BASELINE INDICATORS

20 Goals for a Decade in HRH

BELIZE

2009

Tracking **Regional Goals** for Human Resources for Health

A Shared Commitment

Pan American Health Organization

Regional Office of the World Health Organization

BASELINE INDICATORS

20 Goals for a Decade in HRH

BELIZE

2009

Tracking

REGIONAL GOALS

for Human Resources for Health

A Shared Commitment

Washington, DC
March 2010

Area of Health Systems based on Primary Health Care (HSS)
Project of Human Resources for Health (HR)
Pan American Health Organization
Pan American Sanitary Bureau, Regional Office of the
World Health Organization

PAHO HQ Library Catalog-In-Publicaton

Pan American Health Organizaton

"Baseline Indicators - 20 Goals for a Decade in HRH - Belize 2009. *Tracking Regional Goals for Human Resources for Health: A Shared Commitment*"

Washington, DC: OPS, © 2010

ISBN 978 92 75 13081 0 (Print)

ISBN 978 92 75 13189 3 (Electronic)

1. QUALITY INDICATORS, HEALTH CARE – standards
2. PERSONNEL MANAGEMENT – manpower
3. HEALTH HUMAN RESOURCES EVALUATION
4. PROGRAM EVALUATION – methods
5. HEALTH INEQUALITIES
6. HEALTH HUMAN RESOURCES TRAINING
7. BELIZE

NLM W76.DB38

© Pan American Health Organization, 2010

All rights reserved. Requests for this publication should be directed to the Area of Health Systems based on Primary Health Care, Project on Human Resources for Health, Pan American Health Organization / World Health Organization, 525 23rd St., NW, Washington, D.C., USA [phone: +(202) 974-3296; e-mail: goduecha@paho.org]. Requests for authorization to reproduce or translate PAHO publications—whether for sale or noncommercial distribution—should be directed to the Area of Knowledge Management and Communications (KMC) at the above address [fax: +(202) 974-3652; e-mail: pubrights@paho.org].

The names used in this publication and the presentation of its content do not imply any opinion on the part of the Pan American Health Organizaton about the legal status of countries, territories, cities, or zones or their authorities or about the placement of their borders or boundaries.

The mention of certain commercial enterprises or the trade names of certain products does not imply their endorsement or recommendation by the Organization in preference to others of a similar nature. Save through error or omission, the first letter of the names of patented products is capitalized.

The Pan American Health Organization has taken all reasonable precautions to verify the information contained in this publication. However, the published material is distributed with no guarantee of any type, explicit or implicit. The reader is responsible for the interpretation and use made of this material, and in no case shall the Pan American Health Organization be considered for any harm caused by its use.

Design and Layout: Matilde E. Molina

Table of Contents

Acknowledgements. vii

List of Abbreviations. ix

Executive Summary. xi

1. Introduction. 1

2. Challenge One. Build long-range policies and plans to adapt the work force to the changes in the health system. 3

GOAL 1. 3
GOAL 2. 4
GOAL 3. 5
GOAL 4. 6
GOAL 5. 7

3. Challenge Two. Put the right people in the right places, achieving an equitable distribution according to the health needs of the population. 9

GOAL 6. 9
GOAL 7. 11
GOAL 8. 14
GOAL 9. 15

4. Challenge Three. Promote national and international initiatives for countries affected by migration to retain their health workers and avoid personnel deficits. 17

GOAL 10. 17
GOAL 11. 18
GOAL 12. 19

5. Challenge Four. Achieve healthy workplaces and promote a commitment of the health workforce with the mission of providing quality services to the whole population. 21

GOAL 13. 21
GOAL 14. 22
GOAL 15. 23
GOAL 16. 23

6. Challenge Five. Develop mechanisms of cooperation between training institutions and the health services institutions to produce sensitive and qualified health professionals. 25

GOAL 17. 25
GOAL 18. 26
GOAL 19. 27
GOAL 20. 28

7. Conclusions and Recommendations. 31

Appendix A. Map of Belize....................33

Appendix B. Presentation of Baseline Report to HRH Observatory (November 2009) 35

Acknowledgements

This report was produced with the funding support of the Pan American Health Organization/World Health Organization (PAHO/WHO) in close collaboration with the Belize Ministry of Health and the assistance of the University of Belize. It would not have been possible without the ongoing technical assistance, support and guidance of Dr. Beverley Barnett, Ms. Marilyn Entwistle and Dr. Guillermo Troya from the PAHO/WHO office in Belize, and Dr. Felix Rigoli and Ms. Allison Annette Foster from the PAHO/WHO Office in Washington, D.C.

We would like to offer our sincere thanks to all those individuals who participated in this review. Many individuals within the Ministry of Health completed long and detailed data requests, provided us with advice, additional leads and supplementary information and some participated in personal interviews as well. We are truly appreciative.

In addition, I would also like to personally thank the members of the consulting team in Belize—Dr. Robert Tucker and Dr. Alfonso Ayala, Ministry of Health of Belize and Dr. Roy Young, University of Belize—for their ongoing assistance in completing this project.

Kind regards,

Rick Cameron
Principal
Cameron Health Strategies Group Ltd
Halifax, Nova Scotia
Tel: (902) 826-2374
rickcameron@hfx.eastlink.ca

List of Abbreviations

BHIS	Belize Health Information System
CARICOM	Countries of the Caribbean Community
HRH	Human Resources for Health
KHMH	Karl Heusner Memorial Hospital
MoH	Ministry of Health
MDG	Millennium Development Goals
NHIS	National Health Insurance Scheme
OAS	Organization of American States
PAHO	Pan American Health Organization
PHC	Primary Health Care
SIB	Statistic Institute of Belize
SLA	Health Service Level Agreements
UB	University of Belize
UWI	University of the West Indies
WHO	World Health Organization

Executive Summary

Rationale

The objective of human resources for health (HRH) planning is to equip governments with the information and tools they require to determine the health workforce needed to meet the needs of the population, both now and in the future. With HRH representing the largest portion of the health care budget in most countries, the capacity to estimate changing population health needs and future gaps in HRH supply and demand is critical to achieving an effective and efficient health care delivery system.

Regional Context of Human Resources for Health (HRH) for the Caribbean and Latin America

In 2005, the Toronto Call to Action[1] mobilized the health sector, nationally and internationally, to collectively strengthen HRH to assist the countries in the Region of the Americas in order to achieve the Millennium Development Goals and to provide access to quality health for their populations. In this document, 28 countries of the Americas Region committed political will, resources, and targeted action to confront the five HRH challenges over the next 10 years. In 2007, a Health Agenda for Americas, 2008-2015, was launched by the Ministers of Health of the Americas Region as a shared vision to address the challenges over the next decade to improve the health of the peoples of the Region. To define this vision, twenty Regional goals were adopted by the 27th Pan American Sanitary Conference in July 2007 in Resolution # CSP27/10, "Regional Goals for Human Resources for Health 2007-2015."

A task force of the Regional Network of Observatories of Human Resources for Health in the Americas[2] established a reference manual or guide which standardized across the region both definitions used in the Resolution and processes for establishing the regional goals baseline values and monitoring progress achieved over the decade.

1. Toronto Call to Action, 2006-2015, Towards a Decade of Human Resources for Health, Regional Meeting of the Observatory of Human Resources in Health, October 4-7, 2005.
2. The Regional Network of Observatories helps promote, develop and sustain the knowledge base for HRH by disseminating information throughout the Region, including evidence to support policy decisions to strengthen health systems and improve health service delivery.

The assessment of individual countries in relation to their starting points (baselines) in reference to each of the goals and their priority focus for addressing those goals most needing attention will inform policy makers in their HRH strategies and contribute to plans of action at the national and the regional levels of the Americas.

National Context of Health Systems and HRH in Belize

The Government of Belize Health Sector Reform Program (2007-2011) emphasized strengthening the organizational and regulatory capacity of the public sector, service rationalization and improving coverage and quality of services, and the establishment of a National Health Insurance Scheme (NHIS). A principal aim of the reform program included a national policy to identify, streamline and better manage HRH. To that end, policies are being considered to (a) improve the distribution of HRH across the country; (b) to manage migration; and (c) to define guidelines for a HRH monitoring and evaluation strategy. The Belize Health Information System (BHIS) integrates health information and provides all citizens with an electronic health record. As part of this program, an HRH module has been developed as a key component of the information system, which will enhance the capacity to better manage HRH and provide up-to-date quantitative data for analysts and decision-makers. In support of the Belize Health Sector Reform Program, a national HRH unit (or technical post) and team, regional HRH planning committees, an HRH information system and an HRH strategic plan were all identified as priorities for action.

Objectives

In light of the above, the main objectives of this HRH project were two-fold. The first was to complete the collection, analysis and report of “the HRH core data set” for Belize, completing a project that was initially launched in 2008. This “core data set” of quantitative and qualitative data that includes stocks and flows, education, and management and regulation, reveals the landscape of HRH of Belize and highlights immediate concerns or issues. The report on the Core Data of Belize may be found in the PAHO publication “Core Data - Belize 2009,” which compliments the baseline report and provides extensive detail of specific HRH data in Belize.

The second objective was to conduct background research required to produce a status report for Belize of its starting point, or “baseline” in relation to the indicators for the twenty HRH goals for the Region of the Americas. A research team was established in Belize with support from the Ministry of Health, the University of Belize, and the PAHO/WHO Offices in Belize and Washington, D.C. A number of meetings were held and advice was sought from a number of senior managers within the Ministry of Health.

A research team was established in Belize with support from the Ministry of Health, the University of Belize, and the PAHO/WHO Offices in Belize and Washington, D.C. A number of meetings were held and advice was sought from a number of senior managers within the Ministry of Health.

Ten data fields from the 2008 Core HRH Data Set Project, which used HRH listings from the Ministry of Health personnel records, were identified as key to the research initiative. Applying this framework, data was collected on all employees in both the public and private sectors over the period June to August, 2009. In addition, detailed information on the graduates from the University of Belize between 2000 and 2009 was also collected and reviewed. Linking the graduate data to the HRH data provided an indication of the general retention and overall distribution of health professional graduates throughout Belize.

While the data fields did impose certain limitations on the kinds of data collected, this one-time data collection exercise did not allow for historical trend analyses. Over time, as the processes for gathering and analyzing this core data are established, it is expected that the activity will be repeated annually or bi-annually (ever improving the processes) and trends will become apparent over time.

Data collected, which is both current and confirmed, provides a range of planning information that was previously unavailable in Belize to support both HRH development and management.

HRH strategies are about ensuring that there are enough health workers with the right skills and in the right places to meet the health care needs of the population. The general aim of HRH research and monitoring is to provide the information and tools needed by decision-makers to make informed choices regarding HRH programs and policies. An enhanced HRH information system supports evidence-based health services planning by identifying emerging trends and issues, estimating future HRH needs and supply gaps and determining priorities for action. In addition, the ability to track and monitor changes over time provides insight into which policies and interventions are most effective and identifies where enhanced public support, fiscal space and stakeholder participation are required.

HRH Overview and Graduate Trends at the University of Belize

In the 1990s, Belize ranked in 40th place out of forty-seven countries of the Region of the Americas in terms of density of HRH. Belize exhibited strong growth over that decade, rising to 29th place by the year 2000, and ranking in 1st place with respect to the seven countries of the Central America Isthmus. By 2005 however, of the thirty countries surveyed, only three had a lower number of physicians per 10,000 population than Belize. By contrast, Belize ranked in 2nd place in Central America and in 9th place within the Region of the Americas in terms of the total supply of nurses.

