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UniWorld is dedicated to enhancing the visibility of the University Partnerships in Cooperation and Development program.

UniMonde vise à accroître la visibilité du programme de Partenariats universitaires en coopération et développement.



*A health care volunteer works with the community to help children who are orphaned, abused, neglected, malnourished or disabled.*

## ‘Human ambulances’ for Uganda’s children

Working with partners in Uganda, the University of Calgary is using a community-based model of volunteer care to lower mortality rates and improve the health of children under five

*by Holly Nathan*

**W**hen a trained volunteer in the Healthy Child Uganda program brings a sick child to the local health unit in some of the poorest and most isolated villages in the country’s southwest, everybody knows it’s a case worthy of attention. “Our volunteers are part of the health care system. They’re trained to know what the

signs of different illnesses are and what to do,” says project manager Teddy Kyomuhangi from her home in Mbarara Town. A child under five who might otherwise die from such preventable illness as diarrhea, fever, pneumonia or malaria can instead receive appropriate basic care as quickly as possible. It’s no wonder volunteers have been dubbed “human ambulances.”

Nearly half the families in some areas have lost at least one child under the age of five, according to the project’s baseline study providing some of the first reliable data from the region. One woman lost two of her children before joining Healthy Child Uganda as a volunteer in 2004. Now, her three children are

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## Editorial

**H**ealth problems the world over are complex and rooted in other dimensions of society such as the environment, food production and income generation. They are even more acute in developing countries, where shortages of everything from basic prevention tools to access to health care are all too prevalent.

Health has been a particular focus of the University Partnerships in Cooperation and Development program, funded by the Canadian International Development Agency, since its launch in the mid-1990s. And rightly so. Universities are well positioned to develop sustainable answers to development issues in a complex environment where a multidisciplinary approach, specialized intellectual resources and international networking are all necessary.

The breadth of sectors involved to achieve health improvement – and the paramount importance of health for countries' social and economic development – is illustrated in this issue of *UniWorld*. Our cover story ('Human ambulances' for Uganda's children) shows how university partners added an innovative link in the health care chain by galvanizing hundreds of volunteers in remote areas to provide basic care to thousands of children at risk of dying from diarrhea, pneumonia or malaria. "Rebuilding health in Rwanda," on page 9, and "Renforcement des compétences en soins infirmiers

au Maroc," on page 5, feature nation-wide contributions of universities, the former by rebuilding a health care system in the wake of a genocide and the latter by supporting national health care reform through top-notch master's training for nurses. "Social work a conduit to health in Vietnam," on page 6, is about reaching disadvantaged people in small rural communities, from the elderly to the very young, who feel the brunt of poverty and its often tragic social and health consequences. Finally, "Creating a healthier environment in Ecuador," on page 8, features university partners delving into solutions for curbing multiple health risks such as mercury pollution from mining and chemicals in the growing cut-flower export industry.

The many UPCD health-focused projects complement existing health networks in developing countries. They are all about developing these countries' homegrown specialized human resources who can effectively develop national, regional and global knowledge, responses and action to combat health problems.

*Angèle Beaulin*

## Éditorial

**L**es problèmes de santé sont souvent complexes et retentissent sur d'autres facettes de la société, comme l'environnement, la production alimentaire et la production de revenus. Ils sont particulièrement criants dans les pays en développement où les outils essentiels de prévention et d'accès aux soins de santé sont insuffisants.

La santé a fait l'objet de nombreux projets financés par le programme de Partenariats universitaires en coopération et développement (PUCD), créé au milieu des années 1990 et financé par l'Agence canadienne de développement international. Et pour cause. En effet, les universités sont en mesure d'élaborer des solutions durables aux problèmes de développement dans un environnement complexe qui nécessite à la fois une approche pluridisciplinaire, des ressources intellectuelles spécialisées et la constitution de réseaux internationaux.

Le présent numéro d'*UniMonde* illustre la diversité des secteurs engagés dans l'amélioration de la santé, de même que l'importance cruciale de celle-ci pour le développement social et économique d'une nation. L'article-vedette, « 'Human ambulances' for Uganda's children », explique comment l'inventivité de partenaires universitaires a permis d'intégrer dans la chaîne de soins des centaines de bénévoles des régions éloignées qui fournissent des soins de santé de base aux milliers d'enfants susceptibles de mourir de diarrhée, de pneumonie ou de paludisme. Les articles « Rebuilding health in Rwanda », en page 9, et « Renforcement des compétences en soins infirmiers au Maroc », en page 5, soulignent respectivement la contribution de certaines

universités à la reconstruction du système de santé au Rwanda au lendemain du génocide et à la réforme nationale des soins de santé au Maroc par l'implantation d'une exceptionnelle formation de deuxième cycle en soins infirmiers. En page 6, « Social work a conduit to health in Vietnam » mentionne l'importance de joindre les petites collectivités rurales défavorisées, qu'il s'agisse de personnes âgées ou de jeunes enfants, souffrant des conséquences souvent tragiques de la pauvreté pour la santé et la société. Enfin, « Creating a healthier environment in Ecuador », en page 8, porte sur des partenaires universitaires qui étudient les solutions susceptibles d'endiguer les multiples risques que représentent pour la santé des phénomènes comme la pollution par le mercure provoquée par l'exploitation minière et l'émission de produits chimiques utilisés par l'industrie d'exportation des fleurs coupées, en pleine expansion.

