

QUALITY

ASSURANCE

PROJECT



Quality Improvement in Healthcare Participant Manual

January 2002



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

Quality Improvement Core Curriculum Table of Contents

<u>Module</u>	<u>Module Title</u>	<u>Page</u>
1	Welcome and Introductions	1-1
2	Quality Improvement Success Stories	2-1
3	The Dimensions of Quality	3-1
4	The Four Steps of Quality Improvement	4-1
5	Introduction to Quality Improvement Concepts	5-1
6	The Red Bead Game	6-1
7	Focus on Processes and Systems	7-1
8	Focus on Measurement: Part I	8-1
9	Using QI Tools to Focus on Measurement	9-1
10	The New Zin Obilisk	10-1
11	Focus on Teamwork	11-1
12	Exercises for High Performing Teams	12-1
13	Focus on the Client	13-1
14	Gaining Client Feedback	14-1
15	Focus on Measurement: Part II	15-1
16	QI Success Stories: A Final Look	16-1
17	Team Energizers	17-1
18	Understanding the QI Environment	18-1
19	Planning the QI Initiative	19-1
20	Reflection and Graduation	20-1
	Overheads	

MODULE 1: WELCOME AND INTRODUCTIONS

Course Introduction

Quality improvement has gained widespread acceptance as a necessary goal of health systems. This course is designed to teach you about quality improvement in such a way that you will be able to initiate a quality improvement project at your facility.

Course Objectives

At the end of this course, you should be able to:

- ◆ Explain important details of Quality Improvement to other staff members at your facility
- ◆ Identify a quality improvement opportunity at your facility
- ◆ Develop a plan for beginning a quality improvement initiative that
 - Incorporates the principles of quality assurance
 - Follows the problem solving methodology of quality improvement, and
 - Uses various quality improvement tools and techniques
- ◆ Execute the plan at your facility, asking for assistance when needed

►►► The Quality Assurance Project

The objective of the Quality Assurance Project is to improve the quality of health, population and nutrition services in developing countries through technical support to service delivery institutions, Ministries of Health, USAID Missions, and field-based cooperating agencies. QAP assistance may include long-term resident advisors or short-term technical assistance and training. QAP can provide:

- ◆ Quality of care assessments of specific services or entire facilities
- ◆ Incorporation of quality assurance in project or program design
- ◆ Incorporation of quality monitoring in management information systems
- ◆ Training in quality assurance for health workers at all levels

Much of the approach to quality assurance of the Quality Assurance Project (QAP) is built on the teachings and principles of established leaders in the field of quality, notably W. Edwards Deming, Joseph M. Juran, Avedis Donabedian, and Donald Berwick.¹ QAP's approach to quality assurance for developing countries incorporates more traditional QA methodology (e.g., accreditation, regulation, and standards) with newer methods, such as continuous quality improvement.² The QAP approach to quality assurance is founded on the importance of client perspectives and needs, systems and processes, the use of data for decision-making, and teamwork to solve problems. These principles serve as the foundation for QA, and reflect that QA is not just a set of activities, but also a fundamental set of beliefs and values that become a "way of doing things" in an organization.

¹ Deming, W.E. 1982. *Quality Productivity and Competitive Position*. MIT Center for Advanced Engineering Study: Cambridge, MA. Juran, J.M. 1988. *Juran's Quality Control Handbook* (Fourth Edition). USA: McGraw Hill, Inc. Donabedian, A. 1980. *Explorations in Quality Assessment and Monitoring*. Volumes I, II, and III. Ann Arbor, MI: Health Administration Press. Berwick, D. 1995. *Improving Health Care Quality*. Boston: Institute for Healthcare Improvement.

² Nicholas, D., L. Winter, X. Crespin, and A.M. Boucar. 1997. Results of CQI in Africa: the Niger experience. In *The effectiveness of CQI in Health Care. Stories from a Global Perspective*. ASQC Health Care Series. Milwaukee: ASQC Quality Press Publications.

In its first ten years, QAP developed national and provincial quality assurance programs and stimulated quality assurance interventions at the national, regional and local levels in some 16 countries and conducted training activities in another eight. These efforts led to the creation of over 200 quality improvement teams at facilities ranging from national referral hospitals to isolated rural health posts. These teams applied quality assurance principles and methods to select and validate solutions to frequent problems such as low coverage, inadequate case management, poor counseling, excessive clinic waiting times, and ineffective nutritional rehabilitation services.

The technical capability of QAP staff covers a wide-range of complementary specialties, including: quality assurance; process improvement, quality design/redesign; re-engineering; standards development; team-based problem solving; systems analysis; operations research; training; health policy analysis; health systems reform; accreditation of institutions and health professionals; integrated management of childhood illnesses (IMCI), and other child survival interventions; family planning clinical services; HIV/AIDS; community organization; management and health information systems; supervision and monitoring; program evaluation; organizational and institutional development.

The Quality Assurance Project has been led since 1990 by the Center For Human Services in partnership with the Joint Commission Resources, Inc., and Johns Hopkins University. The Quality Assurance Project is funded by the U.S. Agency for International Development, Center for Population, Health and Nutrition, Office of Health and Nutrition. The Quality Assurance Project serves countries eligible for USAID assistance, USAID Missions and Bureaus, and other agencies and non-governmental organization that cooperate with USAID.

▶▶▶ **Icebreaker / Partner Introductions**

Directions: Once your partner has been determined, spend 10 minutes getting to know one another by asking the following questions and others you might think of. When the 10 minutes is over, you will be asked to introduce your partner to the class.

- ◆ Name

- ◆ Professional / work experience

- ◆ Place of employment

- ◆ Previous knowledge of quality improvement

- ◆ How you like to spend your free time

- ◆ Something you are really good at

- ◆ A saying or motto that is meaningful to you

▶▶▶ Seating Chart

Directions: Use the space provided below to create a seating chart of the course participants and jot down interesting and important details about the other participants as they are introduced.

▶▶▶ Participants' Expectations

Directions: In teams of 4-5 people, identify five important expectations your team has for the course. Share your team's expectations when asked by the instructor.

▶ ▶ ▶ **What is Quality?**

What does the word “quality” mean to you?

