

Chapter 1.1.6

ATTAINING RURAL HEALTH EQUITY IN ASIA

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Introduction

In the Philippines, health is mostly available to only a privileged few. Health inequality has become a glaring reality, making it an accepted norm in life across social groupings. While there are many contributors to the complexity of health disparities, research has identified a wide range of social and environmental determinants linked to health inequalities. This includes how we train our health gate keepers, who are the health professionals responsible for patients' interface with, and entry into, the health care system.

The training of our health workers, particularly doctors, is based on a curriculum adapted from Western models, which focuses predominantly on individual health care, is hospital based, and is dependent on specialists and technology. This means that our graduates are not well-equipped for the realities of our society, and are easily poached by richer countries.

Those who remain to serve locally have inappropriate competencies, in a context where the underlying causes of ill health and disparity are mostly socially and environmentally determined and controlled. The failure to train them with the appropriate competencies to meet the current realities produces a helplessness in doctors. While this has become the complacent surface norm, it need not necessarily be so. A small medical school in the southern Philippines, the Ateneo de Zamboanga University School of Medicine (ADZU-SOM), decided to go against the prevailing power structures and to train appropriate doctors – and in so doing have succeeded in reversing the trends in health indicators for the region.

While about 60% of graduates from the 38 Philippine medical schools practice outside of the country, citing that the country cannot match the salaries and service conditions offered in wealthier countries the ADZU SOM was founded on the belief that if doctors are trained appropriately, with an understanding of health as both a medical and a social phenomenon, and equipped with the skills to work in and alongside local communities, this loss of doctors can be turned around.

What's the evidence?

Between 1998 and 2009, of the 220 graduates from ADZU-SOM, 210 took the national board exams and 200 had passed by 2009.

Compared to the 60% loss of medical graduates across the country, 90% of ADZU SOM graduates are still serving the southern Mindanao region, and 95% remain in the Philippines. Of these, 75% are in government service and 50% are working in formerly doctorless rural areas. The 4% who went abroad served for six to eight years before leaving the country.

Since the first graduates entered into practice in 1998, there has been a dramatic improvement in infant mortality – much greater than in other areas in the Philippines (see Table 1).

**Table 1: Infant Mortality Rate
(deaths per 1000 live births)**

Area	1995	2003	2008
South Western Mindanao Region	55.6	14.6	8.2
National Capital Region	46.9	26.8	24.0

Discussion

The Zamboanga Peninsula is the south-western tip of the southernmost island in the Philippines archipelago, Mindanao. It is a predominately rural region with 3.8 million inhabitants, and Zamboanga City is the centre for regional health services.

In 1994, 80% of the 100 municipalities in the region (mostly rural) lacked a doctor. The region had one of the highest birth rates and infant mortality rates in the country and had a high incidence of malnutrition and infectious diseases - including neonatal tetanus, measles, malaria, typhoid, schistosomiasis, cholera, tuberculosis, rabies, leprosy, malaria, and dengue fever. Few physicians were willing to move to this underdeveloped area because of civil unrest arising from continual armed conflict between 'rebel' groups (Muslim secessionist groups) and government forces, this further contributing to poor health in the population. There was limited access to potable water and proper sanitary facilities, limited health facilities, few health workers, difficulty accessing medicines and medical supplies, and significant logistic challenges in organising healthcare delivery.

In the early 1990s a group of rural doctors in Zamboanga, frustrated by the continuing lack of doctors in their region and the resultant poor health outcomes of people living in their communities, decided that one way to address this situation was to start their own medical school. In 1993, seven concerned physicians, five community civic leaders and three educators convened and established the Zamboanga Medical School Foundation (ZMSF) with an initial working capital of US\$500 (1).

Local clinicians from the region who were undertaking postgraduate specialist training overseas deliberately sought out and engaged with people with medical education expertise. In addition, the University of Calgary provided access to its Problem-Based Learning (PBL) curriculum, and continued to support the initiative through faculty exchanges for the first four years.