Les nombreux projets du programme de PUCD axés sur la santé enrichissent les réseaux de santé déjà implantés dans les pays en développement. Ils visent tous le perfectionnement des ressources humaines locales spécialisées qui, à leur tour, feront efficacement progresser les connaissances et les capacités d'action et de réaction sur les problèmes de santé à l'échelle régionale, nationale et mondiale.

*Angèle Beaulin*

**'Human ambulances'...** *continued from cover*

immunized, she and her husband grow seasonal crops for improved nutrition, and her family is respected and consulted by villagers about the health of other children.

"In our country, the health worker-to-population ratio is very poor, and most of these are already overburdened with clinical work in health centres and hospitals. There is a need to involve other people who can continue education in the rural areas where more than 80 percent of our people live," says Jerome Kabakyenga, dean of the faculty of medicine at Mbarara University of Science and Technology in Uganda and the program's Ugandan director.

Mbarara University, in partnership with the University of Calgary and the Canadian Paediatric Society, is working to improve health for 20,000 children under five in three sub-districts of southwest Uganda, an overlooked area of extreme poverty. Funding support from the Canadian International Development Agency through the University Partnerships in Cooperation and Development program is allowing the Healthy Child Uganda initiative to extend its reach, improve its training, increase capacity and refine its evaluation and management methods. Developing the community-based model of volunteer care is also helping strengthen and support the Ugandan government's "Community-Integrated Management of Childhood Illness" strategy, an initiative of the World Health Organization and UNICEF which aims to coordinate care of childhood illness. "It's an excellent program," says Jenn Brenner, the Canadian director of the project and assistant professor in the University of Calgary's faculty

## Developing skills to manage health care

"Health Management Training in Uganda" is another UPCD project that helped strengthen health care across Uganda. The University of Alberta and Makerere University partnered to equip health workers in remote regions with the management capacity they need to better direct their sub-districts' health services. (Oct. 2003 issue of *UniWorld*)

of medicine. "In most countries, integrated management of childhood illness is in the pilot stage. Uganda is a leader," she adds.

Already, some 320 trained volunteers, more than double the number of the previous year, are working in 170 remote villages in the region. And more villages and parishes are anxious to join the program, which draws huge and interested crowds wanting to see change in their own communities. Meanwhile, Mbarara University students in medicine and health care are heading to isolated villages – which typically have no electricity, running water, communication or even road access – to help with community-based training and research.

"Students have to undergo part of their training in communities where they learn from and at the same time offer service," says Dr. Kabakyenga. "Current students will be in decision-making positions in the near future. They need to be exposed to challenges our people face and also participate in overcoming these challenges."

The result is that Healthy Child Uganda is an increasingly vital link in the health care chain that extends from the most isolated of the country's villages through its smaller health units, and on to national policy makers. Such grassroots participation is helping to realize Uganda's health goals of lowering rates of infant and child mortality.

In fact, the program's volunteers were the first to recognize a measles outbreak in March 2006, when the Healthy Child Uganda program was still in its early stages. "We started getting reports of the outbreak, we connected with the government, and we said we wanted to do an extra child health day," explains Canadian project coordinator Erin Kiley from Uganda. "Health days are usually held twice a year when children are weighed and immunized for such diseases as polio or diphtheria. We said, 'let's have it right now.' Healthy Child Uganda was able to mobilize and we immunized 700 children in one day. We have become a strong advocate on behalf of the smaller health centres whose voices are often not heard at the district level."

While shortages of medications and supplies at isolated and understaffed health centres continue to be a critical issue, the role of volunteers is having a measurable impact in health promotion. In Rugzai and Magambo, 100 percent of mothers were attending antenatal clinics and most attended at least four sessions. Meetings occurred monthly in 13 parishes, with 95 percent of community



*A community volunteer monitors growth among local children during a home visit in a Ugandan village.*

volunteers in attendance. Child health days reached nearly 6,500 people in one year. More than 23,000 home visits were conducted in the 2006-07 reporting year, and some 11,600 children under five were assessed.

And more: the volunteer program is inspiring, one by one, healthy homes among villagers who are installing latrines, incorporating appropriate food-storage techniques, using dish drying racks, installing "tippy taps" to ensure hand washing in water-starved areas and improving nutrition. In addition, some 60 micro-projects addressing income generation have been sparked, from beekeeping and goat minding to fish grinding, evidence of the link between health and social development. Such change is often galvanized by competitions, for instance, the "Model Home Competition" and the upcoming child-friendly health centre competition.