Directions: Reflect upon your past experiences staying at various hotels. Did you stay at a ‘quality’ hotel? What about the experience made it a ‘quality’ experience for you? Write your ideas in the space provided below.

▶ ▶ ▶ **Components of Quality Assurance**

- ◆ **Defining Quality** means developing statements regarding the inputs, processes, and outcome standards that the healthcare delivery system must meet in order for its population to achieve optimum health gains
- ◆ **Measuring Quality** consists in quantifying the current level of compliance with expected standards
- ◆ **Improving Quality** requires engaging in appropriate methodologies to close the gap between current and expected level of quality. It uses quality management tools and principles to understand and address system deficiencies and improve or redesign efficient and effective healthcare processes

MODULE 2: QUALITY IMPROVEMENT SUCCESS STORIES

Module Introduction

One of the best ways to learn about quality improvement is through the case studies. In this unit we focus on some of the quality improvement successes realized around the world through the hard work and commitment of healthcare workers.

Module Objectives

At the end of this module, you should be able to:

- ◆ Recognize that quality improvement initiatives can be simple or complex
- ◆ Recognize that quality improvement relies on the use of data
- ◆ Explain how quality improvement has been achieved in other healthcare settings
- ◆ Recognize that the perspectives of patients may be different than those of healthcare workers and to improve quality, patient perspectives must be known
- ◆ Recognize that individual healthcare workers can have an impact on the quality of healthcare
- ◆ Recognize that some quality improvement initiatives require a team effort
- ◆ Recognize that the solution to problems is not always more money or other resources

▶▶▶ QI Success Story 1: Helping Patients Find Their Way

A receptionist at a district hospital saw that a patient appeared to be confused about where to go for her appointment. She asked the patient if she needed any help and discovered that the patient had become lost while looking for the place to have blood drawn.

The receptionist thought about the problem for a moment. Although there were signs up in the hospital to direct patients, she realized that the woman may not have been able to read or the signs may have been unclear. The receptionist recognized that the patient might need some assistance in finding the clinic.

The receptionist quickly thought of a couple solutions. At first she considered giving the woman directions, but then realized that she could become lost again. Another idea was to call someone over to assist her, but the receptionist realized that this could take too much time. Finally, she decided that the best solution was to walk with the patient to the clinic, as it was nearby and another receptionist was in the office.

The receptionist offered to accompany the woman to the clinic so that she would not get lost again. She was pleasantly surprised by the courtesy and friendliness of the receptionist and thanked her. After they walked to the clinic together, the receptionist verified that this was where the patient needed to be and then returned to her work.

Because it does not make sense that the receptionist always accompanies patients to areas in the hospital, the receptionist decided to form a team to address this issue and prevent it from occurring again. The team studied the problem and decided to code each clinical area with a color. Lines of the corresponding color were then painted along the wall to lead patients to the clinic area. If patients could not read or became lost, they could follow the line.

Guided Reading Questions

QI Success Story 1: Helping Patients Find Their Way

1. What was the “quality improvement” that was accomplished in this setting?

2. What caused the receptionist to recognize that there might be an opportunity for improvement?

3. What did the receptionist do to solve the immediate problem?

4. What course of action did the receptionist take to develop a more permanent solution?

**►►► QI Success Story 2: Decreasing the Duration of Phototherapy
Al-Naser Hospital, Gaza, Palestine**

Dr. Maged Awadella, a pediatrician at Al-Naser Hospital, noted that neonates with physiological jaundice were spending longer than expected under phototherapy. Although the length of therapy varies among infants (depending on weight and bilirubin level), Dr. Awadella sensed that Al-Naser Hospital phototherapy treatment lasted on average longer than other hospitals. Jaundice occurs in neonates when bilirubin levels are too high; it is caused by a variety of factors, including pre-maturity or blood type incompatibility. Phototherapy exposes the skin to ultraviolet light, causing the breakdown of bilirubin and its excretion, ultimately reducing the body's bilirubin level.

Dr. Awadella, previously trained in quality improvement by the Ministry of Health Quality Improvement Project, recognized that this long treatment presented a possible opportunity for improvement. Through the development, testing, and implementation of three simple changes, Dr. Awadella and his team developed an intervention to reduce treatment time and achieved dramatic results within one month. Ms. Nihaya El-Telbani, the quality improvement project coordinator for Gaza, provided technical assistance to the team.

Dr. Awadella noted that neonates with jaundice received longer phototherapy treatment than he would have expected, which resulted in a long length of stay. Long treatment times not only affected the neonates and burdened their families, but also created a chronic shortage of phototherapy incubators countrywide and increased the workload of intensive care staff. The shortage of incubators led to overcrowding in the intensive care unit, increasing the risk of cross-infection among neonates.

The following goals for improvement associated with the long phototherapy treatment were identified:

- Primary goal: Reduce the amount of time in phototherapy for neonates with jaundice
- Secondary goals: • Reduce the overcrowding in the intensive care unit
 • Reduce the workload of staff
 • Reduce cross-infection of neonates
 • Reduce the risk of possible adverse effects due to phototherapy
 • Reduce the burden on families from the lengthy hospitalization

After identifying the aim for improvement, Dr. Awadella and his colleagues began to think about who should participate in the problem-solving team. They wanted to form a team of people involved in providing neonatal phototherapy to incorporate their knowledge in the problem-solving process and to prevent feelings of resistance or resentment in introducing any effective interventions. Two nurses and two doctors from

the neonatal intensive care unit were asked to form a team to work towards this aim for improvement under the guidance of Dr. Awadella. Team members included: Dr. Awadella, Zeinab Shzeim, Abdel Mutaleb Al-Kahlut, and Rashad Al-Khalidi.

Based on their experience working in the neonatal intensive care unit, the team agreed that reduction of time under phototherapy treatment would benefit both patients and health workers. The possible implications for reducing the time in phototherapy convinced the group members to proceed to the analysis of the issue.

The team, composed of experienced nurses and physicians, knew that phototherapy functions by exposing the neonate's skin surface area to light. With this in mind, the team began to question how care was provided and made observations. First, team members discussed the fact that often the diapers used were too large, covering a lot of skin. Secondly, the neonates were not on a schedule to be turned to ensure that the entire body received light. Finally, the team considered that some of the neonates were not on a regular breast-feeding schedule, ultimately affecting their nutrition and health.

