

**PROJECT NOVA
QUALITY IMPROVEMENT INITIATIVE**

**Improving Quality in Reproductive and Maternal Child Health
In Armenia**

Project NOVA

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List of Acronyms

ANC – Antenatal care
ASTP – Armenia Social Transition Program
FAPS – Rural health post in Armenia
FP – Family Planning
IP – Infection prevention
OB/Gyn – Obstetrician Gynecologist
PMP – Performance Monitoring Plan
PPIC – Postpartum Infant care
QI – Quality Improvement
QIS – Quality Index Score
RA – Republic of Armenia
RH/MCH – Reproductive Health/Maternal Child Health
STI – Sexually Transmitted Infections
SHA – State Health Agency
USAID – United States Agency for International Development

Background

Since declaring independence from the Soviet Union in 1991, Armenia has been in a state of political, economic and social transition. Surveys conducted in 1997 and 2000 indicate that the health status of women and children is general poor and use of primary health care services is on the decline.¹ These data show increases in maternal deaths, in postponement of first antenatal care visits by pregnant women, and increased incidents of low birth weight highlight the urgency of the situation, particularly among rural populations.

Improving the quality of and access to reproductive health care in Armenia has been a major focus for both the Republic of Armenia (RA) as international and national agencies. Since 2001, through the Prime II Project and the current Project NOVA, United States Agency for International Development (USAID) has been working to improve the accessibility and quality of reproductive and infant health services through policy development, in-service reproductive health training for primary care providers, improved supervision practices and infrastructure strengthening. While the Prime II Project focused in a pilot marz (LORI), Project NOVA is scaling up support nationally as well as implementing a quality improvement process at facilities and in communities that will ensure that standards are being achieved and progress continues towards better access, use and quality of reproductive health services.

Despite the importance of quality, few health programs in transitional countries develop and implement processes to monitor and improve services—particularly at the primary care level. Although often seen as a luxury to be implemented only at higher level facilities, quality improvement can make services more effective and efficient by empowering providers and communities to work together to improve services and meet client expectations. For quality improvement efforts to be effective and sustainable, both the provider and the community must collaboratively assess health needs and select cost-effective approaches to meet them. Working as a team, health care providers and the community develop confidence and trust, improve communications, and clarify both expectations and needs; by combining efforts and addressing challenges holistically, these teams can often make marked improvements in healthcare services without excessive external resources. Project NOVA is initiating a quality improvement process that will be piloted and developed at selected facilities within Lori, Tavush and Shirak marzes and when appropriate, scaled to a national level.

¹ 2000 Armenian Demographic and Health Survey and, Armenia National Program on Reproductive Health, Ministry of Health, Reproductive Health Survey 1997.

Dimensions of Quality

According to Avedis Donabedian, often considered the ‘father of quality’ and an ethnic Armenian, “The quality of technical care consists in the application of medical science and technology in a way that maximizes its benefits to health without correspondingly increasing its risks. The degree of quality is, therefore, the extent to which the care provided is expected to achieve the most favorable balance of risks and benefits.”²

Quality criteria as defined by the Armenian Ministry of Health are summarized in the Armenian National Guidelines for Obstetrical and Gynecological Outpatient Care³, and include, among others, the following outcome indicators:

- Increased number of women who receive four antenatal visits
- Increased number of women who receive postpartum care
- Increased registration of women earlier in their pregnancy for antenatal care, improving support during pregnancy and her preparation for delivery
- Reduced number of premature deliveries
- Reduced number of maternal and infant deaths.

In order to achieve these results, however, quality must be viewed as a multi-dimensional concept in which the dimensions can vary in composition and relative importance depending on the context. Generally, the dimensions most frequently agreed to by leading experts working in developing countries are: Technical Competence, Access to Services, Effectiveness, Efficiency, Continuity, Interpersonal Relations, Safety, and Amenities⁴. In Armenia, Project NOVA will focus on a slightly modified and reduced Quality model, using the dimensions of Technical Competence, Management, Interpersonal Relations with Client and Community, Access to Services, and Physical Environment.



