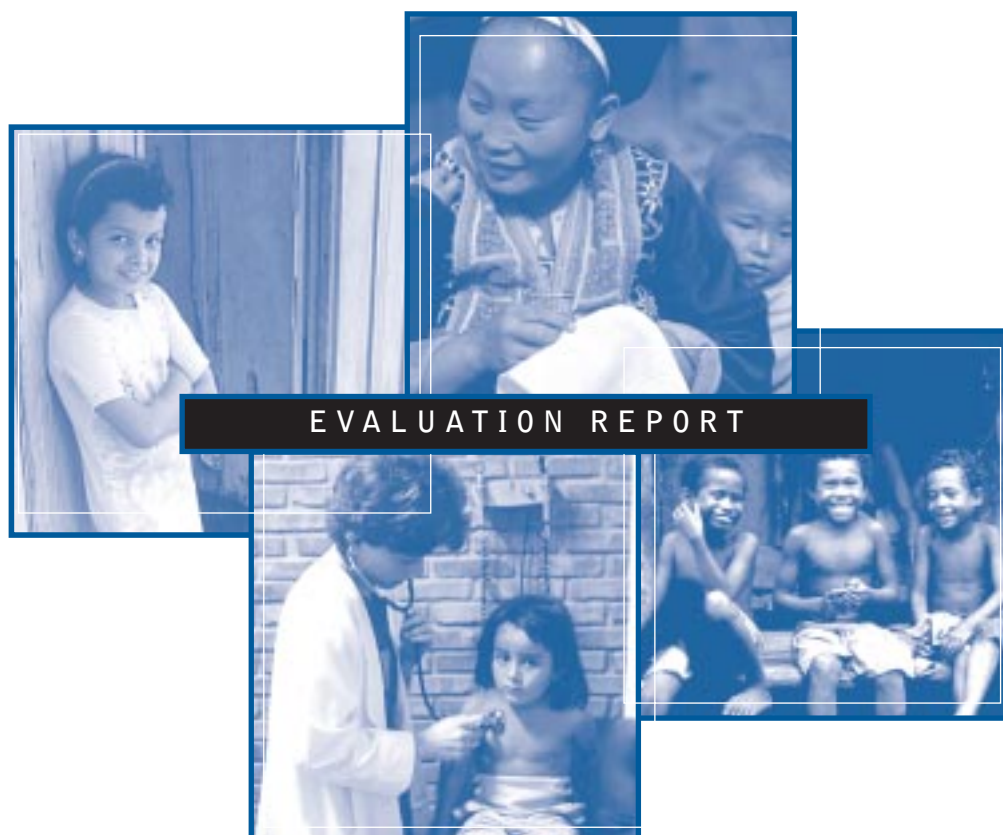


QUALITY

ASSURANCE

PROJECT



Evaluation of the Chile National Quality Assurance Program



Evaluation of the Chile National QA Program

Stephane Legros, MD, MPH, MBA

Rashad Massoud, MD, MPH

Orlando Urroz, MD

Edward Kelley, PhD

“People working with people for the people.”

The Chilean Legacy in Healthcare Quality

Quality Assurance Project
7200 Wisconsin Avenue
Suite 600
Bethesda, MD 20814

TEL 301-654-8338
FAX 301-941-8427
www.qaproject.org



QUALITY
ASSURANCE
PROJECT

TEL (301) 654-8338
FAX (301) 941-8427
www.qaproject.org



The Quality Assurance Project (QAP) is funded by the U.S. Agency for International Development (USAID), under Contract Number HRN-C-00-96-90013. QAP serves countries eligible for USAID assistance, USAID Missions and Bureaus, and other agencies and nongovernmental organizations that cooperate with USAID. The QAP team consists of prime contractor Center for Human Services (CHS), Joint Commission Resources, Inc. (JCI), Johns Hopkins University School of Hygiene and Public Health (JHSPH), Johns Hopkins Center for Communication Programs (JHU/CCP), and the Johns Hopkins Program for International Education in Reproductive Health (JHPIEGO). It provides comprehensive, leading-edge technical expertise in the design, management, and implementation of quality assurance programs in developing countries. CHS, the nonprofit affiliate of University Research Co., LLC (URC), provides technical assistance and research for the design, management, improvement, and monitoring of healthcare systems and service delivery in over 30 countries.

Acknowledgments

The authors are indebted to the staff of the Quality Assurance Project (QAP) for assistance, both at the technical and administrative level. The willingness of the Chilean health authorities at the central, province, and district level to make themselves available at all times is recognized with considerable gratitude, especially the central quality assurance (QA) Unit of the MOH. The evaluation team acknowledges the support provided by the United States Agency for International Development funding this final evaluation and thanks the Agency for providing the Quality Assurance Program with the opportunity to contribute to the success of National Chilean QA program evaluation.

Recommended citation

Legros, S., R. Massoud, O. Urroz, and E. Kelley. 2000. Evaluation of the Chile National QA Program. *Evaluation Report* 1(3). Published for the United States Agency for International Development (USAID) by the Quality Assurance Project (QAP): Bethesda, Maryland.

About this series

The *Evaluation Report* series presents the findings, recommendations, and lessons learned of completed quality assurance (QA) evaluations in countries with long-term QA programs. An electronic copy of this publication may be found at qapdissem@urc-chs.com.

Contents

1. Introduction	1
2. Origins of the Chilean QA Program	3
3. Overview of the Chilean QA Program	6
3.1. QA Administrative Structures	6
3.1.1. The Quality and Regulation Unit (MOH)	6
3.1.2. Health Services	7
3.1.3. Quality Committees	7
4. Adapting QA Approaches to the Chilean Health System	8
4.1. Stages of QA Implementation	8
4.1.1. Stage I: Team Building, Skills Development, and Project Development (March 1991- September 1993)	9
4.1.2. Stage II: Decentralization and Institutionalization of QA in the Health Services (September 1993-March 1995)	10
4.1.3. Stage III: Institutionalization of a Quality Unit in the Ministry of Health (March 1995-March 1997)	11
4.1.4. Stage IV: Quality and Regulation (March 1997-present)	11
4.2. Sustainability of the Chilean QA Program	15
4.3. QA Initiatives within the MOH	16
4.4. Other Chilean QA Initiatives	17
5. Evaluation of QA Program Structure and Management	17
5.1. QA Management within the Health Services	18
5.2. QA Management within Hospitals and Primary Healthcare Centers	19
5.3. Informal Aspects of QA Management: The “Magic” of QA in Chile	19
6. QA Program Technical Functions	20
6.1. Quality Improvement	20
6.2. Quality Design	24
6.3. Quality Assessment and Monitoring	25
6.4. Standards Setting and Dissemination	26
6.5. Evidence-Based Medicine	29

7. QA Program Support Functions	29
7.1. QA Training	29
7.2. Training Modules and Products of the QA Program	30
7.3. Decentralization of Training	32
7.3.1. Integrating Training—QA and Chilean Universities	33
7.3.2. Quality Project for General Area Physicians and Dentists	34
7.3.3. Participation of Professional Schools and Scientific Associations ..	34
7.4. Monitoring and Supervising QA	34
7.4.1. Communication, Benchmarking, and Attitudes within the QA Monitor Community	36
7.5. Dissemination and Communication	37
8. Recommendations and Lessons Learned	39
8.1. Management and Leadership	39
8.2. Technical Functions	41
8.3. QA Support Functions	42
8.3.1. Training	42
8.3.2. Dissemination	43
8.4. Program Management	43
9. References	45
10. Appendices	45
10.1. Tool for Evaluating Impact of Training	46
10.2. Chile Program Evaluation Framework	47
10.3. List of Contacts	56

List of Tables

Table 1: Chile QA Program Evaluation Areas	2
Table 2: Chile Socioeconomic Statistics	4
Table 3: QA Program Objectives	5
Table 4: Capacity Building in QA	7
Table 5: Example of Management Agreement: Agreement No. 25	13
Table 6: List of Relevant Administrative Agreements	14
Table 7: Topics Selected for Quality Improvement Projects 1998/1999	22
Table 8: Examples of Nationally Disseminated QI Project Topics	24
Table 9: Standards and Health Priorities	27
Table 10: Examples of New Standards for Health in Chile	28
Table 11: Scope of QA Training Program: Program of the Ministry of Health, Chile, 1991-99.	30
Table 12: List of Training Modules Completed in the Chilean QA Program, 1994-1999	31
Table 13: Results of the Team Health Test, July 1999	36

List of Acronyms and Abbreviations

CONACEM	National Council for Medical Certification	PAHO	Pan American Health Organization
CHS	Center for Human Services	QA	Quality Assurance
DISAP	División de Salud de la Personas	QAP	Quality Assurance Program
ECM	Quality Assurance Program	QD	Quality Design
EMC	Evaluación y Mejoramiento de la Calidad	SATUS	Servicio de Atención al Usuario
FONASA	Fondo Nacional de Salud	SEREMI	Secretarías Regionales Ministeriales de Salud
ISAPRES	Instituciones de Salud Previsionales	SOME	Servicio de Orientación médica estadística
ISQua	International Society for Quality in Health	STD	Sexually Transmitted Disease
JCI	Joint Commission International	UNICEF	United Nations Children's Fund
MOH	Ministry of Health	URC	University Research Co., LLC
NGO	Nongovernmental Organization	USAID	United States Agency for International Development

Abstract

The Chilean Quality Assurance (QA) program evaluation of July 12–30, 1999 was performed at the request of the Chilean Ministry of Health (MOH). The main goal, in addition to performing a classical evaluation, was to identify key ingredients to the QA program success by highlighting lessons learned from the Chilean experience and deriving principles that can be benchmarked by other countries. A second objective was to make strategic recommendations to enable the eight-year-old QA program to reorient and strengthen its main activities. Six regions (out of a total of 13) and seven “Health Services”¹ (out of a total of 29) were visited. The evaluation team studied both ministerial and municipal healthcare networks, as well as four different types of hospitals.

The evaluation report opens with a brief history of the start of the QA program and then provides an overview of its administrative structures. The stages of implementation are described in depth, followed by indications of sustainability and institutionalization. The core evaluation examined the Health Services, hospitals and healthcare centers, all of which are described in detail. Also detailed are the QA program technical functions: quality improvement, quality design, assessment and monitoring, and standard setting and communication. QA support functions, such as training and supervision, are also evaluated in depth.

The report concludes with recommendations and lessons learned relating to management and leadership, technical and support functions, and program management. The Appendices include the tool that was used to evaluate the impact of training, the evaluation framework, and a list of contacts.

¹ “Servicios” are geographical units within a region.

Evaluation of the Chile National QA Program

1. Introduction

The Chilean Ministry of Health (MOH) requested that the Quality Assurance Project (QAP) conduct an evaluation of the Chilean National Program for the Evaluation and Improvement of Quality, which was implemented between 1991-94 with QAP's technical assistance and funded by the USAID.

The expressed goals of the national quality assurance (QA) program were to: (1) raise awareness about the importance of providing quality throughout Chile's healthcare system; (2) develop a structure to implement and sustain QA activities; (3) achieve measurable improvements in quality of care and service delivery; and (4) improve patient satisfaction. The National Program for the Evaluation and Improvement of Quality, or QA Program (known by its Spanish acronym, ECM), now sponsors QA programs operating in nearly all of Chile's 13 regions and 29 decentralized Health Services.

The evaluation of Chile's QA Program was conducted from July 12-30, 1999 by a joint team of three international consultants from USAID/QAP and the director of the QA Program, with the support of the Chilean MOH and senior QAP staff. The members of the evaluation team were selected in order to maximize the team's experience and abilities with: (a) QA programs and QA approaches; (b) evaluation of QA programs, specifically, and development programs, generally; (c) experience and contacts in Latin and South America; and (d) experience and contacts within the field of QA worldwide.

The evaluation team included the following individuals:

- Evaluators: Stephane Legros, MD, MPH, MBA (CHS); Rashad Massoud, MD, MPH (CHS); Orlando Urroz, MD, (MOH-Costa Rica)
- Evaluation technical team: Tessie Catsambas, MPP; Edward Kelley, PhD; David Nicholas, MD, MPH; Paul Richardson, PhD
- Chilean Ministry of Health Partners: Gilda Gnecco, MD, MPH (QA program director, MOH-Chile); Raquel Loncomilla (QA program assistant, MOH-Chile)

The methodology for this evaluation was devised based upon lessons learned from QAP's work in QA program evaluation in Zambia and Niger, as well as an extensive review of the evaluation literature. A detailed presentation of this methodology is made elsewhere. Other specific sources of information for the derivation of areas for this evaluation included documentation of the Chilean QA program development (Gnecco 1998). The evaluation team then constructed a logical framework of evaluation areas that included specific questions for each area, data sources, method of data collection, recommended indicators for questions, and an indication of when data would be collected (before or during trip). The framework was divided into technical QA areas, support areas for the program, and environmental factors linked to the success or failure of the program. The following table summarizes these technical, support, and environmental factors.

Table 1: Chile QA Program Evaluation Areas

QA Program Structure and Management

- Program structure
 - Management and supervision
 - Leadership for program
 - Organizational culture of quality
-

QA Program Technical Functions

- Quality improvement
 - Standards setting and communication
 - Quality design
 - Quality monitoring
-

QA Program Support Functions

- QA training and training products
 - Dissemination and communication
 - QA research
-

Environment for QA Program

- Role of health sector reform
 - Role of Chilean culture
-

The evaluation team conducted an extensive document review at the Quality and Regulation Unit within the Division of People's Health at the Chilean Ministry of Health. In addition, the team conducted site visits using structured and unstructured interviews, self assessment forms, and appreciative inquiry. These latter two approaches are described in detail elsewhere.² These site visits were conducted at the following locations:

² Interested readers are encouraged to read QAP's publication for health managers on QA program evaluation, available from QAP's Communication Division.

Ministry of Health

- Quality and Regulation Unit, Division of People's Health, Ministry of Health
- Accreditation Unit, Ministry of Health

Regional site visits

- Metropolitano Sur Region
- Metropolitano Oriente Region
- Region III
- Region VI
- Region VIII
- Region X
- Region XI

Universities

- Chile University
- Valparaiso University
- Catholic University

2. Origins of the Chilean QA Program

Historically, Chile has been at the forefront of healthcare service provision in Latin America in terms of prevention, primary care, and medical education. Despite the low incomes of almost half the population, health indicators such as an infant mortality rate of 9.8 per 1,000 live births and maternal mortality rate at 20 per 100,000 live births, a 95 percent literacy rate, and a 71 year-plus life expectancy for men and 77 years for women, rank Chile among more highly developed countries in terms of healthcare. As an example of per capita healthcare expenditure in Chile, in 1997, the public health budget was the equivalent of U.S. \$2,015,000. Regarding the public health expenditure per capita, there was a remarkable increase for the insured population of 108 percent in the 1989-1995 period. In 1995, the public health expenditure per capita for the insured population was around U.S. \$190. The National Health System employs 64,800 people, plus an additional 16,500 at the primary healthcare level.

