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Designing and Integrating Quality Family Health Services at the Salt Model Center in Jordan

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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. (JCR); and the following entities at the Johns Hopkins University: the School of Hygiene and Public Health (JHSPH), Center for Communication Programs (JHU/CCP), and the Program for International Education in Reproductive Health (JHPIEGO). QAP 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 in the design, management, improvement, and monitoring of healthcare systems in over 30 countries.

About this series

The *Case Study Series* presents real applications of QA techniques in developing countries at the national to facility levels, illustrating major quality assurance activity areas, including quality design, quality improvement, standards, and quality assessment. The series covers experiences from diverse geographical and disease areas, such as maternal and reproductive health, child survival, and infectious diseases.

Quality design is the systematic creation of new services or processes or the redesign of existing ones. It incorporates features that meet the needs of internal and external clients while taking into account the resources available. In health-care, external clients include the individuals who use specific services, their caretakers, and their families, but may also include members of the larger community. Internal clients could include healthcare providers, community-based workers, support staff, supervisors, or managers. Quality design is undertaken by a team that can include both internal and external clients of the service to be designed.

The Quality Assurance Project has developed a quality design methodology that teams can use to select a process and then:

- Identify all clients and their needs
- Clearly set objectives for the design
- Create a design that addresses those needs
- Implement and monitor the new design

This case study describes how quality design principles were used to design the Salt Family Health Model Center, the first such center developed in Jordan.

Acknowledgments

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Background

In the mid-1990s, Jordan's population of nearly 4 million was growing at an annual rate of three to four percent. Jordan's high fertility rate, combined with relatively low infant mortality and high levels of immigration, made it one of the fastest growing countries in the world. These population pressures were, in part, due to a lack of knowledge about family planning services and products. Demographic health survey data indicated a large unmet need in family planning: about one-fourth of married women wanted to either delay their next birth or stop having children.[1] To address this need, the Jordanian National Population Commission set a goal to expand and integrate the delivery of family health services throughout the country.

In 1992, the Ministry of Health (MOH) of Jordan, in cooperation with the Quality Assurance Program (QAP), initiated a national program to ensure the delivery of high quality, integrated family health services. The program involved establishing a central level unit in the MOH that would be responsible for directing quality assurance activities, designing and implementing appropriate standards for maternal and child health and family planning services, and establishing quality improvement teams in health facilities.

[1] Zou'bi AAA, Poedjastoeti S, Ayad M. 1992. *Jordan Population and Family Health Survey,* 1990. Ministry of Health, Amman, Jordan.

One of the strategies adopted for the quality assurance program was to design, implement, and evaluate a pilot quality assurance project in Balqa Governorate that would develop a new regional model for decentralizing health services and introduce a number of administrative reforms. Another strategy was to develop a "model center" in each of four Jordanian governorates. These centers would serve as models of integration of primary care and maternal child services and would be designed to demonstrate the best practices in maternal and child health, family planning, infection control, early detection of breast and cervical cancer, and reproductive health at the health center level. In addition, the model centers would gain expertise in applying quality assurance techniques of setting standards and focus on cost reduction. As part of the quality assurance pilot project in Balqa, the first family health model center was planned for the city of Salt, the Governorate capital. QAP provided technical assistance to apply the principles of quality design in the creation of the Salt Model Center.

Setting Design Objectives

Forming the quality design team. In 1994, work began on the first model center at the site of an existing health center in Salt. Staff from the Ministry's Monitoring and Quality Control Directorate and the QAP Resident Advisor constituted the quality design team that would be responsible for gathering client information and designing a new integrated service delivery model to make family health services more accessible and acceptable to mothers.

Setting objectives for the quality design. When the quality design work started, the Salt family health center was located on one side of a second floor office building and its services were limited to maternal, child, and immunization services, with no family planning services. The MOH created objectives for the quality design so that the newly designed center would have expanded services that would include family planning and ensure that services would be integrated to enable mothers to receive family planning consultations whenever they brought their children for immunizations,

growth checks, or other care. The quality design team recognized that to meet these objectives, they would need to modify the environment and all processes of care in the existing center and expand the rest of the second story to accommodate the new services. QAP technical advisors hoped that the creation of the Salt Model Center would serve as a demonstration of the use of quality assurance approaches in the design and implementation of improved services (including closely involving health center staff in the process) to create a demand-driven facility.

