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FINAL REPORT

PALESTINIAN HEALTH SECTOR REFORM AND DEVELOPMENT PROJECT

OCTOBER 1, 2008 TO NOVEMBER 14, 2014

This publication was produced for review by the United States Agency for International Development. It was prepared by Chemonics International Inc.

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By 2014, the Ministry of Health was able to update electronic medical records through the Health Information System to 77 percent of Palestinians living in the West Bank.

FINAL REPORT

PALESTINIAN HEALTH SECTOR REFORM AND DEVELOPMENT PROJECT

Contract No. 294-C-00-08-00225-00

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LEFT: Doctor at the Palestine Medical Complex in the West Bank where the project partnered with the Ministry of Health to establish triage areas in the emergency room.

INSIDE FRONT COVER: By 2014, the Ministry of Health was able to update electronic medical records through the Health Information System to 77 percent of Palestinians living in the West Bank.

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FRONT COVER: NICU Director Dr. Hassan Fitian checks on progress of a prematurely born baby in a USAID-procured incubator. With project support, Rafidia Hospital upgraded its neonatal intensive care services and is the only hospital providing NICU services in Nablus District.

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BACK COVER: Three-year-old Mohammed learned to walk after being equipped with his first artificial limb at the Princess Basma Jerusalem Center for Disabled Children, where he was referred as a result of project-supported community outreach. Mohammed had never been provided with assistive devices, despite being born with only one leg, because his divorced mother could not afford to pay the high costs.

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ACRONYMS

BCC	behavior change communications
CBO	community-based organization
CHCE	continuing health care education
CT	computerized tomography
EPS	Essential Package of PHC Services
ER	emergency room
EWAS	Emergency Water and Sanitation
HEPD	Health Education and Promotion Department
HIS	health information system
HR	human resources
IDP	institutional development plan
IPC	infection prevention and control
NCD	non-communicable disease
NICU	Neonatal Intensive Care Unit
NCTC	National Calibration and Training Center
OJC	on-the-job coaching
PHC	primary health care
PMC	Palestine Medical Complex
PMP	performance monitoring plan
SHC	secondary health care
SOC	Standards of Care

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With support from the project, the Ministry of Health is empowering marginalized female health professionals to be leaders for change within the ministry.

CHAPTER ONE

PARTNERING FOR HEALTH

USAID has supported the Palestinian Authority's Ministry of Health in its development of the public health sector since the ministry was established in 1994. Recognizing the ministry's commitment to creating a successful, integrated health sector, [1] USAID supported its National Health Reform Strategy through the Palestinian Health Sector Reform and Development Project.

Through the project, USAID supported the Ministry of Health, NGOs, and select educational and professional institutions in strengthening their institutional capacities and performance to promote a functional and democratic Palestinian health sector that is able to meet public health priorities. From 2008 to 2013, the project worked to achieve this goal through: 1) improving governance and management practices in the health sector, 2) improving the quality of essential clinical and community-based health services, and 3) increasing the availability of essential commodities to achieve health and humanitarian assistance goals. In 2014, the project continued exclusively on one component, which was to work toward improving governance and management practices and the quality of clinical services in the health sector through expansion of a computerized health information system (HIS).

During its six years of implementation, the project's focus and scope evolved in response to USAID technical directives and funding limitations. In Year 2, USAID expanded the contract

1. National Strategic Health Plan – Medium Term Development Plan (2008-2010), Ministry of Health.

by $29 million, to $86 million. The additional funding allowed the project to fully respond to key priorities identified by the Ministry of Health during its 2008 needs assessment. It also expanded opportunities for procurement of medical equipment, supplies, and pharmaceuticals, and expanded its integrated approach and grants to the NGO sector, ensuring that reform encompasses all areas of the health sector. In Year 3, USAID modified the project scope in response to a mid-term evaluation that described the scope as an "enormous" endeavor and recommended focusing on areas in which the project had achieved "impressive accomplishments," particularly its support for high-quality improvement in primary health care (PHC) services, commodity procurement reform, a grants program, and the ongoing establishment of an automated HIS.[2] In Year 4, a U.S. Congressional hold on all funding for the USAID/West Bank and Gaza mission resulted in a six-month hold and ultimately a reduction in force and implementation. The project scope was reduced for the final two years of implementation to concentrate on the aforementioned activities. In Year 5, another Congressional hold on funding resulted in a further reduction in the project scope, focusing project activities solely on rollout of the HIS.

