

Concept Paper for the National Health Care Quality Improvement Program in Iraq

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Summary: According to the planned activities of the Iraqi Health System Strengthening Project, we prepared this concept paper to provide guidelines for the planning of the National Healthcare Quality Improvement Program (N-QIP). In this document, we presented the major results of the rapid assessment of the quality problems in the Iraqi health system, assessed the local administrative and technical capacity, and identified the capacity gaps that exist for undertaking the (N-QIP), and specified the steps and technical components for the design and implementation of the N-QIP. We proposed that the first 5-year cycle of the program is divided into two phases (demonstration in selected governorates and replication in all others). The next step will be the preparation of a full N-QIP plan by the Iraqi Ministry of Health and get it implemented. Given the complexity of such a national program and the gaps in capacity, substantial technical assistance will be needed during both the planning and implementation phases of the program.

1. Introduction

One of the Iraq Health System Strengthening (IHSS) Project's activities is to assist the Iraq Ministry of Health's work on the design of a National Healthcare Quality Improvement Program (N-QIP) for Iraq. A significantly large initiative such as this must be consistent with the master health plan of the nation and will need the endorsement and ownership of the Iraqi government. Since the master health plan has not yet been created, the Ministry of Health (MOH) has not been in a position to design a ready-to-implement N-QIP. The IHSS Project prepared two concrete deliverables in an effort to assist the N-QIP development process. One is a review paper titled "Primary Health Care Quality: What can Iraq Learn from International Experience?" This document provided an important reference for the Iraqi Ministry of Health to learn from international experience and recommend indicators to measure primary healthcare quality in the design of its own program. The other is a concept paper, which is presented in this document.

This concept paper is prepared to serve as a guideline for the planning of the N-QIP, from which a full plan can be developed once the master health plan and government decree are in place. The specific objectives of this concept paper are to:

- Describe the key problems of healthcare quality facing the Iraqi health system;
- Identify the capacity gaps to complete the design and full implementation of the N-QIP;
- Discuss the steps for the design and implementation of the N-QIP in Iraq;
- Specify the timing, technical and resource requirements

2. Key Problems of Healthcare Quality in Iraq

Healthcare quality is defined as the degree to which health services respond to the needs of individuals and the population, increase the likelihood of desired health outcomes, and are consistent with current professional knowledge.

Healthcare quality is often assessed according to three dimensions: structure, process and outcomes. Structure refers to the resources of the health system, and asks the question, “Are the necessary resources available to provide effective, efficient medical care?” Process measures the performance of health care providers, and asks the question, “Have the processes necessary for providing effective and efficient medical care been conducted?” Outcome is the end result of care, and asks the question “Are the desired health outcomes achieved”.

While there have been no specific studies to assess the current status of health care quality in Iraq, the IHSS Project found that healthcare quality in Iraq has generally been unacceptably low for several years in terms of all quality dimensions.

In the aspect of structure:

- Most health centers and hospitals were built in the 1970s to 1980s, except for a few new hospitals and health centers in the North (Kurdish areas) supported by the Oil for Food Program. Lack of funding over the last fifteen years deteriorated health facility maintenance. Broken windows, worn-out floors, deteriorated walls, dysfunctional air-conditioning systems, and damaged drainage systems are observable in most health care facilities.
- Most of the equipment is old (bought in 1980s) and has not been well maintained. Some new equipment is not being used either because of the lack of parts or personnel for operation. Operating rooms are shabby. Dysfunctional equipment in intensive care units (ICU) and critical care units (CCU) is not uncommon.
- Human resources are not sufficient in both the quantity needed and the level of quality that is necessary to provide effective care. Particularly, nursing education is below the standards for developing countries; and there is a lack of public health services and personnel since there is not a formal public health training program in Iraq.

In the aspect of process:

- The lack of accreditation and licensing systems constitute a major problem to ensure the quality of care. In Iraq, once a health worker (including doctors, nurses

and pharmacists) gets a certificate, he/she is eligible to practice medicine forever, without requirements for continuing education. It is apparent that outdated theories and practice prevail since there have been few opportunities to upgrade health workers' skills and knowledge.

