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The north-south distinction refers to the socioeconomic division that exists between the economically developed, industrialized countries, collectively known as the north, and the low-income and middle-income countries, the south. Although north-south exchange or cooperation programs are common, the dynamics of north-south linkage have been traditionally described as unidirectional dependence, with growth in the south being determined primarily by developments in and priorities of the north. On the contrary, south-south cooperation refers to cooperative activities between newly industrialized southern countries and others in the south to find solutions to common development challenges including those related to health and health care. For instance, health technology transfer has some unique characteristics, including discontinuous changes and multiplier effects, in that relatively low-tech or mid-level interventions such as immunization and drug treatment of selective conditions can have dramatic results in improvement of life expectancies initially. Then a plateau
is reached when increasing risks of technology (e.g., drug resistance, cost, and inadequate care) increase disease burdens and have a negative effect unless overall improvement in basic needs and infrastructure is ensured. High-end technology transfer without development in health infrastructures and basic social needs can be counterproductive without equity and distributional aspects of health policy.  

In 1978, the Third World Non-Aligned Group of nearly 120 nations urged the United Nations (UN) to establish a Special Unit for South-South Cooperation (SSC) within the UN Development Program. Despite uneven progress, 3 decades later, the organization reviewed experiences, trends, and achievements at the SSC Developmental Expo.  

Several commentaries emphasized the slow progress on issues of social justice and poverty reduction but identified some dramatic achievements related to some of the millennium development goals (MDGs) (i.e., health improvement through overall development and provision of primary care services). Emerging south-south collaborations and the expanding role of countries like Brazil, South Africa, India, Malaysia, Korea, and China were highlighted. These emerging donor countries are also in transition following the pattern of Japan, which was both donor and recipient of aid in the 1960s, and later became a major aid provider, a trend shown among Asia Pacific Academic Consortium for Public Health (APACPH) members from East and South Asia. The African-South American (ASA) collaboration had grown to 62 countries and, although primarily focusing on energy and trade, has begun to focus on issues of peace, security, and health needs such as in human immunodeficiency virus (HIV)/AIDS relief and poverty reduction. The level of assistance from emerging donors like China, India, Brazil, and others has grown to nearly 10% of overall development assistance. The nonaligned summit observed that SSC has been relatively successful in reducing south dependence and in creating a shift in the international balance of power.  

Brazil’s form of south-south development aid, which is less conditional and more acceptable, has been called a “global model in waiting.”  

The emerging south in Asia shows 2 levels in transition: the East Asian Tigers (S1 countries) and the Southeast Asian countries (S2 countries) like Malaysia and Thailand, which have grown economically and moved up in overall human development indices. The distinctions and locations of the geographic south, therefore, are now less categorical and definitions are more blurred. International technological dualism (unequal developments in the area of science and technology between rich and poor countries postulated in the 1970s) has also been challenged with the growing technological achievements and scientific publications in south countries like India, China, and Malaysia. Similarly, the digital divide, referring to the major gap in information and communication technology development, does not seem to hold true in the emerging south, such as Korea, Malaysia, Hong Kong, Thailand, and Taiwan. Furthermore, the use of advanced medical technologies in these countries is as high or in some cases even higher and more cost-effective than in the north. Despite this paradox, it was estimated that 88% of all Internet users are from industrialized countries that comprise only 15% of the world’s population.  

In that sense, the Internet, hailed as a “great equalizer,” a revolutionary technological tool to transfer information on a global scale, has not served the poorer countries and has effectively protected the richer nations in pandemics like severe acute respiratory syndrome (SARS) and H1N1. The dream “for poorer villages and isolated communities to have a well-placed computer to serve like a communal well providing essential information about epidemics and medical services for villagers” is still a far cry for the poorer south. The transference of health technology in specific disease entities through vaccines and drugs (the medicalization model of health assistance) has been remarkably successful. On the other hand, the limited research resources for
health problems in the south with emphasis on research interests of the north adds a barrier to enhancement of south-south academic partnerships and maintains the north-south gradient of expertise and dependence.\textsuperscript{17} However, research of complex conditions such as HIV/AIDS, malaria, diabetes, heart disease, and cancers, which are deeply rooted in poverty, environment, lifestyles, and occupation require long-term commitment and a research strategy that promotes south universities’ competency and leadership in examining conditions and contexts beyond medical constructs and solutions. The emerging interest in social determinants of health and noncommunicable diseases (NCDs) has the potential to promote south-south partnerships relevant to local conditions and needs. In addition, south-south collaboration between higher-education institutions often has more shared interest in research priority, capacity building, and problem-based research training. Under conditions requiring social participation and reform, south involvement and leadership in human resource development is essential. However well meaning and altruistic it may be, the steep north-south gradient in the medicalization model needs to be flattened in partnerships with leading universities in the south. This initiative of using the expertise of lead universities in the south to support more regional and national networks and private partners within countries is a strategic lesson that APACPH learnt in its early years. Similar to land grant universities in the United States and universities in Canada and South America, south universities have a strong orientation for service and a common bond of social responsibility. That tradition has a sound basis in creating a global nexus to promote south-south partnerships. Future educational reforms advocated for health professionals\textsuperscript{18} and problem-solving research recommended in global health practice\textsuperscript{19} have the potential to increase relevance and support for a multiple-level societal and policy involvement for health. In such endeavors north consortia support to south-south partnerships would be valuable.