"When people's eyes are opened, they have dreams and they see ways to improve their lives," says Ms. Kyomuhangi. It's also

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'Human ambulances'... *continued from page 3*

a fact that Ugandans love competitions, she adds with a chuckle. "Our volunteers are just ordinary men and women who receive no allowance and are paid no salary. But they are motivated because they see such improvement in the health of the children."

In addition to sparking many community-based projects, researchers and participants, including some 30 Canadian pediatricians who have volunteered to work in the program, are developing and refining the Healthy Child Uganda model to ensure rigour, accountability and sustainability. For instance, the training program is identifying and addressing critical challenges in how to train volunteers and health personnel to ensure transfer of knowledge at the village level where literacy is low and experience in health issues minimal. The dynamic curriculum uses drama, songs, prayers, puppets and other interactive tools, often conducted in Runyankole rather than English, to make learning both relevant and meaningful for varying local realities. Modules address empowerment of communities, traditional medicine, and skill building in such areas as plotting growth charts. In turn, volunteers teach mothers and families in their communities.

Healthy Child Uganda is a model of care that's winning national awards, inspiring research into health care access and gaining international recognition. It's a model that could be applied throughout the country and in sub-Saharan Africa. It's also a possible approach to help make Canada's recent commitment to contribute \$105 million over five years to the Save a Million Lives child-survival initiative a working reality. "We would like to see this model supported by other groups and extended," says Dr. Brenner. In the meantime, the hope is that volunteers in the Healthy Child Uganda program will be incorporated into village health teams now supported by the Ugandan government at the district level.

As Ms. Kiley notes, Healthy Child Uganda's recent support of a government campaign to distribute anti-malarial bed nets provided a critical opportunity to educate parents and communities about malaria, the major threat to child survival. "Hundreds and hundreds of mothers with babies came to get bed nets. You don't walk 10 kilometres with two small children and a baby on your back if you are not interested in child health. People are motivated to improve the health of their children, and they are excited about the possibilities for change." ☺

## Congratulations! / Félicitations !

Congratulations to the eight new projects funded by CIDA following the most recent Tier 2 competition of the University Partnerships in Cooperation and Development program. The winning projects are listed below in alphabetical order by university.

Félicitations aux équipes des huit nouveaux projets financés par l'ACDI suite au plus récent concours du volet 2 du programme de Partenariats universitaires en coopération et développement.

Les projets retenus sont énumérés ci-dessous en ordre alphabétique d'universités.

### University of Calgary in Bolivia

Water management in Bolivia

### Huron University College in Tanzania

Building civil society capacity for poverty reduction

### Université Laval au Mali

Des arbres et des champs contre la pauvreté au Mali

### University of Manitoba in Bangladesh

Building environmental governance capacity in Bangladesh

### University of Manitoba in China

Building capacity to respond to HIV/AIDS in China

### Université de Montréal à Madagascar

La santé animale pour la santé populationnelle

### Simon Fraser University in Bolivia

Bolivian specialization in community economic development

### University of Victoria in Mozambique and Brazil

Southern oceans education and development

## Félicitations ! / Congratulations!

Félicitations à l'Unité de santé internationale de l'Université de Montréal qui a été choisie comme finaliste du concours 2007 des Prix canadiens de la coopération internationale attribués par les Manufacturiers et Exportateurs du Canada et l'Agence canadienne de développement international pour son projet de PUCD au Maroc.

Congratulations to Simon Fraser University, recipient of the Award for Gender Equality for its UPCD project "Women, Poverty and Education in Mexico." The award was presented by the Canadian International Development Agency and Canadian Manufacturers & Exporters as part of the 16th Annual Canadian Awards for International Cooperation.

# Renforcement des compétences en soins infirmiers au Maroc

La réforme du système de santé au Maroc passe par une formation poussée des infirmières, et le ministère de la Santé publique du pays a, pour ce faire, fait appel à l'Université de Montréal

par Josée Descôteaux

**D**epuis une dizaine d'années, le Maroc a entrepris la transformation de son système de santé pour répondre aux besoins accrus de sa population aux prises avec des taux de mortalité maternelle et infantile trop élevés et la présence de nombreuses maladies chroniques. Cette réforme requiert un personnel médical qui détient les savoirs nécessaires pour offrir des services de santé efficaces et de grande qualité.

C'est dans cette optique que le ministère de la Santé publique du Maroc s'est allié à l'Université de Montréal pour donner une formation au deuxième cycle aux infirmières marocaines, dans le cadre du programme de Partenariats universitaires en coopération et développement financé par l'Agence canadienne de développement international. Au Maroc, les futures infirmières doivent compléter une formation au premier cycle après leurs études secondaires, mais celles qui aspirent à occuper des postes de gestionnaires se tournent vers les établissements qui offrent une formation de cadres de deux ans et demi au deuxième cycle.