The team identified the length of treatment as the indicator for the amount of phototherapy treatment needed. The length of phototherapy treatment was measured in number of hours necessary to reduce the bilirubin level enough to allow for a neonate's discharge.

They recognized a lack of data on the length of treatment for neonates receiving phototherapy, so they collected a small sample of data from eight neonates prior to the intervention. They checked the neonates bilirubin levels daily as part of standard procedure to determine if the neonate could be discharged. The sample required an average of 49 phototherapy hours each to achieve the discharge bilirubin level of 6.5 mg percent.

Based on the analysis of the phototherapy treatment procedure, the team generated a possible intervention to reduce the number of hours of treatment needed. Team members agreed to test the effect of completing the following regimen every three hours:

- Make sure that the diaper fits properly, e.g., ensure it is not oversized
- Change the neonate's position
- Ensure that the neonate has been fed

Although these three changes appear to be small and simple in nature, they proved to be critical to assuring the proper exposure of the neonates to the treatment and the effectiveness of the phototherapy. This demonstrates that simple interventions can yield powerful improvements.

Team members, led by Dr. Awadalla, felt that this intervention was necessary and could improve the care of neonates by reducing the length of treatment. As a result, the team decided to test and implement the above regimen.

Because these interventions seemed self-evident, it was logical that they be tested and implemented together. If the interventions had been more difficult or questionable, the team probably would have chosen to test them separately. The team chose to proceed to the testing and implementation stage to assess the impact of this procedure.

The team chose to test the intervention on eight neonates in the intensive care unit. The team verified that the baseline data were complete to compare against post-intervention data. The team also communicated the change in procedures to nurses and physicians to ensure that the regimen would be carried out on these neonates throughout all work shifts.

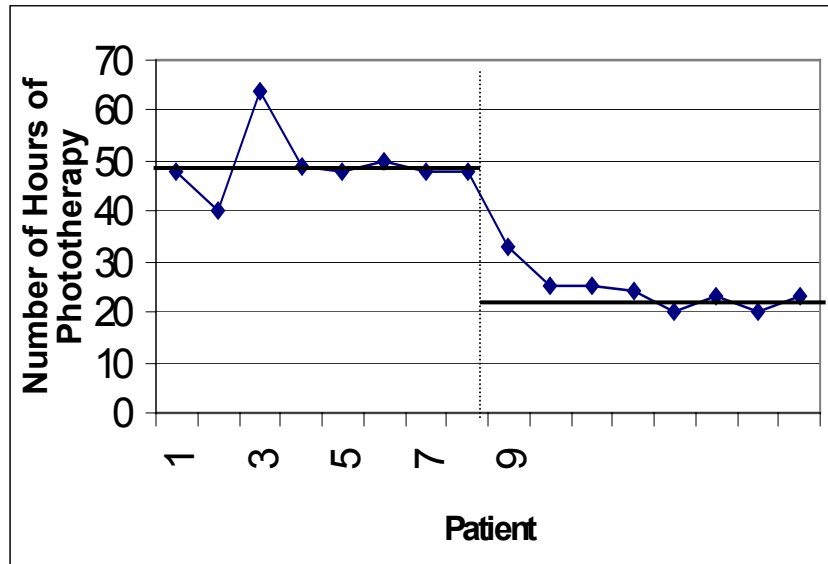
The regimen was not modified from the original plan and was tested accordingly. Data regarding the hours of phototherapy were collected and checked for accuracy and completeness. Post-intervention data revealed a dramatic decrease in the length of phototherapy required. While neonates prior to the intervention required an average of 49 hours of treatment, neonates who received the new regimen needed an average of 24 treatment hours.

This change, charted in Figure 5.2, proved to reduce the average number of hours of phototherapy by approximately 50 percent. The problem-solving team felt that the reduction of treatment by half was sufficient evidence of the regimen's success. This information led to the decision to implement the regimen into the standard of care for neonates being treated for jaundice.

The team felt satisfied with the improvements made in the treatment of physiological jaundice in neonates. These improvements not only validated the success of the intervention itself, but also demonstrated the powerful effects of quality improvement. The team used these results to communicate with colleagues about the importance of maintaining the new standards of care. Although the team disbanded after improvements were achieved, each member developed experience in and enthusiasm for quality improvement, providing a strong foundation for future endeavors.

Duration of Phototherapy Before and After the Improvement (Al-Naser Hospital)

**Duration of Phototherapy
Before and After the Improvement
Al-Naser Hospital**



Note: The line indicates the implementation of the interventions

Guided Reading Questions

QI Success Story 2: Decreasing the Duration of Phototherapy

1. What was the “quality improvement” that was accomplished in this setting?

2. What happened to cause Dr. Awadella to recognize that an opportunity for quality improvement might exist?

3. Who was positively impacted by the success of the quality improvement initiative and in what ways?

4. Why did Dr. Awadella assemble a team to address the problem?

5. Who served on the quality improvement team? Why do you think these people served?

6. What steps did the team take to improve quality in this setting?

7. What type of data did they collect and how did they collect it?

8. What was the final outcome of this quality improvement initiative?

▶ ▶ ▶ QI Success Story 3: Improving Malaria Treatment Outcomes

The staff noticed that a high number of children who had been treated for malaria were returning to the health center without improvement. This was a problem not only because the children were still suffering from malaria, but also it led people to believe that the health center had not treated them properly.

Some staff members suspected that parents were not giving the chloroquine to their sick children, but were instead selling it in the market. Others thought it possible that parents didn't give their children the medication because they did not understand the instructions, were not instructed by the clinic staff to do so, or because they preferred shots and refused to give pills. Staff members also thought it possible that some of their co-workers were not following treatment protocols—perhaps some children who should have been given chloroquine were not. This is due to the fact that chloroquine supplies are a chronic problem—the ministry routinely provides only a set amount of chloroquine at irregular intervals, which has never been enough to cover all the cases. Furthermore, the ministry believed that the health center was getting the proper amount of chloroquine, based on their population and past usage rates. Therefore, the availability of chloroquine is a long-standing problem that cannot be solved at the health center. The director of the health center had observed health workers treating patients and determined that some health workers were not following the treatment guidelines. When approached about compliance to the guidelines, health workers indicated that they follow the guidelines, but perhaps their co-workers do not.