HEALTH AS A HUMAN RIGHT: THE SOCIAL RESPONSIBILITY OF UNIVERSITIES

Health as a human right and primary health care as a means of promoting health for all globally\textsuperscript{20} are underlying values of APACPH. Most universities and agencies with well-established global health track records essentially contribute to the World Health Organization (WHO) ideal, but each institution interprets according to its own priorities, assets, and expertise, largely enhanced through consortia arrangements.\textsuperscript{21} In the late 1970s, postcolonial national movements and underlying cultural values in voluntarism for health improvement such as the Sarvodaya Shramadana movement\textsuperscript{22} served as a rallying point for university collaboration in Asia. The Cold War era that made health assistance a key strategy to influence foreign nations also attracted US universities to participate largely in family planning and maternal and child health (MCH) programs abroad. These trends in social responsibility, voluntarism, and health assistance to promote equity provided the context and climate for the founding of APACPH. The synergy and support of international organizations such as WHO, the United Nations Children’s Fund (UNICEF), and the World Bank, and financial support of the US Agency for International Development, shaped the early directions of APACPH. The peace dividends for health in the post–Cold-War period of the 1990s provided additional stimulus in child survival programs, including control of diarrheal disease and upper respiratory infection.\textsuperscript{23,24} Often priorities and issues that APACPH selected were those advocated by member institutions in the south. For example, activities and policy changes to improve the neglected female child although challenging were initiated by the Institute of Medicine of Nepal.\textsuperscript{25,26} Similarly, priority for the health of indigenous people was also strongly advocated by member institutions such as
Curtin University, Australia, Kalinga Institute of Industrial Technology (KIIT), India, and the University of Hawaii, all of which have a long-standing tradition in working with indigenous populations. It was the inherent commitment and experience of members on issues of common concern that brought them together rather than the opportunity to access donor resources. Using seed grants these small groups have generated external resources and support from their own institutions to further common goals. The south member, KIIT, the largest educational complex globally for indigenous people, is planning in partnership with a select group of north and south members in APACPH to develop a unique training-oriented, service-oriented, and research-oriented global health graduate program for indigenous people. Successes in common but challenging problems such as these have brought cohesion and convergence among APACPH members. It has ensured expertise through joint efforts. The negative effects of such a model are many: waning motivation, delays in start-up, and breakdown in supplies and services as resources are diminished. Sub-regional networks of 3–5 members addressing common problems are adjusting to these challenges by: tapping partner resources for projects in advance, pacing implementation of projects, supporting local initiatives and providing reinforcement through other related activities (eg, agriculture, nutrition, family planning, urban and indigenous people’s development). These sub-regional clusters through such mechanisms have been successful in seeking additional resources from national and global agencies.

CHALLENGE IN GLOBAL HEALTH: ALTRUISM AND EQUITY

Conflicts between intrinsic values and operational challenges often lead to compromises in global health practice. Health as integral to human development has been universally recognized from ancient times in the Asia Pacific region, as noted in the Asoka Edicts (269–231 BC), reflecting the notion of a benevolent monarch safeguarding health of the people. This personal individualistic approach has expanded across Asian societies largely through communal perspectives, religious concepts, and charitable practices of dhana (Hinduism-Buddhism), zakat (Islam), and tithe in Christianity. The establishment of hospitals and clinics, such as the world’s oldest hospital in Mihintale, Sri Lanka, evolved out of that perspective: the highest value in that culture is the physician-king, embodying the state’s responsibility for health and well-being of people. During the colonial era, missionaries expanded the caring traditions beyond national borders, taking care of the sick and those stigmatized by diseases such as leprosy (Hansen disease). Remnants of leprosy hospitals and settlements can be seen dotted across the coastline of Asia, including the one established by Father Damien in Kalaupapa, Hawaii. The work of Mother Teresa and her order in India and more than 120 other countries is a striking reminder of the evolution of missionary health care in Asia. Missionary zeal and altruism remain underlying values among global health practitioners, carrying that imprimatur of charity without the overt intent to proselytize. In the poorer countries adequate care is the luxury afforded to the upper strata of society. This observation is also true to a certain extent even in affluent countries such as the United States, where there are nearly 45 million uninsured people.