WHO estimates that five countries of the Americas Region and fifty-seven countries world-wide have critical shortages of physicians, nurses and midwives, totaling 38,000 and 2.4 million, respectively, or 4.3 million if all health care provider groups are

included.[3] While Belize had a ratio of 25 health care professionals (physicians, nurses and midwives) per 10,000 population in 2005—the minimum acceptable standard identified by WHO—in recent years its HRH density has fallen below this target figure.

With respect to HRH in Belize in 2009, a number of interesting points emerge:

- Since the year 2000, Belize's population has grown at a rate of more than 4% per year, averaging almost 6% in the Cayo and Belize Districts.
- About 52% of the population of Belize lives in rural areas.
- There were 2,283 workers employed in the health system in 2009, 1279 (56%) were health care providers while the remaining 1004 (44%) were administrative and other support staff. About 43% of health care providers were employed in the District of Belize.
- Women are 68% of the health care provider workforce, outnumbering men 2.2 to 1.
- Belize's health care providers are relatively young, 25% being in their 30s. Only 4.5% are over 55 years of age, but within a decade 16% of nurses and 20% of community health workers may be over 55 and nearing retirement age.
- There are about 30 nationalities and ethnic groups in the Belize health care provider workforce, Mestizo and Creole totaling 61%.
- Mestizo and Mayans are not well represented in the health care provider workforce (36% combined) although together they represent 63% of the total population.
- About 38% of health care providers speak only English, 5% speak only Spanish, while 41% speak Spanish and English.
- There are 181 general practitioners and 64 medical specialists working in Belize. The current density of physicians per 10,000 population is 7.5.
- Professional/registered nurses (excluding midwives) with a density of 10.2 per 10,000 population, outnumber doctors by a factor of 1.36 to one, or 1.95 to one if practical nurses are also included.
- Between 2005 and 2009, the number of registered nurses remained relatively stable while the number of specialists fell from 159 to 60. The combined ratio of registered nurses and physicians per 10,000 population dropped from 23.3 in 2005 to 17.7 in 2009.
- Only 38% of employment positions are "established," (permanent or secured positions) within the health workforce, while 23% of the positions are filled by

3. World Health Organization, The World Health Report 2006: Working together for health. Chapter One, Health Workers: A Global Profile, pp. 12-13.

either volunteers or “precarious” workers (meaning workers without secure positions) such as contract, part-time, short-term, or hourly workers.

- Cuban volunteers, representing about 3.4% of the total number of health care providers, are recruited to fill gaps in the delivery of primary health care services.
- Only about 20% of all physicians are employed in established positions.
- About 80% of all health care providers (i.e. clinical workers and health professionals) are employed in the public sector.
- The District of Belize has the greatest density of health care providers relative to its population while the Cayo District has the lowest relative density.
- Urban health care providers out-number rural health workers by a factor of 6.4 to 1. Although 52% of the population of Belize lives in rural areas, only 13.6% of health care providers reside there.
- Only about 51% of graduates from health training programs at the University of Belize between 2003 and 2007 are currently working in the Belize health care system.
- Of those retained, about 80% of graduates returned to the districts in which they resided when they had applied to the University of Belize.
- Overall attrition from employment was relatively low with health care providers having been in their current jobs an average of 9.5 years.

With respect to graduates from the health training programs at the University of Belize:

- Application rates to health training programs at the University of Belize[4] have doubled over the past decade.
- While applicant acceptance rates to health training programs are often over 80%, student registrations are only between 53 and 60%.
- Orange Walk and Corozal Districts and Mestizo and Mayan ethnics groups are not well represented among applicants to health training programs.
- The program completion rate for students in health training programs between 2001 and 2005 was only 34%.
- There were over 7,000 applicants to health training programs at the University of Belize over the past decade but only 528 graduates.

4. University of Belize health training programs include: Social Work, Medical Laboratory Technology, Pharmacy, Public Health Inspectors, Professional Nursing, Rural Health Nursing, Public Health Nursing, Midwifery, Psychiatric Nurse Practitioner and Practical Nursing.

- The number of graduates produced annually from each of the ten health training programs exhibited wide variation between 2000 and 2009. For example, while there were 26 midwifery graduates in 2002, no graduates were produced between 2004 and 2006. Similarly, the number of nursing graduates varied from a low of 5 in 2006 to a high of 26 in 2008.
- Although 52% of the population is rural, only 21% of graduates were from rural areas.
- Of 142 nursing graduates in recent years, 117 elected to take the nursing certification exam. Only about 50% of nurses pass the certification exam in any one year. Nurses wrote the nursing examination an average of 1.62 times before achieving a passing grade, though only about 68% pass the exam overall.
- About 50% of students in health training programs received scholarships with a proportionately higher number of students from Cayo and Stann Creek Districts receiving assistance.
- Belize's ratio of physicians, nurses and midwives[5] per 10,000 population is only 18.8. A total net growth[6] of 32 physicians, nurses and midwives per year is needed to reach a HRH density of 25 per 10,000 by 2015—plus an additional 26 annually to accommodate ongoing population increases—for a grand total requirement of 58 per year.
- The average output from all health training programs at the University of Belize over the past decade has been 53 annually. The output from the nursing and midwifery training programs has averaged less than 14 graduates per year, well below anticipated requirements.

Implications and Next Steps

In light of the above, steps need to be taken at policy and program levels to:

- increase student enrollments in health training programs at the University of Belize;
- increase the uptake of applicants who have been accepted into health training programs;
- recruit more students from rural areas and ethnic populations;
- expand the number and range of scholarships across health training programs and districts;

5. Two-thirds of midwives in Belize are also trained nurses. For purposes of this inventory, health care providers are only listed once in relation to their role in their current clinical positions, irrespective of other credentials they may possess, in order to avoid double-counting.
6. In view of their wide range in roles and differences in deployment globally, WHO only provides a HRH density target for physicians, nurses and midwives as a team, not on an individual professional basis.

- reduce student attrition from health training programs;
- enhance graduate retention rates;
- improve graduate certification exam pass rates;
- significantly augment the number of employment opportunities for health professional graduates; and,
- increase the proportion of 'established' employment positions available to health care providers.

With respect to the baseline goals, while Belize has not reached all of its targets, it has made concerted attempts to do so. While strengths in one area sometimes offset weaknesses in another, by and large Belize has made progress in HRH in recent years:

- Minimum Recommended Numbers—Proportion of physicians/nurses/midwives to the population: The relative proportion of general practitioners and nurses is good (although there are shortages overall).
- Equitable Distribution: Significant rural disparities are greatly helped by mobile health clinics and the presence of community health workers.
- HRH Planning Unit in the Ministry of Health: An HRH planning function is being developed.
- Conditions and Motivation for HRH: There are opportunities for staff to upgrade their skills.
- Labor Relations: Health and safety provisions and labor negotiation mechanisms are in the process of being ratified by government.
- Coordination between Needs of Health Sector and Education: Half of all students in health training programs have bursaries and most of the recent graduates who are working in the health system have returned to their home districts (although only about half of recent graduates are currently employed).

The Regional Goals that provide current opportunities for Belize are:

1. Migration and International Recruitment: Currently there is no code of practice regarding the international recruitment of health care professionals.
2. Migration and Internal Development: There does not exist at this time a government policy on self-sufficiency regarding the development of HRH for Belize.
3. Attrition of Students in Health Professions: With respect to the University of Belize, the average attrition rate from health training programs was 66% for those students who were accepted into the first semester of the academic year

between 2001 and 2005. The average annual pass rate for nurses on the certification exam is about 50%.

4. Coordination of Education and Health Needs: The health training programs at the University of Belize are not yet accredited.

This report makes a broad range of recommendations to support HRH development in terms of partnerships, capacity building, data development, research and strategic planning to address identified HRH concerns.

In specific terms, it is recommended that a permanent national HRH planning advisory committee be established with broad representation from professional, university and government sectors to assist the MoH of Belize on an ongoing basis to develop and implement an HRH strategic plan for the country. This would include providing whatever support is necessary to the MoH HRH Unit to lead and carry out this initiative. The development of an HRH minimum data set to support health services planning that is integrated with the BHIS would be key to these initiatives. The current physician recruitment and retention plan as well as the role and capacity of the University of Belize need to be evaluated.

As a first priority, the data suggests that a HRH strategy will be useful in considering the priorities that have been mandated by the Ministry of Health for the long-term health service needs of the population, the capacities of Belize's health care delivery system and the options available to respond in a way that is viable and sustainable over the longer term.

1. Introduction

Regional[1] Baseline Goals for HRH (2007-2015)

At the 27th Pan American Sanitary Conference in July 2007, twenty Regional baseline goals, organized under five principal challenges, which had been developed to address the HRH issues identified above, were presented and adopted. The strategic goals are intended as an orientation and framework for the analysis and formulation and enrichment of the national ten-year human resources development strategies, according to the specific situation of each country and the objectives that are realistic to attain in each context.

The Regional Network of Observatories of Human Resources would determine the baseline values and will monitor the progress achieved. The identification of Regional goals, and an assessment of the status of individual countries in relation to these targets, will contribute to the development of national and regional HRH plans of action and technical cooperation.

Challenges

These five principal challenges for the Americas Region, identified through the consensus of the Toronto Call to Action, provide the backdrop and thematic framework for the twenty regional goals set out below.

- Build long-range policies and plans to adapt the work force to the changes in the health system.
- Put the right people in the right places, achieving an equitable distribution according to the health needs of the population.
- Promote national and international initiatives for countries affected by migration to retain their health workers and avoid personnel deficits.
- Achieve healthy workplaces and promote a commitment of the health work force with the mission of providing quality services to the whole population.

1. Region of the Americas.

- Develop mechanisms of cooperation between training institutions and the health services institutions to produce sensitive and qualified health professionals.

Regional Goals, Rationale and Comparative Results for Belize[2]

The twenty regional goals set out below further define and operationalize the five principal challenges above, providing a framework within which to work toward HRH development and a set of indicators and benchmarks to monitor progress in achieving HRH goals over time.

The PAHO/WHO Handbook for Regional HRH Baseline Goal (2008), produced as a reference for countries within the Region to ensure the consistent identification and definition of the initial baseline data, was used to guide data collection and interpretation in Belize. Responses to the exploratory questions set out in the Handbook to assist countries in developing their respective HRH status reports in relation to the Regional goals, are included below.

A “visual star” is presented at the end of each of the five Challenge sections to provide a visual summary of Belize’s current status in relation to each of the Regional HRH baseline goals. It allows for the quick identification of those areas in which Belize has achieved its greatest success with respect to HRH targets as well as those areas which may require priority attention. It also provides an HRH reference point to cross-compare Belize to other countries within the Caribbean Region, the Central America Region and throughout the Region of the Americas as a whole.

2. All the information and data in this section were extracted from the Belize HRH core data set survey undertaken and verified between July and August, 2009, and described in detail in the first part of this report.

2. Challenge One

Build long-range policies and plans to adapt the work force to the changes in the health system

GOAL 1

All countries of the Region will have achieved a human resources density ratio level of 25 professionals per 10,000 inhabitants.