Identifying Clients and Determining Their Needs

Identification of clients. The team defined clients or stakeholders for the Salt Model Center quality design as anyone with a stake in its success. They identified the following clients:

Internal Clients:

- Providers: the health center director, other physicians, and nurses
- Other staff: nurse assistants, lab workers, janitors, receptionists, and clerks

External Clients:

- Current clients: women from rural and urban areas within an hour's travel from Salt
- Potential clients: women who were not currently patients, including members of women's groups
- Community leaders: the mayor and his staff, and governorate, municipal, and business leaders
- Local health authorities in the governorate
- Ministry of Health: directorates of maternal and child health, planning and project management, and monitoring and quality control
- USAID/Jordan, which provided financial support and worked closely with the Ministry of Health

Determining patient and community needs. The quality design team coordinated a series of interviews and focus groups to determine the needs of these varied groups and explore possible services and amenities the model center should have. During discussions with current and potential health center clients and community leaders, the team assembled a list of external client needs. One unanticipated finding was that community members wanted separate areas in the center for women's health and child care services, rather than having each treatment room outfitted for all types of care. The following is a list of client needs expressed by community members:

- A more comfortable environment (paper gowns, slippers, beverages, magazines, carpeting, and plants)
- A waiting area within the center
- More privacy during counseling and treatment
- A separate area for women and children's services
- A centralized location for records and patient care (current record system is housed across the street in the main health center)
- More community and school-level education on health topics
- No technical information in exam rooms

Determining health provider needs. The team interviewed health providers in the center, who identified the following key features for the model center:

- Improved infection prevention capability. This includes more sinks, washable walls, intact paint, and floors that could be cleaned with water and soap
- Better health records. There is a need for an efficient system to retrieve records, as well as more complete histories within the records
- A staff in-service training area equipped for clinical practices, including necessary mannequins, supplies, audiovisuals, and reference materials

- Improved standards of care. The current standards in place were not the most up-to-date
- A sterilizer and more complete laboratory equipment
- More space for patient care and staff comfort
- Improved amenities. This includes curtains around beds, brighter colors, and fans for the hot weather season

Determining the needs of government and donor officials. The team also met with Balqa Governorate and senior MOH officials to determine their expectations for the model center. The MOH officials wanted the center to model effective use of staff time, including more patient care and less "down time." They also wanted improved systems for tracking patient appointments and standards for birth spacing, and other maternal and child health services. The team also interviewed USAID officials to understand their priorities for the model center design. USAID staff expected the model center design to create and implement new standards of quality care, demonstrate the effectiveness of integrated services, and establish a model that could be replicated in other sites.

Creating the Design

Defining the main elements of the new design. Normally, in the quality design process, the next step would involve translating client needs into the main elements of the new design. However, although the information gathered from clients was taken into account during the design creation phase, a modified quality design approach was used to create the Salt model center. Because this project had a high profile in the country, the Ministry of Health, USAID, and the QAP advisors pre-determined major elements that would be included in the new design. These elements included facility rehabilitation, improved personnel processes, record-keeping, and clinical standards development. In fact, many of these interventions coincided with internal and external client needs expressed in focus groups. To some extent, the decision to incorporate major pre-determined elements at the model center meant that system-wide issues that internal and

external clients might not have been aware of would be addressed. For example, clients and providers may not fully realize the lack of choice of family planning methods at the center if their experience with methods is limited to what a health center has offered so far. Similarly, clinic staff may not pinpoint the lack of monitoring of quality of care as a principal area of concern if this practice is common in health centers in the country.

Implementing facility improvements. Reconstruction was performed on the new side of the second floor of the office building, and the entire center was painted. In addition, a training room was built, and a new waiting area was created. Sinks were placed in each room and new stone floors were installed to facilitate cleanliness. The lighting in the stairwell was improved and handrails were added; curtains were placed around treatment beds; and the center was provided with sheets and gowns for draping patients.

Figure 1. Mission Statement and Objective

A smoothly functioning, integrated reproductive health service process that is pleasant for clients and staff, and achieves technical and program objectives.