The School was developed and has been sustained over 15 years by a spirit of volunteerism, which has been fundamental to the social capital that has been so critical to its success. The Ateneo de Zamboanga University (ADZU) contributed rooms at its campus without fee. Doctors from the region developed and taught the curriculum without any salary except for a gratis fee of US\$20 per month. The School has only three direct employees (secretary, librarian, research assistant), and the academic faculty consists of local health service employees and private

practitioners. The Dean is employed by the health service. Local civic leaders raised funds and sought assistance from international philanthropic agencies to keep student fees at an affordable level.

The key starting point in the process of attaining equity through training is to understand and define the mission of the school. ADZU SOM was established very specifically to address the problems of its region. Its curriculum was developed around the needs of the region at the same time as ensuring that national standards were addressed.

The curriculum incorporates small group PBL and community-based learning from the first year. Problem-based learning cases are based on regional and national priority health problems. After first tackling the problem in a PBL case, students then visit government hospitals where a real patient with similar problems is seen. Here they learn the bedside competencies of physical examination and communication skills.

Problem-based learning and case-based learning occurs for four months per semester for the first two and a half years. The fifth month of each semester is spent living with people in a variety of small communities where the students' knowledge of individual health care is expanded into population health care. In the second semester of the third year students commence continuous clinical attachments in hospitals, including 24-hour duty every third day.

For the entire fourth year, the students live in the community, implementing the full community programme they started developing in their first year. This community programme includes community development focused on health issues and direct health care provision supervised by the local community leaders/health volunteers, locally-based community doctors, university faculty, and alumni graduates working in the area. In the final year, students return to regional hospitals to integrate their clinical practice, after learning basic medical and public health skills in small communities throughout the region.

Both curriculum and assessment are driven by a competency outcome approach, rather than by reference to a traditional input-oriented model.

Community immersion enables student to integrate the ongoing development of their skills in providing medical services, their involvement in health management through community development projects and their growing understanding of health research. More significantly, bonding occurs between students and communities so that they begin to identify with the problems of the villages. The concept is that the students are the catalysts that facilitate the communities, using collaborative intersectoral approaches, to establish their health problems (diagnosis), strategise around ways of tackling their problems and mobilise local resources to provide the solutions to their own health problems. In this way, the community becomes empowered so that it can stand on its own when the students disengage.

Student-initiated research and development projects in the communities have had significant impact. This has included building pit latrines in the 80% of the region without this basic amenity, improving access to potable water, increased immunisation rates, determining risk factors for TB DOTS (directly observed therapy – short course) default, developing cottage industry income generation, and the creation of home vegetable gardens. Community interaction with the medical school has resulted in improved health knowledge and behaviours among local health workers, mothers, traditional healers and primary caregivers, leading to a better referral system from the remote areas (1).

An illustrative anecdote: A student's perspective

Insight into my Transformative Journey in Medicine – by Dr John Michael Dellariarte (a recent medical graduate of ADZU School of Medicine)

‘Our civilisation has seen great men and women whose works have changed the way we live. We have never been so capable of solving the problems that plague humanity than now because of the sacrifices of these men and women. But why do these problems still continue to prevail? Amidst the advancements in medical knowledge and technology, we seem to find it difficult to discover the missing link. When we first came to our community, we were armed with Physiology, Medicine, Surgery, etc., thinking that these would be enough to help make a community healthier. But much of the realities of the community are not written in these textbooks.

To reach our community, we had to utilise a motorised boat to cross a lake. When the people of the community saw us coming from afar, they ran to their homes and hid; we could see them run through the green rice fields and into their homes which were made of bamboo, palm leaves, and other light materials. How could we help them if we could not even interact with them? The health workers told us about how timid the Subanens were as a people. During our immersion in the community we found out that the Subanen children have to walk several kilometres along the lake's borders, through muddy and thickly forested paths, to get to their school. When it is raining, they put their uniforms in plastic bags and put them on when they get to school to prevent them from getting dirty from the mud.