To further this work, USAID extended the project for one year (October 2013 – September 2014) to continue to focus exclusively on the HIS component. In September 2014, the project received a level-of-effort increase and contract extension (until November 14, 2014) to implement the HIS at Ministry of Health central warehouses. This report covers October 1, 2008 through November 14, 2014.

Throughout its six years, the project's interventions were designed to support the Ministry of Health and select NGOs throughout the West Bank and in East Jerusalem. The project also worked with eligible NGO health service providers in Gaza, with a limited focus on provision of overall capacity strengthening, complemented by targeted grants and procurement support.

Chapter One presents an overview of the project's achievements. It also includes as a supplement "Voices of Impact," a multimedia series in which Palestinian health care providers describe how the project has improved their capacity to serve Palestinian citizens. Chapter Two highlights the effective management promoted by the project in the health sector, and Chapter Three demonstrates the improvements in quality achieved in health services provided by the Ministry of Health and NGOs. At the end of each of those two chapters, the project shares promising practices and lessons learned during implementation and recommends future interventions to support the Ministry of Health

2. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project – Mid-term Evaluation (December 2010).

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STORY: **"We did not have the tools we needed before — not the space, nor the medical equipment. Thanks to USAID, we are now able to meet international standards in giving care to patients," said Dr. Farid Abu Leil, Ministry of Health Rafidia Hospital. The project supported the ministry in upgrading the hospital's capacity to provide pediatric and neonatal care, with $1.7 million in lifesaving equipment and technical assistance in training, emergency services, and pediatric care.**

in reforming and developing the health system. Annexes provide additional information, including key technical deliverables, interventions by region, and a summary table of indicators for the project's performance monitoring plan (PMP) and HIS manuals.[3]

CONTEXT FOR REFORM AND DEVELOPMENT

Since 2008, the Palestinian Ministry of Health has been actively managing the transition from a "chronic emergency" response to a more integrated development-oriented approach for the health sector,[4] in line with larger government reforms initiated by Prime Minister Salam Fayyad.[5]

Challenges to reform and development abound in this fragile context.[6] The health status of Palestinians has been compromised by decades of conflict. As a result, a population with comparatively good health indicators for the region is still struggling with access, availability, and sustainability in its health services, as well as a significant rise in non-communicable diseases (NCDs) during the past 10 years. The ministry also recognizes that citizens have limited participation in health planning

3. The indicators in the summary table are listed in the last approved PMP, which was the Year 5 PMP (approved by USAID on June 5, 2012). The project did not receive official approval of the Year 6 PMP, but indicators measuring implementation of the Year 6 work plan are included in a separate table.
4. National Strategic Health Plan – Medium Term Development Plan (2008-2010), Ministry of Health.
5. Palestinian Reform and Development Plan (2008-2010) and National Development Plan (2011-2013).
6. *Health in the Occupied Palestinian Territory,* the Lancet (http://www.thelancet.com/health-in-the-occupied-palestinian-territory-2011).

for their communities, resulting in a gap between citizen expectations and the ministry's delivery of services.

The Palestinian health system is complex, with four major categories of health care providers: the Ministry of Health, the United Nations Relief and Works Agency, local NGOs, and the private sector. The health system was further fragmented by the political division of the West Bank and Gaza, which has resulted in both scarcity and duplication of services.

The Ministry of Health juggles often-contradictory roles. It is the principal administrative and regulatory body for the health system, as well as the largest provider of health services. It also is one of the largest employers in the West Bank, but it has shortages of hospital specialists and primary health care staff. It must balance its mandate for overseeing all health care for Palestinian citizens with working to provide the best-quality care possible in an efficient, cost-effective manner.

The ministry underwent institutional changes during the project, including a senior leadership change in Years 4 and 5 and recurrent strikes across its facilities during the last three years of implementation. Despite these contextual challenges, the project was able to achieve or make significant gains toward the goals of all components, as will be demonstrated in Chapters Two and Three.

Voices of Impact

Reaching the Disabled

VIDEO: USAID expanded rehabilitation and referral services through $9 million in support to specialized organizations. This support resulted in stronger community services for Palestinians with disabilities, says grantee Director Maha Tarayra.

Supervising Quality Care

VIDEO: The Ministry of Health adopted a new and more supportive approach to supervising health care in the community, with assistance from USAID. Primary health care services have improved permanently, says Mai Safarini, a nursing director.

Engineering Health

VIDEO: A new medical equipment maintenance system introduced by USAID is improving health care provided by the Ministry of Health. At the heart of this system is the first National Calibration and Training Center, built with USAID's support, says center Director Ibrahim Allayan.

