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# **A Report on the Liberia** ***Task Analysis Study***

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# 1. ACKNOWLEDGMENTS

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## 2. ACRONYMS

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AAEH	African Academy for Environmental Health
AFASS	Acceptable Feasible Affordable Sustainable and Safe
AIDS	Acquired Immunodeficiency Syndrome
AMSTL	Active Management of the Third Stage of Labor
ANC	Antenatal Care
ARV	Antiretroviral
ASRH	Adolescent Sexual and Reproductive Health
BCC	Behavior Change Communications
BPHS	Basic Package of Health Services
CBT	Competency-Based Training
CHV	Community Health Volunteer
CHW	Community Health Worker
CM	Certified Midwife
CT	Counseling and Testing
CMOED	Control and Management of Other Endemic Diseases
COCs	Combined Oral Contraceptives
DMPA	Depo-Provera
DOTS	Directly Observed Treatment Short-Course (for tuberculosis)
EC	Emergency Contraception
EH	Environmental Health
EHT	Environmental Health Technician
EME	Emergency Health
EPI	Expanded Program on Immunizations
ETNWG	Educational and Training National Working Group
FP	Family Planning
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information Systems
HR	Human Resources
HTSP	Healthy Timing and Spacing of Pregnancy
IEC	Information, Education, Communication
IMCI	Integrated Management of Childhood Illnesses
IP	Infection Prevention
IRB	Institutional Review Board
IST	In-Service Training
IUCD	Intrauterine Contraceptive Device
IYCF	Infant and Young Child Feeding
JD	Job Description
KMC	Kangaroo Mother Care
KT	Key Task
MAL	Malaria

MDM	Medicin du Monde
MGM	Management
MH	Mental Health
MISP	Minimal Initial Service Package
MOHSW	Ministry of Health and Social Welfare
NACP	National AIDS Control Program
NGO	Nongovernmental Organization
NLC	Normal Labor Care
OC	Obstetric Complications
OJT	On-the-Job Training
OT	Operation Theatre
PA	Physician Assistant
PHC	Primary Health Care
PIG	Pre-service Implementation Guide
PITC	Provider-Initiated Testing and Counseling
PMTCT	Prevention of Mother-to-Child Transmission of HIV
PNC	Postnatal Care
POPs	Progestin-Only Pills
PPH	Postpartum Hemorrhage
PRB	Population Reference Bureau
PSE	Pre-service Education
RBHS	[Liberia] Rebuilding Basic Health Services [Project]
RDT	Rapid Diagnostic Test
RN	Registered Nurse
SNC	Sick Newborn Care
STI	Sexually Transmitted Infection
TB	Tuberculosis
TCD	Tropical and Communicable Diseases
TNIMA	Tubman National Institute of Medical Arts
UNDP	United Nations Development Program
VCT	Voluntary Counseling and Testing

### 3. EXECUTIVE SUMMARY

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National needs are in part captured by the health statistics of a country. These statistics give us a numerical perspective of service delivery gaps. According to the United Nations Development Programme (UNDP), Liberia ranks 169<sup>th</sup> out of 180 countries on the 2009 Human Development Index (UNDP 2009). Nearly a decade after the end of a 15-year civil war that destroyed education, transportation and health infrastructure, and created hundreds of thousands of refugees and internally displaced persons, Liberia is in a rebuilding phase.

The Liberia Task Analysis Study, which examined a convenient sample of four health worker cadres, including registered nurses (RNs), physician assistants (PAs), certified midwives (CMs) and environmental health technicians (EHTs)—was completed with one primary objective: strengthening pre-service education (PSE). The Jhpiego PSE process requires several steps. The first step is to look at the national needs by way of the nation's available statistics on health. These national needs should be reviewed alongside existing research and technology as well as the professional environment and services available. National needs (e.g., individual needs, societal norms, demands of professional competence) are translated into what each profession expects of the health worker upon graduation (i.e., job descriptions [JDs]). Based on these JDs, an academic program may be created and core competencies identified to cover the observable tasks of the JD, the knowledge required, and the professional behavior and standards needed. These expected outcomes may be mapped to different educational courses and assessed in the context of those courses.

When used as part of academic program strengthening, a task analysis is extremely helpful in aligning JDs, core competencies and national needs. In this task analysis, a list of tasks was devised according to what is expected from the Ministry of Health and Social Welfare (MOHSW). A survey was conducted with recent graduates who were working in health facilities (placed from 2007 to 2009) to determine at what frequency and location certain tasks were being performed. In addition, this analysis also explored if and where workers were trained to perform the identified tasks. The task list was developed utilizing the Basic Package of Health Services (BPHS) as well as BPHS-related standards that were created to monitor quality of care. The results analysis focuses on how JDs for each cadre may be improved to inform: 1) the key tasks (KTs) that should be linked to core competencies of each graduate, and 2) the gaps in PSE that exist in preparing health workers for entry-level positions.

This task analysis was conducted to inform improvements in PSE—including updates to core competencies, curricula and JDs of the four cadres—to ensure a streamlined, competency-based education process that is linked to job readiness for an entry-level position at a clinic or hospital. The information derived may also provide evidence for the services included in the BPHS and/or adjustments that may be appropriate. The task analysis included semi-structured interviews with recent graduates from the four health cadres. Convenience sampling was conducted, visiting seven (of 15) counties in which the Rebuilding Basic Health Services (RBHS) Project supports health facilities. The study investigators from Jhpiego, utilizing the BPHS and the standards that they created based on

the BPHS, compiled two surveys: one for the RNs, CMs and PAs; one for EHTs, which was developed in collaboration with a Jhpiego-supported environmental health (EH) education expert (since EH is not part of the current BPHS). The RN/CM/PA survey contained 264 tasks spanning the 19 priority health areas specified in the BPHS. The EHT survey contained 75 tasks utilizing the EHT job descriptions. The survey tool focused on inquiry with new providers, i.e., placed from 2007–2009. Both surveys followed the same format: For each task, the respondent was asked how frequently s/he performs it; whether or not s/he was trained to do so; and if trained, where s/he was trained.

The University of Liberia Institutional Review Board (IRB) and the IRB of Johns Hopkins University Bloomberg School of Public Health approved the final surveys, study protocol, consent forms and other tools.

A group of 16 participants from the RBHS, the Education and Training National Working Group (ETNWG) and county health teams with prior surveying experience completed a two-day workshop, which included piloting of the tools. Over a seven-week period, from December 2009 to February 2010, the 12 person interview team, representing each cadre, administered the survey. Once completed, the survey responses were stored in locked file boxes. A total of 203 participants (119 RNs, 46 CMs, 38 PAs) were surveyed, representing half of the recent graduate population of these three cadres nationwide. And a total of 40 EHT participants were surveyed, representing 80% of the recent EHT graduate population.

Data entry was conducted over a 12-week period, from January to March 2010, and verified once data entry was completed. A descriptive statistical analysis was performed on the overall survey data, with additional breakdowns by cadre and facility level. Stata v 11.0 was used to tabulate the data and the results were recorded in a series of tables in Microsoft Excel.

A detailed summary of the major trends and considerations (by area) that emerged from the data analysis is included under “Trends and Considerations” at the end of the report. As a result of this task analysis, changes may be considered for: 1) tasks on an entry-level job JD of a RN, CM, PA or EHT; 2) related core competencies required to meet national needs; and 3) curricular changes needed in PSE for preparation to implement tasks. A number of areas are included below to highlight some of the identified trends in regard to RNs, PAs and CMs.

**Malaria (MAL):** A majority of providers frequently perform malaria tasks and most have been trained in school, yet a gap persists with 24% of RNs, 17% of CMs and 14% of PAs having received no training in school in at least one malaria-related task.

**Postnatal Care (PNC):** 20% of CMs received no training in school on key PNC tasks.

**Normal Labor Care (NLC):** 18% of CMs reported receiving no training in school on several NLC tasks. 14% of this 18% received training on the job.

**Emergency (EME):** The majority of providers received training in EME tasks overall except CMs, of whom 10% did not receive any training in school despite performing them in one or more EME tasks.

**STI/HIV/AIDS:** About 40% of each cadre did not receive training in school in most STU/HIV/AIDS tasks.

**Voluntary Counseling and Testing (VCT):** Around 20% of each cadre performs VCT tasks frequently. More than half of each cadre did not receive training in school in one or more of these tasks.

**Tuberculosis (TB):** TB is currently mentioned only in the RN JD; need to review national TB statistics to consider whether PAs should also assume TB responsibilities. Currently, about 1/3 of RNs and PAs did not receive training in school for key TB tasks.

**Control and Management of Other Endemic Diseases (CMOED):** Tasks are performed frequently by a low proportion of providers from each of the three cadres; however, training was received in school by a high proportion of each cadre. This area includes some potentially life-saving interventions and should be looked at carefully for which tasks should be included in JDs and linked to core competencies.

Suggestions for updating JDs and linking KT to core competencies and related changes in the curricula for the RN, CM and PA cadres can be found in the body of this report.

The current situation at the Tubman National Institute of Medical Arts (TNIMA) EHT School and for the EHT profession in general within Liberia is not sustainable under current conditions. In addition to the curriculum re-development that is being completed, the development of both performance standards in the EHT program and design of PSE training activities to meet these standards are necessary. Furthermore, discussions among representatives from the EHT program, the MOHSW and other EH stakeholders are necessary to ensure a match among the EH needs of the country, the expectations of MOHSW decision-makers regarding EHT roles, and the design of the re-structured program to fulfill these expectations.

## 4. BACKGROUND

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The Rebuilding Basic Health Services (RBHS) Project is the United States government's major five-year initiative in support of the MOHSW. Implementation of RBHS works toward increased use of basic health care services, and improved infrastructure, health workforce and systems performance.

Jhpiego—a key implementing partner on RBHS by the request of the prime contractor, John Snow, Inc.—seeks to rebuild the basic health services in seven counties in Liberia through the project. Specifically, Jhpiego was brought on to do so primarily by strengthening two educational institutions, Tubman National Institute of Medical Arts (TNIMA) and Esther Bacon School of Nursing and Midwifery (EBSNM).

The Pre-service Implementation Guide (PIG) by Jhpiego is being utilized for this aspect of the project. Standards-Based Education Management and Recognition (SBM-R) has been initiated as a way to improve the performance of educational institutions and clinical sites. Core competencies and curricular changes as well as activities for strengthening clinical sites have been initiated. Over the duration of the project, RBHS intends to impact the aforementioned institutions and four cadres of health care providers (PAs, RNs, CMs and EHTs) that serve the country and are—in a significant way—responsible for impacting the rates of maternal morbidity and mortality.

The health sector is struggling to make the postwar transition with only 65% of health facilities functional, providing access to services to only 40% of the population (as of 2006) (BASICS 2009). A country of 4.1 million people (PRB 2010), Liberia continues to have some of the world's most alarming health statistics, including an infant mortality of 99 per 1,000 live births, under-five mortality rate of 235 per 1,000 live births in 2008 (PRB 2010), and a maternal mortality rate of 994 per 100,000 live births in 2007 (BASICS 2009).

From these statistics, we may infer that tasks related to labor and delivery care, obstetrical complications (OC), newborn care (NC), family planning (FP), and infant and child health need to be located in one or more health care worker JD. There are also a few recent environmental health (EH) indicators that provide data revealing some of the most pressing issues. From these, we see that rural areas are utilizing improved drinking water less than urban areas, as only 52% have access compared to 72% in urban areas. Overall, access to safe water is estimated at 64% (PRB 2010). Since pollution of water resources by human waste is a primary source of unsafe water, concerted effort to reduce this contamination through the work of trained EHTs will have a significant impact on population morbidity and mortality, especially among infants and young children.

Following the installation of a new president in 2005, the Liberian government has taken action to restore its health system to a functional state. The National Health Policy and Strategic Plan has been developed as is being implemented. In December 2007, the MOHSW launched the BPHS, which comprises essential services that the MOHSW guarantees for its citizens in order to achieve improved health outcomes. The BPHS has six priority areas: MNH, CH, ASRH, CDC, EME and MH. Though the public sector is still heavily reliant on nongovernmental organizations (NGOs) and other donor-funded institutions, the

aim of the MOHSW is that all health service providers will implement the BPHS. One of the key challenges that the MOHSW faces to successful implementation of the BPHS is the availability of qualified health workers. Against a backdrop of civil war and weak leadership, health workers have been forced to adapt to changing health needs and trends, often without adequate training. Although the BPHS itself states that it “implies that a minimum set of health staff with appropriate skills will be present at each of the facility levels” (MOHSW 2007), significant efforts must still be made to increase the workforce by the estimated level of 10,000 health care workers required to meet both BPHS standards and the population’s health needs (Cheng 2009).

The BPHS also notes that it offers guidance for the design of training content. As such, the BPHS serves as a blueprint for the expected performance of providers and the competencies recent graduates should have when entering the workforce. Health worker JDs and training curricula have not been updated since the 1980s, with the exception of the RN and CM curricula for which there have been efforts as recent as 2008. Even so, the RN and CM core competency documents call for a review of the core competency within two years time; hence, the task analysis comes at a timely juncture.

This task analysis was conducted to inform improvements in PSE, including updates to the core competencies, curricula and JDs of the four cadres to ensure a streamlined, competency-based education process that is linked to job readiness for an entry-level position at a clinic or hospital. The information derived may also provide evidence for the services included in the BPHS and/or adjustments that may appropriate.

## 5. METHODOLOGY

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### DESIGN

The task analysis included semi-structured interviews with recent graduates from four cadres of health workers: RNs, PAs, CMs and EHTs. Recent graduates invited to participate met the following requirements: They were from one of the four cadres, currently working in a health facility in a project county, had graduated in the past six months to two years (2007–2009), and was not on probation.

### SAMPLE

An estimated 100 RNs, 40 CMs, 40 PAs and 30 EHTs graduate every year from Liberian training institutions. Due to unavailability of data regarding the number of recent graduates actually working in MOHSW sites, convenience sampling was conducted, visiting seven (of fifteen) counties in which RBHS support health facilities. Within each county, the study team first visited project-supported facilities, followed by other health facilities as time permitted.

### TOOLS

Utilizing the BPHS and recently developed quality improvement clinical standards, the investigators from Jhpiego compiled two surveys: one for the RNs, CMs and PAs, and a separate one for the EHTs, working with the EH expert.

Both surveys followed the same format: For each task, the respondent was asked how frequently s/he performs it (“Never”, “Rarely”, “Daily”, “Weekly” or “Monthly”); whether or not s/he was trained to do so (“Yes” or “No”); and if trained, where s/he was trained (“School”, “Job” or “Both”). The surveys leave space for other comments to be made under each task and at the end of the survey, where the respondent is asked a more open-ended question on tasks performed for which training was not received. The surveys also collected a few measures of demographics (e.g., county location, facility type, date of graduation and date entering workforce).

**RN/CM/PA tool:** The RN/CM/PA survey contained 264 tasks spanning health facility management to infection prevention, and the 17 priority health areas specified in the BPHS. The task items were selected after consulting BPHS and clinical standards developed through the PSE Strengthening Initiative, and represent the tasks that RNs, CMs and PAs are expected to perform. The ETNWX reviewed the selected tasks used to develop the survey. This task analysis examined the following areas:

- Malaria (MAL)
- Family Planning (FP)
- Antenatal Care (ANC)
- Postnatal Care (PNC)
- Adolescent Sexual and Reproductive Health (ASRH)
- Normal Labor Care (NLC)

- Obstetric Complications (OC)
- Management (MGM)
- Infection Prevention (IP)
- Mental Health (MH)
- Sick Newborn Care (SNC)
- Expanded Program on Immunizations (EPI)
- Integrated Management of Childhood Illnesses (IMCI)
- Infant and Young Child Feeding (IYCF)
- Emergency Health (EME)
- Sexually Transmitted Infections (STIs)
- Voluntary Counseling and Testing (VCT)
- Tuberculosis (TB)
- Control And Management Of Other Endemic Diseases (CMOED)

**EHT tool:** Because EH is not currently a part of the BPHS, the EHT survey tool was developed utilizing input outlined in the existing JD, as well as input from stakeholders. This work was led by the NWG with assistance from a Jhpiego-supported EH education expert who consulted on the RBHS Project.

## **OPERATIONS**

### **Institutional Review Boards (IRBs)**

The University of Liberia IRB and the IRB of Johns Hopkins University Bloomberg School of Public Health approved the final surveys, study protocol, consent forms and other tools.

### **Piloting Tools and Training Data Collectors**

A team of 16 participants from the RBHS, ETNWG, educational institutions and county health teams with prior surveying experience completed a two-day workshop, which included piloting of the tools. Six recent graduate volunteers from a local hospital and clinics in Monrovia, Liberia, participated with the facility department head's approval. The surveys were revised for language clarifications as requested. In addition to piloting, the Jhpiego-facilitated workshop included training in research ethics, orientation to the study protocol, and practice sessions for using the survey and conducting interviews. Interviewers were supplied with a roster, an interview script, consent forms and surveys. The co-investigator in the field maintained a locked box for completed surveys.

### **Data Collection**

Over a seven-week period from December 2009 to February 2010, the interview team—which was made up of 12 persons who had participated in the training workshop—administered the survey. The interview team included: interviewers representing each cadre; RBHS county coordinators responsible for working with the county health team for

RBHS activities implemented by RBHS-supported NGOs; and RBHS staff. Informed consent was obtained from all survey participants.

## Data Management

Once completed, the surveys were stored in locked file boxes carried by the interview team members to the RBHS facility. Then, the surveys were sent to Baltimore, Maryland (location of Jhpiego headquarters), by air and stored in a locked cabinet.

## Data Analysis

Data entry was conducted over a 12-week period, from January to March 2010. The Jhpiego Liberia senior program coordinator, who was not involved in data entry, verified 10% of the data entered; and any errors found were fixed in the database. Missing or inconsistent responses were assigned specific codes according to the type of issue. A descriptive statistical analysis was performed on the overall survey data, with additional breakdowns by cadre and facility level. Stata v 11.0 was used to tabulate data, and results were recorded in a series of tables in Microsoft Excel.

## Description of Respondents

A total of 203 participants (119 RNs, 46 CMs, 38 PAs) were surveyed, representing half of the recent graduate population of these three cadres nationwide. A total of 40 EHT participants were surveyed, representing 80% of the recent EHT graduate population. Table 1 describes characteristics of the sample.

**Table 1: Sample Characteristics**

	Overall	RN	CM	PA	EHT
<b>Cadre, No. (%)</b>					
RN	119 (50%)				
CM	46 (19%)				
PA	38 (15%)				
EHT	40 (16%)				
<i>Months in Workforce, Mean (SD)</i>	14.6 (8.4)	13.6 (8.4)	16.9 (8.7)	14.7 (7.4)	14.7 (6.6)
<b>County, No. (%)</b>					
Bomi	19 (9%)	13 (11%)	5 (11%)	1 (3%)	5 (13%)
Bong	32 (16%)	25 (21%)	6 (13%)	1 (3%)	1 (3%)
Grand Cape Mount	23 (11%)	16 (14%)	5 (11%)	2 (5%)	0 (0%)
Lofa	36 (18%)	24 (20%)	8 (17%)	4 (11%)	8 (20%)
Montserrado	38 (19%)	11 (9%)	8 (17%)	19 (50%)	11 (28%)
Nimba	30 (15%)	22 (19%)	7 (15%)	1 (3%)	9 (23%)
River Gee	25 (12%)	8 (7%)	7 (15%)	10 (26%)	6 (15%)

	Overall	RN	CM	PA	EHT
<b>Facility Type, No. (%)</b>					
Clinic	76 (37%)	39 (33%)	19 (41%)	18 (47%)	13 (33%)
Health Center	24 (12%)	12 (10%)	7 (15%)	5 (13%)	6 (15%)
Hospital	103 (51%)	68 (57%)	20 (44%)	15 (40%)	11 (28%)
Office/Community					5 (12%)
Government					5 (12%)

## 6. SURVEY FINDINGS: RESULTS/DISCUSSION BY CADRE

For this analysis, we focused on the observable tasks in the JDs since the core competencies are broader statements that encompass all domains of learning. The ETN WG will need to review these competencies and update them once the JDs are finalized. (The core competencies deal mostly with professional conduct and behavior, which we were unable to assess using a verbal survey.)

Since there were two separate surveys (one for RNs, CMs and PAs, and one for EHTs), the findings will be separated accordingly.

### THE RN, CM AND PA CADRES

The results are presented by cadre, as described in Table 2, to inform JDs for each of the three groups (RNs, CMs, PAs).

**Table 2: Key Results to Guide Updates to Job Descriptions and Training Needs**

Results	Input for Decision
Proportion of providers in each cadre in each area that performs tasks frequently	Differences in the proportion of each cadre that performs tasks frequently will help identify which BPHS areas should be included in the JDs for each cadre. Tasks considered for inclusion in updated JDs will be compared to the existing JDs to determine what could be strengthened either by adding or removing tasks.
Within each area, comparison of the proportion of clinic- and hospital-level providers in each cadre that performs specific tasks frequently	Patterns in frequency that differ within a cadre by facility type will highlight what could compose the main elements of the JDs and what, if any, <b>elements specific to either community (clinic or health center) or hospital level</b> could be included in the JDs.
	<b>Key tasks (KTs)</b> will include those tasks that are recommended for inclusion in the JD for the entire cadre. These include tasks that are performed frequently by a relatively large proportion of providers within a cadre as well as tasks that are not performed frequently by a large proportion of providers but that are potentially life-saving.
Comparison of proposed JD content to proposed composition of core competencies	The areas or tasks that are on the on the JDs for all providers and on the list of KT should be included in <b>PSE</b> .  Facility-specific elements of the JD that do not overlap with the KT may be considered for <b>in-service training (IST) versus PSE</b> .
For those tasks where the JD and KT overlap, results of where the providers were trained will be analyzed to determine what training was received in school	These analyses will help determine current gaps in <b>PSE</b> and will have implications for IST.
For all tasks providers were not trained in, description of whether these are performed and considered KTs	

### AGGREGATE RESULTS

Overall, there is a wide variation across the areas in the overall percentage of daily/ weekly responses, as shown in Table 3.

**Table 3: Overall Percentage of Providers Performing Tasks Frequently, by BPHS Sub-areas**

Malaria (MAL)	81%
Infant Youth and Child Feeding (IYCF)	60%
Management (MGM)	55%
Integrated Management of Childhood Illnesses (IMCI)	53%
Infection Prevention (IP)	53%
Antenatal Care (ANC)	48%
Postnatal Care (PNC)	48%
Adolescent Sexual and Reproductive Health (ASRH)	48%
Normal Labor Care (NLC)	36%
Family Planning (FP)	35%
STI, HIV/AIDS (STI, HIV)	32%
Expanded Program on Immunizations (EPI)	28%
Emergency Health (EME)	21%
VCT (VCT)	19%
Tuberculosis (TB)	18%
Sick Neonatal Care (SNC)	18%
Obstetric Complications (OC)	15%
Control and Management of Other Endemic Diseases (CMOED)	10%
Mental Health (MH)	4%

## FREQUENCY OF TASKS PERFORMED

Some task areas have a higher proportion of frequent responses overall. While very broad, this information already begins to indicate areas that either are supported by a vertical program and/or may need increased emphasis in PSE. For example, competencies, curricular content and practice related to malaria, management, IMCI and infection prevention (IP) may need to be strengthened. It is also important to remember that while some tasks are not done frequently, it does not indicate that there is not a need. (This task analysis did not capture this outside of the comments section.) For example, MH is only at 4%, but given that there is only one psychiatrist in the country and minimal training for providers, it is not unusual for the percentage to be so low. However, given that the country was at war for 15 years, it is hard to imagine that the need for MH services is not there.

Knowing the frequency of the tasks is not sufficient enough information to identify KT's; frequencies need to be compared to the type of preparation providers received in related areas. Survey respondents may have interpreted the definition of "training" in different ways, but the common denominator was that if they received classroom instruction, it was considered training. In some instances, respondents verbalized that they knew getting the clinical simulation or practice was not enough. Consequently, if they learned the theory in school, they either mentioned that as training or stated that they did not receive training. When comparing corresponding curricula to their responses, we see that in many instances their practical experience is limited. As each service delivery area is examined, the KT's that emerge will be cast against a graphic depiction of where respondents received training.

This will allow the ETNWG to make decisions about where increased emphasis should be placed and what content may be best suited for inclusion in PSE versus training once health workers start working (i.e., apprenticeship, on-site training activities or formal workshops, otherwise referred to as IST). In future task analyses it would be best to ensure that all respondents have a similar definition of “training”. (Other suggestions for improving the methodology used will be examined in the discussion section at the end of this report.)

## **KEY TASKS (KTS)**

As mentioned previously, the KT's will include those tasks that are recommended for inclusion in the JD for the entire cadre. These include tasks that are not performed frequently by a large proportion of providers, but are potentially life-saving. Some tasks occur more frequently at one facility type over another, but still could be considered a KT. Appendix B: Matrix of Key Tasks by Cadre and Area describes for each cadre which areas, or which specific tasks within an area, are currently proposed to be part of the entire cadre's JD and set of KT's.

## **TRAINING RESULTS FOR PROPOSED KTS**

The results show the following outcomes for each area:

1. % of providers not trained (Trained, No)
2. % of providers trained only on the job (Trained, Job)
3. % of providers trained only in school (Trained, School)
4. % of providers trained both in school and on the job (Trained, Both)

The proportion of providers that report not being trained or trained only on the job represents the percentage of each cadre that was not trained in PSE and offers evidence for where PSE could be strengthened.

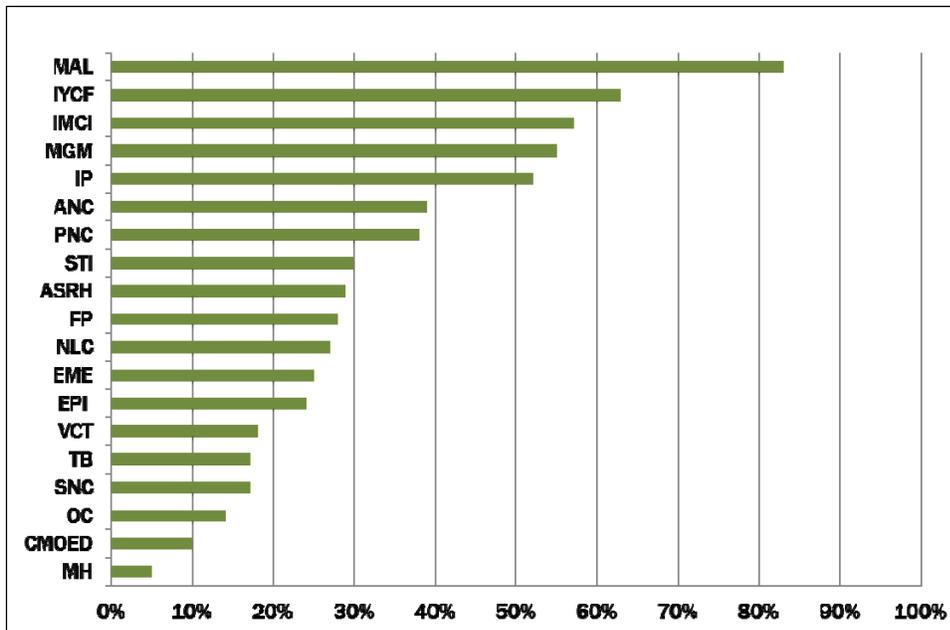
## **JOB DESCRIPTIONS (JDS)**

### **1. Overview**

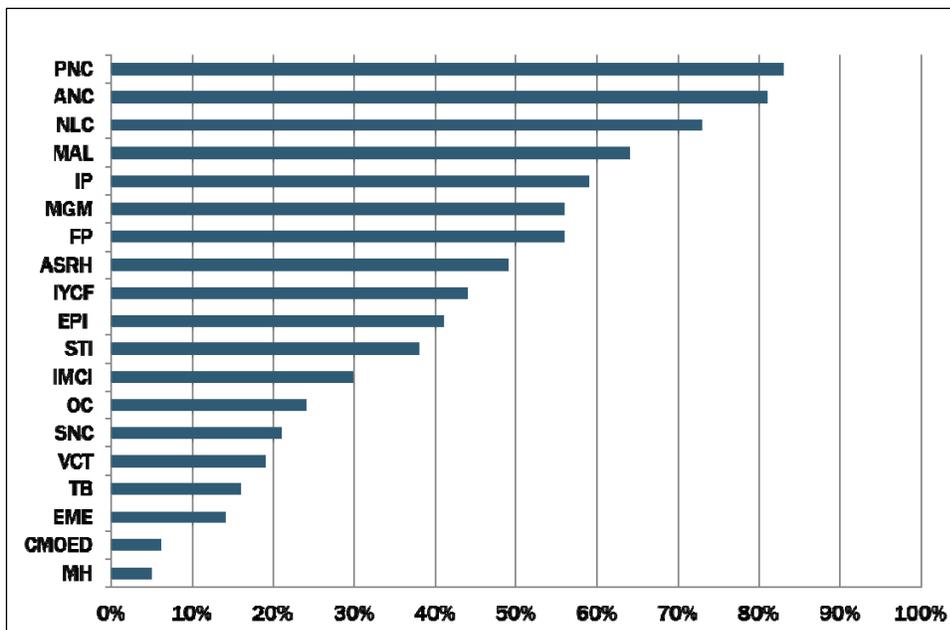
Updates to JDs may be informed by examining the proportion of each provider type that performs the various tasks frequently. Comparisons will be made by provider type and by differences between clinic- and hospital-level workers within the same cadre; these comparisons will allow us see if there are certain tasks that are facility-specific. Though all tasks on the JDs should be included in PSE, it is important to decide how the JD is outlined and how much time or emphasis to give in credit hours. The current nursing JD provides a nice format with general, community-level (clinic and health center) and hospital responsibilities. Though this study did invite providers from the health-center level, only a few recent graduates were interviewed from that level—12 RNs, seven CMs and five PAs. Due to these low numbers and to the inability to say anything general about the health-center level, these data were not included in the analysis. However, since health centers offer similar services as hospitals, responsibilities on the JD for health centers could fall under hospital-level responsibilities.

Proportions vary for the majority of tasks. To begin, the overall percentage of each cadre that performs tasks frequently by area is presented in Figures 1.0, 1.1 and 1.2, in descending order.

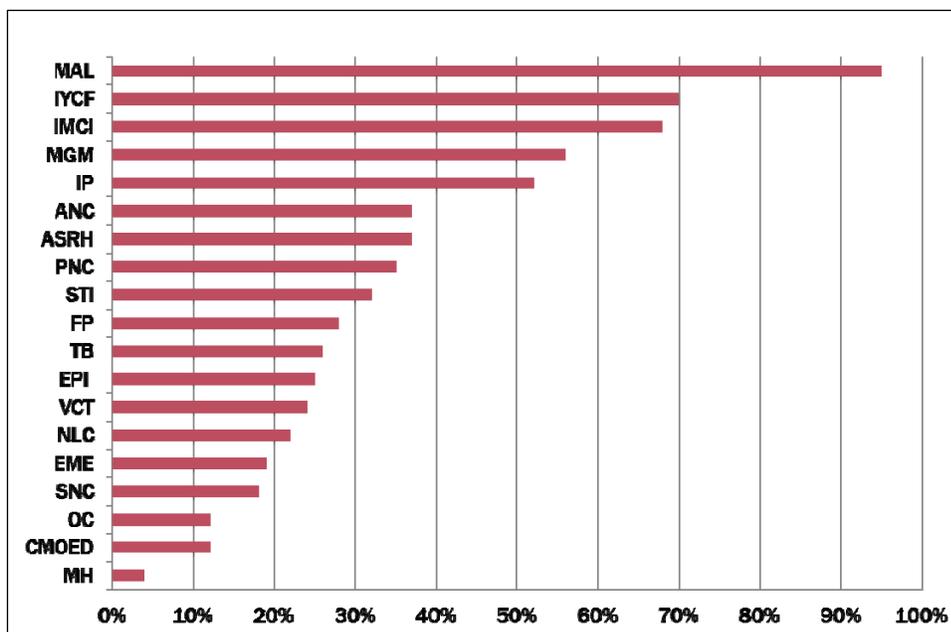
**Figure 1.0. Overall Percentage of RNs Frequently Performing Tasks, by Area**



**Figure 1.1. Overall Percentage of CMs Frequently Performing Tasks, by Area**



**Figure 1.2. Overall Percentage of PAs Frequently Performing Tasks, by Area**



These percentages represent the proportion of daily or weekly responses on tasks within each area for the RN, CM and PA cadres. These results, however, are not a complete measure of how often this care is provided by other providers not included in the survey. For example, a community health worker (CHW) or more senior health care provider (i.e., more than two years of experience) could be implementing tasks that are not reflected. Nonetheless, these overall averages help identify, at a minimum, which areas should be part of each cadre’s JD. When organized as in Table 4, some patterns emerge.

**Table 4: Percentage of Each Cadre that Frequently Performs Tasks Overall in Each Area**

These percentages represent the proportion of daily or weekly responses across all tasks within each area for the RN, CM and PA cadres.

	RN	CM	PA
<b>&gt;75%</b>	MAL (83)	PNC (83)	MAL (95)
		ANC (81)	
<b>50–74%</b>	IYCF (63)	NLC (73)	IYCF (70)
	IMCI (57)	MAL (64)	IMCI (68)
	MGM (55)	IP (59)	MGM (56)
	IP (52)	FP (56)	IP (52)
		MGM (56)	
<b>25–49%</b>	ANC (39)	ASRH (49)	ANC (37)
	PNC (38)	IYCF (44)	ASRH (37)
	STI (30)	EPI (41)	PNC (35)
	ASRH (29)	STI (38)	STI (32)
	FP (28)	IMCI (30)	FP (28)
	NLC (27)		TB (26)

	RN	CM	PA
	EME (25)		EPI (25)
10-25%	EPI (24)	OC (24)	VCT (24)
	VCT (18)	SNC (21)	NLC (22)
	TB (17)	VCT (19)	EME (19)
	SNC (17)	TB (16)	SNC (18)
	OC (14)	EME (14)	CMOED (12)
	CMOED (10)		OC (12)
<10%	MH (5)	CMOED (6)	MH (4)
		MH (5)	

In Table 4, looking at the bar “>75%”, RNs and PAs perform malaria-related tasks most frequently. This confirms the relationship between the national need and direct changes in PSE referred to in the executive summary (i.e., national need-job description-core competency-inclusion in PSE). Malaria prevention as a national need (with more health education and prevention measures) must be included in PSE in order for providers to be prepared to deliver those services upon graduation. Concurrently, the research and resources are available. Malaria is an area that has vertical funding in country; and malaria training is available with test kits and clear diagnostic and treatment algorithms. Upon graduation, key malaria competencies should be included in the responsibilities of each health worker’s job description. Realizing the endemicity of malaria in Liberia as the primary cause of morbidity in all health facilities, malaria-related tasks may need to be included in JDs of all four cadres. However, considering that PAs and RNs see the most malaria cases and work alongside CMs or other health workers, it may be advisable to lift malaria-related responsibilities from the CM and ensure that PAs and RNs are trained in PSE. This division of labor is seen in other countries.

ANC and PNC are also highlighted in the “>75%” bar for the CM. ANC and PNC are examples of where the BPHS, curriculum and JDs are mostly aligned. (ANC and PNC are a part of the CM and PA JDs, but not the RN JD.) Depending on workload, it may be advisable to have RNs (and continue having PAs) conduct ANC and PNC, even though they report only conducting both from 35-39% of the time. We have to keep in mind that the respondents are new workers and may not be proficient enough or comfortable enough to conduct these services as necessary. It may also be the case that the CM workload is low enough that she is able to conduct most of these visits. In addition, anecdotal evidence reveals that clients have a tendency to want the same provider for ANC and PNC visits and may return to the clinic later if they see that that a certain provider (i.e., the midwife) is not present that day. This is a behavior change communication (BCC) effort that needs to be reversed but will take time. Clients should feel that they are receiving standard care, no matter the provider. BCC is highlighted in both the PA and EHT JD, but may need more emphasis in the RN and CM JDs.

More complexity emerges when making decisions about the tasks that are performed frequently by smaller proportions of each cadre; in that, some reasons for these smaller proportions are: the system for that type of care is not fully developed (e.g., MH), and the areas include tasks that respond to infrequent events (e.g., OC are known to occur in about

15% of pregnancies). It is important to use caution when considering removing areas of the JD or not including them based on this overall average. If all areas with less than 25% of tasks being performed frequently by providers were removed, the entire set of tasks within OC, SNC, VCT and CMOED would not be a part of any direct service delivery cadre's JD. To get a more complete picture of the specific areas, see details below.

*Please use Appendix B, Matrix of Key Tasks by Cadre and Area, while reviewing each area in this report.*

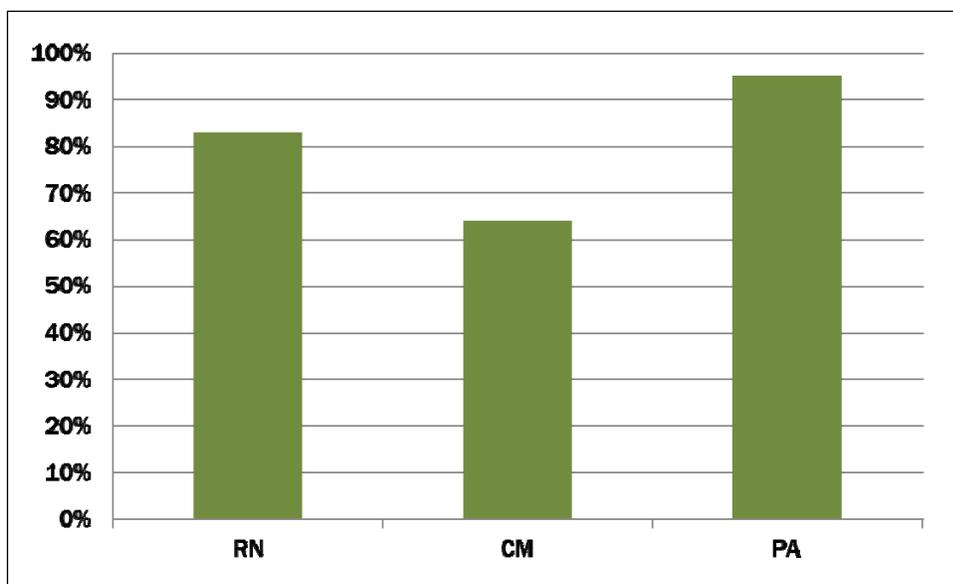
## 2. Malaria

The malaria area included eight tasks (malaria care for the pregnant woman was included in the ANC section and will be presented with ANC results):

1. Conduct a rapid initial assessment of suspected malaria of client
2. Collect key information during history-taking
3. Conduct a physical exam to diagnose malaria
4. Use malaria case management diagnostic algorithms
5. Use malaria case management treatment algorithms
6. Manage malaria in children under five years of age
7. Use rapid test to identify presence of malaria parasites
8. Provide education on malaria prevention

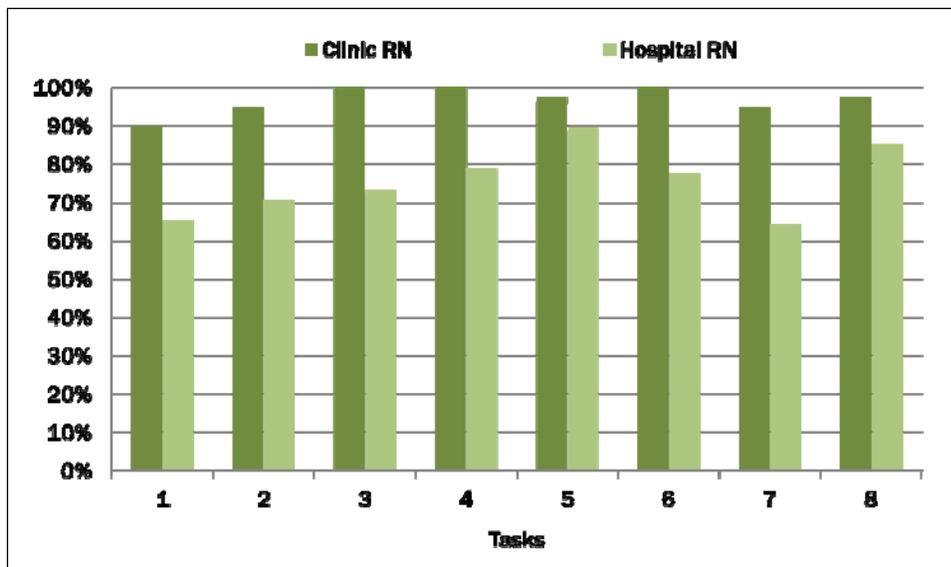
As seen in Figure 2.0, on average, a large proportion of each of the three cadres performs malaria tasks frequently.

**Figure 2.0. Percentage of Each Cadre that Performs Malaria Tasks Frequently**

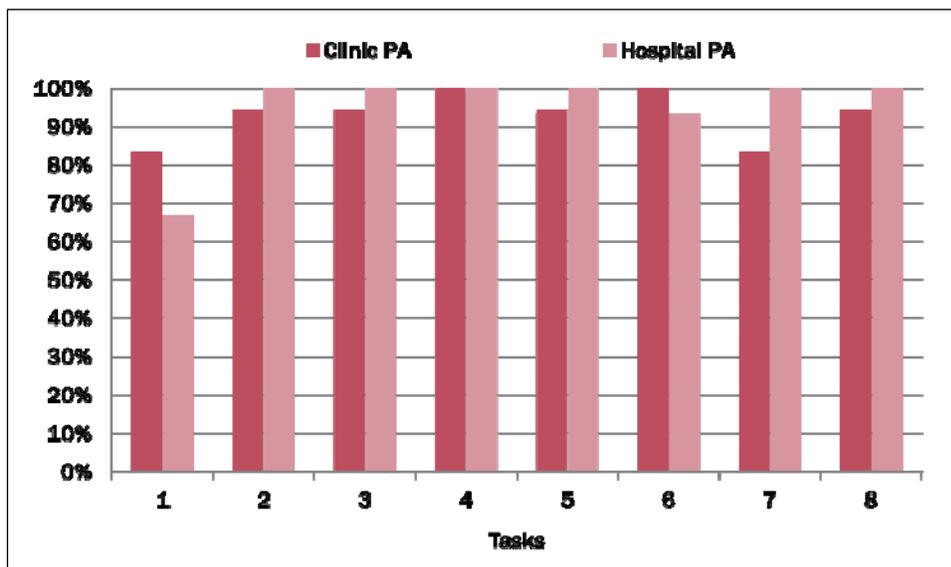


Examining further, it can be seen that a high proportion of RNs and PAs working at both hospitals and clinics performs all the malaria tasks frequently, and that there is more variation among CMs depending on place of work.

**Figure 2.1. Percentage of RNs that Performs Malaria Tasks Frequently, by Facility Type**



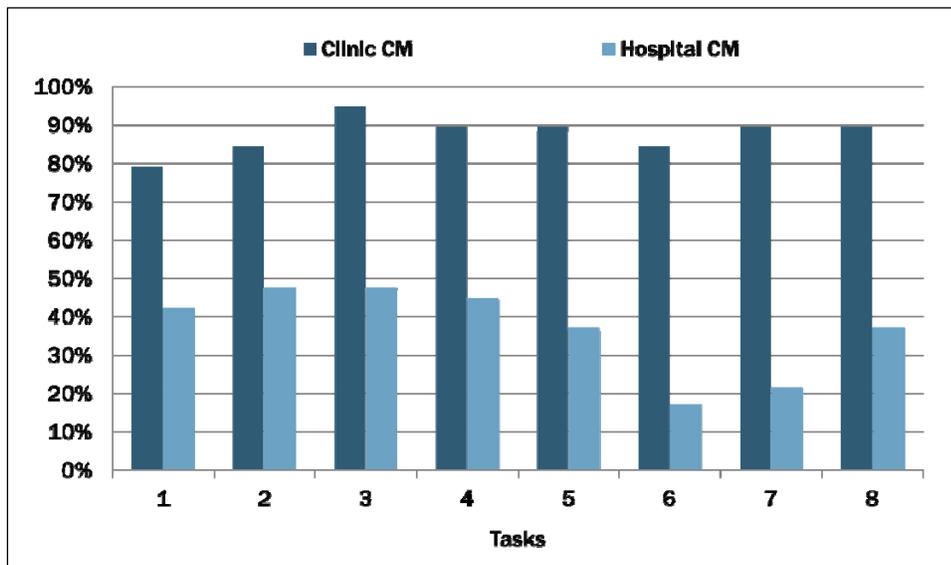
**Figure 2.2. Percentage of PAs that Performs Malaria Tasks Frequently, by Facility Type**



Generally, a lower percentage of hospital CMs performs malaria tasks frequently. There are some malaria tasks (e.g., rapid initial assessment, history, physical, use diagnostic algorithms) that close to 50% of hospital CMs performs frequently. (See Figure 2.3 for percentage of CMs that performs malaria tasks frequently.) Generally in the hospital, the CM is not the first person to encounter the client with malaria; as such, many of the tasks would be completed in the emergency room or pediatrics before contact with the CM. Given this pattern, it may be reasonable to conclude that all malaria tasks should be included in the JDs for RNs and PAs only and only KT in the CM JD, focusing on pregnant women. This distinction will assist in streamlining the work at the point of care and ensure that the

curriculum does not get overstuffed. This same discussion will guide the identification of which tasks will contribute to the list of KT's that could have a greater focus in existing courses and be benchmarks on which to assess students. Figures 2.1 and 2.2, with the results for RNs and PAs, can be found above.

**Figure 2.3. Percentage of CMs that Performs Malaria Tasks Frequently, by Facility Type**



There is a clear need for increased training in PSE, per the respondents; particularly if the stakeholders decide that these malaria tasks should be included in the JD and that these cadres should be competent to perform them upon graduation. (Overall training figures are located in Appendix A: Average Training Preparation By Cadre and Area.)

### 3. Family Planning (FP)

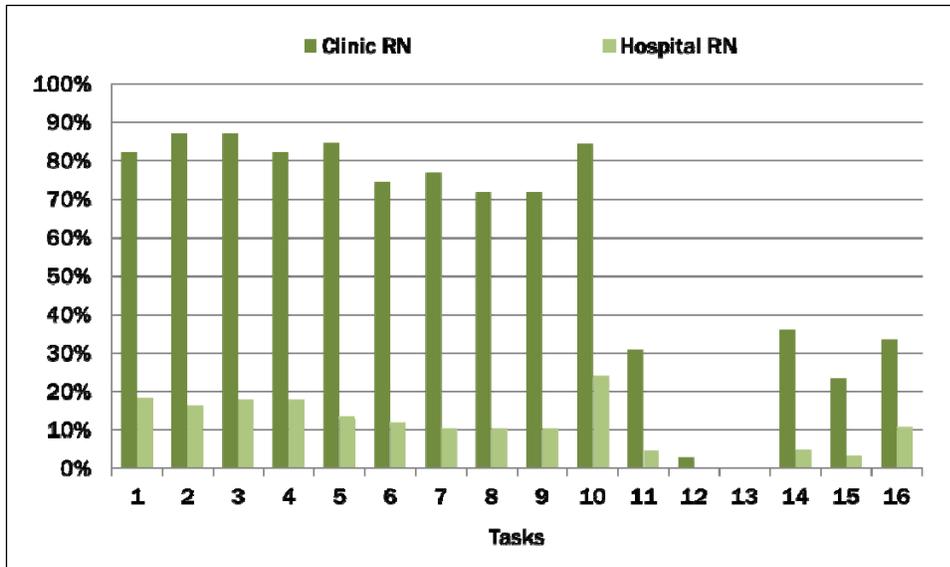
The FP tasks adapted from BPHS performance standards and included in the study are:

1. Use recommended family planning (FP) counseling techniques
2. Provide information on contraceptive methods according to clients' needs
3. Provide information on birth spacing
4. Assess for pregnancies
5. Conduct return visits
6. Use medical eligibility criteria when counseling on contraceptive options
7. Give specific information on combined oral contraceptives (COCs)
8. Give specific information on progestin-only pills (POPs)
9. Give specific information on Depo-Provera® (DMPA)
10. Give specific information on condoms
11. Give specific information on intrauterine contraceptive device (IUCD)
12. Insert IUCD

13. Remove IUCD
14. Give specific information on emergency contraception (EC)
15. Provide EC
16. Provide general information on male and female sterilization

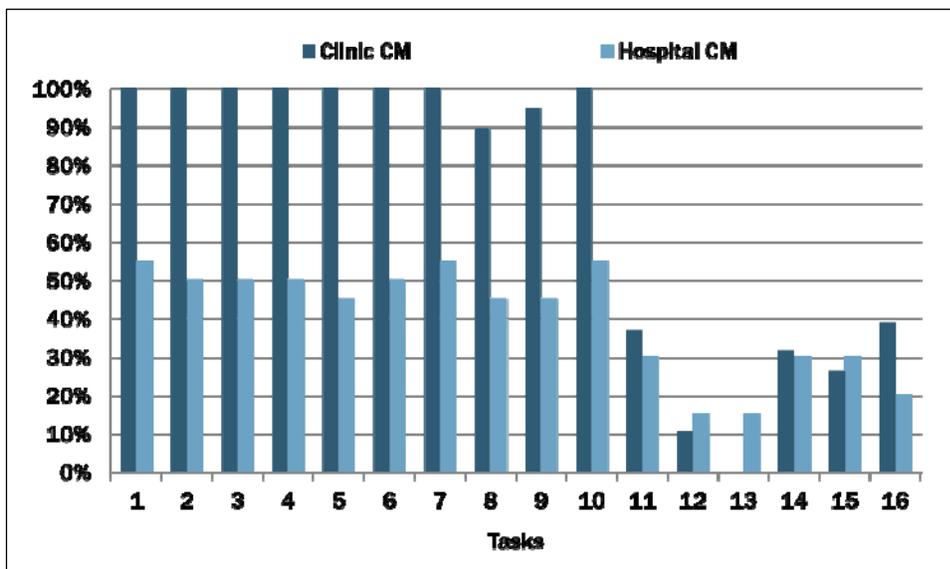
Results in FP—across cadres and facility types—are interesting. Figures 3.0, 3.1 and 3.2 show results for RNs, CMs and PAs, respectively.

**Figure 3.0. Proportion of RNs that Performs FP Tasks Frequently, by Facility Type**



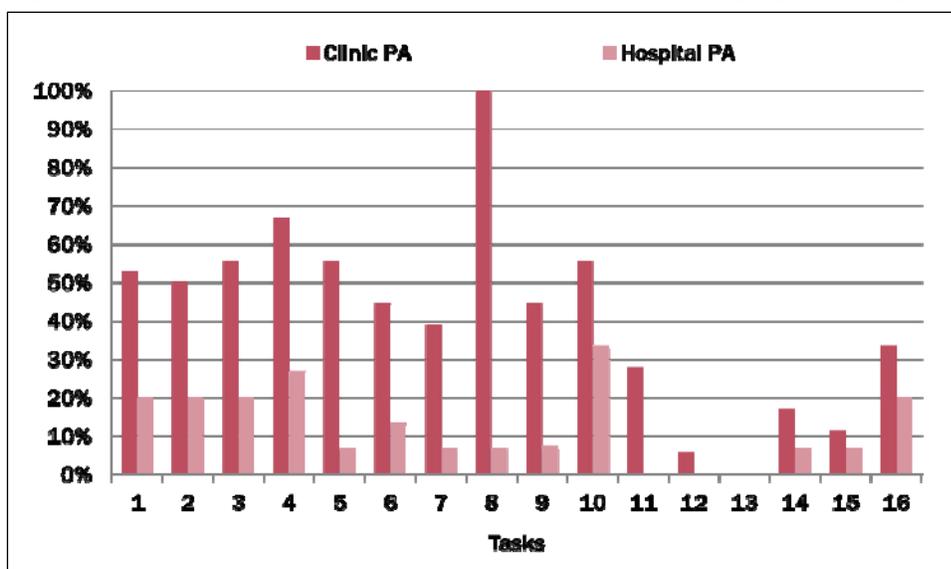
\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

**Figure 3.1. Proportion of CMs that Performs FP Tasks Frequently, by Facility Type**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

**Figure 3.2. Proportion of PAs that Performs FP Tasks Frequently, by Facility Type**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

Figures 3.0–3.2 demonstrate that all FP tasks (and corresponding provisions) should be included in the JDs for RNs, PAs and CMs. Let’s examine the patterns for three related tasks: 11, 12 and 13 (give specific information on IUCD, insert IUCD, and remove IUCD, respectively). Generally, these tasks are performed frequently by a low proportion of providers because there are few to no providers in these categories who have been trained. Given these considerations, it may be appropriate to include insertion and removal of the IUCD in all JDs. Moreover, the lower frequency in the hospital may be the result of the unavailability of commodities, equipment and supplies.