The dilemma of balancing human rights and cost of care polarizes politics, making health care reform a constant challenge. Hence, health as a universal human right, although acknowledged in the constitution of WHO (1946) and in numerous international treaties, has been mostly symbolic for the needy urban and rural populations. Ideologies, values, practices, and prejudices, not merely the lack of resources, still maintain the disparities in health for significant segments of the global population. In this dilemma one realizes that health equity is the central challenge for universities in global health.
GLOBAL HEALTH AND UNIVERSITY CONSORTIA

Medical voluntarism is prevalent in the United States and is often linked to religious organizations and universities with a long-standing tradition of providing development assistance for health (DAH). The emergence of university consortia as a composite that is greater in the sum of its expertise and resources than individual members is a more recent phenomenon. It is estimated that less than 100 consortia are in the United States, of which about 20% to 30% are involved in global health. Several of them are well established and linked to prestigious universities with 5 to 10 institutional members. APACPH and the Global Health Education Consortium (GHEC) are the more established consortia, which have been functioning for nearly 25 and 20 years, respectively. Consortia are dynamic, even unstable at stages in their development, and are constantly challenged for resources. Leadership issues are not uncommon and are more linked to resources than policy, country, or affiliations. Economics of scale and complementarities of skills in organizations tend to form partnerships or mergers, providing resources and stability. The recently founded Consortium of Universities for Global Health (CUGH, 2008) is one of the larger university alliances in the United States. Besides the traditional fields of medicine, nursing, and public health, CUGH has the potential of accelerating advocacy for global health and involving several other disciplines such as engineering, law, agriculture, veterinary medicine, and social sciences. Responding to the increase in DAH funding in the United States, there has been a striking increase in the overall number of universities and their top leadership promoting university-wide involvement in global health (CUGH, 2009). Global health training in universities across the United States has accelerated, and this trend is a giant step in bringing contentious professions to serve synergistically together in DAH. Some of these developments may be cosmetic and opportunistic but nevertheless they have provided stimulus and momentum to a field that was overwhelmed by global crises, burnout, and a growing paralysis because of lack of resources.

DAH

The size of DAH can support or overwhelm recipient countries and control the focus and direction of their health programs. Many south countries in Asia depended on DAH for basic health services. The size of DAH for particular diseases can also distort the pattern of health development in terms of overall health needs and maintenance of health services. Historical evidence of the failure of vertical eradication programs is easily forgotten with the growing potential and efficacy of vaccine-related prevention and mass drug treatment models. Under such circumstances, collaborating south universities become compliant to north interests in the focus of research and selective short-term benefits. Long-term sustainable outcomes requiring investment in infrastructures are often sacrificed.

There are several ethical and strategic concerns that DAH needs to address. One obvious concern is that with the massive DAH, there is a likely convergence of donor interests and a concurrent trend of north university leadership to spearhead that effort.
This situation has been common in the past, with focus on a few selected diseases and selective approaches. The theoretical justifications, although valid in restricted contexts, have been found wanting in a broader social and health context or in long-term outcomes. South voices can be silenced to compliance and disadvantage. Many global health practitioners and scientists have questioned in hindsight the usefulness and limitations of selective programs. In a recent commentary both ethical and strategic concerns on DAH were addressed. Therefore it is critical that south coalitions are supported to realistically address underlying problems (the social and economic constructs in health) rather than the short-term measures that a developed country can successfully implement based on supporting systems and levels of development in sanitation, child care, and nutrition. That has been the perennial challenge not only in global health in poor countries but in the health improvement of the disadvantaged communities in affluent countries. The continuum in DAH from altruism through enlightened self-interest to soft medical diplomacy or hard mercenary or military opportunism is full of ethical dimensions in which the recipients of aid can be manipulated to become passive, coerced, or corrupted, often having little to say. The value of north consortia is their transparency and capacity to support and empower collegial south universities to address problems realistically and help them serve as ombudsmen for health and build south-south consortia that will help not only to solve emergencies but also to build processes to maintain and sustain health improvement.

