

Competency-Based CURRICULUM

Pre-service Training

For

Physician Assistants (PAs)

Republic of Liberia

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REBUILDING BASIC HEALTH SERVICES IN LIBERIA

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The Liberian Physician Assistant Program- Brief Information

By: Dr. Paul Mertens

Introduction:

- **Definitions of a Physician Assistant (PA)-- Physician assistants (PAs) are** “physician extenders” or “physician substitutes” who practice modern medicine under the supervision of physicians and surgeons. PAs are formally trained to provide diagnostic, therapeutic, and preventive healthcare services, as delegated by a physician. Working as members of a healthcare team, they take medical histories, examine and treat patients, order and interpret laboratory tests and x rays, and make diagnoses. They also treat minor injuries by suturing, splinting, and casting. In some developing countries they do routine surgical procedures such as C-sections and herniorrhaphies. PAs record progress notes, instruct and counsel patients, and order or carry out therapy. Physician assistants also may prescribe certain medications. In some establishments, a PA is responsible for managerial duties, such as ordering medical supplies or equipment and supervising medical technicians and assistants.
- **Need for such a program—**In developing countries physicians are often few compared to the population needing care, and too expensive (even if available) for the Ministries of Health to hire in adequate numbers to care for all patients. A cadre of personnel well-trained in prevention, diagnosis and treatment of common illnesses but requiring less training and costing significantly less to employ is an obvious necessity. The same is true in the developed nations, although the physician shortage in developed nations is less and greater funds are available for employment.
- **International History of Physician Assistants—**The name varies in different nations
 - **Africa—**Kenya started a Clinical Officer training course in 1928 while still a British colony. Most East African nations now train and employ Clinical Officers.
 - **U.S.—PA’s--**The PA profession in the U.S. was first proposed by Dr. Charles L. Hudson who recommended to the AMA in 1961 the "creation of two new groups of assistants to doctors from nonmedical and non-nursing personnel." Dr. Eugene A. Stead, Jr. of the Duke University Medical Center in North Carolina assembled the first class of Physician Assistants in 1965, composed of former U.S. Navy hospital corpsmen. He based the curriculum of the PA program in part on his first-hand knowledge of the fast-track training of medical doctors during World War II. Two other physicians, Dr. Richard Smith at the University of Washington, and Dr. Hu Myers at Alderson-Broadus College, also launched their own programs in the mid and late 1960s.

- **History of PA's in Liberia**

- The Lutheran Mission at the original Phebe Hospital at Muhlenberg started a Medical Assistants training course shortly after their nursing course—circa 1925—it was discontinued after a few years.
- Due to the lack and cost of physicians the Ministry of Health hired dressers, practical nurses and RN's to staff clinics. Dressers had no formal training, but had usually been taught how to change bandages and give injections. The nursing personnel had their background from nurses training and frequently some experience working in a hospital, but no specific training in proper physical examination and differential diagnosis.
- The Tubman National Institute of Medical Arts (TNIMA) was established in 1945 and began training nursing personnel. Then in 1965, due to the significant recognized need for clinic personnel trained well in diagnosing, treating and preventing disease, the physician assistant (PA) program was established as a joint venture between the Liberian government, WHO and UNICEF. Initially it was a one-year course, but currently it is a three-year diploma course accredited by the Liberia National Physician Assistant Association (LINPAA) and the Liberia Medical and Dental Association Board
- The Physician Assistant Board (PAB) is the regulatory body for exams and licensing and A PA Association has been established and is functioning.
- Ms. Agnes Dagbe RN, was the first Director of the School of Physician Assistants. She was principally responsible for developing and improving the program from its inception to her resignation in 1980 following the coup
- At first students were mainly recruited from the interior, and sent back to clinics in the interior following graduation
- Prerequisites were an 11th grade education (occasionally 10th grade if an exceptional student), and the applicants had to take an exam given in various centers. Since in the 70's students entering the PA program are graduates of recognized high school with a West African High School Certificate.
- The school of PA at TNIMA has trained over 500 PAs since its inception through 2011

Curriculum Strengthening Process-Physician Assistant (PA)

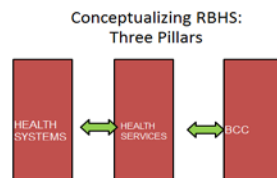
BACKGROUND

Five years after emerging from two prolonged and devastating civil wars, Liberia is beginning to make some degree of measurable progress on a range of economic and social outcomes. The impact of the conflicts on the health sector were as severe as on any other and included loss of staff, destruction of infrastructure, disruption of health programs, lack of resources and resultant increased dependence on international donors.

