Contribution of Nursing and Midwifery to Health System Performance and Goals

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Contribution of Nursing and Midwifery to Health System Performance and Goals

By
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1. INTRODUCTION

Across countries health care systems have been transformed during the last ten years (Alliance for Health Policy and Systems Research, 2000) responding to the need for more equitable, efficient and sustainable health systems. This reorganization of the health systems has increased the need for generation of knowledge about the role and the contributions made by health care professionals to health system performance and goals.

Nursing and midwifery practitioners comprise the largest health service providers and have been affected health system changes in different ways. There are profound changes affecting nurses and midwives work environment, scope of practice, and their relationship with other health care professionals and clients, which may impact their performance and the service they provide.

Within this framework, the World Health Organization developed a case study protocol to obtain and analyze information regarding nursing and midwifery contributions to health systems performance and also the goals and the effects of health system changes on the effectiveness of nursing and midwifery interventions in three countries of the Pan American Region, Belize, Colombia, and Mexico.

The respective nurse consultant in Belize, Colombia, and Mexico organized national working groups of nurses and midwives. Nurse consultants in each country were responsible for administering a 40-item questionnaire to nurses and midwives from different health institutions in each one of the participating countries. In addition, these consultants obtained key information from secondary sources to support findings and complete data analysis. This paper presents an analysis of case study results in the three participating countries.

The case studies show mixed results regarding the nursing situation in the three countries. The differences in the social and developmental contexts of the countries represent the existing diversity in the PAHO region. The countries not only differ in size and population characteristics but also in the advancement of the implementation of the health sector reform. Mexico has a geographic area of 1,972,550 square kilometers (CIA, 1999a) and 91,145,000 inhabitants (PAHO, 1996). Colombia has a geographic area of 1,138910 square kilometers (CIA, 1999b), and an estimated population of 42,299,301 inhabitants (Garzón, 2000). Belize has a geographic area of 22,960 sq. Kilometers (CIA, 1999c) and an estimated population of 222,000 in 1996 (PAHO, 1998).

Because nursing status varies according to contextual characteristics and advancement in the implementation of health sector reform, a brief comparison of the contextual characteristics of the three countries will precede the discussion of health care reform and nursing situation.
2. THE CONTEXT OF HEALTH CARE REFORM IN THE THREE COUNTRIES

2.1 Demographic and Epidemiological Characteristics

Belize, Colombia, and Mexico are undergoing a demographic transition with marked similarities in population distribution. As shown in Table 1, all 3 countries have experienced a decrease in the population less than 15 years of age and a relatively stable population growth within the last 2 decades. Belize presents the highest population growth rate of the 3 countries. All three countries report a slight aging trend (Garzón, 2000; Guild, 2000; Salas, Zárate, & Rubio, 2000).

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PAHO, Vol. II, 1990
CIA, 1999c
CIA, 1999b
CIA 1999a
(U.S. Census Bureau, 1999)

Colombia and Mexico report a decrease in mortality rates, with changes in the distribution of death causes and age groups affected (Garzón, 2000; Salas, Zárate, & Rubio, 2000). In contrast, the mortality rate in Belize increased from 4.0% per 1,000 in 1993 (PAHO, 1999a) to 5.4 (estimated) per 1,000 in 1999 (CIA, 1999c).
Leading causes of mortality in Belize in 1987 were diseases originating in the perinatal period, diseases of the respiratory system, disease of the heart, cancer, and cerebro-vascular disease (PAHO, 1990). Leading causes of mortality in 1998 were heart disease, accidents, cancer, pneumonia, and infectious diseases (Guild, 2000).

Improvements in perinatal care may have contributed to the changes in the distribution of causes of death. Further, the appearance of infectious diseases in the top 5 causes of death represents a new challenge for the health system.

Leading causes of mortality in Colombia in 1986 were homicides and intentional injuries, myocardial infarctions, cardiovascular disease, cerebro-vascular disease, and pneumonia (PAHO, 1990). Leading causes of mortality in Colombia in 1994 were circulatory diseases, external causes (homicides and intentional injuries), cancer, communicable diseases, and conditions originating in the perinatal period (PAHO, 1998b). Heart disease and violent deaths remain important causes of death. However, deaths due to communicable disease, conditions in the perinatal period, and cancer have increased (Garzón, 2000).

Leading cause of mortality in Mexico in 1983 was infectious and parasitic diseases, cancer, heart disease, and accidents (PAHO, 1990). Leading causes of death in Mexico in 1995 were cardiovascular, followed by cancer, accidents, diabetes mellitus, and cerebro-vascular disease (PAHO, 1998b). While infectious and parasitic diseases have decreased, chronic diseases and accidents remain major health concerns.

Colombia and Mexico reported differences in mortality distribution according to geographic region, social and economic status (Garzón, 2000; Salas, Zárate, & Rubio, 2000). This suggests unequal social opportunities in these countries.

2.2 SOCIAL CONTEXT

The three countries demonstrate cultural differences. The dominant culture in Colombia and Mexico is Hispanic, which has blended with native cultures over hundreds of years. Spanish is the primary language in Colombia and Mexico. However, in Belize, the dominant culture stems from Great Britain. Although Spanish is commonly spoken, Belize is the only Central American country where English is the primary language. Differences in heritage have influenced governmental, political, and social structure.

Whereas 92% of Mexican men and 87% of Colombian men are literate (PAHO, 1996), only 70.3% of men in Belize are literate (CIA, 1999c). Further, Colombia and Mexico present similar rates for women, 88% and 87% respectively (PAHO), while only 70.3% of women from Belize are literate (CIA, 1999c). Mexico and Colombia report increased government emphasis on education and literacy (Garzón, 2000; Salas, Zárate, & Rubio, 2000).

