

Health Care Education

Addressing the need in Cambodia



Background



Cambodia needs a highly skilled professional health care workforce to address the country's significant health challenges.

In 1999, one in five Cambodian children died before their fifth birthday. Today, that ratio has improved to an average of one in 20*, though increasing among Cambodia's rural provinces. This is still, however, a distance from one in 120 found in developed nations.

Officially recognized

Angkor Hospital for Children (AHC) is uniquely positioned to help address this challenge. Founded in 1999 and officially recognized by the Ministry of Health as a pediatric teaching hospital since 2006, AHC is working hard to build up its educational and research capabilities that will allow the hospital to replicate elsewhere in Cambodia the hospital's

high quality and compassionate clinical care successes.

Health care in Cambodia

In 1979, only 45 medical doctors had survived the brutal Khmer Rouge regime, which wiped out an estimated 25 percent of the population. Reports from the time state that of those, 20 soon left the country. Additionally, only 26 pharmacists, 28 dentists, and 128 medical students remained in Cambodia.

Even today, Cambodia has two physicians per 10,000 population, while the world average is 14 physicians per 10,000 population, and the most developed nations have more than 30 physicians per 10,000.**

Today, the number of medical schools in Cambodia has expanded and each year, they graduate more than 700 medical

students, but there are only 200 official post-graduate training slots, which limits the number of doctors.

Cambodia has had slightly more success developing nurses through a network of five regional nursing training centers. However, due to limited resources at the government training facilities and lack of development of the nursing profession, the quality of newly graduated nurses in Cambodia often remains poor. Appropriate application of a standard nursing process remains a significant challenge in nearly all government health care facilities.

Current resources

Education at Angkor Hospital for Children is multifaceted and set to expand. The key areas are medical education, nursing education, education provided by the External Projects

Department to government health care facilities, and patient education. In addition, AHC has a vital research department performing research that is clinically relevant to health care in Cambodia.

If appropriate resources are mobilized, each of these areas of education and research can have a profound and positive impact on health care in the entire country for years to come.

References:

* www.unicef.org, ** www.data.worldbank.org



Medical Education



Since 2003, AHC has offered a **three-year Pediatric Residency Program** for doctors who have just completed medical school. The curriculum is based on a western standard pediatric program, modified slightly to fit the disease patterns seen in Cambodia. This initially was created under the close guidance of academic expatriate physicians but its current implementation and modifications are completely under the direction of the Cambodian medical leadership.

All of AHC's doctors have completed this training program and from 2003 until 2012, on average six doctors entered the program each year and 90% completed, with most staying on to take jobs at AHC. Looking beyond just the hospital's own needs, in 2013, 22 doctors entered the Pediatric Residency Program with a majority being female

to make up for the current imbalance. The purpose of this more than threefold expansion was to take the success of AHC and replicate that elsewhere in Cambodia via residency graduates returning to their home communities to practice.

In the future, the core Residency Program needs to expand to include elective rotations such as HIV care, eye care, cardiology, radiology and others. In addition, the program needs to maintain a high level of enrollees each year with a continued focus on gender equality.

Continuing Medical Education

After AHC physicians have completed the three-year program, **Continuing Medical Education (CME)** is vital to maintaining and advancing their skills. At a national level, Cambodia is only now making CME a requirement

for maintaining a medical license. At AHC, the CME program has existed for seven years and all senior physicians are required to participate. Both visiting experts and AHC's senior staff members conduct the CME sessions. In the future, AHC would like to continue its CME activities for all senior medical staff and also become a regional CME site for government and private physicians.

Subspecialty training

Angkor Hospital for Children is uniquely positioned to provide **subspecialty training** in the areas of pediatric surgery, pediatric eye surgery, pediatric heart surgery, cardiology HIV care, radiology, infectious disease, and others. Multiple senior medical staff members have already been trained in subspecialty care on an ad-hoc yet successful basis. AHC is currently working towards formalizing the subspecialty training in

each of these areas and in the future will seek official government recognition of the programs.

There is a severe shortage of medical subspecialists in Cambodia and that is something AHC is working to help address.