In 1982, the Chilean MOH, in conjunction with the World Bank, launched the Health Sector Reform Program that decentralized the public healthcare system—which serves 60 percent of the population—into 13 Health Regions, which, in turn, are further segmented into 29 Health Services. The Health Services are the key administrative units in the system and have considerable autonomy in implementing programs and services. The Health Services have responsibility for the operation of public hospitals in their localities and provide technical oversight to the primary healthcare facilities, which are managed by the municipal governments. However, decentralization resulted in insufficient professional and technical

Table 2: Chile Socioeconomic Statistics

Principal Chilean socioeconomic features

- 14 million inhabitants
 - 25% of population below poverty level
 - 95% literacy rate
 - Life expectancy of 71.4 years for men and 77.3 years for women
 - 2 billion US\$ annual health budget
 - U.S. \$190 public health expenditures/capita
 - 6.5% of GNP for health
 - Infant mortality rate 9.8/1000 live births
 - Perinatal mortality rate 4.1/1000 live births
 - Maternal mortality rate 20/100,000 live births
-

resources. In particular, the need for trained physician staff at the peripheral levels of the health system and insufficient resource flow to these peripheral levels slowed the progress of decentralization.

In 1989, Chile held its first elections after 17 years of military dictatorship. A civilian government was elected that defined the role of healthcare as essential both to improved standards of living and to achieving economic development. The government's social policies were based on promoting equity, social participation, respect for the dignity of individuals, and solidarity with poor and neglected segments of the population. In the effort to strengthen the public health sector, quality of health services ranked high as a priority among both patients and providers in Chile.

The most important quality of care issues within the public sector from the patient's point of view concerned limited treatment availability and rejection of patients needing care. Long waiting periods, delayed care, and inappropriate use of higher-cost specialists were also cited, as were infrastructure-related obstacles to quality care such as physical and structural factors. Furthermore, patients expressed dissatisfaction with user-provider interpersonal relationships.

Concerns expressed by providers included inadequacies in the work environment, outdated technology and infrastructure, inadequate coordination, lack of incentives, high work pressure, and lack of teamwork. Hesitation to honestly express feedback was also acknowledged.

A small group of QAP consultants worked with members of what at that time was called the Primary Healthcare Department of the MOH to design the national QA Program and the following implementation guidelines:

The effort must be national in scope. Program was developed on a national basis to address the need for quality services throughout the country's healthcare system, as well as socioeconomic differences across regions and locales.

Participation in the QA Program must be voluntary autonomy of regional health services is a key characteristic of the Chilean health system. Each region, Health Service, and health establishment would decide the nature, extension, and scope of its quality assurance activities.

Improvement must be achieved at all levels of the system The project was initiated at the primary health level, secondary and tertiary levels were incorporated later, during the second year of activities.

Involvement of all actors of health system From the program's inception, all stakeholders within the health system were invited to participate including Health Services, nongovernmental organizations (NGOs), universities, scientific societies, and private health organizations.

Respect for the existing technical and administrative structures of authority Decision making rested with local authorities. The QA Program was designed not to contradict such decision-making structures.

Based on these guiding principles, the MOH officials defined the QA Program's objectives, shown in Table 3.

Table 3: QA Program Objectives

-
- To raise awareness about the importance of evaluation and improvement of quality among those who manage and deliver healthcare, and to develop local capacity to apply QA methods in Chile
 - To assign responsibilities for QA activities through the formation of committees at the operational levels (health posts, clinics, hospitals), and to institutionalize a continuous and systematic quality improvement process
 - To achieve measurable improvements in quality through specific projects at the local level
 - To increase the acceptability of health services and satisfaction of those who use the health system in areas where the program is active
-

The national team, led by Dr. Gilda Gnecco of the Primary Healthcare Department, then developed a plan of activities that the QA Program would carry out to achieve the objectives.

- Organize a national conference with representatives from all of the Health Services and regions, as well as from universities, NGOs, and the private sector, to introduce QA concepts and methods and to motivate local health authorities to develop their own QA plans and activities. This conference was held in July 1991 in Punta de Tralca
- Support training of healthcare providers in QA skills by working with regions and Health Services to organize and conduct local QA training courses
- Promote and support the development of QA committees at the regional, Health Service, and facility levels to plan and direct local QA activities

-
- Identify and train quality monitors throughout the country to provide technical support for QA training and quality improvement activities at the region and health service levels

The primary technical assistance strategies reflected the main components of the QA Program including motivation and capacity building, planning, development of an organizational structure, realization of quality projects, quality improvement activities without formal projects, and dissemination and institutionalization.

Finally, a major consideration in the introduction of the Chilean QA Program was that it had to be financially and technically self-sustaining.

3. Overview of the Chilean QA Program

To achieve institutionalization of QA functions, organizational structures are needed to plan and direct QA activities at both the policy and operational levels. Administrative structures that are optimal for each country may vary and are largely determined by the organization of the healthcare system and institutional culture of the organization that directs the QA effort. In some countries, a central QA unit has been created to lead and coordinate QA activities throughout the system, while in others, QA functions are integrated into existing organizational units and processes.

This section begins by describing the relationship between Quality Assurance administrative structures within the Chilean Ministry of Health (MOH), Health Services, and local municipalities. Stages of QA implementation will then be detailed, including the evolution of these structures and their role in developing technical and support functions for delivery of quality healthcare services.

3.1. QA Administrative Structures

3.1.1. The Quality and Regulation Unit (MOH)

In 1991, the MOH appointed staff within its Primary Healthcare Department to direct the Quality Assurance Program, headed by Dr. Gilda Gnecco. In 1995, this department became the Quality Unit. It was formally established within the MOH to provide training and support to the 29 Health Services that exist throughout Chile's 13 regions in developing their own QA programs. Since 1993, the Unit has primarily played an advisory role, in keeping with Chile's policy of decentralizing healthcare. The Health Services provide most of the funding for the Unit as well as for training and technical services at the local level.

In 1997, the Quality Unit became the Quality and Regulation Unit within the Division of People's Health (formerly the Primary Healthcare Department), reflecting its new mandate to reinforce the regulatory role of the MOH with a quality focus. In 1997-98 the Unit led staff throughout the MOH in the process of defining quality standards, establishing criteria for their achievement, and developing indicators to measure the achievement of standards in 16 priority health areas. The Unit then coordinated the development of standards, criteria, and indicators that could be applied throughout the regions, Health Services, and facilities

in addressing healthcare needs. The resulting document, “Criteria, Quality Standards, and Indicators for National Health Priorities,” represented the first time that quality standards were defined at the national level in Chile. The Unit also reviews existing laws, decrees, and regulations to identify areas in need of further regulation and is organizing committees of experts to collaborate with the MOH to develop norms in specialized areas.

3.1.2. Health Services

The Health Services are now the strongest institutional base for QA programming. As well as assuming overall responsibility for providing healthcare to local populations, the Health Services administer secondary and tertiary care facilities while local municipalities administer primary healthcare facilities. This split between primary and secondary healthcare facilities dates back to 1982 with the development of the Healthcare Reform Program. Health Services and municipalities are the decision-making entities regarding financing, program administration, and human resources in the Chilean healthcare sector, and thus determine the level of support for QA planning, financing, and activities.

3.1.3. Quality Committees

Quality committees are one of the most important components of the QA Program. They are designated by the Health Services, although participation is completely voluntary. The committees function at all levels of the healthcare system. Membership may include top level political appointees, Health Service officials, and representatives from local universities, representatives from related governmental services (schools or day-care programs), and representatives from NGOs.

Quality committees set priorities, assign tasks, coordinate training and technical support, and coordinate information sharing and dissemination. The MOH lends support in training monitors within individual Health Services, who have been vital to the process of quality assurance training and coaching at the local level. By October 1998, 98 quality committees had been formed at the regional, Health Service, and facility levels, in both hospitals and primary care clinics.

Quality committees are responsible for coordinating and planning quality improvement activities, assigning responsibilities and resources, organizing and supporting training and motivational activities, facilitating the development of specific quality improvement projects and disseminating study results and activities.

Table 4: Capacity Building in QA

Cumulative Results from 1991-99

- 98 Quality committees
 - 625 QA projects developed
 - 800 Monitors trained (75% active)
 - 12,000 Trainees in basic QA through 300 workshops
 - 38% Trained through decentralized system training
-

“I think that the QA Program is one of the most important programs of the MOH”

Executive secretary of the MOH social agenda

4. Adapting QA Approaches to the Chilean Health System

At the outset of the Chilean QA Program, a variety of state-of-the-art approaches were explored for improving delivery of healthcare services. These methods emphasized improvement of healthcare delivery processes and the application of quality assessment and improvement cycles, drawing on QAP’s six-step approach to problem solving and process improvement.

By the end of the first year of the QA Program, a standardized quality assurance methodology emerged from the process of conducting QA training. A straightforward quality improvement process resulted that is flexibly applied by teams throughout Chile. The Program offers a way of approaching quality problems, using guidelines, worksheets, and prescribed formats for each step of the process, from problem definition to developing indicators to measure problems and their impact.

4.1. Stages of QA Implementation

Since July 1991, when the first QA activity took place, through 1998, the Chilean National Quality Assurance Program has developed in four stages, each with its own objectives and achievements. The USAID-funded QAP provided technical assistance to the Chilean QA Program during the first and second stages. During the first year, technical assistance efforts emphasized quality assurance training, organizing quality committees, and planning. During that period, the central QA team within the MOH, with support from international experts, was able to initiate activities throughout Chile and develop a national profile for the Program in a very short time. As implementation progressed, the role of QAP’s advisors became more limited, shifting from involvement in training design, delivery, and project development, to advising the Chilean team on strategic planning. Since the inception of this externally funded program, quality assurance has become institutionalized in Chile’s health system, relying only on local technical and financial resources.

From 1991 to 1994 the frequency of technical assistance visits from international experts was as follows:

- 4 visits — Pedro Saturno, University of Barcelona
- 9 visits — Lori DiPrete Brown, Quality Assurance Project, Bethesda, MD
- 2 visits — Luis Miguel Vidal
- 2 visits — Jorge Hermida, Quality Assurance Project — Ecuador
- 1 visit — Linda Ashburn

The average duration of a visit was 15 days.

4.1.1. Stage I: Team Building, Skills Development, and Project Development (March 1991-September 1993)

The QA Program in Chile was initiated with the national QA awareness and basic skills training seminar held in Punta del Tralca in July 1991. Convened by the MOH with the support and participation of international consultants, the seminar hosted representatives from all of the country's Health Services, universities, and professional associations. The seminar presented the objectives and decentralized implementation strategy of the QA Program and motivated leaders from the Health Services to initiate QA activities in their own areas by forming quality committees, hosting training seminars, starting quality improvement projects, and developing QA plans.

The team leader of the Program, Dr. Gilda Gnecco, asked participants to list the most pressing quality problems at the primary healthcare level in the public health system in Chile. Participants cited long waiting times, physical and structural factors that limited access to services, limited treatment capabilities at the primary level (resulting in delayed care or inappropriate use of higher cost specialists), and patient dissatisfaction with the interpersonal treatment they received. Workshop participants also expressed frustration with inadequacies in their work environment, including outdated technology and physical infrastructure, inadequate coordination, low morale, and lack of incentives. Participants were encouraged to develop quality improvement projects to address these problems. Ten quality improvement projects were initiated as a direct result of the seminar.

At this initial seminar, the central team within the MOH and their international counterparts began to develop six basic training modules for use in the training program. The Chilean team further refined the modules, adding innovations based on their own training experiences, evaluating successes, and continually revising and improving group exercises and materials for clarity and thoroughness. The role of the international consultants increasingly became one of collegial support and feedback rather than one of teaching and direction. As a result, the creation of the modules facilitated the rapid dissemination of basic skills and helped the central training team to consolidate their own training skills.

At the conclusion of QAP's role in assisting the QA process in Chile, the central team developed an additional 10 modules in response to needs identified through experience within the Health Services.

During the first two years of the QA Program, the central team focused on developing QA skills and capacity in the Health Services. In the first year, training in basic QA concepts was provided to 674 health professionals, covering more than half of the country's Health Services. By September 1993, 2,800 health professionals had received basic QA training, 80 percent of whom were primary care providers and 20 percent were secondary and tertiary care providers.

In the QA Program's second year, the central team sought to build on this capacity by stimulating the development of small, targeted projects aimed at achieving quality gains through the use of quality assurance problem-solving methods. This step represented a transition from learning and skills development to more active project development. Forty-four quality improvement projects were initiated by 1993, and many more ad hoc quality improvements took place without formal projects.

During the second year of the QA Program, a number of changes were in evidence that collectively signaled the growing commitment to quality assurance in the MOH, which

began assigning its own non-project funds to the program. The coverage of QA activities (basic training, training of quality monitors, and development of specific projects) was extended to 23 of the then 27 Health Services, with the progressive involvement of more senior and mid-level managers.

The central level team also developed greater technical depth in quality assurance methodology and increasingly standardized its methodological tools, such as training modules and worksheets. This standardization facilitated the diffusion throughout the health system of common terminology and methodological approaches, making it easier for local teams to systematically define and analyze quality problems and to develop criteria and process indicators to measure quality and monitor programs.

Quality monitors at the Health Service level began to assume a larger role in advising and supporting quality improvement teams, reducing dependence on the central level team. Ninety-one quality monitors had been recruited by the end of this stage. At the same time, the central team became less dependent on technical assistance from the international consultants and gained greater confidence in its abilities to refine and further develop a QA approach that was applicable to the Chilean healthcare system. The role of international technical assistance shifted from training and skills development to a more advisory role, helping the central team within the MOH to conduct a series of strategic planning exercises to analyze the first year's experience and develop a work plan for 1993.

“One of the strengths of the program is that it was a bottom-up construction.”

Director of the MOH People's Health Division

4.1.2. Stage II: Decentralization and Institutionalization of QA in the Health Services (September 1993-March 1995)

The second stage of the program began in September 1993, when outside funding for the QA program ended and it was faced with the challenge of sustainability. The MOH decided to fund the salaries of four central staff members, their travel expenditures, and materials for QA training and coaching. All other costs were to be borne by the Health Services, which would pay for materials, training costs, and participants' travel expenses.

As the program moved toward independence from outside technical assistance, it also sought to mirror that same process in its decentralized programs. The central team sought to transfer responsibility and authority to the quality monitors and committees in the Health Services, with the ultimate goal of having the Services able to meet their own needs for QA planning, training, and coaching. By the end of this stage, more than 5,000 health professionals had received QA training and some 250 quality monitors had been trained. More than 200 quality improvement projects had been completed or were in progress. Twenty-six of Chile's 29 Health Services had QA programs, and four had established quality units. Some 90 quality committees had been formed at health center, hospital, Health Service, and regional levels.

During this stage, the central team finalized the QA training modules and organized the first national conference on quality assurance to present and discuss experiences under the EMC program.

4.1.3. Stage III: Institutionalization of a Quality Unit in the Ministry of Health (March 1995–March 1997)

Beginning in 1995, following the termination of direct QAP assistance in December 1994, the QA Program moved into a third stage. This was characterized by continued decentralization and the permanent incorporation of QA functions within the structure of the MOH through creation of a Quality and Norms Unit in the Health Programs Division. The new Unit was assigned the following objectives:

- Continue to develop and decentralize QA activities, coordinating and maintaining permanent communication with the regions, Health Services, hospitals, and clinics involved in the EMC program
- Support QA activities in the Health Services in an advisory role, emphasizing the development of quality policies and plans
- Respond to training requests financed by the Health Services
- Develop and sustain national information-sharing and dissemination channels, including the National Month of Quality and the annual National Quality Conference

During this period, the Quality and Norms Unit reviewed all existing norms and regulatory documents of the MOH to identify areas where norms and regulations were outdated or non-existent. The Unit also began organizing groups of experts (from both within and outside the MOH) to work on norms, protocols, and manuals in areas where they were lacking.

By this time, all training activities were being implemented locally and directed by local quality monitors. Staffing of the central level was reduced to one full-time professional (the coordinator) in 1996.