While Mexico is showing signs of recovery after economic crisis (Salas, Zárate, & Rubio, 2000), Colombia remains in economic crisis, with political unrest and recent devaluation of the peso (Garzón, 2000), and Belize recently experienced an economic slowdown (CIA, 1999a). The 1999 Estimated Gross Domestic Product (GDP) in Mexico was 5.7% (Salas, Zárate, & Rubio), compared with a 1997 GDP in Colombia of 3.1% and a 1998 GDP of 0.5% in Belize (CIA, 1999c).
In 1999, 54% of Colombians lived in poverty (Garzón, 2000), followed by 38.6% of the population of Mexico (PAHO, 1999b) and 33% of the population of Belize (PAHO, 1999a).

Unemployment rates were lowest in Mexico, with 3.7 in 1997 (CIA, 1999a), as compared with Colombia and Belize. Unemployment rates were 15.7% in Colombia in 1998 (Garzón, 2000) and 13% in Belize in 1997 (CIA, 1999c).

Although the three countries show difference in social and economic development, all three have concentrated resources in their larger cities and are experiencing personnel and material resource shortages in the rural or semi-rural areas (Guild, 2000; Garzón, 2000; Salas, Zárate, & Rubio, 2000).

### 2.3 Health Care Reform

All three countries are experiencing health care challenges. Demands for increased service coverage and expectations for quality service are coupled with limited resources. The three countries have similar needs for service expansion, although the driving forces are different. In Mexico, the increased demand for service results from the health care reform principle of universal access, which has increased the number of persons entitled to service (Salas, Zárate, & Rubio, 2000). In Colombia, the population needing subsidized health care has increased due to the growing number of people displaced by violence (Garzón, 2000). In Belize, the immigration of displaced populations from Central American countries has increased demands for health and social services (Guild, 2000).

With the increase in importance of the private sector in health care delivery and the need for cost effective interventions in all 3 countries, quality of service is an important concern (Guild, 2000; Garzón, 2000; Salas, Zárate, & Rubio, 2000). Despite commitments to provide services to their populations, the recent or ongoing economic difficulties and the rising health costs in each country have affected countries’ ability to expand health service capacity to meet increasing needs.

Similar health care reform principles and goals are observed in the three countries. Belize health service reform is based upon the following goals and targets: 1) ensuring universal access to basic health services, using a strategy of primary health care; 2) ensuring child and adolescent survival and development; 3) improving population health, well-being, and development, to diminish health disparities; 4) promoting health lifestyle and behaviors; 5) promoting healthy living conditions and environment; 6) eradicating or controlling national disease threats; and 7) decreasing disabilities, using prevention strategies. Also, health reform in Belize is oriented to improve health service administration and financing, human resources development, infrastructure conditions, and institutional development and planning (Guild, 2000).

In Colombia, the founding principles for essential public service delivery are efficiency, universality, solidarity, comprehensiveness, and participation. In 1993, Colombian Law 100 created and charged the General Social Security System on Health Care (SGSS) with the regulation and provision of essential public health services. SGSS is responsible for the organization of institutions and resources required to provide health benefits to the whole population. SGSS is governed by the principles of equity, mandatory compliance, comprehensive protection, freedom
of choice, institutional autonomy, administrative decentralization, social participation, consensus building, and quality (Garzón, 2000).

Mexican health care reform is based upon principles of universality, equity integrity and social participation (Guevara & Mendias, 2000). In Mexico, health system reform is aimed at transforming the current health system. The four reform objectives are: 1) establishment of instruments that promote service efficiency and quality; 2) expansion of care coverage offered through the Social Security Institutions; 3) completion health service decentralization; and 4) expansion of health service coverage to populations with limited access (Valdés, Batalla, Rayo, & Nájera, 1998).

Health System Changes

In the three countries health system changes can be described using Barillas (1995) Health Care Reform Indicators: decentralization, basic packages, targeting, public/private mix, and self-initiative financing.

Decentralization

The process of decentralization in Belize is just beginning, with the creation of 4 health regions: Northern, Southern, Western and Central. Each region is charged with delivery of primary, community, and public health services, and will have a regional hospital. Currently, the Karl Heusner Memorial Hospital (KHMH), is the national referral hospital and it is experiencing increased autonomy (Guild, 2000).

In Colombia and Mexico the decentralization process has transferred responsibility and resources for health care delivery from the national level to local authorities. In addition, social participation is considered a basic component of the decentralization process (Garzón, 2000; Salas, Zárate, & Rubio, 2000).

The 1993 Colombian Law 10 decentralized the national health system of Colombia by creating state and local health systems under authority of governors and mayors. In addition, hospital governing boards with the participation of the community organizations were mandated (Garzón, 2000).

In Mexico, decentralization is the top priority in the proposed Health Sector Reform Program 1995-2000 and the Healthy city (Municipio Saludable) movement has been considered an important strategy to facilitate community participation in planning and evaluating local health programs. Between 1996 and 1998, health services, including financial and administrative resources were transferred to Mexican states and Mexico City. Health Council comprising all the state secretaries or other health officials is in charge of the regulatory control (Salas, Zárate, & Rubio, 2000).
Basic Packages

The goal of the National Health Plan of Belize is to guarantee universal coverage by providing a set of comprehensive health services (PAHO, 1998c), but specific components of these services were not mentioned. However, the trend in the basic packages is for preventive and health promotion services.

