized 2011. Chairperson: Union Minister MOH, Secretary Deputy Minister MOH, DG DOHP & DOH joint secretary. - National Health Policy 1993, developed by the National Health Committee - Law relating to Nurse & Midwife (1990, revised 2002) – basis for registration, powers of council - Myanmar Medical Council Law (2000) - Law relating to Private Health Care Services (2007) - National Comprehensive Development Plan – Health Sector 2010 to 2031 – links with other sector plans - National Health Plan - developed four yearly; last one 2011 to 2016 - Minister of Health assisted by 2 Union Deputy Ministers. Eight department led by DG. Largest DOH - Department of Health Planning (DoHP) – Health Management Information System (HMIS), Research - DOH: Public Health division under DOH responsible for primary health care, MCH etc. - Department of Research (Lower, Upper, Central) – all research - Basic Health Services: Township Health Department provides primary & secondary health care services; covers 100,000 to 200,000 pop. MCH team, 1-3 Station Health Units and 4-5 Rural Health Centers, each RHC has 4 sub RHCs. Township Medical Officer overall 	None, this document is a good one to get an overview of the health systems in Myanmar	MNCH leadership in MOH needs to be worked out better. The MNCH TSG needs to be operationalized as soon as possible.	<ul style="list-style-type: none"> - Important to ensure consultations with the Deputy Directors of MCH, Women and Child Health (WCH) and the DG Health on HBB, KMC and future work for at township level - Consultations with donors to take turns in leading a secretariat for the MNCH TSG - Alternatively, establish informal project advisory group consisting of key partners e.g. UNICEF, UNFPA, WHO, professional societies, MOH

		<p>manager</p> <ul style="list-style-type: none"> - RHC has 1 HA, 1 LHV, 5 Public Health Supervisor Grade II (PHSII), 5 Midwives - Station hospitals, sub-township hospitals are Primary Health Care (PHC) units providing general services - Township hospitals first referral level with lab, dental services - District & some 50 bedded Township (TS) hospitals provide specialist services with ICU - Secondary and tertiary level of care by Region / State hospitals, Central & Teaching hospitals - HSS: training in 40 TSs by 2013 - Training team and Training Information System - MNH standards – 4 ANC, SBAs, PNC, PAC, EONC, ENC, referrals 			
2.	Overarching Communication Strategy and Plan of Action On Child Survival and Development, Myanmar 2013-2015	<ul style="list-style-type: none"> - Advocacy, Mobilization & Behavior Change plan for home care of newborn and sick child: <ul style="list-style-type: none"> a) develop communication package + community documentary b) integrate messages in social dialogue initiatives c) local events to disseminate messages d) multi-channel campaign - Messages on immediate and exclusive breastfeeding (BF); newborn danger signs; care seeking from nearest Health Facility or provider; postnatal check for danger signs within 7 days of birth 	A comprehensive strategy that could guide the project.	Important to check on how much this strategy is operationalized in country. Would be very important for township level programming	Program interventions to be designed once work on objective 2 of the project is initiated
3.	5 Year Strategic Plan for Reproductive Health 2009-2013 MOH Document	<p>“To ensure coordinated response in reproductive health (RH) toward MDG5 of MMR of 145 and UM5 of 28/1000”</p> <p>4 major components:</p> <ol style="list-style-type: none"> 1. ANC, intrapartum/postpartum care, newborn care 2. 2 birth spacing and unsafe abortions 3. Preventing sexual transmitted diseases (STI's) 4. Adolescent RH, both girls and boys <p>The above carried out through:</p> <ol style="list-style-type: none"> a. Education b. Health system strengthening c. Community involvement 	None	Maternal Mortality Ratio (MMR) data is identified as unreliable citing ranges of 130-600/100K live births as hospital reporting are the primary source; discounting the estimated rates for home/community delivery	<p>Key goals:</p> <ol style="list-style-type: none"> 1. To reduce MMR from 580 in 1990 by 290 in 2013 to achieve the MDG target of 145 by 2015 2. To increase from 64.16% in 2007 to 75% in 2013 and to the MDG target of 80% in 2015 3. Increase Contraceptive Prevalence Rate (CPR)