Historically, colonization of the south had a predominantly military and mercenary perspective in providing health care. Even although such an overt polarization is not visibly articulated, bilateral aid arrangements still follow that model, with variations and compromises tempered with the missionary medicine approach. University consortia have overcome such tendencies and constantly show humanitarian aspects in their global health contributions, supporting the proposed notion of enlightened self-interest for global health involvement (Fig. 1). Detractors, critics, and reasonable purists will continue to have reservations, realizing the conditions of need and the size of DAH. The need for repackaging, refinement, and justification for DAH is a continuously challenging process both nationally and internationally. Major epidemics like smallpox and the recent SARS and swine flu push the panic button to invest in protecting others outside our borders to protect us. Then one realizes that all of us are intimately connected in issues of health through germs, food, water, and air. Yet the realization that global health is linked to violence, war, disasters, and economic poverty is not easy, unless touched by killer tornadoes (United States, 2011) or the Asian tsunami (2004), which drowned a village thousands of miles away, or a nuclear disaster (Japan, 2011), which caused thousands to be evacuated. The application of benefit-accrued models such as in the eradication of smallpox is valid. To promote their acceptance in the context of NCDs has been challenging certainly in the United States, especially in the poorer communities, where structural changes as well as behavioral and medical interventions are needed. The challenges will be similar, or even greater, in developing countries. Successes in reducing NCD burden in developing countries with poor living conditions may not be so prominent as those for emerging infectious diseases. However, initiatives such as tobacco control (China) and oral cancer prevention (India, Sri Lanka, Taiwan) offer leverage to initiate and
expand to comprehensive strategies through south-south partnerships. University consortia have shown effectiveness in meeting local health needs through research, training, and service networks. The shift of balance from the visibility of pandemics and disasters to the major burden of NCD and its multidimensional nature is a major conceptual shift from treatment to prevention and socioeconomic changes. That paradigm shift will require a collective educational response of universities both in the south and in the north to acknowledge and address monster problems that are buried in the iceberg of NCDs, where the diseases are manifestation of multiple conditions that are significantly rooted in the context of where and how people live. The models of comprehensive preventive health in the prominent NCDs such as cancers, obesity, diabetes, cardiovascular diseases, and mental health are rudimentary in contrast to the ballooning needs in the south. China illustrates the tragic impact of the ballooning effect of smoking and tobacco use, diminishing its major health and economic gains.

Other forms of justification for DAH are the potential to serve in medical diplomacy that has been increasingly used in disaster relief. Unlike the military, most universities are ill equipped as first responders in the global disaster arena. They are more efficient in providing disaster preparedness training and facilitating postdisaster long-term rehabilitation and reconstruction. However, disaster assistance with high visibility on the global stage is a temptation for universities and consortia to show their commitment at high cost and low effectiveness. Yet universities that have a primary mission to global humanitarian service as a long-standing tradition and expertise can be successful. For example Tzu Chi University, an APACPH member, is well prepared for disaster relief through its foundation as well as its global networks and partners. Such networks, often religious, tend to overcome access barriers such as political barriers that were evident during the Nargis cyclone, which killed more than 138,000 and displaced more than 2 million people in Myanmar. One of the unspoken realities in DAH is the politics in aid with bilateral agreements that dominate, and military and trade priorities that predominate. Even thoughtful aid administrators have little flexibility in overriding their governmental earmarks. Visibility in aid and more visibility in DAH have become an inevitable phenomenon, if not the key component in DAH, because it provides leverage to raise funds but also places pressure on showing immediate success. In the process there is systemic distortion (ie, all inputs go into 1 health problem: a clearly definable disease and its elimination; a distortion of overall reality). For example, the eradication of malaria was not possible by use of pesticide or mass drug administration alone without significant improvements in environment and human habitation. There are few places where there is total drug resistance and pesticide resistance. The need for balanced comprehensive approaches seems logical but of course more expensive and not so immediate. That is the paradox and motivating energy in DAH. Various scientific models justify the validity of the approaches advocated, not adequately recognizing external environments and other problems not of their immediate concern. Yet lessons in failure because of tunnel vision are not easily seen much less learnt in DAH as competing interests, technology, and visibility for success take priority.