In Colombia, health care coverage is provided through the Basic Benefit Package (Plan de Atención Básica, PAB) offered by a health promoting entity (Entidad Promotora de Salud, EPS). The basic package includes health promotion, disease prevention activities (immunizations, breastfeeding, counseling, health education, and HIV/AIDS prevention) and coverage for treatment of major illness (Garzón, 2000). Maternity care and rehabilitation are also included in the basic package (Castrillón, Orrego, Pérez, Ceballos, and Arenas, 1998)

In Mexico, the basic health plan covers family health, family planning, maternal and child health; oral rehydration therapy, antiparasite treatment, management of acute respiratory problems; prevention and control of pulmonary tuberculosis, prevention and control of high blood pressure and diabetes mellitus, accident prevention and first aid, and community training in personal health care. The extension of coverage under the social security subsystem has taken place through the family health insurance for workers in the informal sector (Salas, Zárate & Rubio, 2000).

Targeting

In Belize, specific target population or services have not been identified. However, five program areas have been included in the National Health Plan: early and late adulthood; late childhood and adolescence; early childhood, environmental health, and sports (PAHO, 1998, Vol. II). In addition, improving prenatal care and immunizations services is a goal of the Belize government goals (Guild, 2000).

Colombia and Mexico have identified specific basic health packages focusing on services to women and children (maternal/child health, family health, and/or maternity care) (PAHO, 1998a &b). The target population in Mexico is indigent and uninsured populations (Salas, Zárate, & Rubio, 2000; Garzón, 2000). In addition to indigent and uninsured groups, Colombia has targeted specific services for indigenous groups (Garzón).

Public-Private Mix of Financing

All countries have public and private funding for health services (PAHO, 1998b) and have established strategies to increase the public-private financing mix.

In Belize, public health services are almost free. However, the health sector is developing strategies to increase the participation of the private sector in health service delivery, introducing national health insurance, and developing strategies to sponsor and regulate the private health sector (Guild, 2000).

Private financing exceeds public financing in Mexico and Colombia (53% private financing in Mexico and 70% private financing in Colombia) (PAHO, 1998a).
In Colombia and Mexico, the increased number of private insurance companies or plan varieties is creating a need for effective regulation and for mechanisms to protect the consumer (Guevara & Mendias, 2000).

Instituto Mexicano del Seguro Social (IMSS) institutions cover more than half of the population (51%) and are financed through workers and federal government contributions, and/or employer contributions. The public institutions are financed through taxation and funds allocated at the central level. Private medicine in Mexico accounts for approximately 30% of hospital beds, employs 34% of the physicians, and provides more than 30% of medical consultations (Salas, Zárate, & Rubio, 2000). However, it is anticipated that independent or self-employed workers, including professionals and small farmers, be covered through voluntary insurance. Currently, they remain outside the social security system (Salas, Zárate, & Rubio).

In Colombia, SGSS provides health benefits to the whole population, which includes the employed, persons with economic capability to join the system, and those with no resources. SGSS encompasses two regimes: the contributory and the subsidized. The contributory regime is comprised of employed persons who help to sustain the Solidarity Fund to finance the SGSS. The subsidized regime is comprised of the population receiving a basic benefit package through the Solidarity Fund. Theoretically, the most affluent population (40%) helps to finance health care of the population with no or fewer resources (60%). Currently, there are 16 million people enrolled in the contributory regime and 9 million persons enrolled in the subsidized regime. The remaining 17 million Colombians will be assigned to one of these regimes. Private services are also available (Garzón, 2000).

Self-Initiatives

All three countries are promoting self-initiatives directed toward increasing management capability and decision-making at regional, state, and local levels. In Belize, public health institutions are subcontracting health services with KHMH (Guild, 2000).

In Mexico and Colombia, self-management is allowing public health institutions to charge for health care services provided to health care plan members of private or other plans (Guevara & Mendias, 2000).

The implementation of health care reform in the three countries is also reorganizing and redefining the roles of the Ministry of Health. The role in each country is evolving to respond to changes in the degree of responsibility assigned to the public health sector, the extent of decentralization of services, and the division of labor in health institutions.

In Belize, the Office of the Ministry of Health was charged with the following responsibilities: 1) provision of services through the establishment of Regional Health Managers, 2) policy development, including needs identification and consensus building, 3) regulating and subcontracting services with private sector to respond to public sector demands, and 4) subcontracting services from the KHMH Authority (Guild, 2000).

Since 1999, the steering authority for the SGSS is the Colombian Ministry of Health, which was reorganized by Decree 1152. Additionally, the Ministry of Health was restructured according to specific management responsibility, with interdisciplinary work groups assigned to each. The
Minister of Health is organized in interdisciplinary working groups. There are 20 nursing professionals currently employed by the Ministry of Health, mainly working in the offices of Public Health Directorate, Development of Health Service Delivery, Information System group, and Insurance Bureau (Garzón, 2000).

In Mexico, the Secretariat of Health has been assigned with the following roles: health sector leadership, health regulation, provision of health care for the uninsured, and separating financial from service delivery functions (PAHO, 1998b). The Secretariat has been reorganized in several directorates according to specific areas. For example the directorate of Reproductive Health is responsible for proposing, disseminating and evaluating policies and strategies related to this area. Even though many nurses participate in the activities conducted by the different directorates, there is only one national nursing advisory position, which limits the participation of nurses at national level (Salas, Zárate, & Rubio, 2000).

Health Service Profile

Belize has two private hospitals, numerous non-governmental organizations and religious groups providing ambulatory services, private practitioners, private laboratories, radiology services, and pharmacies. Belize also has many traditional birth attendants, midwives, and non-traditional healers. Private international services also play an important role in Belize. Private patients sometimes self-refer refer to Mexico, Guatemala, and the US for health services, and government health providers refer patients to neighboring countries, when the service is not available in Belize (Guild, 2000).