		<p>All carried out through a coordinated effort of the MOH and a National working group on RH They first reviewed the 2004-2008 RH plan and identified the challenges, reviewed partnerships toward MDG5, and reviewed & evaluated the RH targets at that time</p> <p>Demographics: a description of the RH demographics citing an estimated pop. of 60M in 325 townships in 14 states [17 for health] 70% rural, 24K doctors, 23K nurses, and 18K midwives; Each Township has approx. 5 rural health centers and a Station hospital Partners in addition to WHO, UNICEF & UNFPA are Population Services International (PSI), MSI, Save the Children and the Professional Societies. Estimated 50% deliveries are in “hospital” although some remotes areas report 90% home del. where reported rates for PPH est. at 30%; hypertension at 17%; and abortion rates of approx. 10% Estimated Total Fertility Rate (TFR) of 2.2; a CPR of 40% [Birth Control Pills (BCPs) 10%, Depo 20%, Intrauterine Device (IUD) 2%] A key finding was the estimate of 50% of MMR in hospital are the result of unsafe abortion [septic]</p>			<p>from 45-50</p> <p>4. Improve ANC from 65% to 80% by 2015</p> <p>Overall, the focus of the strategic plan is to improve access to facilities under an environment which is more “enabling” through policy change, advocacy and the better use of private stakeholders. This coupled with health facility system upgrades in:</p> <ol style="list-style-type: none"> 1. RH packages 2. Human Resources (HR) management 3. Quality Improvement (QI) methods 4. Finances from MOH 5. Better M&E through MOH
4.	Health Workforce Strategic Plan 2012-2017 MOH together with WHO and Global Alliance for Vaccines and Immunization (GAVI) [Nay Pye Taw, 2012]	<p>This is to guide HR development by analyzing challenges:</p> <ol style="list-style-type: none"> 1. Recognizing that health is at the center of poverty reduction 2. Define better the responsibilities of the health workforce 3. Identify shortages of workforce in rural areas 4. Better analyze the difficulties posed by poor pay, lack of motivation, poor skills and lack of Continuing Medical Education (CME)/Refresher training 	None	<ol style="list-style-type: none"> 1. Department of Medical Science (DMS) charged with forming all educational policy in health training 2. DMS advise in drafting all health care legislation 3. DMS monitor accreditation of health educational institutions 4. DMS oversee the development of health curricula in all health institutions 	MOH provide all health sector benchmarking of salaries MOH oversee all HR functions including affirmative action and human rights abuses
5.	National Health Plan, MOH,	A long document encompassing all aspects of health, with section 7&8 referencing MCH	The 2012-2016	Interventions include: 1. Improve health status in rural	Highlights of the objectives for future development:

	2006-2011	<p>7] MNCH Project: Initiated by the National Health Committee to address the issues of MMR, Neonatal Mortality Rate (NMR), Infant Mortality Rate (IMR) and Under 5 Mortality Rate (U5MR) in reference to MGD4&5, based on DOH survey data from 2004-2005;</p> <p>Development of RH interventions with an emphasis on Emergency Obstetric Care (EmOC) and Neonatal care and reduce MMR by 50% and U5MR to 38.5 by 2015.</p> <ol style="list-style-type: none"> 1. Proposed activities focused on training MW's and AMW's posted to new townships 2. Adolescent RH also given high priority <p>The next section was the current situation analysis giving general MMR stats broken down by rural vs. city and a breakdown of MMR to include PPH 31%; PE/E 11%; PAC 10%; sepsis 7%</p> <p>50% of deaths had some ANC, but no emergency plan as assessed by the Dept. of Medical research</p> <p>Next, a breakdown of EmOC revealing that EmOC was available to 8/500K pops. And EmOC avail. to 4/500K population so that only 50% of the country was covered by acceptable Safe Motherhood programs; 40% delivered by Skilled Birth Attendants (SBA's) [MW's]; 12% by AMW's and 7.5% by Traditional Birth Attendants (TBA's).</p> <p>The next section dealt with Newborn using also DOH survey data with the main point being that of the neonatal, perinatal and stillbirth segment of U5MR, that 50% were delivered by AMW's and TBA's; while 25% U5MR was neonatal and 75% of these were home deliveries. Overall, Low Birth Weight (LBW)/preterm accounted for 31% sepsis 25% and birth Asphyxia 25%</p> <p>There was little development of Adolescent RH programs and very little male involvement.</p> <p>The last section involved a description of a PCPNC</p>	available but in Myanmar language only	<p>communities</p> <ol style="list-style-type: none"> 2. Promote community awareness and involvement 3. Provide proper ANC, skilled institutional delivery, PAC and family planning 4. Ensuring adequate essential ob and newborn care in ALL townships 5. Adolescent RH to include Male involvement 	<ol style="list-style-type: none"> 1. Increase township services for women/child health development from 12 to 224 2. ENC from 45 to 285 3. Adolescent RH from 20 to 63 4. ANC with at least 4 visits from 60 to 100 5. SBA attended births from 40% to 80% 6. Increase CPR from 37% to 55%
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		<p>program encompassing a list of strategies ranging from improving skills of the providers to evaluating CME strategies, management training and QI procedures, birth spacing, and improving access to EmOC procedures including the use of MgSO4 in State/Division facilities; IUD insertion in townships; MVA in State/Division facilities and PAC in townships.</p> <p>Lastly, there is a description of an M&E process which focuses on field officers monitoring every 6 months and streamlining communications and reporting procedures and promoting “model plans” to other areas of the country so that comprehensive RH care can be provided to 60% of the entire country by 2015.</p>			
Clinical guidelines/ protocols (maternal and newborn)					
6.	<p>Management of Critically Ill Children, 2nd edition, 2005, Department of Child Health, Universities of Medicine, Myanmar</p>	<ul style="list-style-type: none"> - Management of critically ill neonate (0-2months) - Birth Asphyxia – drying, warmth, positioning, suction, stimulation foot flicking or rubbing the back, use of 100% O2. Steps need realignment to make it clear to follow - Prematurity: focused on feeding management, hypothermia minimum mention - Sepsis: cloxacillin, gentamycin, cefotaxime 	<p>Management of BA can be made further clear</p> <p>ANCS, management of hypothermia, KMC missing</p>	<p>Important to check if key steps of HBB and LBW can be used to update the guidelines</p>	<p>Not a focus of project at this stage</p>
7.	<p>Pediatric Management Guidelines Second Edition 2011 Myanmar Pediatric Society</p>	<ul style="list-style-type: none"> - Neonatal Resuscitation: a) preparation for birth – warm room, radiant heater, two clean cloths, ambo bag, masks 2 sizes, suction device, O2 etc. b) Initial steps: prevention of heat loss (place under radiant heater, dry, remove wet linen), position, suction mouth then nose, provide tactile stimulation c) evaluate respiration – none or gasping – IPPV with O2 d) if breathing spontaneously – check HR – if < 60 continue ventilation and initiate chest compressions e) if meconium stained amniotic fluid: routine suctioning not recommended expect if thick and copious) - Neonatal Sepsis – has substantial details on investigations and treatment 	<p>No specific chapter on preterm births</p>	<p>Very important to point out the need for a more detailed chapter on management of PTBs</p>	<p>Advocate with the Myanmar Pres-service for inclusion of a chapter on PTB – this could be included as one of the capacity building activities, if society agrees</p>