4.1.4. Stage IV: Quality and Regulation (March 1997–Present)

In March 1997, in the context of the health sector's reform process, the Unit was renamed the Quality and Regulation Unit and situated within the Division of People's Health (DISAP). The Unit was given the expanded responsibility of helping to develop the regulatory role of the MOH with a quality focus. The Unit defined the regulatory function of the MOH as one "performed through laws, decrees, regulations, instructions, norms, protocols and other instruments that permit the design, evaluation, control and monitoring of technical and administrative processes in the health system in order to guarantee quality standards in health service delivery." The Unit has since undertaken two major activities in this direction.

National Healthcare Priorities and Administrative Agreements

First, working with other professionals in charge of major health programs and units in the MOH, the Unit was involved with the preparation of Administrative Agreements, a comprehensive listing of quality standards, criteria for their achievement, and indicators for their measurement for 16 national health priorities for the period 1997-2000.

The identification of national priorities was aimed at repositioning the role of public health considerations in healthcare administrative decisions and human and financial resources in the framework of the decentralization process. Another goal of national priority setting was rational use of social participation, equity, improvement in quality, and user satisfaction. The specific objectives of the priority definition process were to:

-
- Determine primary healthcare concerns in order to define program measures and strategies that are optimal to meet the healthcare needs of the population
 - Dedicate human and financial resources to solving the main healthcare problems in the country
 - Identify healthcare priorities at the regional and municipal levels
 - Direct the regulation and control function of the MOH

Sixteen national healthcare priorities were defined, including risk factors, thus determining that certain priorities are considered more than once in some of the defined areas. The defined country healthcare priorities, including risk factors are, by ranking of epidemiological importance, as follows:

- Cancer
- Cardiovascular diseases
- Respiratory infections
- Mental health
- Accidents
- Immuno-preventable diseases
- Tobacco, alcohol, and drug use
- Occupational health
- Tuberculosis
- Dental health
- HIV/AIDS and other STDs (Sexually Transmitted Diseases)
- Diabetes mellitus
- Congenital and perinatal infections
- Sexual and reproductive health
- Malnutrition
- Ocular health

Based on these 16 country healthcare priorities, it was agreed that any local priorities not adequately reflected at the national level be elaborated locally, leading to changes in five of the priorities in certain localities (Chile MOH 1997B).

Specific Administrative Agreements were then established within the central level of the MOH to enable the national delivery of healthcare services. These Administrative Agreements specify levels of responsibility for adequate and timely provision of necessary healthcare services and the requisite resources and technical and administrative support.

The negotiation of the Administrative Agreements for 1997 was based on the national healthcare priorities, which were defined in some cases by each healthcare service and the SEREMIS (Secretarías Regionales Ministeriales de Salud) as a basic framework for guidance. The Administrative Agreements lay out regional and local plans for service activities,

Table 5: Example of Management Agreement: Agreement No. 25

Agreement No. 25 in 1999:

“Orient the Public Management to the User’s Satisfaction”

Objective: “Quality of care improvement as national and local health priorities”

Activities:

- Develop orientations for implementing QA projects and activities that are consistent with national health priorities
 - Establish and disseminate tools for measuring quality and patient satisfaction
 - Monitor project development and QA activities within health services
-

with corresponding goals and indicators.³ The objectives of the Administrative Agreements are the following:

- To ensure consistency between national, regional, and municipal policies, guiding the balanced development between promotion, prevention, recovery, and rehabilitation measures established on the basis of priorities at the local level
- To develop healthcare management oriented toward the user, improving accessibility and quality of care, and incorporating the community’s participation in the definition of policies and priorities
- To implement mechanisms for the assignment of resources associated with results, promoting transparency and efficiency in the use of resources, as well as efficiency and quality in administration through an incentive system associated with the performance of and compliance with healthcare objectives

The document, which represented the first time that quality standards had been defined at the national level, was designed to enable the regions, Health Services, and facilities to assess and monitor their progress in achieving standards for the 16 health priorities.

The second activity was to review and redefine, if necessary, the regulatory role of the MOH. This task has involved cataloguing and standardizing the presentation of norms and other regulatory documents; identifying areas that need further regulation and organizing committees of experts to work on those areas; disseminating regulations and norms to the appropriate levels; and promoting development of instruments for supervising and monitoring compliance with standards at the national level. Work on this activity continues.

Chile’s structuring of Administrative Agreements regarding national health priorities provided the legislative foundation for all national health programs in Chile, including the QA Program.

The overall objective of the MOH’s health policy, as articulated in *Política De Salud: 1998 y 1999 Énfasis y Prioridades*, is as follows: “To guide the Chilean society, and the pertinent systems and institutions, in order to improve, in the short term, the state of health of the

³ Administrative Agreements. 1998. Protocols between the Chilean Health Care Services and the Ministry of Health.

Table 6: List of Relevant Administrative Agreements

DISAP Administrative Agreements 1998

For 1998, the Division of the Health of Persons (DISAP) defined nine Administrative Agreements in consultation with the Health Services:

- To implement the Promotion of Health Care as a function of the national healthcare priorities (national and regional)
 - To improve the quality of care within the framework of the national and local Country Health Care Priorities (Agreement No. 20)
 - To promote the transformation of the Model of Care, incorporating the family healthcare focus, and to design and implement strategies that favor the technological development of the establishments at the primary level of care
 - To increase capacity in the area of healthcare and to increase the Timely Care Program
 - To promote Public Health Care Policies and their respective programs intended to develop an adequate articulation of the Welfare Network at the primary level in rural municipalities
 - To contribute to improving the integral development of children in extremely poor municipalities
 - To ensure access to medicines listed in the National Medicine Form
 - To develop regulatory instruments as a function of national healthcare priorities and the design of healthcare information systems for the monitoring and evaluation of the activities defined in the national healthcare priorities framework
 - To provide adequate care to women with depression throughout all levels of care
-

Chilean population, especially in the high-risk sectors, in the context of rational priorities that are generated from the current demographic, socioeconomic, and epidemiological situation. At the same time, to respond in a satisfactory manner to the expectations demonstrated by the population regarding their healthcare.”

Specific objectives for the 1998-99 administrative period were the following:

- Strengthen primary healthcare networks to increase integration with the rest of the welfare network
- Improve healthcare for older adult beneficiaries of the public system, specifically in terms of the range and types of choices of institutions offering services for older adults. This will be done by progressively expanding coverage at the primary level and by increasing effectiveness and improving timeliness of care at this level, as well as reducing waiting times at the second and third levels in the system
- Prioritize healthcare for populations such as those at especially high risk or with scarce coverage through current health services (e.g., workers at high risk for work-related illnesses and accidents, indigenous populations, dispersed rural populations, and working women). Priority will be given to these populations in terms of expanding coverage, facilitating access to services, and improving timeliness and effectiveness of treatment services

-
- Develop new strategies and interventions that reduce the frequency and severity of work-related accidents and illnesses in the medium term
 - Extend coverage and improve the accessibility, timeliness, and effectiveness of care for some specific health problems such as refraction errors, cataracts, harelip, and respiratory infections in children and the elderly, at all levels in the system
 - Improve the efficiency and effectiveness of emergency care, as well as the quality in the work and service setting, implementing an “Integrated Emergency Care System” that covers the following components: primary care level, transportation and pre-hospital care, emergency hospital care, critical care units, and evacuation beds
 - Preserve those environmental conditions that are conducive to good health and improve those which are not
 - Advance legal initiatives that could improve the administrative framework and strategic bills for the strengthening of the public sector, such as the Equity in Health bill that strengthens the Fondo Nacional del Salud (FONASA)

The Administrative Agreements promoted by the MOH clarify relationships between healthcare sectors, promoting greater effectiveness and efficiency between regional, Health Service, and municipal healthcare systems.

“Incorporating quality within the management commitments is seen as a culmination of the institutionalization process.”

A QA monitor

4.2. Sustainability of the Chilean QA Program

In 1991, QAP had allocated U.S. \$150,000 for project activities within the Chilean health sector and an additional U.S. \$350,000 for technical assistance. This covered expenditures for activities from 1991–94. The Chilean MOH provided staff including the project coordinator, two professional project staff, and a secretary. When QAP’s role ended, the MOH continued to provide funding for staff and training materials. In 1996, due to budgetary constraints, the MOH decided to reduce the salaries of the QA Unit staff by one-tenth for professional staff and by one-third for the secretary. These salary reductions applied to other MOH departments as well. In 1997, further budgetary constraints led to the loss of the two professional staff. The QA Unit at the MOH is currently composed of the director, Dr. Gilda Gnecco, and a half-time secretary. The current budget available for the Unit covers only the printing of regulatory documents. Technical assistance and related expenses provided by Dr. Gnecco to the regions are paid by the regional health services.

A crucial moment in the life of the QA program in Chile came at its close at the end of December 1994. Decentralization of QA management and activities resulted in the 13 regions and 29 Health Services deciding to support both current and proposed QA projects. This financial commitment was fundamental in ensuring the sustainability of QA at the end of QAP in 1994.

In 1999, the Health Services had allocated approximately U.S. \$85,000 (30 million Chilean pesos) to continue previously launched QA initiatives and to design new ones. Thus,

continued local financing of QA efforts—including personal contributions by monitors to logistical support of QA Committees—by the 29 Health Services demonstrates the sustainability of QA as a major programmatic focus of the Chilean health system and that it has been institutionalized at the local level.

“Who talks to me of quality if this facility does not have any money to invest?”

A hospital manager

4.3. QA Initiatives within the MOH

In addition to the implementation of facility-based QA programs throughout the country, additional QA initiatives have been undertaken within the MOH and the private sector since the inception in 1991 of the formal USAID-funded QA program.

Norms and Regulations Department The MOH's Norms and Regulations Department is an accreditation bureau within the Division of Investment and Care Development network. Created in 1992, it follows the Joint Commission International (JCI) models and the hospital management standards from Pan American Health Organization (PAHO). The accreditation process is voluntary and periodic, and results are disseminated only to FONASA and Health Service directors. The accreditation policy focuses on national health priorities. From 1992 to the present, the Norms and Regulations Department examined 80 public (representing 80 percent of the total admissions of the country) and two private facilities and established specific accreditation models. In 1998 the accreditation process began for complex procedures such as kidney transplantation, heart surgery, breast cancer surgery, and neurosurgery.

At that time, accreditation also was initiated for specific departments such as laboratories, blood banks, operating rooms, and imaging and x-ray procedures. In 1999, the accreditation of programs including multiple-traumatized, severe burn, and breast cancer began. The Department includes a director and three assistants. It established a team of 42 surveyors comprised of physicians, nurses, and midwives, some of whom are also quality monitors for the National QA Program.

SATUS In 1998, the MOH created a central office focusing on user satisfaction called Servicio de Atención al Usuario (SATUS), which functions independently of the QA Unit. Since its inception, SATUS has financed and conducted an annual national survey on patient satisfaction for the improvement of infrastructure.

FONASA This is the patients' rights arm of MOH (“Carta de derecho del Paciente”). FONASA has a mandate to develop patient care and patient rights initiatives and launched a special national program that addressed client concerns with healthcare service quality in hospitals and clinics. As part of this program, FONASA produced a booklet in which the following issues are addressed:

- Availability of 24-hour-emergency care in any public emergency ward
- Identification of providers

-
- Orientation regarding functions of medical facilities and channels of feedback
 - Access to medical records with ensured confidentiality
 - Information regarding research protocols, risks, and benefits of treatment
 - Clearly written indications on prescribed drugs

4.4. Other Chilean QA Initiatives

CONACEM is a national council for medical certification that is comprised of representatives of Chile's medical college, medical society, and staff from the MOH. Certification through CONACEM for medical professionals is voluntary.

Preservice Training Modules: Universities including Chile, Catholic, and Valparaiso are developing preservice training modules in QA that incorporate case studies from QA projects in Chile. They are primarily focused on administration and planning. Some professors are also QA coaches for teams working on quality improvement issues. Finally, nurses complete an operational research thesis during the last years of preservice training.

The Interministry Committee for Public Management Modernization acts in an advisory and leadership role in the overall quality policy of the government, including for the Ministry of Health. The Committee also awards the annual *National Quality Award for Public Services*.

The *Chilean Society of Public Health* has created a Department of Quality Assurance with the central QA Unit manager as acting director.

5. Evaluation of QA Program Structure and Management

In 1990, Chile held the first democratic elections after 17 years of dictatorship. In 1991, URC-CHS was invited through USAID funding to work with the Chilean MOH on introducing a QA program. The Minister of Health, Dr. Jorge Jimenez de la Jara, a professor of public health, appointed Dr. Gilda Gnecco to head this project from within the Chilean MOH. His decision played a major role in shaping QA in Chile. At the time of this appointment, Dr. Gnecco was working in the Primary Healthcare Division at the MOH. She had previously held a post as professor at the School of Public Health at the University of Chile in Santiago, and had been expelled from her position for political activism during the dictatorship.

The science and methodology of QA emphasizes teamwork, respecting the opinions of colleagues and patients, and specific problem-solving techniques. Numerous authors in the quality assurance field have referred to the phenomenon of team ownership of QA methods and tools as the "democratization of science." This phenomenon is particularly noticeable in Chile. Dr. Gnecco and her colleagues embraced the QA training model developed by Lori DiPrete Brown and Professor Pedro Saturno, who provided technical assistance from URC-CHS through the USAID QA Project. QA methodology was thus disseminated throughout the health sector. Currently, more than 14,000 healthcare professionals have

been trained in Chile, representing approximately 25 percent of the Chilean health workforce, of whom 800 are “Quality Facilitators.”

QA in Chile is strongly linked with public health and many professionals engaged in the QA effort are experienced public health professionals, including nurses, social workers, and allied health professionals. The fact that only a few physicians are engaged in QA in Chile and that those who are involved tend to focus on public health—and to a lesser extent on health administration—has to some degree influenced the nature of QA activities. Quality assurance activities tend to be more prevalent in primary healthcare centers than in hospitals. Also, QA in Chile is primarily oriented towards patient satisfaction and primary care.

Within DISAP, the Division of People’s Health within the MOH, distinct units administer quality assurance, nosocomial infection control, clinical audit, and accreditation. However, little, if any, interaction occurs between them. In a debriefing with the Vice Minister of Health and DISAP, reorganization of these units to enhance interaction and promote quality was recommended.

5.1. QA Management within the Health Services

QA leadership of regional health services follows the administrative pattern of the MOH in that regional directors are also in positions of responsibility within the QA program in their given geographic area. Additional oversight is provided by the SEREMI—the representative of the President. There are 13 SEREMIs, or one per region.

Items that traditionally have been budgeted in QA allocations have included staff time for QA activities, salary increases, coverage of participation in regional or national quality activities, and travel for Dr. Gnecco to assist with QA.

Relationships between some health services and municipalities are highly collaborative and constructive, although this is not universal. Although full- or part-time quality coordinators, incentive systems, and budgets have been designated for QA by some services and municipalities, others have no QA personnel or devote little if any of their annual expenditure to quality improvement.

The evaluation team found that committed QA leadership was an important factor in the success of QA activities at the regional level in the majority of the sites visited. For example, in one case, after receiving initial QA training from 1991–93, leadership did not support QA activities and very little QA activity took place. With a change of leadership in 1996, professionals who received the original training were encouraged to embark on QA activities and subsequently trained other staff and engaged in various QA activities.