The staff generated the following list of the different components of the problem:

- Need to improve the administration of medication to children with malaria
- Staff may not follow treatment protocols
- Staff may not be honest in saying they follow guidelines
- Children return with continued symptoms

To decide which component of this problem to address, the team made a prioritization matrix, using these criteria:

- Problem is clear
- Risk of not addressing the problem
- Visibility of the problem

They rated the problems on a scale from 1 to 5, with 5 being the clearest, having the most risk, and having the highest visibility.

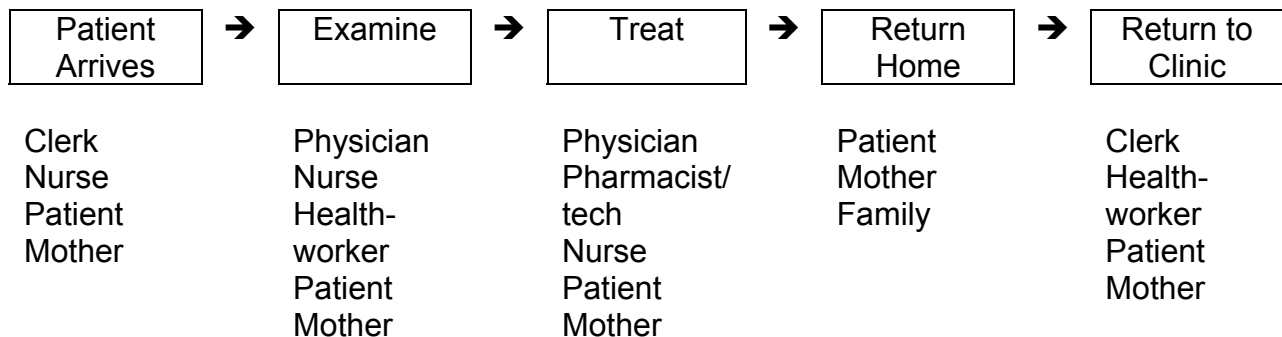
The Prioritization of Problems

Problem	Clarity	Risk	Visibility	Total
Medication administration (by parents)	4	5	4	13
Staff not following treatment protocols	3	5	3	11
Staff not honest about following guidelines	1	5	1	7
Children with continued symptoms	1	5	5	11

After further review of the problems, the team decided to address medication administration. The team continued to clarify the problem by writing the following problem statement:

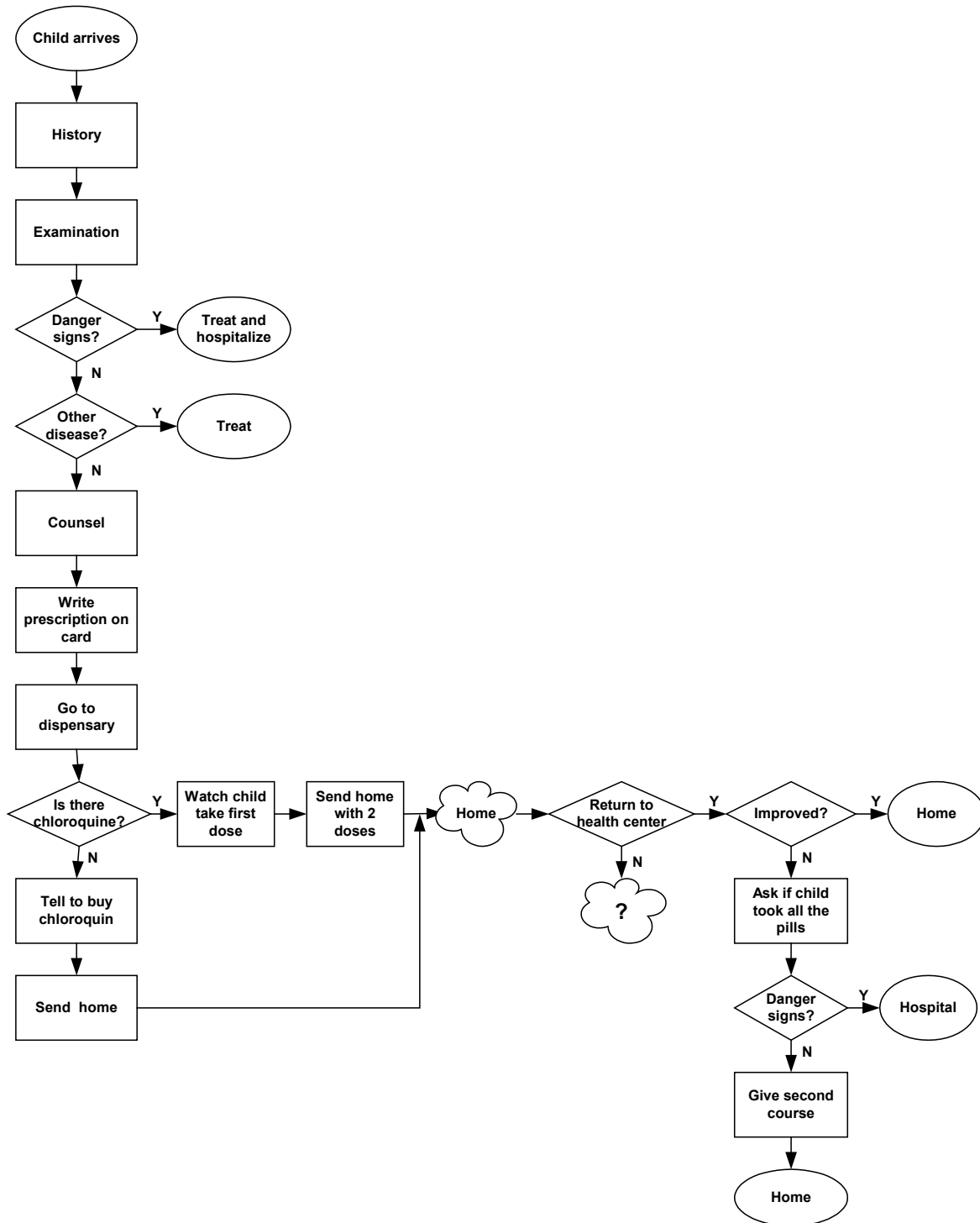
An opportunity exists to improve the management of medication administration for children with malaria, starting with the health worker deciding the child needs medicine and ending with the child well at a return visit to the health center. The current process results in a high number of children who are not recovered after initial treatment. An improvement would ensure that children actually take their complete oral dose of medicine and improve.