8.	Postnatal Care Guideline in Hospital Setting 2011 Maternal & Child Health Section, DoH, OG Department, Special Care Baby Unit, Community Health Development (CHD), University of Medicine, Yangon, WHO	<ul style="list-style-type: none"> - Four PNC visits & timing: within 24 hours; day 2-3; day 6-7; week 6 - Focused on PNC following facility deliveries - No discharge before baby is 12 hours old - Extra PNC contacts: LBW, mothers with HIV - Skin to skin contact mentioned as management for a hypothermic baby 	No separate focus on preterm births		Home based PNC – maybe addressed under objective 2 of the work plan
Education/ training (maternal and newborn)					
9.	Draft for Training of Midwives for Neonatal Resuscitation “Manual of Neonatal Resuscitation for doctors and Nurses in Remote Hospitals” April, 2001	<p>A 5 lesson “how to” manual demonstrating use of both “bag and mask” and “tube and mask”;</p> <ol style="list-style-type: none"> 1. Preparing for resuscitation---risk factors, equipment, cleaning, warmth, suction etc. 2. Initial steps—dry, warmth, position, suction first 3. Bag and mask; 40-60/minute; chest movement 4. Document what you’ve done; chart forms, ICD codes 5. Special conditions---“fresh” stillborns, [yes] anomalies,[no] use Laerdal tube & mask equipment 	References: WHO, AAP vetted	Use of more modern equipment; need to coordinate with HBB program	Could still be used if it were updated to be consistent with Current programs such as HBB
10.	Providing Quality Reproductive Health Services-- -Trainer’s Manual for Basic Health Staff Training [WHO and UNFPA]	<p>Mostly describe lessons for basic health services [BHS] in contraception, abortion [unsafe], safe motherhood, and infection identification using a series of interactive lessons:</p> <ol style="list-style-type: none"> 1. Lecture/slides 2. Case studies 3. Role play 4. Pre-test/post-test assessment <p>Also, sections on teaching tips and how to identify what is necessary and what is superfluous for BHS workers</p>	None	N/A	Recommended to be done as a full 5 day workshop