Rationale

The purpose of this goal is to illustrate the relation between the population in a country and the number of human resources for health with the goal of calling attention to the possible deficits or over-production of these resources. The WHO has suggested that countries require a minimum of 25 health care professionals per 10,000 population in order to provide the minimum acceptable level of health care services to the population. Various global studies have found that few countries with ratios below this level have the capacity to reach the Millennium Development Goals by the year 2015. The index generally includes physicians, registered nurses and midwives, both public and private, migrants and long-term volunteers, who have university training and are employed in the provision of direct patient care.

Results

There are 241 physicians (181 general practitioners and 60 medical specialists), 328 nurses (excluding 141 practical nurses; but including 8 public health nurses, 65 rural health nurses and 19 psychiatric nurse practitioners) and 35 midwives (excluding 7 practical nurse midwives). The population estimate from the Statistics Institute of Belize for 2008 of 322,100 was used as the denominator to calculate the health care practitioner to population ratios. The ratio for physicians was 7.5, for nurses 10.2 and 1.1 for midwives, for a country total of 18.8.

This figure is significantly below the optimal (minimum) recommended target ratio of 25 per 10,000. For Belize to achieve this target figure by 2015, 32 new health care providers would be required annually to achieve this number. Furthermore an additional 26 practitioners would be required to keep pace with the annual growth rate of

the population, for a grand total of 58 per year, not allowing for natural attrition from the workforce. If all health care providers in the country are included however, the ratio for Belize is 59.2.

GOAL 2

The regional and sub-regional proportions of primary health care physicians will exceed 40% of the total medical workforce.

Rationale

To improve population health, many countries are focusing on reformed primary health care (PHC) delivery systems and on strengthening overall public health infrastructure. The key feature of PHC reform is a shift from individual, hospital-centered practice to teams of community-based professionals, who are accountable for providing comprehensive, coordinated health services to their patients. As such, it is critical that the workforce be adequately prepared to meet expected changes in the health system and to support primary health care delivery.

As PHC physicians generally represent only about 25% of the Region of the Americas' total medical workforce, it will be necessary to significantly increase physician numbers within the primary health care team. Strengthening the physician component enhances the primary health care teams' overall capacity for collaborative development, innovative deployment and shared leadership, thereby providing a broader, more flexible and effective response to the full range of community health needs and priorities.

Results

PHC focuses on the provision of community-based, first-contact health services delivery. The PHC physician is actively involved in the provision of public and/or private primary health services, in locations other than acute care or long-stay hospitals.

If general practitioners and primary health care physicians are considered synonymous, and all general practitioners (181) are considered as a percentage of the total supply of physicians in Belize (241), PHC physicians are 75.1% of the physician total. If only the physicians working outside of the district of Belize (132) are considered as PHC physicians, this percentage falls to 54.8%. However, if only those physicians currently residing in rural areas of Belize (i.e. residential addresses are not in towns) are included the figure falls to 6.2% with only 15 general practitioners meeting this criterion.

GOAL 3

All countries will have developed primary health care teams with a broad range of competencies that systematically include community health workers to improve access, reach out to vulnerable groups, and mobilize community networks.

Rationale

The PHC Primary Health Care Team refers to groups of professionals who deliver health services in the community at “primary” or first points of contact between the patient and the health delivery system. The membership of the PHC teams can vary widely and generally reflects the particular health needs of the local community which it serves. The effectiveness of the team is related to its ability to carry out its work and to manage itself as an independent, coordinated, collaborative, self-sufficient health care delivery group.

The Community Health Worker, as a key member of the PHC Team, generally has a familiarity with the population he or she serves, and thus provides a more direct linkage between the health delivery system and the identified health care needs of the community.

Results

The core PHC Team often includes the primary care physician, nurses, midwives and community health workers, but can include over a dozen health care providers, depending upon the country and the fiscal and human health resources available. Given the general physician shortage in Belize, a physician is not generally a permanent member of the PHC Team, except in the case of emergencies. Public Health Nurses often leads the team, accompanied by Rural Health Nurses in a two-person core team. The Public Health Nurse is responsible for all the traditional functions of the PHC Team, including coordinating services, rehabilitation, health promotion and disease prevention, antenatal and postnatal care, etc., but generally excludes the diagnosis and management of acute conditions and emergency treatment.

Currently there are 8 Public Health Nurses, 65 Rural Health Nurses and 158 Community Health Workers active within rural communities. Although 87% of Community Health Workers do reside and practice in rural areas, it is acknowledged that there is a significant shortage of qualified personnel to provide health services to the rural population.

Seven questions were set out in the Handbook to explore this goal and to measure the number and extent to which PHC has been developed in countries throughout the Region. The scores, with a maximum of 10 points each, were awarded as follows:

The scoring opposite the points is confusing and perhaps should be deleted.

Is there a national program?	No (0/10 Points)
What percent of population is covered?	+80% (9/10 Points)
Does the program utilize community networks?	Yes (10/10 Points)
Does it cover vulnerable populations?	Yes (10/10 Points)
Which populations are covered?	All (10/10 Points)
Which professional groups are included?	All* (8/10 Points)
What competencies are required of the PHC team?	Most (8/10 Points)
TOTAL	55/70 Points

Note: *Generally physicians are only included on the PHC Team in an emergency or on an "as needed" basis.

While there is no national PHC program and no MoH focal point to carry out the initiative, there is at the regional level. But PHC remains a MoH strategy and it has distinct health teams that continue to support community health workers. PHC has been revitalized out of Belize and serves to integrate the MoH and non-governmental health sectors. There had been a PHC committee from the mid 1980s through the early 1990s but priorities later shifted to other program areas. The level of care generally has increased significantly since then.

It is to be noted, that the role of mobile health clinics in the regions sometimes extends beyond the traditional function of the PHC Team and may include health inspection, health education, psychiatric nursing, etc. The diagnosis and management of acute and chronic conditions are generally conducted on a referral or emergency basis as physicians are not always included in regional team visits. It has been noted that rehabilitation services after illness is present but inadequate and more MoH attention is required in this regard. Again, coordination of health care services for populations of high risk is provided but service is compromised because of lack of transportation and scarcity of pharmaceuticals.

The total score for this indicator is 55 out of a possible 70 points, or 78.6%. In view of the significant shortage of HRH in Belize, the capacity to deliver the services that are offered is significantly compromised.

GOAL 4

The ratio of qualified nurses to physicians will reach at least 1:1 in all countries of the Region.

Rationale

The purpose of this goal is to show the imbalance that exists in the production of the medical and nursing personnel that could affect the composition and competencies of health care team. For some countries it is expected that for every physician there will be at least four nurses and in other countries the reverse is true. The mini-

mum goal in this instance is identified as one physician to one nurse. Given the scope of the activities of the PHC Team, the expanded role and credentials of nursing and the benefits of using nurses to their full competency levels (especially in a community health context), having the appropriate number of appropriately deployed nurses enhances health service delivery cost-effectiveness and efficiency.

Results

Currently there are 241 physicians and 328 nurses working as health care providers in Belize. This converts to a ratio of 1.36 nurses for every physician, surpassing the recommended ratio of 1 to 1 by a significant margin. It is to be noted that this target figure is achieved not through a rich supply of nurses (in fact, more nurses are required), but rather through an undersupply of physicians.

GOAL 5

All countries of the Region will have established a unit of human resources for health responsible for the development of human resources policies and plans, the definition of the strategic directions and the negotiation with other sectors.

Rationale

The purpose of this goal is to call attention to the importance that decision makers at the highest levels with the health care system assign to HRH. This commitment is evidenced by the development and support of a formal planning unit with specific responsibilities for HRH and that links to and is supportive of the strategic direction of the health care delivery sector. This function goes beyond personnel administration to that of a human resources policy and program development and management.

Results

In this regard, the following questions set out in the Handbook were explored:

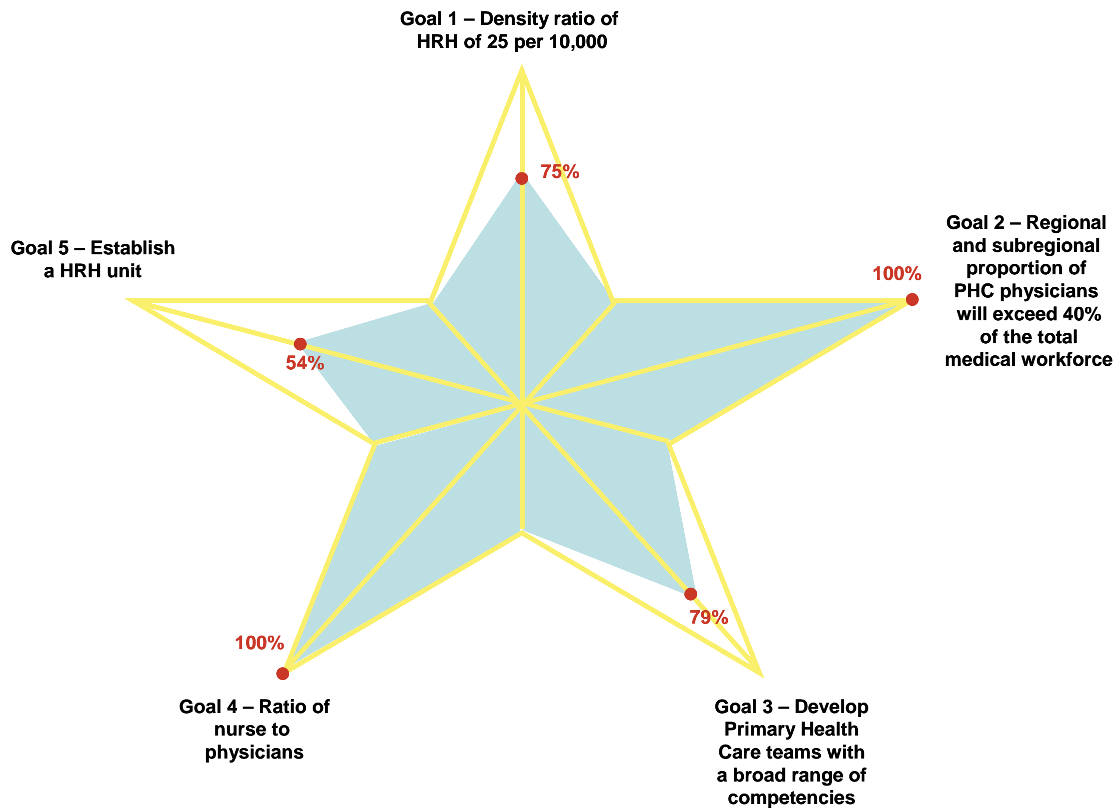
Does a Unit for human resources for health exist?	Partial (3/6 Points)

Three out of six points were awarded in response to this question in view of the fact that while no formal HRH unit formally exists as yet, support for the function has been emphasized in the MoH's health reform agenda and preliminary efforts have been made to establish an HRH function/Unit and to support the HRH planning process. The current MoH support for the Core Data Management and Regional Baseline Goals projects is a significant step in that direction.

Is there Unit within the hierarchy of the Ministry of Health and part of national strategic directions?	No (0.5/1 Point)
Develops HRH policies for the whole organization?	No (0/1 Point)
Plan the number and type of required HRH?	Partial (0.5/1 Point)
Provides strategic direction in the management of HRH?	Partial (0.5/1 Point)
Has an regularly updated HRH information system?	Yes (1 Point)
Utilizes an inter-sectoral negotiation process?	Yes (1 Point)

The result is a grand total of 6.5 points out of a possible 12. This indicates that Belize is about half way (54.2%) towards establishing a fully functioning HRH planning unit.