A high-level flowchart of the process of administering malaria medication to children (shown below) was helpful in identifying who should work on the team. It was determined that a clerk, a nurse, a physician, a health worker, a pharmacist/ tech, and a mother should be included in the team.



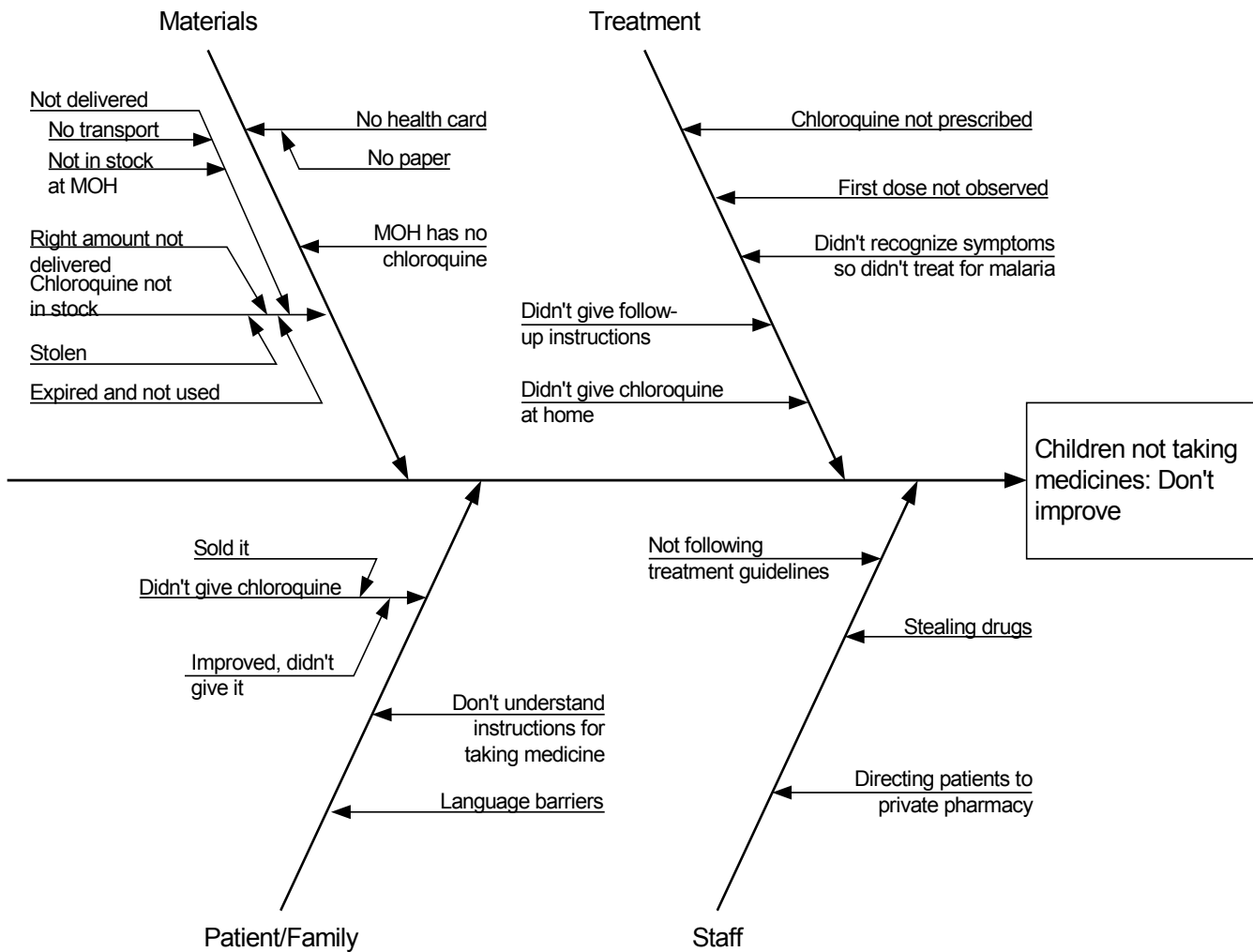
To further understand this information, the team drew a process flowchart (see next page) to look for any repetitive, missing, or incongruent steps. This helped them understand the existing process and to see what problems may exist.

Process Flowchart of the Administration of Malaria Medication to Children



Next, the team conducted a cause-and-effect analysis of possible reasons why a child would not take the proper dose of medicine and, as a result, fail to show improvement. The team drew a fishbone diagram (see below) to identify the possible root causes of the problem in the administration of malaria medication.

Fishbone Diagram of Possible Root Causes for Why Children Do Not Improve



Using the information developed to this point from the flowchart and the cause-and-effect analysis, the team was able to begin hypothesizing about root causes as to why the children's health was not improving. The team stated its theories about the root cause of the problem and then posed questions that would help define what information was still needed. For example:

Hypothesis 1: Health workers are not prescribing chloroquine for malaria patients.
 Question: How many times is a diagnosis of malaria listed on the health card but chloroquine not prescribed?

Hypothesis 2: Mothers do not understand instructions for malaria administration.
 Questions: How many mothers know how and when to give chloroquine? If they do not understand, is language a barrier?

The team now had several theories that they wanted to test. They wanted to collect data for a short time on all malaria patients that were treated to see which of these theories could be proven. Their data sources would be patient health cards, interviews with mothers and health workers, and observations of health workers. They used a data collection plan that would specify exactly what data they would collect, who would collect it, and when. They also suggested ways to analyze the data, since they could predict what data displays would help answer the questions. For example, if they wanted to know parts of a whole, such as how many of the children that returned to the clinic were improved and how many were not, they could display this data with a pie chart.