The FP tasks that are listed in the BPHS currently focus on information and counseling and not on service provision, with the exception of IUCD and EC. This is due in part to the current lack of resources and commodities and competency-based training (CBT) in FP. IUCD and EC are the only FP components of the Minimal Initial Service Package (MISP) in humanitarian settings; so, it makes sense historically why these were the focus of provision. But, moving out of this state into development is now moving the country to focus on developing capacity in all FP areas, including Jadelle® insertion.

As previously mentioned, knowing frequency of these tasks is not sufficient enough information to identify the KTs. These frequencies need to be compared to the type of preparation providers received in the areas that are part of the BPHS. To compare the emerging tasks with the kind of training students received, the following figures have been created to better understand this relationship among these tasks only. For FP, the average percentage of RN preparation in tasks 1–10, 14–16 and all FP tasks may be seen below. These tasks were grouped together when they had comparable statistics with a 10% range.

Figure 3.3. RN Training Preparation in FP Tasks 1–10

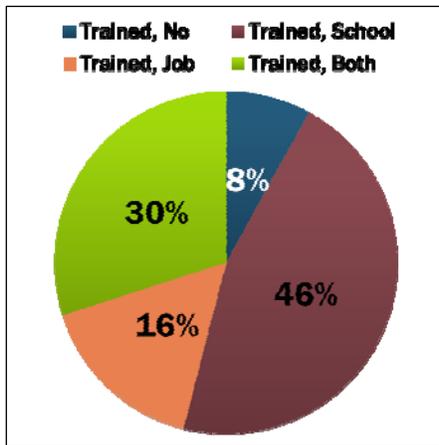


Figure 3.4. RN Training Preparation in FP Tasks 14–16

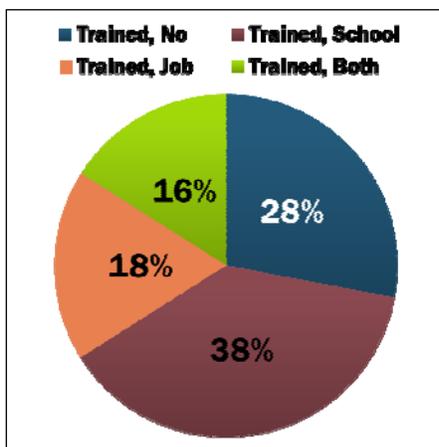


Figure 3.5. RN Training Preparation in all FP Tasks

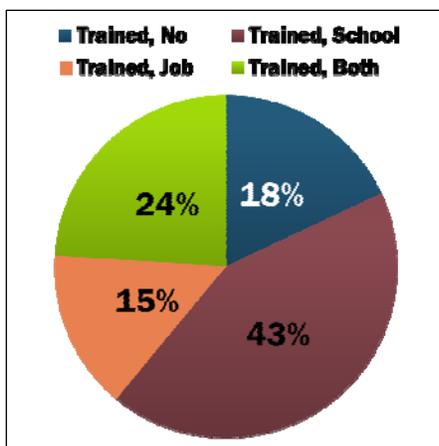


Figure 3.6. CM Training Preparation in all FP Tasks

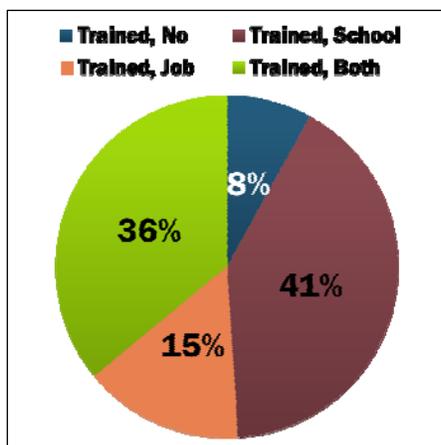
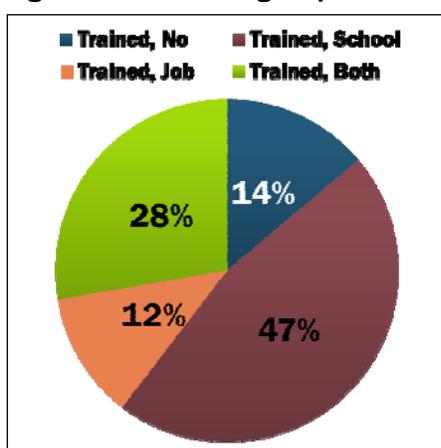


Figure 3.7. PA Training Preparation in all FP Tasks



For Figures 3.5–3.7, a recommendation is not possible until more comprehensive FP services are provided. However, a study will not be able to capture what is happening with which frequency. It would be better to advise that PAs, RNs and CMs all be prepared to competency to provide FP services. Since there is information on IUCD, we may leave this task to CMs and PAs for now; but, this service should also be studied further in the future.

#### 4. Antenatal Care (ANC)

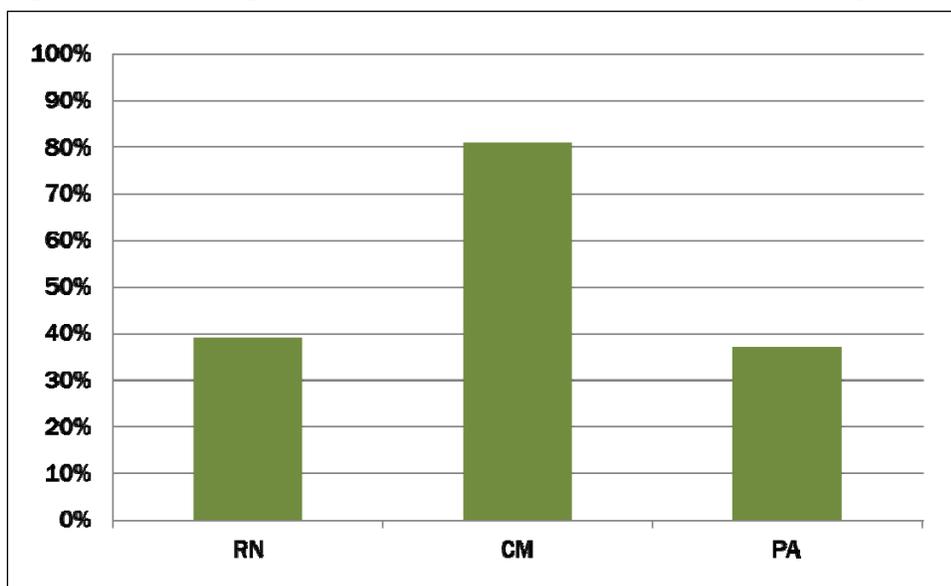
The 18 ANC tasks included in the survey are:

1. Conduct rapid initial evaluations of pregnant women
2. Treat woman and companion(s) with respect
3. Interview pregnant woman for danger signs
4. Obtain obstetrical history
5. Obtain medical history from pregnant woman
6. Perform physical exams on pregnant woman
7. Perform obstetrical exams
8. Counsel woman and companion(s) on personal care (nutrition and hygiene)

9. Counsel woman on breastfeeding
10. Conduct individualized care for pregnant woman based on findings and protocols
11. Initiate intermittent preventive treatment (IPT) according to protocol
12. Assist women and companion(s) with birth preparedness and complication readiness
13. Plan return ANC visits
14. Counsel ANC client regarding postpartum family planning (PPFP)
15. Counsel ANC clients with HIV
16. Evaluate care given to ANC client
17. Treat pregnant woman with malaria according to national guidelines
18. Advise on use of insecticide-treated net (ITN)

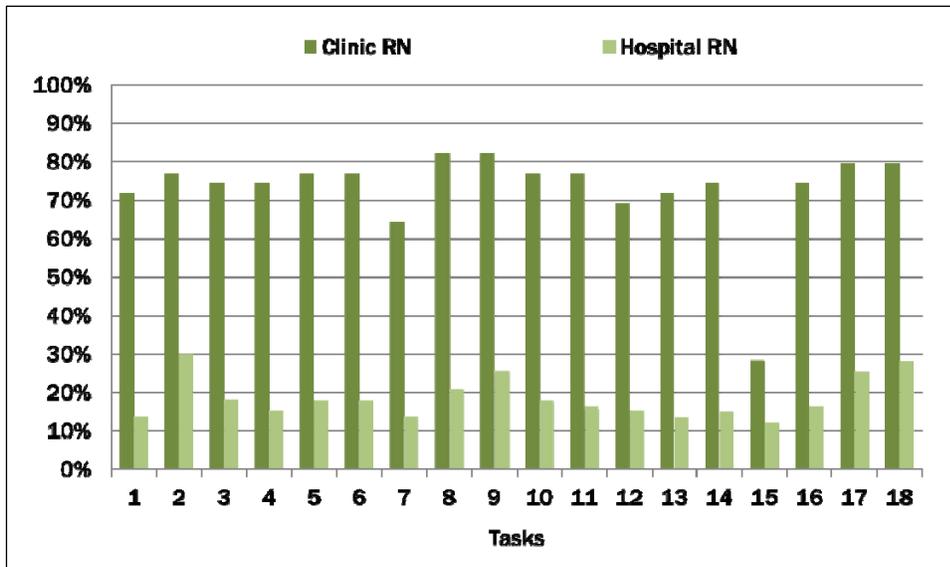
As Figure 4.0 demonstrates, there is wide variation in the overall proportion of each cadre that performs ANC tasks frequently. Therefore, it is important to consider ANC as part of the JDs of RNs and PAs, with closer examination of the patterns of clinic versus hospital (seen in Figures 4.0, 4.1 and 4.2).

**Figure 4.0. Percentage of Each Cadre that Performs ANC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

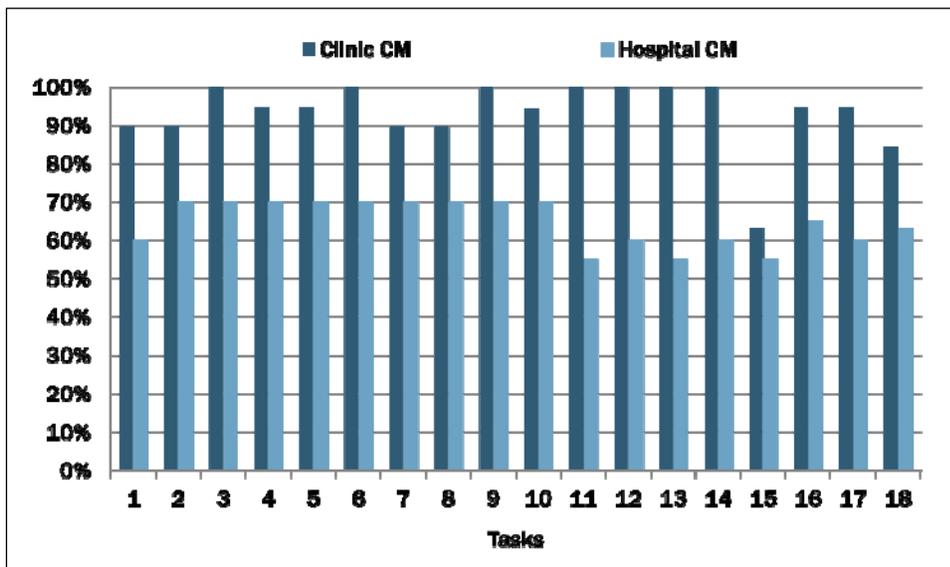
**Figure 4.1. Percentage of RNs that Performs ANC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

Although, on average, less than 40% of RNs performs ANC tasks frequently, a minimum of 65% of clinic RNs performs these tasks frequently, with the exception of one task: counsel ANC clients with HIV. This exception may be, in part, due to lack of training on HIV.

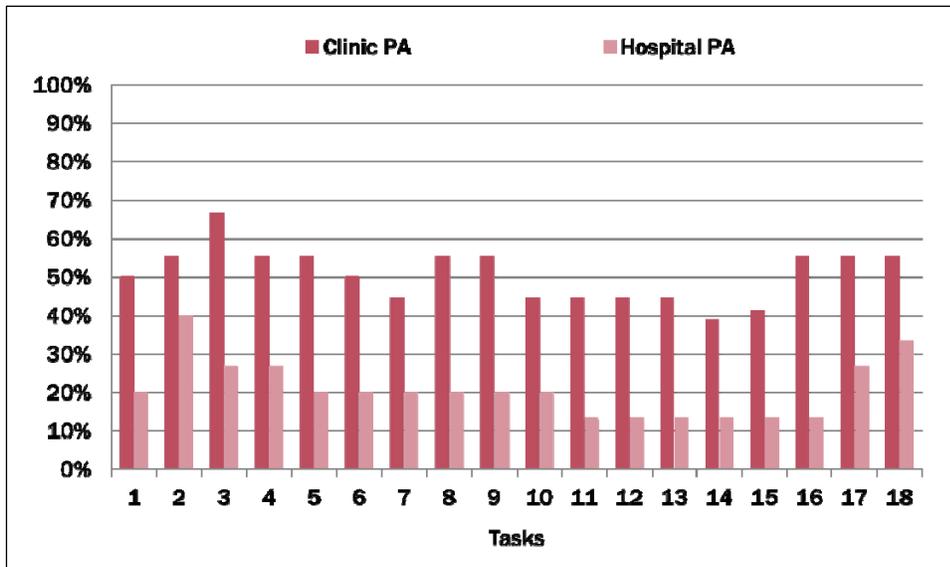
**Figure 4.2. Percentage of CMs that Performs ANC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

CMs from both levels frequently perform ANC tasks. The proportion of hospital CMs that performs these tasks frequently is quite high; i.e., the hospital has a more vertical approach to care and, as such, we can expect this to be the case. When a client arrives at the hospital for ANC care, she is sent directly to a midwife.

**Figure 4.3. Percentage of PAs that Performs ANC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

As seen with RNs, the PA working at the clinic level is more likely to perform ANC. Based on the results above, all ANC tasks may be included in the JDs for RNs, PAs and CMs. There may be some further indication here for highlighting on the JD that ANC tasks would come under community level for RNs and PAs; since both could work at either location, listing under a general requirement may be most advisable. Some patterns of the PA working at the hospital level should be discussed to determine if any of these tasks should be listed at the general or community level and left off of the hospital level part of the JD. Currently, there is no hospital level distinction on the PA JD.

Figures 4.4–4.6 below depict a fair amount of current training in PSE for all cadres in ANC. These tasks should be continued and strengthened.

**Figure 4.4. RN Training Preparation in ANC Tasks**

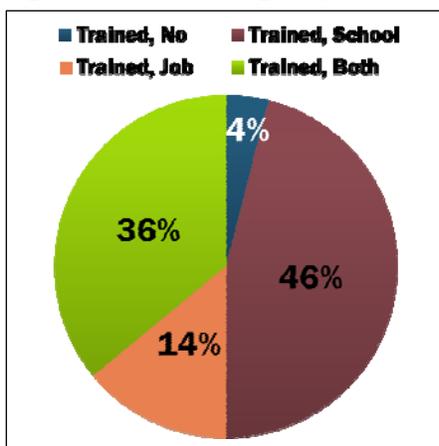


Figure 4.5. CM Training Preparation in ANC Tasks

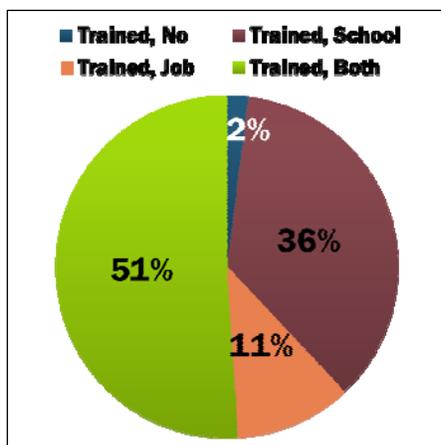
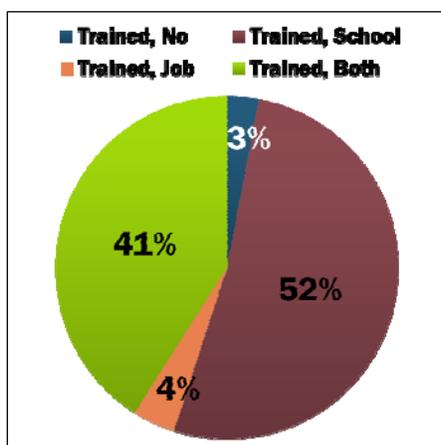


Figure 4.6. PA Training Preparation in ANC Tasks



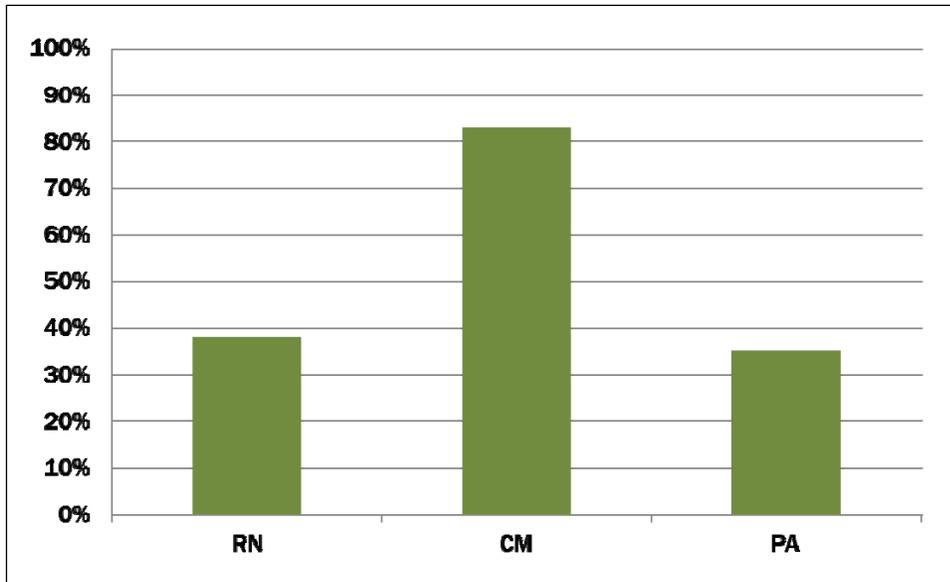
## 5. Postnatal Care (PNC)

The list of PNC tasks included in the survey consists of the following:

1. Conduct a rapid initial assessment of postpartum woman
2. Treat woman and companion(s) with respect
3. Verify existence of, or open a record for, the postpartum woman
4. Conduct routine physical postpartum exam
5. Manage postpartum woman according to assessment findings
6. Advise on danger signs during postpartum
7. Refer postpartum woman per protocol
8. Assess the neonate
9. Demonstrate proper positioning and attachment of neonate on the breast
10. Manage the neonate
11. Counsel parent(s) on baby's care
12. Advise on danger signs in neonate period

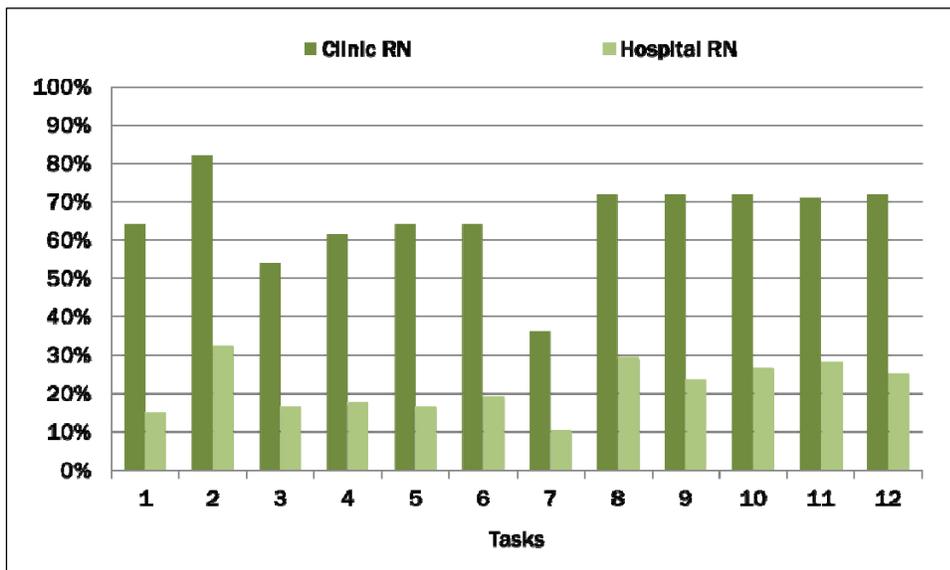
As with ANC, within PNC there is quite a difference among the overall proportions of each cadre that perform PNC tasks frequently. One can look at the individual tasks performed by each cadre at the different facility types to see if a pattern emerges.

**Figure 5.0. Percentage of Each Cadre that Performs PNC Tasks Frequently**



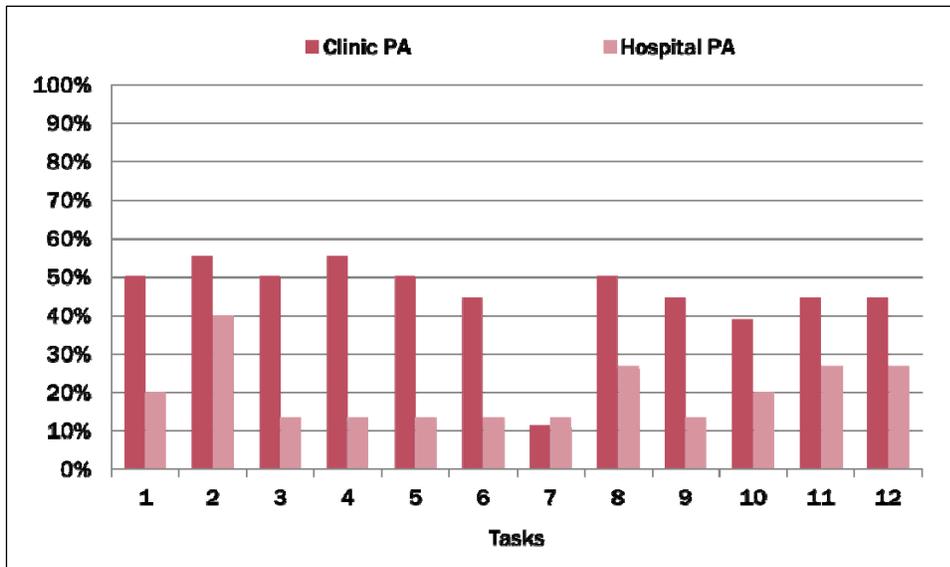
The differences between clinic and hospital CMs are small. But for RNs and PAs, there is a different trend, as demonstrated in Figures 5.1 and 5.2. RNs may require content related to PNC in their JD. PNC is already in the PA JD.

**Figure 5.1. Percentage of RNs that Performs PNC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

**Figure 5.2. Percentage of PAs that Performs PNC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

There is a fair amount of current training for RNs in **PNC**. These tasks should be continued and strengthened, and the JD aligned to reflect expectations of the RN on the job.

**Figure 5.3. RN Training Preparation in PNC Tasks**

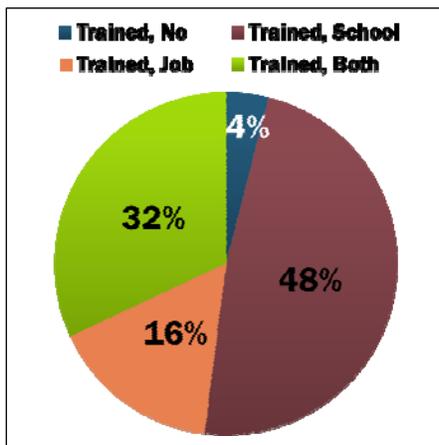
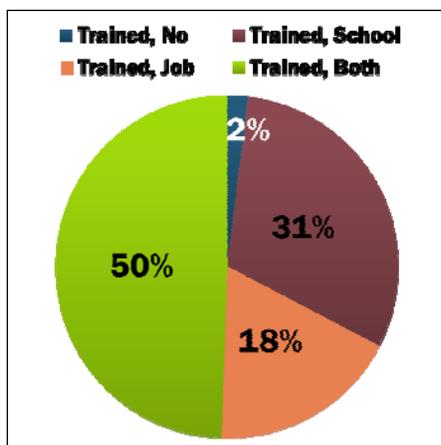


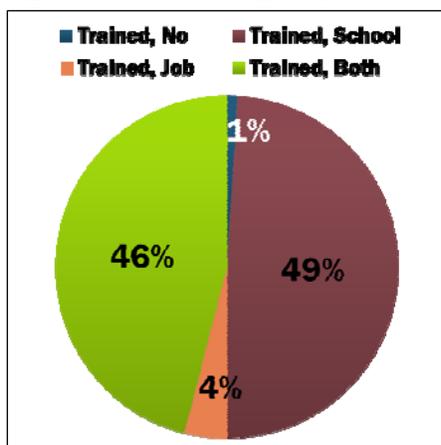
Figure 5.3 above indicates that 20% (16% Job only, 4% No training) of RNs are not receiving training in school on at least one or more key PNC tasks. This is concerning and requires further investigation of the training institutions from which these students are graduating.

Figure 5.4. CM Training Preparation in PNC Tasks



CMs are in a similar scenario; again 20% (2% No training, 18% job only) are graduating from school without training in all PNC KT's.

Figure 5.5. PA Training Preparation in PNC Tasks



In the case of PAs, a higher percentage reported training in school only.

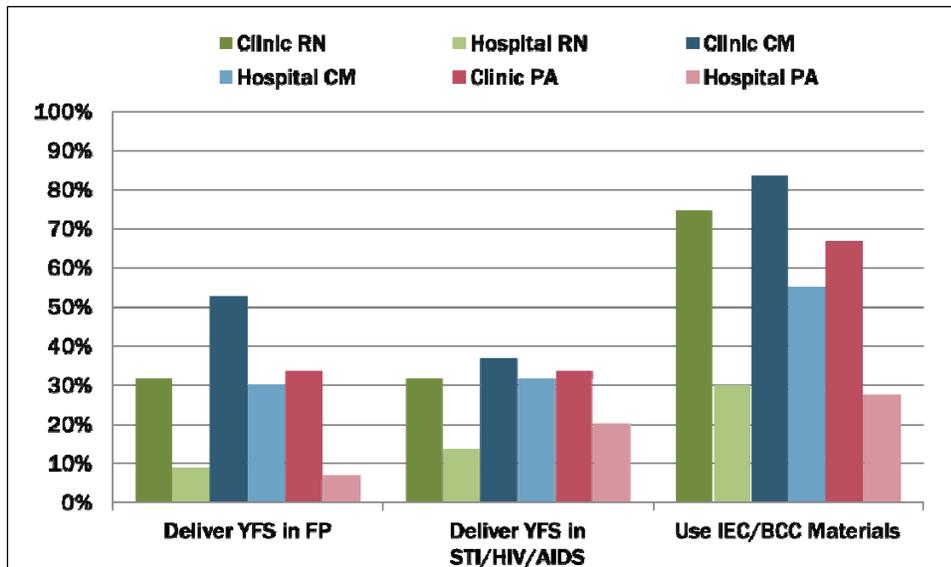
## 6. Adolescent Sexual and Reproductive Health (ASRH)

Three BPHS performance standards were adapted into ASRH tasks for this study. Figure 6.0 shows the proportion of each cadre by facility type that performs these tasks frequently. As can be seen, the proportion of clinic-level providers from each of the three cadres that performs these tasks frequently is larger than its hospital counterpart; though the proportion of hospital CMs that performs ASRH tasks frequently is notable as well. ASRH tasks may need to be considered for incorporation with the JDs of all CMs, RNs and PAs. The tasks are not part of a vertical program and would need to be integrated with existing services.

ASRH is a cross-cutting area. Given the existing population pyramid in Liberia, a large proportion of the population falls into the adolescent category; and having services that will address this age group developmentally will be instrumental in reaching its attention for health education and behavior change. For example, when counseling an unmarried adolescent on FP, it may be best to speak in terms of “contraception” and healthy timing

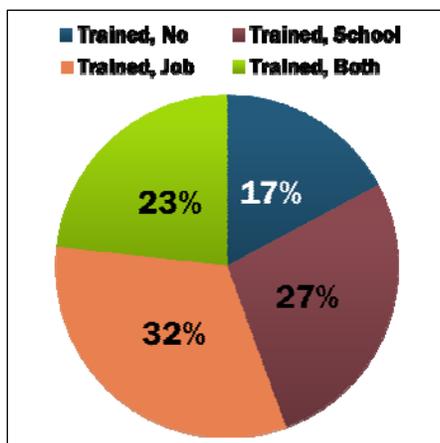
and spacing (HTSP), rather than planning a family that she doesn't have. Screening of sexual violence will also be important, as we have seen in MH. However, given that MH health services are currently few, the stage of primary prevention has passed. Ensuring that PSE addresses how to expand youth-friendly services (YFS) in FP and STI/HIV/AIDS services will assist health workers to increase prevention activities within this population. Per the clinic-level data, it may make the most sense to indicate these tasks at the community level on the RN and PA JDs.

**Figure 6.0. Percentage of Each Cadre that Performs ASRH Tasks Frequently, by Facility Type**



The evidence shown in Figures 6.1–6.3 demonstrates that students are receiving training in ASRH, but (cast in light with the information above) without frequent integration with the existing services as a new provider. Devising creative ways for students to integrate these concepts with and practice them in PSE should be strengthened. This will enable new graduates to be more confident and comfortable to ensure that adolescents get the services they need in a context that motivates them to prevent unwanted pregnancies and infections.

**Figure 6.1. RN Training Preparation in ASRH Tasks**



RNs report receiving the least amount of preparation in ASRH among the three cadres.

Figure 6.2. CM Training Preparation in ASRH Tasks

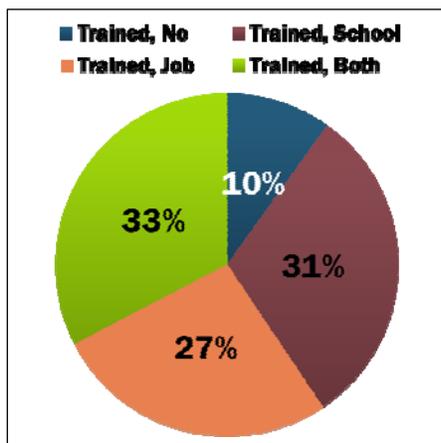
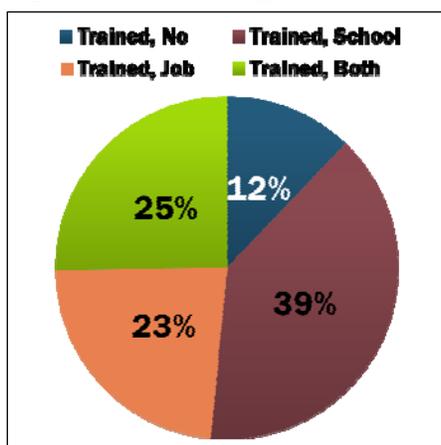


Figure 6.3. PA Training Preparation in ASRH Tasks



Although CMs and PAs report higher percentages, there is also a gap in some programs where ASRH is either not covered, is only in theory or is not recognized by the respondent by the task labels associated with ASRH as ASRH.

## 7. Normal Labor Care (NLC)

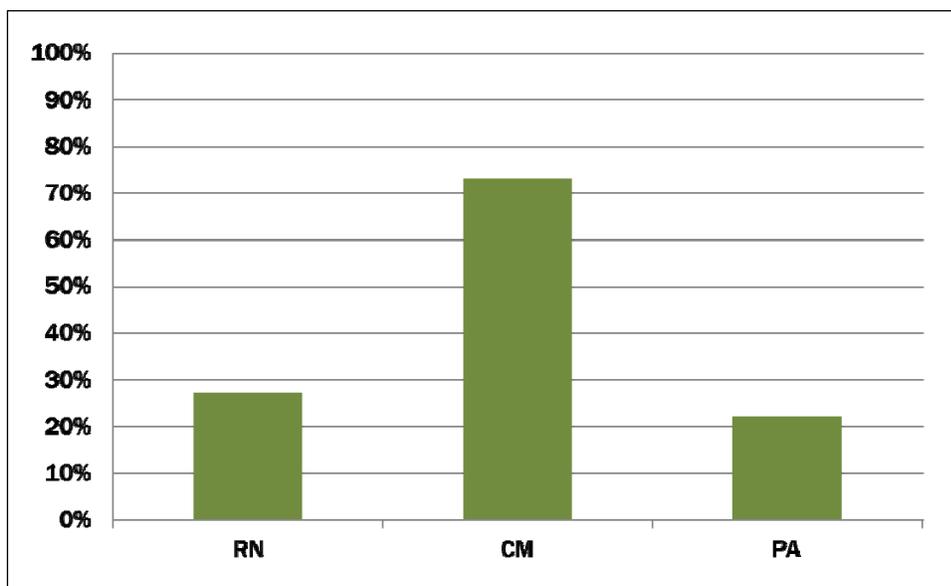
This section included several tasks, as follows:

1. Assess pregnant women in labor to identify complications and prioritize admissions
2. Treat pregnant woman in labor in a respectful manner
3. Review and fill out the clinical history of the woman in labor
4. Conduct the physical examination between contractions if time allows
5. Conduct the obstetric examination between contractions if time allows
6. Conduct a vaginal examination of a woman in labor
7. Provide counseling and testing for women in labor with unknown HIV status
8. Give antiretroviral (ARV) medicine to HIV+ women during labor and delivery

9. Use Acceptable Feasible Affordable Sustainable and Safe (AFASS) criteria to counsel HIV+ women on infant feeding
10. Prepare and implement a plan according to the findings of the history and physical exam for providing care to the woman
11. Use the partograph to monitor labor and make adjustments to the birth plan
12. Assist woman to labor and deliver in the position she wants
13. Assist the woman to have a safe and clean birth
14. Conduct a rapid initial assessment
15. Perform active management of the third stage of labor (AMTSL)
16. Perform immediate postpartum care
17. Dispose medical waste after assisting the birth according to protocol
18. Place used equipment in decontamination solution according to protocol
19. Monitor the newborn in immediate postpartum period
20. Monitor the woman for at least two hours after the birth
21. Perform resuscitation of the newborn
22. Provide appropriate medication to the newborn

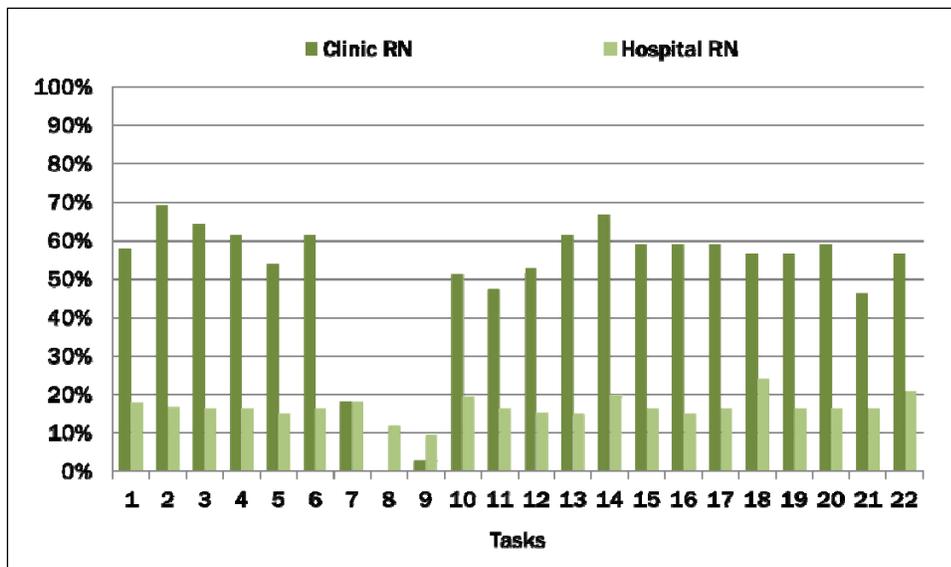
Figure 7.0 shows the overall percentage of each cadre that performs NLC tasks frequently. Not surprisingly, this is highest in the CM cadre. The percentages for RNs and PAs appear very low, but it is important to look at facility-specific providers to see if any key differences emerge.

**Figure 7.0. Percentage of Each Cadre that Performs NLC Tasks Frequently**



Figures 7.1, 7.2 and 7.3 show the results within in each cadre, with comparisons by facility type.

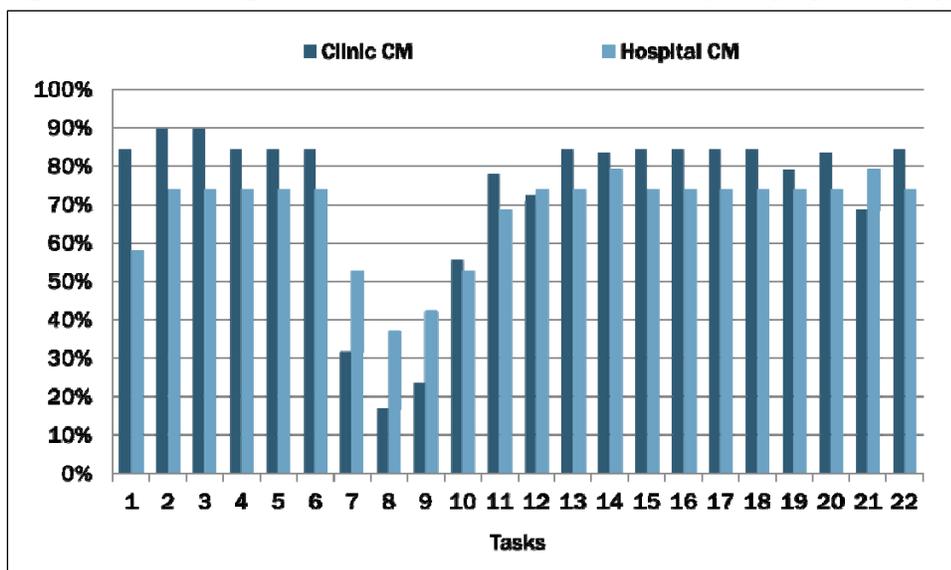
**Figure 7.1. Percentage of RNs that Performs NLC Tasks Frequently, by Facility Type**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

Breaking down the roughly 1/3 of RNs that performs NLC tasks frequently, one can see that for all clinic RNs who responded, at least 40% performs individual NLC tasks frequently except for tasks 7, 8 and 9. (Lack of tasks 7, 8, and 9 are directly linked to the fact that they were not trained in HIV care.) It may be reasonable to include all NLC tasks in the JD of RNs working at the clinic level—perhaps, even including the HIV-related tasks, since the provider performing all other NLC tasks is probably also responsible for HIV tasks. HIV training needs to be conducted in pre-service and more in-service training needs to be implemented. This should be discussed with the National AIDS Control Program (NACP). However, with a current estimated HIV prevalence of 1.7%, it is clearly a national need and therefore health workers must be prepared, at the minimum, to be competent to implement prevention programs upon graduation.

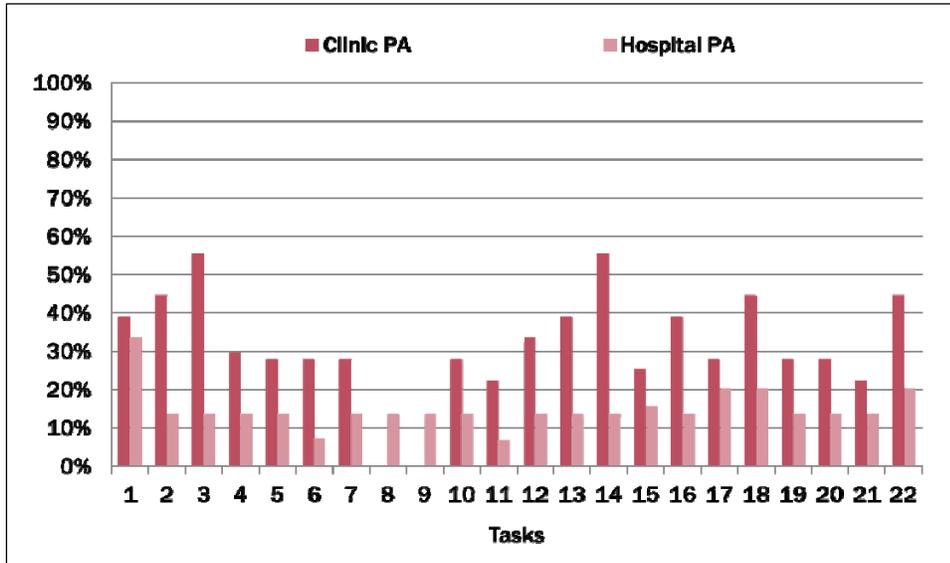
**Figure 7.2. Percentage of CMs that Performs NLC Tasks Frequently, by Facility Type**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

Here it can be seen that all NLC tasks are performed by a higher proportion of clinic CMs as compared to hospital CMs, except for HIV-related tasks. It is reasonable to include all these tasks in the JD for all CMs. This shows that recent graduates may have increased responsibility when assigned to clinic level as compared to hospital level.

**Figure 7.3. Percentage of PAs that Performs NLC Tasks Frequently, by Facility Type**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

It is interesting to see that clinic PAs are performing NLC tasks frequently more than hospital PAs, and also to see which tasks are performed frequently by more than 1/3 of clinic PAs (tasks 1–3, 14, 16, 18, 22). Perhaps these should be included in the JD for the PA, but indicated at the community level. In general, stakeholders are faced with interesting trends for PAs and will need to discuss which other tasks should be included in the JD and, therefore, in the core competencies and curriculum.

**Figure 7.4. RN Training Preparation in NLC Tasks 1–6, 10–22**

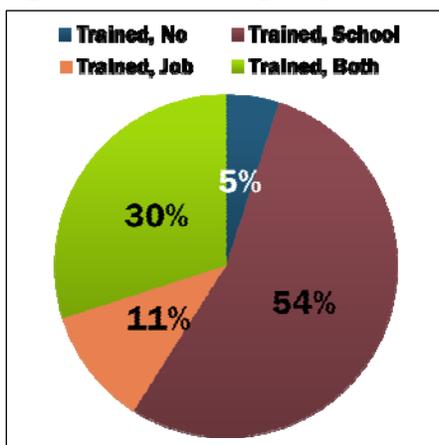
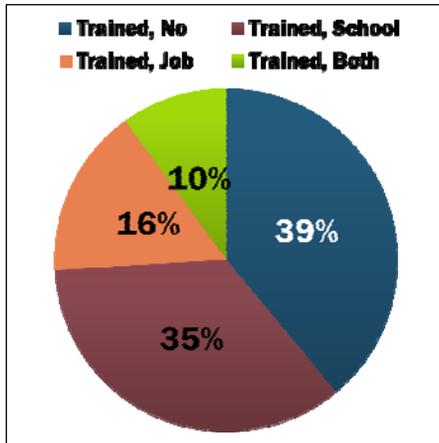
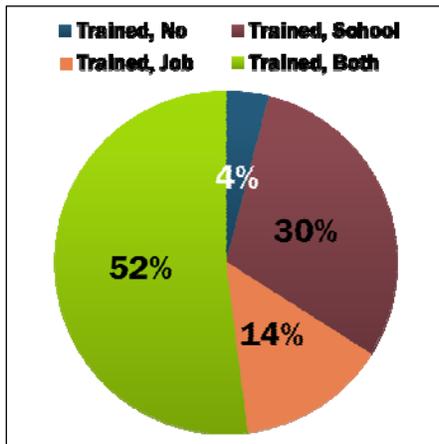


Figure 7.5. RN Training Preparation in NLC Tasks 7-9



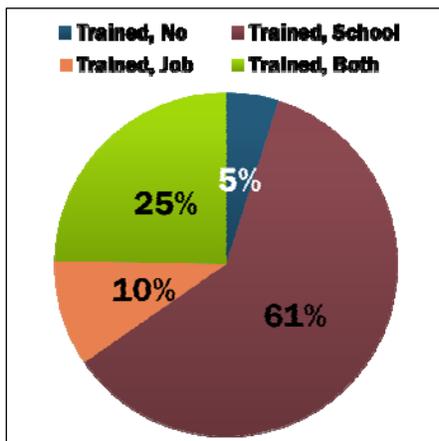
The percentage of RNs that reported no training in NLC 7-9 appears alarming until one notes that task 7-9 are all HIV-related.

Figure 7.6. CM Training Preparation in NLC Tasks



The 4% gap (in the above figure) that you may not expect from any CM program is most likely due to taking the average of all the tasks, which as mentioned include HIV-related tasks.

Figure 7.7. PA Training Preparation in NLC Tasks 1-6, 10-22



The 5% gap here is not related to any HIV functions and would need to be closed with strengthening activities for programs that were not preparing PAs for NLC.

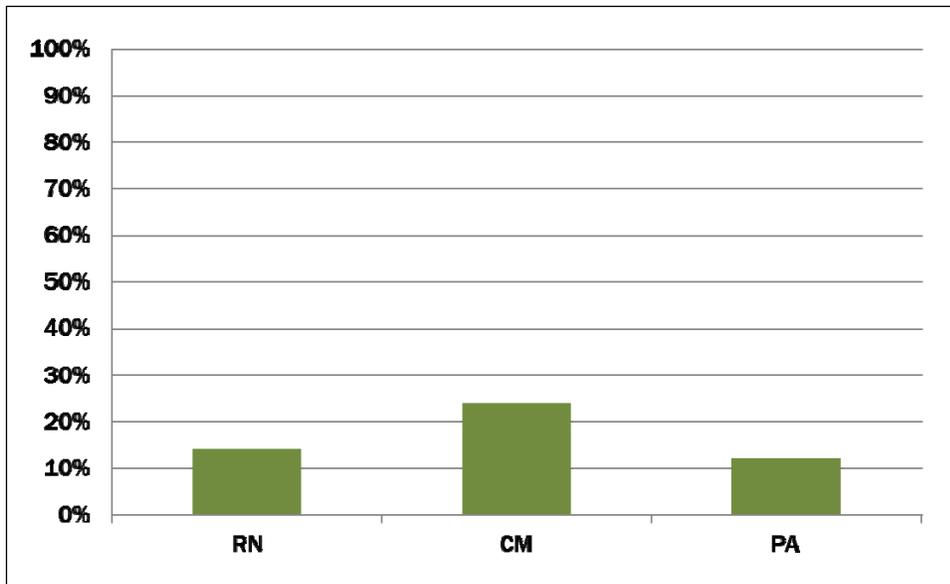
## **8. Obstetric Complications (OC)**

The OC task list includes the following:

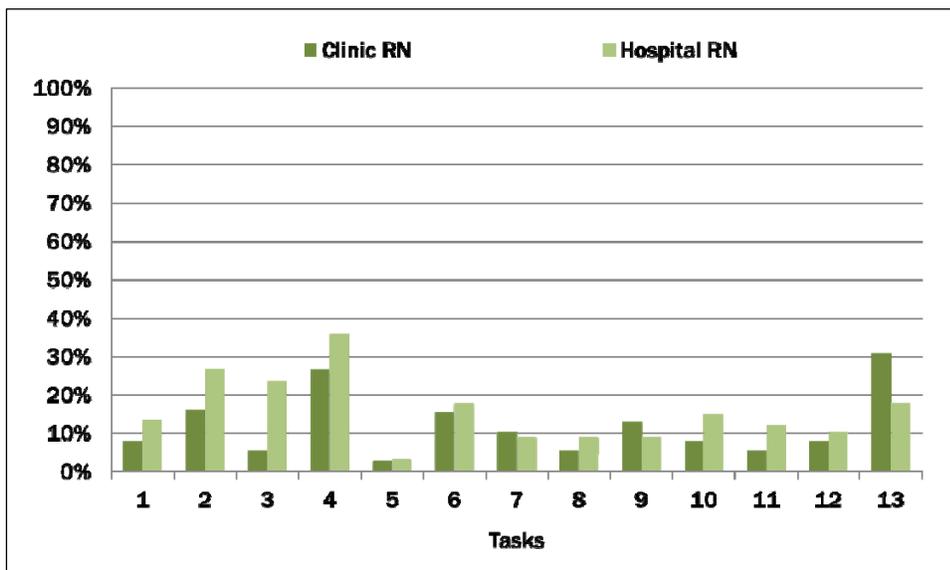
1. Manage hypovolemic shock of woman:
2. Maintain airways
3. Administer oxygen to the woman, 6–8 L/minute by cannula or mask
4. Start two IV lines using a 16- or 18-gauge needle
5. Conduct Rh cross-match
6. Assess woman's need for transfusion based upon signs of shock or impending shock due to amount of blood loss
7. Recognize symptoms of acute postpartum coagulopathy
8. Manage incomplete abortion
9. Manage severe pre-eclampsia and/or eclampsia
10. Manage postpartum hemorrhage (PPH) when bleeding is due to retained placenta
11. Manage PPH when bleeding is due to uterine atony
12. Manage PPH when bleeding is due to perineal or cervical tears
13. Perform uterine massage and extraction of clots for management of PPH

These tasks are performed in response to events that are not, in general, frequently occurring. Figure 8.0 presents the overall proportion of each cadre that performs these tasks frequently, which is quite low for each. However, these tasks have life-saving potential and as such should be considered when updating the JDs. Figures 8.1–8.3 provide some insight on which providers should have this content in their JD.

**Figure 8.0. Percentage of Each Cadre that Performs OC Tasks Frequently**



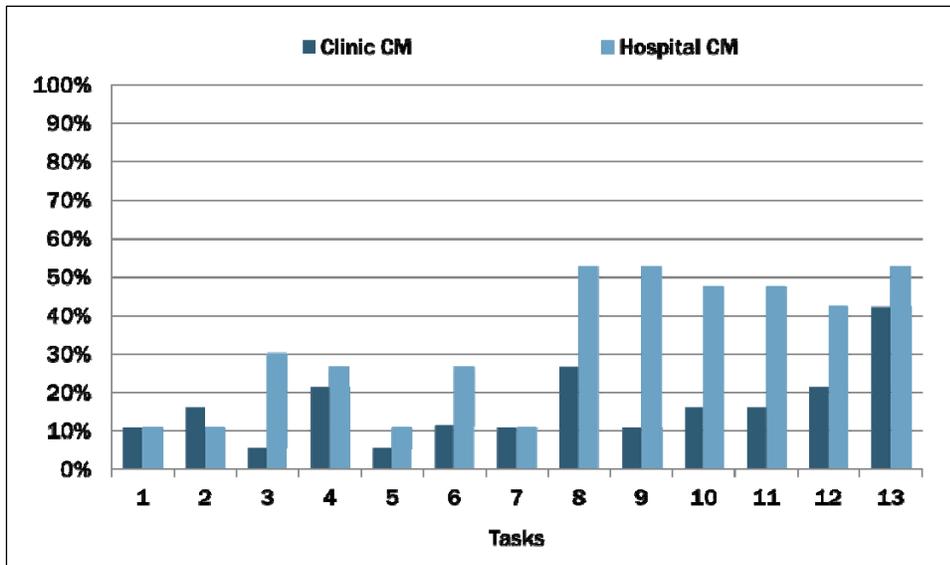
**Figure 8.1. Percentage of RNs that Performs OC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

The proportion of RNs at hospital level that performs OC tasks is higher than that of clinic RNs for nine of the 13 tasks, and the proportion of hospital RNs that performs these tasks frequently does not exceed 20% except in three tasks (maintain airways; administer oxygen to the woman, 6–8 L/minute by cannula or mask; start two IV lines using a 16- or 18-gauge needle). Perhaps these three tasks should be included under the hospital section for RNs. According to the survey, more than 30% of clinic RNs report performing uterine massage and extraction of clots for PPH.