11.	Reproductive Health HIV/AIDS Training Manual UNICEF 1995	<p>I doubt that this book has ever been opened as it looked brand new. This is a “how to” book presented in lesson [group discussions] format containing 4 sections. Designed for educating the community through one-to-one discussion [counseling]; friends to friends discussions and tips on “good decision making”. The book can be used as a TOT book.</p> <p>The core content within the context of birth spacing had to do with:</p> <ol style="list-style-type: none"> 1. Puberty and sexual development 2. Male/female relationships 3. Fertility and the reproductive cycle 4. STD education [the largest section] including HIV/AIDS 5. Birth control methods focusing mostly on barrier methods <p>Most of the book is divided into lessons using Q&A, cartoons and facilitator notes for each lesson.</p>	None	N/A	There is a pre-test/post-test for both the facilitator as well as the learner [participant]. There is no actual data presented as this is a “how to” book.
Regional program, reviews, assessments (maternal and newborn)					
12.	Technical Report In-depth Country Assessment on Nursing and Midwifery, 14/9/2011, MOH/ Dept of Med Science	<ul style="list-style-type: none"> • Definitions of nurse and midwife • A national nursing and midwifery policy exists via National Health Plan 2011-2016 under “Programme Areas”-> Development of Human Resources for Health • Current nurse & midwife workforce numbers have been identified (2011) • Education criteria established • Accreditation by DMS • Curriculum revisions by Department of Medical Science (DMS) • Nursing and midwifery standards set by Nursing and Midwifery Council and they regulate practice (licensing, set SOP- but with DMS approval) • DMS manages nursing and midwifery research 	Compare to MW workforce done by Merlin	<ul style="list-style-type: none"> • MOH process to “sanction”/ assign midwife to post takes 2-5 years and high attrition+ loss of skills • Students do not get enough clinical practice 	<ul style="list-style-type: none"> • Strengthen preceptor programs for pre-service • Consider supervising students in home births • Work with Myanmar Nursing and Midwifery Journal • Support annual meetings and CE events • Support PA with Community of Practice (CoP) and website support to access information
13.	Swiss Dev. Cooperation (SDC) Health Assessment in SE Region of Myanmar (Aug	<ul style="list-style-type: none"> • Assessment done over 1 month • SDC 2013-2017 Strategic Plan for Myanmar objectives: <ul style="list-style-type: none"> ○ Vocational skills dev ○ Agriculture/food security 	None	None	<ul style="list-style-type: none"> • Be engaged with 3MDG • Be aware of SDC’s plans for the PHC MNCH program

	2013). Steven Lanjouw and Nwe Nwe Aye	<ul style="list-style-type: none"> ○ Health, social services, governance ○ Peace, democracy • High morbidity and mortality (M&M) from malaria, TB, HIV • Mat/NB/child M&M decreased in last decade • SE area health worse because long history of conflict zone. Poor access, availability, infrastructure/ equipment, acceptability due to language/ beliefs • Parallel health care system run by NSAGs (non-state armed group)-mobile clinics. NSAG health care system staff all Thailand based ngo trained not government trained. • NSAG health care and government health care in area prioritizing MNCH • This area primarily focused on TB, malaria, HIV because funding from 3DF→ 3MDG. 3MDG covers 10-20% area • Need to strengthen PHC MNCH services especially at community level where 3MDG is not • SDC plans to 1) contribute to 3MDG 2) PHC project in MNCH for government and NSA areas • Health Information System (HIS) data in NSA area unavailable • Momentum of peace process is strong between government and NSA • Increase in health budget will help as well as economic growth • Internally Displaced Persons and refugees expected to return in coming months/years to these regions 			
14.	Quality of ANC performance of midwives in a rural area of Myanmar, 1996. WHO, MOH	<ul style="list-style-type: none"> • Study in 2 Townships in delta, 2 TS in “hilly area” • Many women familiar with “birth spacing methods” but 14% actually do it. • Most women delivering with MW or TBA at home 	None	<ul style="list-style-type: none"> • Very old, 17 yo study • Very limited in area of Myanmar covered 	<ul style="list-style-type: none"> • Support standardized scopes of practice for MWs and standardized, updated PSE curricula
15.	Situation Analysis on	<ul style="list-style-type: none"> • Community based cross-sectional study in one Mon Village and one Shan village with 	None	<ul style="list-style-type: none"> • There is limited access to written resources 	<ul style="list-style-type: none"> • Any facility based health intervention will have a

	<p>Effective Communication Channels for Behavior Impact: Utilization of Maternal Health Care Services at Community Level, 2011. UNFPA, Japanese Organization for International Cooperation in Family Planning (JOICFP), Department of Medical Research (DMR)</p>	<p>objective to identify current communication and information routes for health information to mothers and women/men.</p> <ul style="list-style-type: none"> • Methods: semi-structured interviews and focus groups • 581 respondents between the 2 villages with similar responses across the villages • Personal communication, public announcements and individual/group talking were the most common channels of information sharing • Some people had access to radio, TV that served as information channels but they were the minority • Personal communication the most common form of shared information • Key finding for maternal health: mothers/ women visit new mothers in their homes during the 45 day period a new mother stays at home with the baby and these visits were seen as a key opportunity to deliver information about ANC, birth, breastfeeding and birth spacing 		<ul style="list-style-type: none"> • There does not appear to be a way for someone in these villages to seek further information beyond what was communicated in a finite time message (i.e. a library, internet, institution to house information) 	<p>much further reach if the community's existing channels of information sharing are utilized</p> <ul style="list-style-type: none"> • There is much potential to build from the existing community communication channels and framework • High literacy rates
16.	<p>Press briefing on Family Planning summit July 2012, UNFPA</p>	<ul style="list-style-type: none"> • Myanmar government, Department of International Development UK (DFID), and UNFPA announced new funding to accelerate health MDGs as related to family planning at the London Summit on FP- July 11, 2012. • Unsafe abortion is leading cause of maternal death and disability in Myanmar (Mr. Abdel-Ahad, UNFPA) • Myanmar has a National Population Policy which promotes birth spacing in married couples since 1992 but by 2011, Birth Spacing program only covers 142 of 330 townships • Fertility rate 4.7 children/married woman and 2 children/woman • CPR 2007 40.9% • >50% women of all ages have never married • Abortion rate 5%, highest among 15-19yo • Abortion is highly illegal 	None	<ul style="list-style-type: none"> • Data on specific causes of maternal mortality 	<ul style="list-style-type: none"> • Support government in policy changes that are more inclusive of all women • Support task shifting efforts in family planning where appropriate to lower level cadres