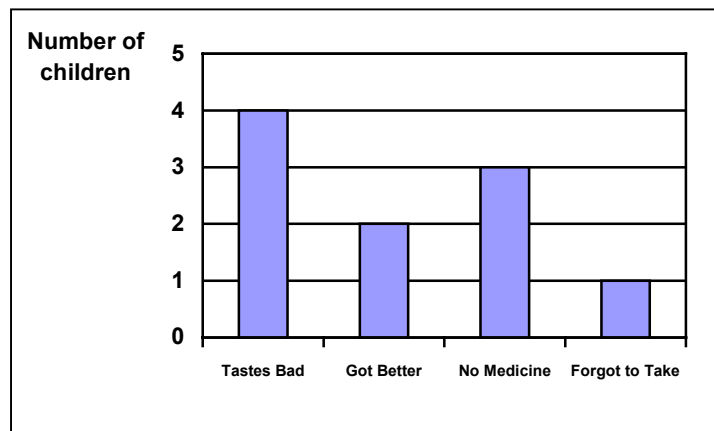
The team then designed check sheets to specify details about collecting data. There was one check sheet that the registration clerk kept to track the patients who had a diagnosis of malaria. This sheet not only tracked the number that had chloroquine prescribed, but also the number of mothers who correctly stated the instructions, said that they were not told the instructions, or did not understand the instructions because of language differences. The clerk also developed another check sheet to track, by patient name, the number of children who had a diagnosis of malaria, whether they returned, and their condition when they returned (improved or not). Information gathered through the check sheets is provided in the table below. Additional check sheets included: a follow-up on how many patients took all of the three doses and reasons for not completing the doses, whether chloroquine was in stock, and the number of patients that came to the dispensary for chloroquine and the number that received it. Finally, the health workers were interviewed to see if they could correctly state directions for taking chloroquine.

Malaria Patient Status

Number of:	Week 1	Week 2	Week 3	Week 4	Totals
Malaria patients	6	8	5	10	29
Malaria patients who returned for follow up	5	8	4	4	21
Malaria patients who improved	2	3	2	2	9
Malaria patients who did not improve	3	5	2	2	12
Times chloroquine was prescribed	6	8	5	10	29

Because only 43 percent of the children improved, data was also collected on whether or not the children completed the prescribed regimen of chloroquine. Even when chloroquine was available, 48 percent of the children that returned for follow-up (10 of 21) did not complete their dose.

The primary reason for not completing the regimen of chloroquine was the taste of the pill; the child recovering and simply forgetting were other reasons cited. When asked, however, 79% of mothers could correctly state how to administer the medicine even though only 38% claimed to have heard these instructions from the health workers.

Reasons Why Children Did Not Take Medication

The team concluded from this information that the root cause of the problem was the unclear or incomplete information given to mothers about administering chloroquine, in spite of its' bad taste or the child's improvement.

The team recognized that they needed to get information to the mothers that was more specific about taking chloroquine with food or some other flavoring to try to change the taste and to continue for the full three doses. The team brainstormed possible solutions, and, using criteria, chose from a list of options to make a poster to inform mothers of foods that cut the taste of the medication. Specific responsibilities were delegated; while the clerk and the nurse would make the poster, all nurses and the clinical officer would need to approve of the poster's content. Mothers were asked which foods cut the bad taste of chloroquine best. The poster was then developed to communicate (with drawing that would be easily understood by mothers) how the taste of the chloroquine could be disguised. The team set the goal of completing this poster in two weeks.

The team identified potential sources of resistance, such as being too busy with work to carry out the plan or not agreeing on foods. Therefore, work was allotted to allow for meetings for staff in charge of making the poster. The staff asked mothers which foods the children liked and which would be likely to hide the taste. The in-charge phoned the hospital pharmacist, who verified that chloroquine could be given with any food.

The poster was completed and hung on the wall within ten days. One month after the poster was hung, the staff began the data collection. They were both happy and surprised to have this be a time when chloroquine had just been delivered from the Ministry of Health, so it should not run out during the time of the data gathering. It took a week and a half to get 20 children with malaria who came back for follow-up. Fourteen of the twenty children (70%) had completed the medicine as compared to 48% before.

The team attributed this remarkable improvement to the poster. Due to the success in influencing the completion of all three doses of the malaria medication, the team decided that the poster was effective and that the clinic should continue to use it.

Guided Reading Questions

QI Success Story 3: Improving Malaria Treatment Outcomes

1. What was the “quality improvement” that was accomplished in this setting?
2. What happened to cause the staff to recognize that an opportunity for quality improvement might exist?
3. What reasons did the staff initially suspect might be the reason why children that were treated for malaria returned with continued symptoms?
4. How did the team determine and clarify what problem to address?
5. Who served on the quality improvement team? Why did these staff members serve? How were they identified?
6. What steps did the team take to improve quality in this setting?
7. What information did the process flowchart provide? What information did the fishbone diagram provide?

8. What hypotheses did the teams generate and what process did they use to test them?

9. What type of data did they collect and how did they collect it?

10. Once the idea was generated to create a poster, how was its content determined?

11. What was the final outcome of this quality improvement initiative?

12. Who was positively impacted by this quality improvement initiative and in what ways?

►►► QI Success Story 4: Increasing Patients' Attendance at Postpartum Appointments

A provincial hospital in an urban area has obstetrics and outpatient departments to serve the many referrals from district and primary care facilities that they receive. The labor ward therefore has some resources to meet these demands, such as a physician with skills in obstetrics, trained nurses, and midwives who assist in routine deliveries.