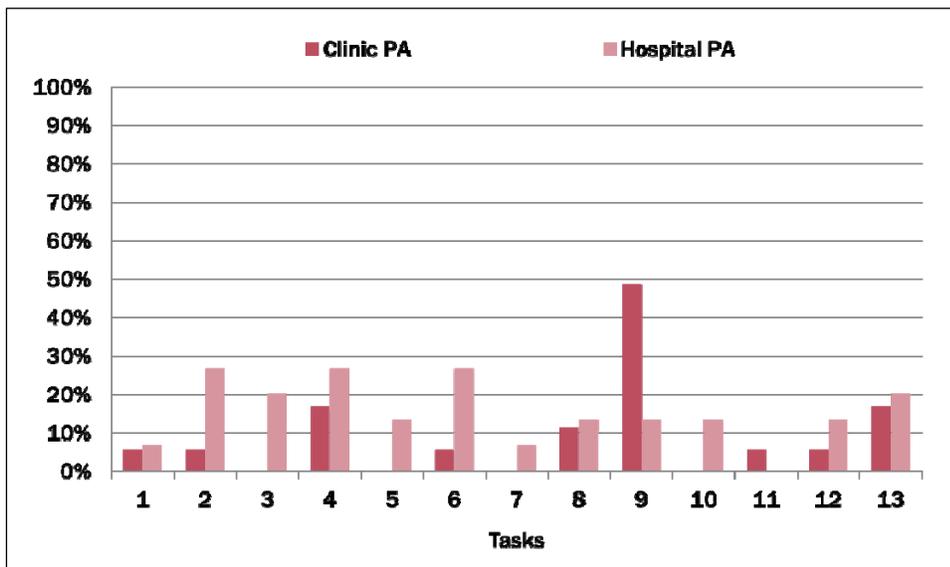
**Figure 8.2. Percentage of CMs that Performs OC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

OC are primarily referred to the hospital, so we can expect that the results from Figure 8.2 above are consistent with reality. It is important to note that there are other cadres responsible for OC (e.g., PAs and physicians) that were not included in the analysis.

**Figure 8.3. Percentage of PAs that Performs OC Tasks Frequently**



\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

The results here show that a larger proportion of hospital PAs are performing tasks 2, 3, 4, 5 and 6 more frequently than clinic PAs, and that almost half of clinic PAs report task 9, managing severe pre-eclampsia or eclampsia. Task 9 should be considered for inclusion in the PA JD.

Figure 8.4. RN Training Preparation in OC Tasks 2 and 4

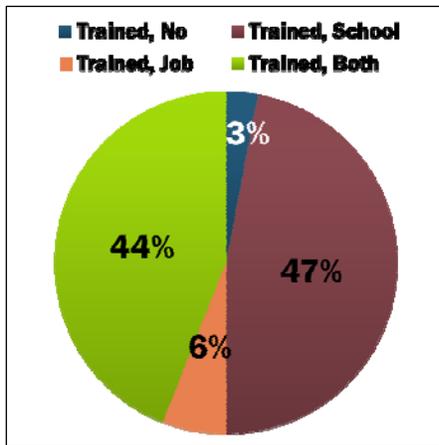
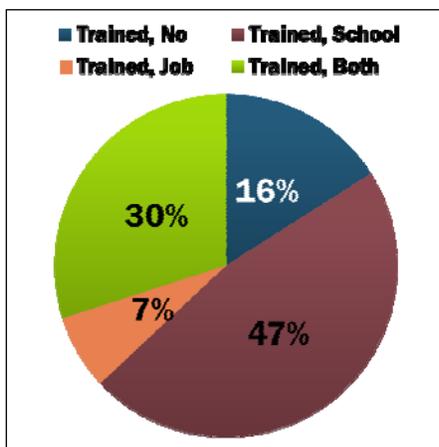


Figure 8.5. RN Training Preparation in OC Task 3



The KT of delivering oxygen in Figure 8.5 has a significant percentage (16%) of RNs that was not trained in school. Again, this may go back to how respondents defined training. And since it is in the curriculum, a discussion with instructors and a closer look at lesson plans and simulated practice are warranted.

Figure 8.6. CM Training Preparation in OC Tasks 8-13

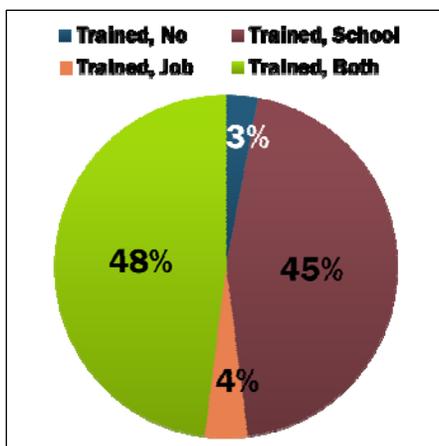
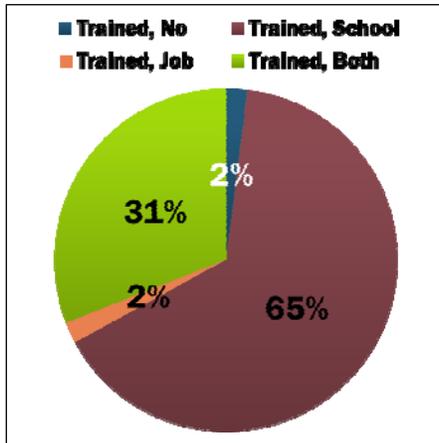
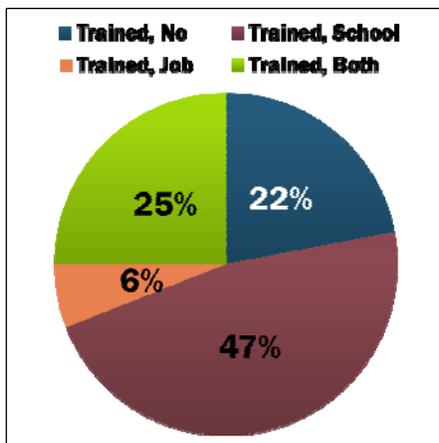


Figure 8.7. RN Training Preparation in OC Tasks 1–2, 4, 6, 9



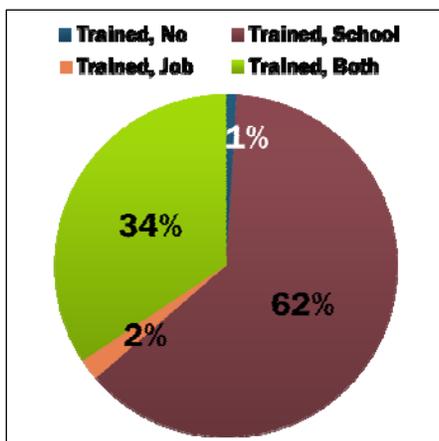
Looking closely to see if these RNs were trained to perform these procedures, the figures demonstrate that the majority was trained and in school. Hence, the RN scope of practice needs further clarification on the OC responsibilities between the CM and the RN.

Figure 8.8. PA Training Preparation in OC Task 3



The percentage of untrained PAs in administering oxygen is even higher here than the RNs.

Figure 8.9. PA Training Preparation in OC Tasks 10–13



## 9. Management (MGM)

The MGM tasks included in the analysis are:

1. Use clinical guidelines available in the facility
2. Manage equipment, supplies and information, education, communication (IEC) materials
3. Review and report deaths
4. Use a referral system with and from other facilities
5. Integrate community feedback with service delivery

Figure 9.0 shows that over half of the providers in each cadre perform MGM tasks frequently, and all but task 3 and 5 are listed in all the JDs.

**Figure 9.0. Percentage of Each Cadre that Performs MGM Tasks Frequently**

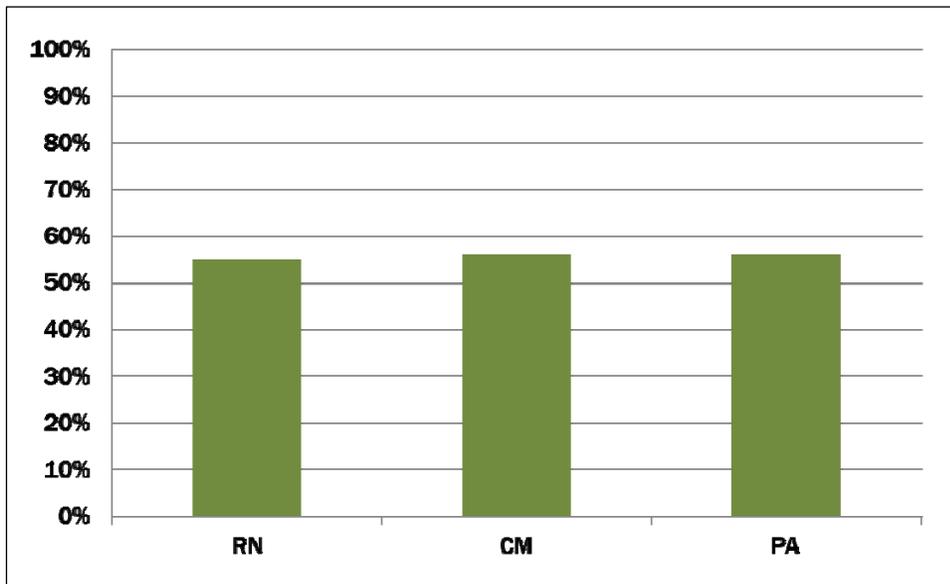
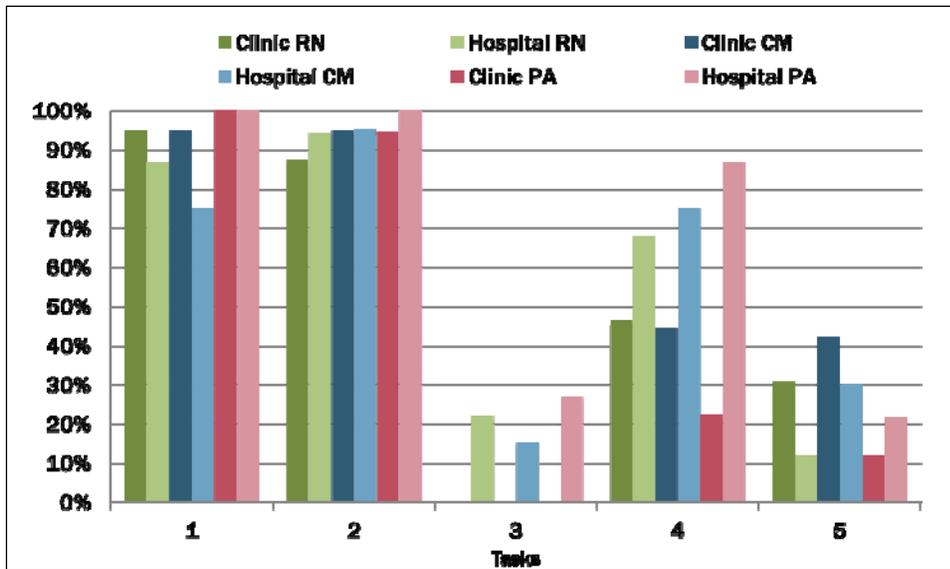


Figure 9.1 demonstrates that a higher proportion of providers in each of the cadres performs tasks 1, 2 and 4 as compared to tasks 3 and 5; task 3 is performed frequently only by hospital-level workers. Although the results vary for task 5, due to its nature, it may be an element that all cadres should have in the JD.

Figure 9.1. Percentage of Each Cadre that Performs MGM Tasks Frequently, by Facility Type



\* Task numbers along the x-axis correspond with the tasks list at the beginning of this section.

Figure 9.2. RN Training Preparation in MGM Tasks

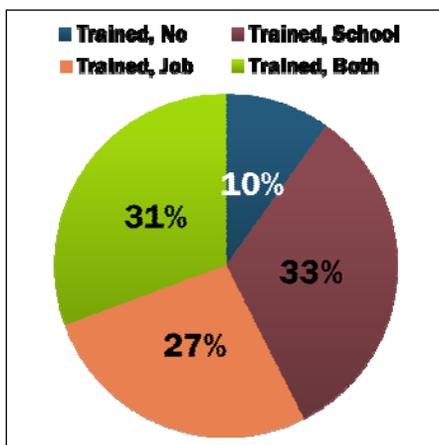


Figure 9.3. RN Training Preparation in MGM Tasks 3 and 5

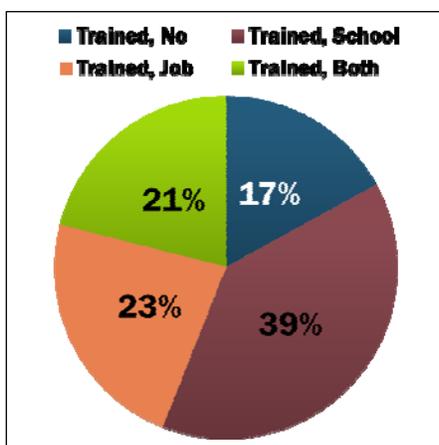


Figure 9.4. CM Training Preparation in MGM Tasks

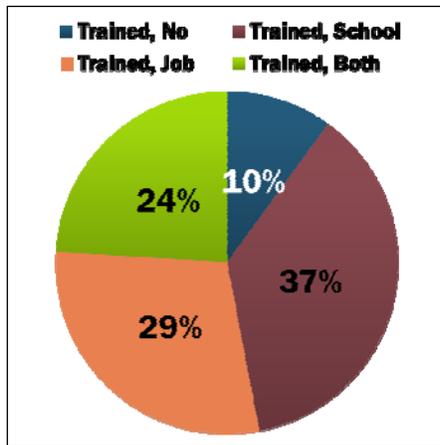
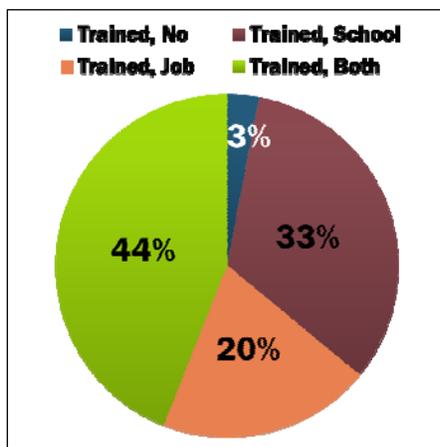


Figure 9.5. PA Training Preparation in MGM Tasks



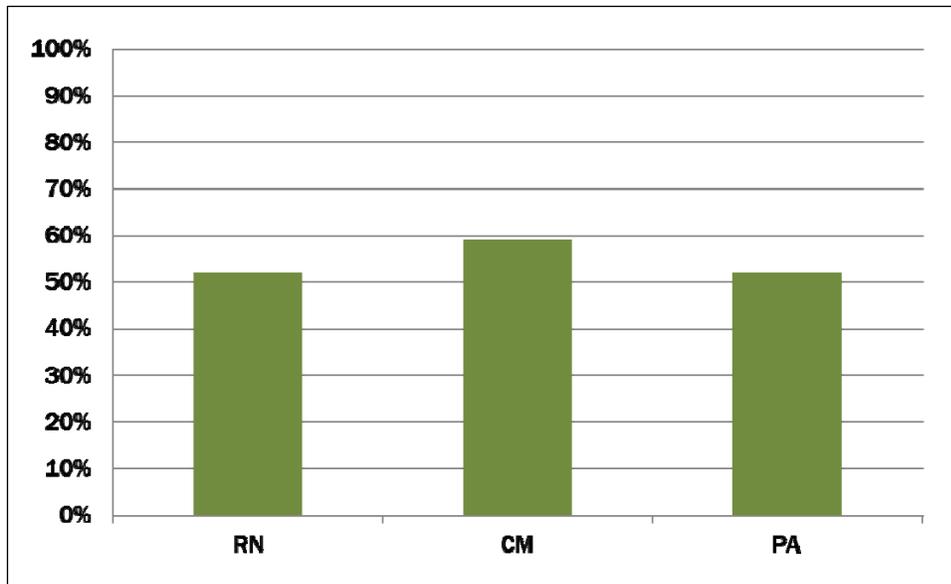
Although training preparation in MGM exists in the curriculum, the figures above indicate a gap with the reports of all three cadres, especially the RN.

## 10. Infection Prevention (IP)

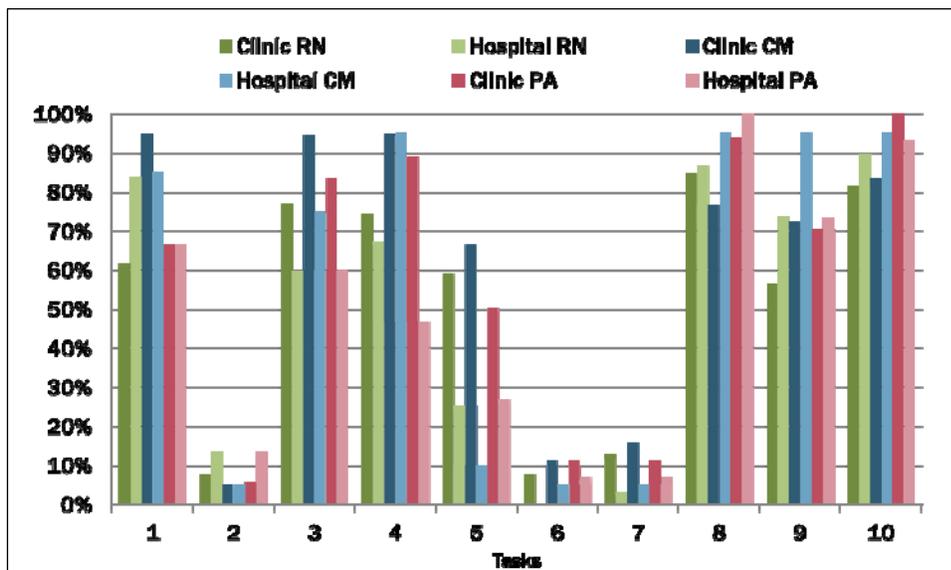
The following tasks were included in this analysis:

1. Participate in cleaning clinical wards and areas
2. Participate in cleaning the operation theatre
3. Prepare disinfectant cleaning solution
4. Decontaminate instruments
5. Participate in sterilizing the equipment
6. Participate in food storage
7. Participate in food preparation
8. Use personal protective equipment when handling used and soiled linen
9. Segregate bio-hazardous waste from regular waste
10. Use personal protective equipment (i.e., gloves, goggles, apron) when handling waste

**Figure 10.0. Percentage of Each Cadre that Performs IP Tasks Frequently**



**Figure 10.1. Percentage of Each Cadre that Performs IP Tasks Frequently, by Facility Type**



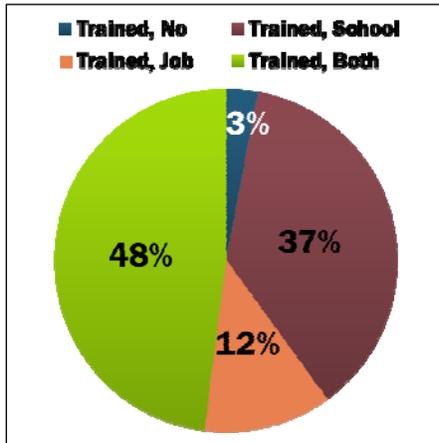
\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

In Figure 10.1 there are relatively high proportions of each cadre (by facility type) that perform IP tasks 1, 3, 4, 8, 9 and 10. For task 5, at hospital level, tasks are reported to be performed by another worker.

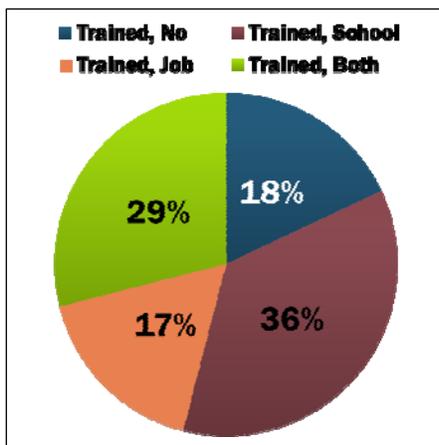
Clinic-level providers from all three cadres report frequently performing task 5 more than their counterparts at the hospital level; this is reflective of the reality that there are fewer hands at the clinic level. Hence, all three cadres should be prepared to competency to sterilize equipment. The low proportions of providers that perform tasks 2, 6 and 7 frequently is explained upon further analysis; most providers reported that this was done by another worker or not done in their setting. Since the operation theatre task (task 2) only exists in the hospital, this is a competency that is not related to any core responsibilities and does not need to be included in any of the JDs. Tasks 6 and 7 may be

covered in PSE under nutrition module in a relatively short time frame. Given that this is a basic skill and something that providers may already be familiar with in the home setting, it would not need much time. Not having a clear understanding of the standards for food storage and preparation in a facility could have detrimental effects if not handled according to standard. Cross-training and/or joint assessments with the EHT program should be considered.

**Figure 10.2. RN Training Preparation in IP Tasks 1, 4, 8, 10**



**Figure 10.3. RN Training Preparation in IP Tasks 3, 5, 9**



A large gap in training in the area of decontamination and sterilization was reported by RNs—and these are KTs. Strengthening methods to ensure that students are trained to competency and assessed in these tasks is warranted.

Figure 10.4. CM Training Preparation in IP Tasks 1, 3, 4

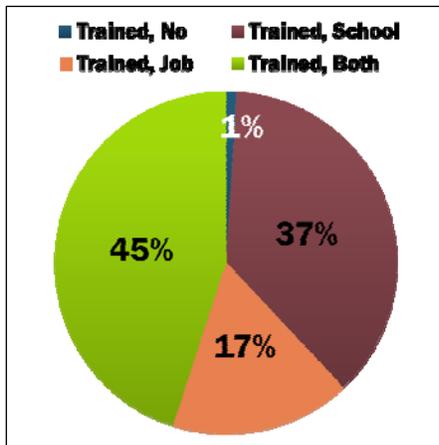
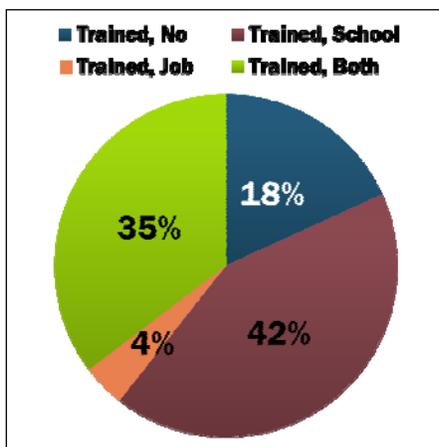


Figure 10.5. CM Training Preparation in IP Tasks 5, 9



Again, we see the same trend as with the RN. Large gaps in training in the area of sterilization and separating bio-hazardous waste were reported by these CMs—these are KTs.

Figure 10.6. CM Training Preparation in IP Tasks 8 and 10

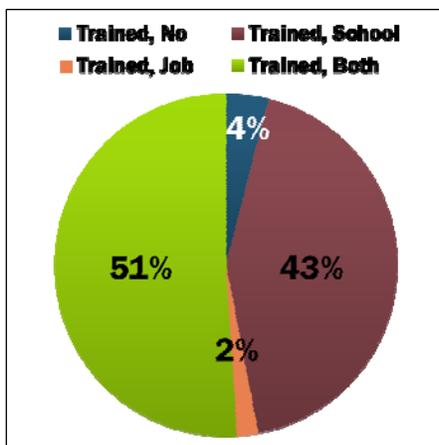


Figure 10.7. PA Training Preparation in IP Tasks 1, 3-5, 8

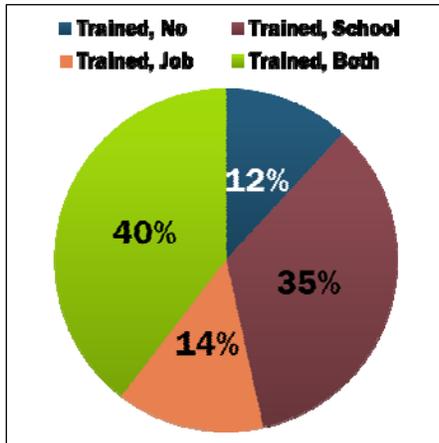
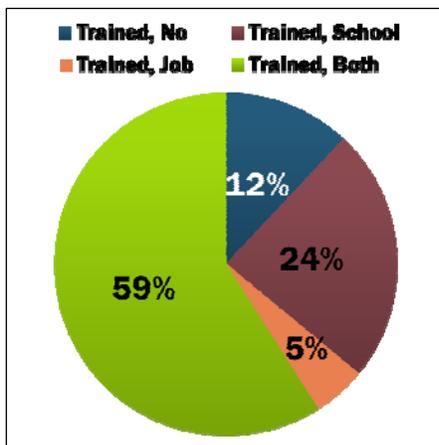


Figure 10.8. PA Training Preparation in IP Tasks 9, 10



Again, a gap in training on IP when it comes to segregating waste and wearing personal protective equipment, both of which could have consequences on the health of the provider and community members.

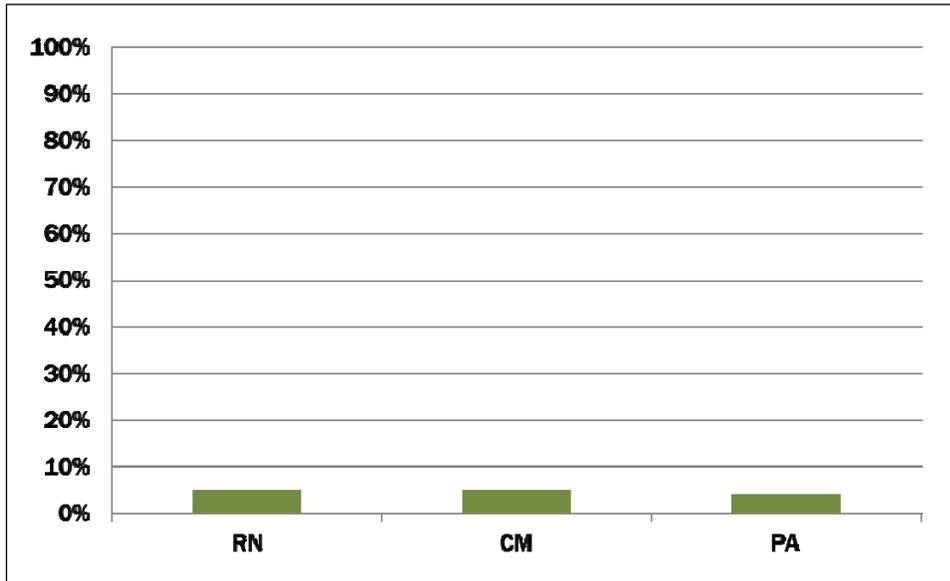
## 11. Mental Health (MH)

Eight MH tasks were included in the task analysis:

1. Receive and treat the client with mental health (MH) issues with respect
2. Ask and record danger signs of acute mental problems (e.g., hallucinations, flight of ideas)
3. Counsel patients with MH problems
4. Refer clients suspected to have psychoses
5. Provide services for victims of sexual abuse
6. Supervise patients on long-term medication for MH issues
7. Administer medication to MH clients as prescribed or protocol
8. Initiate counseling for clients affected by substance abuse

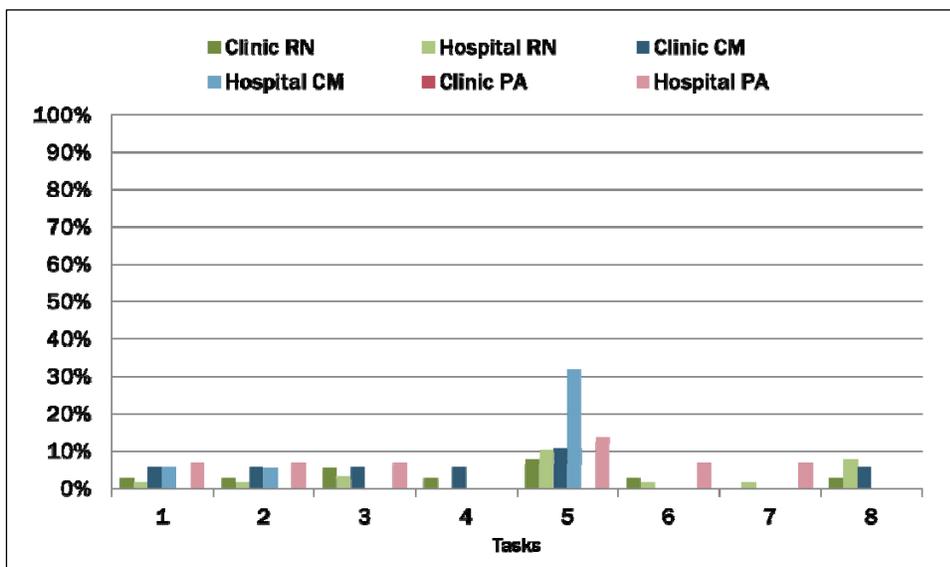
As seen in Figure 11.0, MH is performed by a very low proportion of providers in all three cadres. On average, about half of the providers stated that these tasks are never performed (in their respective settings); approximately 20% said they are performed by another worker; and about 33% said they perform these tasks only rarely. It appears that these tasks compose care for which the demand is low, or if providers do not know how to detect these problems and/or if there are other reasons these tasks are not performed frequently.

**Figure 11.0. Percentage of Each Cadre that Performs MH Tasks Frequently**



Although MH tasks are performed by a low proportion of workers overall, it is interesting to see the patterns within each cadre by facility type (Figure 11.1).

**Figure 11.1. Percentage of Each Cadre that Performs MH Tasks Frequently, by Facility Type**

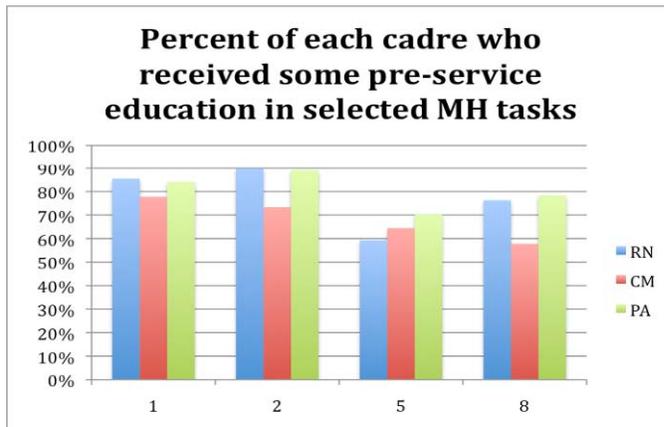


\* Task numbers along the x-axis correspond with the tasks numbered at the beginning of this section.

Figure 11.1 shows a very low proportion of providers from both facility types performing MH tasks frequently, but that about 1/3 of hospital CMs are providing services for victims

of sexual abuse. It appears that the proportion of hospital PAs providing some of the MH tasks frequently is higher than in other cadres, specifically for tasks 1, 2, 3, 6, 7 and 8. Interestingly, the clinic CM and the clinic RN are the only providers who report frequently referring clients suspected to have psychoses. These results may begin to guide the JDs and the emphasis needed in PSE to cover demand. Per the results in Figure 11.1, special emphasis should be given to sexual violence and abuse tasks to prepare at least the CM to provide care according to the standard.

**Figure 11.2. Percentage of Each Cadre that Received Some PSE in MH Tasks 1, 2, 5, 8**



## 12. Sick Newborn Care (SNC)

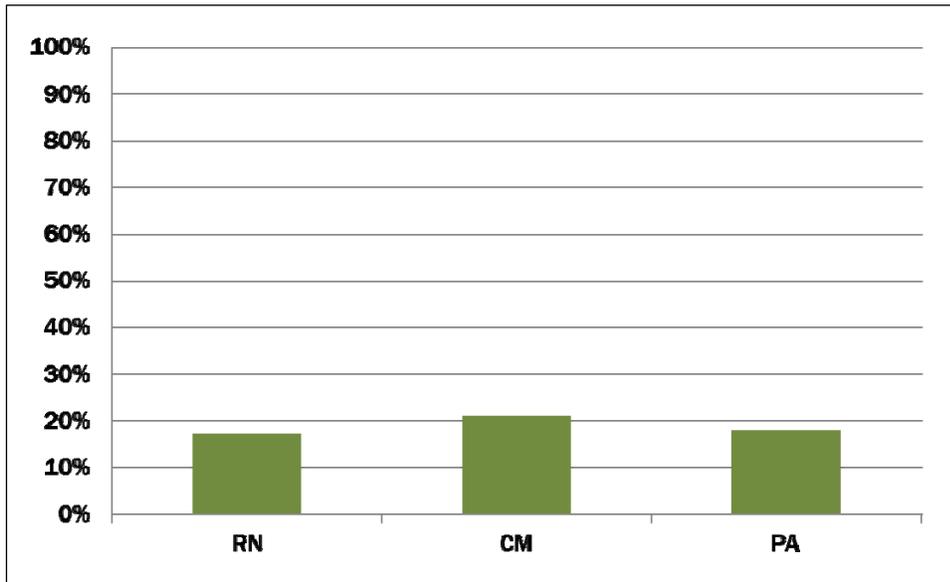
SNC tasks included in the study were:

1. Manage sick newborns
2. Diagnose pre-term or low-birth-weight newborns
3. Manage pre-term or low-birth-weight newborns
4. Give specific information to mother and father (if present) on Kangaroo Mother Care (KMC)
5. Diagnose neonatal sepsis
6. Manage neonatal sepsis
7. Diagnose neonatal jaundice
8. Manage neonatal jaundice
9. Diagnose neonatal tetanus
10. Manage neonatal tetanus
11. Diagnose neonatal umbilical infection
12. Manage neonatal umbilical infection

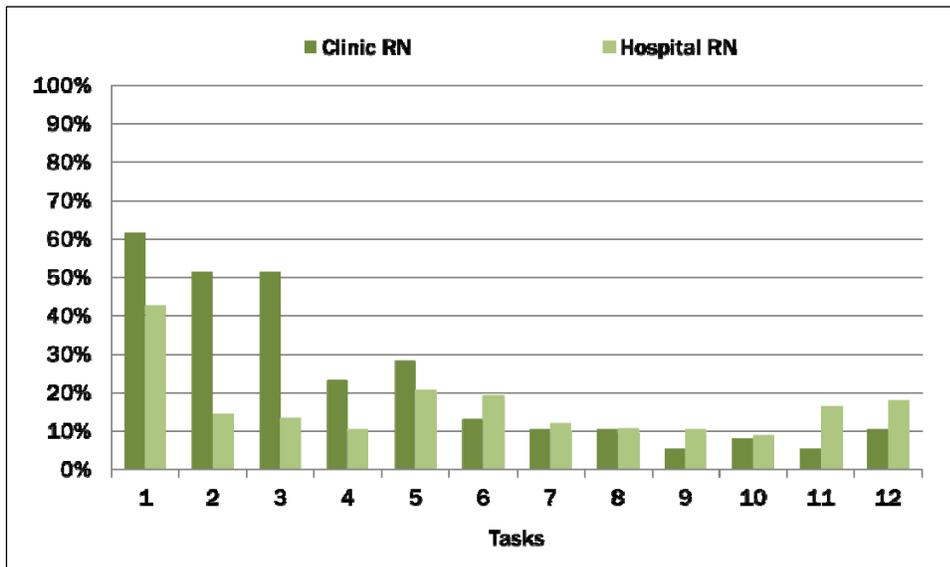
As demonstrated in Figure 12.0, the overall proportions of each cadre that perform SNC tasks frequently are small, around 20%. Similar to OC, this area comprises care that may not be demanded on a daily basis; but, when it is needed, it can be life-saving. Therefore, competent care would be necessary, indicating the need to be included in PSE. Some of the tasks would be referred to the hospital-level “other worker”. For example, if jaundice is not

treated at the clinic, under clinic level could be “diagnose and refer jaundice” and under the hospital level would be “diagnose/confirm and manage jaundice”.

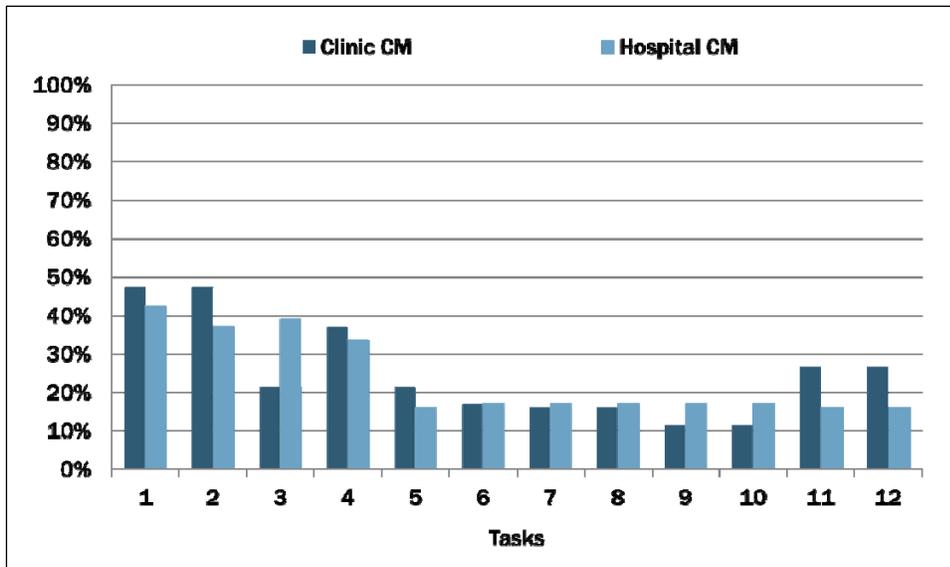
**Figure 12.0. Percentage of Each Cadre that Performs SNC Tasks Frequently**



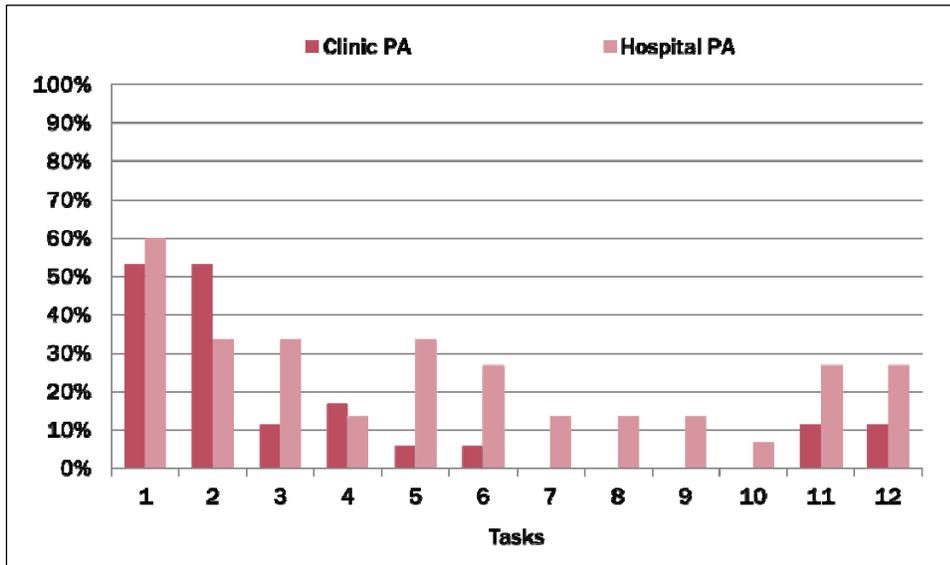
**Figure 12.1 Percentage of RNs that Performs SNC Tasks Frequently, by Facility Type**



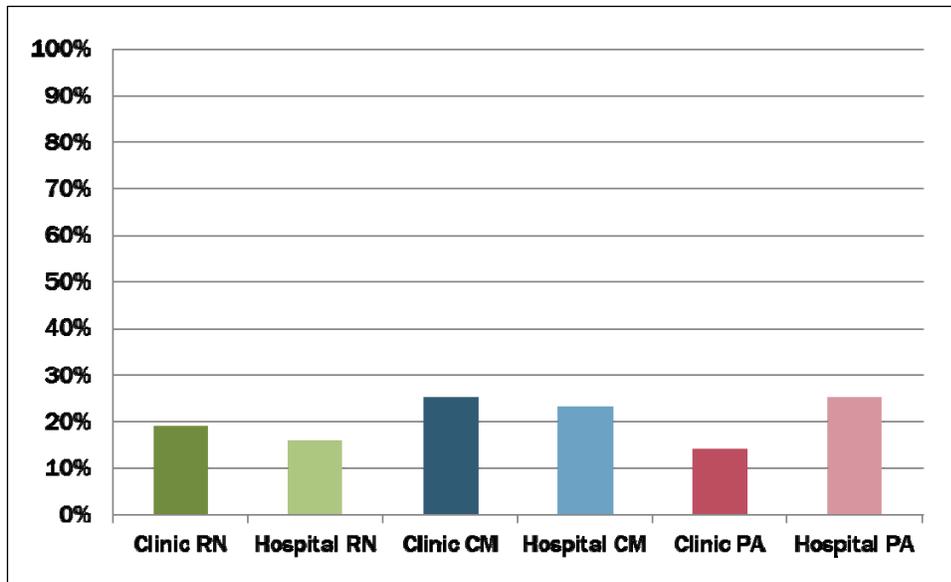
**Figure 12.2. Percentage of CMs that Performs SNC Tasks Frequently, by Facility Type**



**Figure 12.3. Percentage of PAs that Performs SNC Tasks Frequently, by Facility Type**

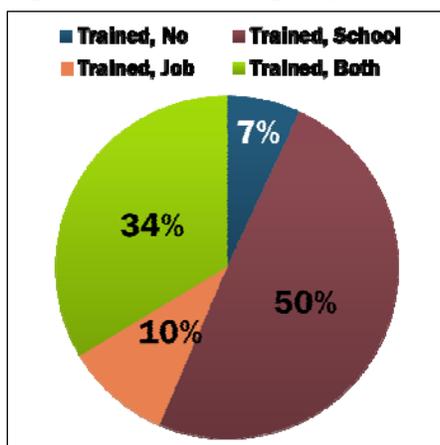


**Figure 12.4. Percentage of Each Cadre that Performs SNC Tasks Frequently, by Facility Type**



Figures 12.1–12.4 represent the proportions of each facility-level cadre that perform SNC tasks frequently. About half of the providers from both facility types performs tasks 1 and 2 frequently. For PAs, the proportion of providers at hospital level that performs SNC tasks frequently is higher than PAs at the clinic level. Tasks 1 and 2 are performed frequently by higher proportions of clinic RNs, all CMs and all PAs. About half of the providers from both facility types performs tasks 1 and 2 frequently. For PAs, the proportion of providers at hospital level that performs SNC tasks frequently is higher than PAs at the clinic level. Given the pattern noted in Figure 12.4 and the life-saving potential the care that these tasks represent, adding specific SNC tasks to the RN, PA and CM JDs should be discussed. Task 3 is related too if 2 is diagnosed and task 4 (KMC) increases survival (research known); therefore, these four tasks for the RN may be considered KTs.

**Figure 12.5 RN Training Preparation in SNC Tasks 1–4**



CMs and PAs are receiving training in the other tasks, but may be referring most to a higher level of care. This is the current guidance per their JD.

Figure 12.6. CM Training Preparation in SNC Tasks

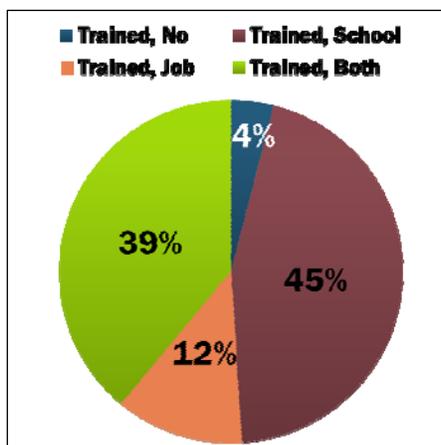
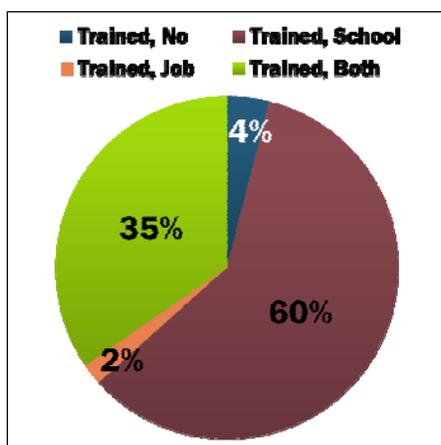


Figure 12.7. PA Training Preparation in SNC Tasks



The gaps are similar for CMs and PAs in SNC, and efforts should be made to fill these program gaps. PAs are reporting more training prior to deployment and very little job-only training. Considering the life-saving benefits, this is promising. A review of the training and assessment methods would still be warranted.

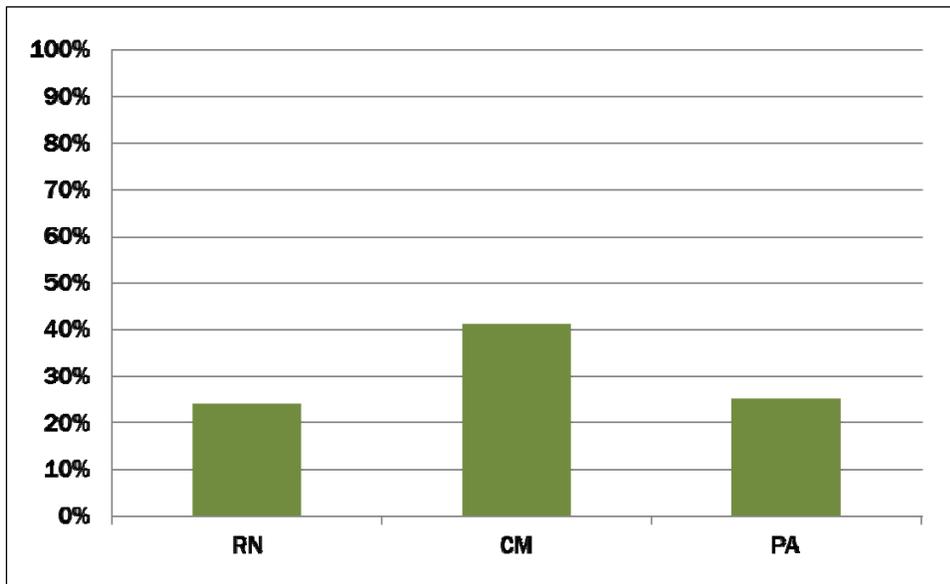
### 13. Expanded Program on Immunizations (EPI)

The EPI tasks included in the analysis were:

1. Use cold chain system to preserve vaccine integrity
2. Participate in vaccine consumption recording
3. Use a multi-dose, open-vial policy
4. Ask client about immunizations received
5. Use the immunization schedule with clients
6. Educate clients on immunization schedule
7. Administer vaccines to clients according to protocol
8. Administer oral vaccines

As can be seen in Figure 13.0, the cadre that has the highest proportion of providers performing EPI tasks frequently is CMs. While these numbers may appear surprisingly low, Figures 13.1, 13.2 and 13.3 show that much higher percentages of clinic-level providers are performing these tasks frequently. It appears that it is more common among clinic CMs to perform EPI tasks frequently, as compared to the hospital CM and other facility-provider combinations. However, tasks 4, 5 and 6 are performed by each of the three clinic-level providers. A module on EPI should be included under primary health care (PHC) course; perhaps some content could be reduced in RN curriculum (e.g., epidemiology in PHC II) to give credit hours to EPI. Interestingly, CMs have immunization scope in the JD, but it is only currently listed in theory in the curriculum; if CMs would be required, this needs to be altered to a CBT plan with simulation and clinical practice in this area.

**Figure 13.0. Percentage of Each Cadre that Performs EPI Tasks Frequently**



**Figure 13.1. Percentage of RNs that Performs EPI Tasks Frequently, by Facility Type**

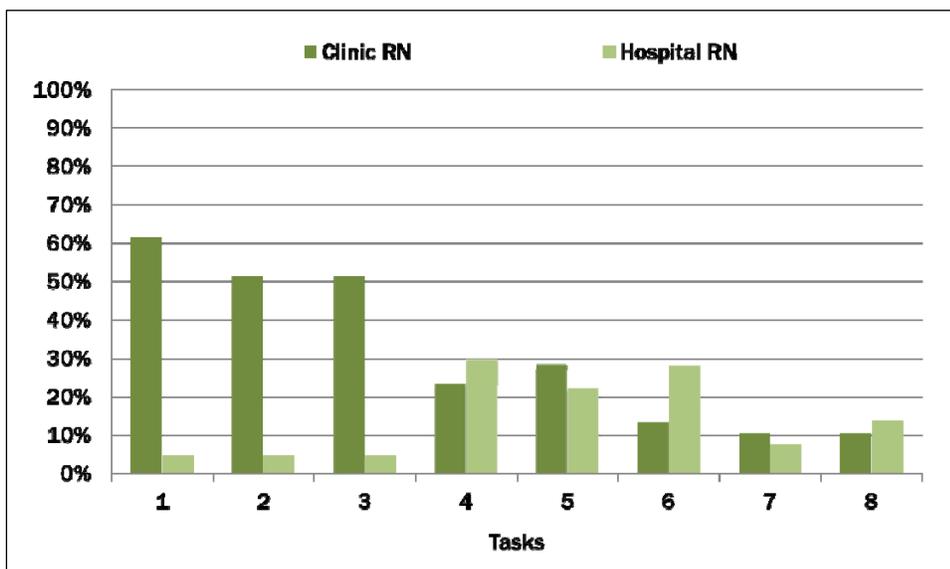


Figure 13.2. Percentage of CMs that Performs EPI Tasks Frequently, by Facility Type

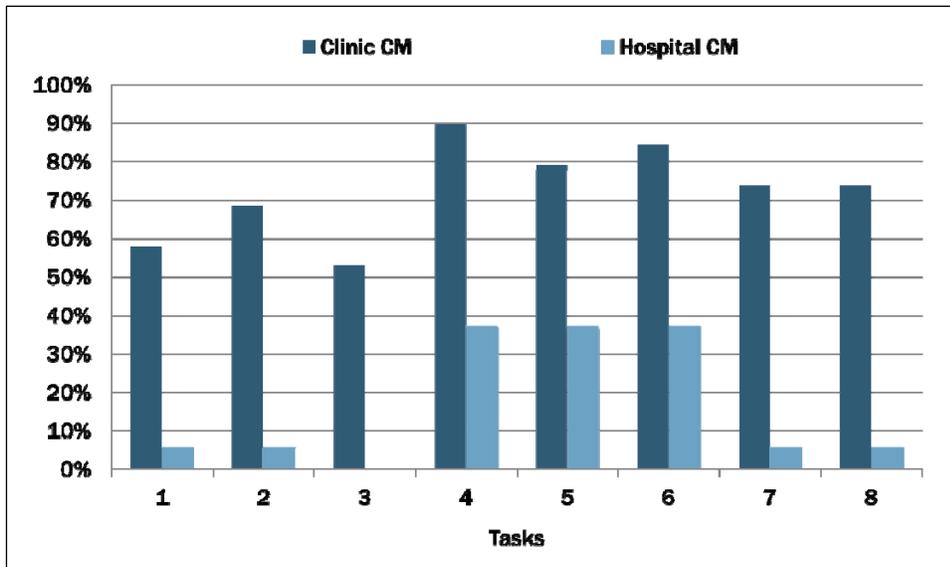


Figure 13.3. Percentage of PAs that Performs EPI Tasks Frequently, by Facility Type

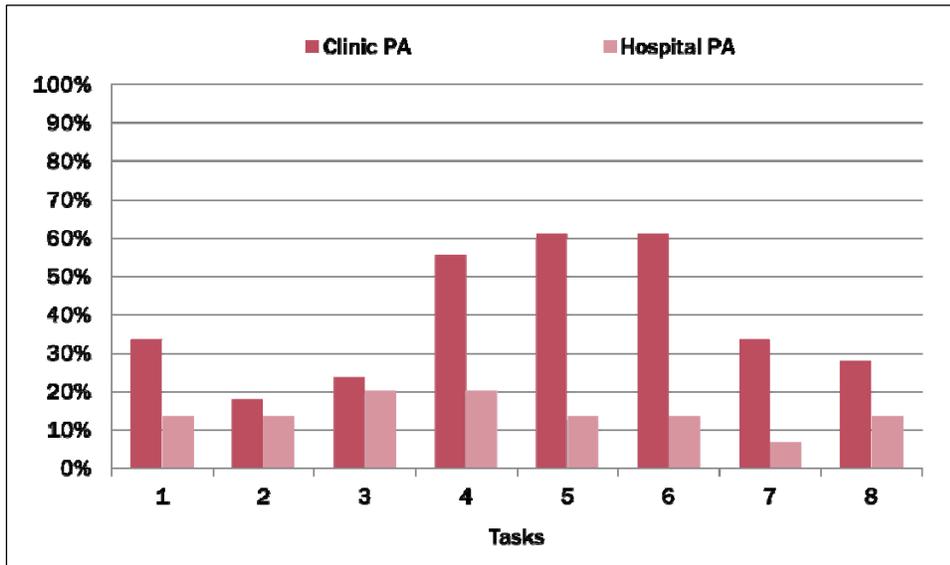


Figure 13.4. RN Training Preparation in EPI Tasks

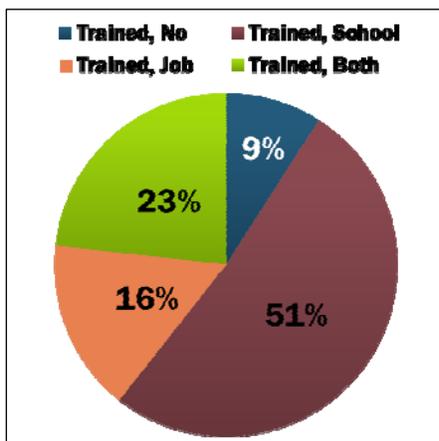


Figure 13.5. CM Training Preparation in EPI Tasks

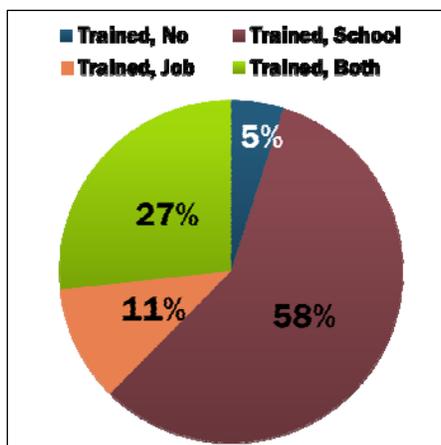
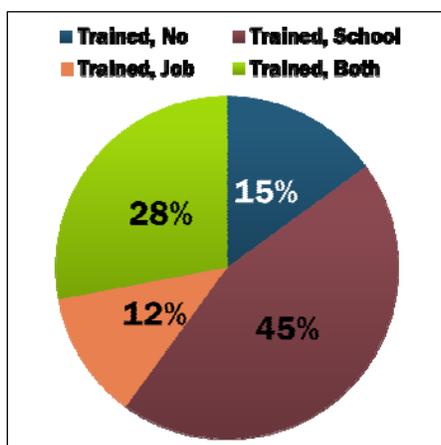


Figure 13.6. PA Training Preparation in EPI Tasks



RNs and PAs have the largest gap in training on EPI-related tasks. The aforementioned discussion on placement of EPI education may be useful in resolving this gap for RNs and PAs as well as CMs.