Figure 1: Completion Percentage of Goals 1-5



3. Challenge Two

Put the right people in the right places, achieving an equitable distribution according to the health needs of the population

GOAL 6

The gap in the distribution of health personnel between urban and rural areas will have been reduced by half in 2015.

Rationale

Over the past twenty years the rate of population growth for many urban areas in the Region of the Americas has been double those of rural areas. Similarly, the growth in the number of health care providers has been concentrated in urban areas, contributing to a continued major imbalance in the urban-rural distribution of the health workforce. While physician to population ratios within the Region of the Americas may be up to four times greater in urban areas than for countries as a whole, the urban physician-to-population ratios may be more than eight times greater than the comparable physician ratios in some rural areas. As a result, rural communities continue to have very limited access to required health care services compared to their urban counterparts.

Achieving a more equitable geographic distribution of health professionals throughout the Region of the Americas—particularly within the context of expanded community-based primary health care teams—would greatly enhance community access to health care services and contribute to the improvement in health outcomes and overall community health status.

Results

There are currently no common definitions of urban and rural among the countries of the Region of the Americas. As such, the definition of urban employed in this review included the population of all of towns throughout the country: Belize, Belmopan, Benque Viejo del Carmen, Corozal, Dangriga, Orange Walk, Punta Gorda and San Ignacio (Cayo, Sta. Elena). Conversely, the rural population was assumed to include those residing outside of towns noted above. Of a total population of 322,100, about

154,100 people resided in urban areas while 168,000 (52.2%) lived in rural communities.

The same urban-rural categories noted above were applied to the addresses of the health care providers currently employed in the health care system. In addition to physician, nurses and midwives, community health care workers were also included in the mix in view of their role and strong representation in rural communities. As such, the rural workforce was deemed to consist of 15 physicians, 14 nurses, 1 midwife and 137 community health workers, for a total of 167 health care providers. The ratio of health care providers (physicians, nurses and midwives) residing in rural areas per 10,000 population was 1.8. This ratio increases to 9.9 if the 167 community health care workers living in rural areas are also included in this total.

Adhering strictly to the definition above means 59 rural health nurses, who serve rural communities but reside in urban areas, were excluded from this total. If rural health nurses are also included in the mix with physicians, nurses, midwives and community health workers, the ratio of health care providers living in rural areas increases to 13.5 per 10,000 rural population.

The comparable figure for the urban population (ratio of doctors, nurses and midwives residing in urban areas per 10,000 urban population) was 38.0. This ratio is reduced 34.1 if all rural health nurses are allocated to rural areas for the purposes of this calculation.

If all health care providers are totaled by current place of residence, only 174 of the grand total of 1279 health care providers (13.6%) resided in rural areas. This translates to a ratio of 10.4 and 71.7 translating to a ratio of 10.4 for rural health care providers and 71.7 for urban health care providers per 10,000 population.

The results of comparing the above ratios of health care providers per 10,000 population of rural (numerator) and urban (denominator) are as follows:

1.8/38	Doctors, nurses and midwives = ratio of 21 to 1
9.9/38	Also includes community health workers = ratio of 3.8 to 1
13.5/34.1	Plus allocating rural health nurses to rural areas = ratio of 2.5 to 1.
10.4/71.7	Includes all health care providers by residence = ratio of 6.9 to 1

These figures indicate that while there is a large disparity between the urban and rural supply of health care providers in Belize, the presence of community health workers, public health nurses and rural health care nurses in communities through mobile health clinics, contribute significantly to reducing this disparity with respect to the provision of rural health services.

That being said, the goal of reducing the gap in the total distribution of all health personnel between urban and rural settings by half by 2015 will require achieving a target of 3.5 to one (compared to the current ratio of 6.9 to one). If only doctors, nurses

and midwives who reside in rural areas are included, the target ratio of urban to rural health care providers is 10.5 to one for 2015, half the current ratio of 21 to 1.

GOAL 7

At least 70% of the primary health care workers will have demonstrable public health and intercultural competencies.

Rationale

The effectiveness of the PHC Team is contingent upon members having the requisite clinical skills, public health knowledge and intercultural competencies to diagnose patients, administer treatment and monitor outcomes, that are appropriate to and reflective of the health care needs of the diverse (ethnic, linguistic, religious, socio-economic, etc.) communities that they serve.

Broad-based public health competencies may enhance the capacity of health professionals to provide comprehensive, community-based patient care that is more responsive to the full range of population health needs. These competencies include skills involved in preventing disease, prolonging life and promoting and maintaining health through population surveillance and the promotion of healthy behaviors.

In order to be most relevant and effective, public health strategies must be sensitive to the cultural contexts in which they are being administered. In addition to increasing the size of the health workforce, enhancing the intercultural competencies of those health workers who will be providing the services will improve the access for diverse cultural groups to needed health services.

Results

Public health competencies generally include, but are not restricted to, any combination of the following task, duties and responsibilities:

- ability to develop strategies for health promotion
- surveillance of risk factors and epidemiological conditions
- education and preventative care to prevent disease and injury
- knowledge of public health interaction with health services at the local level
- able to apply evidence in decision-making, policy and program development, and practice
- capacity to conduct investigations, plan and evaluate
- promotes partnerships, collaboration and advocacy

- capacity to pursue and promote well-being and to address inequities in health status

Intercultural competencies more specifically include interactive and communication skills that acknowledge and highlight the different cognitive, emotive and discourse awareness that must be taken into account when providing health care services to diverse ethnic, linguistic, religious and socio-economic groups.

With respect to the nursing programs at the University of Belize many of these skills are developed in both the general and specialty nursing courses. In addition to the fundamentals of nursing, applied biological science and medication administration, a wide range of courses are offered including an emphasis on nursing care of infants and children, reproductive health care, nutrition and family health in a community setting.

Public Health Nursing includes a focus on epidemiology and disease control and socio-cultural practices in health and disease, including many of the required competencies listed above.

The Nursing Management and Leadership course offered in the Public Health Nursing Program introduces organization management concepts and their application in analyzing strategic, managerial and financial issues within the health care system. This includes an examination of the health services workforce and how it affects the outcomes and performance of the health care system and examines managerial styles and behavioral issues and challenges posed across a variety of health care settings. In addition, the other social factors that affect care-seeking behavior and health services utilization, such as socio-cultural beliefs, attitudes and values, are also studied.

With respect to the delivery system, the topics include quality of care (including monitoring, regulation and policy issues), health promotion and disease prevention and care of special disorders and populations and issues of primary care and policy issues relating to secondary care in the health system. New programs to address emerging health issues are also contained in the course outline.

It is to be noted, however, that with the introduction of a new Nursing Act, which includes new requirements for nursing, nurse training and licensure are not optimally aligned.

With respect to the PHC team, physicians are generally included only in referral or emergency situations and are not regular members of the team or mobile health clinics. While many general practitioners have the requisite public health competencies, because of physician shortages and the current organization of health care services delivery, they do not always have the opportunity in this context to apply them. Community health workers are a significant component of rural health care services but generally they do not have the training and range of skills and competencies listed above. As evident from their course curriculum, public health and rural health nurses

however do have the requisite skills but (again) because of significant shortages do not always have the opportunity to apply them.

With respect to the core PHC team, it is expected that most physicians would possesses the requisite public health competencies and rural and public health nurses would possess half of those listed, i.e. the ability to develop strategies for health promotion, education and preventative care to prevent disease and injury, promote partnerships and collaboration, and, promote well-being to address inequities in health care. Community health workers would likely not possess many of the high-level skills required.

This suggests that about 52 of the 225 (23%) health care providers as part of mobile health clinics and primary health care teams would have the appropriate public health competencies. If community health workers are excluded from the total, it is suggested that up to 59% of primary health care practitioners may have the necessary training and skills to adequately perform a public health function.

With respect to intercultural competencies, it is expected that only public health nurses have this kind of training and communication skills required with respect to the diverse ethnic, linguistic, religious and socio-economic groups. Even this training does not cover in the expected depth, the different cognitive, emotive and discourse awareness with respect to each of these groups. Community health workers may have the awareness but not the training. Similarly physicians, all of whom have been trained outside of Belize, would not have had the required exposure and experience.

As such, it is estimated that none of the physicians or community health workers, half the public health nurses and one-quarter of rural health nurses have the required skills. This suggests that only 19 of the 225 (8.4%) health care providers have the appropriate intercultural competencies.

While it is recognized that there may be an overlap of health care providers who possess both public health and intercultural competencies, for the purposes of this exercise both of these indicators were added together (23% plus 8.4%) for a total score of 31.4%. This suggests that Belize, with a score of 34.1, is 44.9% of the way towards achieving the Regional goal of 70%.

GOAL 8

Seventy percent of nurses, nursing auxiliaries and health technicians including community health workers, will have upgraded their skills and competencies appropriate to the complexities of their functions.

Rationale

In addition to providing the first point of entry to the health system and providing a coordinating function for other health and community services, primary health care recognizes the broader determinants of health. This includes coordinating, integrating and expanding health systems and services to improve population health, to prevent sickness, and to promote health. It encourages the best use of all health providers, through expanding scopes of practice, evolving working relationships and potential new roles within multi-disciplinary teams, in order to maximize the potential of all health resources.

It is important for all members of the PHC care team to have the appropriate skills and to work at their full competency levels within multi-disciplinary environments in order to best meet the needs of communities and the technical requirements of evolving health care delivery systems.

Results

Currently there is no requirement for health care providers on the job to upgrade their skills to match the changing complexities of their employment positions. While some workers do upgrade their skills when seeking promotions, or return to university to complete or upgrade their qualifications, this is currently done on a voluntary basis.

Employment policies with respect to bonuses and merit pay will need to put into place to provide both incentives and requirements for health workers to acquire the appropriate skills required to keep pace with the changing needs, technology and organization of the health care delivery system.

Nurses, auxiliary nurses and medical technicians currently total 667, about 52% of the total health care provider workforce. While currently there is no requirement for these workers to upgrade their skills, the target figure of 70% suggests that 467 of these workers will be required to enhance their competencies.

While there is generally no established requirement for them to do so, it is acknowledged that some health care providers do upgrade their skills. Nurses, however, are required to pass in-service training to update their knowledge and skills for license renewal. As such, Belize is considered as having achieved this goal.

GOAL 9

Thirty percent of health workers in primary health care settings will have been recruited from their own communities.

Rationale

Historically, the growth in the number of health care providers has been concentrated in urban areas, contributing to a continued imbalance in the geographic distribution of the health workforce as seen in Goal 6. The urban physician-to-population ratios for some countries of the Region of the Americas are more than eight times greater than the comparable physician ratio in rural areas. Many countries have adopted incentives to attract health care providers to rural areas, but most have only achieved modest, short-term success. While appropriate salaries and stable, safe working environments are key considerations in attracting health care workers to rural areas, matching the right individual to the right job in the right place appears to be equally important.

Health care workers who are recruited from their own communities are more likely to return and remain in their communities to work after completing their training than are those who have been recruited externally. Local recruitment further enhances the strength of the primary health care team by enlisting those individuals that already possess the requisite cultural sensitivities and knowledge of community networks, contacts and needs.