Championing Community Health

VIDEO: Palestinian citizens partnered with their local government clinics to compete in a project-sponsored health championship. In the process, 82 health committees improved services for local residents. Citizens have greater trust in the Ministry of Health, says Nadine Imran, a Champion Community coordinator.

Delivering Quality Care

VIDEO: The project supported the Ministry of Health to improve community health services. Clinics now provide a higher quality of care to Palestinian citizens, says clinic nurse Samira Qabaja.

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A laboratory technician is now able to sort blood samples by barcode stickers placed on the samples, ensuring test results are accurately transferred to patients' electronic medical records through the Health Information System.

CHAPTER TWO

PROMOTING EFFECTIVE HEALTH MANAGEMENT

HEALTH CARE MANAGEMENT MODERNIZED

Health information management is crucial to ensure the sustainable reform of the Palestinian health system and support the Ministry of Health's ambitions to provide the best possible quality of care for all citizens. No health system can function properly without rapid, accurate, and structured gathering and analysis of data for decision-making, management, and tracking of the population's health.

With project support, the ministry created a national-level, computerized health information system. The HIS is a facility-based and patient-centered system that provides relevant, timely, and accurate data to support evidence-based policymaking. In line with its National Health Information Strategy, the ministry uses the HIS to promote and sustain the health of the Palestinian population, more efficiently plan and allocate its resources, and monitor public health trends.

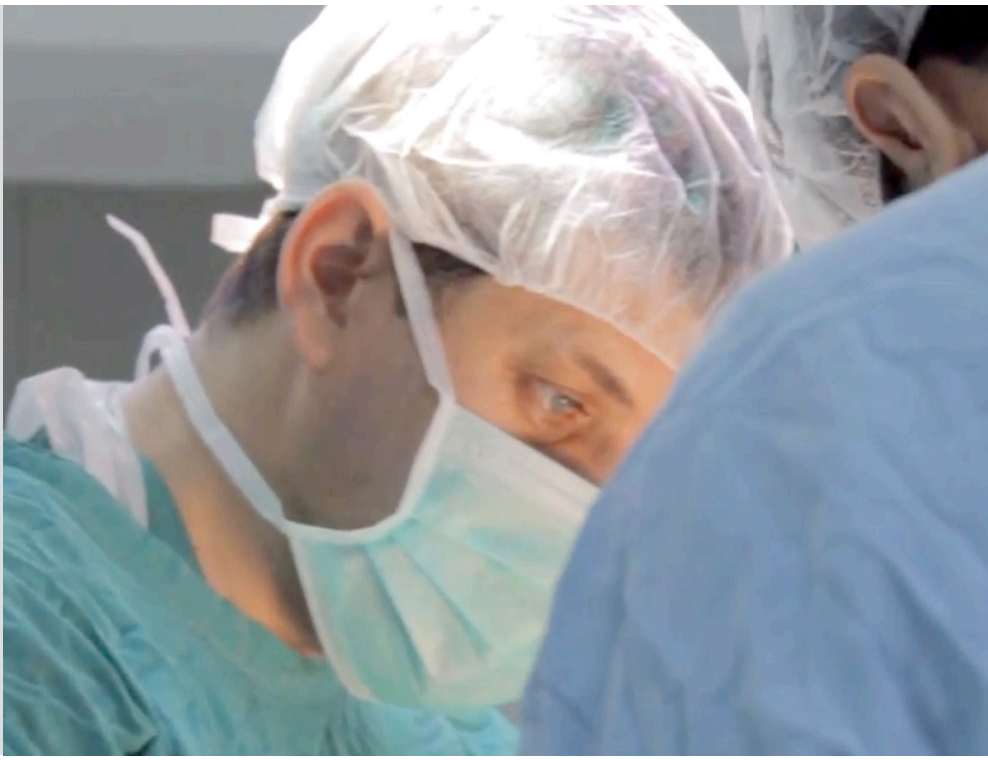
By 2014, the ministry was able to provide health services through the HIS to 77 percent of Palestinians living in the West Bank through 17 facilities in eight governorates. The system expanded to include the first non-ministry facility in 2014. Al-Makassed Hospital in Jerusalem adopted the HIS, after signing a memorandum of understanding with the ministry, which now has an open-license software package purchased by USAID. Al-Makassed is the first private facility to come on line with the system.