#### 14. Integrated Management of Childhood Illnesses (IMCI)

Forty-three tasks composed the IMCI section of the task analysis survey. Due to the high number of tasks, the averages are presented in Figures 14.0, 14.1, 14.3 and 14.4. There is some overlap with SNC; this should be discussed and the duplications reduced (i.e., related to jaundice). The tasks included are as follows:

1. Conduct rapid initial assessment of an infant
2. Assess for possible bacterial infection in infants
3. Classify bacterial infection in infants
4. Treat infants for infection
5. Assess for possible jaundice in infants
6. Classify the jaundice in infants
7. Treat infants for jaundice

8. Assess infant for diarrhea
9. Classify dehydration in infants
10. Treat infant for diarrhea with severe dehydration
11. Treat infant for diarrhea with some and no dehydration
12. Treat infant for severe persistent diarrhea and/or dysentery
13. Assess infant for feeding problems or low weight
14. Classify the feeding problem or low weight in infants
15. Manage the infant for feeding problem or low weight
16. Assess the infant's immunization status
17. Advise the mother/father/caretaker about infant danger signs
18. Conduct initial identification of the child's problems
19. Assess child for general danger signs
20. Classify the sick child for general danger signs
21. Treat sick child with very severe disease
22. Assess child for cough or breathing difficulty
23. Classify the sick child for cough and breathing difficulty
24. Treat the child with severe pneumonia or very severe diseases
25. Treat the child with pneumonia and no pneumonia
26. Assess the child for diarrhea/dehydration
27. Classify the diarrhea/dehydration in the child
28. Treat child for diarrhea with severe dehydration
29. Treat the child for diarrhea with some and no dehydration
30. Treat the child for severe persistent diarrhea and dysentery
31. Assess the child for fever and measles
32. Classify the child with fever in malaria high-risk areas
33. Classify the child with fever in malaria low-risk areas
34. Classify the child with fever and measles
35. Treat the child for fever in malaria high-risk areas
36. Treat the child for fever in malaria low-risk areas
37. Treat the child for fever and measles
38. Assess the child for ear problems
39. Classify the child with ear problems
40. Treat the child with ear problem
41. Classify the child's malnutrition or anemia

42. Treat the child for malnutrition and anemia

43. Check the child's immunization, vitamin A supplementation and de-worming status

Figure 14.0 demonstrates the proportion of providers from each cadre that performs IMCI tasks frequently. It can be seen that the PA cadre has the highest percentage of providers that performs IMCI frequently.

**Figure 14.0. Percentage of Each Cadre that Performs IMCI Tasks Frequently**

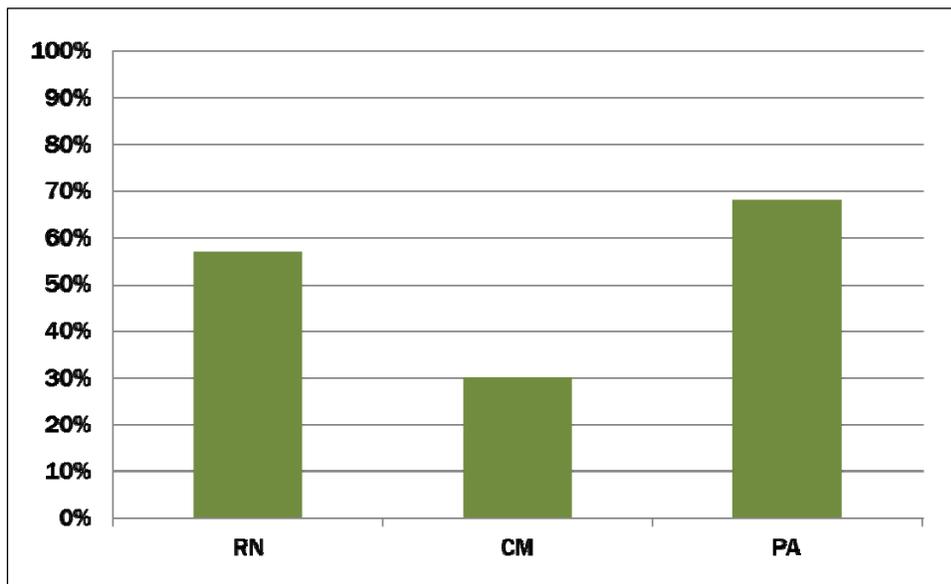
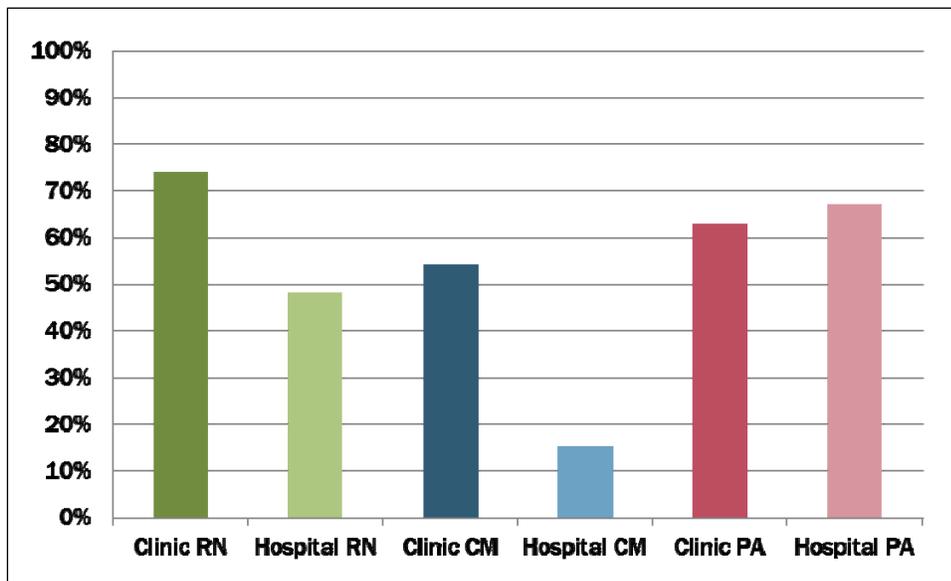


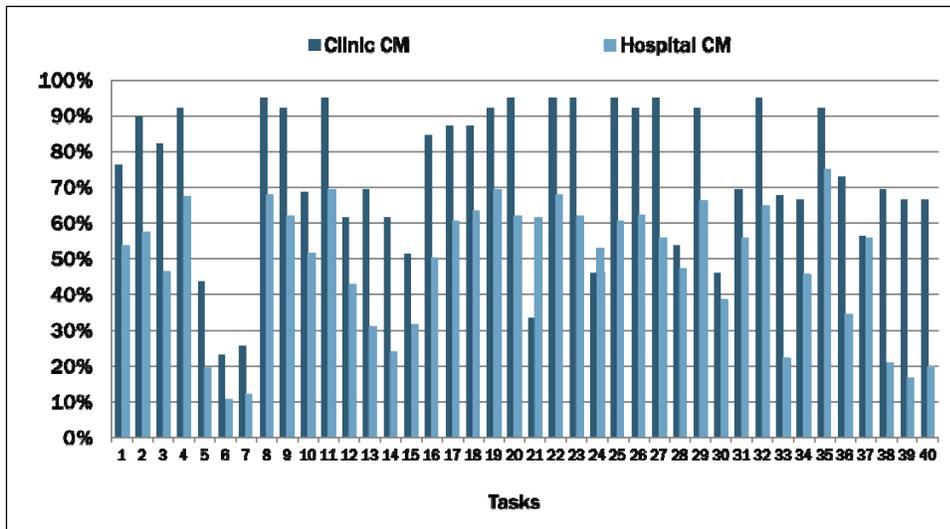
Figure 14.1 shows that clinic RNs and PAs from both facility types have a high proportion of providers that performs IMCI tasks frequently. Given these patterns, these providers should have IMCI in their JDs (for all PAs and for RNs working at clinic level).

**Figure 14.1. Percentage of Each Cadre that Performs IMCI Tasks Frequently, by Facility Type**

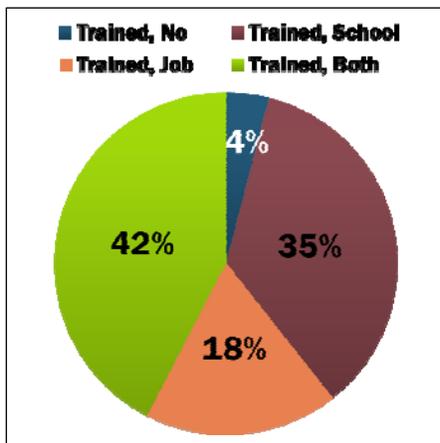


Among CMs, many report performing the individual IMCI tasks more frequently in the clinic (Figure 14.2). IMCI content should be cross-checked with existing syllabi on pediatrics and inserted as needed, as well as specifically included in each JD.

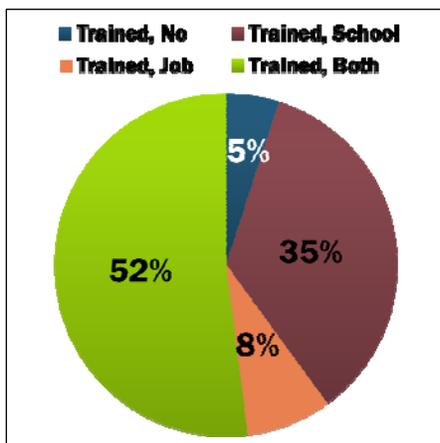
**Figure 14.2. Percentage of CMs that Performs IMCI Tasks Frequently, by Facility Type**



**Figure 14.3. RN Training Preparation in IMCI Tasks**



**Figure 14.4. PA Training Preparation in IMCI Tasks**



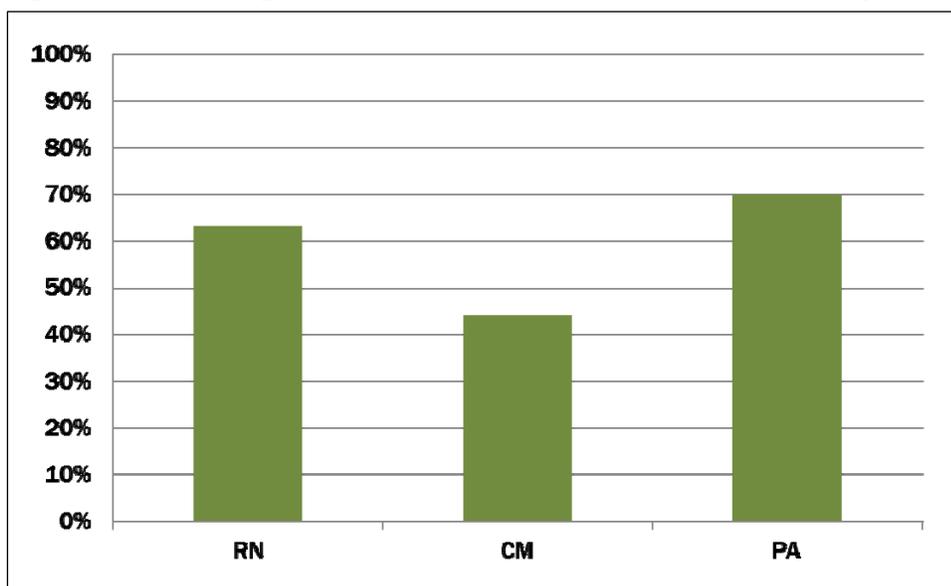
## 15. Infant and Young Child Feeding (ICYF)

The following was the only task listed for ICYF:

1. Teach caregivers proper nutrition of children by proper developmental age

The RN and PA cadres frequently perform this task, and as seen in Figures 15.0 and 15.1; this is similar across facility types for PAs, higher among clinic CMs than hospital CMs and relatively high for RNs working at both levels. This task is already included in the JD for PAs and CMs, but needs some re-wording specifically with the teaching component. This task should be included in the JD for RNs.

**Figure 15.0. Percentage of Each Cadre that Performs ICYF Task Frequently**



**Figure 15.1. Percentage of Each Cadre that Performs ICYF Task Frequently, by Facility Type**

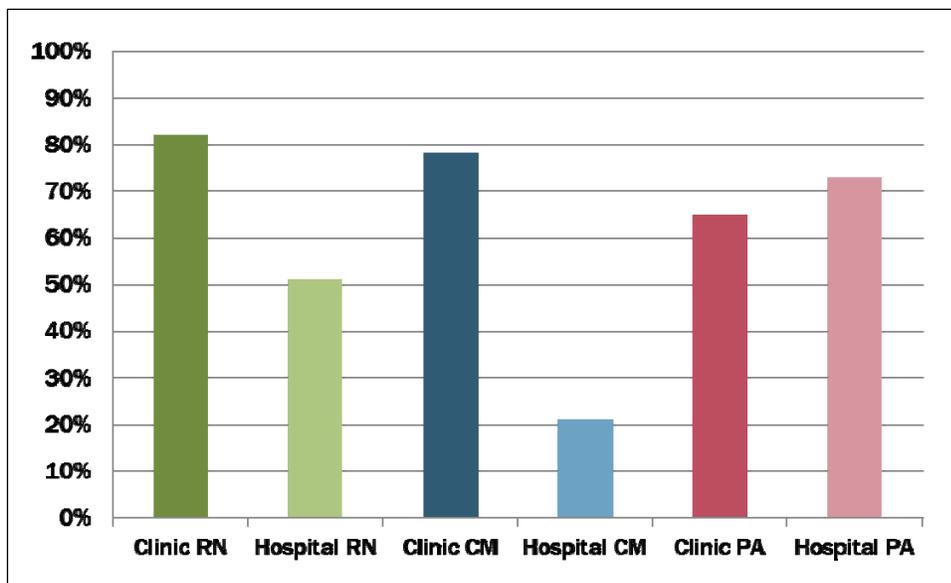


Figure 15.2. RN Training Preparation in IYCF Task

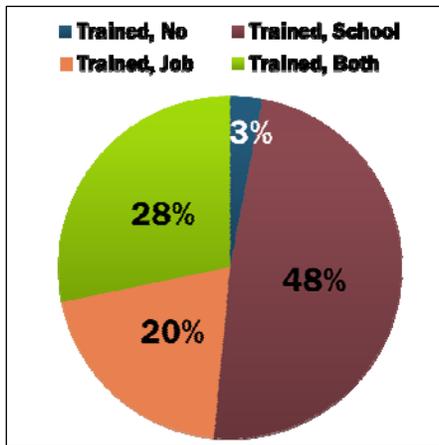


Figure 15.3. CM Training Preparation in IYCF Task

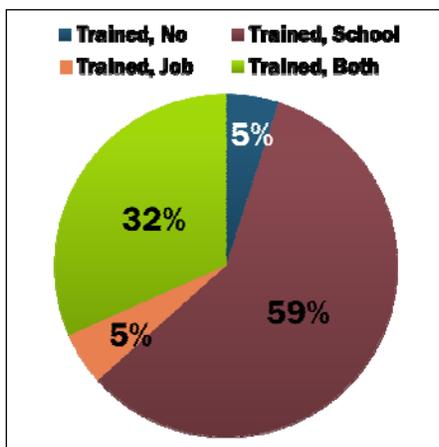
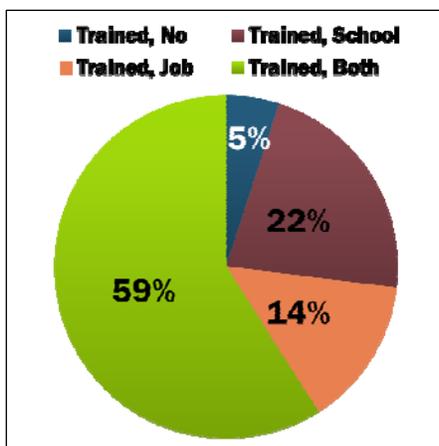


Figure 15.4. PA Training Preparation in IYCF Task



Figures 15.2–15.4 are only in reference to one task. Training preparation for this task usually takes place before or after deployment.

## **16. Emergency Health (EME)**

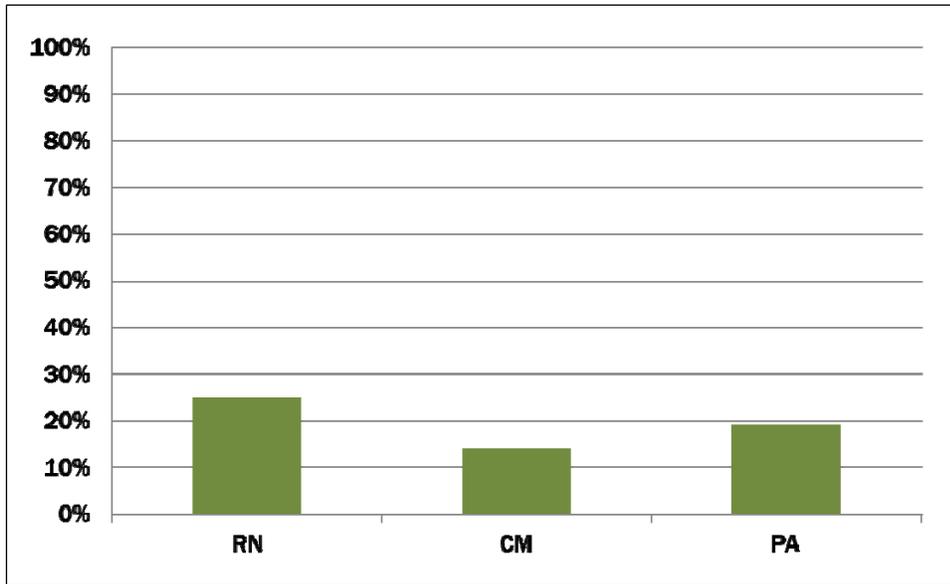
The following twenty-three EME tasks were included in the study:

1. Diagnose and manage shock
2. Maintain airway and bag-breathing for patient with respiratory distress
3. Diagnose and manage anaphylactic reaction
4. Diagnose and manage seizures and convulsions
5. Diagnose and manage animal bites
6. Diagnose and manage poison ingestions
7. Diagnose asthma
8. Manage asthma
9. Provide first aid
10. Manage burn injuries
11. Manage wound care
12. Diagnose pneumothorax
13. Manage pneumothorax
14. Diagnose haemothorax
15. Manage haemothorax
16. Diagnose acute abdomen
17. Manage acute abdomen
18. Diagnose closed fracture
19. Manage closed fractures
20. Diagnose open fracture
21. Manage open fractures
22. Diagnose spinal injuries and pelvic fractures
23. Manage spinal injuries or pelvic fractures

As shown in Figure 16.0, a low proportion of the three cadres perform EME tasks frequently. The majority of providers from all three cadres reported rarely performing EME tasks. On average, 12% report that these tasks do not occur in the setting; 20% report another worker performs them; 47% report they rarely perform these tasks; and 21% report they frequently perform these tasks. Given these statistics, it may be prudent to investigate further if all 23 EME tasks are necessary for inclusion in the BPHS or if other emergencies like stroke hyperglycemia, hypoglycemia, increased BP or diabetic coma should be included in the BPHS. Most of the tasks relate to service provision in the emergency department only. When a survey respondent was from a hospital, the study did not collect data on which department they were working in. Hence it is possible that some of the interviewed participants did not work in the emergency department. The KTs for all

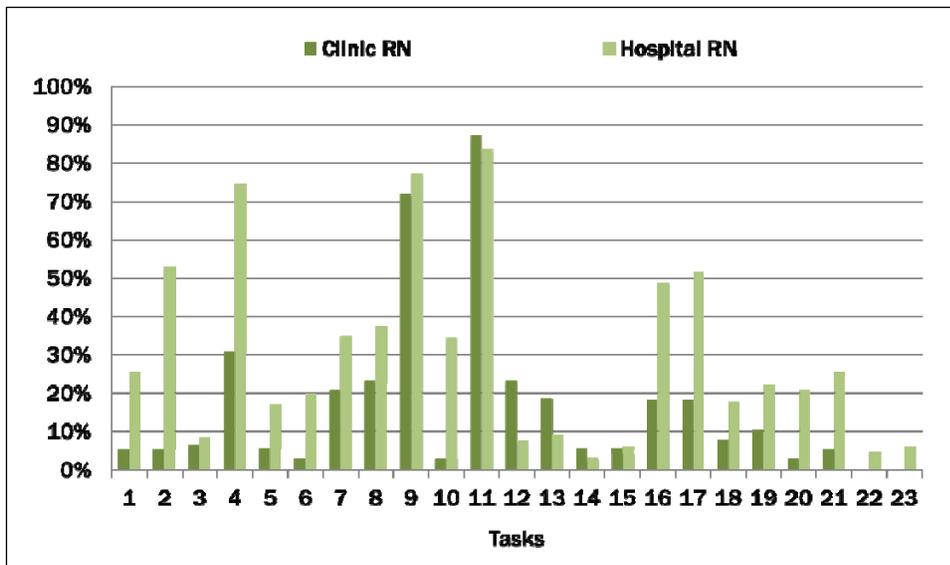
cadres at the clinic/community level were task 9 (providing first aid) and 11 (managing wound care). Hence, these will not be discussed in the Figures 16.0–16.3. First aid and wound care are included in all three cadre’s curricula, as well as the EHT curriculum. This is a good example of where joint training is already occurring. However, ensuring CBT and assessment of competency are critical.

**Figure 16.0. Percentage of Each Cadre that Performs EME Tasks Frequently**



Figures 16.1, 16.2 and 16.3 demonstrate the proportions of cadre by facility type that perform EME tasks frequently; and it is seen that not all of the tasks are performed frequently. A larger proportion of RNs, particularly hospital RNs, reported that they frequently perform several tasks.

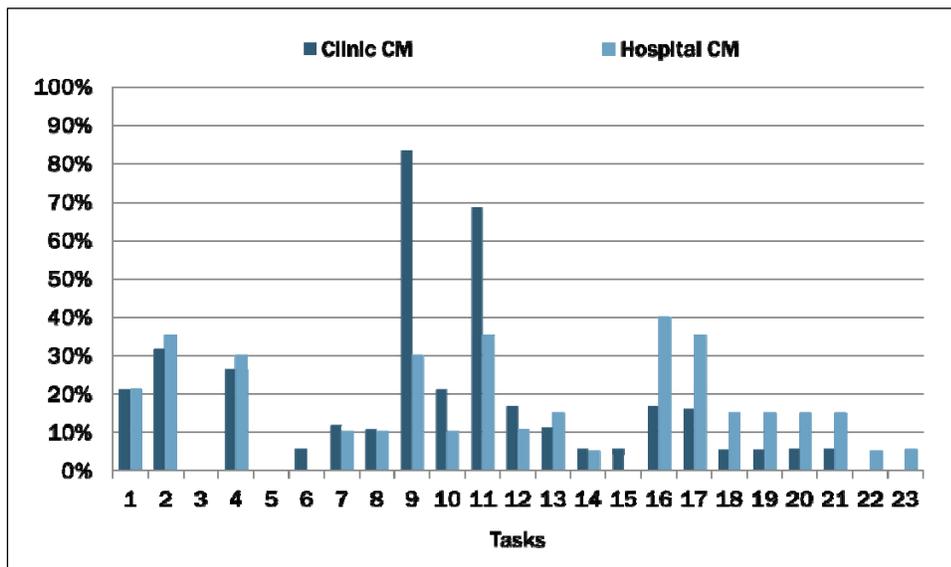
**Figure 16.1. Percentage of RNs that Performs EME Tasks Frequently, by Facility Type**



The KT’s for hospital RNs are tasks: 2 (maintaining airway), 4 (diagnosing and managing seizures and convulsions), 9 (providing first aid), 11 (managing wound care), and 16 and

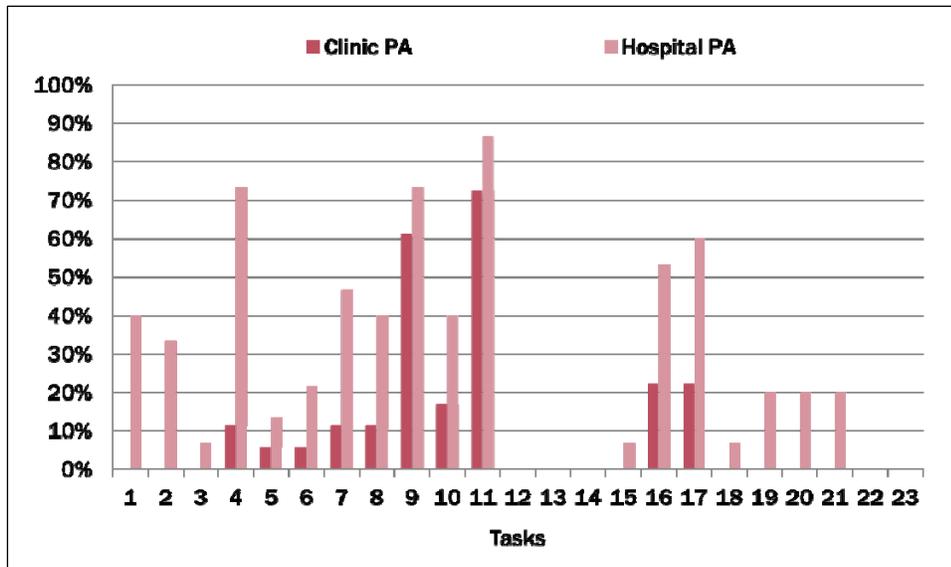
17 (diagnosing and managing acute abdomen). Since they are all related to life-saving and morbidity reducing measures, these additional tasks should be considered for assessment and linked to core competencies in EME. In addition, all of these tasks include competency in IP. Although these are included in the curriculum, practicing in simulation prior to clinical practice would increase safety, comfort, confidence and caring in this area. The EME tasks emphasis of the RN JD is currently on tasks that are not part of the BPHS: performance of incisions and drainage, circumcision, suturing of lacerations. A decision based on health management information systems (HMIS) or national need consensus should be made to keep these in the JDs of all cadres or replace with the KT's identified above. It could also be updated by just adding management of wound care, including but not limited to incisions and drainage, circumcision and suturing of lacerations. While circumcision is generally not considered an EME task, it is mentioned here because of the link to wound care. Currently, training of all cadres does not include circumcision. For the RN, it does not include circumcision beyond care of the circumcised site; but, the manner in which it reads in the JD is that RNs perform this surgical procedure with approval from the county health officer.

**Figure 16.2. Percentage of CMs that Performs EME Tasks Frequently, by Facility Type**



Generally, a low proportion of hospital CMs conduct each of the EME tasks; the tasks that are performed by about 30–40% of hospital CMs include maintaining airway and bag-breathing for patients with respiratory distress, diagnosing and managing seizures and convulsions, providing first aid, managing wound care, and diagnosis and management of acute abdomen. Perhaps when training and assessment of these tasks is conducted for CM students, they could overlap with RN students. The JD should be updated with these tasks also, since currently it only states that CMs should refer emergencies.

**Figure 16.3. Percentage of PAs that Performs EME Tasks Frequently, by Facility Type**



Tasks performed frequently by relatively larger proportions of hospital PAs include mainly diagnosing and managing seizures and convulsions; providing first aid and managing wound care; and diagnosing and managing acute abdomen. PAs, however also diagnose and manage asthma more frequently than RNs and CMs. Given the similarity in the proportions of hospital PAs, RNs and CMs that perform tasks 9, 11, 16 and 17, this is an opportunity for joint assessment. The PA JD does include performing minor surgical and emergency procedures, but does not include the tasks listed above as frequently performed. An update with these tasks included should also be discussed.

**Figure 16.4. RN Training Preparation in EME Tasks 2, 4, 9, 11, 16, 17**

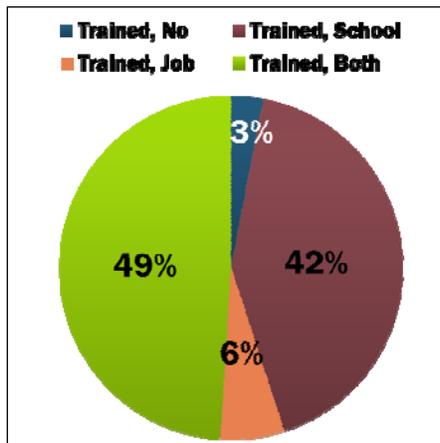


Figure 16.5. CM Training Preparation in EME Tasks 9, 11, 16, 17

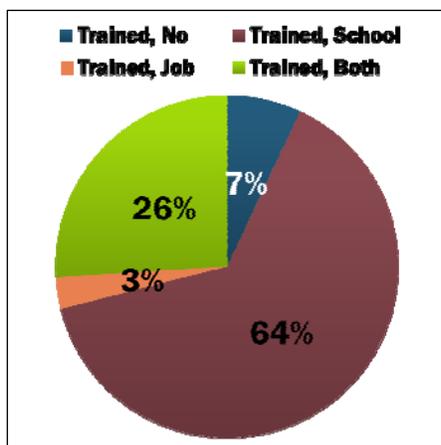
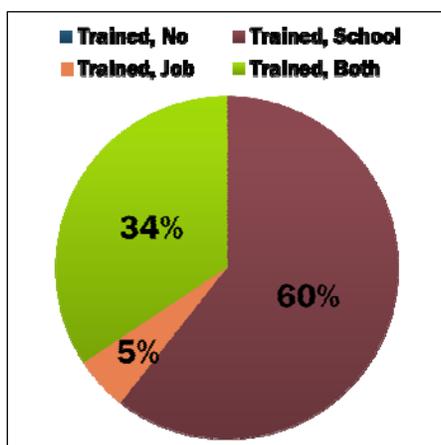


Figure 16.6. PA Training Preparation in EME Tasks 4, 7, 9, 11, 16, 17



PSE training is fair given the Figures 16.4–16.6 with the majority of the training occurring in school. Again, a close review of the teaching and assessment methods would be worthwhile.

## 17. Sexually Transmitted Infection (STIs), HIV and AIDS

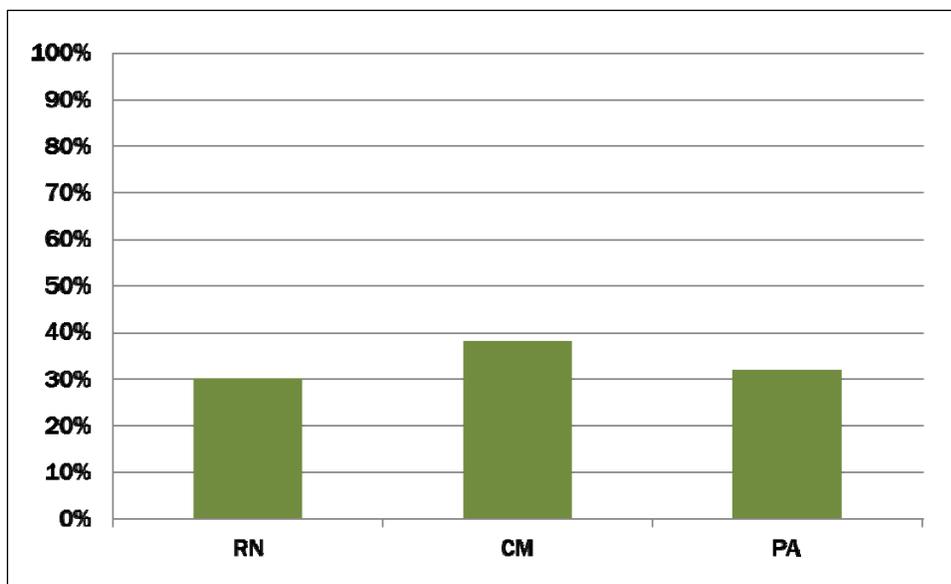
This section includes the following tasks for STIs and HIV/AIDS care:

1. Conduct STI, HIV and AIDS health-education activities using group education skills
2. Provide education about modes of HIV transmission
3. Discuss common misconceptions about HIV/AIDS
4. Discuss reduction of mother-to-child transmission
5. Demonstrate how to use male condom using a model
6. Demonstrate how to use female condom using a model
7. Provide information on HIV/AIDS, prevention of mother-to-child transmission of HIV (PMTCT), STIs, available in the health facility
8. Distribute and place appropriate educational posters and pamphlets on HIV/AIDS, PMTCT, STIs

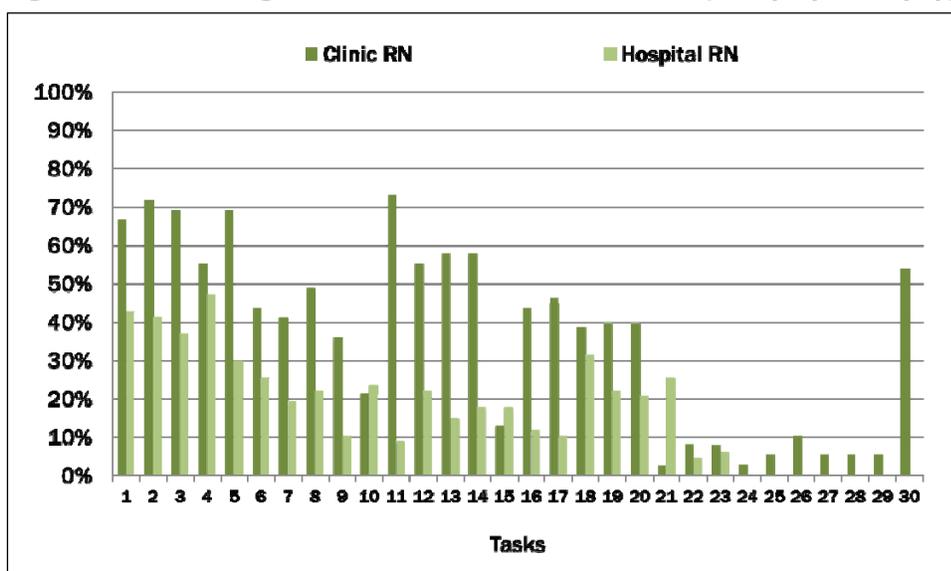
9. Carry out outreach IEC activities in the catchment areas
10. Keep a record of clients who attend the group education sessions
11. Greet the clients cordially and respectfully
12. Counsel on STIs, HIV and AIDS
13. Ensure privacy during the visit
14. Obtain the clinical history, including STI, HIV/AIDS aspects
15. Conduct an examination and lab investigations if intake suggests they are needed
16. Explain the findings from the clinical history and physical exam and manage accordingly
17. Provide counseling on maternal nutrition and micronutrient supplements
18. Counsel the mother on infant feeding following a job aid for each step
19. Prepare/review the birth preparedness plan with the client focusing on pregnant woman's needs
20. Conduct an evaluation of the care provided and subsequent follow-up
21. Collect blood sample per National AIDS Control Program (NACP) standards
22. Dispose medical waste in a leak-proof container after drawing blood for STI/HIV/AIDS management
23. Perform rapid HIV test
24. Administer ARVs
25. Administer nevirapine to HIV+ mother
26. Counsel HIV+ postpartum woman on use of condoms
27. Administer nevirapine to newborn of HIV+ mother
28. Establish care plan for HIV+ mother-infant pair
29. Assess HIV+ mother-infant pair during return visit
30. Use NACP case management diagnostic algorithms for syndromic management of STIs

As seen in Figure 17.0, about 30% of each of the cadres performs STI tasks frequently; however, as demonstrated in Figures 17.1, 17.2 and 17.3, clinic-level providers tend to perform these tasks more frequently than their hospital counterparts.

**Figure 17.0. Percentage of Each Cadre that Performs STI Tasks Frequently**



**Figure 17.1. Percentage of RNs that Performs STI Tasks Frequently, by Facility Type**



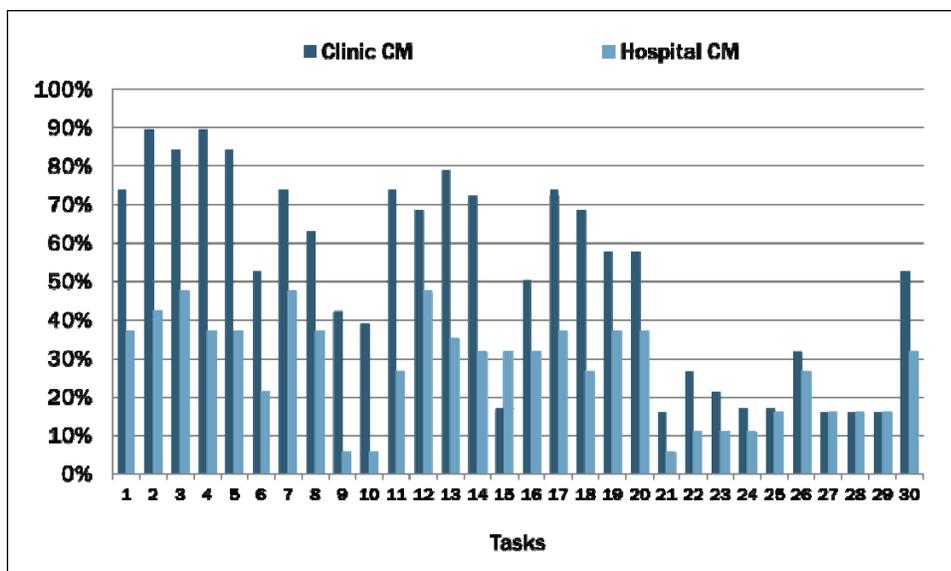
A higher percentage of clinic RNs performs tasks 1-14, 17-20 and 30 frequently than hospital RNs. These tasks are related primarily to counseling and education of the patient except for the last one, syndromic management of STIs. Clinic RNs are generally not frequently performing HIV testing, ARV administration or PMTCT tasks. A moderate proportion of hospital RNs is performing all of these tasks including testing, administration of ARVs and PMTCT. These tasks are not explicit in the RN JD, and consideration for making their responsibilities more clear would be advisable. Specifically, clarity could be added under the hospital section, “A.3l: counsel patients”; under community setting, there is latitude for specifics for this and other programs under “B.3: plans, implements and monitors primary health care programs”, and “B.5: conducts health education programs”.

The task list is very long with 30 tasks. A division of labor among cadres may be advisable in this area as it would be overwhelming for one provider to complete all tasks for all

clients in an integrated manner. Much of the education could be conducted in group health education sessions that are scheduled periodically. This appears to be an effective method where it is being implemented.

Task 15 appears to be a task that would fall under a provider-initiated approach and may be low because training in this area has not been conducted yet. Tasks 21–23 could be performed by a lab technician, but would have to be covered by a RN or CM if a lab technician was not available. Tasks 24–29 all relate to positive cases and hence we would expect lower frequencies. However, if testing was more routine, it would invariably increase how often RNs were frequently providing these services. Task 30 in the current curriculum (Med/Surg II) is minimal at best, with minimal clinical time that is coupled with HIV material also. A review of the lesson plans and assessments for these would be necessary to determine the actual learning outcomes. Since STIs and HIV also appear in a Tropical and Communicable Diseases course, it is worthwhile to consider if all material should be moved to this course and Med/Surg courses reduced. Since there were no tasks otherwise related to Med/Surg in the survey, it is difficult to state other material that could be reduced.

**Figure 17.2. Percentage of CMs that Performs STI Tasks Frequently, by Facility Type**

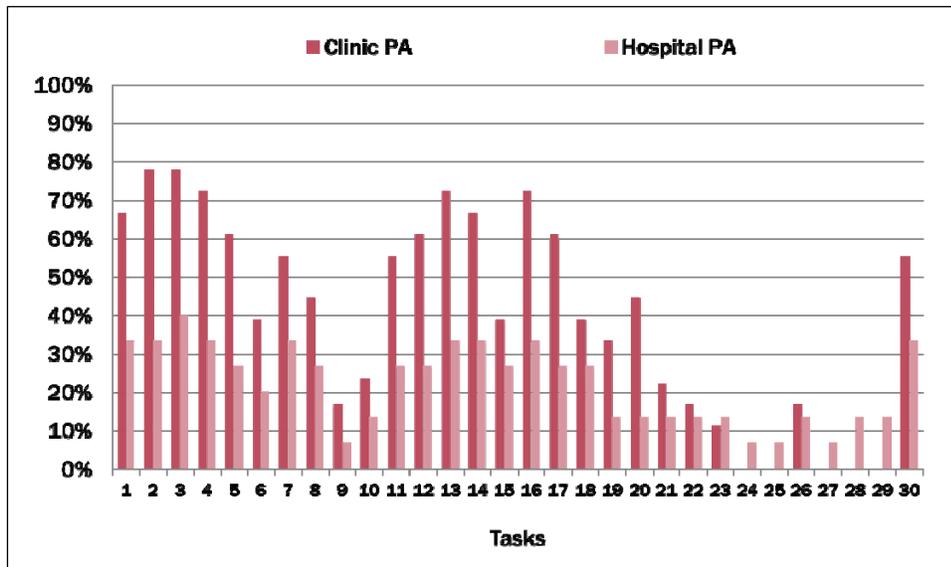


Here again we see a higher proportion of CMs at clinic level reporting tasks 1–14, 16–24, 26 and 30. Both the CM JD and curriculum cover this content to a greater extent in both theory and clinical practice in Midwifery I, Pediatrics and especially Midwifery III course. There is opportunity to increase simulated activities related to STI/HIV. The Midwifery I course states that HIV is a part of routine labs, but from the results we have here, it is difficult to confirm whether they are actually being completed as routine labs. In fact, this lends to moving in the direction of PITC. And if this could be implemented across facilities, the Liberia HMIS would have a better account of HIV prevalence.

In Figure 17.3, there is a similar pattern among PAs as seen among RNs, with the exception that tasks related to administration of ARVs and PMTCT are performed frequently only by hospital PAs. This may be in part due to referrals from the community level to the hospital.

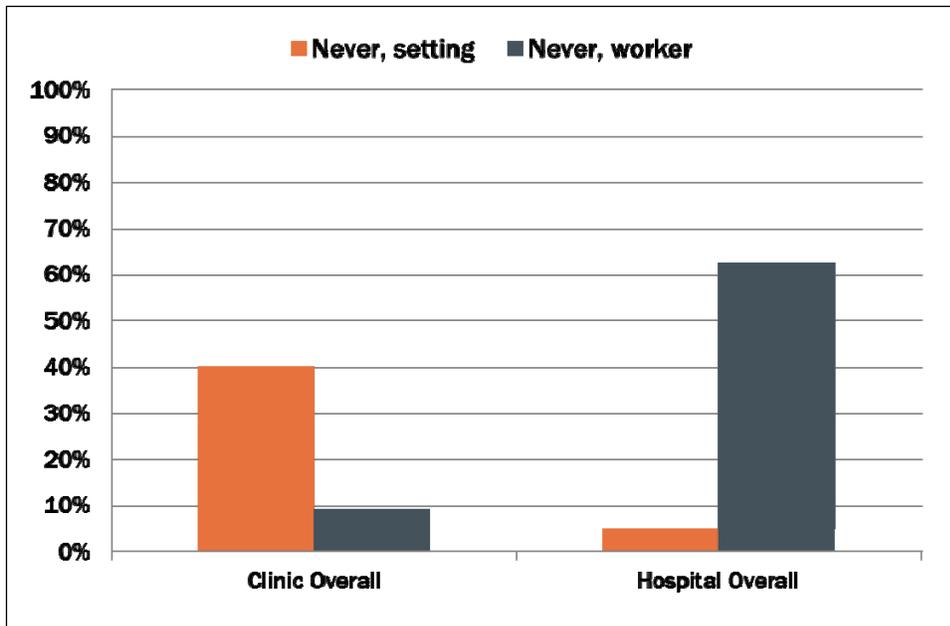
The only task performed frequently by clinic PAs is counseling HIV+ postpartum woman to use condoms; and even the proportion is only around 12%. The PA JD is lacking specific content related to STI/HIV/AIDS. Under clinic services group, education could come under #2 on the current JD, conduct health education for group and individuals, and testing could fall under what is currently stated as #7 on the current JD, do simple laboratory tests when necessary (but this could cover many other tests also); it may be advisable to be more descriptive here.

**Figure 17.3. Percentage of PAs that Performs STI Tasks Frequently, by Facility Type**

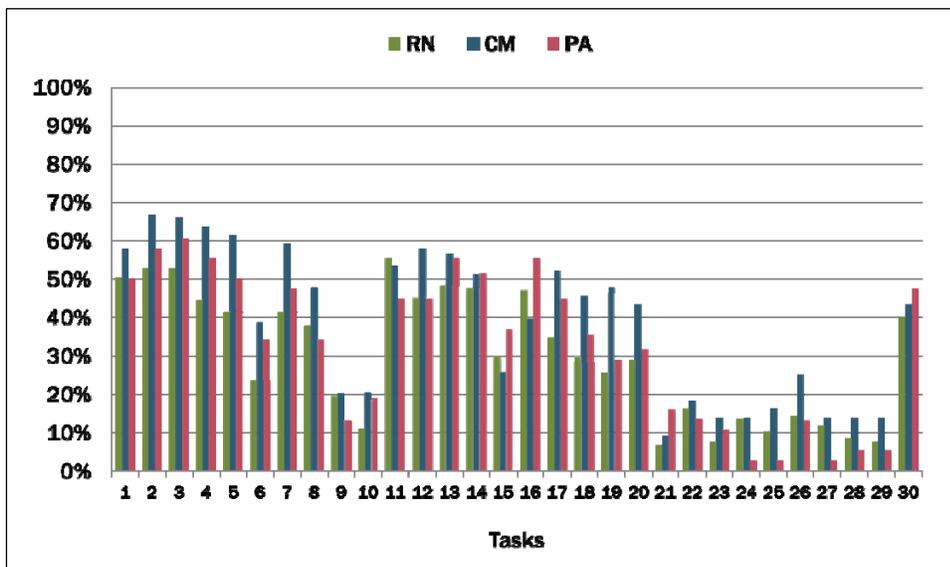


When trying to understand the differences among the patterns by facility type, it is interesting to see an inverse relationship in the reasons providers never perform these tasks. Figure 17.4 shows that at clinic level approximately 40% of providers reported that the tasks do not occur in the setting; and 9% reported another worker performs the tasks. Whereas at the hospital level, 5% reported that STI tasks are not performed in the setting, and about 62% reported these tasks are performed by another worker. From this data, it is unclear why these tasks are not performed in the clinic level. Scheduled site visits (separate from this task analysis) confirm that many of the supplies or materials and training needed for these tasks may not be available at the clinic level. The PSE NWG should consider discussing this with the Clinton Foundation since it is a key stakeholder in HIV for service delivery facilities with a focus on resource readiness.

**Figure 17.4. Percentage of Providers that Never Performs STI Tasks, By Facility Type**



**Figure 17.5. Percent of Each Cadre that Performs STI Tasks Frequently**



Given that the overall proportion of each cadre performing STI/HIV/AIDS tasks frequently is about the same and that they may be integrated with other services, all three cadres should continue to perform these tasks—but divide responsibilities where feasible for efficient care at the point of delivery, including some of the tasks listed in the following section, VCT.

Figure 17.7. RN Training Preparation in STI Tasks

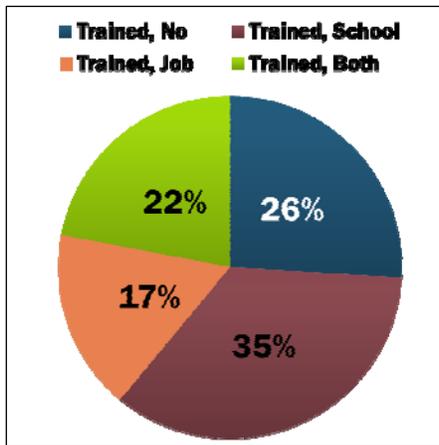


Figure 17.8. CM Training Preparation in STI Tasks

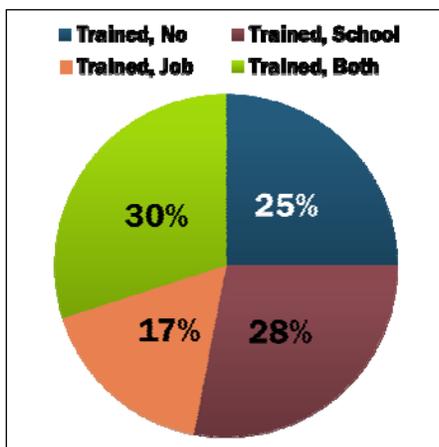
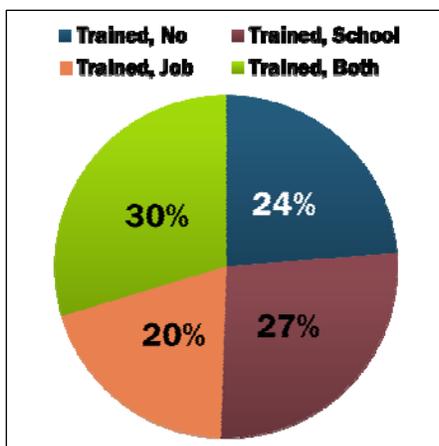


Figure 17.9. PA Training Preparation in STI Tasks



If providers continue to perform these tasks, the gap in PSE needs to be addressed, as 24–26% of all three cadres stated that they have not been trained at all and only 27–35% has been trained in school only.