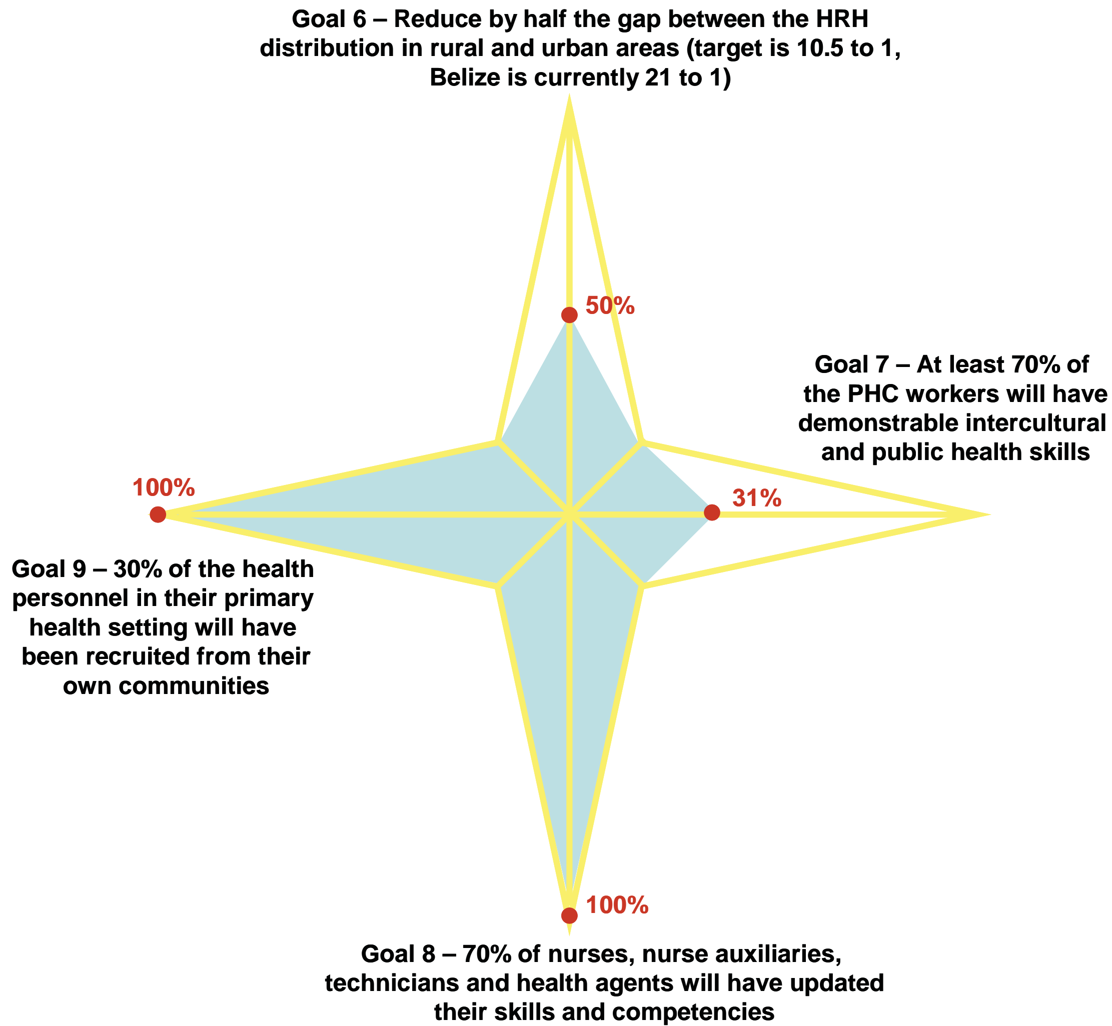
Results

While data is largely unavailable with respect to this question, all professional nurse and midwife graduates from 2003 to 2007 (not just those in PHC settings) were matched in terms of the district in which they are currently employed with their home district when they applied to the University of Belize.

Of the 79 nursing and midwives who graduated over this period, only 40 (50.6%) are currently employed as health care providers in the health care system. Of those 40, however, 32 (80%) were employed in their "home" districts. The return rate ranged from a low of 50% in District of Toledo and 87.5% in the District of Belize. Three-quarters of the workers who remained in the District of Belize, and 40% of all health care providers who were retained, were working at the KHMH regional hospital. Outside of the District of Belize, about 70% of nursing and midwife graduates appeared to return home.

If the total graduates who returned to their home districts (32) are considered as a percentage of all nursing graduates over the five year period (2003-2007)—rather than just those staff who are currently working—the district recruitment rate is 40.5%. This figure surpasses the proposed Regional target for goal eight of 30%.

Figure 2: Completion Percentage of Goals 6-9



4. Challenge Three

PROMOTE NATIONAL AND INTERNATIONAL INITIATIVES FOR COUNTRIES AFFECTED BY MIGRATION TO RETAIN THEIR HEALTH WORKERS AND AVOID PERSONNEL DEFICITS

GOAL 10

All countries of the Region will have adopted a global code of practice or developed ethical norms on the international recruitment of health care workers.

Rationale

In view of the fact that a global shortage of health care workers currently exists in 30% of all countries, that substantial increases in the demand for health workers are forecast in higher income countries in the near future, and, that increasingly competitive health worker migration worldwide will have a significant impact on the workforces lower income countries, the WHO has developed a draft Code of Practice for the International Recruitment of health workers. Countries are being asked to provide feedback on this draft Code of Practice.

The adoption of an ethical code of practice would: i) support a global approach to the issue; ii) recognize the rights of individuals to freedom of movement; iii) recognize the needs of developing nations; iv) limit active recruitment from nations of highest need and with the greatest disadvantages of achieving them; v) establish guiding principles for bilateral agreements with select developing nations; and, vi) act consistently with—and in broad support of—their broad goals and directions.

The migration of health professionals in the Americas is expected to remain a serious concern for many of the countries of the Region of the Americas. Inequities in the supply of human resources for health not only vary greatly across the Region of the Americas, but the gap between countries with high and low densities of health workers continues to grow. The adoption of a code of practice regarding the international recruitment of health workers would be an important first step in developing broad, ethical, collaborative workforce policies to better stabilize and manage the health workforce of the Region of the Americas.

Results

Belize has not currently adopted a global code of practice or developed ethical norms for the international recruitment of health care workers.

In view of the shortage of health care workers in Belize and the increasing demand for health care workers world-wide, there will be continuing pressure to develop HRH strategies and policies in this regard that address the address the health care delivery needs of Belize within a regional and global planning context.

GOAL 11

All countries of the Region will have a policy regarding self-sufficiency to meet its needs in human resources for health.

Rationale

It is generally agreed that any long-term sustainable human resources strategy requires a significant investment in national self-sufficiency in HRH. This principle applies to both developing countries who are the primary source of new immigrants, and developed countries which are generally the destination) for migrant health workers.

Developing countries need to work—with the policy and fiscal support of other nations—to reduce the push factors with respect to emigration of healthcare workers, while developed countries will need to reduce incentives and increase barriers to lower the pull factors that attract migrant health workers. A commitment to becoming more self-sufficient requires that developed nations train and retain, through health workforce incentive programs, the appropriate number of health professionals that are required to meet their identified population health needs.

It is recognized that self-sufficiency is a long-term goal for most countries. Adopting self-sufficiency as the policy of first response in HRH program planning, however, would be an important strategic approach to help stabilize the Region of the America's health workforce by encouraging greater investment in workforce capacity and infrastructure development. Utilizing migrant health workers as a demand "buffer", rather than as a ongoing primary source of health care workers, would be an key component of this approach.

Results

Currently Belize does not have a policy regarding self-sufficiency to meet its needs in HRH.

Self-sufficiency in HRH is achieved by countries training and retaining the appropriate number of health professionals that are optimally required to meet the identified needs of their population. This approach aims to achieve a more optimal, stable

and appropriately distributed health workforce through a strategic investment in health workforce infrastructure and capacity development. By emphasizing more focused and effective country health workforce recruitment and retention policies and programs, the dependence on recruiting health workers from other countries to meet local needs is minimized.

It is recognized that self-sufficiency is a long-term goal and may in fact not be achievable by many countries. But by recognizing the factors involved and including them in HRH planning, policies and programs, countries tend to achieve managed growth and greater stability in their respective health workforces. The result is that countries may then be less dependent upon other nations to fulfill their human resources for health needs.

A policy of self-sufficiency is also a key enabling factor in developing a code of practice on international recruitment that is viable over the long term.

GOAL 12

All sub-regions will have developed mechanisms for the recognition of foreign-trained professionals.

Rationale

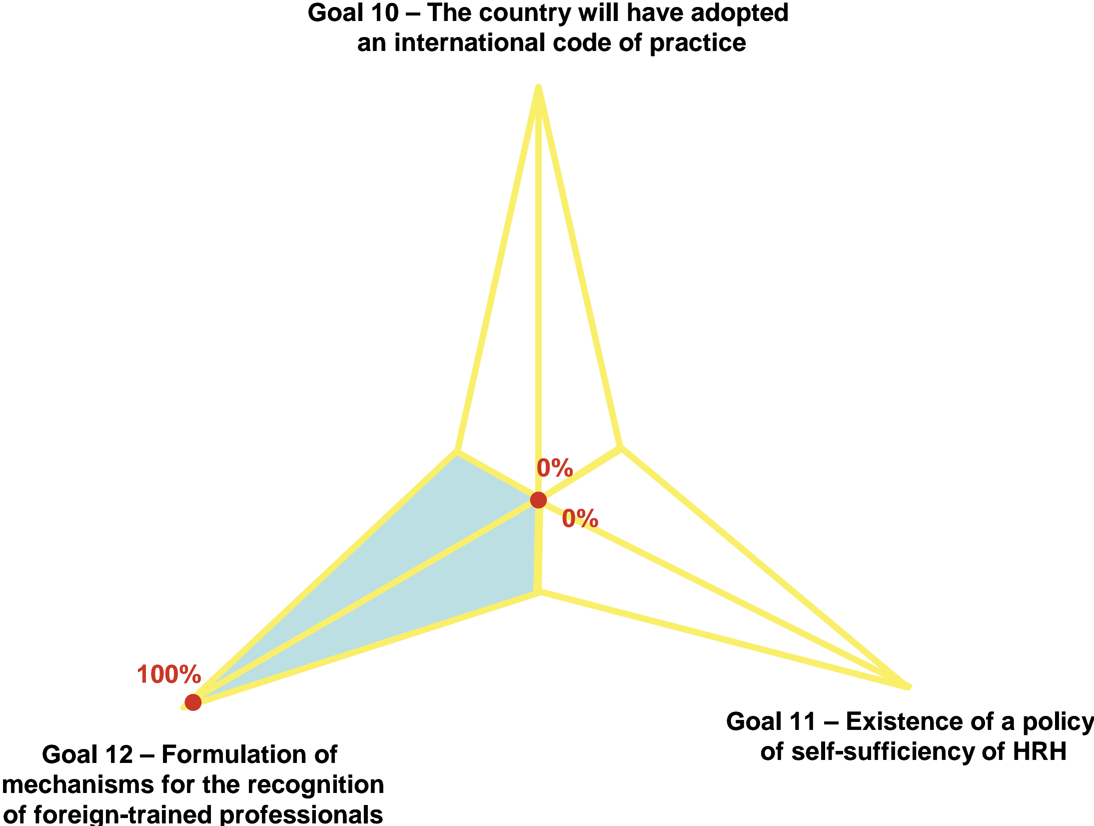
It is important to deepen the pool of the Region's workforce talent and skills by ensuring more successful integration of new immigrants into the economy and into communities. The introduction of common guidelines and mechanisms for the assessment of credentials and competencies of foreign health workers seeking licensure ensures the speedier recognition of foreign credentials and prior work experience and facilitates the assimilation of immigrant health workers into the workforce. This approach would strengthen the human resource capacity of the health delivery system by ensuring that immigrant workers are accepted into the workforce as early as possible and by allowing them to work at their full competency levels. A standardized approach that supports the recognition of foreign credentials helps stabilize the workforce by improving the deployment and long-term retention of immigrant health workers.