With two-thirds of the public hospitals accessing the HIS, the ministry is well placed to continue to roll out a national HIS that will provide an integrated network through which health data and patient information can be

shared, improving patient care and providing relevant and timely data for decision-makers. The ministry now maintains comprehensive medical records for more than 800,000 patients across health facilities, which is a foundation for enabling better decision-making by health providers on three levels: national, district, and facility. In addition, providers are now referring patients to other HIS facilities (within levels and across levels), passing patient records, including prescriptions and laboratory results, directly to the next physician who will examine the patient.

The health information systems at the ministry have evolved over time, with the ministry developing an HIS strategy in 2012 for the paper process, then gradually moving to the electronic system that is rolling out today. In the early stage, health data management was divided among departments, with limited coordination, and was further fragmented by disease-focused demands by donors and international initiatives. These divisions created data duplication, burdened staff with excessive reporting requirements, and prevented the analysis and use of data collected.

Through the project, the introduction of an electronic system that could be used for data-based health management was a dramat-



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VIDEO: **A computerized health information system donated by USAID has modernized health care for the Palestinian Ministry of Health. Change is visible everywhere, according to hospital administrators and clinicians.**

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STORY: A nurse documents notes during rounds in the Urology Department using the new health information system. "The HIS continues to prove itself to be the most valuable tool in improving the quality of patient care and services," said Dr. Khaled Saleh, general director of the Ministry of Health's Rafidia Hospital.

ic innovation and culture shift in the Ministry of Health's management practices. For the first time, the ministry hospitals and key primary care facilities have real-time, reliable data on distribution and demand for resources at the patient level. As a result of unique patient numbers created by the HIS, each patient's full medical history is available at the click of a mouse, eliminating the need for paper records and creating a more efficient means to access vital information. More than 819,960 individual patient records were stored in the ministry's HIS in November 2014, exceeding the life-of-project target of 250,000 records set by USAID. The HIS is operational in 18 ministry facilities in the Bethlehem, Hebron, Jenin, Jericho, Nablus, Qalqilya, Ramallah, and Salfeet governorates. Al-Makassed Hospital in Jerusalem is also using the HIS to manage its outpatient services, with plans to integrate inpatient services soon.

Ministry facilities can now better track patients, staff, and non-medical commodities as a foundation for a national HIS system that can be used in the future to analyze data trends and plan accordingly. Examples include using the HIS to provide data-driven — rather than estimated — pharmaceutical requests during the annual ministry budgeting process (Rafidia Hospital),[7] increase the capacity of an orthopedic clinic that the system showed was overbooked (Rafidia Hospital), and improve monitoring of the actual oc-

7. When surveyed, hospital managers reported the system gave them greater ability to monitor and control the hospital environment and resulted in significant cost savings. For instance, the pharmaceutical director at Rafidia Hospital was able to use the HIS to calculate actual – not projected – pharmaceutical procurement needs as input for the annual budget development.

cupancy rate (Darwish Nazzal Hospital).

The project conducted client satisfaction surveys in the five hospitals that introduced the HIS, using user perception indicators to evaluate the impact of the HIS on health service delivery, quality, and management.[8] Satisfaction with the computerized system is high among facility management staff. Eighty-six percent of HIS users surveyed report enhanced performance monitoring, with managers describing the highest impact, and nearly 90 percent were able to report more effectively than before.[9]

By improving inventory controls and coordination between facilities, the HIS has the potential to minimize waste and inefficiencies, particularly in hospitals' use of consumables (e.g., pharmaceuticals and disposables),[10] which constitutes generally a third of the ministry's annual budget.[11]

Hospital managers at Rafidia and Darwish Nazzal hospitals report that the system gives them a greater ability to monitor and control the hospital environment and has resulted in significant cost savings.[12] For example, control of the use of pharmaceuticals at both hospitals became stricter as a result of the HIS. About 64 percent of users surveyed described reduced expenditures for patient care because unnecessary or duplicate tests, drugs, or treatment were eliminated.[13]

Anecdotal reports suggest that pharmaceutical purchases by Rafidia Hospital fell 17 percent after installation of the HIS, even though the patient load rose 27 percent in the same period. The HIS is predicted to be cost-neutral at the facility level for system con-

8. The assessment included an HIS user survey, group in-depth interviews with facility managers about their experience with HIS during the past year, and a management survey to assess satisfaction with the overall availability of information for reporting and decision-making purposes.