In this aid environment, DAH has built high-tech hospitals to placate leaders of aid receipt. However, these high-profile institutions drain the services of doctors and nurses from much-needed urban and rural areas. This pharaoh effect of visible aid that does more for the donor than for recipients is seen in deteriorating hospitals in the Pacific islands, lacking maintenance or staffing. As recipient countries and donors become more realistic, there is better rationalization and use of DAH such as in overall health improvement, addressing highly visible problems using low-cost interventions. Review of major aid agencies of DAH programs show that, although
they have a distinct focus in their health assistance programs, more often they are competitive and duplicative rather than complementary. Although reinforcement is a useful paradigm in sustaining health improvement, one of the serious problems seen during the family planning era of the 1970s to 1980s in Asia was that the villages were flooded with paid community volunteers creating competing systems staffed with poorly paid government workers, a phenomenon that is repeating itself in parts of Africa. The driving force for instant success and visibility by donors in poor countries is a tragedy that is often repeated; raising expectations without the commitment or resources to sustain efforts through improved local systems. Political agendas predominate in DAH. However, as countries providing assistance gain experience and recipient countries gain skills in negotiation, DAH packages with greater flexibility and relevance emerge from building hospitals to supporting infrastructures, outreach, transport, disease prevention, and health education, as is increasingly seen in the aid provided by Japan and other emerging donor countries. University consortia, especially south-south consortia, can provide leadership to such policy determinations in infrastructure building and outreach. The University of Sabah Medical School, in partnership with APACPH member universities that were involved in rural/island health, established a Center of Excellence in Rural Health in 2008 to provide visibility and credibility on rural health research and training.

Direct emergency assistance through the military is common, especially for health, and is an immediate response in most countries but is often delayed in the United States. However, military assistance seems more prompt and more acceptable internationally during major disasters such as the Indian Ocean tsunami, when US Navy Hospital Ship Mercy significantly contributed to posttsunami relief in Asia. Whatever the range of often overlapping motivations is, the resurgence of interest in global health has led to a dramatic increase in course offerings, joint projects, and programs across medical, public health, and nursing schools. There is a vision for health professionals to have a global perspective in caring-curing skills to serve in global settings. US universities, especially as consortia, not only have the potential, but the collective experience to make that expectation a reality. Expansion of global health training into a formal federally funded global health corps has been suggested. Medical residency programs, including pediatrics, geriatrics, disaster management, and emergency medicine, are providing greater emphasis on global health training and overseas placements. Consortia such as GHEC have provided long-standing leadership in education and promoting interinstitutional partnerships with south consortia. Interuniversity collaborations at national and regional levels continue to further evolve in North America, Latin America-Caribbean nations, and recently in Europe. The influx of DAH funds from government and foundation sources seems to be a key catalyst. What is exciting about the expansion in government and philanthropic engagement in global health is that several models to support south-south partnerships are likely to evolve as the emerging south countries take leadership to access more effectively global health resources. In the development of APACPH sustained support for national and regional networks was found to be a key step in capacity building (see Fig. 1).

There is much that DAH and university participation can reaffirm, whether in the north or south, especially through consortia. Raising common concerns to the common problems among vulnerable populations levels the playing fields for all. In that process, a fundamental lesson that APACPH learnt was that university consortia need to continue to bridge north-south boundaries and bring relevance to the passion to serve. This essence of global health, the sense of a common humanity, the drive that keeps a doctor, a nurse, or a health worker struggling to keep a child alive, to
help a mother with a safe delivery, to prevent a cancer death (whether rich or poor, whether in hospital or a village clinic, or a home) is the same motivation that bridges the gaps between altruism and opportunism in global health.