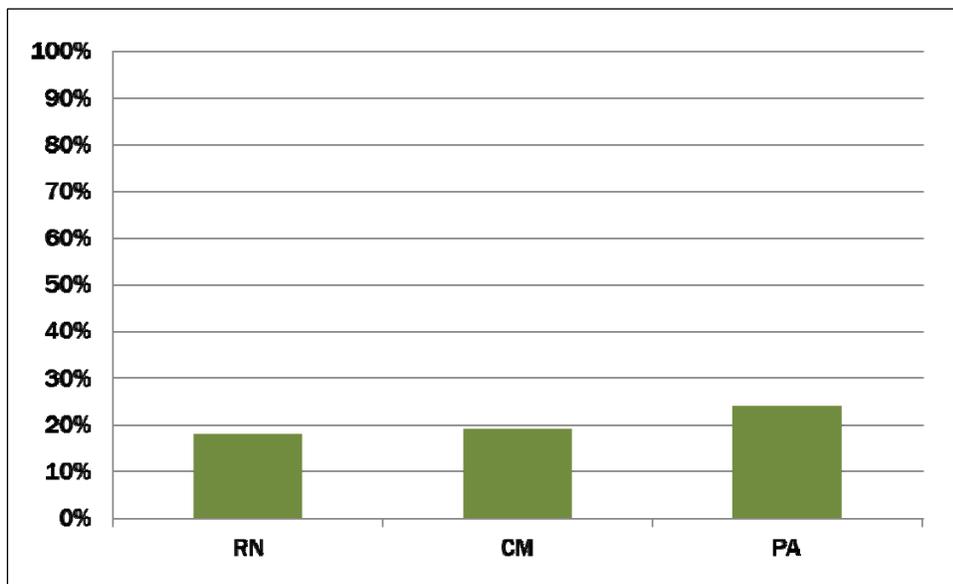
## 18. Voluntary Counseling and Testing (VCT)

This section includes the following tasks for VCT:

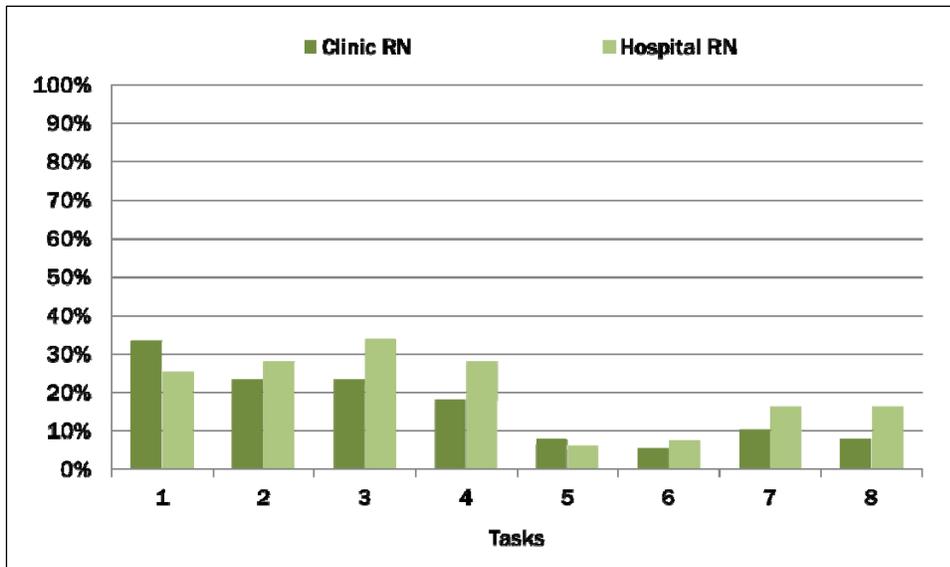
1. Give an introduction and orientation to the HIV counseling session
2. Assess HIV risk of the client
3. Explore options for reducing risk
4. Prepare the client for the HIV test
5. Process the blood samples according to standards
6. Register and report the HIV results
7. Provide HIV-negative test results according to protocol
8. Provide HIV-positive test results according to protocol

VCT is a set of tasks on which providers are currently being trained by the NACP in a vertical in-service program. If providers have not been trained in this program, they are not providing this service. Given the HIV prevalence, a decision will need to be made to continue this as a vertical program or a discussion held on the inclusion of counseling and testing with PSE. Advances in research and technology and available resources should also be considered in this discussion. For example, the availability of rapid diagnostic tests (RDTs), information on provider-initiated testing and counseling (PITC), etc., should be discussed with an expert in HIV.

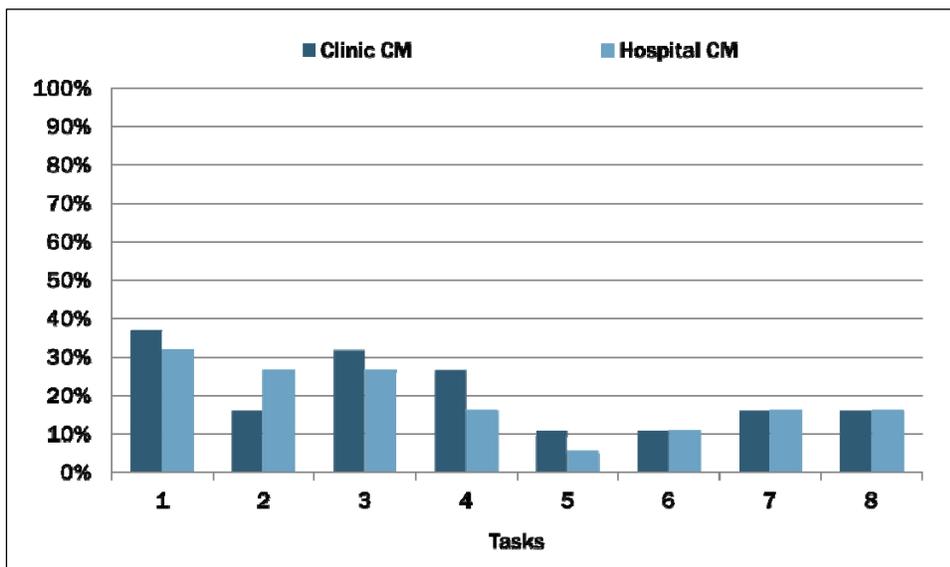
**Figure 18.0. Percentage of Each Cadre that Performs VCT Tasks Frequently**



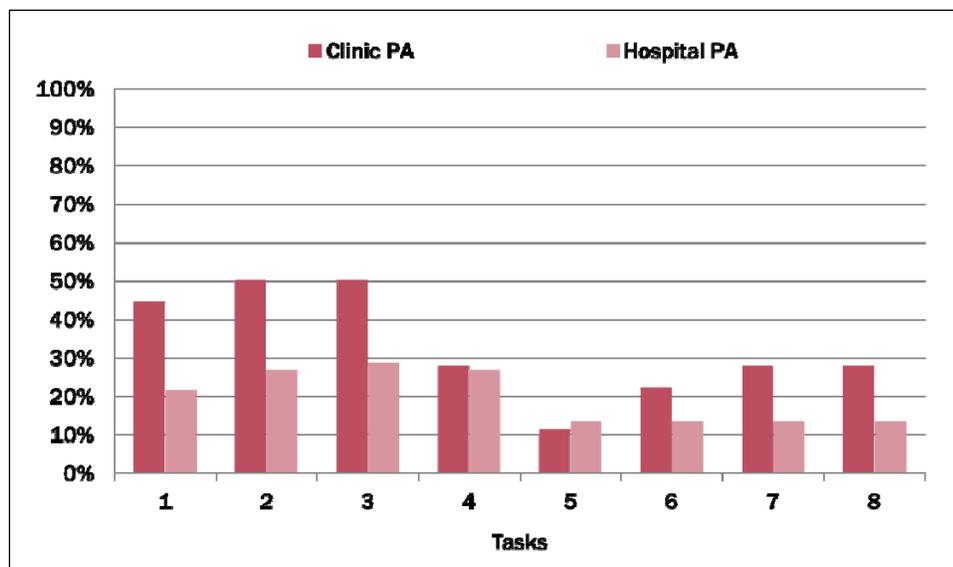
**Figure 18.1. Percentage of RNs that Performs VCT Tasks Frequently, by Facility Type**



**Figure 18.2. Percentage of CMs that Performs VCT Tasks Frequently, by Facility Type**



**Figure 18.3. Percentage of PAs that Performs VCT Tasks Frequently, by Facility Type**



From the Figures 18.0–18.3, all three cadres that report performing tasks frequently are performing tasks 1–4, 7 and 8 at a comparable rate. Given that counseling and testing should be integrated with other services, it would be hard to relegate these tasks to any particular health worker(s). Rather, as in the above discussion, determining how counseling and testing is approached and how it may be streamlined would be an important activity for stakeholders reviewing this area. Other results from the task analysis, not related to Figures 18.1–18.3, demonstrate that for task 5 (process the blood samples), 41% reported it being done by another worker (may be done most frequently by the lab technician). The same is true for health workers reporting on task 6, register and report results. Almost 60% of the workers that responded stated that task 6 is done by another worker.

Perhaps a revision of BPHS area VCT to CT/HIV/AIDS and STI would reflect more of the current evidence and, hence, teaching and learning could be consolidated and reduced in several of the courses by changing the focus and updating the technical content.

Figure 18.4. RN Training Preparation in VCT Tasks 1–4, 7, 8

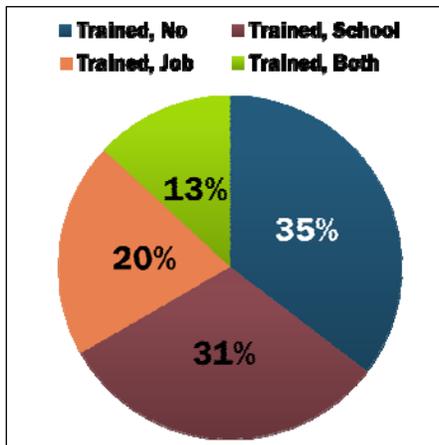


Figure 18.5. CM Training Preparation in VCT Tasks 1–4, 7, 8

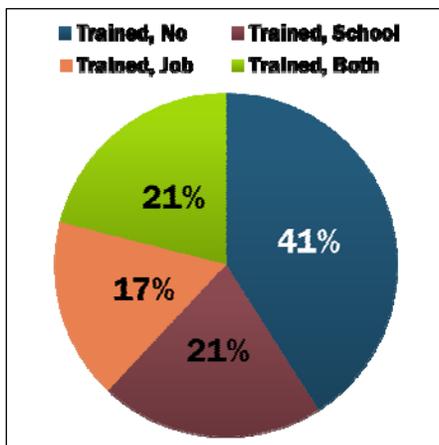
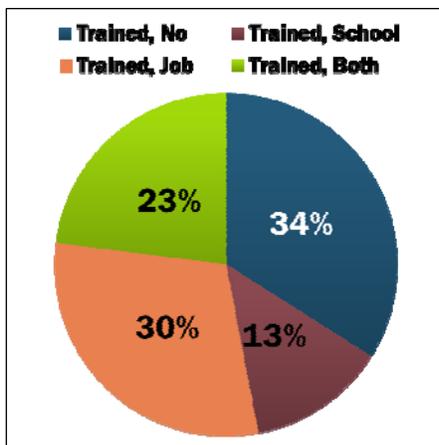


Figure 18.6. PA Training Preparation in VCT Tasks 1–4, 7, 8



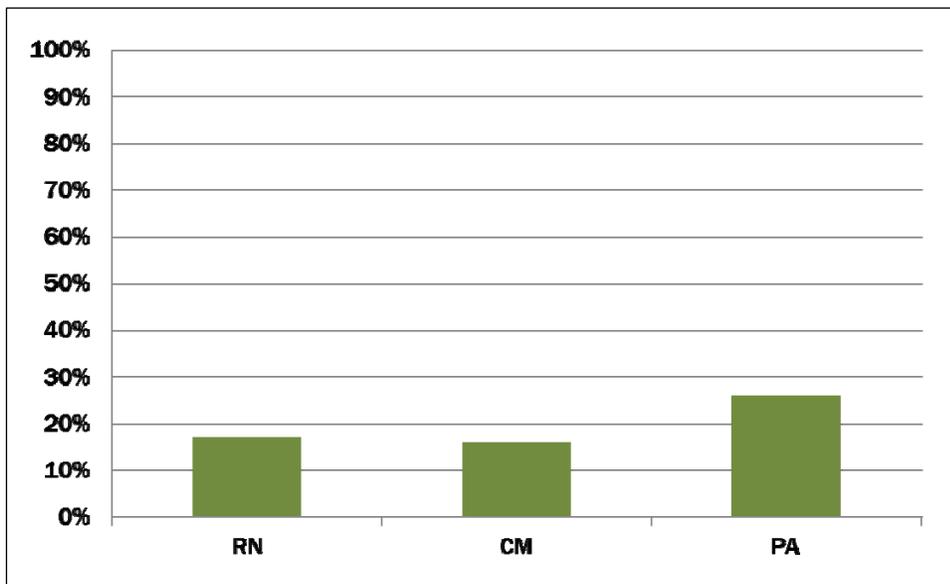
It is interesting that some providers report being trained in school only. However, most report not being trained.

## 19. Tuberculosis (TB)

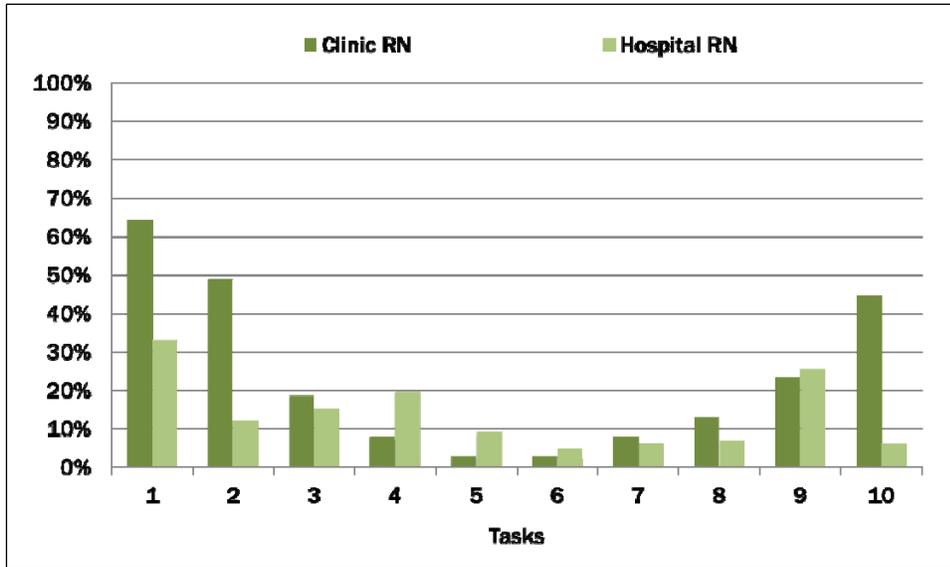
This section includes the following tasks for TB:

1. Provide IEC/BCC activities on spread of TB, recognition of symptoms and case management
2. Administer BCG to all newborns who have not been immunized with BCG
3. Identify suspect cases of TB
4. Collect sputum
5. Conduct microscopy for AFB
6. Diagnose TB in children
7. Register and assign TB cases to a treatment regimen
8. Manage side effects of the drugs
9. Monitor patient response to treatment
10. Supervise intensive phase of Directly Observed Treatment Short (DOTS) therapy

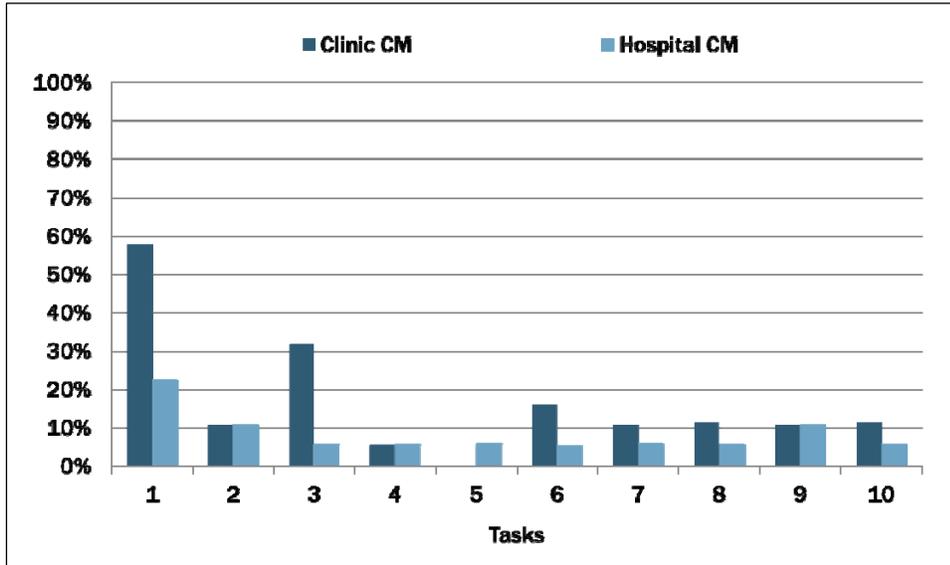
**Figure 19.0. Percentage of Each Cadre that Performs TB Tasks Frequently**



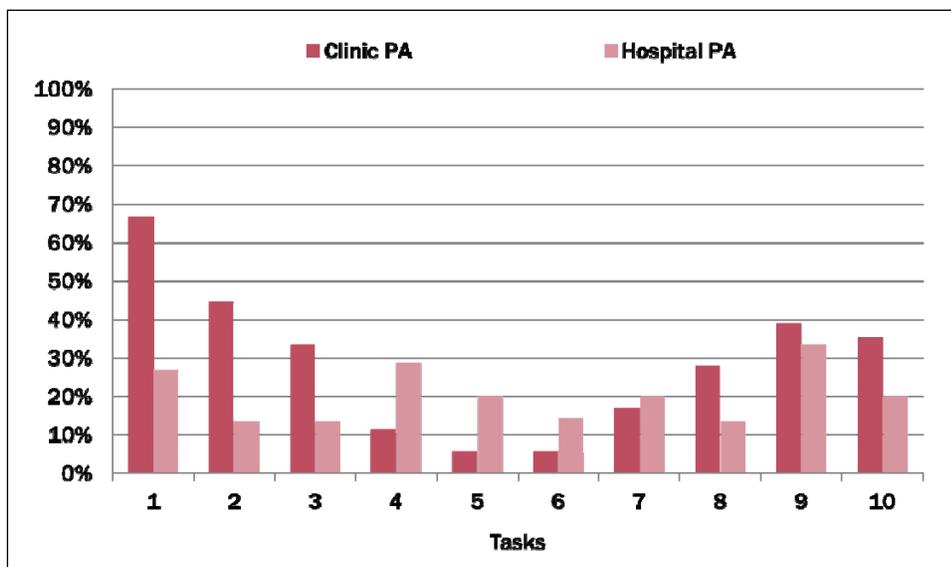
**Figure 19.1. Percentage of RNs that Performs TB Tasks Frequently, by Facility Type**



**Figure 19.2. Percentage of CMs that Performs TB Tasks Frequently, by Facility Type**



**Figure 19.3. Percentage of PAs that Performs TB Tasks Frequently, by Facility Type**



TB tasks are performed frequently among a higher percentage of clinic providers as compared to the hospital level. Some tasks are being completed frequently by a few providers within each cadre. The most common are tasks 1, 2 and 10 (IEC, BCG, DOTS). PAs also tend to have the responsibility of task 9 (monitor patient responses to therapy) even though it is done to some level by other cadres. CMs tend to perform task 1 (IEC) and task 3 (identify suspect cases) more frequently. A discussion on the utility of TB statistics could help inform whether to include TB in the JD and PSE. Perhaps statistics from HMIS could be reviewed when this section is discussed. The RN JD does not specify TB tasks, although there is a general statement where TB could be included “B.3” on PHC programs. It may be useful to be more specific about these programs, as with TB tasks. The PA and CM JDs also do not mention TB tasks. Given the frequencies, it may be wise to consider only having RNs and PAs responsible, if national needs confer that TB is still a priority—then, review the curriculum to ensure that these key tasks are given emphasis. Organizing the JD to include facility-specific tasks may be a worthwhile consideration since most are at the clinic level. The TB tasks not mentioned in the discussion above are also important, but may need to be decreased in emphasis or specifically assigned to another health worker’s JD not mentioned here (e.g., lab technician) if possible. PAs, RNs and CMs, however, may still need to pick up these KT’s.

Figure 19.4. RN Training Preparation in TB Tasks 1–2, 9

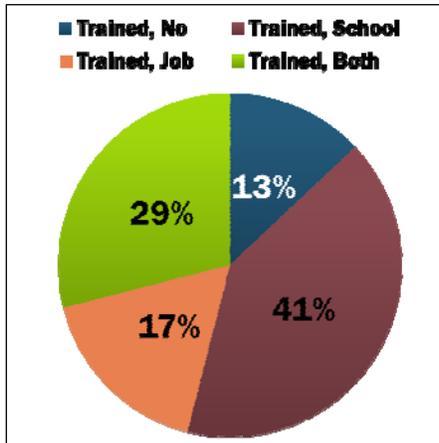


Figure 19.5. RN Training Preparation in TB Task 10

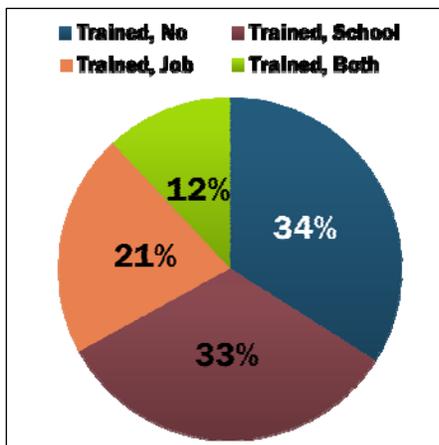
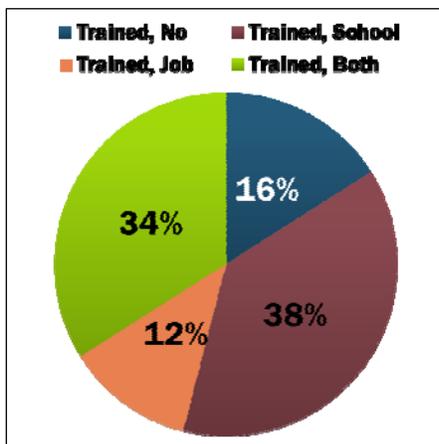


Figure 19.5 indicates that there is a gap in training on the intensive phase of DOTS. This does not indicate that there is as large of a gap in DOTS training in general. Furthermore, it is important to note that a more general task specifying supervision of DOTS therapy is not listed.

Figure 19.6 PA. Training Preparation in TB Tasks 1–2, 9, 10

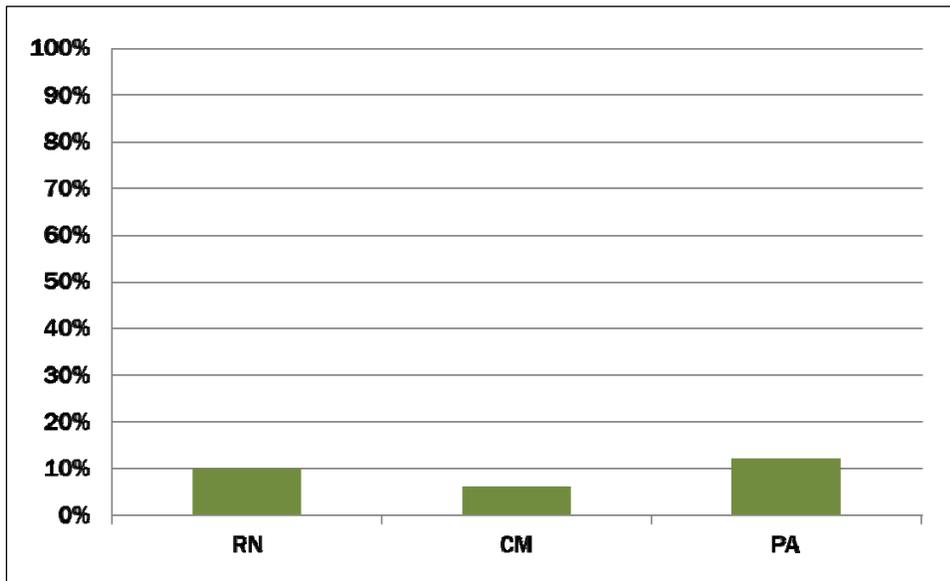


## 20. Control and Management of Other Endemic Diseases (CMOED)

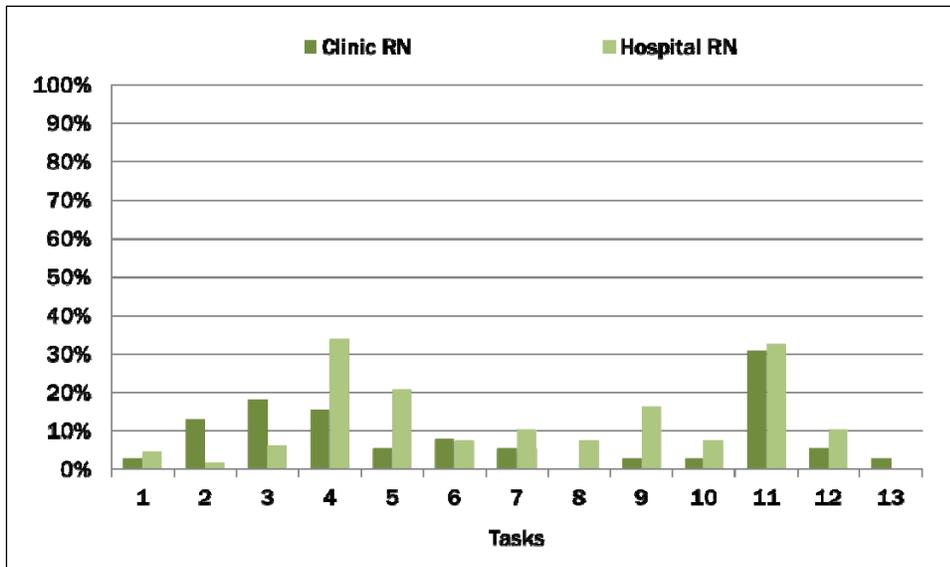
Tasks listed include:

1. Report monthly on all reportable diseases
2. Investigate epidemics
3. Organize and control epidemics
4. Manage typhoid
5. Manage meningitis
6. Manage jaundice and yellow fever
7. Manage acute rheumatic fever
8. Manage hemorrhagic Fever
9. Manage measles
10. Manage pertussis
11. Manage bloody diarrhea
12. Manage neonatal tetanus
13. Manage acute flaccid paralysis

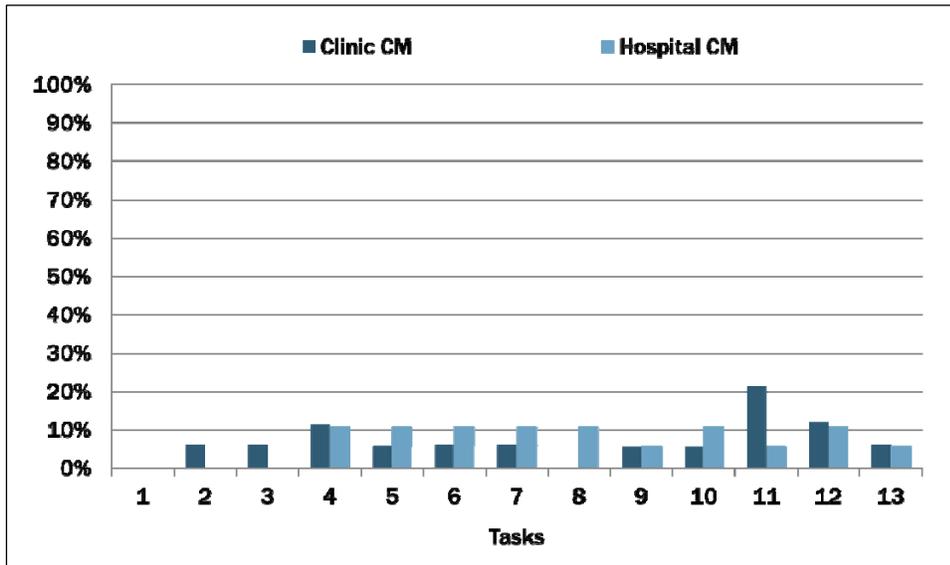
**Figure 20.0. Percentage of Each Cadre that Performs CMOED Tasks Frequently**



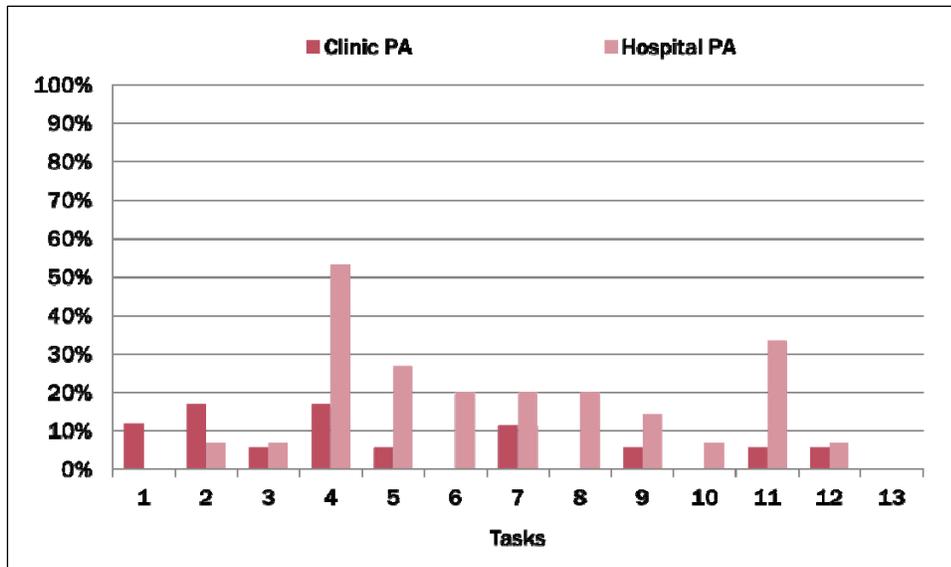
**Figure 20.1. Percentage of RNs that Performs CMOED Tasks Frequently, by Facility Type**



**Figure 20.2. Percentage of CMs that Performs CMOED Tasks Frequently, by Facility Type**



**Figure 20.3. Percentage of PAs that Performs CMOED Tasks Frequently, by Facility Type**



A low proportion of providers from each cadre perform CMOED tasks frequently, whether looking at the overall percentage or comparing responses by facility type, as shown in Figures 20.1, 20.2 and 20.3. Task 11, manage bloody diarrhea, is performed frequently by at least 20% of clinic and hospital RNs and hospital PAs. This is a task that can be life-saving and as such should be considered for inclusion in the all the JDs and in the KT that link to the core competencies for each of the three cadres. When considering which cadre should be responsible for performing this area, there is no apparent pattern by cadre type; however, because of the extremely low proportion of CMs that performs this task frequently, it may be de-emphasized in PSE for CMs. Tasks 4, 5 and 9 are tasks to be considered for inclusion in the JD for RNs. Similarly, tasks 4–8 should be included in the PA JD.

**Figure 20.4. RN Training Preparation in CMOED Tasks 4, 5, 11**

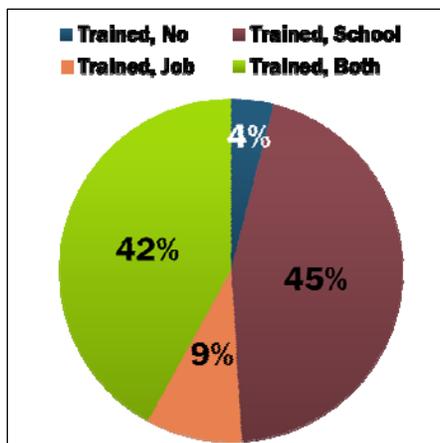


Figure 20.5. RN Training Preparation in CMOED Task 9

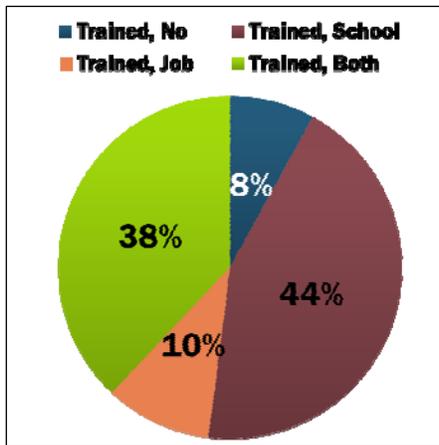


Figure 20.6. PA Training Preparation in CMOED Tasks 4-8, 11

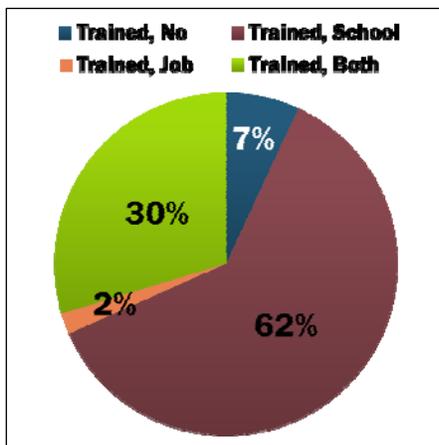
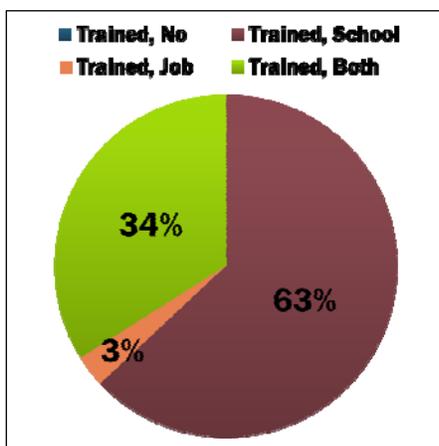


Figure 20.7. PA Training Preparation in CMOED Task 9



PAs are not performing the management of measles frequently, but a high percentage of respondents are reporting that they are prepared to do so.

## **EHT CADRE**

The EHT results were categorized and analyzed in the context of the Five Pillars of Environmental Health as presented by the African Academy of Environmental Health (AAEH) and depicted in the figure below. Our approach to the EHT findings is similar to the other cadres in that we focus on what emerge as KTs in each of these five pillars or areas. It is important to bear in mind that, although it is possible to assign EHT tasks to these areas to demonstrate adequate program breadth, national standards regarding acceptable levels of EHT task proficiency are not as well-developed as the other health service cadres. The absence of such established standards confound accurate assessment of the quality of EHT training and prevent the restructuring of educational tools to enhance its effectiveness. Nevertheless, information from this report may assist with building awareness and political will to include EHTs in the BPHS, and once again allow the unique contributions of professionals in the EHT field to contribute to public health in Liberia. The AAEH pillars should be used as a starting point for creation of standards within the BPHS, since they form the accepted framework for the field of EH and will connect EHT professionals in Liberia with those in other African countries. As suggested by the AAEH, this conformity will support staff development opportunities among countries that will facilitate establishing a path of academic advancement for Liberian program graduates.

There is only one EHT program in Liberia; the survey results indicate some variation in reporting that is not consistent with one training program. These inconsistencies point to issues related to understanding the definition of being “trained”. In addition, the figures below on EHTs indicate that minimal on-the-job training is occurring. The reason for this may be that many are not in formal, paid roles, and have few colleagues and little to no vertical funding for improvements in EH.

The range of expertise needed of EHTs working in rural community settings is wide—in that, they represent the entirety of that knowledge and skill resource. In contrast, the potential for sub-specialty areas in EHT activities in the urban environment leads to situations in which the breadth of PSE knowledge and training may be broad, relative to the skills required for job performance (e.g., in port security or food service inspection). Thus, low percentages in frequency of performing some tasks, coupled with high levels of PSE training in those areas, may not represent a mismatch in curriculum content, but rather a consequence of a broadly-trained graduate taking a focused EHT position.

There is most likely a discrepancy that exists between training at the level of general knowledge and training at the level of task proficiency. It will be critical to identify the areas in which lack of adequate proficiency development contributes to the views of some decision-makers that the EHT program at TNIMA is not of the highest quality. Developing performance standards in these areas and designing activities focused on ensuring that these standards are met during PSE will be the next important tasks, beyond curriculum restructuring, that need to be undertaken.

Furthermore, discussions among representatives from the EHT program, the MOHSW and other stakeholders are necessary to ensure a match among the EH needs of the country, the expectations of MOHSW decision-makers for EHT contributions, and the design of the re-structured program to fulfill these expectations. Confirmation of consistency among

required activities and the EHT core competencies and JD will complete this process of solidarity.

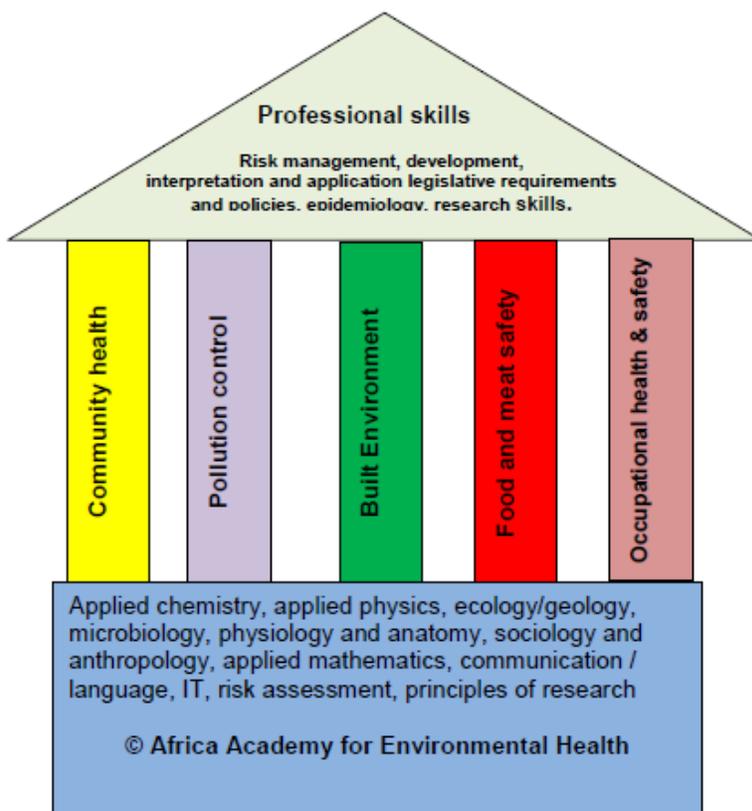


Figure 1 Pillars of environmental health training  
Source: AAEH, 2009 meeting at Pretoria, SOUTH AFRICA

The EHT tasks are organized by the AAEH pillars. The individual KT's selected for depiction are those that were reported to be performed frequently by 40% or more of EHTs. The tasks that are **bolded** are areas of potential synergy with the other cadres' CBT.

## PILLAR ONE: COMMUNITY HEALTH

- 1. Meet with community health center staff to discuss health-related issues**
- 2. Meet with community health center staff to discuss resource needs and utilization**
3. Report to the community health director the condition of environmental health (EH) within the community
4. Maintain accurate and complete records and submit monthly reports to superiors
5. Order EH equipment and supplies and maintain inventories
6. Monitor and maintain all equipment and supplies
7. Map community drinking water sources
8. Map community waste disposal sites

9. Map burial sites in the community
10. Maintain community population statistics
11. Coordinate county EH activities with those of other agencies
12. Participate in in-service education and staff development programs
13. Meet all professional and legal requirements related to EH
14. Train students and auxiliary EH workers
15. Supervise students and auxiliary EH workers
16. Evaluate students and auxiliary EH workers
17. Assist with applied EH research
18. Conduct periodic assessment of sanitary conditions in homes of the community
19. Conduct periodic assessment of sanitary conditions in schools of the community
20. Conduct periodic assessment of hotels and motels in the community
21. Conduct periodic assessments of prisons of the community
22. Conduct periodic assessments of sanitary conditions in swimming pools or beaches of the community
23. Conduct periodic assessments of sanitary conditions in cinemas and video clubs of the community
24. Conduct periodic assessments of sanitary conditions in other recreation centers of the community (list in Comments)
25. Report to the County Health Department the assessments of the above community facilities
26. Perform all other duties as assigned by immediate supervisor
27. Assist the community in establishing a community development committee
- 28. Assist the community in recruiting community health volunteers (CHVs)**
29. Meet with community members to discuss EH needs and concerns
30. Survey community members about EH needs and concerns
31. Carry out a risk assessment relating to a specific EH problem in the community
32. Conduct educational programs for CHVs
33. Prepare informational materials for CHVs
34. Prepare informational materials for community residents
35. Monitor disease patterns and promptly report suspected outbreaks to your immediate supervisor
- 36. Conduct and/or participate in preventive activities such as health fairs and vaccination and health/hygiene campaigns**
37. Investigate animal bites and provide information regarding treatment and health care referral

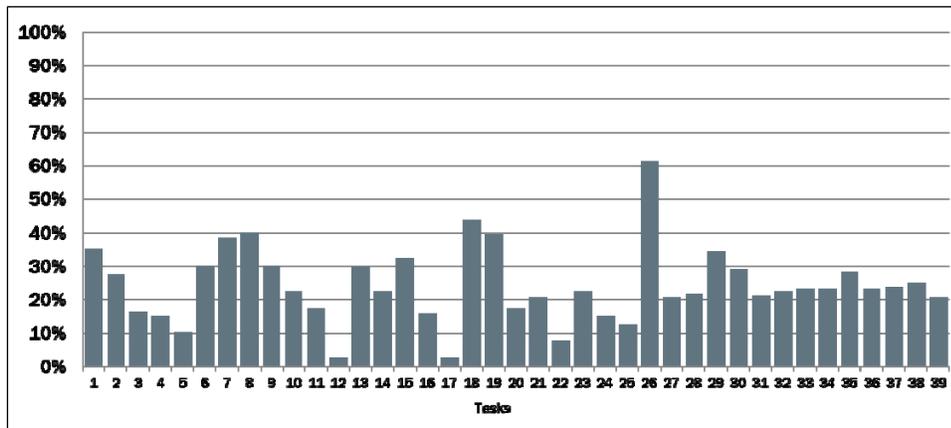
**38. Provide basic first aid (give examples in Comments)**

39. Work with the community development committee for the control and prevention of rabies

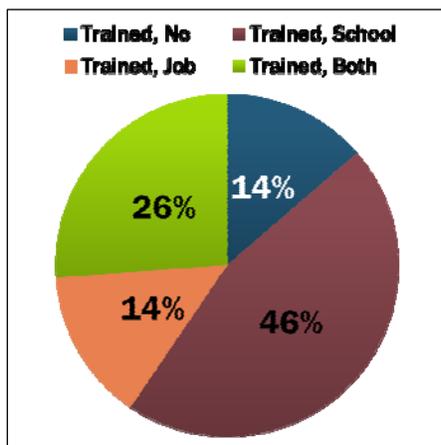
40. Meet with community health clinic staff to discuss health-related issues

41. Meet with community health clinic staff to discuss resource needs and utilization

**Figure 21.0. Percentage of EHTs that Performs Community Health Tasks Frequently**

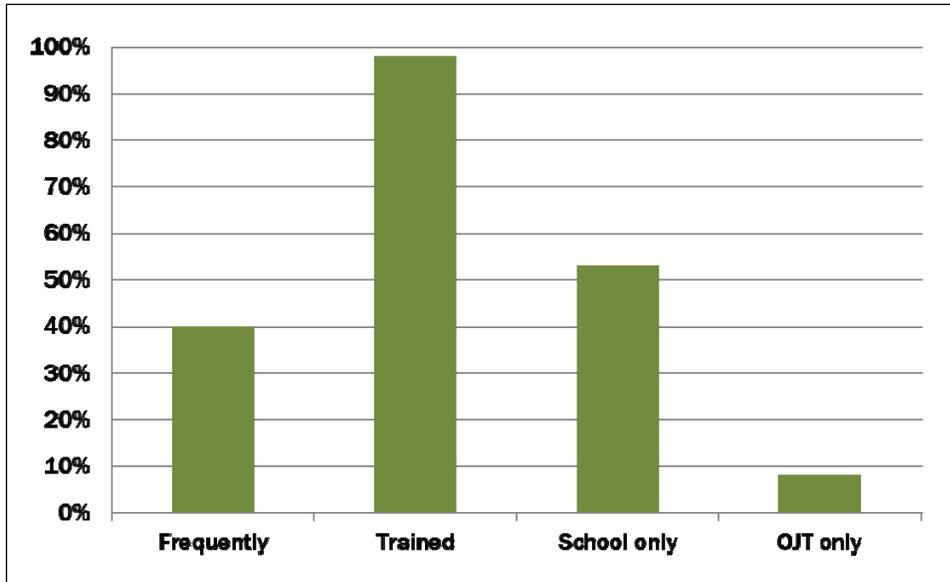


**Figure 21.1. EHT Training Preparation for Tasks in Community Health**



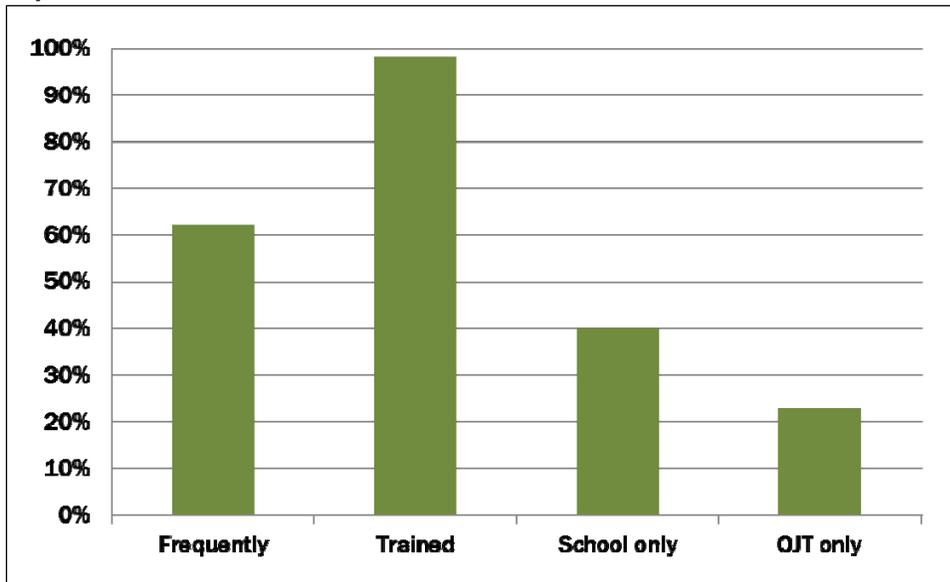
EHTs have extensive preparation in community health. These competencies are largely prepared for in the PSE setting. Gaps identified were reviewed by the technical assistance to the project, and the PSE NWG and EHT stakeholders in Liberia are to revise the curriculum. The new curriculum is being piloted now.

**Figure 21.2. Average EHT Responses for Task 8: Map Community Waste Disposal Sites**



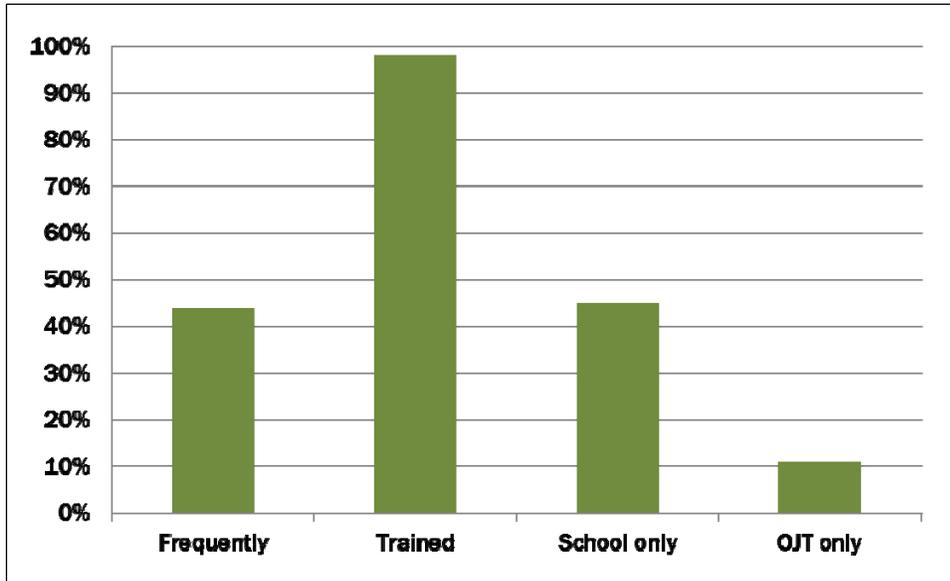
Task 8 shown is a KT where increased preparation time in school and practical experience would be beneficial.

**Figure 21.3. Average EHT Responses for Task 26: Perform All Other Duties as Assigned by Immediate Supervisor**



Task 26 relates to a common phrase on many JDs, but in this case it also depicts the lack of standardization and direction that currently exists with work in EH in Liberia. Many EHTs are not working in a formal position and many graduates volunteer their time to provide needed services since jobs are not formally in place.

**Figure 21.4. Average EHT Responses for Task 18: Conduct Periodic Assessment of Sanitary Conditions in Homes of the Community**



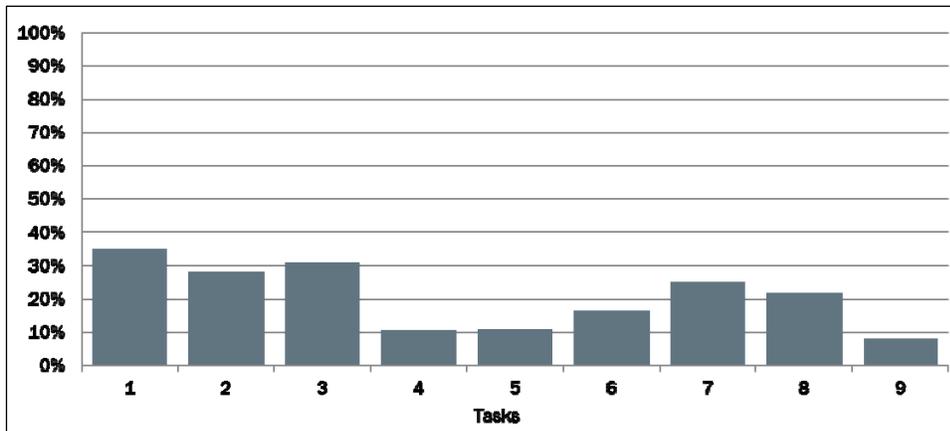
Task 18 is a KT in enhancing the community’s ability to improve its own conditions with the resources that it has. Instructors have an opportunity here to include this as a practical in simulation in addition to student’s field work, enhancing all the domains of learning, knowledge, skill and attitude.

## **PILLAR TWO. POLLUTION CONTROL**

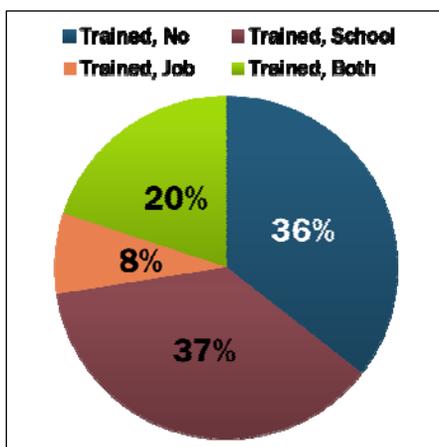
1. Map potential sources of pollutants or other hazards in the community
2. Monitor drinking water quality
3. Identify potential sources of pollution of the water supply
4. Monitor outdoor air quality
5. Identify potential sources of pollution of outdoor air
6. Direct and assist in the reduction of air pollution
7. Identify potential chemical hazard sources in the community
8. Identify potential biological hazard sources in the community
9. Monitor residential indoor air quality

Frequency graphs are not shown for Pillar Two as all tasks were performed at a low frequency. Interestingly, the percentage of respondents that reported being trained in tasks 1, 2, 3, 7 and 8 is between 70–95%.

**Figure 22.0. Percentage of EHTs that Perform Pollution Control Tasks Frequently**



**Figure 22.1. EHT Training Preparation for Tasks in Pollution Control**



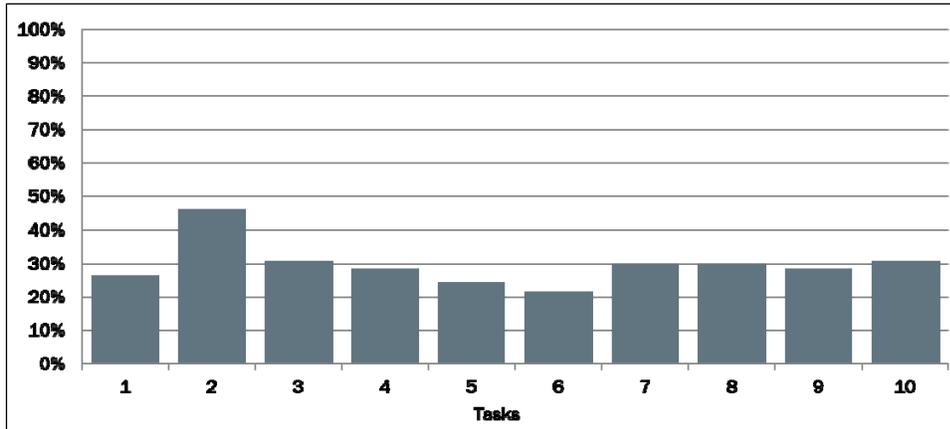
Tasks within pollution control need more resources and technical expertise in the EHT program.