The structure of Mexican and Colombian health care system is closely linked to the country’s production systems. In Mexico, the insured group is mainly comprised of salaried workers or employees covered by IMSS and a small proportion of people covered by private insurance. The uninsured includes the self-employed (without insurance) and the poor, who receive care from public health institutions, the IMSS Solidaridad Program, and private medical services. Although private health insurance coverage is very low, the use of private medical service is common among low-income populations. IMSS and public health institutions offer ambulatory and hospital services including all the care levels. The Secretaría de Salubridad y Asistencia (SSA) is in charge of health promotion and disease prevention programs and health policy development (Salas, Zárate & Rubio, 2000).

In Colombia, direct health care is delivered through Governmental Social Enterprises (GSEs) and Social Health Enterprises (SHEs). The GSEs are special decentralized public entities with administrative autonomy and independent capital. According to Law 100, GSEs are mandated to become SHEs. SHEs are national or regional entities designed to provide State health care services or public social security services. In 1977, Colombia had 731 public hospitals. Of these, 450 corresponded to first level of care, 124 to secondary level and 31 to third level. In addition, there were 126 health center with beds, 914 health centers without beds, 3,718 health posts, 43 Social Security Clinics and 391 private clinics. There is no current information about the available health care infrastructure in Colombia, as new health enterprises have been created, such as Health Promoting Entities (HPEs) and Institutional Health Service Providers (ISPs), and other health entities have been reformed. (Garzón, 2000)
2.4 Nursing and midwifery profile

The nursing and midwifery profiles vary widely, as can be observed in the following country summary.

As in the other two countries, nursing personnel represent the largest group of health care workers in Belize. According to the Pan American Health Organization, 33% of the 500 health workers in 1994 were professional nurses. Also in 1994, there were 117 midwives and 135 traditional birth attendants in the community. More than half of physicians and professional nurses are concentrated in the metropolitan district of Belize, with the majority of them working for the KHMH, the national referral hospital (PAHO, 1999a). In 2000, there were 479 nursing positions, which included different nursing categories (Guild, 2000).

In Colombia nurses provide nursing at all levels of care, and there are no midwives, although nurses may deliver babies. There are two categories of nursing personnel: professional nurses and nursing auxiliaries. Professional nurses receive their nursing degree from a university institution, while nursing auxiliaries receive their certificate from non-formal education institutions. In 1994, there were 11,762 professional nurses, 36,232 physicians, 19,059 dentists, and 35,433 nursing auxiliaries employed by health institutions in Colombia. The nurse-physician ratio was very low (0.42). In 1999, the estimated proportion of professional nurses was estimated to be 5.7 per 10,000 people, and the proportion of nurse auxiliaries was estimated to be 13.9 per 10,000 people. The low proportion of professional nurses may indicate a need to increase the number of professional nurses in the country. However, nurses in Colombia face job market limitations, related to country employment capacity (Garzón, 2000).

Nursing practice in Mexico is based on the biomedical model and is hospital-centered, even though primary care has been declared a priority in Mexico (Cárdenas & Zárate, as cited by Salas, Zárate, & Rubio, 2000). The majority of professional nurses work at hospital institutions, with 55.2% practicing at secondary care institutions, 18.4% at tertiary care institutions, and only 21.8% working at primary care level. Community posts for professional nurses are limited. However, there has been an increase in nursing auxiliary personnel at community level during the last decade. In Mexico, more than one half (51.2%) of the nurses work for IMSS, 28.3% for the Secretary of Health, 9.8% for the Institute of Security and Social Services for State Workers, and the remainder at other public and private institutions in the country (Salas, Zárate, & Rubio).

According to the System for the Administration of Human Resources in Nursing (SIARHE), in 1999, professional nurses represented more than half (61%) of the nursing personnel in Mexico in 1999. There are 10,794 Baccalaureate degree nurses (enfermeras licenciadas), 91,921 technical degree nurses (técnicos de enfermería), and 46,394 nursing auxiliaries working in Mexico (Salas, Zárate, & Rubio, 2000).

In terms of education, the Belize School of Nursing offers four nursing programs: practical, registered, rural health nurses, and nurse midwives. The professional nursing program requires three years of nursing study. Advanced nursing education is available at the University of West Indies in Jamaica. Nurses from Belize believe that there is a need for continuing nursing education and specialty programs available in their own country (Guild, 2000).

Professional Nursing curriculum in Colombia includes 8-10 semesters of studies at an officially recognized university school of nursing. In January 2000, there were 35 schools of nursing, which
graduated between 600-850 professional nurses each year. Twelve schools of nursing offer a total of 31 graduate programs. At Master's level, there are 4 in nursing and 2 in other fields. Of the 25 specialty degrees, there are 12 in nursing and 13 in other fields. Currently a consortium of five Colombian universities is planning to offer a doctoral program in spring 2001. In addition, nursing schools offer flexible programs to facilitate the career advancement of nurses with non-professional degrees. There were 34 nursing auxiliary school of nursing in 1990. There is no data on the current number of nursing auxiliary programs in Colombia, but it is believed that the number has increased (Garzón, 2000).

There are approximately 250 schools of nursing in Mexico offering technical and professional nursing education. Of these, 54 provide baccalaureate and master’s degrees. During the last 10 years, schools of nursing and the nursing associations have promoted professional nursing education through flexible educational programs, which aim to increase the number of nurses with baccalaureate degrees " (Salas, Zárate, & Rubio, 2000).
3. NURSING CONTRIBUTIONS TO CORE FUNCTIONS AND GOALS OF
THE HEALTH SYSTEM

Service Delivery

Although nursing personnel in the three countries represent the largest group of health workers
and have closest contact with the people they serve, nursing contributions to health system goals
are not easily measurable. In Belize, nurses contribute to health system goals through their
participation in public health programs, such as “Making Pregnancy Safe” and HIV/AIDS (Guild,
2000). Health promotion and disease prevention are the most relevant nursing contributions to the
health system in Colombia, with nurses playing an important role in maternal and child programs
(Garzón, 2000). Mexican nurses participate in preventive and educational programs to decrease
maternal and child risks, as well as to control chronic and infectious diseases. Nurses also
participate in the implementation of the 12 interventions of the “basic health package” (Salas,
Zárate, & Rubio, 2000).