		<ul style="list-style-type: none"> In 2012, total budget for health increased 4x and a budget line for Reproductive Health Commodities including contraceptives was established 3 key gaps: funding, coordination (planning, resource allocation, management, M&E) and policy (RH policy favors married women and access to services limited) 			
17.	A reproductive health needs assessment in Myanmar, UNFPA, MOH 1999	<ul style="list-style-type: none"> Assessment conducted in 6 townships in 3 states/divisions via stakeholder meetings, interviews, focus groups, and field observations MMR estimates vary widely. UNICEF/WHO reports 580/100,000 (1998) and 280/100,000 (1994) by official government estimates of Myanmar Maternal and Child Welfare Association (MMCWA) ANC (urban) at hospital or MCH center, ANC (rural) at rural health centers, sub-centers, and home visits by midwives, TBAs also provide limited ANC 70-80% births at home (MOH 1996), only 5% of all births are unattended, 95% attended by doctor, nurse/midwife, TBA, relative/friend (p18) MW and AMW both conduct deliveries, sometimes working together to do so Traditional Birth Attendants (TBAs) also used to conduct births. Level of training varies from informal to formal MWs provided adequate care for normal delivery and appropriate referrals although skills need updating (ergometrine injection given instead of oxytocin). MWs do most all hospital births Postnatal care conducted by midwives and AMW at the woman's home at week 1 and 6 and includes advice on breastfeeding, breast and cord care, sometimes birth spacing Maternal mortality-57% maternal deaths occur at home, 3.7% on way to hospital, and 37% at 	None	<ul style="list-style-type: none"> Content of ANC is not consistent across different health cadres and facility levels Vacuum aspiration not used for incomplete abortion care BeMOC and CeMOC services lacking at many facilities. Lack of family planning for unmarried people Skills and knowledge of health care providers vary widely TBAs have no standardized training or support from health care system 	<ul style="list-style-type: none"> Standardized ANC care for facility and provider and adequate provider education via PSE In-service and pre-service education on MVA Systems strengthening to provide BeMOC and CeMOC Support policy changes to increase access family planning Update clinical skills of providers through in-service training systems using evidence-based practice to global standard Clean birth kits

		<p>hospitals. Most common cause maternal death is septic induced abortion (UNFPA MM study)</p> <ul style="list-style-type: none"> • AB- very illegal and accurate numbers are difficult to calculate. Combination of massage, insertion of a foreign body, and herbal medicine are used. Most all people know where to get an abortion. Cost 100-1000 kyat • Delay in access to care factors: recognition of a problem, remote access/distance to a facility, ill-defined referral chain, cost • Sexual Transmitted Infections (STIs) and adolescents: disconnect between rates of sexual activity among adolescents and provider awareness of this. Family planning illegal for unmarried people. Providers not well trained in STI recognition/diagnosis 			
18.	Situation Analysis of Children in Myanmar, July 2012	<ul style="list-style-type: none"> - Annual 56,000 U5 deaths & 26,000 of them neonatal deaths - U5 deaths highest in the Association of Southeast Asian Nations (ASEAN) countries (<i>Levels & trends in child mortality, 2011</i>) - Prematurity (30.9%) , birth asphyxia (24.5%) & sepsis (25.5%) main causes of NN deaths - NMR 34 % of IMR - 91.8% Neonatal (NN) tetanus (TT) protected (Medical Information Communication System MICS 2009) – May 2012 NN TT elimination status - 56.3% NBs weighed at birth - 8.6% LBW (home births not weighed) - Early BF: 75.8%; EBF: 23.6% - ANC 1 visit: 70.6%; SBA: 64.4% (HMIS report 2009 – does not include private sector) - ANC 1 visit: 83.1%; SBA 70.6%; 36.2% HF delivery (MICS 2009-10) - TFR 2 (2007 Fertility & Reproductive Health Survey) - 71% pregnant women anemic (2004 study by nutrition section of DOH) - MMR 316/100,000 (2004-2005 Nationwide Cause Specific MM Survey) – MDG target 145 / 100,000 	<p>No data on NMR in the last surveys</p> <p>Data discrepancies between HMIS, MICS and also in referencing table (pg. 42)</p>	ANC, SBA, PNC, ENC, management of preterm births, PPH & PE/E management	<ul style="list-style-type: none"> - Coordinate closely with UNICEF for upcoming Situation Analysis report on newborn health.