The Ministry of Health and Social Welfare (MOHSW) has emerged as one of the strongest and most effective government entities, demonstrating strong leadership and vision, developed a sound National Health Policy and Plan, collaborated effectively with its partners and is taking the lead on setting national policies, strategies, and plans. The cornerstone of the Liberian National Health Plan is the MOHSW's Basic Package of Health Services (BPHS), which outlines the essential services to be provided at each level of the health system.

Early indications suggest that there have already been improvements in some important health outcomes. Infant and child mortality have reduced considerably since earlier in the decade and now compare favorably with regional rates. However, the maternal mortality ratio, which remains elevated at a troubling level and is still one of the highest in the world.

The Rebuilding Basic Health Services (RBHS) project, A Joint collaboration between USAID and the Ministry of Health and Social Welfare, is the United States government's major initiative in support of the MOHSW. Funded by USAID, RBHS is a partnership among JSI Research and Training, Jhpiego, the Johns Hopkins University Center for Communication Programs (JHU CCP), Management Sciences for Health (MSH), and Six NGOs partner: Africare, EQUIP, IRC, MERCI, MTI, PSI. Implementation of RBHS is over a 5-year (2008-2013) period and is guided by a three-pronged strategic approach:



- Strengthening and extending **service delivery** through performance-based grants to non-governmental organization (NGO) partners (IRs 1 and 3);
- Strengthening Liberia's **health system** in the areas of human resource management, infrastructure, policy development, and monitoring and evaluation (IR 2); and
- Preventing disease and promoting more healthful behaviors through **behavior change communication** and community mobilization (IRs 1,2 and 3).

In addition, the RBHS project has specific responsibilities in the areas of maternal and child health, family planning/reproductive health, malaria, HIV, and water and sanitation.

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Pre-service Strengthening Initiative/RBHS

Jhpiego was brought on as a key implementing partner to lead the Pre-service Strengthening Initiative by JSI, the prime contractor, in sharing technical expertise in reducing maternal and neonatal morbidity and mortality through evidence-based best practices and to do so primarily by strengthening 2 educational institutions, TNIMA and EBSNM, focusing on Registered Nurses (RNs), Certified Midwives (CMs), Physicians Assistants (PAs) and Environmental Health Technicians (EHTs), so that the long term capacity of Liberia to deliver qualified professionals will affect the exceedingly high rates of maternal and neonatal morbidity and mortality. These two institutions provide educational programs for Certified Midwives and in addition TNIMA provides educational programs for other cadres including, PAs, RNs, EHTs and Medical Lab Tech (MLT). After the first year of implementation, the MOHSW through Dr. Bernice Dahn, Deputy Minister/CMO requested RBHS to add revision of the curriculum for training Medical Laboratory Technicians (MLTs) developed by TNIMA through an independent consultation.

The Pre-service Strengthening Initiative aims to improve, the pre-service training of direct entry mid-level health care Providers; the teaching skills of instructors and clinical preceptors, the educational environment at learning institutions & Clinical sites (health facilities) and the overall management of these institutions. Standard Based Management and Recognition (SBMR), a quality performance improvement process developed and being use by Jhpiego was initiated. Major activities included Effective Teaching Skills training, Technical updates, follow-up, mentoring and monitoring for faculty and clinical preceptors; developing and equipping the simulation center/skills lab, library and computer and science labs; and revising and harmonizing the various curricula updating and making them appropriate for present realities in Liberia.

Curriculum Revision/Development

In developing the curriculum for training students to become PAs, all stakeholders including those in the Education and Training National Working Group and others, including TNIMA, the Liberian Medical and Dental Association, Liberian Medical Council, MOHSW, University of Liberia, USAID, WHO, UNICEF, etc., participated in a three step inclusive process to develop the competency-based curriculum for training PAs as follows:

1. **STTA:** The services of Dr. Paul Mertens, USA, was contracted as STTA to lead the process in response to a request from TNIMA through the MOHSW to the BASICS Project. Dr. Mertens was a major advocate for ensuring that PAs were trained appropriately to manage health facilities in rural Liberia, before the wars, since MDs were in limited numbers. Dr. Mertens served as the primary clinical trainer for PAs who did clinical rotation at CLH or were supervised by him before the war. He had even done a handbook that was used throughout Liberia in helping PAs diagnosed and manage common problems at the clinics and health centers. With the BASICS Project, RBHS worked with Dr Mertens and the staff of the PA School and developed a sequence for courses and began the development of updated syllabi. When the BASICS Project ended RBHS recruited Dr. Mertens to continue to lead the process of revising the job description of the PAs that had last been revised in 1987, developing core competencies and revising the curriculum through participatory process with all stakeholders.