Even though there are differences in the health profiles of the countries, nursing contributions
at the service level focus on similar areas. Nurses in Belize report a strong emphasis on improving
maternal/child outcomes, decreasing HIV/AIDS morbidity and mortality, and improving mental
health outcomes. However, nurses from Belize report the need for expansion of the maternal/child
programs, given the high maternal mortality in that country. In terms of HIV/AIDS, nursing
contributions include serving on the AIDS Commission. In terms of mental health achievements,
the Psychiatric Nurse Practitioner Program of Belize has been considered a model for Caribbean
countries (Guild, 2000).

In Colombia, contributions at service level include maternal and perinatal care, care of
children less than 5 years of age, immunizations, occupational health, and HIV/AIDS -- programs
for which professional nurses are responsible at community level. Colombia has been successful in
the implementation of primary health care and health promotion interventions assigned to nurses
(breastfeeding, vaccination, health education, and HIV/AIDS prevention). Colombian nurses' 
capacity for service organization is also a major contribution to Colombian health care service.
Moreover, Colombian nurses have a holistic view of individual and community health care needs,
which facilitates effective adaptation and contribution to health system goals (Garzón, 2000).

Some Colombian nurses have organized nursing care offices and agencies to offer hospital
services at patient’s home. Nursing services are sold to ISPs or offered as programs in given areas
of influence. Nurses also work in interdisciplinary agencies, such as pain-management centers and
alternative treatment clinics. These centers provide services to terminally ill patients and families
(Garzón, 2000)

Garzón (2000) considers health promotion to be the major Colombian nursing contribution to
Colombian health status. Nurses are highly committed to the promotion of healthy lifestyles,
mobilization of communities and community leaders to encourage healthy communities, reduction
of maternity risks, and organization and management of health services and programs, such as
“Maternidad y paternidad vivida”.

11
Colombian nurses also are expected to refer the under-insured to the agencies in charge of the classification and identification of the under-served population (Garzón, 2000).

In Mexico, major nursing contributions to Mexico’s health are made through the activities related to the Basic Health Package: family planning; prenatal care, childbirth and postpartum care, surveillance of child nutrition and growth; immunizations, management of diarrhea in the home, management of acute respiratory infections, antiparasite treatment of families, prevention and control of pulmonary tuberculosis, prevention and control of hypertension and diabetes mellitus, self-care education, accident prevention, and basic sanitation (Salas, Zárate, & Rubio, 2000).

Maternal mortality has dropped from 6.4 per 10,000 live births in 1985 (PAHO, 1990b) to 4.8 per 10,000 live births in 1999 (PAHO, 1999b). In Mexico, nurses and physicians are responsible for the training of traditional midwives. In addition, nursing personnel (nurses and nursing interns), physicians, and traditional midwives provide most childbirth care. Nurses have contributed greatly to the improvement of the immunization rates in Mexico (more than 90% of the target population received complete immunization last year). Also, Mexico’s achievements in polio eradication were recognized by the World Health Organization (WHO) in 1995 (Salas, Zárate, & Rubio, 2000).

**Developing resources**

Belize nurses and midwives have contributed to human resource development by conducting case studies to improve health care quality. To further improve human resources, nurses suggest revision of midwifery and nursing curricula, establishment of a baccalaureate nursing program, inclusion of nursing research in nursing curricula, administrative training, and continuing education. Belize nurses also recognize the need for more resources in maternal child services (more service hours, prenatal care, perinatal workshops, improved childbirth management skills, and others), health education and continuing education for nurses for HIV/AIDS, and increased resources for mental health. Nurses recognize the need for evidence-based nursing practice and for revision of nursing regulation, particularly in advanced practice (Guild, 2000).

Nursing contributions to human resource development in Colombia include: 1) improving quality of nursing education at the university level; 2) promoting continuing education; 3) establishing nursing accreditation programs; 4) enhancing graduate and specialty nursing programs; and 5) developing a doctoral nursing program, collaboratively established by 5 universities. In addition, the Association of Colombian Nursing Schools and Colleges (Asociación Colombiana de Escuelas y Facultades de Enfermería, ACOFAEN) has taken steps since 1991 to strengthen education and nursing ethics and bioethics (Garzón, 2000). This has provided nurses with required background to maintain leadership positions on Ethics and Bioethics committees at hospital level.

Colombian nurses working in tertiary care institutions have developed standards for nursing care quality, including processes for applications (Garzón, 2000).

Nursing practice in Mexico has gone through several major changes in the last two decades, stimulated and affected by the need for improving nursing education and research, as well as faculty with post-graduate education. Mexican schools of nursing initiated nursing graduate studies during the 1980’s. Responding to 1990s health care reform implementation, Mexican nurses have engaged themselves in reconceptualization of nursing theory and practice, which increased nurses’ ability to meet country health demands (Salas, Zárate, & Rubio, 2000).
Through the Federation of Mexican Nursing Schools and Colleges (Federación Mexicana de Asociaciones de Escuelas y Facultades de Enfermería, or FEMAEE), Mexican nurses have implemented nursing educational accreditation and certification. Mexican nurses also have initiated a voluntary process for implementation of general examination for graduates of baccalaureate nursing degree programs and the professional competency examination is also being used, for graduates of baccalaureate and technical programs. It is anticipated that nursing competency exams will become an indicator of the quality of nursing education. Additionally, another contribution to Mexican human resource development is creation of a collegiate agency, the Mexican Interinstitutional Commission on Nursing, which is charged with definition of guidelines and directives for nursing practice and education (Salas, Zárate, & Rubio, 2000).