Medical school affiliation

AHC currently is not directly affiliated with any medical school in Cambodia. AHC has, however, accepted medical students from a private Cambodian medical school for clinical rotations and now is working towards a recognized affiliation with the University of Health Sciences. AHC would like to develop its student training capabilities by affiliating with Cambodia's top medical schools and extending AHC's clinical faculty, physical space and learning resources to better accommodate students.



Nursing Education



Angkor Hospital for Children achieved its official teaching hospital status in 2006 through the recognition of the **Nursing Student Program**. Each of Cambodia's five regional nursing training centers began sending nursing students to AHC for a 2–4 week clinical, hands on rotation. Emphasis is placed on teaching the nursing process and practical skills. Over 200 nursing students from throughout Cambodia

attend the program each year. The common feedback from students is that AHC represents their first experience with hands-on high quality care and strong teamwork. In the future, AHC would like to continue to expand the program to include dental nurses, eye care nurses and other specialty nurse student training. Longer term, AHC could become a regional nursing training center itself, once a sufficient number of AHC's own nurses obtain Bachelor of Nursing Degrees or Master of Nursing Degrees. Potentially, a nursing training center on site could generate income and produce high quality nurses capable of having a positive impact on Cambodia's health system.

New Nurse Curriculum / Certified Pediatric Nurse Program

Education of AHC Nurses is a continuing process. All nurses are first trained

following AHC's **New Nurse Curriculum**.

Over three months, each new nurse must learn and follow AHC's nursing process and learn AHC's nursing protocols and procedures. To obtain a permanent contract, all nurses must successfully complete this curriculum. Next, nurses may choose to enter AHC's **Certified Pediatric Nurse Program**. This is a two-year program based on learning twelve different general pediatric nursing subjects. The program is unique in Cambodia as there is currently no government exam or coursework for pediatric nursing. AHC is working toward official Ministry of Health recognition of this program and its expansion to other facilities and institutions as interest grows. We believe this will represent an important step towards standardizing and improving the quality of pediatric nursing care in Cambodia.

Continuing Nursing Education

All nurses employed at Angkor Hospital for Children are required to attend **Continuing Nursing Education** on a weekly basis. Both AHC senior nursing staff members and volunteer nurse educators from overseas provide a weekly lecture series on a variety of topics. In order to maintain this program, AHC needs to grow its own nursing leadership and educators over time. Heavy investment in AHC's own **Nurse Pedagogy Course** is required to produce AHC's nurse leaders of the future.

Other opportunities abound in nursing education at AHC. The Australian-run program, **Diploma in Child Health**, would like to extend its participation to nurses at AHC. Designed initially to help ensure that Australian physicians caring for remote and poor populations

had appropriate pediatric knowledge and skill, the program currently operates in over 20 countries worldwide with a particular focus on the Asia Pacific region. The rigorous testing and standardization of this program helps ensure that participating clinicians meet an appropriate standard of knowledge.

Additional short course **Specialty Care Training** programs in Singapore and Bangkok are planned and could be expanded over time in order to ready AHC in its efforts to begin further specialty training on site.

In addition, **Advanced Pediatric Life Support** and **Advanced Critical Care Courses** are planned to be carefully expanded over time so that AHC's successes in these areas are replicated in the public and private health care sectors of Cambodia.



External Programs

A main goal of many international Non-Governmental Organizations working in the developing world is to fill gaps in social services until these can be provided by the government. AHC's **External Programs Department** assists the Ministry of Health strengthen its health care systems so that eventually pediatric health services and others can be provided by the government itself. Under a USAID funded grant, the

External Programs team works both with the Ministry of Health and with Provincial and District Hospitals to take AHC's successes of the past 14 years and apply them in the government health care system.

An AHC team has successfully helped apply physician clinical practice guidelines, nursing protocols, a nursing code of ethics, among others through education and training. In the future, AHC would like to expand this work.

Capacity Building and Health Education Program

In addition to working with upper levels of government, the External Projects Department works at the village and health center level through the **Capacity Building and Health Education Program**. This aims to improve care provided by health centers.