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2. Developing Pre-service and Clinical Quality Improvement Standards



Utilizing the Pre-service Implementation Guide, the pre-service education initiative, RBHS adapted the Standard-Based Management and Recognition (SBM-R) process, a quality improvement process, which was developed in 2005 by Jhpiego and it is being used to improve the performance of two educational institutions, the Tubman National Institute of Medical Arts (TNIMA) and the Esther Bacon School of Nursing and Midwifery (EBSNM) and the six health facilities serving as clinical sites for training students from both institutions.



SBMR is a four step process of **Setting standards** of performance in an operational way, **Implementing the standards** through a streamlined and systematic methodology, **Measuring progress** to guide the improvement process toward these standards and **Recognizing the achievement** of the standards. It focuses on desired level of performance and quality to be attained. As one of its first activities in the initiative, RBHS led an exercise in April 2009 involving diverse stakeholders in training health workers to develop a set of **pre-service educational performance standards** based on the world Federation of Medical Education and WHO pre-service education standards in four areas, **classroom and performance assessment, clinical practice and assessment, infrastructure, and institution management**. The pre-service education standards have been adopted by the Liberian Board of Nursing and Midwifery as national pre-service education standards for nursing and midwifery education in Liberia.

In the process of strengthening health care service delivery at health facilities serving as clinical sites for the two schools, RBHS again led the process of developing **clinical performance standards** involving all key stakeholders, particularly those involved in delivery of health services. The clinical standards were adapted from internationally recognized clinical standards for the Liberian context. Based on the BPHS, standards were developed for infection prevention, management of health facilities and 17 clinical content areas that were sub-components of the six BPHS components (maternal and newborn health; child health; adolescent sexual and reproductive health; communicable diseases; mental health; and emergency care). RBHS and the MOHSW has adapted these standards and are using minimum required standards in ten areas for quality

improvement in the MOHSW four step quality improvement process of: identifying the standards, measuring the standards, implementing the standards and recognizing the standards

3. Conducting a Task Analysis

Using the updated job description and core competencies, and in consultation with relevant Jhpiego staff and stakeholders, the Pre-service Strengthening Initiative developed the tool for conducting the task analysis. This task analysis was conducted primarily to inform updates to the core competencies, curricula and job descriptions of the PAs for improvements in pre-service education (PSE) that ensures a streamlined, competency-based education process that is linked to job readiness for an entry-level position and job descriptions that are in line with national needs, as well as, to provide some evidence for the services that are included in the BPHS and/ or adjustments that may be appropriate. The Task analysis tool for the PAs contained 264 tasks spanning infection prevention, health facility management and the 17 priority health areas specified in the six components of the BPHS: maternal and newborn health, child health, reproductive and adolescent health, communicable disease control, mental health and emergency care services. These 19 areas had been outlined as critical to promoting public health in Liberia. The task items were selected after consulting the BPHS and the clinical standards developed by the Education and Training National Working Group (ETN WG) and represents the tasks that PAs are expected to perform. The ETN WG reviewed the selected tasks used to develop the survey. The tool followed the same format. For each task, the respondent was asked three major questions:

- How often the task was performed: **Frequency** (Never/Rarely/Daily/Weekly/Monthly)
- Were you trained to performed the task : **Training Status** (Yes/No)
- Where were you trained to performed the task: **Training Location** (School/Job/Both)

The findings indicated that PAs were performing malaria related task most frequently (95%) and mental health task least frequently (4%). PAs were also performing Malaria, management, IMNCI, VCT and TB related task more frequently than other cadres. Only 13% of PAs reported pre-service training in VCT related tasks while most PAs (63%) reported pre-service training in tasks related to obstetrical complications, even though only 12% reported performing these tasks. The analyzed data was utilized as key evidence for revising the job description and core competencies, and curriculum in order to make them relevant in meeting national needs. With the approval of all stakeholders including the MOHSW and The PA Association and PA Board, this revised curriculum was updated to include all frequently performed task as well as key/critical tasks that enhance quality of life.