Designing administrative support processes. All health center staff participated in a discussion of the vision, mission, and objectives (see Figure 1) for the model center. The results of this meeting were posted and forwarded to the Ministry of Health. Next, the QD team developed general standards for the health center (see Figure 2), job descriptions (see Figure 3 for an example), and performance evaluation criteria for all levels of personnel who would staff the model center. New staff members were hired according to these criteria. The team designed new, more complete clinical and administrative record forms. They also updated filing and information processing systems to be improve efficiency.

Developing clinical standards. The design team worked with a large group of staff from the Salt family health center, Balqa Governorate, and the central MOH to develop clinical

Figure 2. Selected Health Center Standards Adopted at the Family Health Model Health Center

- The health center should have a permanent staff with a minimum number of the following:
  - One physician
  - One midwife
  - Three nurses
- The health center should have a private place to examine pregnant women
- Each midwife should have enough skills to examine pregnant women, take the necessary vital measurements, patient medical history, and any other necessary measurements
- Each customer of the center should know the importance of the return visit card and punctuality
- Each pregnant woman should know the importance and benefits of breast feeding

Figure 3. Suggested Job Description for the Nurse of the Model Center

Job title: Nurse, responsible to clinic physician

Main tasks: assists the physician in providing the service; prepares, and sterilizes clinic instruments

Duties and Responsibilities:

1. Assists the doctor in providing services
2. Treats clients respectfully and respect their rights
3. Sterilizes instruments according to standards and specifications
4. Prepares sterilized instruments and solutions according to standards
5. Prepares clients before gynecological examination and method use
6. Maintains equipment and instruments ready to use
7. Keeps instruments clean and sterilized for assuring good quality of care

policies based on national and international standards for IUD insertion, as well as policies regarding the use of Depo Provera, pills, condoms, and natural family planning. In addition, standards were created for lab practices, patient counseling, and diagnosis and treatment of sexually transmitted diseases. This group of staff also reviewed and updated existing standards for growth monitoring, nutrition counseling, immunizations, and antenatal care.

Implementing and Monitoring the Design

Communicating design to staff. Over a six-week period, staff were oriented to the new policies, standards, and customer focus of the center. Medical and nursing staff received training in the new clinical practices. The quality design team worked extensively with managers to train them in quality management supervision techniques and administrative procedures. In March 1995 the Salt Model Center was opened.

Monitoring the implementation of the design. Using data generated by the newly designed record forms, the quality design team tracked data on monthly service volume in the Salt Model Center, comparing the figures with data from 1994, the year before the model center opened.

Results

Figures 4 through 7 document the results achieved by the Salt Family Health Care Model Center in terms of increased client usage. Figure 4 shows that, overall, the number of clients receiving services at the center increased dramatically from 1994 to 1996.

The number of antenatal visits increased by 40 percent, and well-baby visits doubled from 6,278 in 1994 to 12,975 in 1996. Family planning services increased tenfold: from 395 in 1994 to 4,630 in 1996. The number of vaccinations increased by 37 percent.

Figure 4. Comparison of Service Volume, Salt Model Center—1994, 1995, and 1996

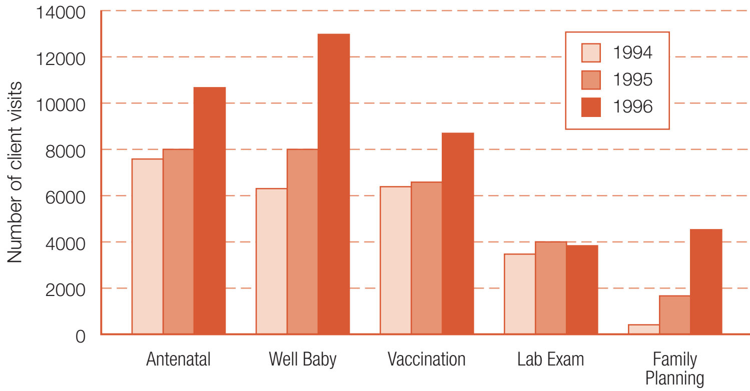


Figure 5 shows the increase in the number of monthly family planning clients between 1994 and 1995. A steady increase occurred after the center opened in March 1995, from 205 clients in May to 500 clients in October 1995.