Administrative Agreements discussed in Section 4 commit facilities to a specific level of performance to be undertaken in the coming year, usually consisting of a minimum number of patient services. In other cases, such Administrative Agreements were aligned with the national priorities of waiting-time reduction and patient satisfaction. Future funding of facilities depended on their meeting goals outlined in the Administrative Agreements. The agreements spawned many projects geared to fulfilling these goals. Often, these projects were not formal QA activities but were nonetheless presented as such. An example is the posting of two full-time pediatric surgeons to the hospital in Castro, on the west coast of Chile. Their duties include repairing undescended testes in small boys, an operation that must be done between ages two and six to ensure adult fertility. When a visiting surgeon

handled these cases, the Chiloe Islanders, at the mercy of ocean weather, were often unable to reach the mainland during his stay. Providing year-round surgical specialists through an Administrative Agreement has enhanced the islanders' access to quality healthcare.

5.2. QA Management within Hospitals and Primary Healthcare Centers

At the regional level of healthcare in Chile, administrative structures vary from one health service or municipality to the other. Healthcare facilities throughout Chile evidence similar variation. In some, a formal coordinator may be designated on a part- to full-time basis, or may not be formally assigned to QA activities. Budgets for coordinators are not universally allocated, so that QA coordinators may not be appointed. In some facilities, staff are allotted time for QA activities and may receive various small incentives to pursue them.

Regional and facility support for QA has a visible effect on the level of QA activities. However, its absence was not the only determinant of the presence or level of QA activities in that region or facility.

As mentioned above, QA programming and supporting infrastructure in healthcare facilities is more likely to occur where Health Services and municipalities are committed to quality assurance. However, some facilities have developed significant QA initiatives in spite of inadequate support. For example, one hospital made significant strides in QA programming and over several years achieved significant quality improvements. The hospital, regarded as a leader in quality, has slowed its efforts somewhat due to a change in hospital leadership. Because hospital-director positions are to some degree regarded as political appointments, the ability of appointees to continue leading the QA effort is not a significant factor in their appointment. Consequently, momentum in QA development can be lost through changes in institutional leadership, as it was in this particular hospital.

Significant variation also exists between facilities within the same Health Service or municipality in terms of resource allocation for and level of QA activities, as well as in the sophistication of methodological approaches. Many QA projects focus on improving basic infrastructure such as renovating or installing toilets for the disabled, improving waiting rooms, and helping families through the use of cellular phones to contact family members awaiting emergency room care. In a few other instances, however, teams have focused on more complex issues of clinical care.

5.3. Informal Aspects of QA Management: The “Magic” of QA in Chile

The uniqueness of the Chilean QA effort became increasingly apparent to the evaluation team, particularly through the warmth and dedication of professionals throughout the country who are ready to engage in QA regardless of the level of support provided by authorizing institutions. These professionals take pride in their QA training, accomplishments in improving patient satisfaction, and in their title of “Quality Facilitator.” Dr. Gnecco's outstanding personal qualities (e.g., professionalism, integrity, transparency, dedication,

democratic leadership, and personal warmth) also helped to shape the Chilean QA effort, as evidenced by the respect accorded her by healthcare professionals throughout the country.

As the evaluation progressed, it became clear that what unites the Chilean QA effort extends far beyond formal administrative channels in the MOH to less formal but stronger bonds formed at the local level that have contributed to the success of Chile's QA effort. The team gradually came to an awareness of what it referred to as the "magic of QA in Chile" and a more comprehensive understanding of how Chile's QA effort has evolved. Both Dr. Gnecco and key QA professionals in Santiago agreed with this analysis.

"Without the charisma of the QA program director, the program would have died five years ago."

DISAP Director

"Directors see QA activities as a supplementary task."

A nurse

6. QA Program Technical Functions

Because the Chilean Quality Assessment and Monitoring Program benefited from a broad range of technical assistance, it has been studied by those interested in QA techniques and approaches. This section reviews the breadth and development of the Program's technical functions in terms of the improvement, design, and monitoring of quality as well as supervision and standards setting. Finally, other quality initiatives are discussed.

6.1. Quality Improvement

More than 625 QA projects have been developed nationwide in Chile since the inception of the QA program, the vast majority of which are carried out according to established quality improvement cycles. This is a process that entails: (a) identifying problems related to quality of care, (b) studying the causes of the problem, (c) identifying a solution or quality improvement, and (d) implementing and evaluating the quality improvement. With the support of QA monitors, training related to problem selection, operational problem definition, and problem-solving cycle initiation is accomplished during a basic four-day QA training. This training includes exercises that familiarize participants with principles, conceptual frameworks, and strategies of QA intervention, as well as the components of a traditional "QA cycle" and work team principles, as further detailed in Section 7, QA Program Support Functions. The types of opportunities for improvement dealt with by QA teams in the field can be organized in terms of:

- Organizational opportunities
- Infrastructure opportunities

-
- Clinical/technical opportunities
 - Other opportunities (See Table 7)

At the conclusion of the training on QA, the trainees are usually asked to commit themselves to the completion of project cycles, although no systematic approach to project completion was in place at the time of the evaluation. QA monitors are changed with project cycle follow-up. However, in many instances the QA program director is also directly consulted and may assist as many as 50 percent of all QA projects.

Basic QA tools include:

- Nominal group technique—allows a team to quickly come to a consensus on the relative importance of issues
- Prioritization matrices—narrows options through a systematic approach of comparing choices
- Brainstorming—establishes a common method for a team to generate a high volume of ideas on any topic

Cause-and-effect fishbone diagrams and flow charts are also regularly used by QA teams in Chile. Other tools used by slightly more advanced teams include force field analysis and pareto charts. Story boards for QA projects are regularly produced and used by QA teams. In reviewing these story boards, the evaluation team found that causes of problems are generally clearly and easily identified and solutions are generally logical, creative, and within budget.

“We need to explain better that Quality is a modern way of managing organizations.”

A Quality monitor

“The QA methodology brings a new way of thinking. It helps us to innovate and to realize what’s going on.”

A Quality coordinator

In terms of the content of the improvements, QA teamwork in Chile essentially comprises small-scale projects that deal with infrastructure rather than technical and clinical improvement. This is partly due to Chile’s minimal investment in its public health network during the country’s 17 years of dictatorship. However, the evaluation team noted during its visits that many new hospitals and restoration projects are in progress and that the QA methodology could prepare quality committee members to efficiently manage such newly renovated institutions.

In addition, the evaluation team also observed in several places a tendency to equate the development of new infrastructure with problem solving. Rather than redesigning inefficient systems of care, the building of larger and better-equipped hospitals was viewed as the solution to improving delivery of quality healthcare.

Some examples of opportunities for quality improvements in Chile are presented in Table 7 below.

Table 7: Topics Selected for Quality Improvement Projects 1998/1999

Structural opportunities

- Inadequate signage
 - Need for better patient waiting areas
 - Lack of proper hygiene and cleanliness standards
 - Need for child care facilities for patients and families
-

Organizational opportunities

- Underutilization of operating room
 - Inadequate information network from the board of directors and the Intensive Care Unit
 - Inadequate technical nursing norms dissemination in the Intensive Care Unit
 - Inadequate information for patients and their families regarding emergency admissions
-

Technical/clinical and other opportunities

- Inefficient ambulatory surgery ward management
 - Need for an audiometry service
 - Inconsistent care for patients with hypertension and diabetes
 - Unclear admission process policies and procedures
 - Delay exceeding 24 hours to receive blood exam results
 - High average patient length of stay in the Intensive Care Unit
 - High number of surgery cancellations
 - Lack of motivation of the personnel
 - Long waiting time in the emergency ward
-

In general, baseline assessments of QA projects are rarely performed prior to applying solutions; thus, it is difficult to demonstrate the success of QA efforts. This constitutes a weakness of the QA program and perhaps a partial explanation for why leaders or physicians are not more involved in QA efforts at regional and national levels. QA results are poorly documented with statistics or charting of before-and-after data analyzing the impact of the team's interventions.

One rationale offered by QA team leaders for the lack of baseline assessments is that after brainstorming, many QA teams tend to immediately apply solutions because they believe that completion of a formal QA cycle is too time consuming. Another explanation, as in the case with one QA team with several years of experience in QA, is that a team may be able

to spontaneously assess the problem without the use of prioritization matrices or other problem selection steps. Approximately 70 percent of the QA teams in Chile are using the full QA methodology and 30 percent are using a type of rapid problem-solving cycle. Each team has its own adaptation, often eliminating steps and applying immediate solutions without spending adequate time on problem analysis.

At the regional level, specific tools such as brainstorming, decision matrices, and force field analysis are often used to define strategic plans for QA that are integrated within the regional health plan. However, time constraints often affect the level of involvement of team members on QA teams at this level of the health system, making completion of cycles and their application to actual problems within regional Health Services a rarity.

QA teams are organized according to problems selected and are usually staffed by service, ward, or unit personnel. A ubiquitous problem is the under-involvement of physicians. Most often, teams include nurses, midwives, auxiliary nurses, social workers, nutritionists, and administrative staff. Generally, physicians comprise no more than 10 percent of the team, although Barros Luco Trudeau Hospital is one notable exception. Due to the insightful intervention of the nurse administrator of QA within the hospital, organizational and clinical areas requiring quality improvement were consistently identified and assessed by QA teams in terms of their overall impact, and physicians became increasingly involved and committed to these efforts.

QA team attitude, motivation, and behavior are strongly influenced by Chilean cultural and professional ethics. At QA team meetings, discipline is high and planning is geared to obtain results. Participants are punctual and absenteeism is minimal. Although bureaucratic requirements often interfere with optimal functioning (i.e., multiple authorizations for participation of administrative staff at meetings or lack of facilities for meetings), in Chile, unlike many other countries that are implementing QA efforts, staff turnover was not identified as a major issue. Because the program is effectively implemented nationwide and the number of individuals currently trained in QA is so high, team members may be transferred to other regions of the country and immediately become integrated into another QA team.

In terms of the results of QA efforts, many of the quality improvement efforts in Chile, as observed by the evaluation team, are of infrastructure (e.g., waiting room, bathroom, and hospital bedrooms) and undoubtedly would have occurred due to the process of modernization in the country. Other improvements involve the incorporation of a client focus, especially at the hospital level. Examples of such a focus include allowing parents to spend more time with their children on hospital clinical wards, enhancing interpersonal skills of physician and nursing staff, and providing patients with more information about their prognosis, course of treatment, and overall hospital experience.

However, although 625 QA projects have been accomplished successfully, benchmarking of QA, or sharing and learning between QA teams, remains a very informal process. In addition, the QA Unit remains without a systematized approach for dissemination. Some effort has been made to share the successes of important QA projects, especially through the QA Program's national conference (discussed in Section 7.5, Dissemination and Communication). A selected number of projects, many of which focus on clinical or client-related improvements, have been disseminated for review and possible adaptation by teams in other regions. Some of these are presented in Table 8 below.

Every year the QA Committee at the Health Services level selects the best projects to be financed during an official selection round. Depending upon the availability of funds, a

second round can be organized in order to select more projects to be supported. This official funding has been important for QA efforts, since, due to decentralization, financial discrepancies exist in the level of support for QA projects in different regions.

Table 8: Examples of Nationally Disseminated QI Project Topics

-
- Breast-feeding awareness (in collaboration with UNICEF)
 - Presence of the father during delivery
 - Parent participation during pediatric hospitalization
 - Presence of the family during hospitalization of terminal patients
 - Special nursing in-home service for terminally ill patients
-

6.2. Quality Design

Examples of quality design (QD) or redesign activities for existing processes were identified by the evaluation team. It must be stated that they did not reflect “textbook” examples of QD. QAP has established some basic guidelines for quality design efforts, including the following:

- Quality design should be based on assessment of client needs
- Quality design links client needs with new features of a process
- Quality design involves a new or substantial redesign of a system, process, or product
- Quality design includes some failure proofing or test for robustness of the new design proposed

Given this description, the team was able to identify a number of QD efforts within the Chilean QA Program. In some specific cases, the QD team applied the classic quality improvement cycle, but proposed and applied solutions that involved a complete process of care and a specific health system, such as the emergency health system or the maternal health system. In addition, these efforts often involved an assessment of client needs. The following are specific QD efforts noted by the evaluation team:

- Five health centers in Rancagua have redesigned the annual regional immunization campaign with better distribution of tasks, a common operational calendar, and coordination between each health center.
- A set of integrated solutions was implemented to halt a respiratory virus epidemic at the regional Guillermo Grant Benavente Hospital in Concepción.
- Ambulatory surgeries, with discharge of the patient during the same day, were implemented and performed on a routine basis within Hospital Barros Luco Trudeau with interesting outcomes such as:
 - Twenty-five percent reduction of the patient waiting list for surgery
 - Twenty-four percent of surgeries performed on an outpatient basis
 - Twenty percent reduction of surgery beds

-
- An appointment system for specialists' visits was designed to operate by fax between the level of primary healthcare facilities and hospitals, hence facilitating and speeding up the scheduling system and the appointment confirmation process. It took two years for this to be implemented in the metropolitan region (Servicio de Salud Metropolitano Oriente), with significant improvements in time savings, patient comfort, mechanisms for tracking patients through counter-referrals, reduction of no-show visits, and integration of the hospital network. Patients were informed of items required before consultation such as specific forms, a list of mandatory exams and documents, specialized wards, and guidelines on referrals.
 - A home care system for adult and elderly patients was designed to use the services of retired auxiliary nurses in a southern health region.
 - Palliative care was implemented in San Martin de Quillota region.

6.3. Quality Assessment and Monitoring

The QA Program in Chile is engaged in a variety of activities in the area of quality assessment and monitoring, from both the patient's and health system's perspective. Determining levels of patient satisfaction is an important step in the classic sequence of QA implementation and is evaluated through different quality assessment tools. User satisfaction is frequently measured through local surveys, exit interviews, or focus groups that enable local decision makers to define strategies of problem selection. A diagnostic module was developed by the QA Unit in response to a request from several regions that had initial difficulties with survey management. As a result, suggestion boxes and books for registering feedback were regularly displayed in healthcare facilities during patient visits to ensure data collection. The frequency of data collection varies by region. Independently of the QA Unit, SATUS organized, implemented, and financed a national survey on patient satisfaction, primarily designed to address infrastructure improvement. The vertical decision to implement a national survey on patient satisfaction coming directly from the MOH/SATUS was not well received in several regions.

On the other hand, few provider-satisfaction surveys are performed. The topic still remains taboo, as it is viewed as falling into the area of management-labor relations. Perceiving the need to focus on this issue, the QA Unit designated it as the main topic of the fifth pre-conference QA meeting in April 1999.

In terms of measurement of provider and facility performance, the QA Unit designed a specific module, Number 11, on quality indicators called "*Monitoring of a QA Program.*" It presents the monitoring process and group exercises related to the construction and selection of indicators. A genuine culture of indicators is evidenced by their regular implementation by QA teams in most healthcare facilities throughout the 13 regions, with the exception of only a few locales. Indicators are present in the Administrative Agreements and in individual QA projects. In the Concepción Hospital, the team found an impressive set of indicators for the Intensive Care Unit, a direct result of a QA project. The medical staff now routinely uses the set. In addition, indicators are linked with new standards in each regulatory document edited by the MOH. This last use of indicators includes indicators on quality of care outcomes, input, process, and impact and sentinel events.