		<ul style="list-style-type: none"> - PPH (31%) main cause of maternal deaths, followed by PE/E (11%) & abortion related complications (9.9%) - Midwife population ratio is 1:4,144 (MOH National Health Plan 2006-2011) - Private sector major provider, especially for poor; quality of service inadequate - 87% out of pocket expenditure on health for consumers, highest in the region - Basic health services lowest in Northern Rakhin, Chin, Sagaing, Kayah and Kayin states / regions 			
19.	Overall and Cause Specific Under Five Mortality Survey 2002-2003, UNICEF	<ul style="list-style-type: none"> - 86% children die at home – sick children are treated by elderly / grandmothers at home. - Of the 778 U5 deaths, 570 (73%) deaths occurred in 0-11 months of age - 34% of U1 deaths within neonatal period - Health care seeking: government health facilities 31% (MCH, UHC, RHC, SRHC, hospitals); private facilities 14%. - Acute Respiratory Infection (ARI) (28%), diarrhea (18%) cause of deaths in U5 - Prematurity (31%), Sepsis (26%) & Birth Asphyxia (24.5%) cause of deaths in neonatal period - 88% of deaths among newborns born at home - Home deliveries 90% rural, 76% urban 	Recent report?	<p>ENC for home deliveries PNC for home deliveries Discrepancy in recommended visits and what is feasible given resources LBW management – KMC? Management of birth asphyxia – HBB? Critical Care Medicine (CCM)</p>	<p>Programs targeted to provide MNH services at homes through the most appropriate health worker / volunteer Important to start advocating from year I and be ready to design and implement programs, once the project starts work on objective 2</p>
20.	Statistical Profile of Children & Women in Myanmar 2009, Central Statistical Organization, Ministry of National Planning and Economic Development	<ul style="list-style-type: none"> - Area: 680,000 sq. km. - Population: 58 million - Population density: 86 / km - Number of districts: 67 - # of townships: 325 - # of sub-townships: 64 - # of wards 2850 - # of village tracts 13703 - # of villages 64,827 - Life expectancy female: U: 69; R: 67 - Female literacy: 95% - Delivery government hospitals: 43% - Delivery private hospitals: 13.2% - Home deliveries: 43.8% - AssDel: docs: 50% 	Data discrepancies around deliveries and assistance		Under Objective 2 of the project, work closely with Township leaderships to support quality data collection

		<ul style="list-style-type: none"> - AssDel: nurse, midwife, AMW, LHV: 49.8% - TBA: 0.2% 			
21.	Annual Public Health Statistics Report (2009) – Department of Health Planning & DoH - published March 2011	<ul style="list-style-type: none"> - 7th report; based on monitoring reports of basic health staff at PHCCs – covers all services provided in 2009 - 22.4% general clinic attendance - Basic Health Staff (BHS) field visits 22 / village, ward - ANC – average 3.3 times / pregnant woman - PNC – 6 times - Deliveries by BHS 50.2%; AMW 13%; TTBA 8.2% - Indicators for MNH: ANC coverage, # of ANC, % of pregnant women with closed birth interval; % of deliveries attended by BHS; % of deliveries at RHC; % of LBWs; % of Perinatal mortality, average frequency of PNC; % of referral 	MNH indicators review	Delay in annual reports?	Under Objective 2 of the project, work with Township level facilities to support quality data collection
22.	Annual Hospital Statistics Report 2008 – Department of Health Planning with collaboration of DOH, March 2010	<ul style="list-style-type: none"> - % of bed occupancy: Yangon Children Hospital 115%; Children Hospital Mandalay 69%; Central Women Hospital Mandalay 63%; Central Women Hospital Yangon 332% - Live births: 98-94% - Still births: 6.2-2.1% 	Indicator definitions difficult to discern from report		
23.	A feasibility study of the Community Health Initiative for MCH in Myanmar, MOH, WHO, Health Intervention and Technology Assessment Program (HITAP), July 2010	<ul style="list-style-type: none"> - Proposed solution for HR shortages for Community Health Initiative (CHI) – task shifting AMW & TBAs trained to provide PNC, while MWs focus on ANC & delivery - Yedashae, Tatkone, Daik-U townships study sites for health financing 	Follow up on progress of study	Linkage of MNH programs with the financing schemes MOH plans for integration into health systems and sustainability	If the study is successful and implemented nationwide, we will need to take advantage of this effort and advocate for improving capacity for quality MNH
24.	Multiple Indicator Cluster Survey 2009-	<ul style="list-style-type: none"> - IMR 37.5/1000LB - U5MR 46.1/1000LB - BF < 1 hour 75.8% 		Not all newborn indicators included in this survey.	Ensure all tested newborn indicators are included in upcoming MICS or DHS in