Development syllabi of Courses and validation of the curriculum

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Individual course syllabus was developed for all courses in the curriculum by local experts including faculty of the A.M. Dogliotti College of Medicine, UL and other MDs providing assistance to the PA school and finalized by Dr. Mertens

- A. A validation workshop was done and the sequencing, title, as well as each course syllabus in the curriculum was reviewed. The objectives of the workshop were: 1) to review and endorse the revised updated job description and draft core competencies for PAs and 2) to confirm the adequacy of the draft curriculum for meeting training needs of PAs. Comments/changes, including additions primarily due to the findings of the task analysis were agreed upon and noted.

B. Finalization of the curriculum

All the comments were incorporated into the courses and the finalization process included sharing the course syllabus with experts and incorporating comments. The curriculum was again circulated to all stakeholders and Dr. Mertens, based on a request from TNIMA, led TNIMA faculty in a process of final review. These and comments received from others have been incorporated into this final curriculum

As a result of this inclusive and dynamic process, included in this updated competency-based curriculum for training RNs are updates from the National Health Policy and components from the Essential Package of Health Services (EPHS), 2011-2021, which is the present *framework developed by the MOHSW to continue improving basic health services provision in a post-conflict setting. The EPHS focuses on strengthening certain key areas that continue to perform weakly in the current system and the scaled-up of and additional services for all levels of the health care delivery system in order to provide more comprehensive services to the Liberian people.*

This curriculum emphasizes updated material on high impact evidence-based interventions and appropriate technology for improve maternal neonatal and child health, EmONC, Adolescent Sexual and Reproductive Health, HIV/AIDS and TB, including PMTCT and DOTS, Malaria case management and prevention, emphasizing ACT, IPT, use of RDT and early treatment, especially for under-fives, Nutrition, especially the ENAs, IMNCI, non-communicable disease and neglected tropical diseases management, Management and Prevention of Sexual and Gender based Violence, as well as Family Planning counseling and service. Regarding community health the curriculum stresses the importance of community participation and working **with** and not for the community in the transformative approach using adult/dialogue education principles.

Emphasis is also placed on multi mix teaching and learning methods for interactive presentations that promote learning and the importance of student performance assessment is highlighted in best practices assessments recommendations in this curriculum for both theory and practical.

Admission Criteria for Entry into the Physician Assistant Pre-service Training Program in Liberia

Candidates for the PA Program must:

- Be a high school graduate with a West African Examination Council (WAEC) certificate
- Pass Biology, Chemistry and Physics on the West African Examination Council (WAEC) exam
- Pass the entrance examination of the institution
- Pass the interview at the institution

Be able to present:

- Health certificate from a licensed doctor
- Letter of application
- Three years of a high school transcript
- WAEC examination certificate
- Two letters of recommendation
- Two passport size photos

National State Board Exams:

At the end of this curriculum, students are eligible to sit at the National State Board Exams. In order to legally practice medicine as a PA one must graduate from an authorized program and must sit and pass a state examination administer by the medical board.

Philosophy:

The following beliefs had an impact on the directions of the curriculum revision and standardization efforts. These are the following:

- Health is a fundamental right that should be enjoyed by all communities, families, groups of people and individuals alike, irrespective of their race, religion, creed, beliefs and values
- To attain health, a multi-disciplinary team approach to the delivery of health care that integrates promotive, preventive, curative and rehabilitative health measures must be adopted at all levels
- PAs has a significant role to play within the health team in the planning, organization, implementation and evaluation of health care strategies
- Education and practice of PAs can make maximum contributions towards the attainment of a high-level of wiliness of the total population when they are community oriented and family-centered, but at the same time, providing for the interests of individuals
- The PA should be capable of performing professional functions independently and interdependently, and be able to make decisions and accept responsibility for actions taken
- The Government of Liberia through the Ministry of Health and Social Welfare has adopted the basic health package as means of providing basic health care service to the people of Liberia, particularly to those in rural areas
- Education is a dynamic process; learning is an active and continuous process enhanced in an atmosphere of trust and mutual respect
- Adult education principles and communication at all levels is essential to the successful development and implementation of the curriculum
- The teaching-learning experience will be culminated through a change in behavior
- The promotion and protection of the health of the people is essential to the economic and social development of the country
- PAs are a cadre of personnel well-trained in diagnosis and treatment of common illnesses, prevention and health promotion.
- The PA school at TNIMA endeavors to produce health workers with basic scientific knowledge and practical experience to actively provide basic health care services to the people of Liberia.