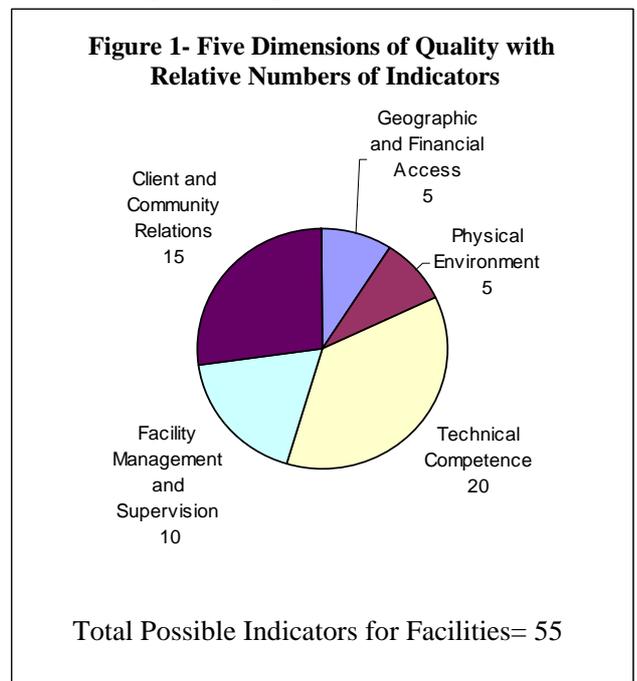
1. Technical Competence examines provider performance and determines if it meets acceptable standards or not. NOVA will be looking at performance in the clinical areas of antenatal care (ANC), postpartum and infant care (PPIC), family planning (FP), infection prevention (IP) and sexually transmitted diseases (STI).

² Donabedian, Avedis, *Explorations in Quality Assessment and Monitoring*, Ann Arbor, MI: Health Administration Press, 1980.

³ Armenian National Guidelines for Obstetrical Gynecological Outpatient Care, Ministry of Health, 2004.

⁴ Brown, L., et al., *Quality Assurance of Health Care in Developing Countries*, Bethesda, MD, Quality Assurance Project

2. Management looks at supervision of rural facilities as well as the daily management of the facility with regards to record keeping, cold chain process for immunizations and other relevant systems.
3. Interpersonal Relations with Client and Community probes three important areas:
 - Client-provider interaction: Do providers treat clients with respect? Answer questions?
 - Community- provider relations: Are providers knowledgeable and involved in their communities? Do they seek input from the community on health care issues?
 - Community contribution to services: Does the community support the facility? Is the village mayor involved in the activities of the facility?
4. Access to services investigates geographical, financial and cultural access.
 - Geographic Access: Because Armenia’s primary health care model relies so heavily on the intervention of the physician, distance and transportation to higher-level facilities is a critical factor in whether a woman can access care or not. Although this project cannot create facilities where they don’t exist, it is important to be aware of the difficulties women face in receiving care. Doctors and specialists have the mandate to visit rural areas to provide care—often they do not, and women suffer the consequences.
 - Financial Access: Many primary services are covered by the State through reimbursement of individual health facilities and are intended to be free of charge to vulnerable populations. Yet many clients are not aware of this right. The USAID Armenian Social Transition Program (ASTP) has developed a poster listing all of the free services available and all health facilities except FAPs are required to post it, but not all clinics have the poster visible for clients and do not inform clients of their right to free services.
 - Cultural Access: Barriers such as unreported gender violence and the tacit acceptance of informal payments for services can inhibit clients from seeking services. It is important to educate both clients and providers on how to deal with such situations as they arise and what their legal rights and ethical responsibilities are when confronted.
5. Physical Environment: This dimension examines not only equipment and supplies in facilities but also the



condition of infrastructure. Some FAPS have been renovated by various international organizations or individual humanitarian assistance efforts, but many others are dilapidated and do not have the most basic infrastructure in place: windows, doors, basic furniture such as chairs or table, are missing. Electricity, heat, and running water are all amenities that are absent in FAPs. It is important factor this into any overall assessment of quality for any facility. In addition, basic supplies needed to provide care as well as the availability of educational materials are considered in this dimension.