6.4. Standards Setting and Dissemination

In 1997, the QA Unit began to collaborate with health program and unit directors within the MOH to select and define healthcare delivery criteria, standards, and indicators. The QA Unit prepared an official MOH document called *Criteria, Quality Standards and Indicators for National Health Priorities*. The document was designed to enable regions, Health Services, and facilities to assess and monitor their achievements concerning health priorities on a national basis. This document is distributed to Health Services with the goal of “implementing at a decentralized level strategies and activities to improve quality of care in relation to the national and local health priorities.” It contains evaluation criteria, definitions, examples, matrices, and suggestions of indicators to monitor all management commitments linked with the health priorities. It also contains an instrument to enable managers to build an information system facilitating the registration, tabulation, analysis, and use of information for decision-making. Finally, this compilation of standards establishes the basis for quality assessment activities and ongoing monitoring of healthcare delivery processes at numerous levels within the Chilean healthcare system. Since 1997, a routine inventory of existing regulatory documents has been conducted and disseminated to all Health Service-related organizations. This document, called *Catastro, Other Regulatory Documents*, compliments the *Standards and Indicators* compilation and has facilitated the supervision and monitoring process.

Ten volumes of regulatory standards have been compiled and published for addressing Chile’s national health priorities and sent to Health Services directors, program chiefs, hospitals, and municipalities, as well as to universities and the private sector. However, some health priorities remain without formal regulatory guidelines, making it difficult to evaluate and monitor progress. These standards represent a thorough systematization and dissemination effort, as well as a significant economic investment. For the first time in many years, one of the MOH’s budget items includes regulation. Furthermore, this is the first time that quality standards have been defined at a national level.

However, if the national health priorities and the existing regulation materials are compared in Table 9 (below), many existing gaps are immediately apparent. Clinical standards are still lacking in many areas.

The second phase of standards development began in 1998 under the authority of the QA Unit director and followed a specific editing framework. The objectives of this work were:

- Review and redefinition, if necessary, of the regulatory role of the MOH
- Diagnosis of the areas requiring regulation
- Organization of committees of experts to address these areas
- Standardization of the editing of new norms and other new regulatory documents

The QA Unit established national working groups on healthcare norms and standards. These groups then developed both technical/administrative norms and clinical guidelines. These panels of experts are in the process of elaborating norms, protocols, decrees, and laws in areas without regulation or with outdated regulatory documents. The Quality Unit also recognized that new norms must be established in conjunction with new national health priorities. The edition of the new standards includes two complementary documents: (a) a checklist for supervisors to perform efficient monitoring of compliance with the

Table 9: Standards and Health Priorities

National Health Priorities	Clinical Areas with Existing and New Standards
Accident	
Congenital and perinatal infections	
Cancer	Lymphomas, leukemia,
Diabetes mellitus	
Cardiovascular diseases	Hypertension
Immuno-preventive diseases	EPI
Respiratory diseases	
Malnutrition	Nutrition
Dental health	Odontology promotion and prevention
Mental health	Mental health
Ocular health	
Occupational health	Occupational health
Reproductive health	MC health, diabetes and pregnancy
Drugs, alcohol, and tobacco	
Tuberculosis	Tuberculosis
Human Immunodeficiency Virus	Acquired Immunodeficiency Disease Syndrome/STD
Other Clinical and Management Areas with Existing Standards	
Adolescent health	Dialysis and transplantation
Adult health	Blood bank
Epidemiology	Rural health
Clinical laboratories (include national policy)	Pharmacy
Cholera	Health education
Intra-hospital infections	Traditional medicine
Primary Healthcare	Environmental health
Health promotion	

standards, and (b) a monitoring plan that includes a complete set of indicators (input, process, output, sentinel, and impact) with national indicators, regional indicators, and a proposal for local indicators. This instrument is applicable for only the new norms.

Table 10: Examples of New Standards for Health in Chile

New Standards for Health in Chile

- Odontology promotion and prevention (1998)
 - Norms for the prevention and treatment of dentomaxillary anomalies (1998)
 - Norms for the use of fluoride in odontological preventive care
 - Norms for promotional activities and specific preventive care for odontological care of infants (1998)
 - Norms for prevention of gingivitis (1998)
 - Mental health: Guide for the detection and care of physical and sexual assault victims in emergency care settings (1998)
 - Technical assistance manual for addressing intra-family violence (1998)
 - Technical norms for diabetes and pregnancy (1999)
 - Clinical laboratories technical and methodological guidelines with national policy (6 vols., 1999)
-

Additional goals of the second phase of standards development and dissemination are listed below:

- Dissemination of clinical standards to the appropriate level of care and to the appropriate teams. A letter from the deputy minister and an explanatory document for standards implementation supports their communication. A broad distribution was done to the 29 regional health directors, the 13 regional ministry secretaries, the Public Health Institute, universities, scientific societies, and the private sector.
- Refining of instruments for the supervision of standards at the national level and proposed plans for their monitoring, reducing the level of subjectivity in the current evaluation process
- Establishment of a library of regulatory documents that did not formerly exist at the ministry level within the Quality and Regulation Unit Office
- Systematizing of existing regulatory documents related to the national health priorities to allow internal and external evaluation within the system. The central QA Unit is sending specific evaluation forms for initial feedback on the quality and viability of the new standards in order to establish an ongoing system to assess, revise, and improve them.

The communication of standards appears to be an issue for the future. Formal structures have not been established to strengthen the adoption of standards, such as job aids, training sessions, or supervisory policies. The inventory and production of new standards that were edited and sent to the Health Services and facilities was a remarkable effort and seems to be self-sufficient in the minds of many health policy decision makers. For the purpose of assessing the specific issue of standard communication, a meeting was organized by the MOH in August 1999 to identify how clinical guidelines have to be used in practice.

6.5. Evidence-Based Medicine

A recent initiative was developed in neurosurgery to set norms and standards according to evidence-based medicine and a peer review process. The director of the MOH People's Health Division, a neurologist skilled in evidence-based medicine, launched this activity in 1998.

At Barros Luco Trudeau Hospital, physicians are developing local standards based on principles of evidence-based medicine. This effort is linked with the Cochrane Library. The hospital paid the subscription and works regularly on the updated materials and publications produced by Cochrane. At issue will be how these initiatives on evidence-based medicine approaches will be coordinated and scaled up to a national level.

"The QA methodology brings a new way of thinking. It helps us to innovate and to realize what's going on."

A quality coordinator

7. QA Program Support Functions

This chapter presents the results of the evaluation team's review of QA program support functions in Chile, including:

- QA Training and the Chilean QA training modules
- Monitoring and supervising QA
- Dissemination and communication

7.1. QA Training

Training is the fundamental strategy behind the Chilean QA program, which was initiated on June 8, 1991 in Punta de Tralca with the Seminar on Quality Assessment and Improvement, led by QAP. The MOH invited directors representing all the country's regions, universities, and professional schools to attend. It was at this seminar that the first quality monitors were appointed. At the time of this writing, 40 percent of those who were trained during this workshop remain active. Training within the Chilean QA program has been widespread and was designed to work within the overall MOH strategy of decentralization.

Analysis of the training activities for more than 60,000 healthcare delivery personnel in the central and regional levels of MOH revealed that approximately 20 percent have received some level of QA training. Table 11 demonstrates the growth of the QA program in terms of training, demand for which is continually increasing.

Currently, a total of 12,000 people have been trained. However, this is not a static result, but rather a success that is expanding through local training efforts and raising awareness of QA concepts among social and professional communities. Although new trainees initially continued their work with the QA program, involvement of the original cadre of trained

Table 11: Scope of QA Training Program: Program of the Ministry of Health, Chile, 1991-99

	By the End of 1995	By the End of 1998	By the End of 1999
Health professionals trained	5,254	10,600	10,775
Quality monitors trained	256	615	784
Health Services with quality plans	42%	75%	80%
Quality projects completed	200	625	NA

professionals varied in degree of commitment at the local level. Factors limiting trainees' commitment have included:

- High turnover of front-line personnel
- Change in managers
- Limited time for training activities, with the result that some of the regions visited had experienced a four-year plateau during which time there was no additional training

It should be noted, however, that some Health Services, such as those of *Metropolitano Sur*, *Metropolitano Oriente*, and *Concepción*, continued to make progress despite these obstacles.

7.2. Training Modules and Products of the QA Program

Chile's extensive set of QA training modules has been the direct outgrowth of the central QA Unit's focus on developing training methods that are consistent with the country's needs, rather than on importing models from other settings. The training modules developed for the program were designed to respond to the needs of those who receive the services of healthcare systems. From the review of the evaluation team, the modules seemed to have resulted from a dynamic process of systematic and continuous feedback, evaluation, and revision. Although the modules are based on a certain methodological stringency in terms of QA concepts, they are easily understood. Finally, the modules have been applied within the MOH's overall strategy of decentralization and have required participation of a range of healthcare professionals. This approach has ensured the involvement of a large group of individuals in capacity building within the program.

Given that regional and local QA monitors have contributed to the design of current modules, production of modules has meant recognizing and checking local teaching ability. It is planned that the next module in 2000 will be solely developed by monitors and QA teams and that the Quality Unit will function only as a coordinating agency. The development of training products followed a specific pattern. Prior to 1993, training materials were obtained through URC's QAP as well as from international consultants contracted by QAP. In this phase, training was adapted to the Chilean context, creating a uniquely "Chilean"

methodological approach. The first three modules deal with basic QA concepts, and methodological guides are attached to support teamwork in the training seminars (see Table 12 below). These modules are used in basic training seminars, initially of three days' duration and now of four.

Table 12: List of Training Modules Completed in the Chilean QA Program, 1994-99

Module Numbers	Titles
Modules 1, 2, 3	Basic QA Concepts
Modules 4, 6	Develop a Culture of Quality Developing a Quality Plan
Module 5	Teamwork of Leadership
Modules 6, 8, 9, 11	Vision, Mission, Policies for Quality Plans Evaluating Quality of Services Statistical Methods for QA Indicators Development
Module 10	Rights of Duties of Clients
Modules 13, 14, 15, 16	External Client Satisfaction Assessing Quality Projects Supervision History of Quality
Modules 7, 12	Training Monitors Medical Audit

In 1994, Module #4 on organizational culture and the culture of quality was developed at the request of some Health Service managers. During this period, Module #6 was also developed, which provides a step-by-step guide for developing a quality plan. In 1995, Module #5 was developed, which gathers existing material on teamwork and leadership and adds work guides that allow teams to adapt the material to their unique environments and to use it to train additional team members.

Based on gradual input from the teams, Advanced Module #6 was prepared in 1996. It provides monitors with the tools they need to build the vision, mission, policies, and strategies of a quality plan. In that same year, Module #8 was developed on evaluating the quality of services; it provides tools for evaluating processes and developing criteria and standards. With the appearance of Module #8, the need arose to determine monitors' knowledge of statistics as applied to QA. Therefore, Module #9 addresses statistical methods for monitoring quality, which is related to Module #11 on the identification of indicators.

In 1997, Module #10 was designed to increase users' access to information and was disseminated nationally. It included the recently completed Ministry of Health document on the Rights and Duties of the User. It is complemented by Module #13 on external user satisfaction, a conceptual-methodological module to support survey construction. Module #14 was developed in that same year as a strategy in program development. Currently, two monitors from the Maule Health Service are revising it. In 1997, modules were developed on "assessing quality projects" to support the work of the monitors in tracking quality teams and their projects. As training increasingly incorporates supervision, Module #15 was developed to identify it as a quality management tool to support the monitors. Module #16 summarizes the history of quality.

During 1999, two important modules appeared: Module #7, on the training of monitors, after two years of checking and revision, and Module #12, which deals with medical auditing. These materials are a vital component of the QA Program and ensure its continuity while facilitating the decentralization process. All training modules are being included in the "quality and regulation libraries" that have been established by nearly all of Chile's Health Services.

The modules have been developed and adapted as the QA program has matured. New modules on continuous quality improvement may appear in response to the involvement of other disciplines such as clinical management and evidence-based medicine, given that the challenge of involving more clinicians is one faced in all of Chile's 13 Regions. It will become necessary to develop the capacity of documentation centers to facilitate exchanges of existing information on quality among those newly trained in the field.

7.3. Decentralization of Training

The QA program's sustainability has been affirmed by increasing responsibility assumed for training at the regional and local levels of healthcare delivery—a considerable accomplishment. As of this writing, 37.8 percent of all training is now conducted at the regional or local level. This figure is probably higher because local teams do not always report on duplicate or additional training that they conduct.

Furthermore, these efforts are supported by review at the central level and by the supervision of training materials. Most of the regions have a quality plan, which in some cases is incorporated in annual strategic planning, so that a particular unit and its schedule of activities with respect to training can be documented. A pertinent example is the Health Service of Llanquihue whose director is a quality monitor. This program is based on quality methodology, using products, evaluation criteria, standards, and indicators for follow-up, and continuous monitoring of training activities.

The transfer of responsibility from the central to local levels has permitted increasing creativity and innovation in local training strategies, which are progressively incorporated by trained monitors in various regions. Some localities, such as regions II, III, V, VI, VII, VIII, IX, X, and the Metropolitan Region, have achieved a high level of maturity in their local training process.

The decentralized training process is improving, and, consequently, ensuring the quality of the courses offered at the regional level is a challenge. Greater interest has also been focused on ongoing evaluation, either through external or self-assessment. Such assess-

ments are conducted at the central level, where all training modules are followed by an evaluation test. In addition, projects are reviewed and concerns are directly discussed with the program coordinator. In the future, it will be necessary to certify the quality of the new courses being given through the duplication process (multiplier effect) at the local level.

7.3.1. Integrating Training—QA and Chilean Universities

The MOH retains leadership of QA initiatives, calling on its central QA Unit to further develop materials, standards, and recommendations with the objective of supporting the public health sector as well as educational subsystems, universities, professional schools, and various scientific associations. However, integration of these training curricula demonstrates the level of QA institutionalization and decentralization that has occurred throughout Chile.

From the outset, public and private universities have been included in the effort to institutionalize QA training, in both undergraduate and postgraduate training as well as in clinical services. Approximately 70 percent of Chilean universities are now teaching quality-related subjects at various levels. The University of Valparaiso, a state university, has included a course on quality assurance in the curriculum of an Obstetrical-Nursing School course on administration. In 1995, fifth-year students began internships in QA projects through their practice in primary care hospitals and clinics. The students are also required to prepare a thesis on quality-related subjects with the objective of optimizing user satisfaction. Such projects provide research for university department directors and have been incorporated into healthcare service design.

A large demand has thus been created for students at institutions that are incorporating quality-based health education into their curricula, since the administration feels that this teaching experience is important for their management.

At the University of Chile, important contributions to the field of QA programming in health-care have emerged as a result of public health training workshops at the undergraduate level in phonaudiology, nursing, kinesiology, and medical technology, and for postgraduate teachers of epidemiology, environment, maternal-infant health, and pediatrics. In addition, quality monitors have been trained through the Clinical Services Department at the José Joaquín Aguirre Hospital (teaching Hospital of the University of Chile), with the result that surgeons have requested that the training be offered to their scholarship students.

The Quality Unit has also trained a total of 76 teachers at the Nursing-Obstetrics School of the Pontifical Catholic University of Chile, the University of Concepcion (Region VIII), the University of Valdivia (Region X), and at Temuco (Region IX). The Pontifical Catholic University of Chile has instituted a Continuous Quality Improvement Division in the School of Medicine and Nursing at both the undergraduate and post-graduate levels and for the last three years (1996–1999) has had a quality plan in the clinical hospital that operates within the School of Medicine. At the same time, training programs continue to be developed in basic, clinical, and preclinical sciences through university medical schools. Thus, the strategic involvement of Chilean universities in implementing quality training has clearly resulted in institutionalizing the training. In addition, because QA involves preventing defects in healthcare systems rather than merely checking errors as they occur, enhancing student awareness of quality issues will have a synergistic impact both in the workplace and within the wider community.