« Nous voulions améliorer la formation offerte au deuxième cycle; nous souhaitons notamment nous doter d'un programme avec l'approche par compétences », indique Ahmed Agyo, chef de la formation de base

à la direction des ressources humaines du ministère de la Santé publique du Maroc et directeur du projet dans son pays. L'approche par compétences exige une participation plus active des étudiants, en liant davantage le contenu des apprentissages au comportement visé en situation pratique. « Nous avons donc décidé d'aller voir ce qui se fait ailleurs dans le monde, dans les pays où il y a des francophones, dont le Canada, et nous sommes venus au Québec », ajoute-t-il.

## Cours convoités

C'est ainsi que, dès 2003, les fonctionnaires du ministère de la Santé marocain ont, avec l'aide des enseignants de l'Université de Montréal, bonifié le programme existant au deuxième cycle en y ajoutant des modules tels que la diversité culturelle et la diversité des soins.

Après avoir remodelé les plans de cours, la Faculté des sciences infirmières de l'Université de Montréal a évalué et sélectionné les candidats marocains, une tâche d'autant plus difficile que le ministère de la Santé du Maroc lui avait proposé plus de 200 candidatures pour l'inscription à la maîtrise, alors que le financement reçu de l'ACDI pour ce programme ne lui permettait que d'offrir 15 places.

Le ministère de la Santé publique du Maroc a défrayé les coûts de l'équipement

informatique et de location de salles de cours, tandis que l'Organisation mondiale de la santé au Maroc a payé les frais de scolarité des 15 étudiants de la première cohorte. L'Association marocaine des soins infirmiers et l'Institut de formation aux carrières de santé de Rabat ont également été des partenaires privilégiés dans la bonne marche du projet.

## Multiplication des succès

Le ministère a ensuite délocalisé l'enseignement de la maîtrise à Rabat, capitale du Maroc, où les enseignants de l'Université de Montréal ont épaulé leurs pairs marocains pendant un an, après quoi on a mis en place l'enseignement à distance pour les étudiants de l'extérieur de Rabat.

« Nous avons également ouvert en septembre un centre de formation à Marakech et nous voulons nous implanter sur deux autres sites afin de desservir l'ensemble du pays », ajoute M. Agyo, dont le ministère s'est engagé à embaucher les futurs diplômés du nouveau programme.

Outre son succès auprès du personnel infirmier marocain – le ministère a reçu 1 500 candidatures pour 60 places en 2007 –, la formation rehaussée au deuxième cycle générera à long terme un impact positif sur la santé de la population marocaine, soutiennent les codirecteurs du projet. « Nous avons beaucoup insisté sur les questions de santé communautaire et les soins de première ligne », précise Bilkis Vissandjée, professeure agrégée à la Faculté des sciences infirmières de l'Université de Montréal et codirectrice canadienne du projet.

## Adaptation culturelle : un défi

Les maîtres d'œuvre du projet se sont quand même heurtés à certains obstacles, comme la traduction française d'une partie du matériel de cours. Malgré des efforts en ce sens, la présence de l'anglais, qui demeure la langue privilégiée des publications scientifiques, dans une partie du contenu des cours, a constitué un handicap pour



Les partenaires de l'Université de Montréal et du ministère de la Santé publique du Maroc offrent une formation au deuxième cycle aux infirmières qui aspirent à occuper des postes de gestionnaires.

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# Social work a conduit to health in Vietnam

For academics at Memorial University of Newfoundland and in Vietnam, health problems are part of larger social issues and require the expertise of social workers

by Moira Farr

**S**ocial workers in Vietnam are gaining ground in the fight to improve health and reduce poverty, especially among women and children in the country's rural areas, thanks to a capacity-building project funded by the Canadian International Development Agency through the University Partnerships in Cooperation and Development program. Over the past five years, Vietnamese and Canadian academics successfully reached out to more than 1,200 social workers in rural areas alone.

During this time, the College of Labour and Social Affairs in Hanoi became the University of Labour and Social Affairs (ULSA). It has been working with Memorial University of Newfoundland's schools of nursing and social work to improve the education of social workers and to gain recognition among policy makers as a crucial part of Vietnam's development.

"The project has been very effective in training community workers, who will in turn provide better services to their



Social work students at the University of Labour and Social Affairs participate in a workshop on child abuse.

## Renforcement des... suite de la page 5

les étudiants marocains, estime M. Agyo. « L'adaptation culturelle, c'est-à-dire l'arrimage de la vision des enseignants et du contenu des cours à notre vision n'a pas toujours été facile non plus », ajoute-t-il.

Ces failles n'empêchent pas le directeur marocain du projet d'affirmer sans ambages que le projet est une réussite. À preuve, le programme révisé en fonction des réalités culturelles et sanitaires du Maroc a été introduit dans les lois par décret. En outre, son ministère reçoit quotidiennement des demandes d'inscription à la nouvelle maîtrise provenant d'étudiants d'autres pays de l'Afrique francophone – sans compter le Bénin, qui souhaite mettre en place sa propre formation, calquée sur le modèle marocain.