### **PILLAR THREE. BUILT ENVIRONMENT**

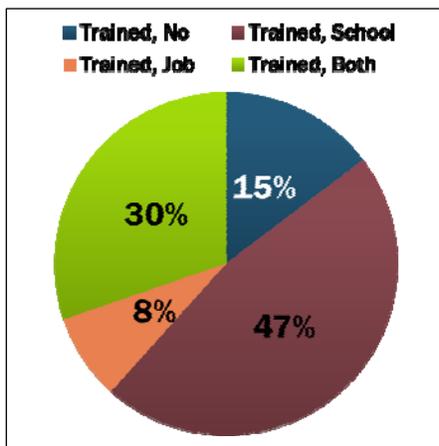
1. Conduct port inspection to control and prevent the importation and exportation of communicable diseases
2. Direct and assist in the maintenance of drinking water sources
3. Direct and assist in the maintenance of waste water systems
4. Provide guidance for the proper construction and maintenance of latrines
5. Work with the community development committee to identify possible exposures of residents to hazardous agents
6. Work with health volunteers to identify possible exposures of residents to hazardous agents
7. Work with the community development committee to identify possible exposures of residents to infectious agents

8. **Work with health volunteers to identify possible exposures of residents to infectious agents**
9. Work with the community development committee in the selection of suitable burial sites
10. Work with families in the selection of suitable burial sites

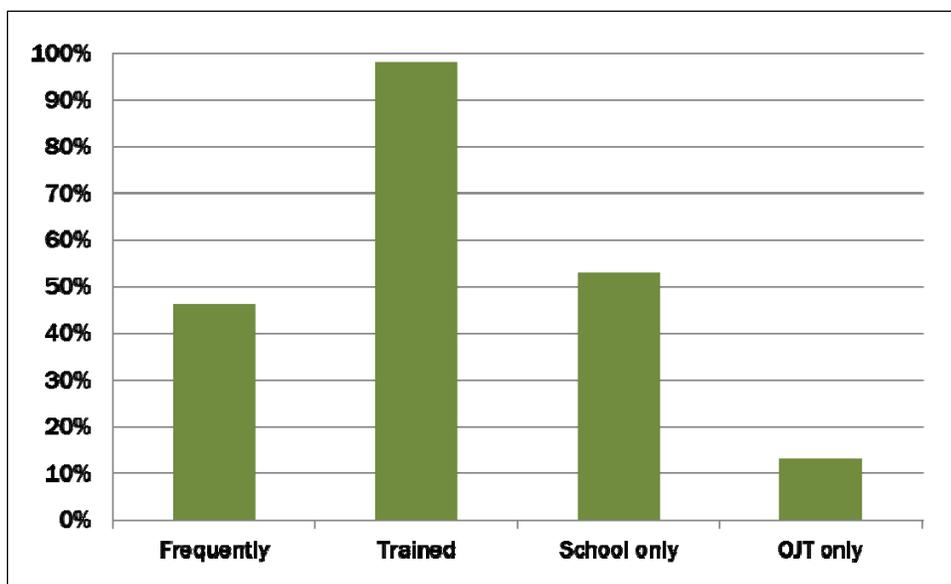
**Figure 23.0. Percentage of EHTs that Performs Built Environment Tasks Frequently**



**Figure 23.1. EHT Training Preparation for Tasks in Built Environment**



**Figure 23.2. Average EHT Responses for Task 2: Direct and Assist in the Maintenance of Drinking Water Sources**



EHTs are getting good preparation for task 2, maintenance of drinking water sources, but lack some of the equipment needed in the program to train in simulation before entering the workforce or community (e.g., in the area of pump maintenance and repair). EHTs are, however, expected to be able to perform this task.

## **PILLAR FOUR. FOOD AND MEAT SAFETY**

1. Conduct periodic assessment of sanitary conditions in food establishments of the community
2. Conduct periodic assessment of sanitary conditions in meat shops of the community
3. Conduct periodic assessment of sanitary conditions in markets of the community
4. Conduct periodic assessments of sanitary conditions in fisheries of the community
5. Conduct periodic assessments of sanitary conditions in poultry farms of the community
6. Conduct periodic assessments of sanitary conditions in pig farms of the community
7. Assess commercial food sanitation practices
8. In cooperation with the community development committee, work with commercial food managers to improve sanitation practices
9. Work directly with commercial food managers to improve sanitation practices
10. Work with the community development committee to improve home sanitation practices in food storage and handling
- 11. Work with health volunteers to improve home sanitation practices in food storage and handling**
12. Work with the community development committee to improve home sanitation practices in water storage and handling

13. Work with health volunteers to improve home sanitation practices in water storage and handling

Figure 24.0. Percentage of EHTs that Performs Food and Meat Safety Tasks Frequently

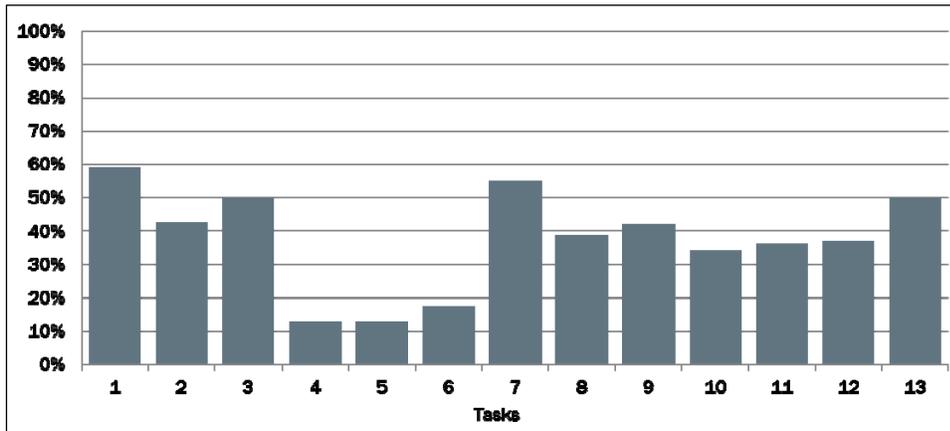


Figure 24.1. EHT Training Preparation for Tasks in Food and Meat Safety

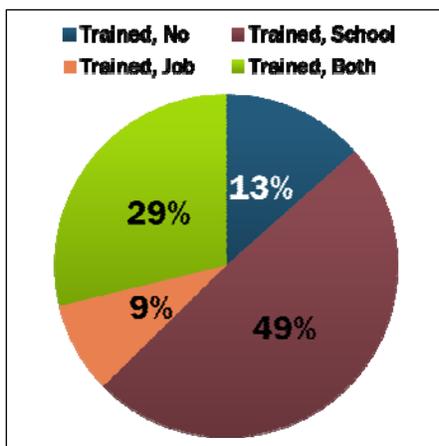
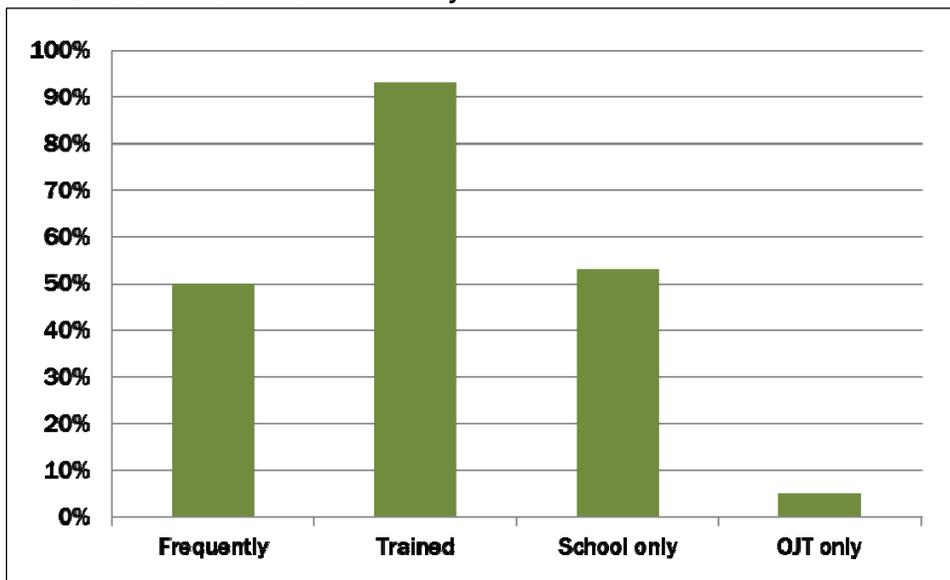
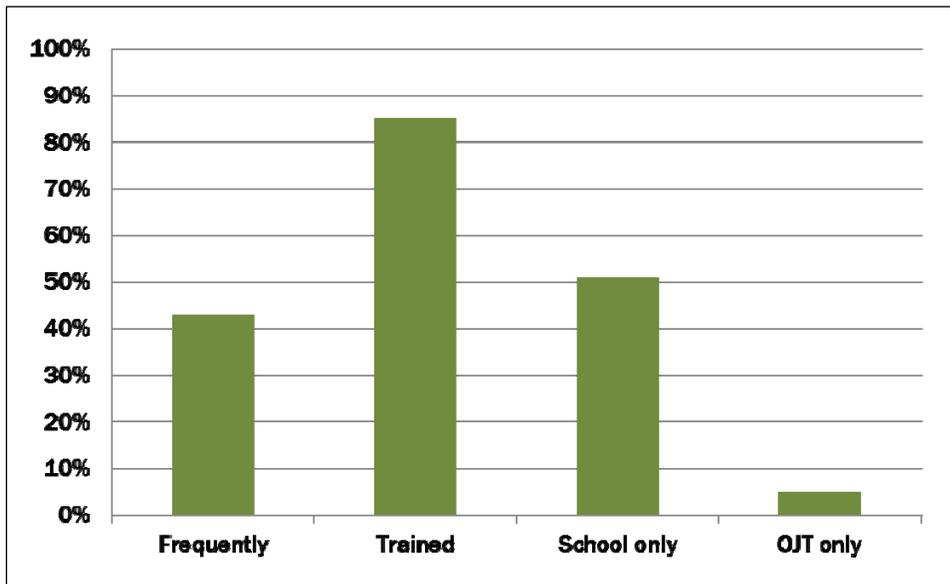


Figure 24.2. Average EHT Responses for Task 1: Conduct Periodic Assessment of Sanitary Conditions in Food Establishments of the Community

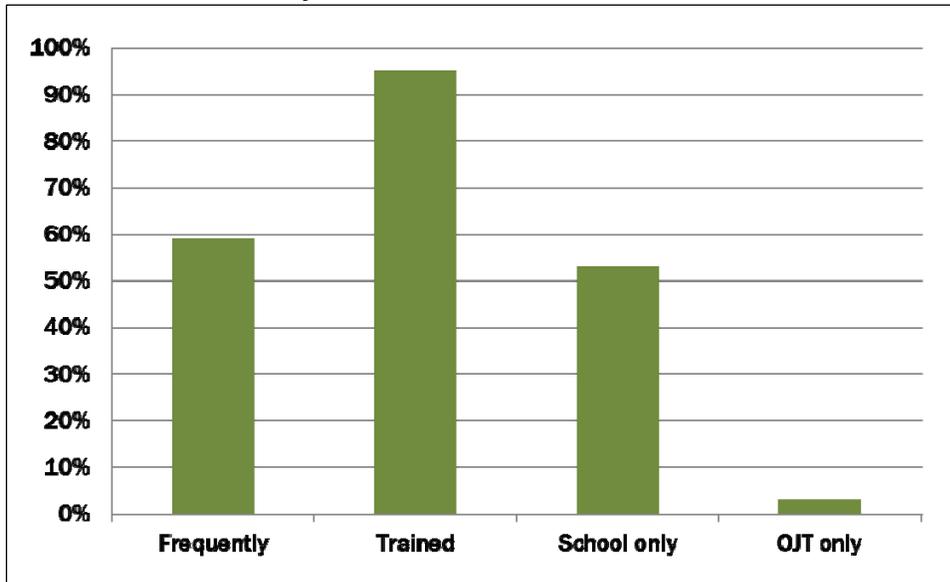


The policy environment for regulation of food is lacking; the need for standards in food establishments, however, is high and is an area in which graduates could be deployed to make significant changes to both the sanitary conditions of eateries listed above and places of sale depicted in the Figures 24.3–24.7.

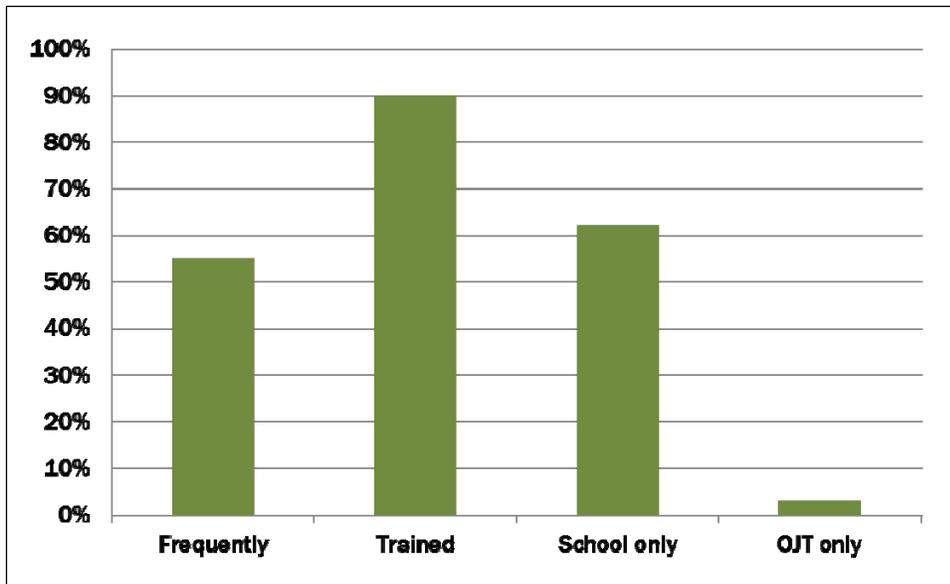
**Figure 24.3. Average EHT Responses for Task 2: Conduct Periodic Assessment of Sanitary Conditions in Meat Shops of the Community**



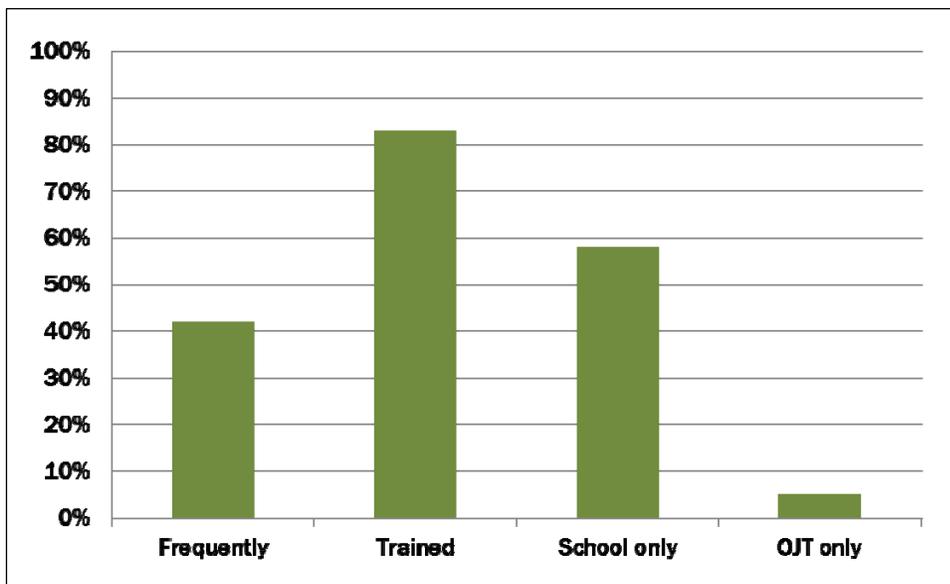
**Figure 24.4. Average EHT Responses for Task 3: Conduct Periodic Assessment of Sanitary Conditions in Markets of the Community**



**Figure 24.5. Average EHT Responses for Task 7: Assess Commercial Food Sanitation Practices**

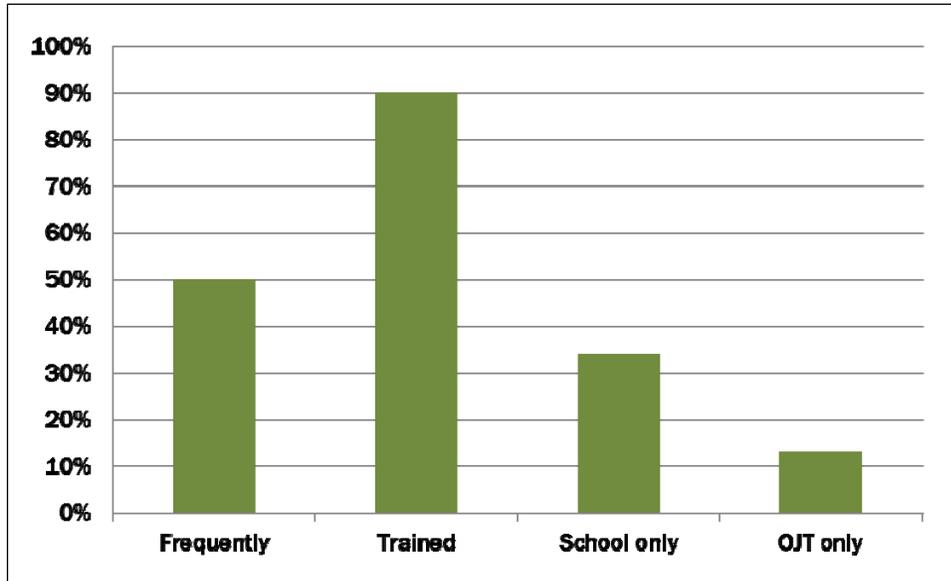


**Figure 24.6. Average EHT Responses for Task 9: Work Directly with Commercial Food Managers to Improve Sanitation Practices**



Less than half of the EHTs surveyed worked frequently with commercial food managers to improve sanitation practices. The training, whether complete with simulation or field work, is laid out in theory; thus, strengthening these competencies would already have context.

**Figure 24.7. Average EHT Responses for Task 13: Work with Health Volunteers to Improve Home Sanitation Practices in Water Storage and Handling**

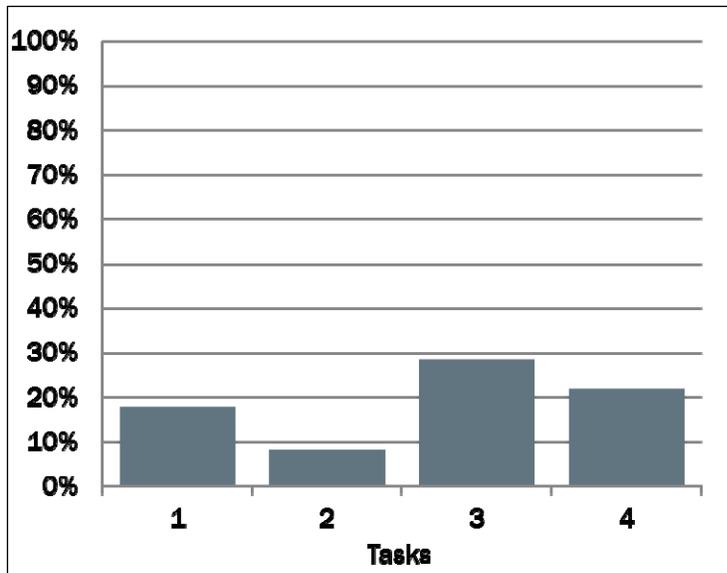


Task 13 above is done frequently by half of the 40 EHTs surveyed. From this analysis, the scope of the health worker is not clear, but they are also not all paid positions; thus, regulations or standards on this KT are not present. Currently, EHTs meet with community health volunteers (CHVs) and discuss acceptable methods of drinking water containment, transport from the source to the home, transfer to home storage vessels, appropriate storage vessel types, protection of the water while in the home, etc. CHVs would then visit households with this information and reinforce good habits. This information is understood as acceptable practices as opposed to standards.

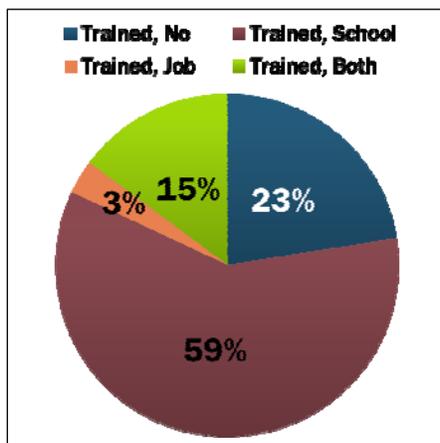
## **PILLAR FIVE. OCCUPATIONAL HEALTH AND SAFETY**

1. Conduct periodic assessment of sanitary conditions in industries of the community
2. Conduct periodic assessments of sanitary conditions in government offices of the community
- 3. Assess the safety of occupational environments to protect worker health**
4. Identify and work with the CDC to eliminate unsafe practices in the handling of hazardous chemicals

**Figure 25.0. Percentage of EHTs that Performs Occupational Health and Safety Tasks Frequently**



**Figure 25.1. EHT Training Preparation for Tasks in Occupational Health and Safety**



There appears to be specific training in this area in the curriculum and according to the respondents of this survey. However, the frequency with which they currently perform these tasks is reported to be low. There may be several reasons for this. Before reducing the content in the curriculum, an assessment of the number of jobs in this sector that are available for EHTs needs to be discussed. There is at least one task that could be an area where students are jointly trained, as this task also falls under standard precautions in which the other cadres are trained.

## **7. DISCUSSION AND CONCLUSIONS**

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This task analysis has data that may be viewed in many ways depending on the objective of the inquiry. The analysis of the data focused on identifying KT's that could be included in updated JDs and were based on frequency, national needs, contextual and vertical programming, existing JDs, core competencies courses and resources available. These updated JDs may act as the guide for ensuring that the core competencies, content, teaching and learning methods, and assessment methods are all linked to expected, observable job functions of an entry-level professional graduating from a diploma program.

This study does not address the quality of the tasks. Current efforts are underway to improve standards at clinical sites utilizing performance standards and language that have been updated from the tasks included here to the latest evidence-based practices and language that occur today in the various different BPHS areas. For example, the FP standards have been updated, have integrated ASRH, and a pool of national trainers is being prepared so that a range of methods can be offered.

Realizing that frequency is not the only measure of a KT, the investigators and one of the advisors attempted to look at the criticality of the tasks. A task that is not performed frequently but would be life-saving if performed correctly (e.g. newborn resuscitation) needs training to competence prior to deployment. Our group of 4 was too small to report on the results of this criticality exercise; however a larger group of experts in country could perform this utilizing The Delphi Method as a process for inclusion of these tasks into the appropriate cadre's job description.

Although EH is not a part of the BPHS at the present time, EHT curriculum improvement was deemed an integral part of the RBHS scope of work in health service PSE. Hence, uncovering information that would lead to improvements in the program was prioritized, and recent EHT graduates were also included in the study. It will be important for EHT program faculty and other EH stakeholders to carefully review these survey results together and decide on the most accurate interpretation of the information they contain. The resulting insight will be critical to the success of more formalized meetings necessary to plan the course of EHTs in Liberian health care and services.

Revealing the study results gives hope for a clear opportunity to change the course of EHTs in Liberia. It also shares the findings with needed stakeholders to make the necessary changes and include EH in the BPHS for the improvement of the health of Liberia.

### **LIMITATIONS AND RECOMMENDATIONS FOR FUTURE TASK ANALYSIS STUDIES**

Limitations of this study are similar to those of other studies administering surveys. A low response rate can reduce the validity of results (Wang 2003), and responses may be highly variable because they are based on respondents' personal judgment and on their interpretation of survey terms (Brannick 2002, Burgel 1997, Lincoln 2000).

The response rate of the study was 100%. Additionally, the study attempted to decrease self-reporting bias by conducting interviews in-person; the pre-data collection orientation workshop further standardized the understanding of instructions, items and terms by individual interviewers.

The task list relied on BPHS performance standards, which were generally linked to national needs, but not exhaustive in scope, and certain important tasks may have been excluded. The respondents had different interpretations of being “trained”. In future inquiries, it would be best to make this very clear to the survey team by having the definitions printed out—with each team giving the parameters for the meaning of being trained and each surveyor checking respondents for their understanding of the parameters. For future studies, collecting information on the school attended and on the area/department in which the provider is working within the facility (e.g. emergency room in hospital) can enhance the utility of results. Finally, if the interviewee indicates that another worker performed the task, the cadre of that other worker should be identified so that the survey team knows when it is another worker of *his or her own cadre* or another *type of cadre*.

Some issues were found in the process of data cleaning. A response was not marked in 0.83% of possible data entry points, and inconsistent responses were marked in 0.33% of entries; such as two responses marked for the frequency of performing a single task or incongruent responses to training and training location. The study team reviewed each of these issues with the co-investigator and lead interviewer in Liberia to identify the reasons for these inconsistent responses, discovering that: 1) some respondents are not usually responsible for performing certain tasks but perform them when the responsible worker does not have time; 2) the definition of “trained” was interpreted differently by respondents; and 3) some of the inconsistent responses were due to interviewer error in marking the survey. Consequently, future such studies should include additional response options in the survey and provide both interviewers and respondents with a list of definitions. Further, the team should include a person whose sole responsibility is to check the surveys on-site. Regarding the interviewees’ interpretation of being trained, when discussed with interviewers, they reported repeatedly that the majority of respondents understood that only lectures did not constitute being trained.

**A task analysis should be repeated as in an iterative process of keeping the job descriptions, core competencies, curricula and BPHS aligned with the national needs of the country and identifying emerging national needs.**

## **TRENDS AND CONSIDERATIONS**

The following survey results are a summary of trends that emerged (by area) and considerations based on our data analysis. From this task analysis, changes may be considered for: 1) tasks on an entry-level JD of a RN, CM, PA or EHT; and hence, 2) related core competencies required to meet national needs, and 3) curricular changes needed in PSE to prepare providers to implement these tasks. Noting the tasks that are linked to JDs and core competencies will assist instructors in determining assessment areas within the topic area. However, tasks that are frequently performed by a low percentage of providers—but if not completed would result in death or disability—should also be

prioritized for attaining competency and assessing the level of competency. Please read the full report for further information, graphic representations of task frequency and rationale for these considerations.

## **General Trends**

1. The majority of BPHS priorities are being delivered in the health facilities.
2. All four cadres have different formats for their JDs, and this makes it difficult to compare them. The current JDs for CMs, PAs and EHTs do not have a distinction between clinic and hospital; the current JD for RNs is the only one with this distinction.
3. There are clear differences between care provided at clinic and hospital levels.
4. Vertical programs that focus on in-service were clear in the results.
5. The minimum standard for clinics and health centers detailed in the BPHS remains: there is at least one CM and one other provider (RN or PA). In some cases, RNs are conducting tasks that primarily PAs are trained for and vice versa.

## **General Considerations**

1. The BPHS could use some realignment of areas. Consider CT/HIV/AIDS as a separate area from STI and eliminate VCT. A description of a phased approach to prioritization may also reap faster results. Base Phase 1 priority areas on greatest population-based national needs.
2. JDs should, from a human resources perspective, be standardized into a similar format.
3. Although there are clear differences between community-level and hospital-level care, graduates need to be prepared at a basic level for deployment to any facility type (and in the case of EHTs, community also); since it is uncertain where a provider will end up and could be easily shifted from a hospital to a clinic (e.g., if the provider moves, gets married, etc.). Having said that, where these services are performed frequently by a higher percentage of providers could be included in the JD by facility type or community, so that graduates know what to expect in one setting versus another.
4. Vertical programs need to be included in the decision-making process of why and what information should be integrated with PSE. This is a transition to a more sustainable model, but all stakeholders need to participate. It is important to determine to what level and in what courses this material may be integrated.
5. Task-sharing (versus task-shifting) needs to be discussed, with some tasks normally conducted by only physicians or PAs to be considered for addition (and not subtraction from others) to the RN or CM scope of practice. A good example of this is IUCD insertion and removal. Competency-based training (CBT) for this and other FP tasks are already underway for a national group of trainers.
6. A discussion regarding RN or PA overload (acting under PA or RN scope of practice, respectively) for areas in which they are not trained is critical to maintaining their expected scope of practice. RNs need to be provided CBT for those tasks to be able to perform them effectively, or they need to set accountability and clear boundaries for their actual expected tasks.

## Trends in Priority Areas

1. Malaria (MAL): Performed frequently by all cadres. Vertical funding is available, and rapid tests are available and utilized. Algorithms for diagnosis and treatment implemented by PAs the most, then RNs and lastly CMs.
2. Family planning (FP): FP counseling and information provided frequently by PAs, RNs and CMs usually at the clinic level with the exception of long-term and permanent methods. The tasks listed were information-oriented, except IUCD. Assessing actual method provision is not available.
3. Antenatal care (ANC): Performed mostly by the CM, but required by all per current JDs.
4. Postnatal care (PNC): RNs perform PNC more frequently than PAs, but it is not included in RN JD.
5. Adolescent sexual and reproductive health (ASRH): The three ASRH tasks listed here are cross-cutting and need integration with variety of different services to really achieve expected outcomes.
6. Normal labor care (NLC): Recent RNs are performing deliveries, a task not included in their JD. It is included in PSE under Maternity Nursing, and RNs are expected to conduct deliveries if needed. Although it is not an usual practice, if RNs are expected to conduct deliveries it should be stated in their JD. PAs are performing more NLC frequently at the clinic level.
7. Obstetric complications (OC): New graduates are performing tasks related to OC infrequently. *Reviewing and reporting deaths is listed under management tasks but is absent from any JD.* PAs are managing severe pre-eclampsia and eclampsia, but it is not included in the PA JD.
8. Management (MGM): *Reviewing and reporting deaths is listed under management tasks but is absent from any of the JDs.* Integration of community feedback is not frequently done.
9. Infection prevention (IP): Clinic-level staff (all cadres) report sterilizing equipment more frequently than hospital-level staff.
10. Mental health (MH): Sexual violence stands out as a KT for CMs. Otherwise, PAs conduct the majority of MH tasks compared to other cadres.
11. Sick newborn care (SNC): Frequency reported on these tasks is low.
12. Expanded Program on Immunizations (EPI): CM curriculum (only EPI theory/classroom) is not aligned with CM JD.
13. Integrated management of childhood illnesses (IMCI): Some duplication with SNC.
14. Infant and young child feeding (IYCF): There is only one task and it is included in the CM and PA JDs.
15. Emergency (EME): Too many tasks in this area are not common. KTs for all three cadres—first aid and wound care—are already in the program training. PAs need updates in their JD to include these two tasks as well as diagnosing and managing acute abdomen. Circumcision is not in RN curriculum.

16. Sexually transmitted infections (STIs): RN tasks are not clear for testing, antiretroviral (ARV) and prevention of mother-to-child transmission of HIV (PMTCT) provision. HIV is a routine lab (listed in Midwifery I).
17. Voluntary counseling and testing (VCT): Limited tasks in this area.
18. Tuberculosis (TB): More common in the clinic setting. Information, education and communication (IEC), BCG and DOTS emerged as the KTs, but other tasks are needed as support to implement these. Some of the tasks may be done by another worker, e.g., lab worker/technician.
19. Control and Management of Other Endemic Diseases (CMOED): Low frequency in CMs.

### **Considerations for Priority Areas**

1. Malaria (MAL): Emphasize malaria in pregnancy (MIP) for CM responsibility. Focus on ensuring that RNs and PAs are competent and available to provide all other services.
2. Family planning (FP): New training is being conducted in this area. Purposeful integration with appropriate PSE courses based on the research and available commodities should be implemented. Recommend insertion and removal of IUCD by all cadres. Until FP makes the transition from MISP to common and comprehensive services, all providers should be prepared to provide FP counseling and the other methods. Surgical interventions were not discussed and are not included in this consideration.
3. Antenatal care (ANC): Leave tasks as required by all cadres.
4. Postnatal care (PNC): Add PNC to RN JD.
5. Adolescent sexual and reproductive health (ASRH): Cross-training should be considered so that ASRH is integrated with courses where FP, STI and BCC are covered. Add to all JDs and indicate it at the community level (clinic or health center) since there is the most frequency there. Also discuss community outreach. Instructors could create special integration projects with FP or STI/HIV/AIDS.
6. Normal labor care (NLC): Untrained providers contribute to maternal mortality and morbidity. A discussion on how to correct these practices is essential. Both PAs and CMs are certified to conduct deliveries, but as expected, CMs are conducting the majority of NLC tasks. HIV tasks during NLC are rare. This should be discussed with vertical HIV programs to determine if training should be integrated with PSE or remain in in-service training (IST).
7. Obstetric complications (OC): Conduct a record review to see outcomes of these clients/patients. Review and revise scope for RNs vs. CMs vs. PAs. Include management of severe pre-eclampsia and eclampsia to PA JD.
8. Management (MGM): A system (or assigned cadres) to review and report deaths need to be considered. A mechanism for obtaining community feedback (e.g., suggestion box) and a system to reviewing suggestions for quality improvement should be discussed. A closer look at the curriculum and teaching and learning materials should be completed to see if these two management tasks have been highlighted.

9. Infection prevention (IP): All three cadres should be trained to competency on sterilizing equipment. Cross-training projects or joint assessment with cadres, including EHT, should be considered.
10. Mental health (MH): MH is a cross-cutting issue and all providers need to be prepared to accept, prevent and manage sexual violence cases. Other duties could be assigned to the PA since the PA is frequently conducting more of the tasks at the clinic level. Modules developed and in use by Medicin d'Monde need to be reviewed along with those by the International Rescue Committee (*Clinical Care for Sexual Assault Survivors: A multimedia training tool*) and could be adapted for and integrated with PSE.
11. Sick newborn care (SNC): Revise some of the standards based on the reality of referrals.
12. Expanded Program on Immunizations (EPI): CM curriculum revision needed to align with current JD (need CBT plan) as CMs are expected to give immunizations. A discussion on a minimum of two providers prepared to give EPI would be necessary, so if one cadre is not present, there is another available—given the demand of needed immunizations. For example, if an RN is not available, at least the CM would be present and competent to give immunizations according to the standard. A module on EPI could be included under PHC. Perhaps some content could be reduced in RN curriculum (e.g., epidemiology in PHC II) to give credit hours to EPI.
13. Integrated management of childhood illnesses (IMCI): Reduce duplication with SNC and place IMCI in JD.
14. Infant and young child feeding (IYCF): The task in CM and PA JDs needs to be reworded with a focus on teaching. RNs need this added to their JD. Could be collapsed with PNC tasks unless expansion of tasks in this area is planned.
15. Emergency (EME): Ensure CBT on first aid and wound care, and conduct joint assessment across cadres. Remove circumcision from RN JD. Joint assessment is also possible and should be considered across multiple cadres, including EHT.
16. Sexually transmitted infections (STIs): RNs need their tasks specified related to testing, ARV and PMTCT provision. There are many tasks, so a discussion on the division of labor among these cadres is important. Consider consolidating content (STI/HIV/AIDS) to Tropical and Communicable Diseases (TCD) course and reduce time in Med/Surg for RNs. Be more specific with PA JD content related to HIV testing and education.
17. Voluntary counseling and testing (VCT): Consider collapsing this area as CT or provider-initiated testing and counseling (PITC) with HIV/AIDS in TCD course and eliminate this area. Keep STIs as a separate module in TCD course mentioned above.
18. Tuberculosis (TB): Need more national information on TB, but can assign these tasks to RNs and PAs only. Specific tasks should be outlined in both JDs.
19. Control and Management of Other Endemic Diseases (CMOED): Consider adding these tasks to RN and PA JDs so that their expectations on the job are clear.

## 8. RECOMMENDATIONS

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- When reviewing the above survey results, keep in mind that they are derived from a convenience sample of 40% of new graduates and not from a truly representative sample of all health workers.
- RNs and PAs need their scopes defined more clearly so they are not working within each other's scope without the training to do so. There may also be instances, particularly in rural settings, where these two cadres take time away from their clinical duties to perform activities for which EHTs are formally trained and able to carry out.
- As described in the introduction to the EHT results, discussions among the EHT program, MOHSW and other key representatives are now needed to match expectations for EHT activities with program content and quality.
- All JDs need to be updated to reflect actual tasks being performed.
- All core competency documents need to be updated to cover these areas and link to the JD.
- More national statistics need to be collected to understand national needs better to revise the task list in the BPHS.
- A position or policy human resources paper requiring CBT should be written and disseminated to all teaching institutions, indicating the resources and guidance available to meet this standard.
- A future study should be conducted when FP services become more comprehensive.
- A future study should be conducted on any programs that change their content and length of study to reflect these national needs.
- Although Med/Surg tasks was not included in the study, given the population pyramid of the country and the national needs, the PSE NWG should either do a study which looks at the frequency of associated tasks or look at the number and content of Med/Surg courses in relation to the BPHS tasks and ensure that there is alignment in PSE preparation.
- Include AAEH pillars in the next version of the BPHS with particular attention on tasks that may be taught with other cadres in PSE to reduce level of resources required.
- **Consolidate the 19 BPHS priority areas to the following 14 areas and add EH for a total of 15 areas, ensuring IP, MH and ASRH are addressed in every area:** (1) Malaria, (2) FP, (3) ANC, (4) PNC, (5) NLC, (6) OC, (7) MGM, (8) Infant and Child Health (SNC, IYCF, IMCI and adding healthy child), (9) EPI, (10) EME, (11) STI, (12) HCT=VCT/HIV/AIDS/ART, (13) TB, (14) CMOED, (15) EH

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Wang N. Examining reliability and validity of job analysis survey data. J Appl Meas; 4(4):358-69.

# APPENDIX A. AVERAGE TRAINING PREPARATION BY CADRE AND AREA

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## REGISTERED NURSES

Figure A.1. RN Training Preparation in MAL Tasks

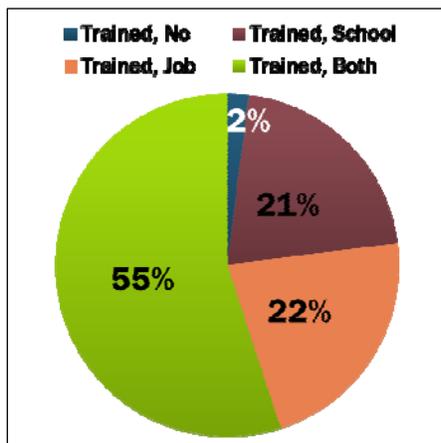


Figure A.2. RN Training Preparation in FP Tasks

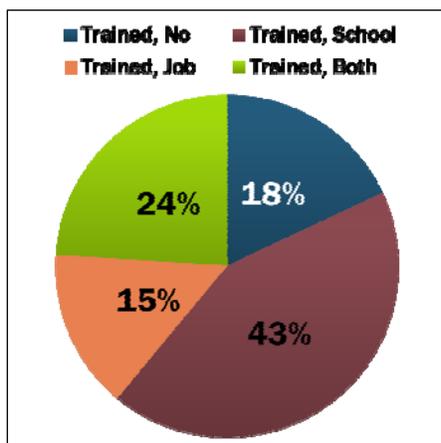


Figure A.3. RN Training Preparation in ANC Tasks

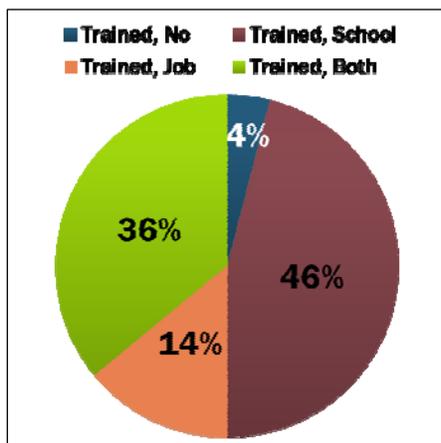


Figure A.4. RN Training Preparation in PNC Tasks

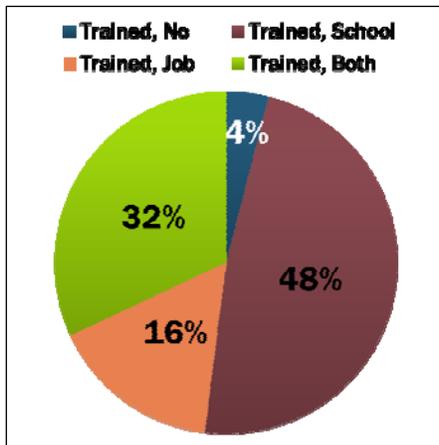


Figure A.5. RN Training Preparation in ASRH Tasks

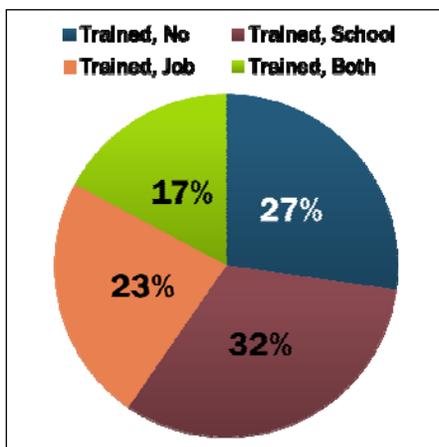


Figure A.6. RN Training Preparation in NLC Tasks

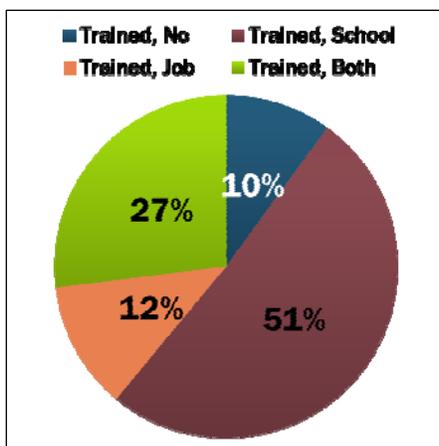


Figure A.7. RN Training Preparation in OC Tasks

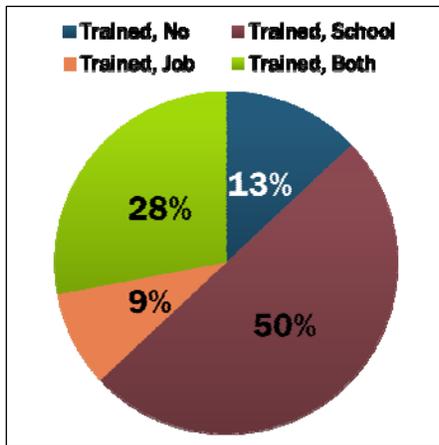


Figure A.8. RN Training Preparation in MGM Tasks

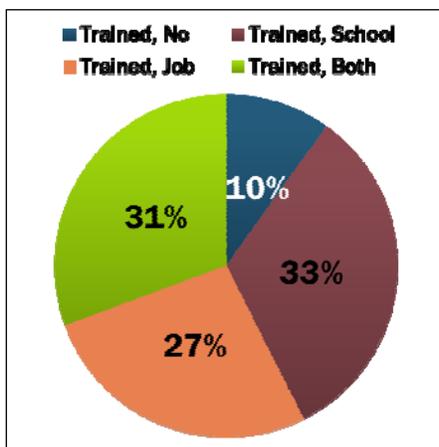


Figure A.9. RN Training Preparation in IP Tasks

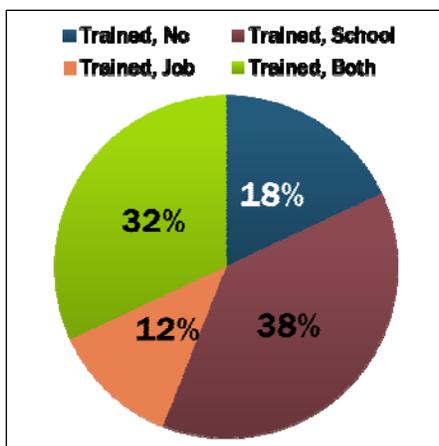


Figure A.10. RN Training Preparation in MH Tasks

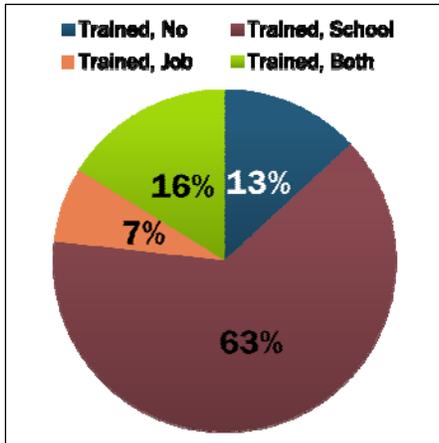


Figure A.11. RN Training Preparation in SNC Tasks

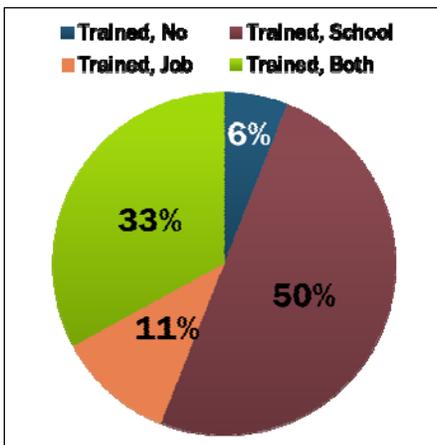


Figure A.12. RN Training Preparation in EPI Tasks

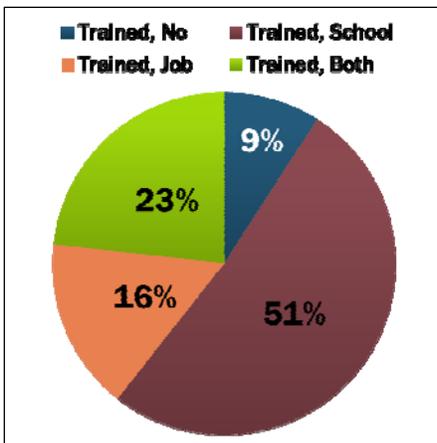


Figure A.13 RN Training Preparation in IMCI Tasks

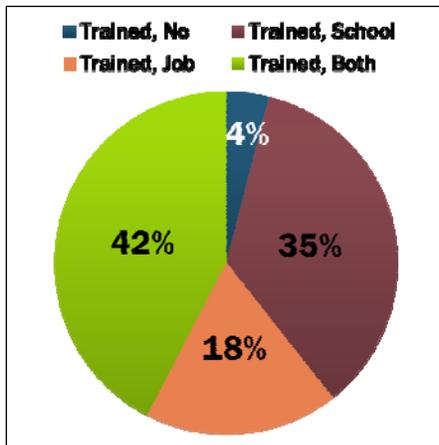


Figure A.14. RN Training Preparation in IYCF Tasks

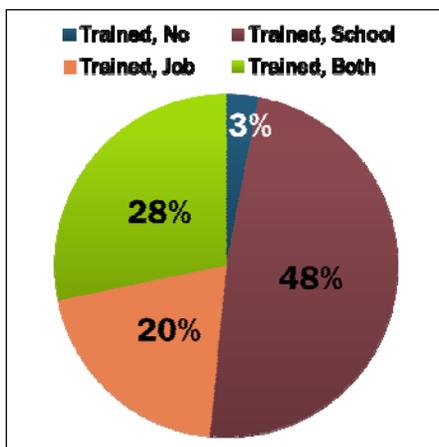


Figure A.15. RN Training Preparation in EME Tasks

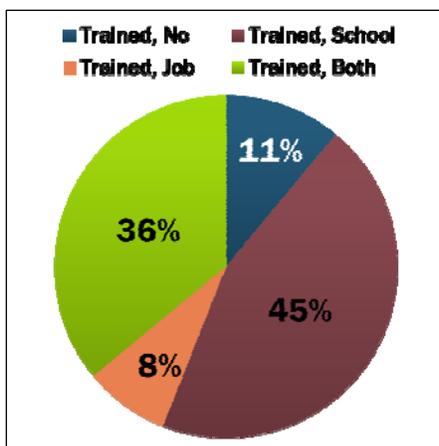


Figure A.16. RN Training Preparation in STI Tasks

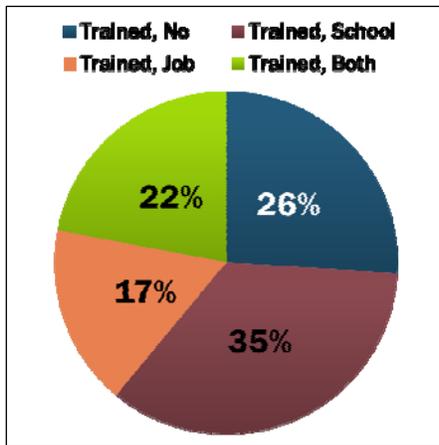


Figure A.17. RN Training Preparation in VCT Tasks

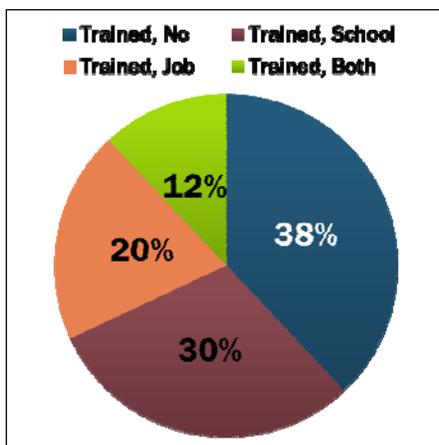


Figure A.18. RN Training Preparation in TB Tasks

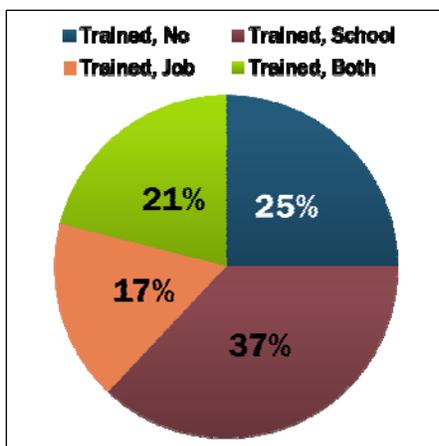
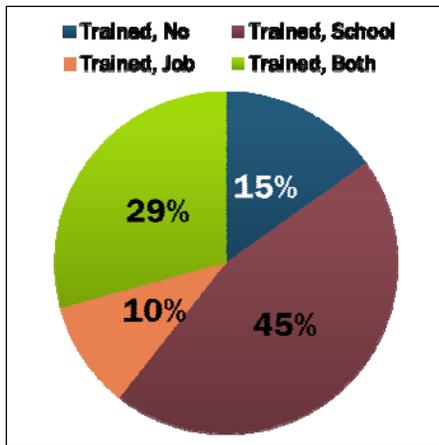