Assessing Quality of Facilities

Each quality dimensions will be assessed by monitoring dichotomous indicators that are most critical in determining the ‘health’ of the dimension. Not intended to be comprehensive, these indicators will act as vital signs alerting providers of areas in need of improvement. The total number of indicators will be approximately 55, with each dimension contributing a percentage of the whole. In viewing the relative strength of each dimension vis-à-vis the whole, Technical Competence is seen as the most important and complex to assess as it encompasses five clinical areas (ANC, PPIC, FP, IP, and STI). Technical Competence therefore receives the most indicators, at 20. Client and Community Relations follows with 15 indicators, Management and Supervision- 10, and as Access and Physical Environment receive 5 indicators each.

It is important that the dimensions of quality that feed into Project NOVA’s PMP evaluation framework. The major results expected for Project NOVA are:

- 1) **Improve RH/MCH performance of rural health facilities through training and equipment provision**—Monitored by QI Dimensions of Technical Competence and Physical Environment.
- 2) **Strengthen management and supervision of rural RH/MCH services**— Monitored by the QI Dimension of Management and Supervision.
- 3) **Improve RH/MCH policy formulation and implementation**—Supported by the implementation and results of the quality framework which will enhance adherence to quality standards, support policy changes required once results are gathered, and produce the information-driven decision making key to policy formulation.
- 4) **Increase consumer demand for services through community education and mobilization**—Supported by the dimension of Client and Community Relations, as well as the strong involvement of the community and clients in the quality improvement process, described below.

Scoring Quality in all Facilities

Project NOVA is a national program seeking to impact national level indicators of quality and access. As such, it is necessary to define a methodology to assess and monitor the quality of care in the entire universe of rural facilities in the country. Therefore, a subset of the total number of quality indicators will comprise a *quality index score (QIS)*. Each rural facility will receive a quality score based on the results of the

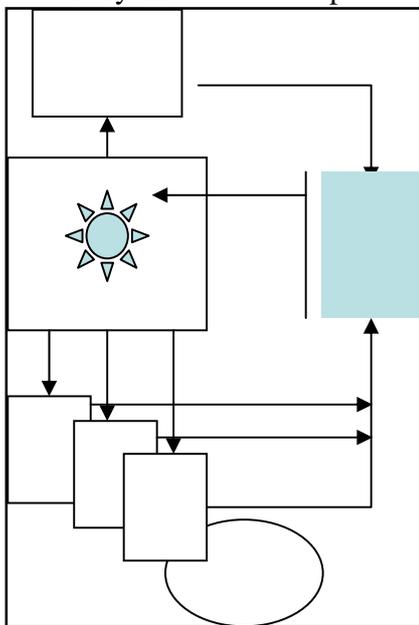
annual Project NOVA community and facility mapping exercise in each marz. After marz implementation program, Project NOVA will assess a representative sample of facilities to determine a follow-up QIS. This index score also may allow the project to compare quality in facilities that are implementing a quality improvement initiative with marz and national average scores.

QI intervention facilities will assess their quality monthly. The project will help these facilities to review their scores over time and among the different facilities. Teams will post their scores at their facilities and will monitor their own progress. Periodically, the team leaders will present the analysis of trends and accomplishments to the marz authorities.

Quality Improvement

According to the most current thinking in quality improvement, there are four required elements for continued quality improvement to take place: (1) Client and community focus, (2) Understanding work as processes and systems; (3) Using data to drive decision-making and develop interventions; and (4) Teamwork. Project NOVA will employ all four concepts in the Quality Initiative⁵.

Client and Community Focus: Involving the community as whole as well individual clients in determining quality and improving services achieves two important results: services meet the expectations of clients causing clients to visit more often; and the community takes ownership in the management, delivery and results of health services.