**Nursing/Midwifery Impact in Reducing Financial Barriers to Care**

Belize nurses appear to have a limited role in reducing financial barriers for care to the poor. They do suggest budgets for some outreach programs and participate in strategies to reduce care costs, through referrals and donations of medication. Belize nurses think that areas for improvement include: 1) increasing resources; 2) better integrations of health and social services; 3) more nursing participation in budget planning; 4) increased emphasis on prevention; and 5) increased nursing advocacy on behalf of the vulnerable (Guild, 2000).

Colombian nurses think their major contribution to reducing financial barriers to care is through nursing productivity, which provides high quality care at low cost. As an example, nurses reduce health costs through provision of 75% of medical consultations for maternal and child care. Additionally, nurses have demonstrated understanding of the need for achieving financial balance in health care and attention to productivity and cost control. A negative factor in reducing costs is diminishment of patient care time due to increased administrative and other duties. A suggestion for improvement in nursing contributions to reduction of financial barriers is strengthening economic knowledge and financial management skills (Garzón, 2000).

Although Mexican nurses play an important role in public health in Mexico (Salas, Zárate, and Rubio, 2000), there is little information about nursing impact in reducing financial barriers to care. However, Mexican nurses have made significant contributions to strengthening disease management and prevention programs and contributed to development of local and sectoral policies promoting socioeconomic development. As one of most notable deficiencies of the Mexican health sector is limited ability to provide basic coverage to the whole population, one suggestion for improving nursing and midwifery contributions is implementation of innovative community services that respond to service demands (Salas, Zárate, and Rubio).

**Factors Facilitating or Inhibiting Nursing Contributions to Core functions**

Belize nurses report as facilitators: 1) nurses’ willingness for self-improvement; 2) education; 3) leadership and management; 4) clinical practice; 5) support from the Ministry of Health and top level management; 6) health policy; and 7) increasing service availability and access. Belize nurses list as inhibitors: 1) negative political interference; 2) staff shortages; 3) in-service training limitations; 4) insufficient autonomy, policies, and leadership; 5) poor relationships between nurses and physicians; 6) lack of recognition; 7) transportation; 8) insufficient human and material
resources; 9) limited research; 10) regulation and legislation; and 11) inadequate supervision or support (Guild, 2000).

Colombian nurses report facilitators to be: 1) academic preparation; 2) holistic vision; 3) social and human service training and management training; 4) pressure to pursue graduate education (nursing and other) in order to be competitive for advisory and leadership positions; 5) availability of graduate program (nursing and other) that are flexible and innovative, offering advanced preparation, distance learning, etc.; 6) nursing capabilities for flexibility and adaptation to changes implemented by the social security system; and 7) strong professional organizations, which provide guidance to professional nurses through development and initiation of strategic plans (Garzón, 2000).

Colombian nurses report limiting factors to be: 1) role limitations in certain settings; 2) assignment of heavy administrative/logistical responsibilities to nursing coordinators; 3) new organizational structures in hospitals that affect a unified direction in a) nursing philosophy, policies, and guidelines for care, and b) communication channels, information, and participation at high management levels where decisions and polices are made; 4) limited experience of nursing professionals in determining costs of nursing interventions needed to estimate adequately the value of nursing services, which is an important productivity requirement; and 5) lack of a national strategic plan for nursing development to respond to the current health system (Garzón, 2000).

Mexican nurses identify facilitators to be: 1) legislative and regulation changes that have impacted health and education institutions, resulting in modified nursing models and expanded nurses’ roles; 2) nursing education/training progress; 3) nursing graduate programs, with increased emphasis on nursing research; 4) professional trend for more autonomy, increased training, and management of multidisciplinary teams; 5) theoretical and research advances; and 6) broadening of nursing role to include primary care, health promotion, prevention of disease, and participation in important health programs (Salas, Zárate, & Rubio, 2000).

Mexican nurses identify inhibitors to be: 1) a gap between changes in education and changes in practice; 2) limited opportunities for nurses to practice in primary care or community settings; 3) limited nursing roles in national health policy and programs; 4) insufficient nursing personnel; 4) differences in how nurses are educated/trained; 5) nursing concentration in urban centers; 6) incomplete regulation of nursing schools; 7) dominance of the medical model in health care; 8) under-utilization of professional nurses (Salas, Zárate, & Rubio, 2000).

Factors impacting Nursing and Midwifery Contributions

Nurses from all three countries mention health system changes to improve cost-benefit ratios at health institutions. Participation of nurses in planning and managing economic resources is limited in all three countries.

Nurses from Belize note several ways that contextual factors are impacting health care and their practice. For instance, nurses think that local economic pressures in Belize to decrease health resource and spending costs may impact health system allocations. Already budgets for nursing service include only salaries and allowances, but nursing control of nursing budgets is diminishing. For example, while public health nursing service had been authorized to manage its own budget since 1987, in 2000 the nursing budget was subsumed into the District budget. Moreover, Belize
nurses report a “lack of political commitment to the nursing sector” (Guild, 2000, p. 13), which indicate a lack of a power base to effect change. Nurses from Belize mention the importance of nursing education and post-graduate training and continuing education to update skills and abilities to meet complex health needs (Guild).

Colombian nurses also observe contextual factors affecting nursing contributions. Garzón (2000) views three factors as most important to strengthening nursing participation in core health system functions: 1) excellent nursing professional education, including graduate nursing education; 2) social and human science preparation; and 3) training in service management. Overall, Colombian nurses feel prepared for interdisciplinary and intersectorial work. However, while nurses have achieved professional position within the health care team, due to outstanding training, education, and “great social sensitivity,” nursing contributions are frequently intangible, invisible, and hard to measure in terms of economic productivity (p. 23). Moreover, interdisciplinary teams deliver health care, making it more difficult to isolate specific nursing contributions. Nevertheless, there is increasing recognition of the value of nurse contributions to health care, especially with aggregates and communities. At the local level, there is greater nursing involvement in planning, implementing, and evaluating projects and programs. However, although Colombian nurses have administrative responsibilities for health programs, such as completing monthly and annual reports of personnel productivity and program coverage, they do not have financial control of nursing budgets (Garzón).