Figure 5. Number of Family Planning Clients, Salt Model Center—1994 and 1995

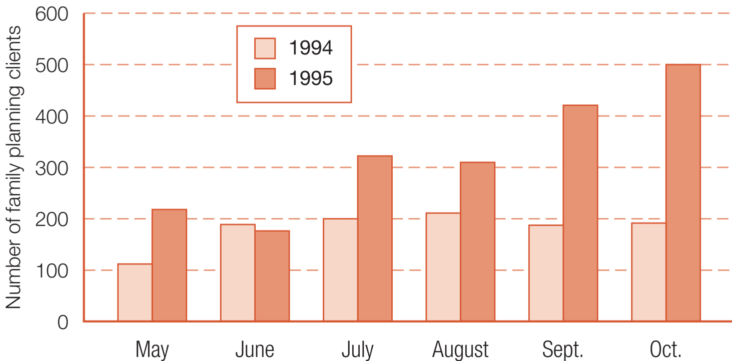
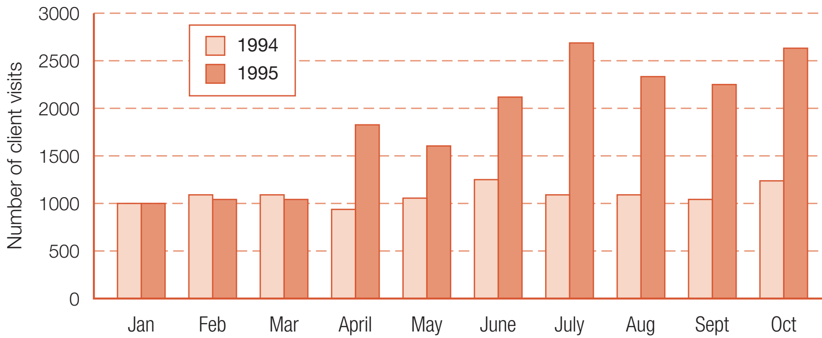


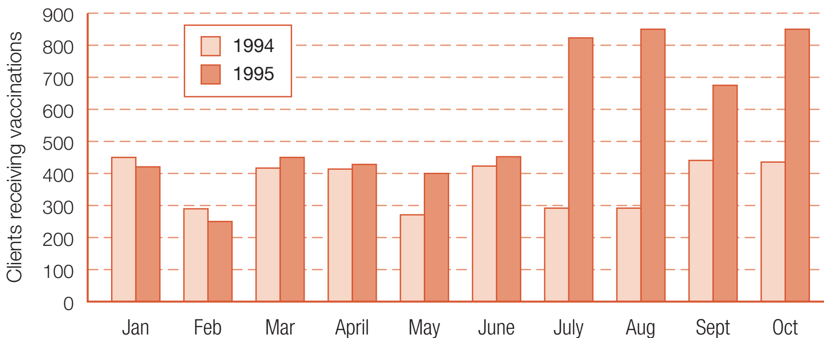
Figure 6. Total Number of Client Visits, Salt Model Center—1994 and 1995



The total number of client visits between January and October of 1994 and 1995 is provided in Figure 6. Dramatic increases occurred directly after the model center opened. Before March, the number of visits remained steady at about 1,000 client visits per month; after the center opened, this average doubled to approximately 2,100 client visits per month.

Figure 7 compares the number of clients receiving vaccinations between January and October of 1994 and 1995. The most significant increase occurred in July and August of 1995, when vaccinations more than doubled the numbers for 1994.

Figure 7. Total Number of Clients Receiving Vaccinations, Salt Model Center—1994 and 1995



Survey of client satisfaction. In 1996, the MOH conducted a survey of users of the Salt Model Center. The survey yielded the following results:

- 77 percent of clients found the center to be convenient in terms of time and cost
- 96 percent found the center to be clean and comfortable
- 68 percent said they had adequate privacy
- 75 percent found the staff to be courteous and friendly
- 60 percent had confidence in the staff's knowledge and treatment
- 85 percent had dates for follow-up visits on their record
- 60 percent found health education materials to be adequate

Replication of the Salt model. Based on the positive response of users and health providers to the Salt model center design, the MOH decided to replicate the family health center concept, with the eventual goal of establishing a Family Health Care Model Center in each of Jordan's 12 governorates.