With providers working with communities to make services more efficient, comfortable, accessible, and responsive, clients will become more educated regarding what services are offered, how preventive care can lead to better health and what danger signs to look for when evaluating whether or not they should seek care. Too often Armenian women choose not to go to take advantage of free services for antenatal and postpartum care unless something is wrong—creating a crisis referral to a higher level of service that is difficult to get to. In addition, some Armenian rural ambulatory facilities are owned and managed by the community and the role of the community leader or mayor is extremely important to the overall maintenance and management of services.

⁵ Massoud,R. et al, 2001, *A Modern Paradigm for Improving Healthcare Quality, QA Monograph Series*, Bethesda, MD.

This community leader can help create the respect and demand for effective preventative services at the local level.

This initiative addresses client and community focus in two ways:

- A community leader will participate on the QI Team to ensure that the facility and the services are meeting the community's needs, and to act as a spokesperson about health services improvements.
- Feedback will be solicited from clients on the provider's performance, interpersonal skills, as well as overall impression of services.

Understanding Performance as Processes and Systems: Improving the performance of providers and the outcomes of services requires examining both the content of care as well as the process for providing care: evidence-based standards, protocols and guidelines must be carried out given the people, resources, infrastructure, supplies, and support available. Instead of looking only at outcomes, such as improved health statistics, improvement initiatives must look at the entire system— how are clients treated when they arrive? Do providers clearly explain the importance of each antenatal visit and the required lab tests? Are laboratory services accessible to women? Is a referral system in place? Improving outcomes requires that providers understand the service as a system and that their success is dependent upon the functioning of its key processes. This is particularly important given the vertical nature of the health system in Armenia where most providers are narrow specialists and lower level providers, such as nurses, are limited in their tasks and relied on only for the most basic health care services. This physician centered structure requires clients to travel to the nearest Ambulatory, Polyclinic, or Women's Consultation for most other services, which can be miles away over very difficult roads. Although physicians are required to visit villages and work with FAP nurses to serve communities, their visits can be spread out and sporadic. Also, a focus on systems rather than individual performance reduces the 'blaming' that can occur when only provider performance is assessed and found deficient.

This QI process design uses a team structure that includes representation from each facility in a network of services, from the lowest level (FAP) to the highest (polyclinic, women's consultation or maternity hospital; see Fig. 2). This multi-facility structure will allow teams to analyze referral systems and information flow as well as other support systems that facilities need in order to be most effective, such as supervision and management.

Using Information for Decision-making and Developing Interventions One of the most important elements of any improvement process is the effective use of information for decision-making and planning. Quality data are scarce—and when available, they are often not used because they don't meet the operational needs of programs or they don't reach those that need it. And often, those that do have access to information, often lack the awareness and appreciation to use it as part of their decision making process. However, information is critical to program improvements. With it, we can:

- Identify and assess problems

- Discover causes for problems
- Make informed decisions about changes
- Decide whether changes are improvements or not—and if not, alter the approach
- Monitor changes over time to ensure we are reaching desired goals.

Data collection processes should be simple and indicators dichotomous so as to eliminate debate about whether something has been achieved or not. When possible, quality teams should be involved in the process of finalizing indicators, developing tools, and managing the collection of information, in addition to monitoring and discussing the resulting information for decisions regarding improvements.

In selecting data to monitor for this process, we have identified 55 indicators that are derived from evidence-based standards and guidelines, that reflect the priorities of reproductive and maternal and child health care at the primary level and that are feasible to collect at the facility level by quality teams. Of these 55 indicators, quality teams can select a sub-set of 30 to initiate their processes—with a distribution across all dimensions of quality. Other indicators can be added over time or as priorities change for each team.