Le partenariat avec l'Université de Montréal prendra fin en 2009. En attendant, il engendre des répercussions alors que des étudiants marocains font d'une reconnaissance accrue de la profession infirmière au Maroc l'objet de recherche de leur mémoire de maîtrise. Ce n'est pas tout, indique M. Agyo; son ministère compte « exporter » cette réussite au premier cycle de la formation en sciences infirmières. « Nous

## Nouvelles approches préconisées par le programme de maîtrise

Approches antérieures	Nouvelles approches
Vision traditionnelle de la santé : absence de maladie	Vision positive de la santé : miser sur les ressources de la personne pour assurer son bien-être
Analyse des problèmes de santé selon des paramètres biologiques et les facteurs de risque	Analyse des problèmes de santé selon l'approche des déterminants sociaux de la santé
Interventions : soins curatifs et éducation à la santé visant un changement ponctuel de comportement	Continuum soins – prévention des maladies – protection et promotion de la santé Approche axée sur les forces des personnes
Pratique cloisonnée	Pratique en collaboration interdisciplinaire et intersectorielle, ainsi qu'avec la communauté
La responsabilité de la santé incombe uniquement au secteur de la santé et aux professionnels	La santé est la responsabilité de tout un chacun
Approche axée sur la personne	Approche axée sur la population

y introduirons notamment des modules comme la responsabilité professionnelle et l'éthique », signale-t-il.

On souhaite également offrir la maîtrise au Liban, qui est déjà partenaire de

l'Université de Montréal. Ainsi, plusieurs établissements partenaires dans les pays en développement seront en mesure d'outiller le personnel infirmier en vue d'améliorer la santé de leur population. 

communities,” says Nguyen Thai Lan, a ULSA faculty member who helped the project develop a curriculum relevant to the educational needs of Vietnamese students and to the people they go on to serve.

The challenges are significant: as a result of a post-war baby boom, 50 percent of Vietnam’s population is under the age of 25; statistics indicate that the poverty rate has declined from 51 percent in 1992 to 30 percent in 1997, but despite substantial economic development, the gap between rural and urban quality of life is widening. In the past, “social work was not seen as a profession,” says Lan Gien, professor at Memorial’s school of nursing and Canadian co-director of the project. In small rural communities, social issues were either dealt with by government or military officials or not dealt with at all. The disadvantaged in these communities – women, the elderly, the very young, the disabled – have continued to feel the brunt of ongoing poverty and its often tragic consequences. Prostitution, family violence and break-up, homelessness, substance abuse, HIV/AIDS – “these things were not looked at before,” says Dr. Gien.

Today, social workers who receive training at ULSA are tackling these problems through education on social and health issues within the communities themselves. Of particular concern, for instance, are the problems of opium and the trafficking of women along the northern border with China. ULSA-trained community workers have come together to form an advisory committee with women’s and youth groups, a retirees’ association and a farmers’ syndicate to increase awareness of the problems through workshops, brochures and counselling.

Also of great concern is the ongoing stigma attached to people with HIV/AIDS. Here, says ULSA’s Dr. Thai Lan, the school has also had its successes. “A trainee in a workshop for community workers in Hanam province said that before the workshop she was very afraid of the HIV/AIDS patients; she thought they were dirty. But now she changed her mind and felt that they needed to be supported and respected.”

So far, 80 students have completed ULSA’s 10-course social-work program, developed in conjunction with Memorial and taught in the Vietnamese language. Twelve ULSA students have completed master of social work degrees at the University of Regina or the University of the Philippines and now form

the core academic staff for ULSA’s bachelor of social work program, teaching, conducting research and providing continuing education. Many of these academics visited Memorial University in Newfoundland to share their knowledge and experience of social work in Vietnam. The school’s staff has also attended workshops to improve teaching skills, focusing on subjects such as field-work education and supervision, current trends in social work and project evaluation.


ULSA has expanded its library and also opened the Social Work Practice Centre on campus. This unique community resource provides counselling to students and staff, orphaned children and local teenagers on subjects ranging from living skills to sexual health.

The university’s reach has extended far into rural communities. Workshops designed for those unable to attend the program at the school in Hanoi have attracted 1,200 rural social-work providers – five times as many as originally intended.

The Vietnamese government has taken notice of ULSA’s impressive progress and has invited faculty to sit on a national committee to develop a training code and improve social-work education throughout the country. Ten other universities have sought advice on how to design their own similar programs, and the school is increasing its international collaborations with Canada, the Philippines, Germany, Singapore and Australia.

## Reaching out to rural Indonesia

“Nursing, Women’s Health and Community Outreach in Indonesia” is another UPCD health project led by Memorial University, this time in collaboration with the University of Indonesia. Establishing a community presence, identifying and treating real problems, and collecting and using health data have already helped improve the health of women and children in the rural villages of Indonesia. (Oct. 2005 issue of *UniWorld*)

Most satisfying, says Dr. Thai Lan, is knowing that the Vietnamese government now acknowledges that the need is great for more well-trained social workers, and that ULSA can work together over the long term with such bodies as the Ministry of Health and the National Committee on HIV/AIDS to improve the health of all Vietnamese, the disadvantaged in particular. “We’ve pushed up the recognition of social work as a profession,” says Dr. Thai Lan. 