	2010 Ministry of National Planning and Economic Development, Ministry of Health, UNICEF	<ul style="list-style-type: none"> - Exclusive Breastfeeding (EBF) to 6 months 23.6% - Baby weighed at birth 56.3% - LBW 8.6% - TT protection 91.8% - Contraception use ever married women 46% - 1 ANC 93.1% - Content ANC: BP 80.1%, weight 63.6%, urine test 56.9% - SBA delivery 70.6% - HF delivery 36.2% - Teenage marriage 7.4% 			Myanmar
25.	Myanmar Medical Association Brochure	<ul style="list-style-type: none"> - Founded 1949 - Only professional body of medically qualified doctors - 79 branches across the country - Over 17,000 members - All specialties represented – 30 Specialty Societies - Activities: Community Medical Education (CME): conferences annually for 7 days beginning from 3rd week of January - Medical specialties held every two years in November - Workshops and seminars: sponsored by donors - Refresher courses: main activity for CME; over a dozen course offered every year - MMA Central Executive Committee Members: 2012 to 2013: President Prof. Kyaw Myint Naing - MMA HQ: 249 Theinbyu Road, Mingalartaungnyunt Township, Yangon - Publication: Myanmar Medical Journal published quarterly 			<p>Important partner under the present project.</p> <p>Assessments of the relevant Specialty Societies to be conducted</p> <p>Jointly approved capacity building recommendations to be developed</p> <p>Concept notes / proposals to relevant donors in country regarding strengthening of the societies</p>
26.	Baseline assessment findings (presentation) (PATH Project) August, 2011	<ul style="list-style-type: none"> - Descriptive study - Study areas: Mingaladon, Than Lyin and Insein, in Yangon Region - Study population mothers with under-1 year old child in the project area - 54% of the mothers knew required TT doses during pregnancy - However only 22.3% received TT 2 times 			Questions of baseline to be referred to for future surveys to be conducted

		<ul style="list-style-type: none"> - 61.9% mothers said that they knew danger signs in pregnancy - Except for swelling of legs (correctly answered by about 60% of the interviewees), majority of the mothers were unable to provide correct answers for the danger signs - 96% of mothers sought ANC - 65% sought ANC from either a midwife (MW) or a Lady Health Visitor (LHV), 15% from TBA - Mean ANC visit frequency 4 times - About 94%, 80%, 73%, 84% and 63% of the respondents said they received iron and folic acid tablets, nutrition advice, breast feeding advice, birth planning advice and HIV/AIDS counseling respectively. - 57.1% of the 126 mothers had taken blood tests during the last pregnancy - only 42 remembered types of blood tests taken - 68.3% delivered at home - TBAs delivered 54.8% of babies, followed by doctors (23.8%) - 99% of umbilical cords cut with clean instrument - 33.1% applied turmeric powder, traditional medicine or oil on the umbilical stump - 62% bathed the baby immediately after delivery - 98.4% wrapped the baby immediately after delivery 			
27.	Training Needs Assessment of Emergency Obstetric Care [EOC] among basic health services [bhs] in Select townships of Yangon Division[2009]	<p>A study done by the MCH section of the DOH led by Dr. Theingi Myint. Study done to determine the EmOC needs of 3 townships. Survey of 157 bhs workers using in-depth interviews and focus groups, including TMO's, SMO's, MW's, Lady Health visitors, Asst. Surgeons, Health Assistants and Trained Nurses. A baseline test was given as part of the assessment.</p> <p>Findings:</p> <ol style="list-style-type: none"> 1. 2/3's of the bhs workers had one basic training in the past 10 years 2. Among the bhs workers, community midwives had the least knowledge 	Reference general MOH publications above reflecting similar data	This type of study should be carried out further in a sampling of other areas, especially those more remote [see next report of EmOC]	

		<ol style="list-style-type: none"> 3. Doctors in station hospitals need refresher training in RH areas 4. Majority of doctors never received anesthesia training 5. Midwives expressed need for training in the use of injectables such as oxytocin and antibiotics and especially, the use of MgSo4[33/35 interviewed were “afraid” of using MgSo4 and would rather use diazepam. 6. There was an expressed need for visuals in teaching injectables 			
28.	Report on Assessment of EmOC in Myanmar [2010] MOH	<p>Study conducted in 2008 was a review of 135 State/Division/District hospitals and 268 Township hospitals followed by an assessment of a random sample of 101 obstetric facilities in 4 States and 3 divisions in Myanmar in 2009.</p> <p>Key Findings were:</p> <ol style="list-style-type: none"> 1. 2/3 of the facilities were NOT fully functioning for EmOC for a variety reasons, including lack of a medical doctor. Also, for those facilities which did have a doctor, there was lack of motivation and less demand for services 2. Among those services designated as Emergency facilities [CEOC] lack of services for manual removal of the placenta, non-use of anticonvulsants, lack of the ability to perform C/S, and lack of provision of blood transfusion were found as major non-compliant factors. 3. In the Basic Facilities [BEOC], the major sources of non-compliance were the lack of giving transfusions and lack of anticonvulsant use. 4. Half of those facilities assigned as BEOC were actually functioning as EMOC and 15% of those assigned as CEOC were actually functioning as BEOC <p>2/3 of patients were referred to these facilities by Basic Health Staff and median time to the facility was approx. 1 hour. Prolonged labor, PE/E,</p>	None	<ol style="list-style-type: none"> 1. Among the indicators measured, the amount of CEOC was sufficient in all but 2 States---Katchin [far North] and Mon [Southeast Thai border] 2. All States had more than the minimum level of required EMOC services with Katchin [just barely] at the lowest level. 3. Overall States, only 60% met the need for EMOC with Katchin again at the lowest. 4. National C/S rate was 11.5% with a low of 5% in Yangon Region and a high of 15% in the Bago and Mandalay Regions. 	<ol style="list-style-type: none"> 1. Development of a “quick” and “easy” monitoring system for EMOC should be developed 2. All hospitals which have a high level of unmet need should have a fully trained doctor posted and equipment/supplies provided [3 of 13 recommendations listed] 3. More effective referral system/communications 4. Further evaluation of Rural Health Centers [RHC] for EMOC needs to be done 5. Community based education programs in RH need to be improved and patient satisfaction data kept. 6. Maternal death reviews need to be conducted in a standard fashion