Mexican nurses also describe contextual factors affecting their professional contributions. Nursing practice in Mexico was affected in 1990 by several changes. These included 1) emphasis on quality and productivity, client satisfaction, and nursing skills; and 2) theoretical and practice reconceptualization, resulting in an increased focus on health care (Salas, Zárate, & Rubio, 2000).

Mexican nurses have improved their educational preparation, with resulting changes in nursing practice and capability to operate in different settings. Nursing effectiveness is affected by several important factors, including restricted participation in health decision-making, variations in educational background, and hospital-centered practice, particularly in urban settings. As in the other 2 countries, Mexican nurses have a limited role in financial management of health care resources. Further, Mexican physicians in administrative roles have resisted adoption of primary care models where nurses have major roles. Moreover, the Ministry of Health has invested resources in training people with less than high school education as midwives and health auxiliaries, rather than utilizing professional nurses, which diminishes opportunities for professional nursing practice at primary care level and contributes to under-utilization of professional nurses. Fifty percent of primary care positions in the metropolitan areas and 75% of primary care positions in the other areas have been filled with auxiliaries. Additionally, there is disagreement about required academic credentials for technical and certificate nursing personnel (Salas, Zárate, & Rubio, 2000).

**Factors Affecting Nursing and Midwifery Services**

In terms of individual dignity and client satisfaction with services, Belize nurses report that nurses and midwives respond to some extent to individual dignity, confidentiality and client satisfaction. One way this is done is through provision of quality services that promote population health and human development. However, some services are more responsive to staff needs, and nurses believe there is still need for improvement (Guild, 2000).
In Colombia, the importance of human dignity has been a major consideration, with nurses promoting humanization of health services and emphasizing ethics education and participation on institutional ethics committees. While there are no Colombian studies measuring the impact of nursing on client satisfaction, some offices have conducted client opinion interviews and analyzed client satisfaction through assessments of complaints (Garzón, 2000).

Mexican nurses’ consideration of numerous health determinants (biological, social, and cultural factors) in the conceptualization of health recognizes individual dignity needs. Mexican nurses mention an emphasis on client satisfaction with nursing and medical care adopted by hospitals during the last decade (Salas, Zárate, & Rubio, 2000).
4. IMPACT OF SOCIO-ECONOMIC-POLITICAL CONDITIONS ON NURSING AND MIDWIFERY SERVICE

Scope of service

In Belize, there are limitations in the scope of nursing services with a need to increase the number of nurses in educational, administrative, and expanded role positions. In addition, the high cost of nursing specialization and decreased resources has limited nursing participation in specialization programs. In terms of the population, the socio-economic-political conditions of the country have decreased health service accessibility (Guild, 2000).

In Colombian hospitals, GSEs agencies, and certain private institutions, nurses are responsible for larger numbers of patients, which restricts time for direct care. This problem is magnified by increasing numbers of nursing auxiliaries who sometimes lack proper training (Garzón, 2000).

In Mexico, nursing services have been expanded through the incorporation of primary health care and community activities. However, the role of the professional nurse at the community level has been restricted due to limited job positions for professional nurses (Salas, Zárate, & Rubio, 2000).

Service setting

Nurses and midwives from Belize do not mention a particular service setting shifting. However, they note an increase in the number of institutional deliveries in urban areas with a decrease in institutional deliveries in rural areas (Guild, 2000). Colombia nurses have been shifting settings, with an earlier move from communities to hospitals (Castrillón et al., 1998) and a more recent move back to the community, to provide health promotion and illness prevention services (Garzón, 2000). Mexican nurses are still firmly entrenched in institutions and hospitals. Although some nurses work at community level, community nursing positions are limited (Salas, Zárate, & Rubio, 2000).

Salary level

In all three countries, nurses have expressed salary concerns. Belize respondents concerns include: public health salary freezes, inadequate fringe benefits, salaries disproportionate to workload, and need for upgrade of salaries according to increased cost of living. In addition, there is a need for better benefits for nurses and midwives, such as health insurance (Guild, 2000). Colombian nurses are concerned about institutional changes that are impacting their overall salary, such as “comprehensive” wages (Encompassing monthly salary without fringe benefits). Colombian nurses are also concerned about changes in contracts, such as shift to short-term contract or limited-term contracts. This has created a problem with service continuity, as well as job dissatisfaction and lack of employment security (Garzón, 2000). In Mexico, nursing salaries are low, and many
Mexican nurses must hold more than one job or work at several institutions to meet life expenses (Salas, Zárate, and Rubio 2000).

**Working conditions**

Most nurses from Belize report some improvement in working conditions, although there is need for further improvement. An inadequate physical environment affects standards of nursing practice (Guild, 2000). Colombian nurses note increase rotation of personnel in some health institutions (Garzón, 2000). Mexican nurses report a nursing shortage, increased workload, extended work shifts, and unsatisfactory work conditions (Salas, Zárate, & Rubio, 2000).

**Resources**

Nursing and midwifery services in Belize have been affected by insufficient resources at all levels, including inadequate equipment (Guild, 2000). In Colombia, lack of materials and medicines for patient treatment are affecting not only the quality of nursing services but nurses as well. This lack of resources affects professionals' mental status as the effectiveness of their work is decreased (Garzón, 2000). In Mexico, nurses reported insufficient supplies in their work units and inadequate working conditions (Salas, Zárate, & Rubio, 2000).