7.3.2. Quality Project for General Area Physicians and Dentists

The Quality Unit developed a five-day basic training seminar in April 1999 with the support of regional monitors and voluntary inclusion of 10 Health Services, with a pilot plan to train 70 physicians and dentists. These trainees, as part of the “destination cycle of the Ministry of Health” program, will be placed in management positions in hospitals and/or primary care clinics throughout Chile. This effort involved the deans of the schools of medicine and dentistry of universities in both the public and private systems. The workshop brought physicians and dentists together for the first time in basic quality training, while also allowing them to meet QA monitors. The project’s costs are low, yet it has high impact and is evaluated highly by both seminar participants and the managers of organizations within which these physicians and dentists work.

The private health system has also benefited from basic training and/or training of monitors from the Quality Unit. One private hospital has a quality committee that has developed an initial QA plan and attends national conferences. The Alemana Clinic has developed specific quality projects and has nursing quality days, at which the director of the Quality Unit has been invited to speak. In addition, the Labor Security Institute has nine trained monitors and has developed projects particularly in the area of rehabilitation, as presented at the third and fourth national conferences.

“The training seminar and follow-on activities for physicians and dentists were a big success. It was another strategic move in the success of the program.”

A quality monitor

7.3.3. Participation of Professional Schools and Scientific Associations

Since the inception of the QA program, QA seminars have been conducted at professional training schools for dentists, midwives, nurses, nutritionists, psychologists, physicians, kinesiologists, social workers, and paramedical technicians. In addition, scientific associations representing specialty areas such as neurosurgery, gynecology, and endocrinology are consulted regarding regulation, since they participate in standard-setting groups that advise the Ministry. Consultation has been provided on training content for QA associated with the process of developing standards, and the linkage of regulation with the process of evaluating and monitoring quality.

7.4. Monitoring and Supervising QA

Supervision within the Chilean MOH is not formally integrated with QA features and approaches, although the QA program offered training in supervision in 1998 and a specific training module is in place. In fact, the supervision system is in crisis, lacking such tools as appropriate checklists for supervisors to use during visits to healthcare facilities. Supervision also seems to be poorly integrated within regional training departments so that technical training reinforcements cannot be implemented when needs are identified through

the supervisory process. The central QA Unit has initiated some improvements, but further efforts are needed. In the Osorno region, for example, supervision is integrated as a function of quality management through workshops in which supervisors and program coordinators design tools. It now remains to disseminate such supervisory activities to other regions.

After the initial seminar on raising awareness and training, potential monitors receive training in QA theory and practice en route to becoming “premonitors.” Premonitors are trained to facilitate tasks of the multidisciplinary work team, and are then promoted to the position of monitor once they form a quality assurance team in the field. Monitors can then become pre-instructors and instructors, who train and provide follow-up and support for healthcare personnel introduced to QA methodology within each round of training. Basically, all of the monitors are volunteers and they are dedicated to their mission as well as the ideal of teamwork.

Monitors are considered key to decentralization of the evaluation process, the continuous monitoring of the Health Services by the central level of the MOH, and to successful operation of local healthcare facilities by the Health Services, both with respect to the continuity of activities and their ongoing diversification and dissemination. A viable network of monitors has thus been created throughout Chile whose essential characteristics are commitment, cooperation, creativity, and innovation. Of the 784 monitors trained by the central level and the 180 monitors trained by the Metropolitan Sur Health Services between 1992 and 1999, 75 percent continue to be active. This is a reflection of their dedication as well as of the support provided by the system’s administrative levels.

During this evaluation, a study was performed, based on an innovative tool developed by the evaluation team,⁴ to assess the monitoring system for the QA Program. Three groups of monitors were assessed:

1. Twenty-four monitors at the central level of the health system. These monitors came from Health Services such as S.S.M. Sur, Oriente, Norte, and Central. The individuals included administrators, nurses, nutritionists, kinesiologists, midwives, social assistants, and physicians
2. A team of 10 monitors in Rancagua, who comprise the Quality Committee of the hospital administrations in the region
3. Fourteen monitors in the Municipal Health Department of Concepción. These individuals included nurses, supervisory midwives, physicians, pharmacists, dentists, and journalists

Each of the three groups was assessed with the same questionnaire, consisting of questions on the adequacy of various dimensions of their QA training, including: (1) the monitoring environment, (2) communication within and outside of the monitoring team, (3) level of responsibility that individual monitors believed they had, (4) whether monitors felt recognized for good work, and (5) degree of motivation in performance of monitoring tasks. The evaluation team tallied the results of the questionnaires for the three groups and rated each team in terms of “priority areas for improvement.” Results are presented in Table 13 below.

⁴ For more information on the questionnaire, please refer to the Appendices for this report.

Table 13: Results of the Team Health Test, July 1999

Dimension of QA work	Group A (n=19)		Group B (n=10)		Group C (n=14)	
	Group Score	Priority for Improvement	Group Score	Priority for Improvement	Group Score	Priority for Improvement
Training	8.7	5	8.0	2	8.5	3
Environment	6.2	1	8.4	5	8.9	5
Communications	7.8	3	8.1	3	8.0	2
Responsibility	7.9	4	8.4	4	8.4	4
Recognition	6.6	2	6.5	1	7.0	1
Motivation	9.8	6	9.8	6	9.4	6

All the groups studied showed extremely high levels of motivation for QA projects. However, the above table indicates that QA teams believed they were accorded insufficient recognition for their efforts and acknowledged lack of incentive as an issue impacting subsequent QA-related work. Senior administration within facilities with active QA teams must recognize and reward work team performance as an important asset to management, but without regarding the teams as a parallel structure. The administration would benefit from this highly committed human resource.

In terms of technique (i.e., understanding, handling, and frequency of use of the quality tools), the highest scores were accrued by the central monitors (Group A). It is noted that Groups B and C could improve in this area. If training is integral to the effectiveness of the work teams, its relationship to other factors such as environment, communication, authorization, recognition, and motivation needs to be considered.

7.4.1. Communication, Benchmarking, and Attitudes within the QA Monitor Community

Despite obstacles impeding direct communication, there is a constant flow of information through both countrywide networks and within each Health Service. The Quality Unit has supported this process through formal and informal communication that has created some limited opportunities for “benchmarking,” or sharing best practices. In this way, best practices are shared for specific processes. An example of benchmarking is the study on the use of medications by the pharmaceutical chemist at the Limache Hospital (Region V) who shared expertise and experiences with the pharmaceutical chemist at the S.S.M. Sur Administration on the use of medications in primary care, as well as best practices.

When the monitors of the Metropolitan Region Health Service were asked why they had volunteered as QA monitors, they responded, “The need to produce change and to be able to manage and transform the culture of public health in Chile.” They believe that tools

designed to enhance delivery of quality healthcare services can improve participation, horizontal dialogue, and empowerment of the work teams. Over time, monitors and quality committees have found increased opportunity to meet in their work units, as well as resources with which to implement QA projects. In so doing, they have gradually bypassed organizational hierarchies to provide training for directors of services, hospitals, and primary care clinics. Others serve as monitors, providing models of solid foundations in building a system of quality management. “We note that when a manager is trained in quality, he becomes a monitor of quality and always includes it in his management.”

7.5. Dissemination and Communication

The following initiatives have been implemented to promote quality assurance in Chile:

The National Prize for Quality in Public Services was established by President Eduardo Frei Ruiz-Tagle to stimulate the delivery of quality services to users in the public sector. Its objective is to promote a comprehensive culture of quality in public administration and to promote the participation of staff at all levels in assessment and QA processes. It recognizes those systems with comprehensive quality programming. There may be more than one nomination per provider institution.

The Day of Excellence in Health was established by Supreme Decree #232/99 of April 26, 1999, to be held each year during the third week of October. Honors are granted for outstanding contributions to the field of public health in Chile.

Zepeda Award The Quality Assurance program has established an incentive for monitors who participate in training. This highly valued award—a Diploma of Honor—is named for the late Dr. Mariela Salgado Zepeda, a monitor who was recognized for her leadership in the Chilean QA program. Nominations are made by each Health Service and submitted at every national conference on quality.

Bonus Program: Through the system for evaluating achievement of goals set by the MOH, the Ministry receives the budget proposed by the Office of the Secretary to the President. In turn, each of the Health Service administrations receives resources to carry out the assigned programs. There is also a Qualification Board comprised of central offices and officials that grants an official bonus, depending on the performance grade. However, no mechanisms currently exist for self-assessment and grading by the work team that would encourage individuals and teams to achieve continual improvements in the indicators of excellence.

Local Recognition of Individuals and Teams Some regions recognize QA contributions by individuals and work teams, and they have included these initiatives in their annual strategic planning for training, sometimes allocating funds for quality projects. However, initiatives are not formally integrated elements of incentive systems at the central and regional levels but rather are acknowledgments of voluntary efforts and do not typically involve financial compensation. The dedication of healthcare personnel who freely contribute their time and often economic support has been largely responsible for the success of the QA program in Chile.

The QA program has been thoroughly disseminated throughout Chile. The Quality Unit and MOH maintain continual communication with all sectors of the health system. The program reaches all levels of the health sector, providing immediate feedback on system

performance through formal and informal communication. Success can be attributed to the timely exchange of information, as well as to the response to recommendations about quality projects and to receptive and committed QA leadership.

The dissemination of QA program achievements has resulted in greater participation and communication among all levels of healthcare professionals, as evidenced by increased recognition of their achievements in a country with a public health culture and growing democracy. However, although the MOH supports the QA program, its benefits in terms of cost-effectiveness have not been established. This limits resource allocation for dissemination and communication of QA programs. However, both central and regional efforts to spread the program have been established through participatory forums such as:

- **The Month of Quality:** Healthcare-related QA efforts are publicized at all levels of care in the country through conferences, mural exhibits, and brochures distributed to both internal and external clients, and staff interviewed at all provider institutions are familiar with them. The Month of Quality has been held in October since 1994. In 1998, 367 different activities were carried out during the Month of Quality and 24 of the country's 29 Health Services participated.
- **The National Conference on Health Services Quality:** Each year the QA program holds a national conference on QA with invitations to QA teams to present their work. The QA Program publicizes the different projects in which the quality teams are involved through a summary of the national QA conference. This document has had a great impact on development of the QA program and on involving new participants, including officials and politicians throughout the administration and municipalities. The central QA Unit documents and disseminates all QA projects throughout the country through the conference summary. The conference has been positively evaluated by participants.

International dissemination of the Chilean QA Program achievements has been emphasized since 1992. The program has been involved in 10 major international presentations, including the International Society for Quality in Health (ISQua). The results of this particular evaluation were also presented at the 1999 ISQua Annual Conference in Melbourne, Australia.

8. Recommendations and Lessons Learned

The Quality Assurance Project has focused its efforts in the evaluation of QA programs on the use of evaluation data for future planning and decision making. In the case of Chile, the evaluation team was focused first on providing useful information for the Ministry of Health of Chile and second on gathering data that could be useful to countries just beginning the establishment of a national QA program. For this reason, we have organized this section of the evaluation report into two subsections. The first makes recommendations for the Ministry of Health in Chile regarding future directions for the QA program there. Secondly, we examine lessons learned from Chile that could be considered “best practices” worthy of adaptation by other countries seeking to institutionalize QA.

The evaluation team examined management and leadership issues, technical functions, and support functions. We have organized our recommendations around those three areas.

8.1. Management and Leadership

In spite of the extremely impressive achievements of QA in Chile, further improvements can be made in organizational structure and leadership. The evaluation team’s recommendations in this area can be summarized as follows:

- Promote an emphasis on strategic planning within the QA program through a focus on linking QA program goals and Ministry of Health policy directives
- Strengthen central leadership of the QA program through support to the central QA unit, including staffing support and information resources
- Create a National Quality Council to strengthen central leadership in QA and link the numerous quality initiatives in QA
- Emphasize QA methodologies and tools as general approaches for improving management in the healthcare system, especially through the integration of QA and management training for Ministry personnel
- Strengthen physician involvement in the QA program with concrete incentives and efforts designed to increase competencies and interest of physicians in QA activities
- Examine opportunities to increase initiatives in the area of evidence-based medicine

It is evident that QA activities have not always been optimally carried out and that a clearer strategic direction of the Chilean QA effort is needed to meet the healthcare needs of the population, in particular, targeting clinical quality improvements. The team recommends that the Ministry of Health reposition the QA Unit in the MOH in order to give it increased ability to communicate with the regions and direct the national quality strategy. This requires strategic planning for the QA division, providing it with clear vision and new objectives.

Strengthening and supporting the existing formal QA leadership could play a critical role in harnessing the existing energy and enthusiasm into very useful QA activities. The central leadership can play a critical role in defining national priorities for improvement, acting as a think tank for QA methods, and providing training and national level coordination of the QA

effort. The current position, funding, and mandate of the Quality Assurance Unit may not be adequate to allow it to fulfill this role. Some leaders in the MOH acknowledged the inadequacy of the current position of the Central QA Unit. There was also some discussion regarding the possibility of creating a “Superintendencia” to overcome this. In addition to the positioning, it will also be important to unite the various MOH units working on different aspects of QA. These include infection control, accreditation, clinical audit, evidence-based medicine, and the Quality Assurance Unit.

Support for the central unit should also be material as well as strategic. At the least, the unit should recover the human resources it had in 1994: two technical assistants and one full-time secretary. The evaluation team also feels that the QA Program would benefit greatly through a modest level of material support for the central unit in the form of access to information. This would include local access to international sources of QA information through the Internet as well as modest investments in other sources of documentation, such as journal subscriptions.

In addition to repositioning the existing central QA unit, the evaluation team recommends the creation of a national quality council involving senior health authorities to guide and support quality improvement in the Chilean healthcare sector. The QA structure could be further enhanced through the creation of this “National Council on Quality.” Such a council would include key health-sector decision makers, together with the QA executives, and would serve to oversee and garner support for the Chilean QA effort.

Quality assurance should be used and legitimized as a management tool. The same methodology that is used to improve quality can be applied to the management of the healthcare system at different levels. It is recommended that this transition be initiated, given evidence of a strong commitment among the MOH leadership to embark on a fundamental managerial transformation of this nature, which would include intensive training and technical assistance. The evaluation team also felt that the Chilean QA Program could benefit from inserting quality management classes within any hospital management training provided to future hospital managers.

Physician involvement appears to be a major problem in the Chilean QA effort. We recommend involving physicians as a key strategy for future development. Many strategies could be useful in involving physicians in QA. Physicians are more likely to be excited about clinical improvements, which result in better clinical outcomes. Therefore, it is important to use QA to make improvements in priority clinical areas. This can result in double benefits: tackling important priorities for the health of the population and involving physicians in QA. Another strategy to use for the initial clinical improvements is to identify physician leaders who are more likely to accept QA—the so-called—“early adopters.” It is important to involve those who can have a positive influence on the physician community.

Evidence-based medicine must be included as an integral part of the Chilean QA focus on clinical improvement. The emphasis should be on integrating evidence-based and subject-matter medical knowledge to enhance the systems and processes of healthcare delivery. This basic approach has been shown to be very powerful in improving clinical quality. The experience of the metropolitan south region in the use of evidence-based medicine could be valuable in this work.