Teamwork: Involving individuals at all levels of the system is important for achieving buy-in for the improvement effort and because different views often create better solutions. This quality improvement initiative will involve a network of facilities that are linked through supervision and referral—a maternity hospital or polyclinic⁶, an ambulatory or rural facility, and the FAPs linked to that facility (Figure 2). At a minimum, there will be one representative from each of these facilities that participates on the quality team, as well as participation from the community leader or designee from each FAP community. As the ambulatory sits at the center of this referral model, the head of the ambulatory will act as the Quality Team Lead for this initiative.

Implementing the NOVA Quality Improvement Initiative in year one

Selection of Sites: Two quality teams will be implemented in each of three marzes (Lori, Shirak and Tavush) during the first year of the initiative. Teams will be identified through discussions with the Advisory Board in each marz that meet basic criteria, including:

- Interest and ability on the part of the head of the ambulatory to lead the quality team (as the ambulatory is the central facility in this design, the ambulatory should be selected first). This person should be a physician and able to dedicate up to 3 days per month to this initiative.
- Interest and accessibility of the Ob/Gyn responsible for clinical care for the catchment area

⁶ In many marzes, there is no formal link between the highest level of service (maternity hospital or polyclinic) and the ambulatory with its' designated FAPs and women are referred to the closest or most accessible facility that offers OBGYN services. In other marzes, they have “deoptimized” some ambulatories and connected them legally to polyclinics.

- Number of FAPS linked to the ambulatory
- Accessibility of the FAPS to the ambulatory or higher level health facility

Orienting Teams: As part of the launch process, QI teams will first be trained in basic quality improvement concepts and be oriented to the initiative's objectives and scope. The QI team will develop a charter with clearly defined roles, responsibilities and expectations, then begin work by selecting the indicators they will track and the methods for gathering that data. Project NOVA staff will work with them to develop monitoring plans and practice with the instruments so they are able to implement the instruments confidently. A rolling agenda will be developed for monthly meetings in order to facilitate the review of data, the identification and discussion of gaps, and the generation of solutions. Data will be analyzed to look at trends and to determine if solutions are addressing intended gaps.

On-going Support: QI teams will meet on a monthly basis at the ambulatory (or occasionally at one of the FAPS when appropriate) to discuss problems, find solutions, and monitor action plans. The Team Lead will be responsible for ensuring that the team meets and that the discussion focuses on reviewing information presented and solutions are generated. Team members will be responsible for implementing monitoring tools at their facilities and presenting findings on a monthly basis, as well as updates as pertinent to activities planned the preceding month. Project NOVA staff will support and attend these meetings to help facilitate, conduct training in data collection and analysis, problem solving techniques, and to help maintain the focus of the work on systems and processes, not people.

Reporting of Results: There is always a delicate balance between the need for reporting and the investment required in terms of cost and time. It is Project NOVA's belief that if information is relevant and meaningful to those that collect it, if they have the authority to act on recommendations, and if it is kept simple, the likelihood of sustainability is higher. For this reason, the quality teams will be involved in the selection of indicators, the development of the monitoring plan, and the self-reporting and posting of data on a monthly basis. Quality improvement results will be presented to marz authorities every six months, with informal visits encouraged by marz authorities to quality team meetings in between. The objective for this pilot quality improvement initiative is to create the willingness and awareness of the power of information and team-based problem-solving in facilities that are otherwise bereft of attention and most support systems, and to develop a process that can be sustained over time and with as little automation as possible. If, in the future, an information system is implemented that can automate collection, analysis or reporting, a more rigorous reporting system can be implemented.

Linking with Supervision and Management: There is a clear distinction between supervision and quality improvement—and particularly in Armenia where supportive, as opposed to punitive, supervision is a relatively new concept, it is important to maintain that distinction. Quality improvement must be undertaken and sustained with involvement and participation from the health care provider and the community, and

with different facilities working together to find solutions; strict supervision oversight of the process can damage that organic adoption of quality improvement. However, each quality team will include the supervisors responsible for supporting the participating FAPs and it is important that supervisors be supportive of the process as resource-persons and advocates. On some teams, the team lead and supervisor will be the same person, and project staff will ‘coach’ this individual on how to maintain the distinction between these two roles.