Results

Belize has achieved goal twelve. Under the CARICOM agreement, there is free movement of health care professionals between the 15 member countries (plus 5 associate members) within the region. This allows health care professionals to relocate to the country of their choice with the knowledge that their credentials will be honored and that they will be able to work in their capacity as a health professional without further testing or training. Over 900 Cuban health care workers, for example, are employed throughout the region, 44 of whom are currently in Belize.

With respect to health care professionals—doctors, nurses, midwives and dentists—from other countries however, they are all required to write the appropriate licensing exam through the Belize Medical Council, Dental Council or the Nursing and Midwives Council. While there is no official language exam, general English language proficiency is assessed during the respective Council's interview process.

Figure 3: Completion Percentage of Goals 10-12



5. Challenge Four

Achieve healthy workplaces and promote a commitment of the health workforce with the mission of providing quality services to the whole population

GOAL 13

The proportion of precarious, unprotected employment for health service providers will have been reduced by half in all countries.

Rationale

An effectively functioning health delivery system is one of the many factors that determine the health of a population. As such, promoting stable working conditions for all healthcare providers is an important strategy for improving population health. Precariously employed workers, such as temporary employees, part-time workers) and people working in low-wage positions with uncertain prospects for the future, face high levels of job insecurity and frequent short-term employment. The reduction of precarious, unprotected employment for health service providers will enhance the long-term success of health workforce recruitment and retention strategies and increase the overall stability, manageability and effectiveness of the health workforce.

Results

Of the 1279 health care providers employed by the health care delivery system of Belize, only 486 (38%) are established positions. About 17% of the health workforce are volunteers (e.g. Cuban physicians who are paid by their home country, and community health workers, etc.), 0.5% are contract positions and a further 6.5% are open-vote, unestablished positions that offer no long-term security or benefits to health workers.

While all employment positions are covered by social security, contracted positions have contracted benefits and no long-term security, and volunteers and unestablished positions do not have pension plans, health services insurance, pregnancy leave or disability coverage. Furthermore, largely outside of union contracts, these position are

not protected from job out-sourcing and have limited options to appeal unsatisfactory or unhealthy working conditions.

The number of non-tenured, contracted, voluntary and unestablished positions results in less than optimal protection for health workers and contributes to labor turnover, chronic vacancies and general workforce instability.

Approximately 30% of the health care provider workforce in Belize falls into the category above. The target is to reduce the unprotected proportion of the workforce by half, or 15%, by the year 2015. This would include, as a priority, reducing the unestablished positions from 83 to 41, or from 6.5 to 3.2% of the workforce.

GOAL 14

Eighty percent of the countries of the Region will have in place a policy of health and safety for the health workers, including the support of programs to reduce work-related diseases and injuries.

Rationale

Employee health and safety programs, policies and legislation need to be developed and implemented to provide formal guarantees of safe and healthy work environments for all healthcare workers with respect to general working conditions and overall workplace safety. Health and safety programs need to be tailored to the specific requirements of individual workplaces. Formal programs to enhance workplace safety and security result in improved worker job satisfaction, better workplace performance and greater stability through lower rates of worker absenteeism, turnover, sick leave and general attrition.

Results

This responsibility, under the Occupational Safety and Health Act, has been proposed to be a mandate by the Belize government for both governmental and private employers. As of October 2009, this law has been proposed but not yet ratified by Cabinet.

This goal has not yet been achieved in Belize.

GOAL 15

At least 60% of the health services and program managers will fulfill specific requirements for public health and management competencies, including ethics.

Rationale

The purpose of this goal is to professionalize and strengthen the leadership and administration of health services delivery with a view to achieving greater efficiency in management and a greater capacity and commitment for work. The proportion of managers who have formal certification from a university or through an accredited in-service training program is an indicator of progress with respect to this goal.

Results

A brief survey of a number of MoH officials at Head Office and the health regions estimated that about half (50%) of middle and senior management had some form of certification in health management, just short of the target of 60%. It was further estimated that about one-third of management staff in health facilities, one-half in health regions, and about 60% in the MoH had health management certification. While these figures were not verified, it was noted that the documentation would be available under job descriptions and personnel records of the various managers.

The MoH does operate a fund to support training in health management and administration. The MoH, under its Action Plan, has workshops that provide certification and funds training through the Belize Institute of Management. Pending availability of seats, 2 to 6 people do in-service training ever six months on subjects such as time management, data management and finance. While the MoH supports staff training when scholarships are available, through various government departments, no specific management training requirement has been established.

Belize has not achieved this goal.

GOAL 16

One hundred percent of the countries of the Region will have in place effective negotiation mechanisms and legislation to prevent, mitigate or resolve labor conflicts and ensure essential services if they happen.

Rationale

The provision of critical health services must be considered an essential service to the public. As such, effective legislation and labor negotiation mechanisms must

be put in place to resolve labor disputes to ensure that there is no disruption to those health services that are considered necessary to save or sustain life. The thrust of this initiative is not to minimize the importance of labor concerns or to defer ongoing labor negotiations. Its purpose is to establish a formal mechanism to maintain dialogue with workers' labor organizations that allows for the continuing delivery of essential health services while labor disputes are being settled. This mechanism would protect the rights of employees, consistent with local labor codes and union practices, and facilitate patient access to critical health care services.

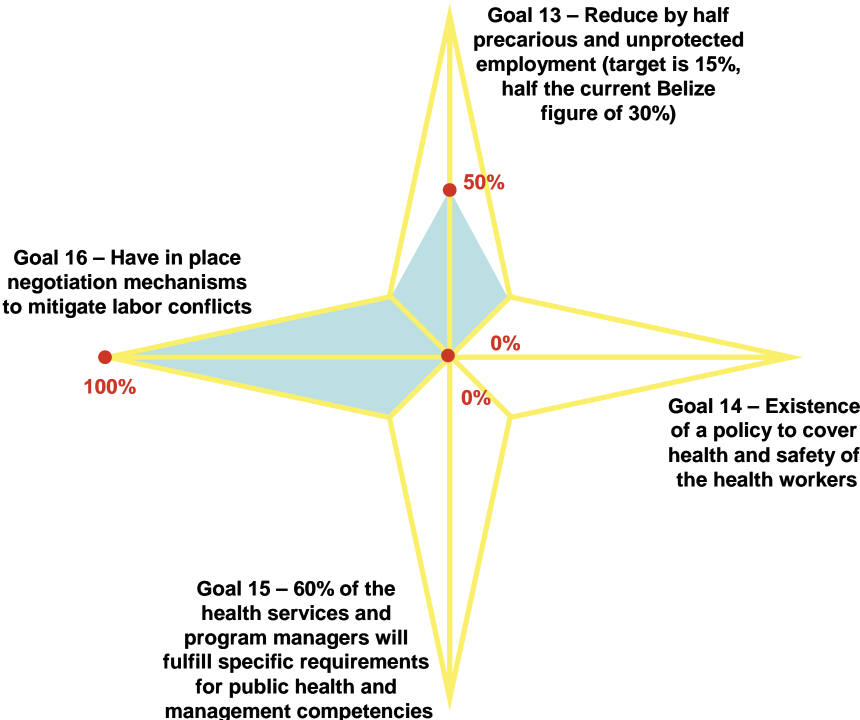
Results

There are General Labor Laws that affect all Government of Belize Ministries and govern labor relations in the health sector. These include the Belize Statutory Instrument, Government Workers Regulations, No. 145, 1992, and, the conditions of services, Public Service Regulations, No. 160, 2007.

The Belize Labor Office is responsible for preventing where possible and settling disputes between labor and management. Essential services legislation exists to ensure that critical, non-elective health care services are not interrupted during labor-management disputes in the health sector. These services are dictated by the Essential Services Law, Chapter 298 and 298S of the "Settlements of Disputes Act".

Goal 16 has been fully achieved in Belize.

Figure 4: Completion Percentage of Goals 13-16



6. Challenge Five

Develop mechanisms of cooperation between training institutions and the health services institutions to produce sensitive and qualified health professionals

GOAL 17

Eighty percent of schools of clinical health sciences will have reoriented their education towards primary health care and community health needs and adopted inter-professional training strategies

Rationale

This goal is inserted in the reformed concept of PHC that calls attention towards strengthening society's role in reducing health inequalities. Therefore, it parts from the concept of health as a human right and highlights the need to face the social and political determinants of health. The full development of PHC requires paying special attention to the role of HRH in this change and the reaffirmation of the paradigms they play. Consequently, training of personnel in university environments with this focus takes a new and important dimension.

The goal of community health care is to provide comprehensive and appropriate health care starting with the families and the community as the basis for planning and action.

For the PHC team to be effective, the must work together as a team, share common values and approaches, not just with regards to medical issues but social and environmental issues and strategies as well. It is also important within a team environment that staff are deployed effectively, are utilized to their full levels of competence and understand and respect each team member's role. This allows the team to be as effective and efficient as possible.

In order for this collegial culture to develop at the workplace, shared courses and common curricula need to promoted and developed with respect to inter-professional student training.

Results

While a biomedical model with a primary focus on disease is employed to train health care providers at the University of Belize, it also integrates social factors into its public health nursing programs, for example, with courses that include community health nursing, socio-cultural practices in health and disease and family health in the community setting. Courses include factors that affect care-seeking behavior, the social factors that impact upon health care utilization (beliefs, attitudes and values), health promotion strategies, monitoring and regulating quality of care as well as the elements of leadership. PHC elements are integrated into the main curriculum.

While the public health and rural health nursing courses have integrated PHC elements in their curricula, which enhance the overall effectiveness of mobile health clinics, not all potential professional partners in the PHC team have had the same degree of exposure and there are no immediate plans to alter current training programs accordingly. One year certificate programs do not always have the time or capacity to optimally emphasize the utilization of the PHC model.

With respect to PHC training overall, 4 out of a maximum of 5 points were awarded because the program does not focus just on the biomedical model but includes PHC components in the curriculum of the health training programs. With respect to inter-professional education, however, only 2 out of a possible 6 points was awarded, as only minimum cross-training and integration occurs at the didactic or internships levels. There are no plans currently afoot to implement additional components of the inter-professional teaching model.

Applying the ranking system outlined in the Regional Baseline Goals Handbook, the total points awarded to Belize for this goal were 6 out of 11 (54.5%).

GOAL 18

Eighty percent of schools in clinical health sciences will have adopted specific programs to recruit and train students from underserved populations with, when appropriate, a special emphasis on indigenous, or First Nations, communities.