8.2. Technical Functions

The Chilean QA Program is engaged in a range of technical activities, although the program to date has been based upon quality improvement efforts at the facility level. Although the technical level of the QA Program in Chile is high overall, there are still areas for possible improvement that should be addressed if the program is to continue to grow technically. The team's recommendations in this area can be summarized as follows:

- Continue efforts to link priority health policies and objectives of the Ministry of Health with regional and local quality improvement activities
- Encourage the development of larger scale quality efforts using techniques such as quality design
- Analyze the possibility of streamlining quality improvement efforts for certain straightforward quality problems when a more "rapid" approach might be applicable
- Strengthen capacity in monitoring quality of care at the facility and team levels so that baseline assessments are conducted regularly during QA activities
- Demonstrate and document the cost-effectiveness of QA activities
- Integrate client input and client satisfaction data more regularly into quality improvement efforts

QA activities in Chile should be targeted to priority health needs at the national, regional, and facility levels. Many QA initiatives have been undertaken with impressive results. Some efforts, such as reducing patient queues in facilities, are already in progress and may be expanded to other management and clinical priorities. Existing incentive initiatives could be used to encourage this linking by, for instance, placing an emphasis on clinical improvements achieved when considering awards to teams or individuals for QA work.

Further efforts could be made to encourage large scale management and clinical improvements in addition to infrastructure development projects. The evaluation team found a number of areas where the Ministry of Health could profit from larger scale improvement efforts that move beyond facility-based problem solving teams' abilities. However, in order to address such problems, the QA Program in Chile will need to develop some expertise in technical areas such as quality design.

Quality improvement includes a wide range of activities. Principal among these were quality improvement activities on the "input side" of the delivery of healthcare; that is, the majority of the projects presented to the evaluation team addressed resource gaps. These projects included strengthening basic infrastructure, improving toilet facilities, providing information to patients, clean laundry projects, and others, all of which significantly contribute to patient satisfaction. However, many of these "input-related" quality improvement efforts do not require the patient satisfaction or needs surveys that were conducted in order to identify them in many of the projects presented. Nor do they require the expertise of special QA teams. Such QA activities can be accomplished through straightforward management decisions. In cases where full quality improvement cycles are not necessary, the evaluation team encourages the central QA Unit to develop the knowledge, interest, and capacity for "rapid" problem solving work to accelerate teams' work.

Despite the central QA unit's work on developing training materials in indicators and monitoring, further work is needed to strengthen the quality assessment system to demon-

strate improvement in quality of care from QA activities. Baseline assessments have to be performed systematically before the beginning of any QA project. Tools exist to help, and the QA Unit should alert the regions and facilities and provide some specific meetings on that topic. Afterwards, demonstrating the efficiency and power of some quality improvement would be easier and more effective. The central QA Unit needs to acquire the skills to lead with cost-effective techniques and to develop some operational research on the cost implications of QA. This information is sorely lacking in the developing world, and even minimal information from several demonstration projects could significantly aid the funding situation for the QA Program in Chile.

Although there is a wide range of efforts aimed at encouraging client and community participation in the health system in Chile, the evaluation team felt that client input into quality improvement activities could be improved. The work of QA teams would benefit significantly from the incorporation of patients within groups dominated by health providers.

Finally, Chile is well ahead of much of the world in terms of the development and implementation of standards. What is needed now is further work on communication of the many standards catalogued by the central QA Unit and development of techniques for communicating and adopting standards for the decentralized levels of the Chilean health system. In addition, further work will need to be done to strengthen the standards adoption, such as the development of job aids, on-the-job training sessions, or facilitative supervision policies.

8.3. QA Support Functions

Support functions play a key role in the development and sustainability of any national QA program. In particular, the evaluation team felt that two areas, training and dissemination, deserve particular attention in the future management of the Chilean QA program.

8.3.1. Training

Training has been the backbone of the Chilean QA Program success. Broad training efforts have ensured that the program has survived despite high turnover rates. However, because high turnover of director-level staff continues to be a formidable challenge faced by all regions, emphasis should be placed on involving new directors in promoting and approving the training plan and in maintaining their continuity. In particular, this will mean placing emphasis on ongoing training for the “generales de zonas.” In this way, the program can avoid gaps in leadership for QA activities following staff turnover.

In addition, training at the facility level in basic QA skills should continue. However, the evaluation team feels that any new training should be linked to the development of a QA project, perhaps through pseudo “contracts” between the QA trainers and the trainees at the end of the training session. These training sessions in basic QA skills could also profit from a greater involvement of Chilean health professionals already trained in QA in the different regions of the country. Additional training resources have been generated from the QA Program’s strong ties to Chilean universities. The evaluation team recommends that this involvement continue, particularly in the area of pre-service training and quality of care research. Finally, once teams are trained, the evaluation team recommends that mechanisms be established to ensure that facility management staff recognizes the work of the QA team and reward progress in improving quality.

8.3.2. Dissemination

The Chilean QA Program has made great strides in the implementation of a dissemination strategy, anchored by the National Month of Quality and National QA Conference. However, further efforts could be made to maximize the impact of these mechanisms for communicating Program successes. First of all, the team recommends the implementation of a systematic benchmarking system. To a certain extent, Chile has the makings of such a system already in its current dissemination mechanisms. Although it should be noted that some dissemination has occurred, especially of projects addressing national priorities, this has been primarily achieved either through special, one-time publications or through personal efforts. A regular benchmarking system in Chile would be based on wider distribution of “best practices” in QA and better dissemination of the QA Program’s archives. Such an effort would require expansion of the QA Unit’s mandate to develop and coordinate such activities.

The evaluation team has several recommendations regarding national meetings. In particular, it will be important to involve more physicians and senior healthcare leaders in the annual QA conference. Because this event is key to optimal communication throughout the national QA network, a specific budget should be allocated to increase participation and the dissemination of materials resulting from the conference. Second, it will be important to complement the current schedule of national QA meetings with regular regional meetings on QA topics in order to assess program development and adapt QA program objectives and strategies.

Two important avenues for dissemination—the Internet and QA literature—need attention. To date, development of QA and regulation libraries has been slowed due to a lack of support for permanent updating of QA literature sources (e.g., books, reviews, Internet subscriptions, etc.) within the program. Greater connection to the worldwide QA community clearly would enhance the success of QA efforts in Chile. Priority suggestions are to:

- Increase the visibility of the QA program with an enhanced presentation on the MOH website. QA activities should be highlighted, with results displayed, on the web page.
- Publish the QA book entitled *Quality is Ours: A Country Reality*, written by the QA Unit Coordinator. The book includes the experience of the program from 1991 to date and provides a summary of its conceptual and methodological framework. Funds are needed for the publication.

8.4. Program Management

A common belief, held by a number of individuals seen by the evaluation team, is that Chile’s QA Program can function with or without adequate human or economic resources. Although this has actually been true up to this point in the program’s life, sustainability and support for future efforts will require strategic review of resource needs and decisions about priority areas for investment in the future of the program. One of the key areas for improvement is for dedicated resource allocation at the central and regional levels for QA activities. During the past two years, resources have been regularly allocated to regulation activities and only very sporadically to the Quality Program. During the most recent period of the QA Program’s development, all training activities requested by the Health Services have been provided by the QA Unit. This is despite the fact that the initial team, which was composed

of three health professionals and a secretary, has been reduced to one professional (the QA program director). Project continuity and accomplishment of objectives in the areas of Quality and Regulation have only been possible through increased and unpaid overtime on the part of the program director as well as the dedicated collaboration of QA monitors and committees. Ongoing constraints imposed by Chile's current economic conditions on the national health budget appear to preclude resolution of this problem.

The MOH in Chile may need to seriously examine the human resources needs of the Program as it plans for the year 2000 and beyond. This is particularly important in terms of the creation of an authority (an individual or committee) at the MOH level that could integrate and coordinate the quality activities, avoiding task duplication, omission, or inequity. The integration of quality tasks with teams from divisions other than DISAP becomes difficult because of bureaucratic tracks within the MOH.

Finally, the team recommends that attention be given to the lack of assigned time allocation for QA monitors to work on the QA projects or to receive ongoing training. There is a clear necessity to allocate specific time to quality activities, particularly training, since current training is frequently funded through monies earmarked for "general training."

9. References

- Gnecco, G. 1998. Making a commitment to quality: Development of a national quality assurance program in Chile, 1991-1998. Presentation made to International Society for Quality in Health Annual Conference, 1998.
- Ministry of Health, Chile. 1998. *Criteria, Quality Standards, and Indicators for National Health Priorities*.
- Ministry of Health, Chile. 1997A. *Country Healthcare Priorities*. Division of People's Health.
- Ministry of Health, Chile. 1997B. *Design and Implementation of the Healthcare Priorities*. Division of Health of Persons.
- Ministry of Health, Chile. 1996. *Visiting Card, Health Situation in Chile 1996*.

10. Appendices

The following items are attached to this report as appendices:

10.1. Tool for Evaluating Impact of Training	46
10.2. Chile Program Evaluation Framework	47
10.3. List of Contacts	56

10.1. Tool for Evaluating Impact of Training

The following tool was tested in Chile in order to evaluate the impact of training. Information on the tool and its use is contained in the report. This tool was devised by Dr. Orlando Urroz of the Ministry of Health of Costa Rica. No unauthorized reproduction or use of this tool should be made without consent of Dr. Urroz and the Ministry of Health of Costa Rica.

TEST DE SALUD DEL EQUIPO (TSE)

La intención de este test es aportar insumos para analizar la salud de un equipo de trabajo, desde la perspectiva de la comunicación, cooperación, motivación y una serie de características. Por favor lea cada frase y marque la respuesta más apropiada con una " x ".

	Muy de acuerdo (10)	De acuerdo (7)	En desacuerdo (4)	Muy en desacuerdo (0)
1. Se muestra respeto y consideración a todos los miembros del equipo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Hemos tenido suficiente capacitación en GC de modo que ahora entiendo los principios de GC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. La capacitación en GC fue útil y claramente presentado.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. El coordinador del proyecto conoce y emplea los principios de GC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Nuestro ambiente de trabajo alienta la formación de equipos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Mis insumos/sugerencias e ideas son consideradas valiosas y apoyadas por los miembros del equipo y el director del equipo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Estoy creciendo profesionalmente a través de mi trabajo en este trabajo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Me siento facultado para contribuir con lo mejor de mis capacidades.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Mi esfuerzo es apreciado y recibo reconocimiento por un trabajo bien hecho.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Comprendo perfectamente mi función y lo que se espera de mi.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. El equipo juega un papel central en el proceso de toma de decisiones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Este equipo está bien organizado.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. La administración superior reconoce y premia el excelente desempeño del equipo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Este es un equipo efectivo, con espíritu de equipo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. En el equipo se da comunicación efectiva.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Estoy motivado a dar mi mejor esfuerzo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. El director del proyecto siempre apoya al equipo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Entiendo como mi esfuerzo contribuye a los objetivos del equipo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Existe comunicación efectiva entre el equipo y los grupos externos (clientes, otros equipos, alta gerencia, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Estoy satisfecho de ser un miembro de este equipo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EVALUACION	
<input type="checkbox"/>	Técnicas de GC (2,3,4)
<input type="checkbox"/>	Entorno (1,5,12,14,17)
<input type="checkbox"/>	Comunicación (7,10,15,18,19)
<input type="checkbox"/>	Facultación(6,8,11)
<input type="checkbox"/>	Reconocimiento (9,13)
<input type="checkbox"/>	Motivación (16,20)

Agrupe las frases de acuerdo con las categorías señaladas en la zona derecha y calcule el promedio de puntuaciones.

10.2. Chile Program Evaluation Framework

Evaluation Question	When	Indicator	Source	Method
1. Environment				
1.1 Health Reform What is the structure of the healthcare system? <ul style="list-style-type: none"> ■ summary of roles within the broader healthcare system (private, public, universities, nonprofit) ■ organizational chart w/ key functions ■ overall priority of healthcare in policy environment, budgetary allocation ■ how well developed are the support systems? Standards development Monitoring Supervision Training Research Dissemination 	pre-visit		documents	descriptive
Summarize the history/evolution of health reform	pre-visit		documents	timeline chart depicting key events
1.2 Key policies that influence the health system <ul style="list-style-type: none"> ■ economic ■ budgetary allocation ■ independence and authority of MOH leadership ■ policies in related sectors that may be important (e.g., education, human resources, legal entitlements of workers, legislated accreditation and licensing requirements) 	pre-visit		documents interviews	
1.3 Chilean culture	pre-visit		interviews documents	elements of Chilean culture that seem important for their “fit” with the “culture of Quality”
2. QA program				
Description of QA activities: creating a map of QA within the health system. Summarize: <ul style="list-style-type: none"> ■ What is happening in QA policy, standards development, quality improvement, training for QA, supervision, monitoring, research, dissemination of QA progress and results, and quality design? ■ At what levels is QA happening (central—ministry level, provincial, district, and local)? ■ Who has responsibility, authority and decision-making power for QA at each level (central—ministry level, provincial, district, local)? What are they responsible for? What are they supposed to do? What do they actually do? What is missing? 	pre-visit		documents	

Evaluation Question	When	Indicator	Source	Method
2. QA program <i>(continued)</i>				
History of the QA program <ul style="list-style-type: none"> ■ Who provided leadership in starting it? ■ What was the process and strength of advocacy for QA? ■ How did the program evolve overtime? ■ How did its evolution relate to changes in the health system overall and other policy reforms? 	pre-visit		documents	timeline
QA policies <ul style="list-style-type: none"> ■ Explicit (written) and implicit policies ■ Is there a QA plan? If yes, is the plan explicit about <ul style="list-style-type: none"> Goals and objectives Structure, functions and responsibilities Fund allocation for QA A roll-out plan (who will do what to whom) ■ What is the intended future of the QA program? 	pre-visit			descriptive
3. Management and Supervision of QA				
What is the role of managers and supervisors in QA at every level of the health system? <ul style="list-style-type: none"> ■ Explicit in QA program ■ Implicit in supervision 	pre-visit in-country			
Do supervisors have the competencies required to do QA supervision? <ul style="list-style-type: none"> ■ educational and training levels of supervisors 	in-country pre-visit	appropriate-ness of training	record review	comparison of recorded educational and training levels and scope with required skill base
<ul style="list-style-type: none"> ■ competency evaluation 	pre-visit and in-country	specific competencies	interviews	knowledge and skill testing
How often do they visit providers? (for each level of the supervision system)	pre-visit and in-country verification	# visits	record review and interviews	
Are they reviewing and supporting QA efforts and how?	in-country	# supervisors checking on QA activities; # supervisors participating/ contributing to QA/QI activities	interviews with supervisors and providers	
Do supervisors monitor compliance with standards?	in-country	# supervisory visits when compliance was checked/ total # of supervisory visits	interviews and record review	
Do they coach teams?	in-country			
Do they motivate teams?	in-country			