Figure A.19. RN Training Preparation in CMOED Tasks



### Certified Midwives

Figure A.20. CM Training Preparation in MAL Tasks

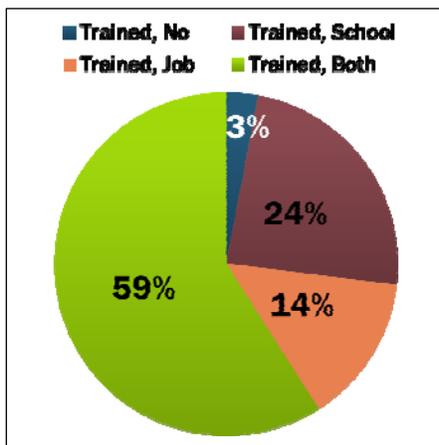


Figure A.21. CM Training Preparation in FP Tasks

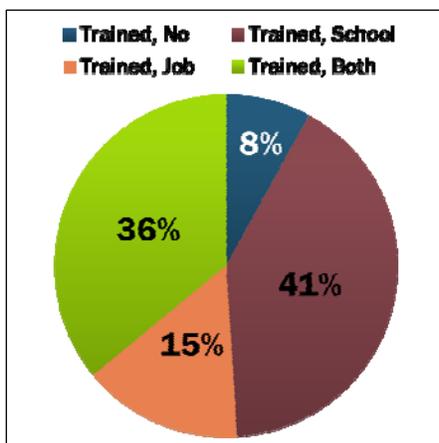


Figure A.22. CM Training Preparation in ANC Tasks

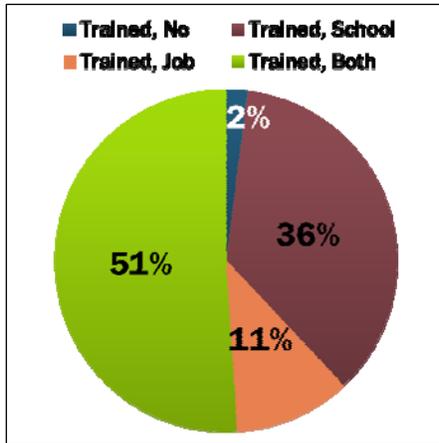


Figure A.23. CM Training Preparation in PNC Tasks

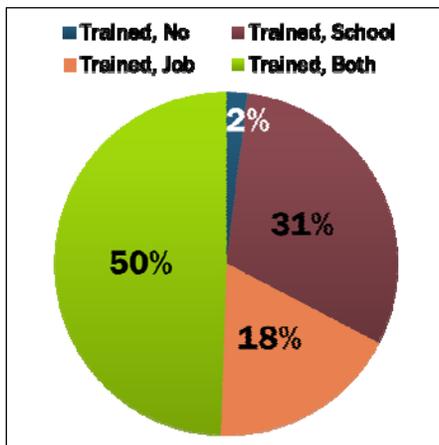


Figure A.24. CM Training Preparation in ASRH Tasks

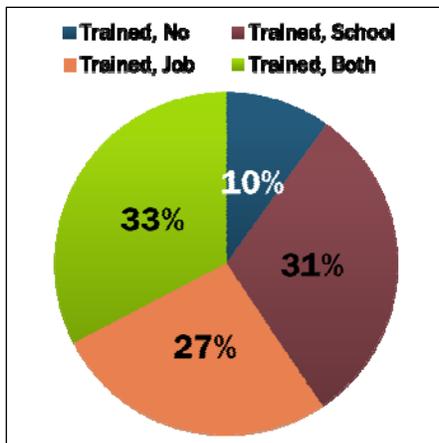


Figure A.25. CM Training Preparation in NLC Tasks

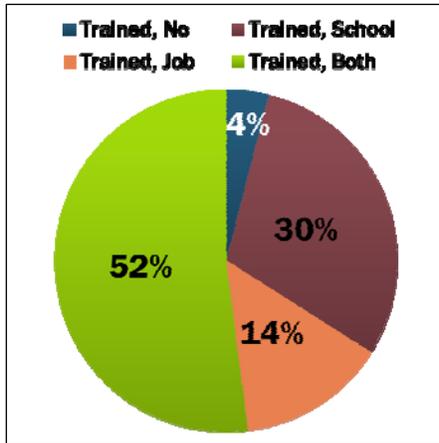


Figure A.26. CM Training Preparation in OC Tasks

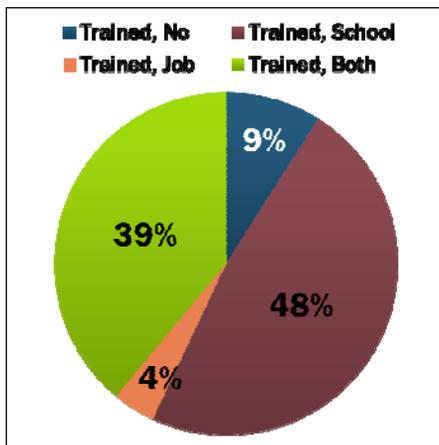


Figure A.27. CM Training Preparation in MGM Tasks

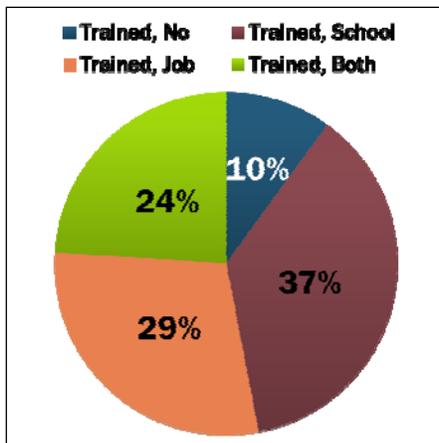


Figure A.28. CM Training Preparation in IP Tasks

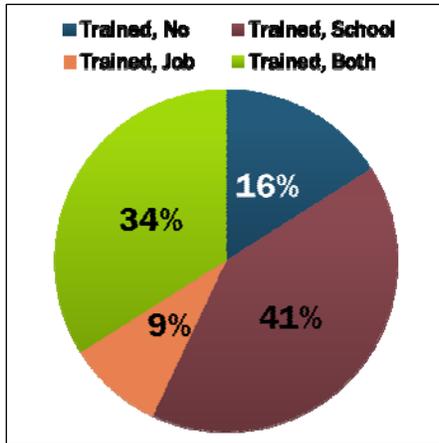


Figure A.29. CM Training Preparation in MH Tasks

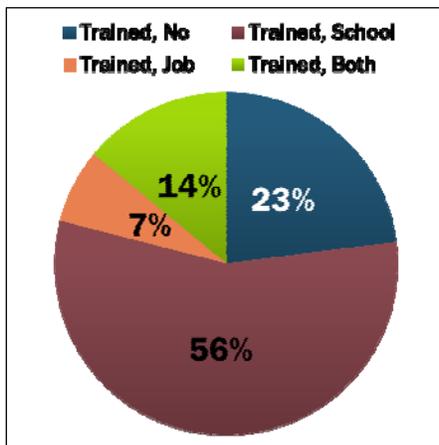


Figure A.30. CM Training Preparation in SNC Tasks

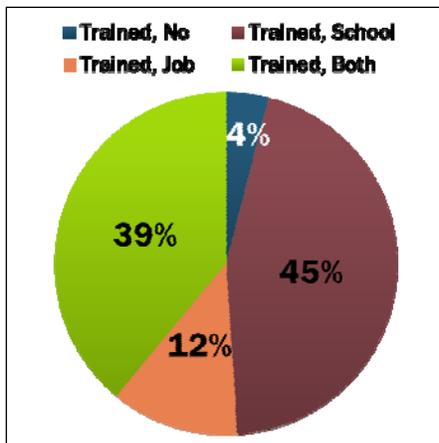


Figure A.31. CM Training Preparation in EPI Tasks

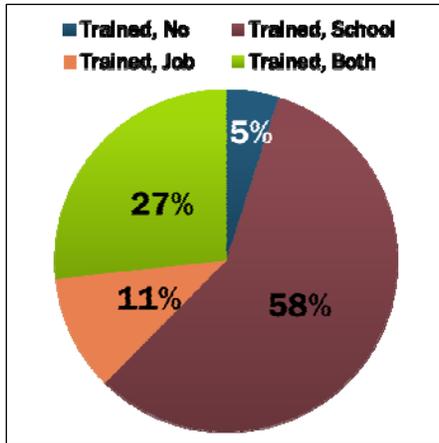


Figure A.32. CM Training Preparation in IMCI

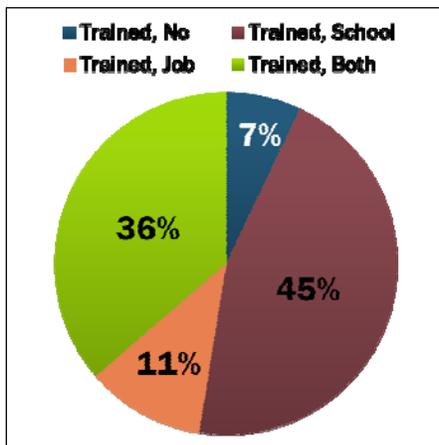


Figure A.33. CM Training Preparation in IYCF Tasks

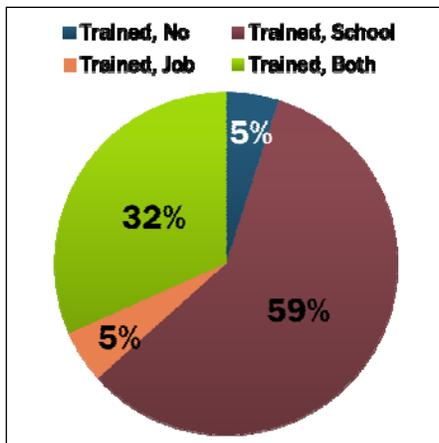


Figure A.34. CM Training Preparation in EME

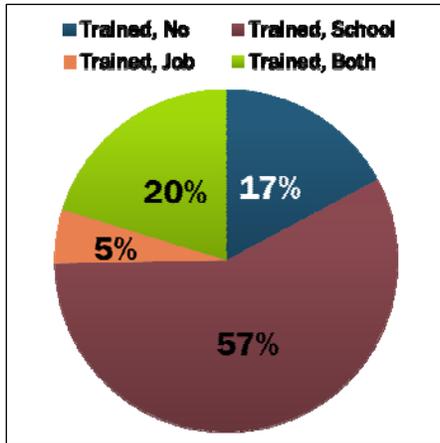


Figure A.35. CM Training Preparation in STI Tasks

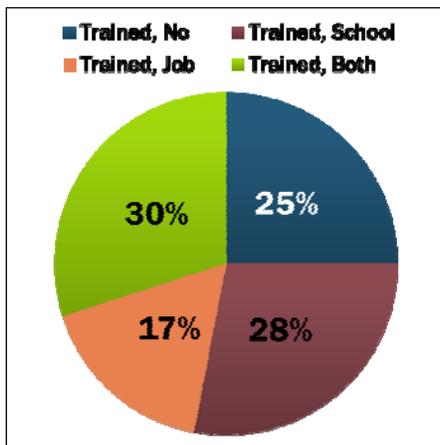


Figure A.36. CM Training Preparation in VCT

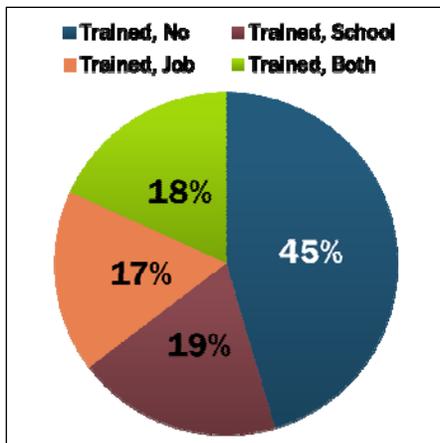


Figure A.37. CM Training Preparation in TB Tasks

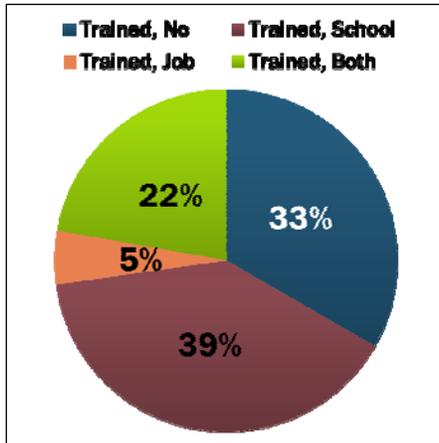
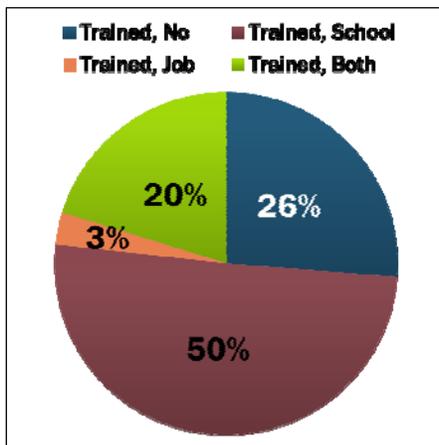


Figure A.38. CM Training Preparation in CMOED Tasks



## Physician Assistant

Figure A.39. PA Training Preparation in MAL Tasks

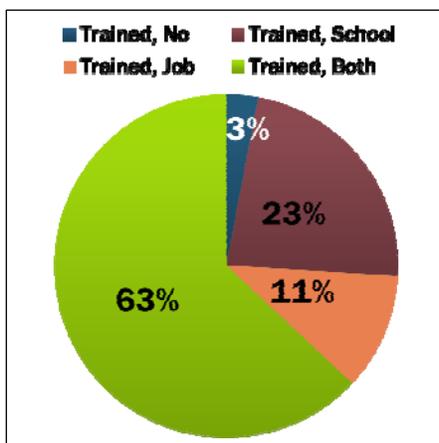


Figure A.40. PA Training Preparation in FP Tasks

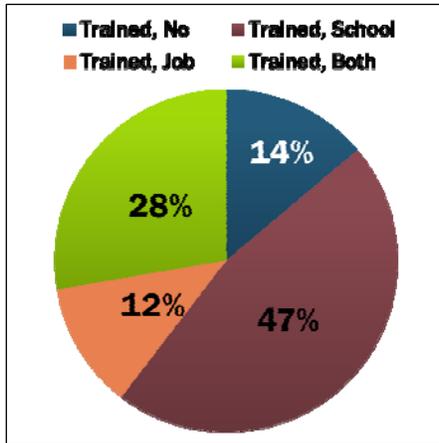


Figure A.41. PA Training Preparation in ANC Tasks

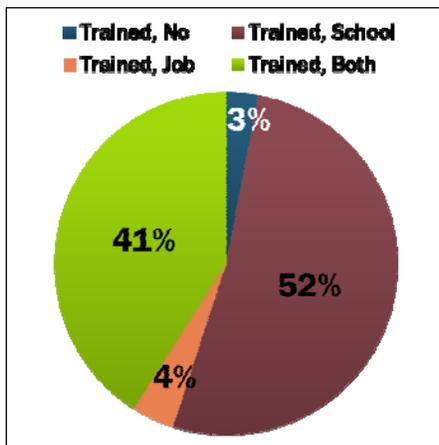


Figure A.42. PA Training Preparation in PNC Tasks

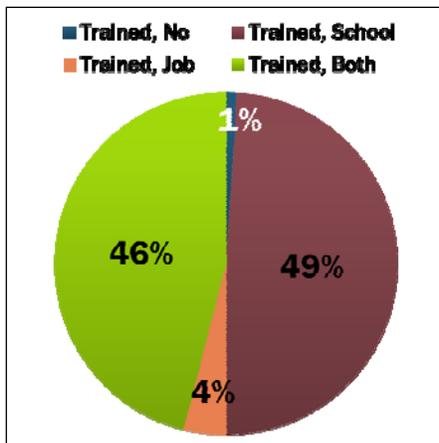


Figure A.43. PA Training Preparation in ASRH Tasks

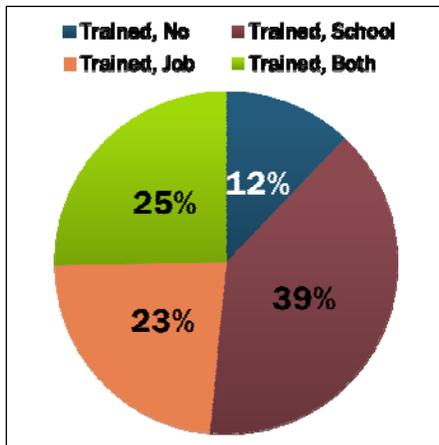


Figure A.44. PA Training Preparation in NLC Tasks

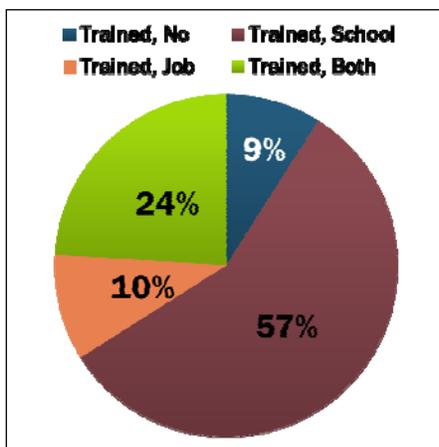


Figure A.45. PA Training Preparation in OC Tasks

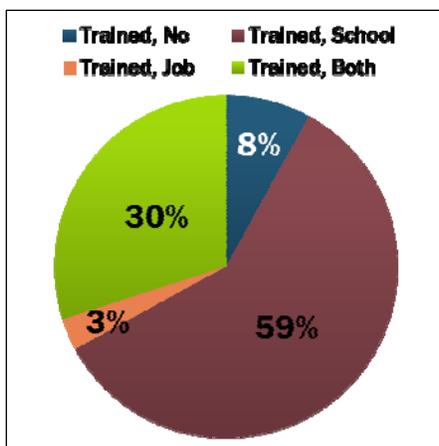


Figure A.46. PA Training Preparation in MGM Tasks

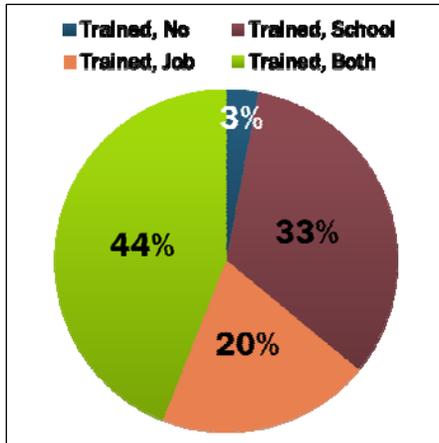


Figure A.47. PA Training Preparation in IP Tasks

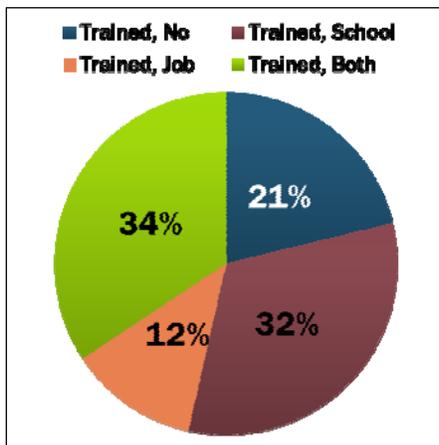


Figure A.48. PA Training Preparation in MH Tasks

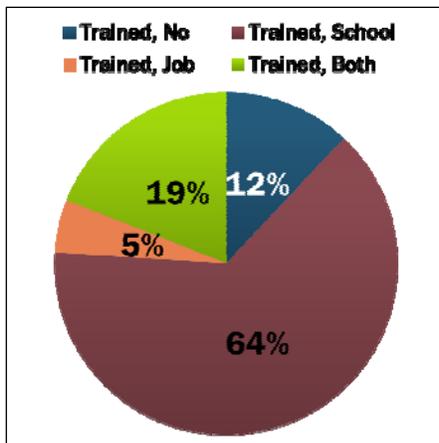


Figure A.49. PA Training Preparation in SNC Tasks

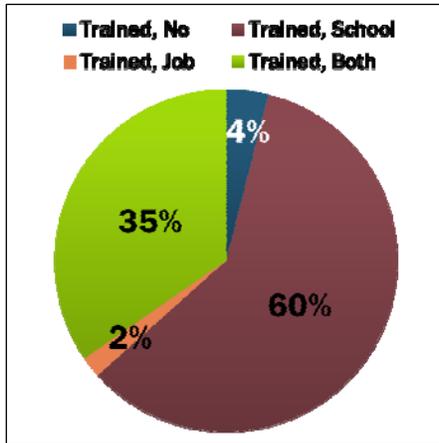


Figure A.50. PA Training Preparation in EPI Tasks

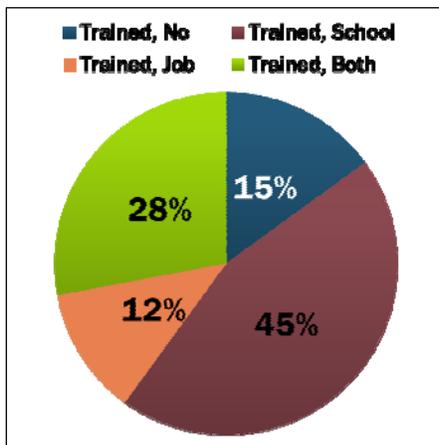


Figure A.51. PA Training Preparation in IMCI Tasks

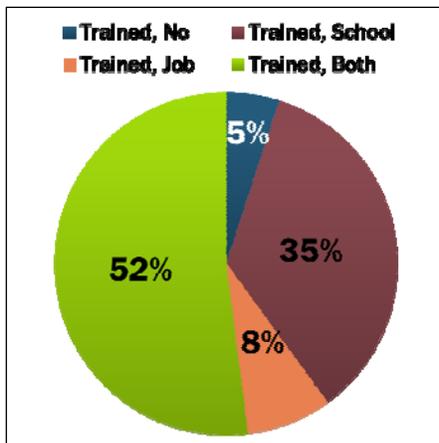


Figure A.52. PA Training Preparation in IYCF Tasks

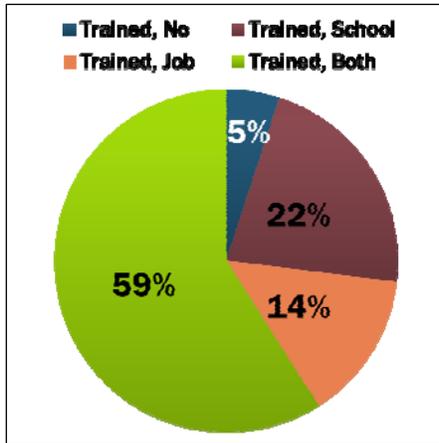


Figure A.53. PA Training Preparation in EME Tasks

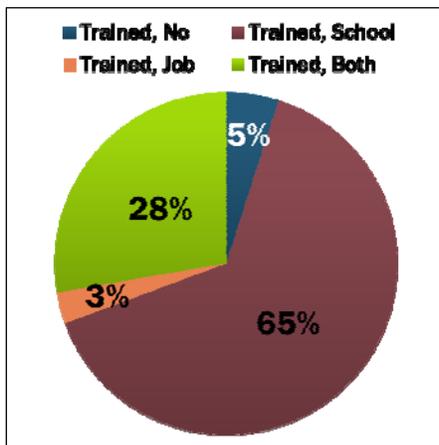


Figure A.54. PA Training Preparation in STI Tasks

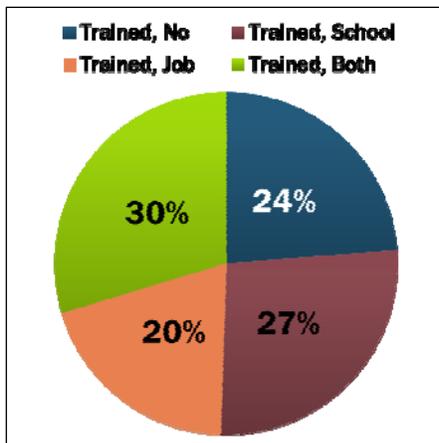


Figure A.55. PA Training Preparation in VCT Tasks

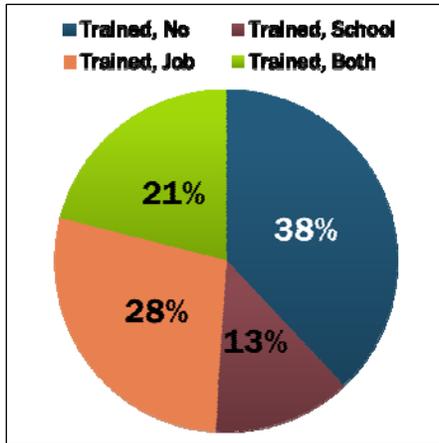


Figure A.56. PA Training Preparation in TB Tasks

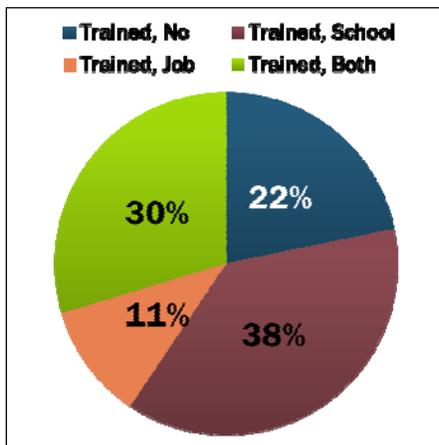
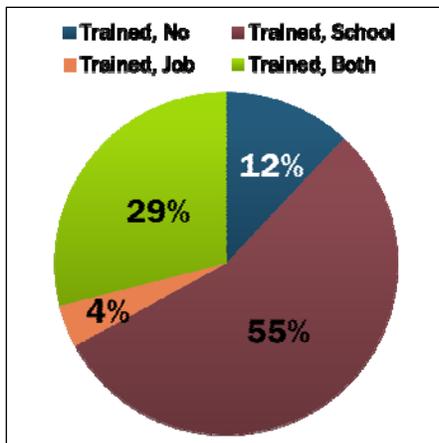
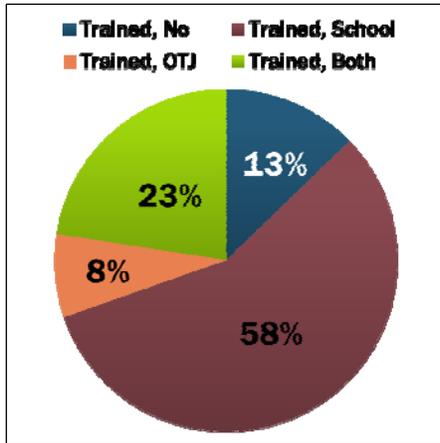


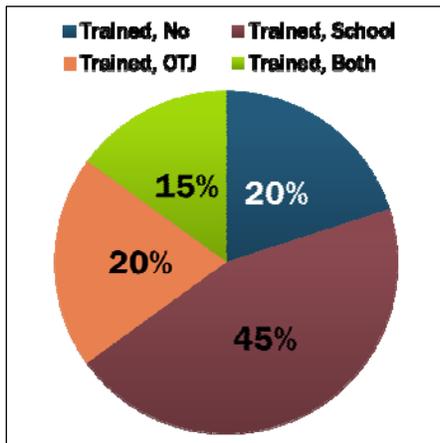
Figure A.57. PA Training Preparation in CMOED Tasks



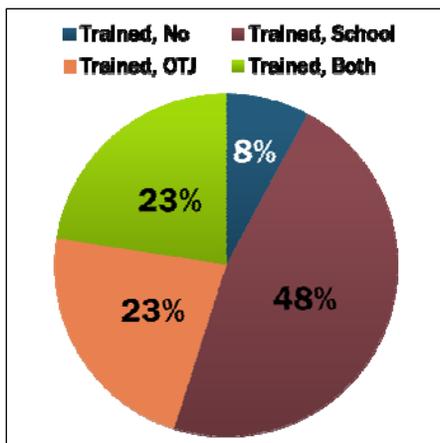
**Figure A.58. EHT Training Responses for Pillar 1, Task 1: Meet with Community Health Center Staff to Discuss Health-Related Issues**



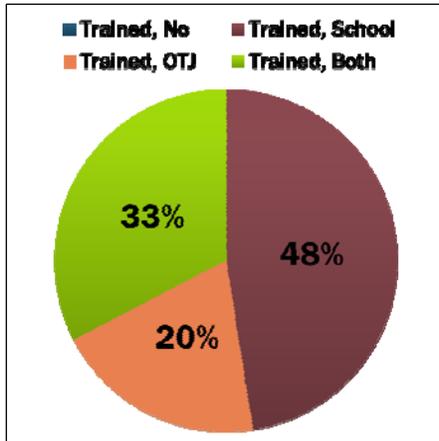
**Figure A.59. EHT Training Responses for Pillar 1, Task 2: Meet with Community Health Center Staff to Discuss Resource Needs and Utilization**



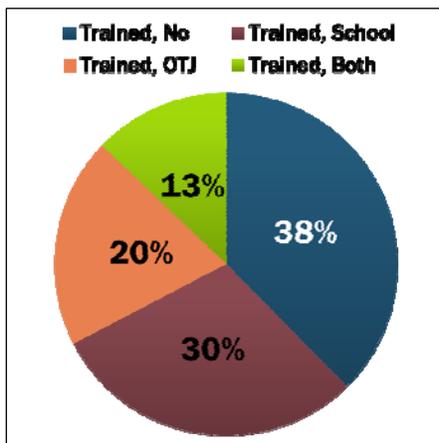
**Figure A.60. EHT Training Responses for Pillar 1, Task 3: Report to the Community Health Director the Condition of Environmental Health (EH) within the Community**



**Figure A.61. EHT Training Responses for Pillar 1, Task 4: Maintain Accurate and Complete Records and Submit Monthly Reports to Superiors**



**Figure A.62. EHT Training Responses for Pillar 1, Task 5: Order EH Equipment and Supplies and Maintain Inventories**



**Figure A.63. EHT Training Responses for Pillar 1, Task 6: Monitor and Maintain All Equipment and Supplies**

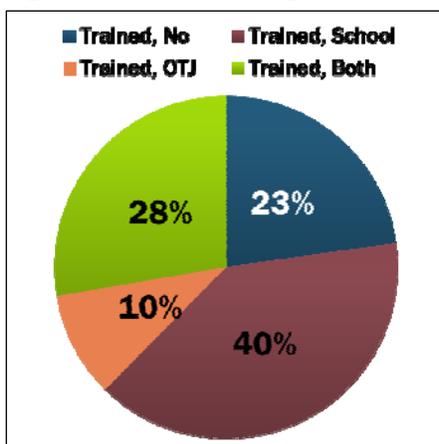


Figure A.64. EHT Training Responses for Pillar 1, Task 7: Map Community Drinking Water Sources

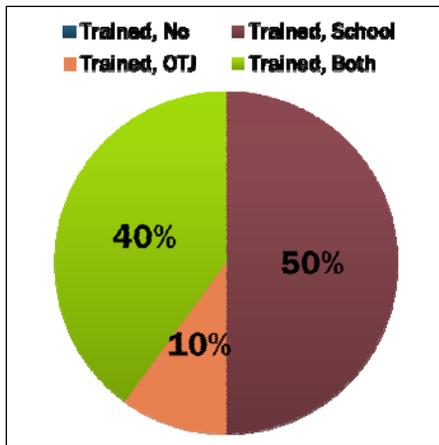


Figure A.65. EHT Training Responses for Pillar 1, Task 8: Map Community Waste Disposal Sites

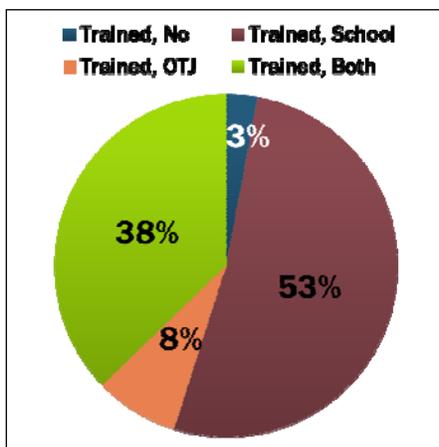


Figure A.66. EHT Training Responses by Pillar 1, Task 9: Map Burial Sites in the Community

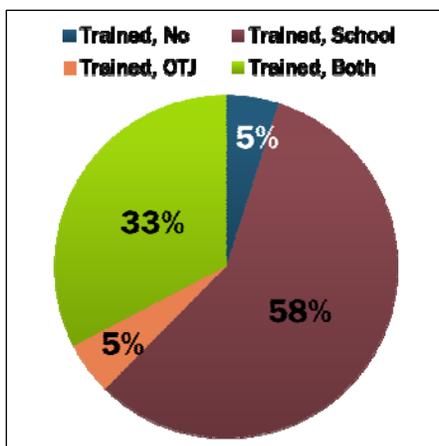


Figure A.67. EHT Training Responses for Pillar 1, Task 10: Maintain Community Population Statistics

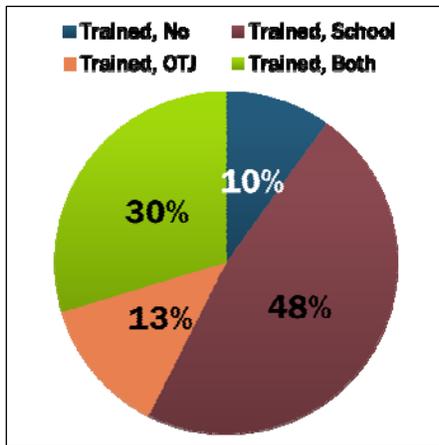


Figure A.68. EHT Training Responses for Pillar 1, Task 11: Coordinate County EH Activities with those of Other Agencies

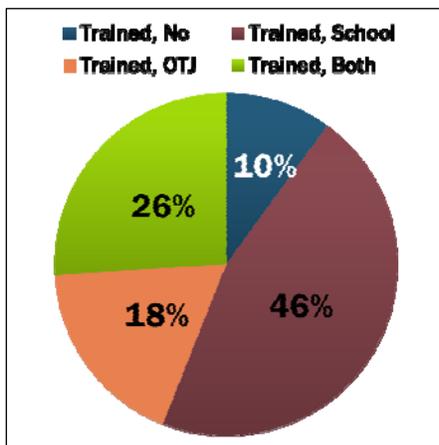
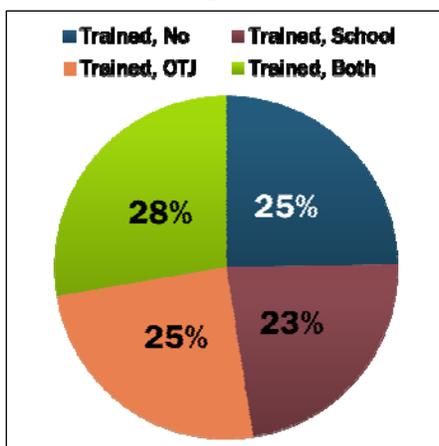
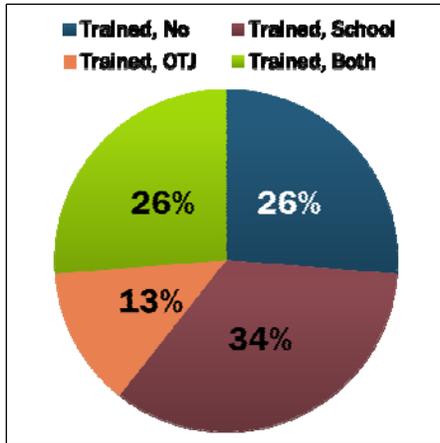


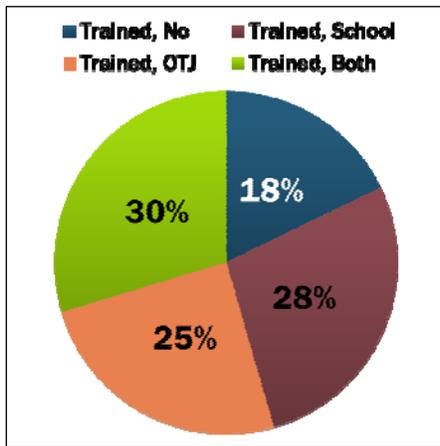
Figure A.69. EHT Training Responses for Pillar 1, Task 12: Participate in In-service Education and Staff Development Programs



**Figure A.70. EHT Training Responses for Pillar 1, Task 13: Meet All Professional and Legal Requirements Related to EH**



**Figure A.71. EHT Training Responses for Pillar 1, Task 14: Train Students and Auxiliary EH workers**



**Figure A.72. EHT Training Responses for Pillar 1, Task 15: Supervise Students and Auxiliary EH Workers**

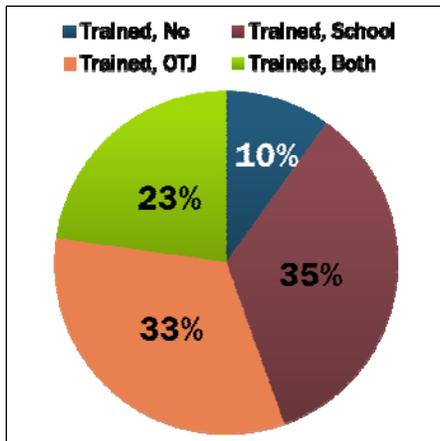


Figure A.73. EHT Training Responses for Pillar 1, Task 16: Evaluate Students and Auxiliary EH Workers

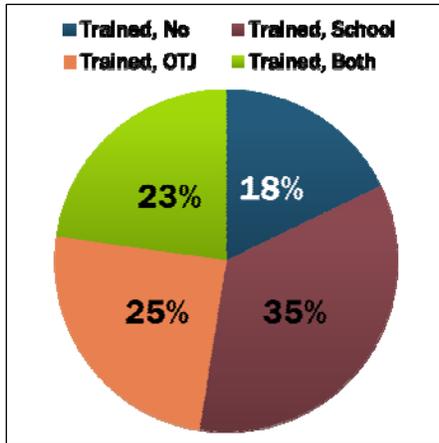


Figure A.74. EHT Training Responses for Pillar 1, Task 17: Assist with Applied EH Research

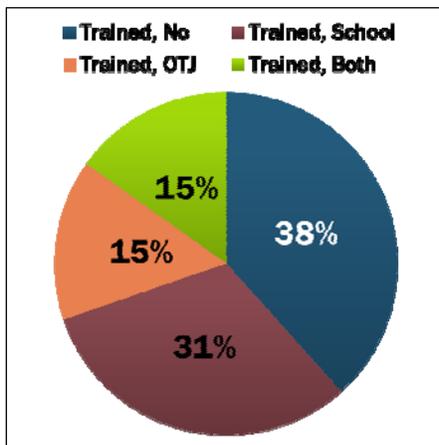
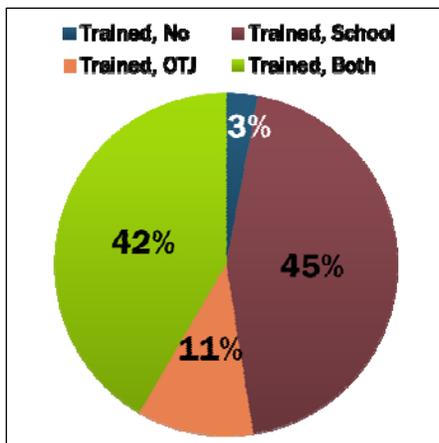
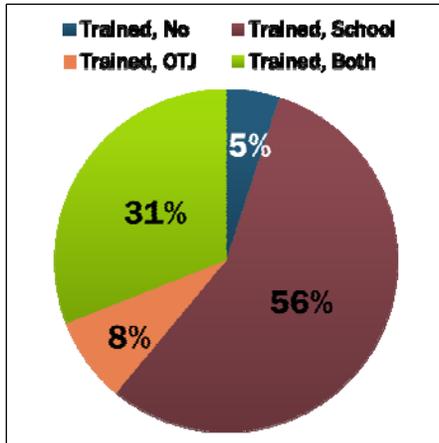


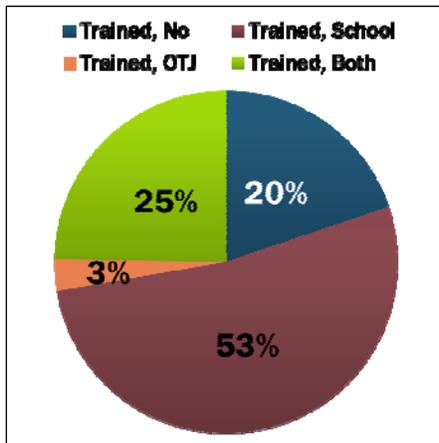
Figure A.75. EHT Training Responses for Pillar 1, Task 18: Conduct Periodic Assessment of Sanitary Conditions in Homes of the Community



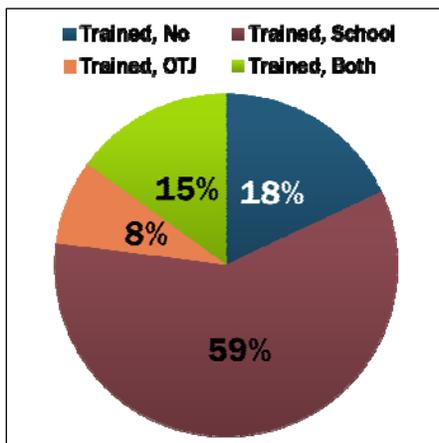
**Figure A.76. EHT Training Responses for Pillar 1, Task 19: Conduct Periodic Assessment of Sanitary Conditions in Schools of the Community**



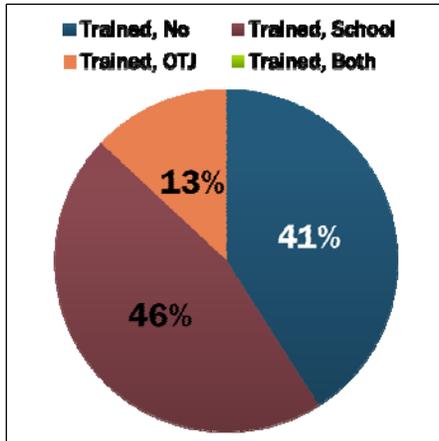
**Figure A.77. EHT Training Responses for Pillar 1, Task 20: Conduct Periodic Assessment of Hotels and Motels in the Community**



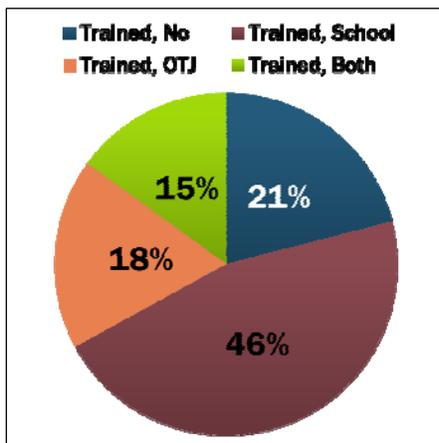
**Figure A.78. EHT Training Responses for Pillar 1, Task 21: Conduct Periodic Assessment of Prisons of the Community**



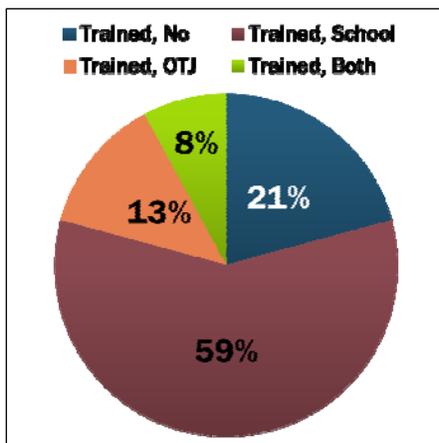
**Figure A.79. EHT Training Responses for Pillar 1, Task 22: Conduct Periodic Assessment of Sanitary Conditions in Swimming Pools or Beached of the Community**



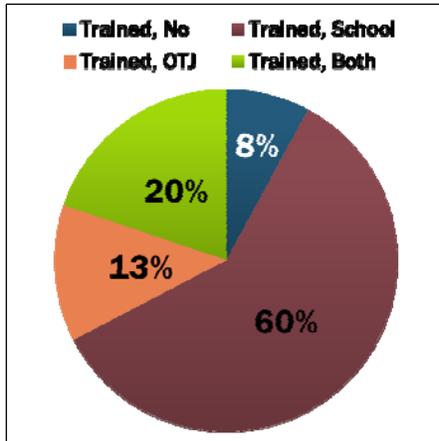
**Figure A.80. EHT Training Responses for Pillar 1, Task 23: Conduct Periodic Assessment of Sanitary Conditions in Cinemas and Video Clubs of the Community**



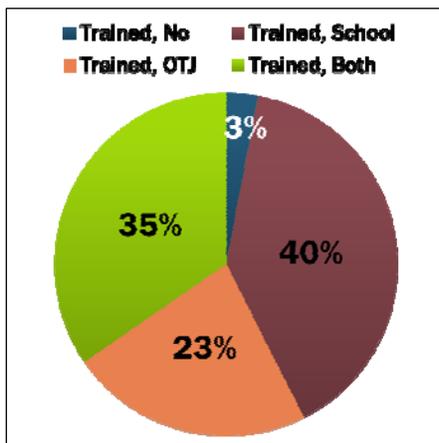
**Figure A.81. EHT Training Responses for Pillar 1, Task 24: Conduct Periodic Assessment of Sanitary Conditions in Other Recreation Centers of the Community**



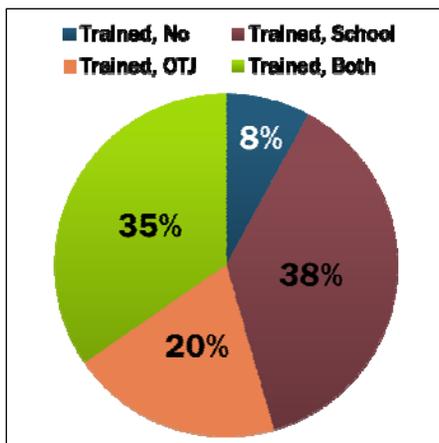
**Figure A.82. EHT Training Responses for Pillar 1, Task 25: Report to the County Health Department the Assessment of the Above Community Facilities**



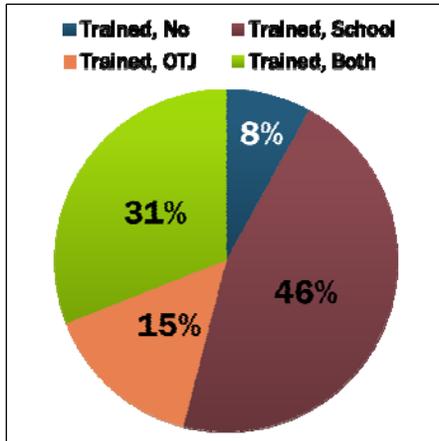
**Figure A.83. EHT Training Responses for Pillar 1, Task 26: Perform All Other Duties as Assigned by Your Immediate Supervisor**



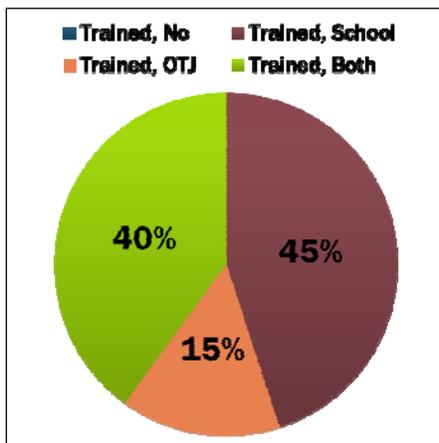
**Figure A.84. EHT Training Responses for Pillar 1, Task 27: Assist the Community in Establishing a Community Development Committee (CDC)**



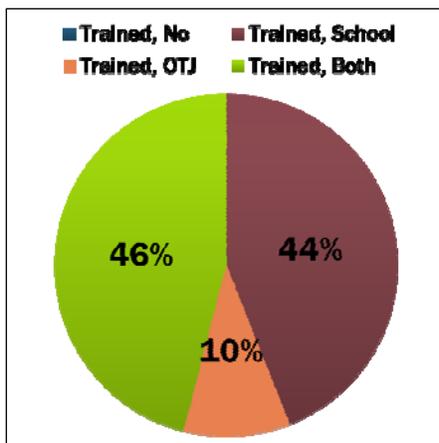
**Figure A.85. EHT Training Responses for Pillar 1, Task 28: Assist the Community in Recruiting Community Health Volunteers**



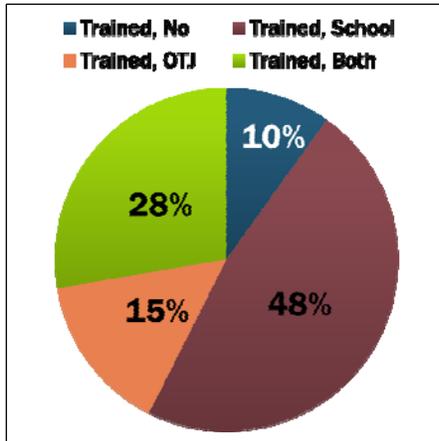
**Figure A.86. EHT Training Responses for Pillar 1, Task 29: Meets with Community Members to Discuss Environmental Health Needs and Concerns**



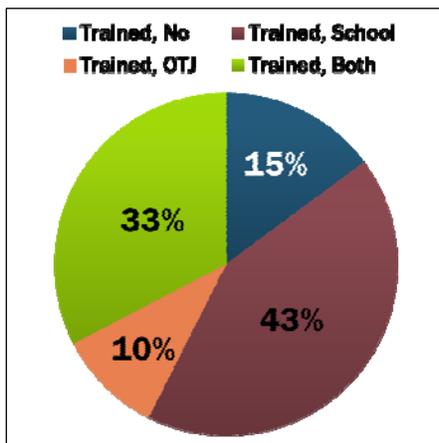
**Figure A.87. EHT Training Responses for Pillar 1, Task 30: Survey Community Members about Environmental Health Needs and Concerns**



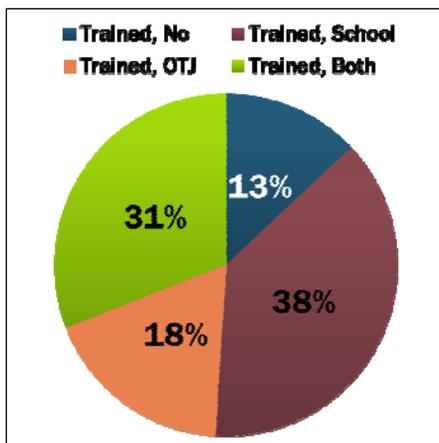
**Figure A.88. EHT Training Responses for Pillar 1, Task 31: Carry Out a Risk Assessment Relation to a Specific Environmental Health Problem in the Community**



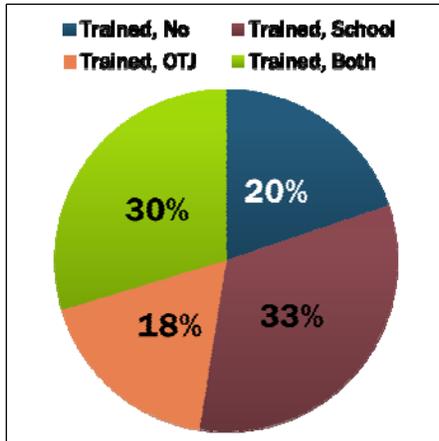
**Figure A.89. EHT Training Responses for Pillar 1, Task 32: Conduct Educational Programs for Community Health Volunteers**



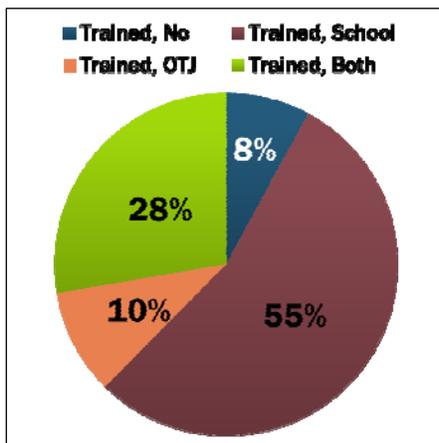
**Figure A.90. EHT Training Responses for Pillar 1, Task 33: Prepare Informational Materials for Community Health Volunteers**



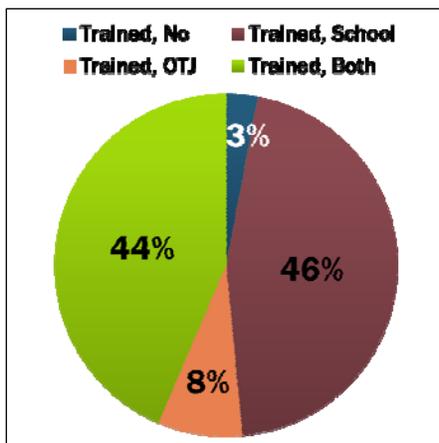
**Figure A.91. EHT Training Responses for Pillar 1, Task 34: Prepare Informational Materials for Community Residents**



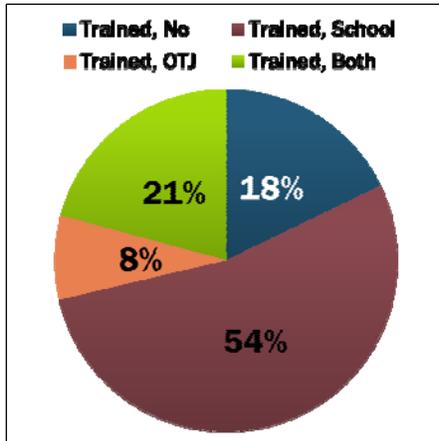
**Figure A.92. EHT Training Responses for Pillar 1, Task 35: Monitor Disease Patterns and Promptly Report Suspected Outbreaks to Your Immediate Supervisor**



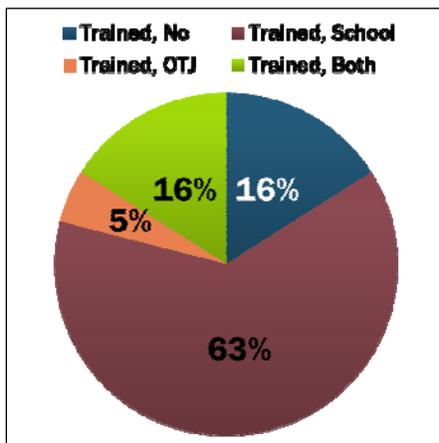
**Figure A.93. EHT Training Responses for Pillar 1, Task 36: Conduct and/or Participate in Preventive Activities Such as Health Fairs and Vaccination and Health/Hygiene Campaigns**