		<p>dribbling of fluid, and previous C/S scar were the most common reasons for referral.</p> <p>Also assessed were issues concerning patients' opinions regarding quality of service as to why they were referred to these facilities and mostly were because the staff were "more capable" in a variety of technical areas.</p> <p>Cost data were obtained with approx. \$100 USD the median cost for services with a range of \$7.50 to \$350. Cost of meds and a "fee" for the provider were the largest component of total costs. Most meds were available, but only 12% Free of charge. There was over 90% patient satisfaction for the care they received in facility, although 17% still preferred to stay at home for their delivery.</p>			<p>7. Alternative health care financing to improve access/transportation needs to be explored.</p>
29.	End Line Survey Findings 2012 [PATH and Burnet Institute]	<p>Cross-sectional descriptive survey in 3 sites [Mingaladon, Than Lyin, Insein]; 126 before the intervention and 143 after the intervention compared mothers with a child less than 1 year old; face to face interviews and focus groups</p> <p>FINDINGS:</p> <ol style="list-style-type: none"> 1. mean age 28; education of mothers and fathers similar; occupation of mothers "midwife"???. occupation of fathers common laborers 2. Ante natal care [knowledge and practice] = AN care by SBA and more than 3 visits significantly better in the treatment group; 3. Knowledge of danger signs before delivery= bleeding and severe headaches better in the post intervention group 4. knowledge of danger signs during delivery= bleeding per vagina and prolonged labor better in intervention group 5. Newborn Care practices= knowledge of clean delivery kit and cord care better in the intervention group 6. Although breast feeding rates were similar, danger signs revealed by feeding difficulties and infection were better in 	None	N/A	<p>Lower SES groups need more education and empowerment toward better care and community financing</p> <ol style="list-style-type: none"> 1. Community and Mothers' support groups needed in rural settings 2. Significant role still present for TBA's so they need to be better mobilized and educated 3. Demand side health financing needed to address poverty.

		<p>the treatment group</p> <ol style="list-style-type: none"> 7. Child immunization rates were slightly better in the intervention groups 8. Both Community Support Groups and Mother Support Groups played a significant role in MCH activities; significant involvement of TBA's as well as TBA's providing much of the ANC to poor mothers; 			
30.	Annotated Bibliography of Research Findings in Reproductive Health Research 2007; WHO&MOH	<p>Approx. 450-500 RH research abstracts derived from the Subject Index of Medical Subject Headings [MeSH] downloaded from Pub Med. Those pertaining to the focus of the GDA are:</p> <ol style="list-style-type: none"> 1. Abortion—approx. 60 entries of which 10 were sampled and found to be mostly regarding Ab demographics, sepsis, bleeding, techniques and PAC. Nothing about LARC in relation to PAC 2. Birth spacing—approx. 25 entries, mostly about barrier methods; oral contraceptives; none on LAM and a few on LARC; another 25 labeled family planning 3. ANC—approx. 10 labeled this way and another 25 labeled prenatal care 4. Gestational age assessment approx. 20 about half using ultrasound 5. Prematurity—approx. 20 describing problems with the premature newborn and those associated with PE/E 	Approximately one half of those sampled were Ph.D. theses describing the intent for more work.	In general, these are poorly indexed and difficult to match with the page referenced in the index. The described assessment of the content was done by counting the total number of references in the index; since the index was more or less useless, those selected for review were done at random.	

Appendix 2

Key Informant Interviews

UNICEF
USAID
WHO
UNFPA
UNICEF
WCHD
MCH
3 MDG Fund
Merlin
Burnet Institute
Save the Children
PATH
Myanmar Medical Association
General Practice Medical Association
Obstetrician-Gynecology Medical Association
Myanmar Pediatric Society
Myanmar Nurse and Midwifery Association
Marie Stopes International
Department of Medical Research
Community Development Association LRC Myanmar
Yangon Children's Hospital
Yankin Children's Hospital