Rationale

This goal seeks to inquire if the Colleges and Schools in Clinical Health Sciences have accepted or recruited students in health training programs from underserviced areas and from populations who traditionally have not had access to health services. It is expected that health care providers who are recruited from rural areas and from minority populations are more likely to return there to practice. Furthermore, they are more likely to have the social and cultural sensitivities and the language skills needed in primary health care settings with rural and ethnic communities.

Results

Of the 528 graduates from the University of Belize between 2000 and 2009, 260 (49.2%) had been awarded scholarships. Compared to only about one-third of professional and practical nursing programs, 60% of nurses in the baccalaureate program nurses were supported by scholarships. The psychiatric nurses practitioner program recorded the highest levels of support with twelve of the thirteen graduates (92.3%) having been on scholarships. On a district basis, Stann Creek and Cayo had the highest percentage of graduates who had received scholarships at over 57%, while Corozal and Toledo had the lowest representation at about 35% and 42%, respectively.

While scholarships are relatively evenly distributed among the graduates of health training programs, the fact remains that not all ethnic groups and districts are equally represented at the University level. Mestizo is over half the population but only about one third of the health training program graduates. Mayans in particular are not well represented among health care provider graduates. Though they represent 10% of the general population, they are only 3.4% of the total number of graduates. Similarly, the Districts of Orange Walk, Stann Creek and Toledo represent about one-third of the general population but only 16% of health training program graduates.

Approximately 40% of scholarships have been recommended by the MoH and over the past three years applicants have been paid by the Ministry of Education. An attempt has been made to ensure a strong representation from under-serviced populations, particularly in the fields of nursing, midwifery and practical nursing.

Of the eleven health training programs offered by the Faculty of Nursing, Allied Health and Social Work, scholarships are relatively evenly distributed by district and by health profession. Thus all the training programs were awarded one point each, for a total score of eleven out of eleven. A special emphasis on underserviced populations however, has only pertained to three out of the eleven health training programs (nursing, midwives and practical nurses), resulting in a score of 3 out of a possible 11 points. As such, the University of Belize is assessed as having achieved a total score of 13 out of 21 points (62%) with respect to having achieved the goal of training students from underserviced areas and minority populations.

GOAL 19

Attrition rates in schools of nursing and medicine will not exceed 20%.

Rationale

This goal seeks to shed light on the degree of medical and nursing student attrition rates. This rate certainly measures the quality of the educational process and the difficulty in retaining students in health careers, faced to the costs their training entails, repetition of courses and dropout. Studies in countries in the Region of the Americas

have found attrition rates that exceed 50%, which implies a high level of failure of the educational system to retain possible future health professionals, with consequences on the misuse of resources and impact on the quality of professional training.

Results

An examination of student completion rates in the health programs at the University of Belize for students who entered training programs between 2001 and 2005, revealed that the overall completion rate was 34.2%, ranging from a low of 28.1% for entrants in 2001 to a high of 46.2% in 2003 in the five year period.

With regards to health training programs, the highest completion rates were for the certificate program in midwifery and the bachelor's degree program in social work, at 58.4% and 57.1%, respectively, with nursing near the overall average of health training programs of 34.4%. While less than optimal, this figure is comparable to some countries in the Region of the Americas which have estimated completion rates of about 25%. Currently there is no medical school in Belize and no data was available to estimate the attrition rate of Belize medical students from the University of the West Indies and elsewhere. Other than a private off-shore medical school there is no public medical school offered in Belize. The MoH of Belize does offer scholarships for medical training in Cuba and Nigeria, and other students do go voluntarily to other schools outside the Caribbean, but no data is available at this time to estimate return rates or attrition rates from these training programs.

The completion rate for nurses of 34% at the University of Belize converts to an approximate attrition rate (the opposite of completion rate) of 66%. The attrition rate of 66% for nurses in Belize is far below the target for this goal of 20%.

GOAL 20

Seventy percent of schools of clinical health sciences and public health will be accredited by a recognized accreditation body.

Rationale

This goal seeks to include the dimension of quality of education that is provided in the schools of clinical health sciences and public health and their certification on behalf of a recognized accreditation body. The direction of the services towards quality is one of the principles of the health systems based on PHC and are the basis for the health policies and training of health personnel.

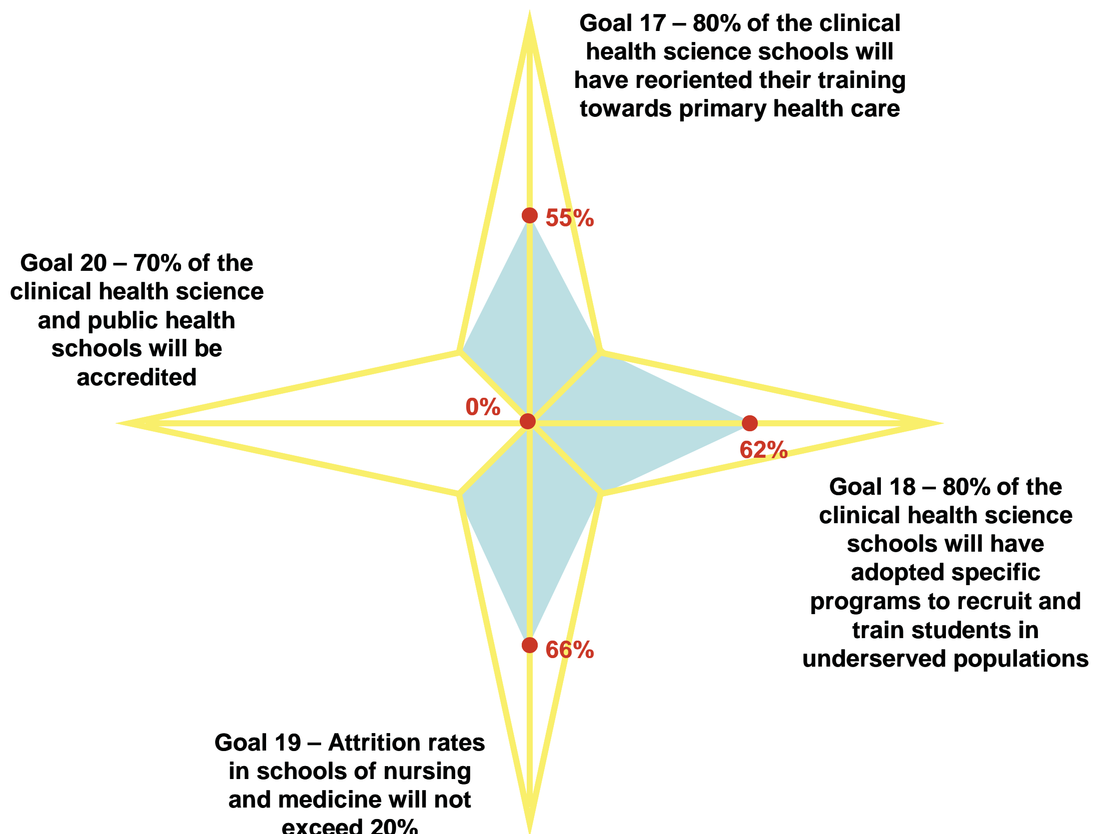
Results

Currently the health training programs under the Faculty of Nursing, Allied Health and Social Worker of the University of Belize are not accredited. There is no official accrediting body in the country to evaluate the clinical health sciences training programs.

The University of the West Indies (UWI) has an accredited on-line program for nurses. As this represents a very small percentage of the nursing workforce and the health workforce as a whole, it is not reflected the summary results for Belize. In the future, as the cohort of graduates from the UWI accredited nursing program becomes a more significant percentage of the Belize health workforce, Belize will improve its standing with respect to achieving this Regional goal.

The University of Belize is currently in negotiations with a university in the United States to begin the process of developing international accreditation standards for Belize. Although the process has begun, it is expected to take close to a decade to complete.

Figure 5: Completion Percentage of Goals 17-20



7. Conclusions and Recommendations

These conclusions and recommendations are also included in the Core Data Report for Belize, 2009.

It is estimated that the current ratio of health care providers per 10,000 population in Belize is 18.9, below the WHO recommended optimal ratio of 25.

A net annual growth of 59 health care providers will be required just to keep pace with Belize's population growth of 4.3% each year.

A net gain of 26 physicians, nurses and midwives will be needed to accommodate population increases, while a further 32 per year will be needed to meet the target of 25 per 10,000 population by the year 2015, for a grand total of 58 annually.

As such, steps that may be effective for consideration at the policy and program levels include:

- increase student enrollments in health programs at the University of Belize;
- increase the uptake of applicants who have been accepted into health programs;
- recruit more students from rural areas and ethnic populations;
- expand the number and range of scholarships across programs and districts;
- reduce student attrition;
- enhance graduate retention rates;
- improve graduate certification exam pass rates;
- significantly augment the number of employment opportunities for health professional graduates;
- increase the proportion of “established” employment positions; and,
- expand e-learning opportunities, such as offered by the open university of UWI .

With targeted policies to address improved alignment between the representative output of the University of Belize and the HRH needs of the population, it is likely that Belize's health reform and health system performance targets will be achievable.

While the focus of this review is on the inventory of the health workforce of Belize, the scope of these recommendations include the identification of the critical conditions necessary to develop and support an effective HRH planning system. Improvements in capacities to plan HRH through enhanced data development and regional partnerships are central to achieving this goal.

While individual capacities and resources differ across health regions, there are significant opportunities and benefits to building upon a common HRH planning foundation. Common data definitions, further software development, assumption exploration and consistent approaches to planning can be developed collaboratively and best practices and lessons learned can be shared across regions. A common framework, approach and understanding of key planning concepts, including the overall scope and range of strategic options available, would be an important place to begin.

Appendix A

Map of Belize

Appendix B

Presentation of Baseline Report to HRH Observatory (November 2009)

Human Resources for Health in Belize

Baseline Indicators for Belize
Presentation to HRH Observatory

November 10, 2009

Regional HRH Baseline Goals

Challenge One. *Build long-range policies and plans to adapt workforce to the changing health system*

GOAL 1: Regional HRH density target of 25 per 10,000 population
- 241 MDs (7.5), 328 RNs (10.2) and 35 Midwives (1.1)
- Grand total of 18.8 per 10,000 population (July 2009)

GOAL 2: Primary Health Care MDs will exceed 40% of medical workforce
- GPs/PHC MDs (181) are 75% of total number of physicians
- 52% of physicians work outside of District of Belize
- Only 15 MDs (6%) have rural residential addresses

GOAL 3: Broaden PHC team skills & include community health workers
- No national program exists
- Competent teams & mobile clinics
- Uses community networks & services vulnerable populations
- 79% of goal achieved, but seriously under-staffed

Regional HRH Baseline Goals

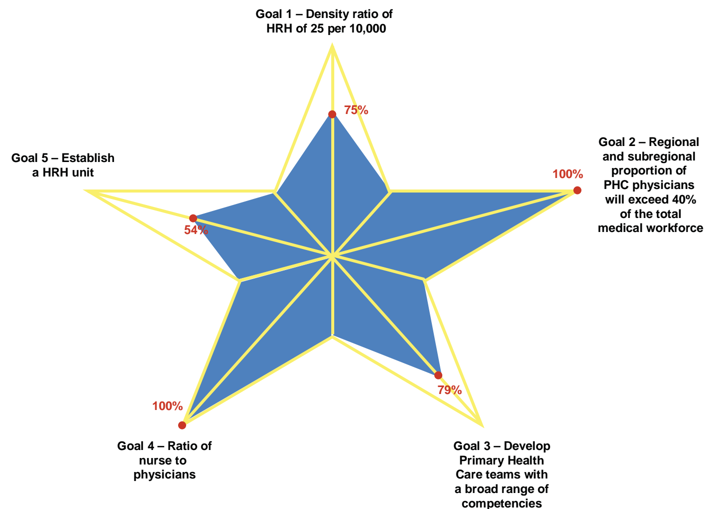
(Cont.) **Challenge One**. *Build long-range policies and plans to adapt workforce to changing health system*

GOAL 4: Achieve a Regional ratio of RNs to MDs of at least 1 to 1
- RNs total 328 and MDs total 241
- Ratio of RNs to MDs is 1.36 to 1, or 1.9 if *all* nurses included
- However, an undersupply of both MDs and RNs exists

GOAL 5: Establish HRH Unit responsible for development of HRH plans and policies, strategic directions and negotiations with other sectors
- HRH Unit is currently being established and resourced
- Goal is about half way towards a fully functioning Unit with an information system, national integrated planning process.