- Private pharmacies are not well regulated. A private pharmacy can recommend and sell almost all drugs, except a few addictive drugs, without a doctors' prescription. This unchecked system significantly increases the likelihood of medical errors.
- Irrational use of drugs and products are common. Reduction in charges for drugs and quadrupled drug consumption at health centers combined with little evidence of an increase in medical need and health outcomes, suggests that drugs are over prescribed by doctors and overused by patients. During visits to hospital wards the team almost consistently observed that intravenous treatment (IV) is a routine medical practice, irrespective of actual medical needs.

- The referral system is absent. Patients can visit any health centers, and can visit a specialist and go to hospitals without referrals from the general practitioners (GP) at health centers. Because the copayment fee is inexpensive and drugs are free at all public-owned health facilities, patients can visit several doctors a day. Bypassing the system is not uncommon. Patients may receive more than one prescription from different providers. The waste of pharmaceuticals and confusion about their appropriate use are apparent problems.
- There is no consistent medical record system in either health centers or outpatient departments of hospitals. Inpatient records tend to be managed by individual doctors and are quite often not well maintained. The quality of medical charting is also substandard.
- The consultation time is unacceptably short. The overutilization of services has resulted in a large number of patients per doctor hour. At health centers, doctors work for only 3 hours (9:00 a.m. to 12:00 p.m.) of the day, during which they see between 50-100 patients per doctor. As a result, the consultation per patient ranges from 2-4 minutes. The team observed that visiting a doctor often involves no more than asking for a prescription and getting free medications.
- Facility sanitation is poorly maintained. With a few exceptions, almost all public health care facilities fail to maintain an acceptable sanitation status. Uncollected garbage, scattered trash, unclean toilets, and dusty rooms were common at most health facilities. Untreated medical waste (including syringes) has increased the health threats to patients and communities.
- Health services are generally provided without clinical standards. Doctors treat patients based more on senior doctors' practices, and on each facility's treatment tradition and culture than on evidence-based clinical guidelines. UNICEF and WHO disseminated clinical guidelines on several common diseases that are posted in some of health centers, but few doctors appear to follow these guidelines in their medical practice.
- Quality assurance programs in hospitals and health centers are generally non-existent. Health care facilities do not have any guidelines on maintaining a quality standard for health care delivery.
- Demand-side interventions are lacking. Very few interventions involve educating the general public on health care issues. The prevailing views of the patients are that IVs are better than pills, antibiotics are better than oral rehydration salts (ORS) for treatment of diarrhea, and expensive drugs are better than cheap drugs. These views of patients play an important role in doctors' medical decisions.
- Prevention strategies focusing on changing the knowledge, attitudes, and behavior of the community members are extremely insufficient.

In the aspect of health outcomes:

- Infant mortality rate increased from 50/1000 in 1990 to 107/1000 in 2000;
- Child mortality rate increased from 56/1000 in 1990 to 131/1000 in 2000;
- Rate of low birth weight increased from 4.5% in 1990 to 30% in 2002;
- Immunization coverage dropped to 65-75% in the 90s;
- Iodine deficiency in under five children was 44% in 2002;
- Prevalence of childhood anemia was 61% in 2002;
- Exclusive breastfeeding (4 months) was as low as 30% in 2002.

This brief overview of the healthcare quality problems suggests that: (1) the low quality of care covers both structure and process, and is reflected in poor population health outcomes; (2) quality problems have been a long-term and system-wide issue, and will need system-wide strategies and persistent actions to improve the quality of care. Namely there is a need for designing and implementing a long-term N-QIP. However, the success of the N-QIP heavily depends on local administrative and technical capacity to design and implement a lasting and effective quality improvement program.

The following section is to assess existing capacity and identify the possible gaps.

3. Assessment of the capacity for designing and implementing the N-QIP

In 1997, the Ministry of Health initiated a Quality Improvement Program with support from WHO. The program included training courses for concerned personnel in all governorates on various topics such as use of performance indicators and standards. In 2001, The MOH institutionalized the program and established a “Quality Section” under the Public Health and Primary Health Care Directorate. The Quality Section was placed under this directorate because the Quality Improvement Program was carried out by the Preventive Health Directorate (Currently, The Public Health and Primary Health Care Department). The Quality Section coordinates work with other directorates in the MOH, particularly the Technical Affairs Directorate through a coordination committee.