Local service providers develop basic social work skills at a workshop in rural north Vietnam.

# Creating a healthier environment in Ecuador

University partners delve into solutions for curbing environmental health risks such as mercury pollution from mining and chemicals in the growing cut-flower export industry

by Keane J. Shore

**E**ccuador spans a coastal plain, Andean highlands and an Amazonian region, with the Galapagos Islands contributing their own fabled locale offshore. Its population of about 14 million includes indigenous groups living traditional lives, modern city dwellers straddling the economic spectrum, as well as fishermen, miners and farm workers – all riding a fast track into the global economy. The country is a small yet diverse geographical and cultural microcosm of big swaths of South America.

As the country's economy grows, concern increases over balancing monetary gain with basic quality of life. Ecuadorians identify a long list of environmentally related health risks, such as mercury pollution from mining, respiratory diseases from air pollution, contamination from agricultural chemicals, vector-borne diseases such as dengue fever, and potential devastation from Andean earthquakes and volcanoes.

For Northern and Southern public-health specialists intent on strengthening Ecuador's national environmental-health capabilities, these complex challenges also present clear opportunities. Solutions here could improve lives across South America.

## Managing environmental health risks

Enter a multifaceted, ambitious, well-received university partnership aimed at finding sustainable ways to manage environmental health in Ecuador. Its directors are Jaime Breilh of Andina de Simon Bolivar University's health faculty and the Centre for Study and Assessment of Health, and Jerry Spiegel of the University of British Columbia's college of health disciplines.

Dr. Breilh, trained in medicine, social medicine and epidemiology, has long assessed human health risks related to chemicals in Ecuador's growing cut-flower export industry. Dr. Spiegel, director of the Centre for International Health at UBC, has participated in many health-related international development projects.



*This master's student won a scholarship from the International Development Research Centre for his thesis on reducing pesticide exposure in his indigenous community of Tucayta in Southern Ecuador.*

Three years in, the six-year, \$3-million University Partnerships in Cooperation and Development project funded by the Canadian International Development Agency is starting to help Ecuador build sustainable, homegrown capacity to manage diverse environmental health risks and improve the quality of life of its vulnerable citizens.

The Southern partners from Ecuador, Cuba and Mexico, to name a few, offer much of the human capital, forming hemispheric links that should help keep the initiative moving after CIDA funding ends. UBC's multidisciplinary team of experts acts as a resource and advises Ecuadorian partners on creating public health education programs offering ecosystem health credentials that range from community participation certificates to specialized graduate degrees. Finally, the project also strengthens computer and laboratory capabilities and brings interactive teaching techniques into a setting where learning in the past has centred on formal "chalk and talk."

## Economics as part of health

Drs. Spiegel and Breilh say that the project, while about health, views Ecuador's entire economic system holistically. This equips public figures involved in the project to balance risks linked to industrial growth with the protection of ecosystems, sustainable production and human health.

"I think a check on the system is needed, from the perspective of strong, hard research, and we need to promote cadres that are well-trained to do this type of assessment. For policy development, you need more knowledge," says Dr. Breilh.

The four universities are developing complementary environmental health curricula using case studies collected in representative Ecuadorian ecosystems. By the project's end in 2010, Ecuador will have graduated 150 health practitioners in certificate programs, 60 master's students and four PhD students in the field. A dozen faculty members at the four universities

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# Rebuilding health in Rwanda

The rector of the National University of Rwanda appealed to the University of Western Ontario to help it piece together parts of the country's devastated health care system

by Harriet Eisenkraft

**B**orn in Rwanda, Desire Ndushabandi grew up and went to medical school in Uganda and did postgraduate work in Kenya. Then, more than 30 years after he and his family had fled his country of birth and early childhood, Rwanda called him and other doctors back home. As a result of the horrific 1994 genocide, "There was great need. The health care system was nearly paralyzed," says Dr. Ndushabandi, who is now rector of the Kigali Health Institute (KHI).

Half a world away, David Cechetto, professor in the faculty of medicine and dentistry at the University of Western Ontario (UWO), already had experience in medical aid work for Africa when he set off from Canada for Kigali in early 2000. Despite his time teaching in a Nigerian medical school and his decades as a director of a program that sent physicians to developing countries, he was about to face unique devastation. Rwanda – one of the world's poorest nations – "was a sombre country where people were still reeling. The infrastructure had recovered. [But] the emotional recovery had not taken place," he now says.

The killings by Hutu extremists had wiped out more than 800,000 Tutsis and Hutu moderates, including many of Rwanda's doctors and other health professionals.

Infectious diseases, such as malaria and tuberculosis, were rampant, as was the spread of AIDS: almost one-third of Rwandan women between the ages of 18 and 35 were HIV-positive, a result of widespread rape used as a tool of the genocide. Trauma-induced mental illness proved overwhelming for a system with only one doctor per 40,000 people. Moreover, most of the nation's nurses who worked on the front lines in hospitals and health centres had only secondary-school training and were not equipped to deal with the complexity of cases.