Challenge One

HRH policies and plans
Goals 1 to 5



Regional HRH Baseline Goals

Challenge Two. *Achieve an equitable distribution of the health workforce according to the health needs of the population*

GOAL 6: Reduce Regional Urban/Rural HRH gap by 50% by 2015

- Density of urban MDs, RNs and Midwives per 10,000 population is 38 to 1; rural density is 1.8 to 1
- Rural to urban HRH density is currently 21 to 1
- Reducing disparity by 50% by 2015 yields target of 10.5 to 1
- Note, if *all* health care providers are included, current density ratio of rural to urban health providers is 6.9 to 1

GOAL 7: 70% PHC workers with public health/intercultural competencies

- In view range of training of PHC workers, only about one quarter have the optimal range of skills required
- Fewer workers have required intercultural competencies
- Belize is about half way towards achieving the Regional goal

Regional HRH Baseline Goals

(Cont.) **Challenge Two**. *Achieve an equitable distribution of the health workforce according to the health needs of the population*

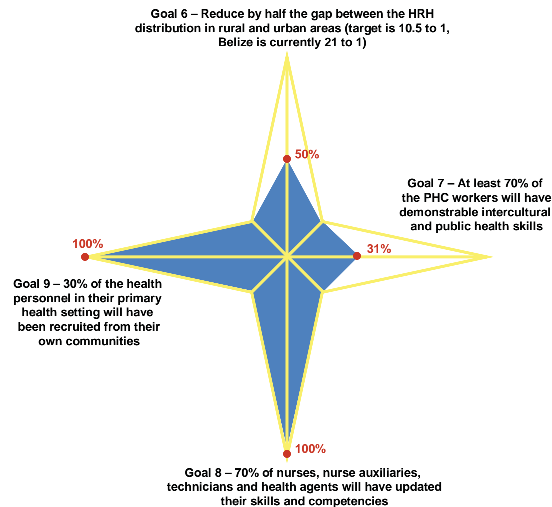
GOAL 8: That 70% of nurses, auxiliary nurses and medical technicians to upgrade skills & competencies appropriate to their function by 2015

- This group is 52% of workforce; 70% would be 467 workers
- Nurses are required for license renewal to pass in-service training to update their knowledge and skills.
- Currently there is *no* formal, established requirement

GOAL 9: 30% of PHC workers to be recruited from their own communities

- All currently employed professional RN and midwife graduates between 2003-2007 were matched against addresses when applying to the University of Belize
- Although only modest numbers of graduates were employed, of those who were, 40.5% worked in own communities

Challenge Two
Equitable distribution of the health workforce
Goals 6 to 9



Regional HRH Baseline Goals

Challenge Three. *Promote national and international migration initiatives for countries to retain health workers*

GOAL 10: Countries of the Region to adopt a global code of practice & ethical norms for the international recruitment of health workers

- No code of practice or ethical norms have been adopted
- World-wide HRH shortages, makes this a priority issue

GOAL 11: A Regional policy on self-sufficiency to meet its HRH needs

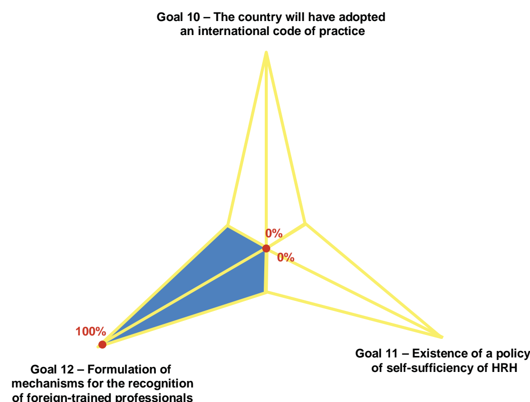
- No policy has been adopted
- A more stable and predictable health workforce may be achieved by supporting health workforce infrastructure and capacity development

GOAL 12: All sub-regions will have developed mechanisms for the recognition of foreign-trained professionals

- Belize has achieved goal twelve
- The CARICOM agreement allows for free movement of health care professionals between the 15 member countries (plus 5 associate members) within the Region.

Challenge Three

Manage migration
Goals 10 to 12



Regional HRH Baseline Goals

Challenge Four. *Achieve healthy workplaces and promote a commitment of the health workforce with the mission of providing quality services to the population*

GOAL 13: Reduce proportion of unprotected employment by 50%

- About 38% of employment positions are "established"
- About 17% are volunteer positions
- A total of 30% of the workforce are in untenured, contract, un-established or voluntary positions
- The target for 2015 is to reduce this figure to 15%

GOAL 14: Introduce policies regarding health worker health & safety

- This goal has not yet been achieved
- This responsibility, under the Occupational Safety and Health Act, has been proposed to be a mandate by the Belize government for both governmental and private employers. As of October 2009, this law has been proposed but not yet ratified by Cabinet

Regional HRH Baseline Goals

(Cont.) **Challenge Four**. *Achieve healthy workplaces and promote a commitment of the health workforce with the mission of providing quality services to the whole population*

GOAL 15: At least 60% of health managers will have competencies in public health, management and ethics

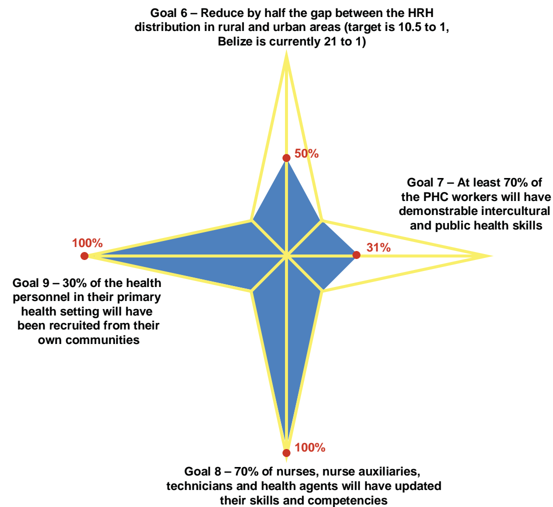
- Brief management survey revealed that 50% of senior and middle management had some training in health management
- The MoH does provide a management training fund but there has been no specific management training requirement established
- The target of 60% has not been achieved

GOAL 16: Effective labor negotiation mechanisms & legislation in place

- General labor laws currently in place that govern all labor relations within the health sector

Challenge Four

Promote a commitment of the health workforce
Goals 13 to 16



Regional HRH Baseline Goals

Challenge Five. *Develop mechanisms of cooperation between training institutions and the health services institutions to produce qualified health professionals*

GOAL 17: Health sciences schools will reorient education towards PHC & community health needs & adopt inter-professional training strategies

- Public health & rural health nursing integrate PHC in their curricula, no PHC partners have the same exposure
- There are no immediate plans to alter current training programs
- Training programs have achieved about *half* of these goals

GOAL 18: Schools will recruit from underserviced & indigenous populations

- Scholarships evenly distributed by District and profession
- Only 3 of 11 training programs provided scholarships to under-serviced areas, resulting in about 60% of goal achieved

Regional HRH Baseline Goals

(Cont.) **Challenge Five.** *Develop mechanisms of cooperation between training institutions and the health services institutions to produce qualified health professionals*

GOAL 19: Attrition rates in schools for RNs and MDs will not exceed 20%

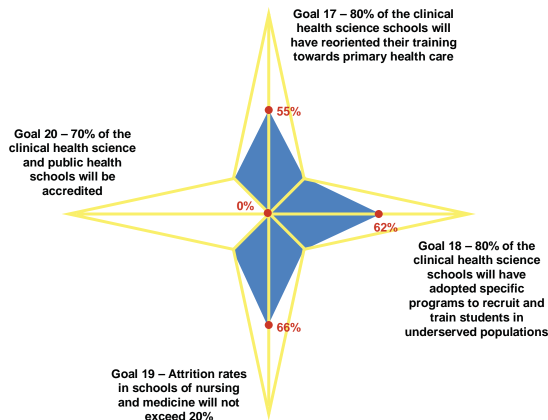
- Only 34% of students entering nursing programs between 2001 and 2005 graduated, for an attrition rate of 66%
- This figure is significantly above the Regional target of 20%

GOAL 20: 70% of health science and public health schools will be accredited

- Health training programs at the University of Belize are not accredited by a recognized accreditation body
- UWI has an accredited on-line program for nurses – this is very small percentage of the nursing workforce and the whole of the workforce so this program will not be reflected in the percentage ratio of Goal 20 at this time. In the future, if the cohort of graduates is a more significant percentage of the Belize workforce, then that will be included and increase the percentage ration of Goal 20
- International accreditation is expected within the decade

Challenge Five

Mechanisms of cooperation between training institutions and health services
Goals 17 to 20



Summary Implications

Current Strengths

- The proportion of nurses is strong, although shortages persist overall
- Significant rural disparities are supported by Mobile Health Clinics and community health workers
- An HRH Unit/planning function is currently being developed
- Opportunities exist for staff development
- Health and safety and labour negotiation mechanisms are currently in place
- Half of students in training have scholarships and most graduates who are working have returned to their home Districts, although only half recent graduates are currently employed

Summary Implications

Ongoing Challenges

- Currently there is no Code of Practice regarding the recruitment of international health professionals
- There is no policy on “self-sufficiency” regarding the development of HRH in Belize
- The current attrition rate for students in health training programs is about 66%; and the pass rate for nurses on the certification exam in any given year is about 50%
- The health training programs at the University of Belize are not yet accredited

Next Steps

Areas for Priority Attention

- Formalize a National HRH Advisory Committee with a broad-ranging membership from the health, education and finance sectors to reconfirm HRH priorities and to develop a long-term HRH implementation strategy
- Provide the core HRH function with the MoH with the necessary resources and support to achieve this goal
- Finalize a HRH data set to be integrated into the Belize Health Information System to support HRH planning
- Begin negotiations with the University of Belize to address the issues and concerns that have been identified including a review of its current and potential role and capacity
- Evaluate the current physician training and recruitment plans
- Identify the HRH requirements to meet long-term population health needs and review the capacities and options of Belize's health care delivery system to meet these challenges

ISBN 978-92-75-13189-3