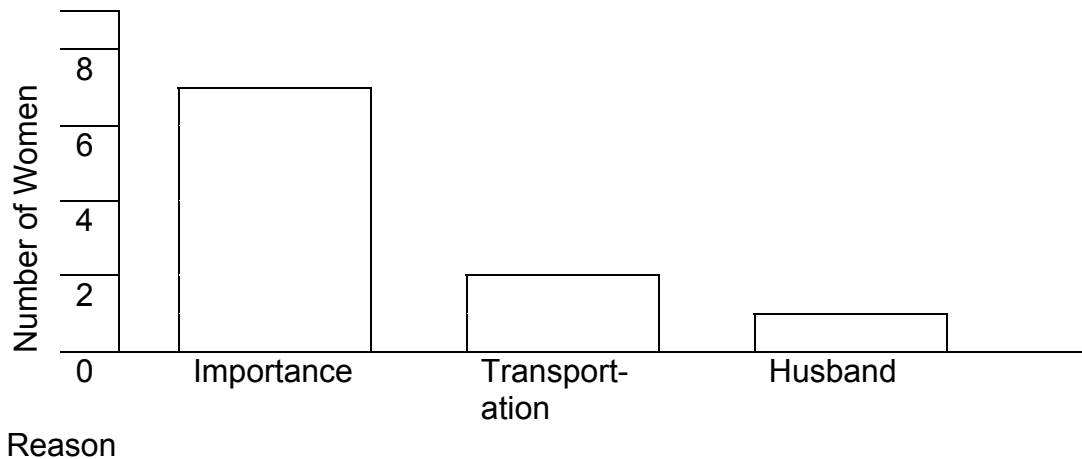
A team monitors the maternal care in a provincial hospital to track the provision of antenatal, delivery, and postpartum care. The team consists of the physician, a physician's assistant, a couple of midwives, a nurse from antenatal care, and a representative from the operating room. Additionally, the team includes the opinion of external customers by incorporating the leader of a woman's group on the team. This case details how the team monitored and improved maternal care delivery.

The team reviewed the information collected from routine monitoring of maternal care services. In analyzing follow up after delivery, the team noted a low return rate of 20% for postpartum appointments six weeks after delivery. At first the team thought that the nurse and midwives may forget to inform women after delivery of the importance of postpartum care, but the nurse and midwives assured the rest of the team that they regularly stress this point.

This finding is important because postpartum care allows providers to verify that the uterus and cervix have returned to normal size as well as provide contraceptive counseling for birth spacing options. Given the risks of not following up with postpartum care, the team determined that postpartum care is key to maternal care and that neglecting it would pose a threat to the health of their patients. Therefore the team decided to continue studying this issue.

The team developed a simple and quick way to discover why women were not returning for the postpartum appointments. They randomly chose ten women that were scheduled for postpartum appointments and did not come. Then, a few team members visited the community to ask the women why they did not return for their appointment. Reasons included: not knowing that it was important to return, lack of transportation, and their husband would not allow them to return. The following graph illustrates that most women did not understand the importance of the postpartum appointment.

Reasons cited by women for not returning for postpartum visit

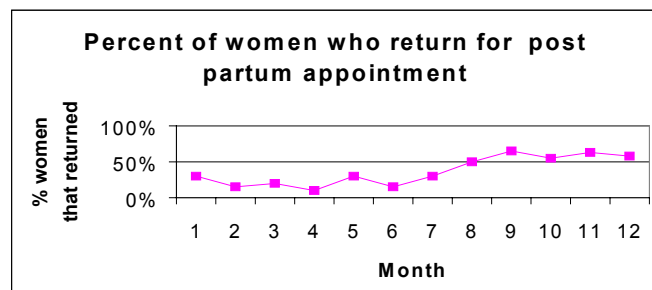


Based on this knowledge, the team decided that it was important to develop an intervention that would not just tell women to come to their postpartum appointments, but also explain their importance. Working together, the team decided that an Information, Education, and Communication (IEC) campaign could provide the critical information about postpartum care to women consistently throughout pregnancy and delivery. This IEC campaign would begin during ante-partum counseling and be reinforced again during postpartum counseling with the midwife. The goal of this intervention was to communicate a consistent message to women about the importance of postpartum care with the objective of increasing attendance of postpartum appointments.

The team added the IEC materials to the standard procedure for ante-partum and post delivery counseling. The midwives were trained in the new IEC materials and asked to try them with each patient. The team then monitored the attendance of postpartum appointments over the next three months. The team was pleased to see a gradual increase from 20% attendance and attributed this improvement to the use of the IEC materials.

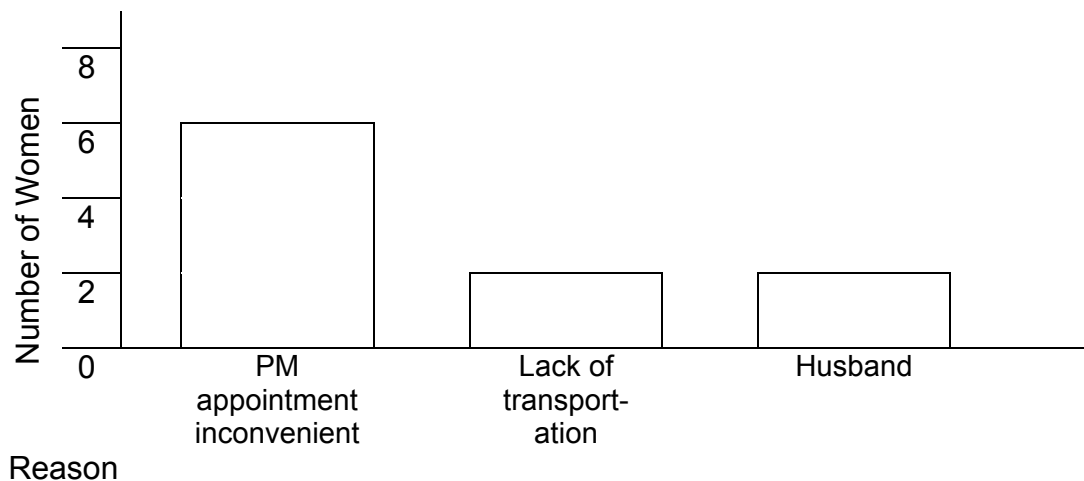
The team continued to monitor the entire maternal care process, including postpartum care. The team noted that while attendance of postpartum appointments rose from 20% to 60%, this increase leveled off after a few months and did not continue to rise. Initially the team was pleased with this increase. After six months of

monitoring, however, the percentage of women that returned for the postpartum appointment did not continue to rise. The team did not think that the 60% attendance of postpartum care was satisfactory. As a result, the team decided to revisit the issue and begin the quality improvement steps again.