Provision of Family Heatlh Services at the Family Health Care Model Center in Salt, 1995.

Quality Design Insights

The case of the Salt Model Center provides useful insights for future quality design efforts in Jordan and other settings.

Changing the quality design methodology to shorten some steps can limit the power of the quality design approach to fully address all client needs. The quality design approach used to design the Salt Model Center did not entirely follow the ten-step quality design methodology that QAP has refined and applied in other settings. Though client needs were identified, much of the design was based on several predetermined key functions selected by the MOH and quality design team. These functions responded in many ways to the internal and external client needs that were identified by the quality design team. Nevertheless, the final design did not address all the key needs for some of the identified clients, particularly the monitoring needs of USAID. Quality design efforts should include a systematic review of the final design to ensure that all key client needs are adequately addressed by features of the design.

Focusing the monitoring system chiefly on service volume and not on compliance with standards or other quantitative performance indicators limited the system's ability to rigorously validate the effectiveness of the new design. In the period immediately following design implementation, the collection of monitoring information for the model center focused only on service volume statistics, in response to the immediate reporting requirements of the Ministry of Health. Data on measures of compliance with standards, quality of care indicators, or specific information on family planning methods requested or accepted by clients were not formally collected. Although the medical director and senior nurse in the Salt Model Center directly observed the staff to ensure that new standards were accurately implemented, this information was not routinely recorded. The client satisfaction survey did not compare satisfaction before and after the opening of the model center, a comparison that would have helped to validate the impact of the new design. Future quality design efforts would benefit from the

selection and collection of quality monitoring indicators to document the effectiveness of the design in meeting client needs.

Staff development and training play an important role in the QAP process. Because staff frequently develop habits for handling clinical and administrative procedures, staff behaviors may become ingrained and difficult to modify. The creation of integrated family planning services became an opportunity to train staff on newly established policies and standards. In turn, the comprehensive training on the new standards and clinical criteria enhanced improvement activities.

The quality design methodology used by QAP consists of 10 steps. The current case study describes an early QAP experience. The quality design methodology has since evolved. The current method, which was most recently applied in Guatemala, consists of the following steps:[1]

1. Select the process to be designed.
2. Identify clients, both external and internal.
3. Identify and prioritize client needs and expectations.
4. Define objectives of the process/system.
5. Create flow chart of the main activity blocks of the process/system.
6. Link needs with each activity block in the flow chart.
7. Identify key features in the new design that respond to priority needs of client, linked with activity blocks.
8. Written description of the new process design.
9. Test design for robustness and reliability.
10. Plan, implement, and monitor new process/system.
    a) Comparison of old versus new process.
    b) Description of human and material inputs needed for new design.
    c) Communication (IEC) plan for new design.
    d) Activity plan for implementation of new design.

[1] Case studies about the 10-step methodology are available.

Designing and Integrating Quality Family Health Services at Salt Model Center in Jordan: Summary

In 1992, Jordan began a national quality assurance program aimed at increasing the effectiveness and quality of family health service delivery systems. The Quality Assurance Project (QAP) provided technical assistance to the Ministry of Health (MOH) to support implementation of the program. One of the strategies the MOH adopted was to establish model centers for the delivery of integrated family health services that were responsive to client needs. The first family care model center was established in the city of Salt in Balqa Governorate. Staff from the MOH's Monitoring and Quality Control Directorate conducted interviews with health providers, Governorate and MOH officials, and community leaders and held focus groups with current and potential health center users to understand the needs of its diverse internal and external clients. The center's facilities were upgraded and redesigned and improved clinical, personnel management, and recordkeeping processes were put in place to respond to client needs and concerns. Service data collected before and after the Salt Family Care Model Center opened in March 1995 showed that by the end of 1996, marked increases had been demonstrated in the number of client visits and in the number of family planning, antenatal, well-baby, and vaccination services. Lessons from Salt have been incorporated in the development of family care model centers in other Governorates in Jordan.