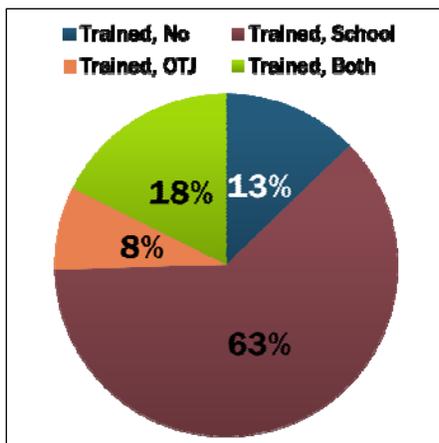
**Figure A.94. EHT Training Responses for Pillar 1, Task 37: Investigate Animal Bites and Provide Information Regarding Treatment and Health Care Referral**



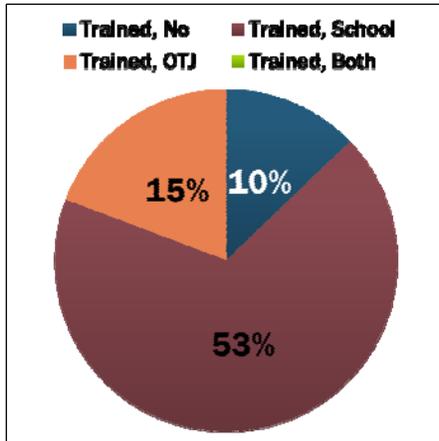
**Figure A.95. EHT Training Responses for Pillar 1, Task 38: Provide Basic First Aid (Give Example in Comments)**



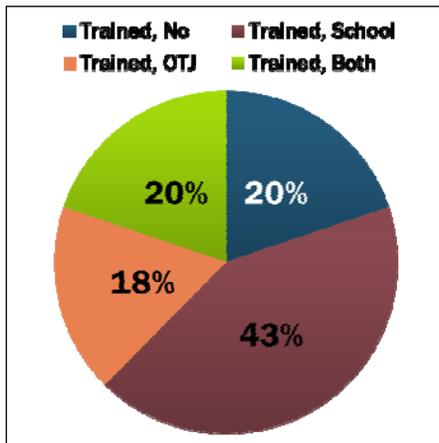
**Figure A.96. EHT Training Responses for Pillar 1, Task 39: Work with the CDC for the Control and Prevention of Rabies**



**Figure A.97. EHT Training Responses for Pillar 1, Task 40: Meet with Community Health Clinic Staff to Discuss Health-Related Issues**



**Figure A.98. EHT Training Responses for Pillar 1, Task 41: Meet with Community Health Clinic Staff to Discuss Resource Needs and Utilization**



**Figure A.99. EHT Training Responses for Pillar 2, Task 1: Map Potential Sources of Pollutants or Other Hazards in the Community**

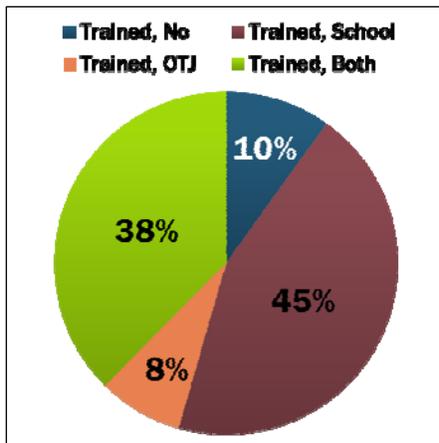


Figure A.100. EHT Training Responses for Pillar 2, Task 2: Monitor Drinking Water Quality

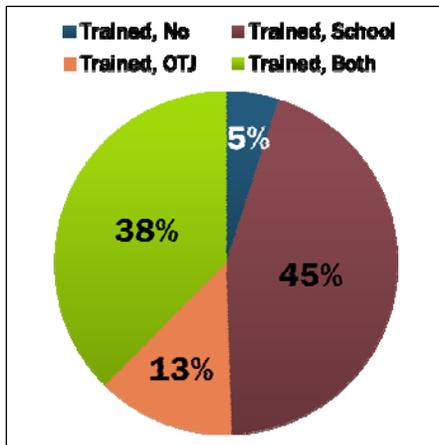


Figure A.101. EHT Training Responses for Pillar 2, Task 3: Identify Potential Sources of Pollution of the Water Supply

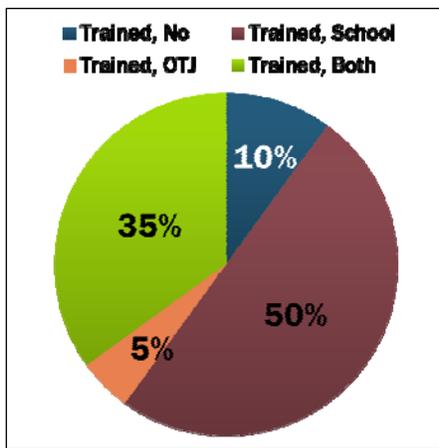


Figure A.102. EHT Training Responses for Pillar 2, Task 4: Monitor Outdoor Air Quality

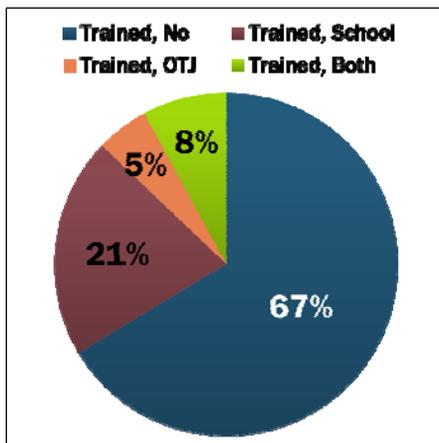


Figure A.103. EHT Training Responses for Pillar 2, Task 5: Identify Potential Sources of Pollution of Outdoor Air

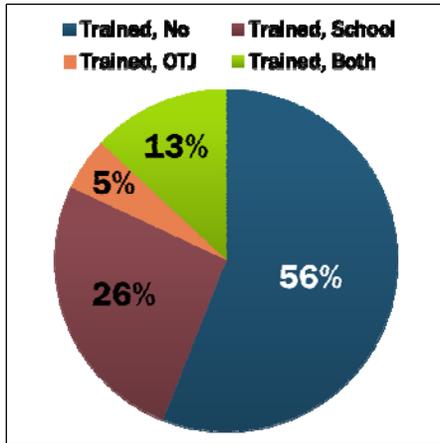


Figure A.104. EHT Training Responses for Pillar 2, Task 6: Direct and Assist in the Reduction of Air Pollution

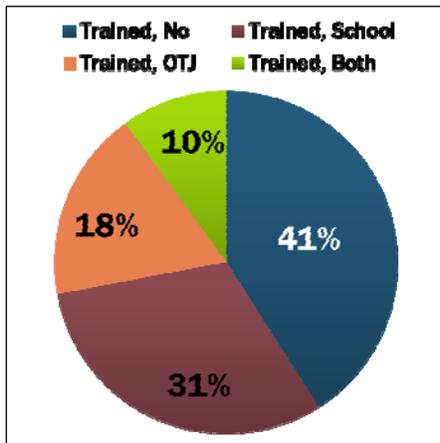
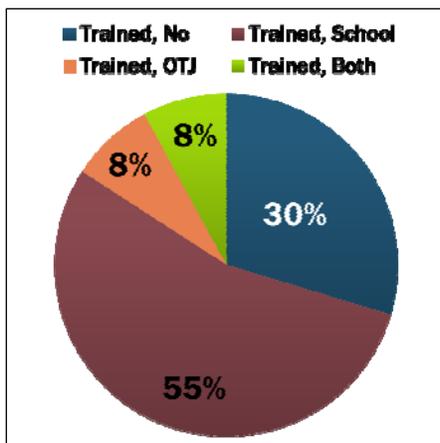
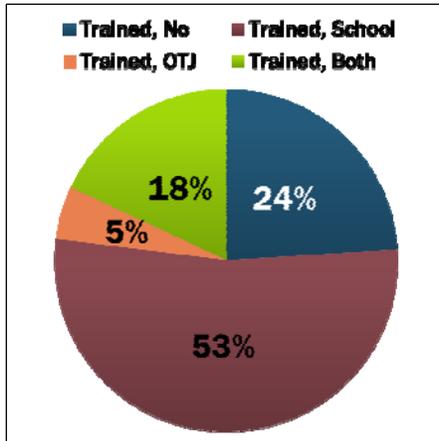


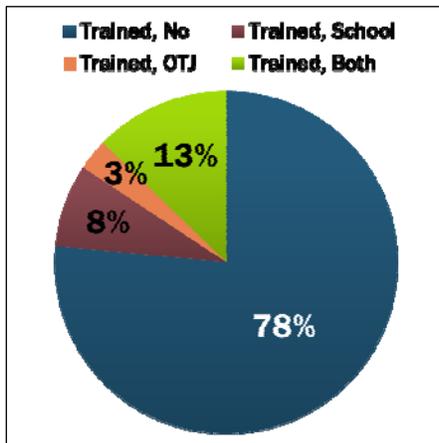
Figure A.105. EHT Training Responses for Pillar 2, Task 7: Identify Potential Chemical Hazard Sources in the Community



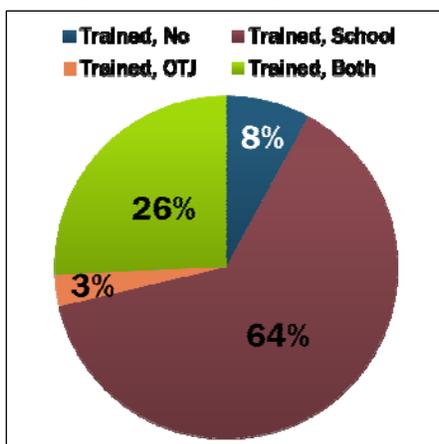
**Figure A.106. EHT Training Responses for Pillar 2, Task 8: Identify Potential Biological Hazard Sources in the Community**



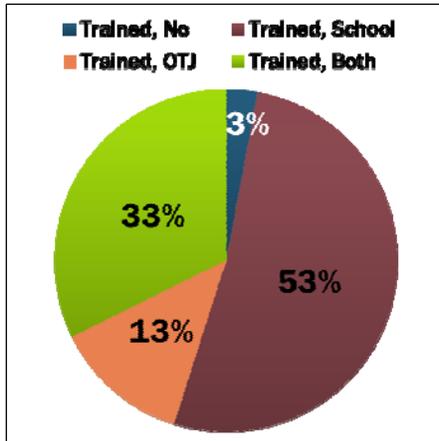
**Figure A.107. EHT Training Responses for Pillar 2, Task 9: Monitor Residential Indoor Air Quality**



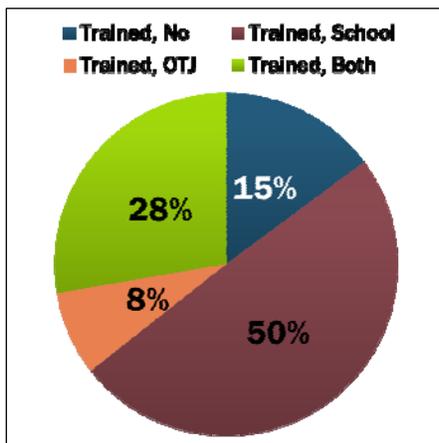
**Figure A.108. EHT Training Responses for Pillar 3, Task 1: Conduct Port Inspection to Control and Prevent the Importation and Exportation of Communicable Diseases**



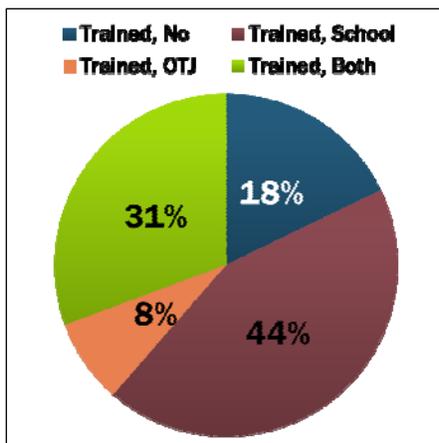
**Figure A.109. EHT Training Responses for Pillar 3, Task 2: Direct and Assist in the Maintenance of Drinking Water Sources**



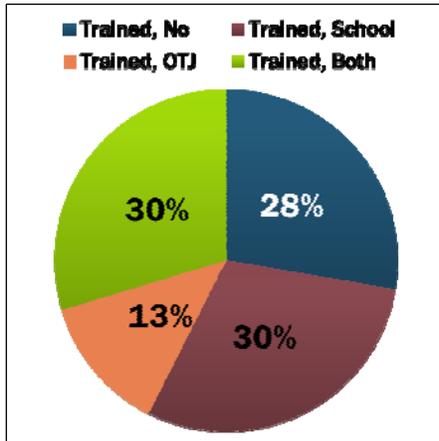
**Figure A.110. EHT Training Responses for Pillar 3, Task 3: Direct and Assist in the Maintenance of Waste Water Sources**



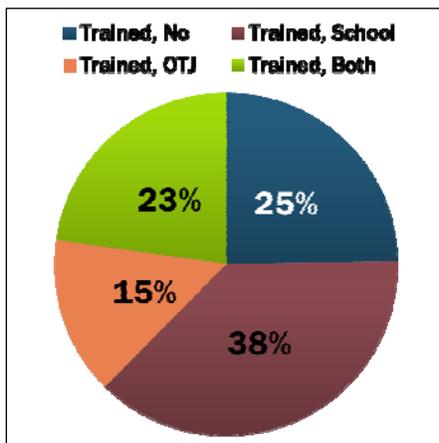
**Figure A.111. EHT Training Responses for Pillar 3, Task 4: Provide Guidance for the Proper Construction and Maintenance of Latrines**



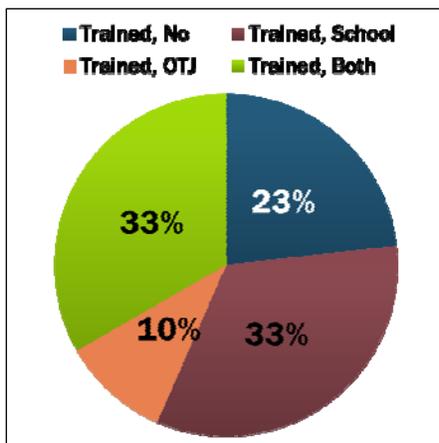
**Figure A.112. EHT Training Responses for Pillar 3, Task 5: Work with the CDC to Identify Possible Exposures of Residents to Hazardous Agents**



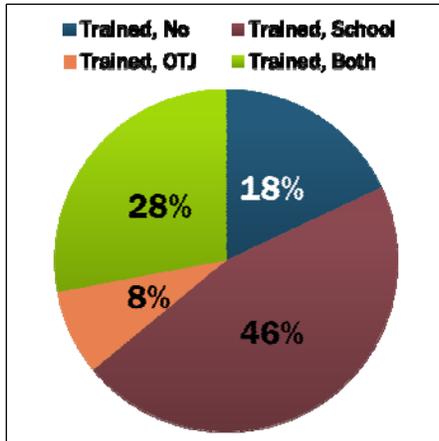
**Figure A.113. EHT Training Responses for Pillar 3, Task 6: Work with Health Volunteers to Identify Possible Exposures of Residents to Hazardous Agents**



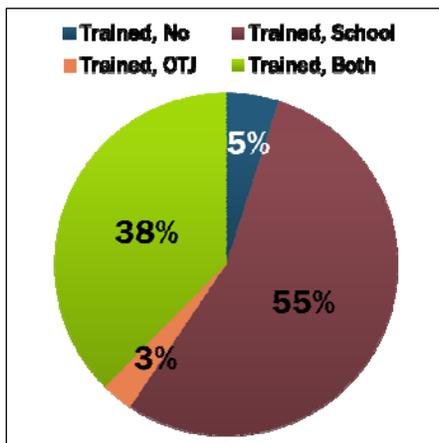
**Figure A.114. EHT Training Responses for Pillar 3, Task 7: Work with the CDC to Identify Possible Exposures of Residents to Infectious Agents**



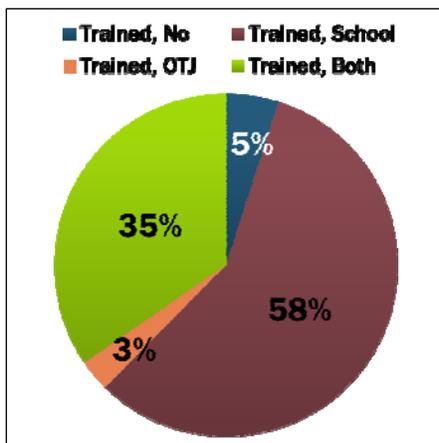
**Figure A.115. EHT Training Responses for Pillar 3, Task 8: Work with Health Volunteers to Identify Possible Exposures of Residents to Infectious Agents**



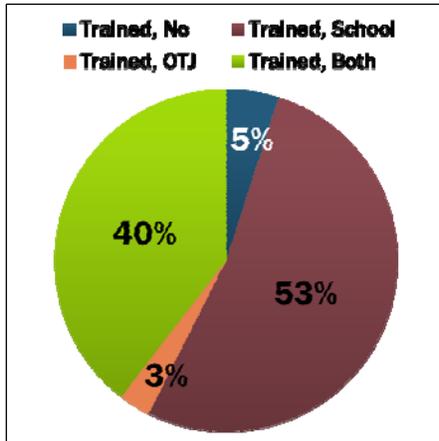
**Figure A.116. EHT Training Responses for Pillar 3, Task 9: Work with the CDC in the Selection of Suitable Burial Sites**



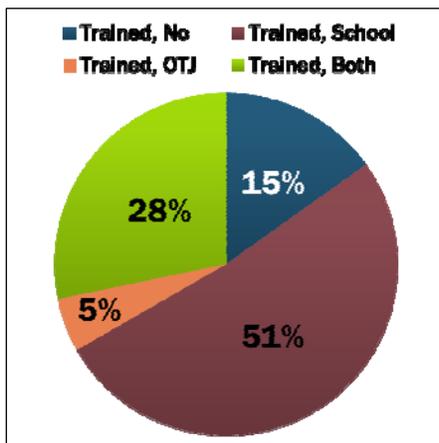
**Figure A.117. EHT Training Responses for Pillar 3, Task 10: Work with the Families in the Selection of Suitable Burial Sites**



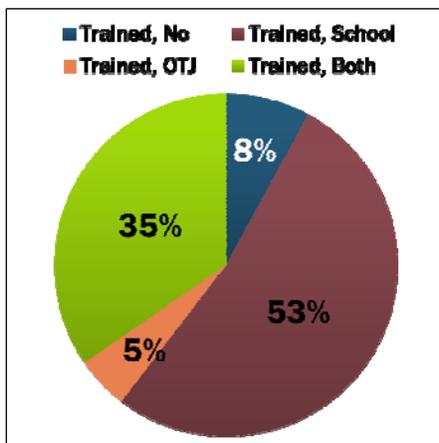
**Figure A.118. EHT Training Responses for Pillar 4, Task 1: Conduct Periodic Assessment of Sanitary Conditions in Food Establishments of the Community**



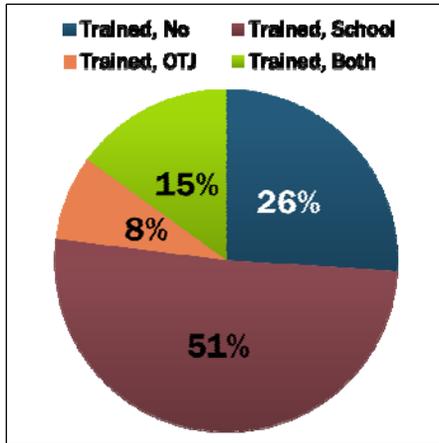
**Figure A.119. EHT Training Responses for Pillar 4, Task 2: Conduct Periodic Assessment of Sanitary Conditions in Meat Shops of the Community**



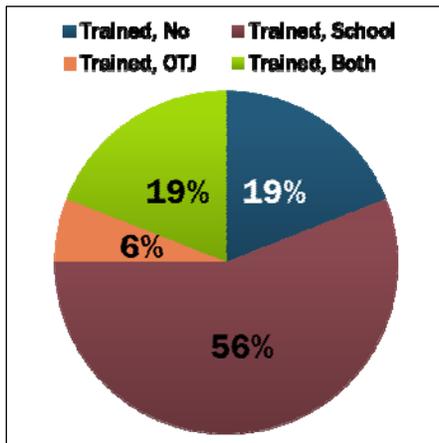
**Figure A.120. EHT Training Responses for Pillar 4, Task 3: Conduct Periodic Assessment of Sanitary Conditions in Markets of the Community**



**Figure A.121. EHT Training Responses for Pillar 4, Task 4: Conduct Periodic Assessment of Sanitary Conditions in Fisheries of the Community**



**Figure A.122. EHT Training Responses for Pillar 4, Task 5: Conduct Periodic Assessment of Sanitary Conditions in Poultry Farms of the Community**



**Figure A.123. EHT Training Responses for Pillar 4, Task 6: Conduct Periodic Assessment of Sanitary Conditions in Pig Farms of the Community**

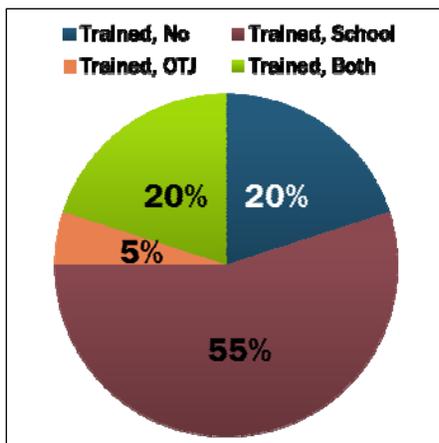


Figure A.124. EHT Training Responses for Pillar 4, Task 7: Assess Commercial Food Sanitation Practices

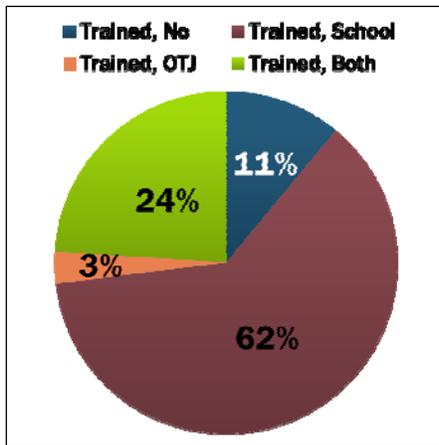


Figure A.125. EHT Training Responses for Pillar 4, Task 8: In Cooperation with the CDC, Work with Commercial Food Managers to Improve Sanitation Practices

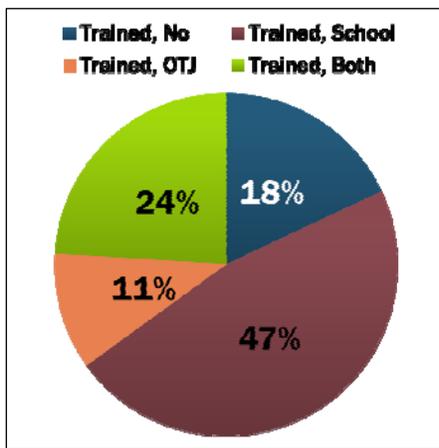
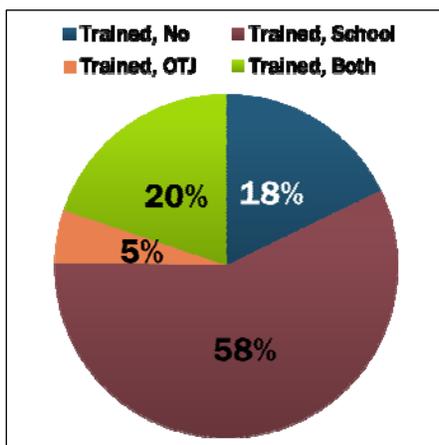
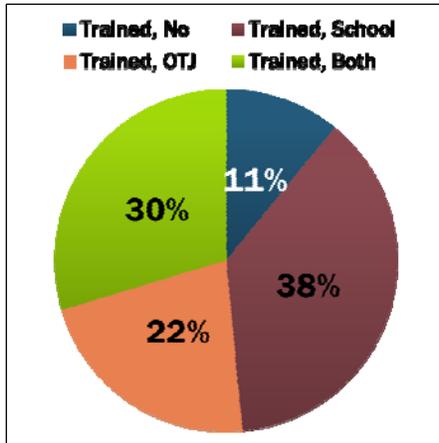


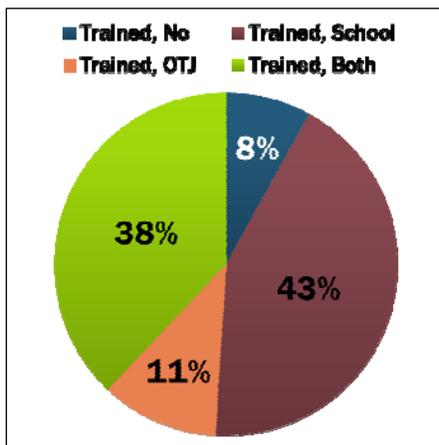
Figure A.126. EHT Training Responses for Pillar 4, Task 9: Work Directly with Commercial Food Managers to Improve Sanitation Practices



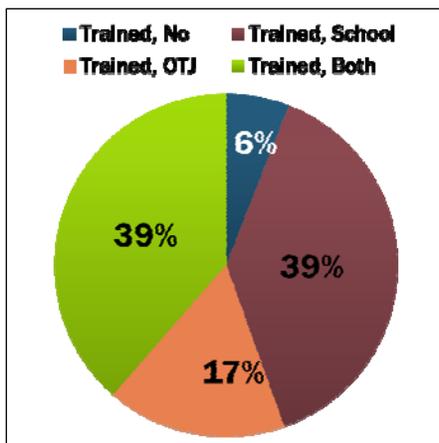
**Figure A.127. EHT Training Responses for Pillar 4, Task 10: Work with CDC to Improve Home Sanitation Practices in Food Storage and Handling**



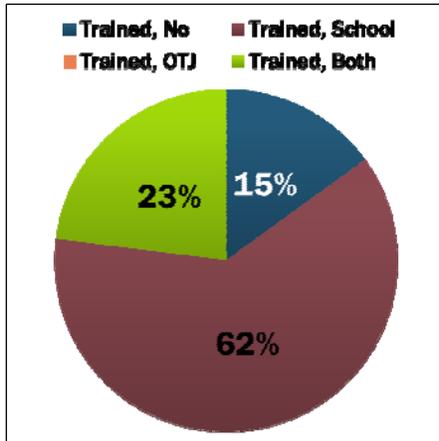
**Figure A.128. EHT Training Responses for Pillar 4, Task 11: Work with Health Volunteers to Improve Home Sanitation Practices in Food Storage and Handling**



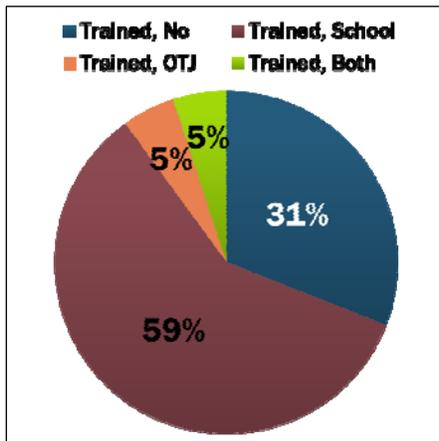
**Figure A.129. EHT Training Responses for Pillar 4, Task 12: Work with the CDC to Improve Home Sanitation Practices in Water Storage and Handling**



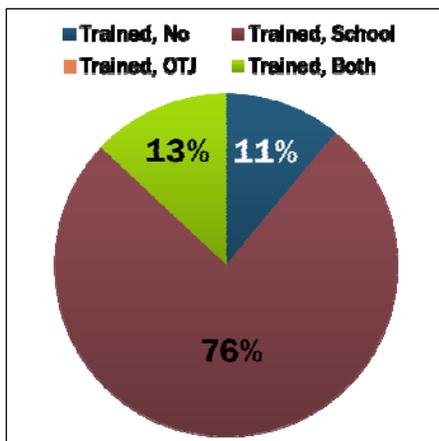
**Figure A.130. EHT Training Responses for Pillar 5, Task 1: Conduct Periodic Assessment of Sanitary Conditions in Industries of the Community**



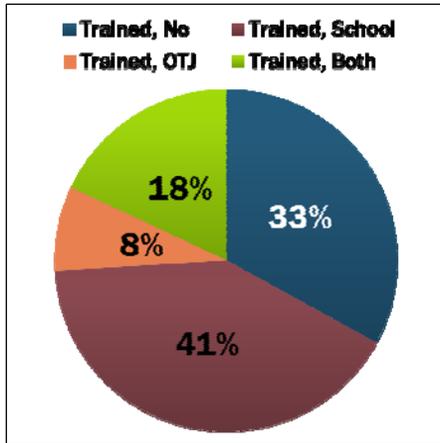
**Figure A.131. EHT Training Responses for Pillar 5, Task 2: Conduct Periodic Assessment of Sanitary Conditions in Government Offices of the Community**



**Figure A.132. EHT Training Responses for Pillar 5, Task 3: Assess the Safety of Occupational Environments to Protect Worker Health**



**Figure A.133. EHT Training Responses for Pillar 5, Task 4: Identify and Work with the CDC to Eliminate Unsafe Practices in the Handling of Hazardous Chemicals**



## APPENDIX B. MATRIX OF KEY TASKS BY CADRE AND AREA

Cadre	Job Description Areas*	Tasks Recommended for JD by Cadre	Tasks to be discussed with NWG	Key Tasks to Link to Core Competencies
<b>Registered Nurse</b>				
	Malaria	All		All
	FP	FP task 1-10, 14-16		
	Clinic-specific FP	FP task 1-10, 14-16		
	ANC	All		All
	PNC	All		All
	ASRH	All	Adding emphasis to sexual violence as currently not a task	All
	Clinic-specific ASRH	All		
	Clinic-specific NLC	Tasks 1-6 and 10-22	Tasks 7-9	1-6 and 10-22
	Hospital-specific OC	2, 3, 4	13	2, 3,4
	Clinic-specific OC	13	13	
	MGM	1-5	3, 5	1-5 after discussion on 3, 5
	IP	1, 3-5, 8- 10	6-7, compare with discussion in report	1-5, 8-10
	Mental health	1, 2, 5, 8	1, 2 (why is PTSD not included), 5, 8	1, 2, 5, 8
	SNC	1-4		1-4
	EPI	All		All
	IMCI	All	Reduce duplications with NC, and 41-42 were deleted from analysis as they were two tasks in one and there was reporter issues	All
	IYCF	Only one task		Only one task
	EME	2, 4, 9, 11, 16, 17	All listed if necessary	2, 4, 9, 11, 16, 17
	STI, HIV/AIDS	All	All as a flow of services to increase efficiency may be needed with this large number of tasks. However, the importance of having all cadres competent in this area is clear.	All

Cadre	Job Description Areas*	Tasks Recommended for JD by Cadre	Tasks to be discussed with NWG	Key Tasks to Link to Core Competencies
	VCT	1-4, 7&8	Discuss if cont. as vertical program by UNAIDS or insert in PSE as VCT, PITC, and/ group-based approaches	1-4, 7&8
	TB	1, 2, 9, 10	Discuss other tasks and if other worker should have assigned in JD. Also need to discuss TB statistics.	1,2,9,10
	CMOED	4, 5, 9, 11	9- measles appears to be treated at low frequency by RNs and PAs, but if considered a national need, should be included in JD and PSE	4, 5, 9, 11
	Hospital-specific CMOED	4, 5, 9		
<b>Certified Midwife</b>				
	MAL	All for clinic CM	Should JD include specific section for hospital CM? Which malaria tasks should be included?	
	FP	All		All
	ANC	All		All
	PNC	All		All
	ASRH	All 3 tasks		All 3 tasks
	NLC	All		All
	OC	All suggested unless another cadre not included in the task analysis is responsible for some of the OC tasks	8-13, are they receiving CBT for these	All
	MGM	1-5	3,5	1-5
	Hospital-specific MGM	3		
	IP	1, 3-5, 8- 10	6-7, compare with discussion in report	
	Mental health	1, 2, 5, 8	1, 2 (why is PTSD not included), 5, 8	1, 2, 5, 8

Cadre	Job Description Areas*	Tasks Recommended for JD by Cadre	Tasks to be discussed with NWG	Key Tasks to Link to Core Competencies
	SNC	All		All
	EPI	All		All
	IMCI	none	Consider removing	None
	Clinic-specific IYCF	Only one task		Only one task
	EME	9, 11, 16, 17	all listed if necessary	9, 11, 16, 17
	STI, HIV/AIDS	All	All as a flow of services to increase efficiency may be needed with this large number of tasks. However, the importance of having all cadres competent in this area is clear.	All
	VCT	1-4, 7&8	Discuss if cont. as vertical program by UNAIDS or insert in PSE as VCT, PITC, and/ group based approaches	1-4, 7&8
	TB	N/A	None	None
	CMOED	N/A	None	None
<b>Physician Assistant</b>				
	Malaria	All		All
	FP	All	Discuss training of PAs in MCHIP/RBHS-supported comprehensive FP national training and PSE program as service provision is necessary prior to student rotations in PSE	All
	ANC	All		All
	PNC	All		All
	ASRH	All		All
	Clinic-specific NLC	1-6, 10-2	7,8,9	1-6, 10-22
	Clinic-specific OC	1, 2,4, 9	10-13	1-4, 6, 9
	Hospital-specific OC	1, 2-6	10-13	1-4, 6, 9, Question on 10-13?
	MGM	3,5	3, 5	3,5
	Hospital-specific MGM	3		
	IP	1, 3-5, 8- 10	6-7, compare with discussion in report	1-5, 8-10

Cadre	Job Description Areas*	Tasks Recommended for JD by Cadre	Tasks to be discussed with NWG	Key Tasks to Link to Core Competencies
	Mental health	1, 2, 5, 8	1, 2 (why is PTSD not included), 5, 8	1, 2, 5, 8
	SNC	All		All
	EPI	All		All
	IMCI	All		All
	IYCF	One of one task		One of one task
	EME	4, 7, 8, 9, 11, 16, 17	All if discussion is needed	4, 7, 9, 11, 16, 17
	STI, HIV/AIDS	All	All as a flow of services to increase efficiency may be needed with this large number of tasks. However, the importance of having all cadres competent in this area is clear.	All
	VCT	1-4, 7&8	Discuss if cont. as vertical program by UNAIDS or insert in PSE as VCT, PITC, and/ group-based approaches	1-4, 7&8
	TB	1, 2, 9, 10	Discuss other tasks and if other worker should have assigned in JD. Also need to discuss TB statistics.	1,2,9,10
	CMOED	4-9, 11	9- measles appears to be treated at low frequency by RNs and PAs, but if considered a national need, should be included in JD and PSE	4-9, 11
	Hospital-specific	4, 5, 6, 7, 8, 11	4, 5, 6, 7, 8?	11

## **APPENDIX C: TASK LIST FOR RN, CM, PA**

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### **MALARIA**

1. Conduct a rapid initial assessment of suspected malaria of client
2. Collect key information during history-taking
3. Conduct a physical exam to diagnose malaria
4. Use malaria case management diagnostic algorithms
5. Use malaria case management treatment algorithms
6. Manage malaria in children under five years of age.
7. Use rapid test to identify presence of malaria parasites
8. Provide education malaria prevention

### **FAMILY PLANNING (FP)**

1. Use recommended FP counseling techniques
2. Provide information on contraceptive methods according to clients' needs
3. Provide information on birth spacing
4. Assess for pregnancies
5. Conduct return visits
6. Use medical eligibility criteria when counseling on contraceptive options
7. Give specific information on COCs
8. Give specific information on POPs
9. Give specific information on DMPA
10. Give specific information on condoms
11. Give specific information on IUCD
12. Insert IUCD
13. Remove IUCD
14. Give specific information on emergency contraception (EC)
15. Provide EC
16. Provide general information on male and female sterilization

### **ANTENATAL CARE (ANC)**

1. Conduct rapid initial evaluations of pregnant women
2. Treat woman and companion(s) with respect
3. Interview pregnant woman for danger signs

4. Obtain obstetrical history
5. Obtain medical history from pregnant woman
6. Perform physical exams on pregnant woman
7. Perform obstetrical exams
8. Counsel woman and companion(s) on personal care (nutrition and hygiene)
9. Counsel woman on breastfeeding
10. Conduct individualized care for pregnant woman based on findings and protocols
11. Initiate IPT according to protocol
12. Assist women and companions with birth preparedness and complication readiness (BP/CR)
13. Plan return ANC visits
14. Counsel ANC client regarding post-partum family planning (PPFP)
15. Counsel ANC clients with HIV
16. Evaluate care given to ANC client
17. Treat pregnant woman with malaria according to national guidelines
18. Advise on use of insecticide-treated net

### **POSTNATAL CARE (PNC)**

1. Conduct a rapid initial assessment of postpartum woman
2. Treat woman and companion(s) with respect
3. Verify existence of or opens a record for the postpartum woman
4. Conduct routine physical postpartum exam
5. Manage postpartum woman according to assessment findings
6. Advise on danger signs during postpartum
7. Refer postpartum woman per protocol
8. Assess the neonate
9. Demonstrate proper positioning and attachment of neonate on the breast
10. Manage the neonate
11. Counsel parent(s) on baby's care
12. Advise on danger signs in neonate period

### **ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH (ASRH)**

1. Deliver youth-friendly services in family planning
2. Deliver youth-friendly services in STI/HIV/AIDS

3. Use IEC/BCC materials

### **NORMAL LABOR CARE (NLC)**

1. Assess pregnant women in labor to identify complications and prioritize admissions
2. Treat pregnant woman in labor in a respectful manner
3. Review and fill out the clinical history of the woman in labor
4. Conduct the physical examination between contractions and if time allows
5. Conduct the obstetric examination between contractions if time allows
6. Conduct a vaginal examination of a woman in labor
7. Provide counseling and testing for women-in-labor with unknown HIV status
8. Give antiretroviral medicine to HIV+ women during labor and delivery
9. Use AFASS criteria to counsel HIV+ women on infant feeding
10. Prepare and implement a plan according to the findings of the history and physical exam for providing care to the woman
11. Use the partograph to monitor labor and make adjustments to the birth plan
12. Assist woman to labor and deliver in the position she wants
13. Assist the woman to have a safe and clean birth
14. Conduct a rapid initial assessment
15. Perform active management of the third stage of labor (AMTSL)
16. Perform immediate postpartum care
17. Dispose medical waste after assisting the birth according to protocol
18. Place used equipment in decontamination solution according to protocol
19. Monitor the newborn in immediate postpartum period
20. Monitor the woman for at least two hours after the birth
21. Perform resuscitation of the newborn
22. Provide appropriate medication to the newborn

### **OBSTETRIC COMPLICATIONS (OC)**

1. Manage hypovolemic shock of woman:
2. Maintain airways
3. Administer oxygen to the woman, 6–8 L/minute by cannula or mask
4. Start two IV lines using a 16- or 18-gauge needle
5. Conduct Rh cross-match

6. Assess woman's need for transfusion based upon signs of shock or impending shock due to amount of blood loss
7. Recognize symptoms of acute postpartum coagulopathy
8. Manage incomplete abortion
9. Manage severe pre-eclampsia and/or eclampsia
10. Manage postpartum hemorrhage (PPH) when bleeding is due to retained placenta
11. Manage PPH when bleeding is due to uterine atony
12. Manage PPH when bleeding is due to perineal or cervical tears
13. Perform uterine massage and extraction of clots for management of PPH

### **MANAGEMENT (MGM)**

1. Use clinical guidelines available in the facility
2. Manage equipment, supplies and IEC materials
3. Review and report deaths
4. Use a referral system with and from other facilities
5. Integrate community feedback with service delivery

### **INFECTION PREVENTION (IP)**

1. Participate in cleaning clinical wards and areas
2. Participate in cleaning the operation theatre
3. Prepare disinfectant cleaning solution
4. Decontaminate instruments
5. Participate in sterilizing the equipment
6. Participate in food storage
7. Participate in food preparation
8. Use personal protective equipment when handling used and soiled linen
9. Segregate bio-hazardous waste from regular waste
10. Use personal protective equipment (e.g., gloves, goggles, apron) when handling waste

### **MENTAL HEALTH (MH)**

1. Receive and treat the client with mental health (MH) issues with respect
2. Ask and record danger signs of acute mental problems (e.g., hallucinations, flight of ideas)
3. Counsel patients with MH problems
4. Refer clients suspected to have psychoses

5. Provide services for victims of sexual abuse
6. Supervise patients on long-term medication for MH issues
7. Administer medication to MH clients as prescribed or protocol
8. Initiate counseling for clients affected by substance abuse

### **SICK NEWBORN CARE (SNC)**

1. Manage sick newborns
2. Diagnose pre-term or low-birth-weight newborns
3. Manage pre-term or low-birth-weight newborns
4. Give specific information to mother and father (if present) on Kangaroo Mother Care (KMC)
5. Diagnose neonatal sepsis
6. Manage neonatal sepsis
7. Diagnose neonatal jaundice
8. Manage neonatal jaundice
9. Diagnose neonatal tetanus
10. Manage neonatal tetanus
11. Diagnose neonatal umbilical infection
12. Manage neonatal umbilical infection

### **EXPANDED PROGRAM ON IMMUNIZATIONS (EPI)**

1. Use cold chain system to preserve vaccine integrity
2. Participate in vaccine consumption recording
3. Use a multi-dose open vial policy
4. Ask client about immunizations received
5. Use the immunization schedule with clients
6. Educate clients on immunization schedule
7. Administer vaccines to clients according to protocol
8. Administer oral vaccines

### **INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESSES (IMCI)**

1. Conduct rapid initial assessment of an infant
2. Assess for possible bacterial infection in infants
3. Classify bacterial infection in infants

4. Treat infants for infection
5. Assess for possible jaundice in infants
6. Classify the jaundice in infants
7. Treat infants for jaundice
8. Assess infant for diarrhea
9. Classify dehydration in infants
10. Treat infant for diarrhea with severe dehydration
11. Treat infant for diarrhea with some and no dehydration
12. Treat infant for severe persistent diarrhea and/or dysentery
13. Assess infant for feeding problems OR low weight
14. Classify the feeding problem OR low weight in infants
15. Manage the infant for feeding problem or low weight
16. Assess the infant's immunization status
17. Advise the mother/father/caretaker about infant danger signs
18. Conduct initial identification of the child's problems
19. Assess child for general danger signs
20. Classify the sick child for general danger signs
21. Treat sick child with very severe disease
22. Assess child for cough or breathing difficulty
- 23. Classify the sick child for cough and breathing difficulty**
24. Treat the child with severe pneumonia or very severe diseases
25. Treat the child with pneumonia and no pneumonia
26. Assess the child for diarrhea/ dehydration
27. Classify the diarrhea/ dehydration in the child
28. Treat child for diarrhea with severe dehydration
29. Treat the child for diarrhea with some and no dehydration
30. Treat the child for severe persistent diarrhea and dysentery
31. Assess the child for fever and measles
32. Classify the child with fever in malaria high-risk areas
33. Classify the child with fever in malaria low-risk areas
34. Classify the child with fever and measles
35. Treat the child for fever in malaria high-risk areas
36. Treat the child for fever in malaria low-risk areas
37. Treat the child for fever and measles

38. Assess the child for ear problems
39. Classify the child with ear problems
40. Treat the child with ear problem
41. Classify the child's malnutrition or anemia
42. Treat the child for malnutrition and anemia
43. Check the child's immunization, vitamin A supplementation and de-worming status

## **INFANT AND YOUNG CHILD FEEDING (ICYF)**

1. Teach caregivers proper nutrition of children by proper developmental age

## **EMERGENCY CARE (EME)**

1. Diagnose and manage shock
2. Maintain airway and bag-breathing for pt with respiratory distress
3. Diagnose and manage anaphylactic reaction
4. Diagnose and manage seizures and convulsions
5. Diagnose and manage animal bites
6. Diagnose and manage poison ingestions
7. Diagnose asthma
8. Manage asthma
9. Provide first aid
10. Manage burn injuries
11. Manage wound care
- 12.** Diagnose pneumothorax
13. Manage pneumothorax
14. Diagnose haemothorax
15. Manage haemothorax
16. Diagnose acute abdomen
17. Manage acute abdomen
18. Diagnose closed fracture
19. Manage closed fractures
20. Diagnose open fracture
21. Manage open fractures
22. Diagnose spinal injuries and pelvic fractures
23. Manage spinal injuries or pelvic fractures

## **SEXUALLY TRANSMITTED INFECTIONS (STIS), HIV AND AIDS**

1. Conduct STI, HIV and AIDS health education activities using group education skills
2. Provide education about modes of HIV transmission
3. Discuss common misconceptions about HIV/ AIDS
4. Discuss reduction of mother to child transmission of HIV (PMTCT)
5. Demonstrate how to use male condom using a model
6. Demonstrate how to use female condom using a model
7. Provide information on HIV/AIDS, PMTCT, STIs available in the health facility
8. Distribute and place appropriate educational posters and pamphlets on HIV/AIDS, PMTCT, STIs
9. Carry out outreach IEC activities in the catchment areas
10. Keep a record of clients that attend the group education sessions
11. Greet the clients cordially and respectfully
12. Counsel on STI, HIV and AIDS
13. Ensure privacy during the visit
14. Obtain the clinical history, including STI, HIV/AIDS aspects
15. Conduct an examination and lab investigations if intake suggests they are needed
16. Explain the findings from the clinical history and physical exam and manage accordingly
17. Provide counseling on maternal nutrition and micronutrient supplements
18. Counsel the mother on infant feeding following a job aid for each step
19. Prepare/review the birth preparedness plan with the client focusing on pregnant woman's needs
20. Conduct an evaluation of the care provided and subsequent follow-up
21. Collect blood sample per National AIDS Control Program standards.
22. Dispose medical waste in a leak-proof container after drawing blood for STI/ HIV/ AIDS management
23. Perform rapid HIV test
24. Administer ARVs
25. Administer nevirapine to HIV+ mother
26. Counsel HIV+ postpartum woman on use of condoms
27. Administer nevirapine to newborn of HIV+ mother
28. Establish care plan for HIV+ mother-infant pair
29. Assess HIV+ mother-infant pair during return visit
30. Use NACP case management diagnostic algorithms for syndromic management of STIs

## **VOLUNTARY COUNSELING AND TESTING (VCT)**

1. Give an introduction and orientation to the HIV counseling session
2. Assess HIV risk of the client
3. Explore options for reducing risk
4. Prepare the client for the HIV test
5. Process the blood samples according to standards
6. Register and report the HIV results
7. Provide HIV-negative test results according to protocol
8. Provide HIV-positive test results according to protocol

## **TUBERCULOSIS (TB)**

1. Provide IEC/BCC activities on spread of TB, recognition of symptoms and case management
2. Administer BCG to all newborns who have not been immunized with BCG
3. Identify suspect cases TB
4. Collect sputum
5. Conduct microscopy for AFB
6. Diagnose TB in children
7. Register and assign TB cases to a treatment regimen
8. Manage side effects of the drugs
9. Monitor patient response to treatment
10. Supervise intensive phase of DOTS

## **CONTROL AND MANAGE OF OPPORTUNISTIC AND EMERGING DISEASES (CMOED)**

1. Report monthly on all reportable diseases
2. Investigate epidemics
3. Organize and control epidemics
4. Manage typhoid
5. Manage meningitis
6. Manage jaundice and yellow fever
7. Manage acute rheumatic fever
8. Manage hemorrhagic Fever
9. Manage measles

10. Manage pertussis
11. Manage bloody diarrhea
12. Manage neonatal tetanus
13. Manage acute flaccid paralysis

## **APPENDIX D: TASK LIST BY PILLAR FOR EHTS**

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### **PILLAR ONE: COMMUNITY HEALTH**

1. Meet with community health center staff to discuss health-related issues
2. Meet with community health center staff to discuss resource needs and utilization
3. Report to the community health director the condition of environmental health (EH) within the community
4. Maintain accurate and complete records and submit monthly reports to superiors
5. Order EH equipment and supplies and maintain inventories
6. Monitor and maintain all equipment and supplies
7. Map community drinking water sources
8. Map community waste disposal sites
9. Map burial sites in the community
10. Maintain community population statistics
11. Coordinate county EH activities with those of other agencies
12. Participate in in-service education and staff development programs
13. Meet all professional and legal requirements related to EH
14. Train students and auxiliary EH workers
15. Supervise students and auxiliary EH workers
16. Evaluate students and auxiliary EH workers
17. Assist with applied EH research
18. Conduct periodic assessment of sanitary conditions in homes of the community
19. Conduct periodic assessment of sanitary conditions in schools of the community
20. Conduct periodic assessment of hotels and motels in the community
21. Conduct periodic assessments of prisons of the community
22. Conduct periodic assessments of sanitary conditions in swimming pools or beaches of the community
23. Conduct periodic assessments of sanitary conditions in cinemas and video clubs of the community
24. Conduct periodic assessments of sanitary conditions in other recreation centers of the community (name in Comments)
25. Report to the County Health Department the assessments of the above community facilities
26. Perform all other duties as assigned by your immediate supervisor
27. Assist the community in establishing a community development committee

28. Assist the community in recruiting community health volunteers (CHVs)
29. Meet with community members to discuss environmental health needs and concerns
30. Survey community members about environmental health needs and concerns
31. Carry out a risk assessment relating to a specific environmental health problem in the community
32. Conduct educational programs for CHVs
33. Prepare informational materials for CHVs
34. Prepare informational materials for community residents
35. Monitor disease patterns and promptly report suspected outbreaks to your immediate supervisor
36. Conduct and/or participate in preventive activities such as health fairs, and vaccination and health/hygiene campaigns
37. Investigate animal bites and provide information regarding treatment and health care referral
38. Provide basic first aid (give examples in Comments)
39. Work with the CDC for the control and prevention of rabies

## **PILLAR TWO. POLLUTION CONTROL**

1. Map potential sources of pollutants or other hazards in the community
2. Monitor drinking water quality
3. Identify potential sources of pollution of the water supply
4. Monitor outdoor air quality
5. Identify potential sources of pollution of outdoor air
6. Direct and assist in the reduction of air pollution
7. Identify potential chemical hazard sources in the community
8. Identify potential biological hazard sources in the community
9. Monitor residential indoor air quality

## **PILLAR THREE. BUILT ENVIRONMENT**

1. Conduct port inspection to control and prevent the importation and exportation of communicable diseases
2. Direct and assist in the maintenance of drinking water sources
3. Direct and assist in the maintenance of waste water systems
4. Provide guidance for the proper construction and maintenance of latrines
5. Work with the community development committee to identify possible exposures of residents to hazardous agents

6. Work with health volunteers to identify possible exposures of residents to hazardous agents
7. Work with the community development committee to identify possible exposures of residents to infectious agents
8. Work with health volunteers to identify possible exposures of residents to infectious agents
9. Work with the community development committee in the selection of suitable burial sites
10. Work with families in the selection of suitable burial sites

#### **PILLAR FOUR. FOOD AND MEAT SAFETY**

1. Conduct periodic assessment of sanitary conditions in food establishments of the community
2. Conduct periodic assessment of sanitary conditions in meat shops of the community
3. Conduct periodic assessment of sanitary conditions in markets of the community
4. Conduct periodic assessments of sanitary conditions in fisheries of the community
5. Conduct periodic assessments of sanitary conditions in poultry farms of the community
6. Conduct periodic assessments of sanitary conditions in pig farms of the community
7. Assess commercial food sanitation practices
8. In cooperation with the community development committee, work with commercial food managers to improve sanitation practices
9. Work directly with commercial food managers to improve sanitation practices
10. Work with the community development committee to improve home sanitation practices in food storage and handling
11. Work with health volunteers to improve home sanitation practices in food storage and handling
12. Work with the community development committee to improve home sanitation practices in water storage and handling
13. Work with health volunteers to improve home sanitation practices in water storage and handling

#### **PILLAR FIVE. OCCUPATIONAL HEALTH AND SAFETY**

1. Conduct periodic assessment of sanitary conditions in industries of the community
2. Conduct periodic assessments of sanitary conditions in government offices of the community
3. Assess the safety of occupational environments to protect worker health

4. Identify and work with the community development committee to eliminate unsafe practices in the handling of hazardous chemicals