There are 16 MOH employees working in the central Quality Section and 2 employees at each health directorate. The MOH Quality Section consists of 3 units: 1) Monitoring and Evaluation, 2) Training and 3) Guides and Studies.

The composition of the Quality Section is as follows:

No. Of individuals	Position	Educational background	Remarks
1	Director of QA Section	Specialist Physician and Community Health Specialist	Medical doctor with a Diploma in internal medicine and Masters degree in Community Medicine. Attended

			and participated in several training courses inside and outside the country
1	Deputy of QA Director (Director of Monitoring and Evaluation Unit).	Physician- specialist in Community Medicine	Medical doctor with a diploma in Community Medicine.
1	Director of Studies and Guides Unit	General Practitioner in Dentistry	Attended Quality Assurance courses and training
1	Pharmacist	Bachelor in Pharmacology	
11	Medical assistants	Qualified Medical Assistants	Distributed within the three units in the section (monitoring and evaluation & training & guides and studies units)
1	Administrator	Diploma in Management	

At the Directorate level, the quality unit consists of a trained physician and a medical assistant.

The Quality Section performs the following activities:

1. Sets standards and indicators for measuring the quality of care through consultative consensus processes with relevant stakeholders including other MOH departments, university professors, the public and local administrators
2. Monitors the quality of performance at service delivery sites through a process in which the Health District monitors the performance of health care delivery at health center on a monthly basis and reports to the quality team at the directorate level. In turn, they report to the central level on a quarterly basis.
3. Prepares forms and guides for completing forms on assessing quality
4. Prepares training materials and conducts training for staff at different levels of the system
5. Monitors and evaluates the quality of training courses provided for MOH staff
6. Revises indicators and standards based on a continuous feedback process
7. Assists with issues concerning pilgrims' health and visitors to the holy shrines
8. Monitors quality reports for people living in the Marshes
9. Assists other MOH departments in the formulation of work plans and setting indicators and standards
10. Performs surveys of specific activities such as food safety and health audit system

11. Participates in strategic planning activities of the MOH

The MOH Quality Section uses a manual information system where forms and guides are circulated and collected by relevant departments. The MOH is in the process of preparing a book, which contains all the forms, indicators and standards used by the Quality Section.

There is a conflict of interest in having the Quality Section as part of the Primary Health Care and Public Health Directorate. The Quality Department should have a degree of autonomy and independence to allow it to perform its function. The Quality Section is currently proposing that it should be an MOH independent department and not under any of the current health directorates.

The Quality Section staff would benefit from exposure to experience in other countries, particularly in the developed world. There is also a need for academic training and on-the-job training. In the interim period until the National Healthcare Quality Improvement Program (N-QIP) is ready to implement, there is a need for immediate interventions in the field. The Quality Section in the MOH has the capacity to carry out activities and have already prepared a plan for Quality Improvement, which covers 50% of the hospitals and 20% of the Health Centers. The plan focuses on 4 dimensions 1) improving the managerial and supervisory skills of staff, 2) introducing information systems and the use of technology, 3) improving the referral system and 4) increasing the involvement of the Kurdistan region. The Quality Section will require technical assistance with the implementation of this plan.

The fact that there is a Quality Section in the MOH which is already performing quality improvement tasks is an excellent start for the (N-QIP) and it is clear that the Quality Section is the place to lead this effort.

4. Key Steps for the N-QIP

A National Healthcare Quality Improvement Program is defined as a course of actions designed at the national level and implemented at all levels of the health system for achieving the predetermined measurable objectives for improving overall healthcare quality of a nation. N-QIP has the following characteristics:

- The N-QIP is usually initiated based on the fact that healthcare quality problem is a nationwide and system-wide problem, which can only be solved through government initiatives at national level.
- Its implementation and operation will need both political and financial commitments. To operate such a program, there is usually a governing body and a technical committee to make policies and provide technical guidance. There will need to be government regulations to enforce the implementation at various levels of healthcare system, and financial incentives for motivating staff to achieve the highest level of performance.