The team identified the low attendance of women for postpartum appointments through the routine monitoring of the intervention that they had implemented six months earlier. To learn why women were still not returning for postpartum appointments, it repeated the analysis conducted earlier. Interviews with ten women revealed that the most did not return because afternoon appointments were inconvenient for them to attend. Other women listed that transportation and their husbands kept them from returning (see chart below).

Reasons cited by women for not returning for postpartum visit (Post intervention)



The team decided that scheduling could be addressed through a sub-team and chartered a team to develop and implement a solution. The physician and midwife that conducted the postpartum appointment formed the sub-team with administrative staff to develop a solution. The sub-team decided to try expanded hours in which postpartum appointments could be scheduled by adding one morning a week. The idea was to make postpartum hours more convenient for the women to attend.

The sub-team tested the solution of new morning hours by providing patients with a choice of afternoon or morning appointments for postpartum care. They then continued to monitor the attendance by the time of day that service was available. The team found a sharp increase in attendance with a rise from 60% to 75% within just a few months. Because this new schedule appeared to affect the attendance of postpartum women, the sub-team advised the larger team to implement this schedule as a part of the regular process.

Guided Reading Questions

QI Success Story 4: Increasing Patients Attendance at Postpartum Appointments

1. What was the “quality improvement” that was accomplished in this setting?
2. What happened to cause the staff to recognize that an opportunity for quality improvement might exist?
3. How did the team determine and clarify what problem to address?
4. Who served on the quality improvement team? Why did these staff members serve? How were they identified?
5. What steps did the team take to improve quality in this setting?
6. What was the initial intervention?
7. What did the team do to determine if the intervention was working? What might have happened if they had not done this?
8. Why was the sub-team formed? What purpose did it serve?
9. What was the final outcome of this quality improvement initiative?
10. Who was positively impacted by this quality improvement initiative and in what ways?

▶▶▶ Questions for Discussion

1. What do these cases have in common?
2. In what ways are the cases different?
3. What overall steps did the health workers in each case use to improve quality in their setting?
4. How important was the availability of economic resources in each of the quality improvement efforts?
5. What might have happened had the health workers not tried to understand the needs of its clients?
6. What was the value of the team approach in each of these situations?
7. What were the individual health workers able to accomplish in these various cases on their own?
8. Who was positively impacted by the various quality improvement initiatives and in what ways?

MODULE 3: THE DIMENSIONS OF QUALITY

Module Introduction

The Quality Improvement Success Stories detailed in Module 2 explored just a few of the ways that the quality of healthcare can be improved—many more ways exist. Over the years, the different ways that quality can be defined have been classified into nine categories that are called the “dimensions of quality”. This module explores the dimensions of quality and the quality grid for the purpose of continuing the discussion of what quality means in a healthcare setting.

Module Objectives

At the end of this module, you should be able to:

- ◆ Explain the concept of “dimensions of quality”
- ◆ Name and briefly describe several of the dimension categories
- ◆ Provide examples of quality from each dimension
- ◆ Explain the concept of “Right Things Right”

▶▶▶ **The Dimensions of Quality**

There are nine dimensions of quality. Each is briefly described below. A space is provided to record examples of each offered by the instructor and members of the class.

1. **Technical Performance** – the degree to which the tasks carried out by health workers and facilities meet the expectations of technical quality (comply with standards)

Example:

2. **Effectiveness of Care** – the degree to which desired results (outcomes) of care are achieved

Example:

3. **Efficiency of Service Delivery** – the ratio of the outputs of services to the associated costs of producing those services

Example:

4. **Safety** – the degree to which the risks of injury, infections or other harmful side effects are minimized

Example:

5. **Access to Services** – the degree to which healthcare services are unrestricted by geographic, economic, social, organization or linguistic barriers

Example:

6. **Interpersonal Relations** – Trust, respect, confidentiality, courtesy, responsiveness, empathy, effective listening, and communication between providers and clients

Example:

7. **Continuity of Services** – Delivery of care by the same healthcare provider throughout the course of care (when appropriate) and timely referral and communication between providers

Example:

8. **Physical Infrastructure and Comfort** – The physical appearance of the facility, cleanliness, comfort, privacy, and other aspects important to clients

Example:

9. **Choice** – when appropriate, client choice of provider, insurance plan or treatment

Example:

Notes:

The Dimensions of Quality / Exercise

Directions: In groups of 3 to 4 people, identify three additional examples of each dimension of quality (in a healthcare setting). Write them in the space provided.

<u>Dimension</u>	<u>Examples</u>
1. Technical Performance	_____
2. Effectiveness of Care	_____
3. Efficiency of Service Delivery	_____
4. Safety	_____
5. Access to Services	_____
6. Interpersonal Relations	_____
7. Continuity of Services	_____
8. Physical Infrastructure and Comfort	_____
9. Choice	_____

▶▶▶ The Quality Grid (Right things Right)

The quality grid serves as a reminder that it's important to do "right things" AND do "things right". Doing "right things" means to use effective interventions that meet customer needs. Doing "things right" entails managing work processes so that the work is organized in a way that works correctly, efficiently, and on time.

		+ How You Do It -	
What You Do	+	Right Things Right EXAMPLES: <ul style="list-style-type: none"> • Conducted lab test as requested on schedule, and conducted it correctly • Filled out correct form, and provided accurate information 	Right Things Wrong EXAMPLES: <ul style="list-style-type: none"> • Completed lab test as requested on schedule, but conducted it incorrectly • Filled out correct form, but provided inaccurate information
	-	Wrong Things Right EXAMPLES: <ul style="list-style-type: none"> • Conducted wrong lab test, but conducted it correctly • Filled out incorrect form, but provided accurate information 	Wrong Things Wrong EXAMPLES: <ul style="list-style-type: none"> • Conducted wrong lab test, and conducted it incorrectly • Filled out incorrect form, and provided inaccurate information.

The Quality Grid (Right things Right) / Exercise

Directions: In the same group of 3 to 4 people, develop two additional examples of the quality grid. If you like, use the examples generated from the previous exercise as a starting point.

	+	How You Do It		-
What You Do	+	Right Things Right	Right Things Wrong	
	-	Wrong Things Right	Wrong Things Wrong	