The team works closely with Village Health Volunteers and health center staff to assure that appropriate care is provided locally in Siem Reap Province. Continued work with a growing number of health centers in the province's poorest areas is planned for the future.

School Nurse Program

Basic health knowledge in local communities remains a significant challenge in Cambodia. The **School Nurse Program** currently works at five primary schools offering health and hygiene education to students as well as basic health assessment and referrals, as needed. In addition, the External Projects Department provides First Aid Training to multiple hotel, NGO and business employees. Both programs could be significantly expanded.



Family Education

The important aspects of patient and family education are skill building and fostering responsibility. At AHC, general prevention, health promotion and disease-specific education are taught with a strong sense of personal ethics. Some sessions, in order to bridge the socioeconomic and communications gap between the health care providers and clients, are taught by peer educators. This is the case in AHC's **HIV Program**, in which HIV positive mothers who are raising healthy HIV positive children teach other mothers and families about care at home, with great success so far.

Malnutrition remains the number one complicating factor in patients admitted to AHC. Today, 40% of children in Cambodia under five are considered too short for their age, stunted by malnutrition. Wasting, a sign of acute

malnutrition, is less common but still affects 11% of children. These figures are more acute among rural populations. Therefore, a significant amount of education focuses on nutritional issues. In the future, with appropriate resources, AHC could train more families and become more of a regional training center for nutritional issues.

In 2012, AHC began the first hospital-based **Social Work Program** in Cambodia. Through this program, education has been provided to numerous families regarding community resources available to them. By educating families better about local resources, social complications and repeat hospitalizations are often prevented. Currently, the social work case load exceeds the team's capacity and therefore careful expansion is desired.



Research



Angkor Hospital for Children recognizes the importance of evidence-based medicine and obtaining research data that is specific to Cambodia. AHC collects high-quality, reliable data that can be used to create medical and health procedures and recommendations that will be most effective for the Cambodian population. The research to date has been occasionally independent but mostly collaborative.

International partners

Partners, to name a few, have included: Wellcome Trust (UK), Mahidol University (Thailand), Brown University (USA), Médecins Sans Frontières (France), and University of California, San Francisco (USA). Recognizing the importance of confidentiality and the need to protect patients from undue harm, the hospital established an Internal Review Board

(IRB) in 2004. The IRB has been certified by the U.S. Department of Health and Human Services and Federal Wide Assurance for the Protection of Human Subjects for International Institutions. A complete list of published research, as well as current studies, is available at: www.angkorhospital.org/education/research

Future

In the future, AHC desires to expand its research efforts through selection of key staff members to train in research techniques. The hospital also hopes to expand the partnership with the Mahidol Oxford Research Unit.

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Next Steps

Careful linkage of AHC's clinical successes with its growing educational capabilities is the key to future success and sustainability of the hospital. We must invest significantly in the key areas of education – medical, nursing, external projects and patient education. Additional academic, organizational and financial partners must be found in order to ensure the needed progress.

2014 Expanded Education Efforts in Need of Funding

Medical Education

- Three Year Pediatric Residency Program Expansion
- On-site Subspecialty Training Costs
- Development into Regional CME Site Work Towards Medical School Affiliation

Nursing Education

- Expansion of Nursing Student Program to Include Specialty Nurses
- Support For Current Nursing Leadership to Obtain BSN or Masters of Nursing
- Certified Pediatric Nurse Program
- Nurse Pedagogy Course
- Diploma in Child Health for Nurses
- Additional Specialty Care Training Regionally (Bangkok, Singapore)

External Programs Education

- Activities Training Government Health Workers not covered by USAID grant
- Expanded CBHEP Activities Surrounding AHC's Satellite Clinic at Sotnikum
- Diversifying School Nurse Program To New Schools
- Diversifying First Aid Training to New Businesses, Government Workers and NGO's



Patient & Family Education

- Furthering Peer Counseling: HIV Program
- Increasing Patient and Family Education Capabilities through Expanded Onsite Equipment and Materials.

Research

- Creation of AHC Research Faculty Position
- Increased Collaboration with Mahidol Oxford Research Unit

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