The link between supervision and quality improvement is important and should be strengthened over time. Project NOVA has recently produced a Management Handbook for use by supervisors and facility managers; it is a practical, hands-on approach to managing services at a facility and also provides supervisors with a background in quality improvement, a description of the QI process and team structure, and the supervisor’s role in quality improvement. Although we will involve supervisors in the pilot QI teams formed in each region, this Handbook will have a much wider distribution and should provide the basics for supervisors that are not involved in a NOVA pilot quality site, but nonetheless interested in improving quality.

Incentive Schemes to Enhance Sustainability

Sustainability is always a challenge when introducing a new process or concept to a system—particularly if it involves additional work for providers, supervisors and managers. This case is no different, and we will be asking FAP nurses to implement new monitoring tools, to actively work with the community on solutions; and travel once per month to the ambulatory. We will be asking that the head of the ambulatory manage and lead the quality process by facilitating meetings, overseeing and leading the data analysis, and presenting findings to the marz level authorities. Every person participating on a team will have added responsibilities in order to reach improvements. Although the Project cannot promise facility renovation or an increase in salary, it is important to consider all cost-effective means possible to motivate quality teams. Several options for incentives exist, and we will explore each option to determine what is possible and most sustainable:

- Increase salaries by a small amount for those participating on quality teams by allocating additional or earmarking funding through the State Health Agency (SHA) (currently SHA has been providing additional financial incentives to those individual staff members of the six ASTP/MOH pilot sites who participate on quality teams.) or by encouraging managers of autonomous ambulatories to increase salary amounts for those staff members who participate in the Project NOVA quality teams.
- Recent research conducted by the PRIME II Project in Kyrgyzstan⁷ has demonstrated that the public posting of data can be a strong motivator for providers. Charts and graphs in facilities and communities can be used to show

⁷ Luoma, M., Levin, L., Mason, R. Public Posting in Kyrgyzstan, PRIME II, Project, Chapel Hill, NC, 2004

changes in data every month and can be posted by the quality team after the monthly meeting. Postings that compare all of team's results will also be posted, as this creates a competitive sense among teams and across regions.

- Although a formal accreditation system is beyond the scope of this project, ministry approval for formal recognition of quality for pilot sites that achieve improvements will be explored. Public recognition is valued highly in Armenia, and has been demonstrated to be a strong motivator in a study conducted under PRIME II⁸ to explore the factors that influence performance. Mechanisms such as formal congratulatory letters to providers accompanied by a public sign or poster recognizing the facility as one of model quality are frequently effective and are achievable under this project scope.
- The Project will consider limited financial incentives such as payment for transportation to the ambulatory once per month, or a bonus payment for participants of the QI team for the one-year duration of the pilot.

Conclusion

In implementing this quality improvement initiative it is the Project's intention to collaborate with and build on other ongoing efforts to improve the quality of primary health care delivery services. For example, we will coordinate with ASTP to host occasional events for quality teams to share knowledge and experiences. Although the NOVA QI initiative will only be implemented in two networks per marz it is important to build a quality network and community of practice with sustainability as an objective. The greatest improvements to health systems can occur when sense of ownership, pride, and accountability for quality in services is felt by both providers and communities. This is a phenomenon that can only happen over time and with constant encouragement from health authorities. Providers need to feel that they can solve some of their own problems—and that they can act on their own recommendations as well. If this sense of independence is not allowed, providers will quickly become jaded and revert to an attitude of 'it's not my fault, and I can't do anything about it.' By starting small and concentrating on shared responsibility for results, this initiative will lay the foundation required for future scaling of a quality improvement initiative on a national scale.

⁸ Fort, A., Gyuzalyan, H. Kohler, R. Voltero, L. *Reproductive Health Care at the Primary Level in Armenia: Assessment of Providers, Services and the Factors Affecting Performance*. PRIME II Project, Chapel Hill. 2003.

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