Dr. Ndushabandi and Dr. Cechetto today co-direct a project funded by the Canadian International Development Agency through the University Partnerships in Cooperation and Development program to rebuild that system. When the head of the National University of Rwanda wrote and asked UWO's medical school to help train doctors in 1999, the letter was forwarded to Dr. Cechetto. During his first trip and after subsequent discussions there, he became convinced of the importance of primary health care for the country. He saw a need for support and training of the nurses, midwives, psychologists and others who work at the community level



As the main government-supported training centre for nurses in Rwanda, the Kigali Health Institute is a critical player in addressing the country's health issues, specifically the struggle against HIV/AIDS.

as the first line of defense. It was then that he enlisted the help of his UWO colleague, Carroll Iwasiw, professor in the school of nursing at UWO and one of Canada's leading nursing educators.

In 2005, KHI became the beneficiary of a six-year project to develop curriculum for a nursing baccalaureate and for faculty training. A further goal is to improve and make accessible teaching and learning materials, including a computer lab and enhanced library. With \$989,000 from CIDA and \$520,000 from other partners, including Fanshawe College, the University of Ottawa, York University and the National University of Rwanda, the school's "pioneers" – their 10 teachers and about 50 nursing students so far – are halfway through the four-year program, says Dr. Ndushabandi.

When Dr. Iwasiw first visited Rwanda in 2004, she met with nurses and educators "who were working under horrendous circumstances. There were hospital units without running water, with one toilet for 40 patients. There were limited supplies and windows without screens. Yet [the nursing staff] were cheerful and motivated. I came



Three Rwandan partners from the department of nursing at the Kigali Health Institute visit a Canadian clinical skills lab.

Paul Mayne/Western News

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away with great respect for the people who had stayed or who had returned and wanted to build the country," she says.

During the last two years, Canadian and Rwandan team members have introduced a contemporary patient-centred, case-based teaching component. The first two years of the baccalaureate have been completely revised and implemented. "We are developing curriculum *with* them, not *for* them," says Dr. Iwasiw. What this means is that the Rwandan nurse educators and an array of academics from Canadian institutions sit down together in both countries to decide on study, practicum and lab components. The Rwandans are learning to write their own curriculum, which emphasizes the prevention and treatment of HIV/AIDS and the delivery of mental health services, including trauma care.

"The mental health problems are more acute since the genocide. There are large numbers of orphans, some who've been taken in by family members or been in orphanages and haven't necessarily experienced family life," says Dr. Iwasiw, who adds: "We hope [the Rwandan] graduates will be able to recognize and respond to problems." That may mean more than simply referring them to psychiatric institutions, currently the main model of care, but "to be supportive of them and their families and help them learn how to cope."

Although the program includes training in the kind of community nursing and active learning that are new to the system there, "we're not taking Canadian curriculum and just transplanting it; it's appropriate for Rwanda," says Dr. Cechetto. What's

more, "the teachers there are open to new concepts." The team has also held workshops on gender and health, particularly as they relate to mental health and HIV/AIDS. Eight members of KHI's faculty have travelled to Canada for curriculum work and to observe clinical placements and community health activity here.

The nurses who graduate will go on to take leadership roles in some of the 11 district and four major hospitals around the country. With one nurse for more than 5,000 people in Rwanda at present, there is also great interest in the project's goal of training nurses "at a higher level so they can (eventually) take care of the teaching themselves," adds Dr. Ndushabandi. A member of the Canadian team has already helped with a nursing-education program that prepared a group of students to train diploma nursing students in regional schools. An e-learning component and distance education options are also on the horizon, says Dr. Iwasiw. In June, three Canadian and three Rwandan faculty members will attend and present their research on the KHI program at an international nursing conference in Ireland.

The Rwandan government is intent on bringing its health professionals up to international standards. So, "curriculum development will affect policy decisions" as nurses will be required to take a level of training that is articulated and ratified by a relevant government ministry, says Dr. Ndushabandi. Moreover, he concludes, good nursing care will no doubt lead to a healthier population. And "once we are healthy, we shall be productive. And once we are productive, poverty will be reduced in our country." ☺

## Renforcement des institutions publiques au Rwanda

Le projet « Renforcement de la gouvernance au Rwanda » est un autre projet de PUCD en cours au Rwanda. Comportant la mise sur pied d'une maîtrise en administration publique à l'Institut rwandais d'administration et de management, en collaboration avec l'École nationale d'administration publique, le projet favorise grandement le renforcement des institutions publiques et la formation de citoyens contribuant activement à l'élaboration de politiques nationales. S'ensuivent des lois et des services publics qui établissent les règles de fonctionnement du secteur privé et améliorent la qualité de vie des citoyens de même que leur confiance en leurs institutions. (Numéro de mars 2006 d'UniMonde)

**Creating a healthier...** *continued from page 8*



*Master's students are evaluating methods to control exposure to pesticides in Ecuador's large export-oriented cut-flower industry.*

will also receive new training. Newly trained specialists will in turn teach at least 600 community learners. Many are already gauging Ecuador's technological readiness, setting up a range of community-based information-gathering projects and publishing manuals that other communities can use to address similar problems.