**Budgeted positions**

In Belize, even though, there is a need to increase the number of nursing and midwifery positions, budgeted positions of nurses and midwives have changed very little during the last 10 years. However, nurses and midwives are expected to provide excellent services with limited personnel (Guild, 2000). In Colombia, the number of nurses and nursing auxiliary's positions has decreased due to hospital closings (Garzón, 2000). According to Salas, Zárate, & Rubio (2000), Mexico nursing shortage has changed little in the last three years due to financial restrictions. However, a small increase in the number of professional nurses at primary care level was noted in the last two years.

**Leadership and policy development**

According to study participants in Belize, there have been changes in types and number of nurses/midwives in leadership positions. Now, nurses have the opportunity to have leadership positions. They can apply for regional positions, such as health managers or hospital administrators. Moreover, the 6 nurse managers and the Chief Nursing Officer participate in policy development (Guild, 2000).

In Colombia, nursing participation in policy development and decision making levels is limited (Garzón, 2000). For example, there is not nursing participation in the Social Security Board or council, at national and state levels respectively. Moreover, nurses at the Office of the Ministry of Health work as members of multidisciplinary teams (Garzón, 2000). In Mexico, the coordination, strategic, and regulatory bodies of IMSS include nurses at national and regional levels. However,
nursing participation in policy development at national or state levels is restricted (Salas, Zárate, & Rubio, 2000).
5. PAHO/WHO CONTRIBUTIONS TO NURSING AND MIDWIFERY

Extent of External Support

In Belize, only half of the interviewed nurses mentioned that external funding has supported nursing training and development of midwifery curricular programs. Nurses mention that PAHO supports only research and curriculum projects. In addition, nurses from Belize disagreed, with some believing support has increased slowly while others believed that it has decreased (Guild, 2000).

In Colombia, Universidad del Valle and Universidad Nacional have developed distance learning and outreach nursing programs, using external funding. In addition, Colombian nurses have received funding for nursing knowledge dissemination through consultations, seminars, and publications. Colombian nurses reported that external funding has decreased. However, in the past, Colombian nurses have obtained resources from such different funding agencies as W.K. Kellogg Foundation, the Canadian Nurses Association (CAN) and the Canadian International Development Agency (CIDA) (Garzón, 2000).

In Mexico, international health agencies have influenced nursing by emphasizing a global nursing practice and recommending policies and strategies oriented to enhance nursing practice at all levels of care. Mexican nurses mentioned that the Kellogg Foundation has sponsored a multidisciplinary program, which seeks to raise the educational levels of nursing personnel (Salas, Zárate, & Rubio, 2000).

The Role of WHO in Strengthening Nursing and Midwifery Services

In Belize, WHO has strengthened nursing and midwifery services, by funding research and training activities, including workshops, providing perinatal record forms, current information, and supporting activities at the primary care level (Guild, 2000). In Colombia, the role of WHO in strengthening nursing activities was not recognized by the majority of the responding nurses. The WHO Resolution 49.1 was known only to board members of the Colombian Nursing Association. Colombian nurses nevertheless, did recognize the support received from PAHO, especially from nursing advisors (Garzón, 2000). In Mexico, nurses also are unaware of the WHO resolution 49.1. Following WHO nursing recommendations of 1992 and 1997, nursing schools are emphasizing nursing professionalization through distance learning courses (Salas, Zárate & Rubio, 2000).
6. SUMMARY

Even though countries are highly dissimilar in geographic and population characteristics, the three countries are facing similar challenges from unequal health opportunities derived from social and economic inequity. Reduction of social and economic inequality strategies includes development of human resources and increasing employment opportunities.

Efforts to develop human resources are evident in Colombia and Mexico, where literacy rates have improved during the last years and graduate programs have been increasing. However, in Colombia (with very high unemployment rates) nursing employment opportunities are decreasing. In Mexico, (with low unemployment rates but limited opportunities for better nursing paid jobs) employment opportunities are decreasing. In addition, Mexican nurses report needing to maintain two jobs to support their families (Paz & Martínez, 1998; Valdéz, Batalla, Rayo, & Nájera, 1998).

Violence is a social, economic and health concern in the three countries. Violence is creating political instability in Colombia (Garzón, 2000) and social concerns in some parts of Mexico (Salas, Zárate, & Rubio, 2000). Violence is also affecting young people in Belize (Guild, 2000). It is well known that violence affects foreign economic investments, a necessity for economic growth and country development. Therefore, these countries share a barrier to international competitiveness.

In terms of health care reform, all three countries are going through a decentralization process, but are using different strategies, presenting different developmental stages, and obtaining different results. Universal access to health care is the main goal, hindered by development of effective financial mechanisms. Regulation of health service providers, including the regulation of private practice, has been recognized as an urgent need. Finally, financing public health services represents a serious challenge given national and local budgetary constraints.

Nursing situation reflects the existing social and economic inequalities and the limitations of the current health systems. In the three countries, nurses and midwives have been affected by health care reorganization. Nurses and midwives have a limited role in health policy development and in the decision making process. The scope of nursing service is limited either by the number of available number of nursing positions or by the larger number of patients assigned to nurses.

With the exception of Belize, nursing resource utilization and budget constraints may explain the lack of required nursing personnel in clinical and community positions in Mexico and Colombia. Therefore, nursing personnel shortages need to be examined carefully.

Even tough working conditions, salaries and job satisfaction are decreasing, interviewed nurses continue to emphasize the need for holistic care and health programs oriented to respond to community needs. However, the changes in the context and in the health care delivery system may be calling for a change in the organizational and professional culture. Proactive strategies emphasizing focused and planned action may facilitate the generation of a culture that knows what, when and how to learn. This skill is very important in times of change.
REFERENCES