GLOBALIZATION: ERA OF DISASTERS AND PANDEMS: THE CNN EFFECT

The World Wide Web and the instant sharing of tragedies, disasters, and pandemics alike on a global scale through television images and multimedia have brought a high degree of awareness of the widely prevalent pathetic human conditions both in the upper-income, middle-income, and low-income countries. Along with popular concerns during catastrophes, the increased participation of celebrities, major philanthropists, and government has created an unprecedented climate for global contributions to specific health causes such as HIV/AIDS, tuberculosis, and malaria.\textsuperscript{46} The global media lens has shown that disasters often define and expose vulnerabilities of health systems for elderly people (Katrina, 2005; Japan, 2011) and the chronicity of neglect in sanitation (postearthquake disaster and cholera outbreak in Haiti). The stark differences and inequalities in health have become globally apparent through television lenses. In this complex developmental melee, universities serve as conduits for knowledge, technical expertise, and resources. They have made major contributions in selectively directing the improvements for global health. Instant communication and the dramatic increase in disaster reporting have accelerated the focus on health. On the negative side are tendencies for trivializing tragedy and demanding unrealistic results. The last decade has seen a significant increase in disasters. There were 385 disasters between 2000 and 2009, an increase of 233\% from 1980 to 1989 and of 67\% from 1990 to 1999.\textsuperscript{39} Hurricane Katrina (2005) and a string of megadisasters and pandemics in the Asia Pacific region have filled media screens and brought home instantly how globally connected we are. In this era of disasters and pandemics, the south universities and research centers have been in the spotlight, either blamed or recognized. During that time, north-south collaboration has enhanced the credibility and expertise of institutions in the south in outbreak surveillance, infection control, and disaster management. Disasters and pandemics in the last decade have also created a stimulus for networking among APACPH members. The first APACPH Collaborating Center of Excellence for Injury Prevention and Disaster Management was established in 2005 in the Taipei Medical University, with links to the National Emergency Medical Center and the emergency medicine departments at 3 university hospitals and the School of Public Health. In addition, 3 other member universities, 2 from the south and 1 from the north, served as additional partners in training, research, and emergency relief. The Collaborating Center has provided training for educators and experts from the south in fields including disaster management in pandemics (SARS) and humanitarian relief in various contexts (Asian tsunami, earthquakes, and typhoons in Taiwan, Indonesia, China, and the Philippines). Taiwan, as the typhoon corridor in the North Pacific, being regularly exposed to earthquakes, monsoonal floods, and the largest number of typhoons every year, is geographically well located for the study of natural disasters.\textsuperscript{47} The Center of Excellence also serves as a research center where Masters and doctoral students, health professionals, and health and hospital administrators have been trained. Research has identified several recurring problems: loss of communication and data early in disasters, leading to the impression of the loss of truth as the first symptom in any disaster; surveillance; crisis communication; and crisis management. The Collaborating Center of Excellence model developed by APACPH serves further to promote south-south exchanges and build credibility and expertise through such networks. The model has been expanded to address other needs in the Asia Pacific region.
such as the epidemic of oral cancer associated with betel nut and tobacco chewing, and rural/island health. The Center for Peace and Health devoted to reduction of conflicts and violence through health initiatives has also been established.

As the focus in health generally shifts to emergencies in the global arena (epidemics and disasters), the less visible problem of NCDs has been neglected. The growing burden of NCDs in the south has since been recognized by APACPH. University presidents and senior academic leadership have become actively involved in highlighting the problem of NCD. There is growing recognition that education for health needs to begin at the core undergraduate level for personal behavioral issues (drugs, smoking diet, and violence) as well as to gain skills in cultural competencies and understanding of community structures and policies. Therefore university-wide educational reform for global health at undergraduate level with a focus on interdisciplinary partnership at the graduate level is being planned. The key and integrating strategy is to focus on community-level applied problem-solving research. These directions are based on university president consultative meetings with senior faculty and administrators during 2008 to 2011. Presidents and Global Health Conference declarations have documented support for these and follow-up actions.48,49

CASE STUDY OF APACPH IN N-S PARTNERSHIPS

APACPH was founded in Kauai in 1984 with 5 university members represented by deans of medical and schools of public health. As a buildup to the formation of the consortium, many University presidents, and ministers of health and law from founding member countries attended the signing ceremony. National and international nongovernmental organizations (NGOs) including the US Centers for Disease Control, WHO, UNICEF, and the World Bank were represented. The founding mission and values were to emphasize health as human right and primary health care as a priority in the achievement of health equity.50,51 The founding Dean from the School of Public Health in the University of Hawaii was Dr Jerrold Michael. The organization has grown slowly and deliberately to 67 members in 21 countries in 25 years. East to West it now spans from the University of Kazakhstan in Alma Ata (now Almaty), to George Washington University in the United States; north to south it extends from Tokyo University Medical School to Auckland University School of Public Health.52 Six stages in the development of APACPH have been identified (Fig. 2).

In the formative first decade, the newly established organization focused on vision and mission (stage 1); development of leadership through the WHO Collaborating Center for Leadership (stage 2); and small-scale research, service, and intervention projects for vulnerable populations (stage 3), which enhanced the social responsibility of south universities as well as faculty and student participation from the north. In this decade, resources mainly came from the north.

The growth and development in the second decade show the growing leadership influence from the emerging south: East Asia and Southeast Asia, the economically advanced group of countries where largely self-supporting regional offices and networks were established (stage 4). The setup of regional office enables selected countries in the region to initiate national network building (eg, Thailand, China, and Indonesia).

During the maturation and stabilization of the third decade, Centers of Excellence were established, using a senior partnership of the south with selective expertise and some limited resources coming from the north (stage 5). The establishment of a Web-based International Cyber University for Health (ICUH), and enhanced university leadership (presidents) have created a synergy for global health in partnership with
the ministries of health and global health agencies. Such partnerships have initiated university-wide educational reforms for global health (President’s Declaration on Global Health, Taiwan, 2009; President’s Declaration on Non-Communicable Diseases, Bali, 2010). The development and strengthening of national networks of south-south universities with a collective focus on local problems is the priority at this stage of development in APACPH.