As the first 30 Ecuadorian master's students complete community-based theses, Drs. Breilh and Spiegel hope for concrete results to influence policy. Academics from the four Ecuadorian universities are helping to advise the Ecuadorian Constituent Assembly as it rewrites the country's constitution. And a third of all community participants in the project already hold influential posts in different areas, and at different levels, of Ecuadorian government. For example, three are key indigenous leaders, another oversees municipal veterinary health, and another is a lawyer leading a national water rights forum.

"They have a very strong political presence, which in itself means that the training that they're getting is probably going to enrich their view of ecosystem health," says Dr. Breilh. "It was all designed for action." ☺

# Tackling global health issues together

Capacity building is at the heart of the Teasdale-Corti Global Health Research Partnership Program that links researchers in Canada and the developing world

by Stephen Dale

**A**lthough Ana Sanchez was educated in Sweden and lives in Canada, the Brock University professor of community health sciences has never forgotten Honduras, the country where she was born.

Her current research, in fact, has brought her back to her homeland. In collaboration with Lourdes Enriquez de Madrid of the National Autonomous University of Honduras, Dr. Sanchez has just embarked on a four-year initiative designed to transform the national university's microbiology department into a much more effective player in Honduras' fight against infectious diseases.

A key part of the project is the creation of a new master's program to train specialists who will assist in today's research and, it is hoped, set the research agenda of tomorrow.

"In a developing country," explains Dr. Sanchez, "even if you have a PhD, you still need resources, you still need grad students, if you want to further your research. We hope to create a new nurturing environment where research informs teaching, and teaching informs research – and both inform practice and policy."

Beyond its influence on academia, the program aims to introduce a new approach to disease control, one that "takes the lab to the field, and the field to the lab," to make better use of microbiologists' considerable expertise.

**A new master's program in microbiology aims to introduce a new approach to disease control, one that "takes the lab to the field, and the field to the lab."**

Elaborates Dr. Sanchez: "When we talk about the big three – tuberculosis, malaria and HIV – which are rampant in Honduras, microbiologists' contribution has been limited mostly to helping out



Yves Beaulieu/DRC

The Teasdale-Corti Global Health Research Partnership Program funds 13 collaborations worldwide, including one in Honduras to fight infectious diseases.

with diagnostics, or determining the frequency and number of cases. But we have to be involved beyond the lab. We have to go into communities that are most affected and determine what the real issues

are that put people at greater risk of contracting disease."

While graduates of the new program are expected to work in communities, Dr. Sanchez is also hopeful that some

will make the leap into the government offices where policy is set. If that happens, "they'll be able to put into practice the new philosophy of integrating and collaborating and joining forces to approach the problem from multiple points of view."

The goals that Dr. Sanchez outlines are very much in keeping with the philosophy of the Teasdale-Corti Global Health Research Partnership Program that is funding the Honduras project, as well as 12 other collaborations striving to bring the expertise of Canadian and developing-country researchers to bear on a range of global health issues.

Those issues include broad considerations such as the place of primary health care in global health policy, and more specific ones such as pediatric pain management

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policies in Asia, the rise of childhood obesity in Mexico, and methods for dealing with the psychological impacts of civil violence and natural disasters.

A program of the Global Health Research Initiative – itself a partnership of the International Development Research Centre, the Canadian Institutes of Health Research, Health Canada and the Canadian International Development Agency – Teasdale-Corti, at its core, aims to develop new capacities in the South.

But these partnerships have also produced insights of great potential benefit to Canadians.

For example, at a recent gathering of Teasdale-Corti collaborators in Ottawa, participants learned about one project intended to support nurses' role in the care of HIV/AIDS patients in five African and Caribbean countries. According to the University of Ottawa's Nancy Edwards, the project's Canadian co-lead, the premise is that "nurses are the backbone of health systems, although they are not prominent in policy making." This resonates in Canada, where nurses also have a critical role to play in policy making.

Similarly, the University of Calgary's Craig Stephen says that a project to enhance surveillance of animal health in



Peter Bennett/IDRC

A new master's program at the National Autonomous University of Honduras, established in collaboration with Brock University, will train specialists to help fight tuberculosis, malaria and HIV. These health specialists are expected to be involved beyond the lab, working directly with communities at risk.

Sri Lanka, in part to help prevent pandemics, is informing similar Canadian plans to strengthen the role of veterinarians in public health. "Sri Lanka has a very good history of taking information into communities," he explains, and Canadians

have been learning from that example. What this illustrates, Dr. Stephen concludes, is that "this is very much a two-way learning process."

Stephen Dale is an Ottawa-based writer.

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