- The program has clearly defined goals and measurable objectives for healthcare quality improvement.
- The activities planned and performed are logic and systematic. It will need a national plan and necessary mechanisms to assure the plan is implemented as it is designed to achieve the designed objectives.
- The N-QIP usually needs long-term and continuous efforts.

The N-QIP will need several steps:

- Step 1: Consensus building;
- Step 2: Team organization;
- Step 3: Capacity building
- Step 4: Designing the N-QIP
- Step 5: Implementation
- Step 6: Evaluation

4.1 Consensus building

It is essential that stakeholders at all levels agree on the importance of and support the development of a national quality improvement program. Without such a consensus, the health care quality issues won't be on government policy agenda, and there won't be adequate political and financial commitment for a N-QIP. Even if the N-QIP is established, the lack of consensus will be the biggest threat to the sustainability and effectiveness of the program.

The target audiences of the consensus building are health policymakers at both central and local levels, the heads of health care facilities, health policy researchers, and community members who are likely to be involved in the quality improvement program.

The means of consensus building will include, but are not limited to: seminars, newsletters, meetings/conferences, and public media (eg newspapers, radio and television).

The expected outcomes of the consensus building process are:

- The target audiences realize that quality of healthcare is a major problem that needs to be tackled. Specifically, there should be consensus on the size of the problem, the causes for the problems, the consequence of the problems, and the options for solving the problem. To facilitate the achievement of such an outcome, there will be a need for some technical inputs, including various analyses, studies, and reports associated with each of the above dimensions of the problems description.
- It is widely realized that it is time for action, which means that healthcare quality is not only a problem, but also a priority problem that should be on government policy agenda.

- It is agreed that the healthcare quality problem will not be solved/improved unless the government is committed to tackling it. Political will and commitment from different levels of the system is essential for both initiation and implementation of the N-QIP.
- There should be a consensus that quality improvement will need nationwide and long-term efforts, which should be organized as a major government initiative in the form of the N-QIP.

4.2 Team organization

Once consensus is reached and the government (Iraqi Ministry of Health) decides to embark on the N-QIP, the most immediate task to proceed is to organize the team. The team should consist of staff at the central level (MOH), local level (Governorate Directorate of Health) and facility level (hospitals and health centers).

4.2.1 Central level

There should be a National Committee for Healthcare Quality (NCHQ), a secretariat (office or department within the MOH, and a Technical Working Group (TWG). The NCHQ will be chaired by at least a vice minister of health, and consist of members (9-15) from various departments of the Ministry of Health associated with the N-QIP, and the key institutions affiliated with the Ministry of Health (eg CDC). The committee should also have members from the Ministry of Finance, Ministry of Planning, and other ministries, which operate health facilities. The committee should have regular meeting, which are organized twice a year, and occasional meetings can also be held according to need. The functions of the NCHQ should include:

- Providing administrative principles for the design and implementation of the N-QIP
- Approving the overall and annual work plans
- Supervising the secretariat and TWG
- Reviewing progress reports
- Deciding budgets

The secretariat can be established based on the existing quality control team in the MOH. Whatever it is named (eg department/directorate of healthcare quality improvement, and office of N-QIP¹), it will be a standing unit of the Ministry of Health. The secretariat will be responsible for the NCHQ and report to the chair of the NCHC. The functions of the secretariat should include:

- Implementing the overall and annual plan decided/approved by the NCHQ

¹ It is important to note that health authorities in Iraq are organized by vertical programs (e.g. hospital administration, immunization, maternal and child health, and TB control etc.). Special programs or initiatives are often backed by a vertical program or department within the health authorities. This is a big challenge for the healthcare quality issues being put on the government agenda and for the development of a sustainable and effective N-QIP. To assure the sustainability of the program, it is necessary to establish a special unit (department or directorate) in the Ministry of Health responsible for healthcare quality improvement.