On that day we made a covenant to champion our children who face such extraordinary impediments in the pursuit of their education, since we believe that education is pivotal and formative to a child's attitude, which will eventually determine the decisions he makes in the future as an adult, among which are decisions that he will make in terms of their health. We asked the teachers of these children how they were doing in school. The teachers said they were doing well. They said the children would usually be able to sleep in class, because they get tired walking on their way there. With the help of donors and indigent banka-makers [boat-makers], we set out to build 44 yellow boats to ferry children to school. These bankas [boats] can seat six to seven children at a time. After this, they have more energy to get them through class. The Yellow Boats bridged a gap, by connecting the people to opportunities for development: school, health centre, the wider community.

One day, we went back to the Subanen community, and this time, they were all on the lake shore to greet us when we arrived. The evolution of a very timid people to a people who are virtually partners in every health project is an extremely powerful and life-changing experience, most of all to us medical students. To have been part of a people's discovery of their potential is a distinct privilege. We set out with the intention to make a positive change in the community, but it was us who were changed. We learned that as health care workers, it is also our role to develop the collaborative capacity of the people in a community so that they may someday be able to negotiate their needs to relevant social entities on their own in the future.'

Broader applicability and implementation

The ADZU School of Medicine has become part of the Training for Health Equity network (THE net), which is demonstrating the application of social accountability principles around the world. The same principles can, with adaptation, be applied to any context.

Practice pearls

Key issues

- The mission of the ADZU SOM is specifically to provide solutions to the changing health problems of the South Western Mindanao region.
- The curriculum combines an understanding of the biomedical model (disease-oriented, individual health care focus) with a social model (health-oriented, population health focused).
- A combined five-year MD MPH programme is run, which aims to develop both health care skills and a health development perspective.
- Students spend progressively more time in rural communities, until the whole of the fourth year is at community-level; the philosophy is of ‘communities forming students and students transforming communities’.
- Problem-based learning, community-oriented education and competency-based evaluation are interwoven.
- The 12 priority health problems of the country, together with the most common health problems of the region, became the core curriculum.
- Graduates are expected to have competencies as self-directed learners, physician clinicians, health researchers, physician teachers and physician managers.

Lessons learned

- It is not resources that are the biggest limitation; if there are transformative ideas and people who are willing to try them out, the resources will be found.
- Training in a socially accountable way can transform the health care of a region.
- For doctors to be re-designed, the teachers need to be re-designed.
- So-called global standards may often be inappropriate.
- There is a need to be oneself as a school – independent, self-critical and self-respecting – in order to address the health priorities of one’s own communities.

What to do

- Focus on the values that are being transmitted to students.
- Find your allies and work with them.
- Allow students to develop a relationship with one community over time.
- Expose students initially to communities for a short period, and then let them return to the school to reflect. Do this repeatedly until they are comfortable.
- Place students in sites which make it difficult for them to leave on weekends.

What not to do

- Don't try to adapt a traditional curriculum. Radical transformation is required.
- Don't wait for permission. Lead the way.
- Don't waste time arguing for the value of what you are doing – actions and results speak louder than words.

Conclusion

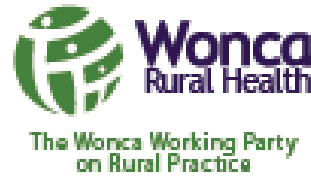
A small medical school has shown that it can reverse the trends in doctor movement and in health indicators by adopting a socially accountable approach to medical education, as a step towards attaining equity in health outcomes.

References

1. Cristobal F, Worley P. Can medical education in poor rural areas be cost-effective and sustainable: The case of the Ateneo de Zamboanga University School of Medicine. *Rural and Remote Health* 2012;12:1835. www.rrh.org.au (accessed 12 August 2013).

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