The predominance of the emerging south within the S-N-S organization is as follows. To date 23.5% of APACPH membership is represented by north universities, and 76.5% is made up of universities from 3 groups of south countries: S1 (12.5%), S2 (22%), and S3 (42%) using the country classification created by the World Bank (Fig. 3).53

KEY CATALYSTS IN THE DEVELOPMENT OF THE SOUTH-SOUTH-NORTH COLLABORATIVE MODEL

Four key catalysts in the development of the south-south-north collaborative model were identified.

1. Leadership that began as a genuinely shared north-south leadership, not merely tokenism, developed into a cohort of senior and sustained leadership of the south with a consultative expert role for the north. The leadership development model strongly endorsed in the early stages had its problems. The quick turnover of academic leadership such as deans and presidents in Asia, sometimes every 2 years in some countries, made it necessary to build a tier of support. The stature of the early leadership cohort and the support of global leaders of WHO and
UNICEF, as well as regional and national leaders, maintained the momentum in the first decade.

2. Resources were primarily from 1 source in the north (United States) in the initial stages. Subsequently, multiple funding sources were developed from other north members including Japan and Australia. In the later stages, the emerging south countries in East Asia (S1) and Southeast Asia (S2) assumed the major responsibility for funding through the Regional Center and Centers of Excellence.

3. The era of disasters and pandemics provided rapid exposure to the expertise and creativity of faculty and professionals and capacity of institutions in Asia to respond to these challenges. The ability to respond promptly to local conditions also gave leverage to south partners. The high-tech with high-touch cultural competencies in times of need with humanitarian response served to build credibility and trust, even under politically sensitive conditions among members. The APACPH Collaborating Centers in Injury Prevention and Disaster Management, Oral Cancer Prevention, Rural and Island Health, and Peace and Health brought together the expertise and commitment to address issues of common concern with resources largely coming from the lead university in the south and collaborating partners and donors from the north.

4. APACPH is a small organization but its visibility and impact have been enhanced by several factors as follows.

   a. The *Asia Pacific Journal of Public Health*, the first English journal in public health in Asia (1986). The journal offices are in the University of Malaya, which provides editorial support for an international team of editors. Besides providing global
visibility the journal from its inception served to encourage excellence and focus on promising researchers from the south. The editorial team in partnership with major publishing houses has conducted workshops on research and publishing for junior faculty and students.

b. ICUH was founded in 2003 in collaboration with Yonsei University and was established to use the World Wide Web to advance public health and medical training for students and health professionals from countries with limited resources and access to undergraduate and graduate courses such as Mongolia and Vietnam. ICUH offers a focused course in 3 areas: disaster management in response to natural disasters and pandemics; public health certificate courses; and Masters of Public Health courses. Additional efforts were made to provide the courses in the region’s native language.

c. The recent 42nd APACPH Global Health Conference held in Bali focused on NCDs. NCDs have become the major public health priority in APACPH with a focus on research, service, and partnership with national and global health agencies and ministries of health. The Global Health Conference also serves as an Asia Pacific forum for health policy issues and recognition of leadership largely from the south. Regional conferences and national activities continue to maintain the momentum and strengthen the network at the national level.

d. The Early Career Network (ECN) was established in 2006 after the Asian tsunami and has evolved to a small but dynamic network that serves as support groups to relief operations. They have now begun to work closely with the Collaborating Centers and in the conduct of international meetings and photography exhibitions. An important function served by ECN is to bridge the gap between university education and professional practice and maintain commitment to global health issues.

With a flat, shared leadership organizational structure and limited resources of the south-north-south model, several strategies have evolved to maintain the stability of the organization. A central rotating secretariat usually managed by a north university with significant decentralization of operations to officers and regional offices has been progressively developed. The decentralization process was initiated to enhance participation of the south as well as to restrict bureaucratic overgrowth. Consequently the responsibility to provide service and to raise funds was assumed by key institutions in the south. The Centers of Excellence, ICUH, and the journal office are largely self-supporting, maintained by respective south universities, providing an expanded resource pool for the organization. The ECN of young professionals is also south driven. Besides these organizational strategies, resource contribution shifted from the north to the emerging south in the latter part of the first decade, with a growing responsibility of the south members in the second decade to contribute significantly in kind and in local expenses including the funding and management of major conferences (see Fig. 2). The partnership with local and global NGOs and ministries of health provided the third stabilizer. The fourth component in this stabilization process is the ongoing development of the south national network of members and NGOs, and the access to resources.