- Supervising the work of governorate directorate
- Day-to-day management of the N-QIP
- Liaison with TWG, international organizations and foreign assistance efforts
- Program planning
- Progress report
- Facilitating information/experience exchange among governorates

The technical working group will be a non-standing unit which provides technical support to both the secretariat and the NCHQ of the N-QIP. The TWG will consist of quality assurance experts from universities, hospitals, health centers, and the Ministry of Health. The roles of the TWG will include:

- Drafting plans and reports
- Developing technical guidelines, strategies and interventions for improving healthcare quality
- Advising the construction and management of information system
- Conducting research, preparing technical reports, and reviewing technical documents
- Providing technical assistance to governorate and health facilities
- Monitoring and evaluation of the N-QIP

4.2.2 Local level

The organization of the local team should consider the possible transition from the current centralized healthcare system to a future decentralized one. As the financing and management responsibilities move gradually from central to local through the process of decentralization, the role of local team will be expanded. The organization of the local team should be based on the current centralized system, but allow for future modifications.

At the local level, we recommend the establishment of a department within the governorate directorate of health, responsible for healthcare quality improvement. A management committee may not be necessary and the organization of the TWG at governorate level should be kept optional.

The quality improvement department of the governorate directorate of health should report to both the Director of Health and the Secretariat at the MOH. Each governorate will need to:

- Develop and implement its own plans according to the national and local quality improvement priorities
- Provide leadership and technical support to healthcare facilities
- Facilitate information/experience exchange among healthcare facilities

4.2.3 Facility level

Healthcare quality improvement takes place at the facility level and these facilities are the fundamental targets of the N-QIP. To assure the effectiveness of the N-QIP, each of the major health facilities (eg hospitals and health centers) should establish a healthcare quality assurance team responsible for:

- Implementing policies and strategies from higher levels
- Following national standards in healthcare provision
- Reporting to governorate and accepting supervisions
- Designing and implementing facility-specific strategies, actions and interventions
- Developing innovative health facility level quality assurance schemes and sharing experience with other facilities
- Evaluating results

4.3 Capacity building

Building the capacity of staff at all levels of the health system is essential for the success of the N-QIP. Capacity building should be considered and planned for at the very beginning of the development of the N-QIP. Capacity building activities should be conducted as soon as the teams at various levels of the system are organized, to facilitate the design and implementation of the N-QIP.

The strategies of capacity building include:

- Internal training sessions --- using local experts to conduct workshops and seminars targeted to specific audiences, which will develop the knowledge and skills that are needed for the design and implementation of the N-QIP
- External training sessions --- using international experts to perform workshops, focusing on theories, methods, tools and international experience
- Study tours --- paying special visits to countries with experiences in N-QIP and learning their practices and lessons learned from successes and failures.
- Learning by doing --- taking capacity building as a continuous and persistent process. Internal exchange based on program performance is an important and cost-effective strategy for capacity building

The knowledge and skills mix needed should be tailored by considering:

- Different levels of the N-QIP
- Different technical areas (e.g. medical record system, continuing education, accreditation, information systems etc.)
- Administrative vs technical capacity

The knowledge and skills that may be considered include:

- Statistics
- Epidemiology
- Software

- Computer
- Project planning and management
- Quality improvement theories and practice
- Continuous quality improvement techniques
- Program monitoring and evaluation

4.4 Designing the N-QIP

The design of the N-QIP will be presented in the form of a national plan, and subsequent plans divided by the administrative levels of the program, and the technical areas. There is no uniform template for the detailed design of the program. Nevertheless, it usually must provide detailed information on the following:

- Why is the program being performed?
- What will be achieved?
- What to do?
- How to do?
- Who does what?
- How to evaluate?
- When to do what?

The designing process starts at the national level. The sub plans at lower levels and for various technical areas should be developed after the national overall plan is available. The national plan should leave flexibility for variation in the types of interventions that will be undertaken in the different governorates. The N-QIP will need to encourage local and facility level innovations. The initial design of the program at national level should focus on the following:

- Principles that the governorates and health facilities are required to follow (e.g. the goals and objectives that the program is aiming to achieve, basic organizational structure at the central, local and facility level, etc.);
- National policies and regulations (national level interventions) for improving health care quality (e.g. continuing education, licensing and accreditation);
- National guidelines for the design of specific interventions
- Model plans for governorate and health facilities

Based on the above stated areas of the national plan, further planning and tool development can be performed at national, governorate and health facility levels; and for different technical areas. The detailed plans for technical areas may include the following areas:

- Minimum infrastructure standards for health facilities
- Infrastructure improvement
- Human resources development
- Medical record system
- Licensing and accreditation

- Continuing education
- Development and implementation of medical practice guidelines
- Utilization and chart review system
- Practice profiling
- Performance-related pay for groups and individual providers
- Strategies for reducing malpractice and medical errors
- Continuous quality improvement strategies at facility level
- Injury and accidents preventions
- Patient satisfaction and complaint management
- Information systems
- Quality indicators and measurement tools
- Monitoring and evaluation plan

4.5 Implementation

To assure the plan is implemented smoothly and will produce the desirable results, the implementers of the N-QIP will need to note the following points:

- The implementers have to stick with the plan and implement activities as they are planned. It is likely that the overall nation plan may not articulate the activities in detail. If this is the case, a sub-plan, which is consistent with the overall plan, should be developed. To assure the effectiveness of the N-QIP program, all activities should be planned in advance.
- During the implementation process, the implementers may encounter problems that are not expected by the plan. Some planned activities may be difficult to implement (e.g. unfeasible) or better programmatic options may become evident. In this case, the implementer will need to report to the central management team of the N-QIP and decide whether the planned activities should be modified.
- Due to the complexity of the N-QIP program, it is impossible to predict in advance if all plans can be implemented or if the program will achieve the desired results. Therefore, we suggest that the implementation of the N-QIP be divided into two phases – demonstration and replication. The demonstration can take place in selected governorates to test effectiveness and generate experiences that can be used for the modification of the plan.

4.6 Monitoring and evaluation

Monitoring and evaluation is performed to answer three questions: (1) Are the planned interventions delivered in the right intensity and to the right target population? (2) Are the interventions effective in improving the quality of health care? (3) What are the determinants to affect the effectiveness of interventions? Monitoring and evaluation is important in assuring the delivery of interventions and generating lessons for improving the performance of the N-QIP. The tasks associated with monitoring and evaluation include:

Final report											
Planning for another cycle of N-QIP											

5.2 *Technical assistance*

Technical assistance here is defined as using and paying for international experts to perform activities associated with N-QIP. Given the existing capacity (as is assessed in the third of this document), and the requirements for diverse knowledge and skill in such a complex national program, there will be a great need for technical assistance. Technical assistance can be a part of capacity building, but usually it is more extensive. For example, the N-QIP may ask international experts to participate in planning, developing tools, and conducting specified studies.

General technical assistance needs should be planned for and budgeted in advance. However, more specific need for technical assistance can be identified during the planning and implementation process of the N-QIP. To assure the quality of technical assistance, the N-QIP will need to find the right experts and be clear about their needs and expected results (e.g. deliverables) before technical assistance begins.

5.3 *Funding*

To fully accommodate the planning and implementation needs of the N-QIP, substantial amounts of funding will be needed. However, the specific amount of the budget depends on the following:

- The financing need for performing designed interventions --- More interventions, higher intensity and coverage of interventions will mean greater need for budget.
- Financing availability --- The final budget of the program will depend on availability of funds.
- Program sustainability --- The determination of the size of the budget for each year should also consider program sustainability. Programs that are overly ambitious in the beginning may increase the likelihood of downsizing or terminating the program in later years;
- Activity overlapping --- The activities of the N-QIP may overlap with activities of other programs. Collaboration and coordination with other programs can help to reduce the N-QIP budget to a politically acceptable level and at the same time to assure the implementation of the activities proposed in the N-QIP.

The sources of funding for the N-QIP should be identified even before the program is planned. Potential sources include:

- Bilateral collaboration (eg USAID, DFID etc.)
- International organizations (the World Bank, WHO, UNICEF etc.)
- Central government

- Local government (along with decentralization, local governments will becoming a major sources of funding for health programs)

To mobilize funds and improve the efficient use of available funds, the program will need to develop and design innovative mechanisms. One of such mechanisms is fund matching in which the applicants (eg local governments, and health facilities) are required financial contributions for the implementation of the proposed activities Another option is to use performance-related pay mechanisms to provide economic incentives for staff to perform at a higher level of competency. The traditional centralized budget allocation without considering performance should be avoided.