Evaluation Question	When	Indicator	Source	Method																					
4. Training																									
Descriptive chart: number of health professionals who have been trained by healthcare system level, by type of training, and by geographical location <ul style="list-style-type: none"> ■ Who is being trained? At the national/central, provincial, district and local level: supervisors and providers ■ Why are they being trained? (What types of competencies are we attempting to develop and what do we want people to do differently?) Awareness Assessment Coaching TOT Problem solving Other 	pre-visit																								
Who is doing the training? <ul style="list-style-type: none"> ■ Illiterate with good people skills ■ Educators ■ Specialized (driven by management) ■ Supervisors 	pre-visit																								
Are the most effective people being trained at the different levels of the health system? (How are people selected to be trained?)	pre-visit and in-country																								
What methods are used in training? <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Pre service</th> <th style="text-align: center;">Post service</th> </tr> </thead> <tbody> <tr> <td>Classroom</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Cascade</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Mentoring</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Lecture</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>On-the-job</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Distance learning</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> </tbody> </table>		Pre service	Post service	Classroom	✓	✓	Cascade		✓	Mentoring		✓	Lecture	✓	✓	On-the-job		✓	Distance learning	✓	✓	pre-visit			
	Pre service	Post service																							
Classroom	✓	✓																							
Cascade		✓																							
Mentoring		✓																							
Lecture	✓	✓																							
On-the-job		✓																							
Distance learning	✓	✓																							
Does the health supervision system assess QA competencies? <ul style="list-style-type: none"> ■ For supervisors ■ For providers 	pre-visit and in-country																								
Is training a response to needs assessment?	pre-visit and in-country																								
Are training tasks appropriately performed? <ul style="list-style-type: none"> ■ Needs assessment ■ Analysis ■ Design ■ Development ■ Production ■ Delivery ■ Evaluation 	pre-visit request to gather information	# of training events where all steps have been followed/ total # of training events																							
Is training being evaluated? <ul style="list-style-type: none"> ■ Whose performance is assessed? (Individuals and/or teams) ■ When is training evaluated? (at end of training and/or later—on-the-job) 	pre-visit request to gather information	# of training events evaluated/ total # of training events																							
Is there re-training?	pre-visit request																								

Evaluation Question	When	Indicator	Source	Method
4. Training <i>(continued)</i>				
Do staff feel competent to perform their tasks? Are staff competent to perform their tasks? How well do they perform their tasks?	in-country			
Is training integrated into the QA program? Who provides resources for QA training? <ul style="list-style-type: none"> ■ Donors (outside the health system) ■ The national government ■ The private sector Is there a QA training plan? Are there modifications in the training program?	pre-visit questions and in- country verification			
5. QA Research				
Summary "map": Who is conducting QA research: At what levels of the health system? On what topics? In response to whose requests? What happens to the results?	pre-visit			
What research methods are being employed? Are they appropriate and adequate?	pre-visit and in-country			
How are the results used? Are they used to improve QA activities and methods?	in-country			
Is QA research evaluated?	pre-visit			
6. Dissemination and Communications				
What is the purpose of documentation and communication? <ul style="list-style-type: none"> ■ Sharing and learning ■ Attracting resources ■ Educating the community and increasing access ■ Motivating and creating goodwill 	pre-visit question and in-country follow up			
Is there a framework for documentation and learning? <ul style="list-style-type: none"> ■ Is there monitoring? ■ Is there supervision? ■ Is there results analysis and reflection? ■ Are results and learning incorporated into further work? 	pre-visit question and in-country follow-up			
Is there dissemination and sharing for different types of audiences? <ul style="list-style-type: none"> ■ Internal ■ Community/client ■ Other sectors ■ Policy makers ■ Regional ■ International 	pre-visit question and in-country follow up			
Are customers informed about quality improvement activities? <ul style="list-style-type: none"> ■ How? (at clinic, through media, in public/community functions) ■ How often? ■ Are these "dissemination activities evaluated and improved? 	pre-visit and in-country			

Evaluation Question	When	Indicator	Source	Method
6. Dissemination and Communications <i>(continued)</i>				
Especially in more remote areas, is community involved in quality improvement efforts? <ul style="list-style-type: none"> ■ Is public education? ■ Is perceived quality of services measured? ■ Are community members playing a role in the quality improvement efforts? 	pre-visit and in-country			
What is the mode/media of dissemination? <ul style="list-style-type: none"> ■ Public media (Newspaper, Radio, TV) ■ Workshop/Meeting ■ Written product (Report, Newsletter) ■ Informal (word-of-mouth) 	pre-visit			
Does dissemination and documentation work? (is it achieving its goals?)	in-country			
7. QA Assessment and Monitoring				
Does health system collect data on quality of care? <ul style="list-style-type: none"> ■ Input ■ Process ■ Outcomes ■ QA program implementation 	pre-visit			
How often is data collected? <ul style="list-style-type: none"> ■ Ongoing surveillance of health? ■ Ad hoc 	pre-visit			
Who is using the data and for what purpose? <ul style="list-style-type: none"> ■ At different levels of the system ■ What types of decisions do the data inform? 	pre-visit and in-country			
Has QA program defined key indicators? <ul style="list-style-type: none"> ■ for quality of care outcomes ■ for QA program implementation 	pre-visit and in-country			
What is the quality of the indicators? <ul style="list-style-type: none"> ■ Are they clear? ■ Are they reliable? ■ Are they valid? ■ Are they realistic/feasible? 	in-country			
How is information about client needs collected? <ul style="list-style-type: none"> - Ad hoc direct questioning and feedback for individual quality improvement activities - Monitoring system ■ Exit interviews ■ Suggestion "box" ■ Customer service function ■ Routine surveys ■ Focus groups 	pre-visit and in-country			
How is data collected? <ul style="list-style-type: none"> ■ At different levels of the system? ■ By what method? ■ Where is data kept? 	pre-visit			
How is data analyzed?	pre-visit and in-country			
How is data used? <ul style="list-style-type: none"> ■ To allocate resources? ■ To initiate quality improvement? 	pre-visit and in-country			

Evaluation Question	When	Indicator	Source	Method
7. QA Assessment and Monitoring <i>(continued)</i>				
Is data disseminated regularly? ■ At each level of the health system ■ In what format?	pre-visit and in-country			
How is the monitoring/assessment system assessed and modified?	pre-visit and in-country			
What is the technological level of the monitoring system? ■ Manual or automated ■ Is it adequate?	pre-visit and in-country			
8. Quality Design				
Describe quality design activities ■ Quality design of products ■ Quality design of services	pre-visit			
How are systems of processes to be redesigned selected?	pre-visit and in-country			
What is the composition of the design team? Are there representatives of every core subprocess? ■ representatives of external customers? ■ representatives of internal customers? ■ representatives of main stakeholders? ■ others?	pre-visit and in-country			
Do initial steps include: ■ develop an initial vision? ■ define a high-level flow chart? ■ identify external and internal customers?	in-country			
Are client needs and expectations identified? ■ through an initial assessment ■ through "best guesses" of participants	in-country			
Are client needs and expectations prioritized? How?	in-country			
Are appropriate tools being used? ■ Brainstorming ■ Quality function deployment ■ Measurement ■ Further client feedback ■ Benchmarking (Are experiences sought from other health systems, other parts of the health system and from similar services in other countries or sectors identified to inform current design process?) ■ Mental escape ■ Other	in-country			
Are client needs assessed—product or service testing—at every step of design? ■ What are the key questions asked in the test for robustness? ■ What test methods are used?	in-country			
Does testing lead to redesign?	in-country			

Evaluation Question	When	Indicator	Source	Method
8. Quality Design <i>(continued)</i>				
<p>Is an implementation plan of the new design being prepared?</p> <ul style="list-style-type: none"> ■ Are resources for implementation identified? ■ Is a communication plan developed for the new design? <ul style="list-style-type: none"> – for different groups – different channels of communication – message design for each case – spokesperson identified 	in-country			
9. Quality Improvement				
<p>Who is responsible for QI?</p> <ul style="list-style-type: none"> ■ Individuals and/or teams? ■ At what levels of the healthcare system? (central level, supervisors, health workers) 	pre-visit			
<p>How is it organized?</p> <ul style="list-style-type: none"> ■ Teams responsible for monitoring health care quality who initiate problem solving? ■ Problem solving teams at facility level? 	pre-visit			
<p>How is it supported?</p> <ul style="list-style-type: none"> ■ At central and provincial health employees ■ By supervisors ■ By outside sources (e.g., donor funding) ■ At the local level 	pre-visit			
<p>What is happening in process improvement</p> <ul style="list-style-type: none"> ■ Are they mapping their processes? ■ Are they monitoring key indicators and results? ■ Does monitoring result to improvement efforts? ■ Do they develop standards? ■ Do monitor results? 	pre-visit and in-country			
<p>Are the clients and stakeholders of services identified?</p> <ul style="list-style-type: none"> ■ Are health supervisors able to identify their clients? ■ Are health workers able to identify their clients? 	in-country			
<p>Problem solving</p> <p>How are problems selected?</p> <p>Are teams following the problem-solving cycle?</p> <ul style="list-style-type: none"> ■ Identify and define problem ■ Analyze causes ■ Develop solutions ■ Implement and test solutions 	in-country			
<p>Who is on the teams?</p> <p>How were they formed?</p> <p>How were they prepared?</p> <ul style="list-style-type: none"> ■ Who, if any, were trained? ■ Validated? <p>Do teams have the necessary competencies to do QA?</p>	pre-visit and in-country			

Evaluation Question	When	Indicator	Source	Method
9. Quality Improvement <i>(continued)</i>				
Do teams exhibit appropriate attitudinal, motivational, and behavioral characteristics? <ul style="list-style-type: none"> ■ Decision making through consensus ■ Accountability for the team ■ Responsibility for own piece of the work 	in-country			
What are its results of QI? Is there improvement happening?	in-country			
10. Standards				
Describe standards Map where are standards being set—for what type of health activities? Who sets and adapts standards for each type of standard, and at each level of the health system? By what process? <ul style="list-style-type: none"> ■ How are provider needs incorporated? ■ How are client needs incorporated? 	pre-visit			
How are standards approved?	pre-visit			
How are standards communicated? Initial communication of standards Ongoing communication and dissemination of standards <ul style="list-style-type: none"> ■ To health professionals ■ To clients 	pre-visit and in-country			
How are standards documented?	pre-visit			
How are standards monitored, evaluated, and adapted?	pre-visit and in-country			
How are supported systems functioning vis-à-vis standards? <ul style="list-style-type: none"> ■ Staffing competencies ■ Supply system ■ Training ■ Monitoring ■ Supervision 	pre-visit and in-country			
What is the quality of existing standards? <ul style="list-style-type: none"> ■ Are they clear? ■ Are they valid? ■ Are they realistic? ■ Are they reliable? 	pre-visit			
Ultimately, do standards “work”? <ul style="list-style-type: none"> ■ Who knows about standards? ■ Who understands them? ■ Who complies with them? 	in-country			

Evaluation Question	When	Indicator	Source	Method
11. Accreditation and Licensing				
Who has authority for accreditation and certification <ul style="list-style-type: none"> ■ Professional associations ■ National and regional accreditation bodies for facilities 	pre-visit			
How is it conducted? <ul style="list-style-type: none"> ■ By whom? ■ Frequency 	pre-visit			
Resources devoted to accreditation	pre-visit			
How is it enforced? <ul style="list-style-type: none"> ■ Monitoring of compliance ■ Consequences ■ Appeals 	pre-visit			
What are its results? <ul style="list-style-type: none"> ■ on assuring quality of products and services ■ on cost 	pre-visit and in-country			
12. Organizational Culture				
Do health supervisors and health workers understand the concept of quality? Have they internalized it?	in-country			
Do they believe quality assurance is valuable? Do they perceive it as a priority?	in-country			
Has anything changed in the workplace as a result of the quality assurance program? <ul style="list-style-type: none"> ■ Higher empowerment of health workers and supervisors to act? ■ Higher decentralization of authority? ■ Greater delegation of responsibility to them? 	in-country			
Is the problem-solving technique perceived as exclusive for doctors (and not administrative staff)? Is it perceived as just the administrators' and nurses job, but not necessary for the doctors? Or is it embraced by all?	in-country in-country			
Can health workers and supervisors describe potential future applications of quality assurance to other areas (QA has not yet addressed)?				

10.3. List of Contacts

Last Name	First Name	Company Name	Title	Work Phone	Fax Number	Email Name
A. Salinas	Dr. Rodrigo	Ministerio de Salud, Div. Salud de las	Jefe de División	011-562-630-489/ 630-0490	011-562-638-3562	rsalinas@machi.med.uchile.cl
Arriagada Riffo	Dr. José	Hospital de Niños Dr. Exequiel González	Director	011-562-460-5204	011-562-460-5203	
Bouésseau	Dra. Marie- Charlotte	Ministerio de Salud, Div. Salud de las	Asesor	011-562-639-4001 ex.489	011-562-638-3562	Mbouesse@pasteur.minsal.cl
Chomali Garib	Dra. May	Servicio de Salud Metropolitano Oriente	Subdirector Médico	011-562-264-9152/ 340-4201	011-562-209-7829	cgm@entelchile.net
de la Fuente Villalón	Miguel	Hospital Luis Calvo Mackenna	Director	011-562-236-1569/ 236-0598	011-562-236-0584	
Eliana Díaz Simpson	María	Servicio de Salud O'Higgins	Jefe - Depto. De Comunicaciones	011-56-72-236-847	011-56-72-231-005	
Erazo Latorre	Dr. Alvaro	Ministerio de Salud, República de Chile	Subsecretaria de Salud	011-562-639-4683	011-562-639-9461	aerazo@pasteur.minsal.cl
Herrera Latorre	Gerardo	Ministerio de Salud, Div. Salud de las	Asesor	011-562-639-4001 ex.492	011-562-638-3562	gherrera@pasteur.minsal.cl
Ipinza Riveros	Dr. Manuel	Ministerio de Salud, Agenda Social de Salud	Secretario Ejecutivo Comité de Gestión	011-562-630-0423/ 630-0415	011-562-639-9461	mipinza@minsal.cl
Lechuga Montenegro	Christian	Hospital Regional Rancagua	Jefe de Comunicaciones	011-56-72-222-725	011-56-72-230-675	
Montoya Aguilar	Dr. Carlos		Profesor de Salud Pública y Consultor	011-562-205-1805	011-562-204-7848	

continued

10.3. List of Contacts *Continued*

Last Name	First Name	Company Name	Title	Work Phone	Fax Number	Email Name
Montt Vidal	Dr. Julio	Servicio de Salud Metropolitano Oriente	Director	011-562-205-0340/ 340-4200	011-562-209-7829	dirossmo@ssmor.co.cl
Pepper Bergholz	Dra. Susana	Ministerio de Salud, Div. Salud de las	Jefe Depto. Normas y Regulación	011-562-630-0532	011-562-630-0510	spepper@pasteur.minsal.cl
Ríos Palma	Mario	Servicio de Salud Llanquihue Chile	Director	011-562-261-401	011-562-258-444	
Rodríguez Oliveri	Dr. Osvaldo		Cirugía General Vascolar Periférico	011-562-243-6477	011-562-236-2416	socmed@entelchile.net
Tay U.	Dr. Leoncio	Ministerio de Salud, Region Metropolitana	Subdirector Médico, SAMU	011-562-634-5218	011-562-634-9768	ltay@entelchile.net
Valdés Moya	Margarita	Hospital Clínico San Bojía Artarcan	Asistente Social Jefe	011-562-554-4677		
Wednesday, August 25, 1999						
Valenzuela Van Treek	Dario	Asociación Chilena de Municipios	Alcalde de Rancagua y Secretario General	011-56-72-238-593	011-56-72-224-271	emprende@rancagua.cl
Varas F.	Dr. Patricio	Clínica Alemana	Neurologo	011-562-210-1061		pvfarm@ctcrevna.cl
Vicente Martínez	Irene	Hospital Clínico Facultad de Medicina	Programa Mejoramiento Continuo - Jefe	011-562-686-3361	011-562-635-4948	ivicente@med.upuc.cl
Yévenes Soto	Dr. Marcelo	Ministerio de Salud, Region del Bio-Bio	Secretario Regional Ministerial	011-56-41-227-044	011-56-41-226-066	seremi8@pasteur.minsal.cl