PRIORITY FOR VULNERABLE POPULATIONS

The classic model for health assistance has been an N-S conduit, the prevalence of which has produced dependence, control, exploitation, and reciprocal corruption of the donor and recipient systems. The early efforts of the consortium was to disperse
a large number of small grants on operational research and problem-solving capacities related to infectious disease control, MCH, and family planning. The emphasis was to use simple techniques and culturally appropriate strategies to ensure sustainability. These practices also leveled the academic exchanges between the north and south. During the epidemics and pandemics of SARS, avian flu, Nipah virus, swine flu, and H1N1, APACPH members provided leadership in research training and services, showing south competency. The north members supplemented the efforts through technical support and other resources. The south leadership was critical in promoting health equity and addressing sensitive issues such as neglect of female children, abuse of elderly people, and stigmatized health conditions such as HIV/AIDS. In poor countries, efforts to control or eradicate major infectious diseases by medication alone without addressing underlying social conditions and investing on infrastructure have limited success. Success requires a comprehensive primary health care approach, with involvement of key ministries besides health. In this challenge, APACPH has supported lead institutions and national and regional networks to network with NGOs to achieve common goals. For instance, the Collaborating Centers of Excellence for Oral Cancer Prevention in Asia Pacific emerged as a response to the fast-growing problem of oral cancer (in epidemic proportions in some countries) related to betel nut chewing in Asia. The center is linked to cancer prevention and humanitarian organizations that rehabilitate individuals with major disfigurements and stigma. These challenges have also helped revitalize the organization’s own values and commitment to redefine collectively what is unacceptable for health in the south societies as well as what is feasible with limited resources. In the context of oral cancer, the reduction of betel nut chewing is our top priority. Similarly, networks based on problem-solving efforts such as in injury prevention, indigenous health, and peace through health initiatives are being promoted. The model of health as a bridge to peace is being expanded in curricula, conferences, and publications.

SUMMARY

Twenty-five years is a benchmark for any organization, more so in fragile international partnerships. Limited resources, rapid turnover in leadership in south universities, growing disinterest in north universities as control and power shifts to the south, slow membership growth and uneven resource support, which is largely voluntary, and organizational changes have all had a negative effect to various degrees. Despite those limitations, there is an overall sense of achievement particularly in the ability of the south’s capacity to take over and manage APACPH successfully and contribute through the collective partnership. The boundaries of north and south have really almost completely blurred. From small beginnings, the annual conferences have grown to become a major global health event attracting university presidents, ministers, global health organizations, and local communities together in reinforcing policy initiatives and improving efficacy. The development of Collaborating Center and ICUH has created small but vibrant networks. In-country networks and south-south partnerships have stabilized as membership levels reached a healthy functional level of 3 to 5 in-country members. An ongoing strategy to revitalize in-country and regional networks is built in through national and regional conferences and partnership in national public health and medical organizations. Member university presidents have also begun to use APACPH networks and the Global Health Conferences to foster the social responsibility of universities whether in indigenous health, urbanization, or MDG-related goals. There have been sustained efforts to recognize and retain
south leadership. Over the past 25 years, a total of 65 APACPH awards for excellence in leadership, research, teaching, and services have been given to leaders from the south. A Global Health Ambassadors program to retain the influence of leadership has been instituted. Capacity building has been slow but sustained, and has become south driven. Nearly 100 faculty and students received scholarships for their Masters and doctoral studies in the first 10 years through the WHO Collaborating Center at APACPH member universities, mostly in the north. It is estimated that more than 1000 faculty and students have been supported in short-term programs at member universities in the last 20 years. More than 60% of that support came from south universities, including the 4 APACPH Collaborating Centers. Each year, 10 to 15 APACPH travel grants are awarded to students and junior faculty to attend annual and regional conferences. APACPH members provide additional matching awards. The APACPH Global Health Conferences have therefore become a real opportunity for learning and exchange. Global health leaders and university presidents from many countries add their perspectives on global health equity across nations, the founding values of APACPH, reenergizing the commitment to primary health care and the MDGs. These acts of rededication of the social responsibility of universities to local and global communities touch the cornerstone of the social and environmental constructs in health. The beliefs and actions that emerge are value laden. In imperfect organizations like a university consortium there have been significant compromises and accommodation both by the north and the south. Yet the common goals and core activities have been revitalized by the members, especially the leadership of young global health professionals, whose dedication in serving the populations in need will sustain the collaboration.

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