9. User Perception of HIS Effectiveness - Nablus and Qalqilya (Year 5).

10. In-depth interviews from Rafidia and Darwish Nazzal Hospitals revealed that control of the use of pharmaceuticals became stricter as a result of the HIS. Rafidia Hospital was able to support the cost savings with numbers from its Pharmaceuticals Department, showing that there was a 17 percent decrease in the hospital expenditure on pharmaceuticals between 2009 and 2012 despite a 27 percent increase in the number of patients for the same period. ("Assessing the Effectiveness of the Palestinian Ministry of Health, Health Information System," Alpha International, 2013.)

11. The 2013 Ministry of Health budget allocated about $75 million (281.7 million new Israeli shekels) to consumables, which includes pharmaceuticals (around 80 percent), medical disposables, laboratory reagents, and other procured items.

12. As indicated by empirical and anecdotal evidence, the HIS is enabling the ministry to better manage its limited resources. The HIS significantly reduces waste and inefficiencies at the ministry by improving inventory controls and coordination between facilities. Hospital managers reported that major cost savings are in consumables, including pharmaceuticals, medical disposables, and other procured supplies. Demand for these consumables has dropped in HIS facilities as the system increases the ministry's capacity to monitor distribution and use. In addition, doctors and pharmacists can now use inventory data to favor generics and better avoid expiration of drug supplies.

13. User Perception of HIS Effectiveness - Nablus and Qalqilya (Year 5).

sumables (e.g., paper and toner), as a result of its waste reduction and greater efficiency in resource management.[14]

An important aspect of hospital management costs was introduced through the HIS in the select hospitals, following a project-supported standardization of service pricing triggered by the HIS. As the project rolled out the HIS in select ministry facilities, it became evident that there were discrepancies in prices paid by patients for services across facilities. The variations in pricing affected financial management at the facility level due to a lack of pricing data, with facility finance teams using unverified costs in recording patient payments. Without a complete and unified list of services, ministry finance staff were unable to enter all payments into the HIS finance module, resulting in discrepancies between manually recorded and HIS-generated accounting data.

The project supported the ministry in the costing and pricing of services at Rafidia Hospital and subsequently supported it to unify the list of services and the pricing of those services across the ministry. With project support, the ministry unified the names and most costs for more than 1,800 services. The ministry was also able to capture previously unrecorded services (such as orthopedic surgical implants) and eliminate redundancies (such as duplicate listings of tests for driving licenses). The ministry adopted the methodology to support service costing in other facilities. (For the impact of the HIS on service delivery, see Chapter Three. Improving High-Quality Services.)

In the sixth year, the ministry activated the HIS Human Resources (HR) Module as a tool for reforming human resource management. The HR module is a timekeeping module in the HIS that extends to ministry facilities in the West Bank. With its universal connectivity, the module is a tool that the ministry can use to reform human resource management. Through the module, the ministry has access to a comprehensive HR time management system (MenaHR) and a web-based self-service tool for employee/manager HR transactions (MenaME). The HR module minimizes paperwork and enhances the quality and efficiency of the management of employee working files and related transactions, including recruitment, appraisals, sanctions, and training.

By the end of Year 6, all Ministry of Health employee files were uploaded into the module. Personnel transactions were required to be carried out using the automated system, including roster management and personnel requests. The project also increased the ministry's capacity for automated HR reporting by unifying job titles across all the ministry's facili-

14. "Assessing the Financial Impact of HIS on the Ministry of Health," Nicholas Skibiak (short-term technical assistance No. 071), submitted to USAID on April 28, 2013.

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The project supported the ministry in producing national guidelines for quality improvement in PHC services. The ministry institutionalized 25 reform processes and products, including service guidelines, training manuals, protocols, and job aids developed or updated by the project.

ties and providing it with a new, licensed HR statistical reporting feature.[15]

REGULATION OF NATIONAL HEALTH CARE STRENGTHENED

During the project, the ministry developed and adopted key regulatory tools that strengthen its culture of quality improvement and its capacity to plan health services, including clinical and operational standards. The project facilitated the ministry's efforts to move forward with regulatory priorities by standardizing health care delivery and strengthening quality management at the primary and secondary health care levels. The ministry institutionalized 25 reform processes and products, including service guidelines, training manuals, protocols, and job aids developed or updated by the project.

The ministry now uses consolidated service definitions to evaluate and plan health services provided through its clinics, following its adoption of the Essential Package of PHC Services (EPS) and five-part Standards of Care (SOC).

The EPS clarifies the responsibilities and needs of each clinic. Medical staff will be aware of — and accountable for — the services required for their clinic. This was a critical step for the ministry outlining the essential services. The package can be used in each clinic as a user-friendly job aid, a monitoring checklist for supervisors, a tool for evaluation

15. The Qlikview statistical reporting tool enables the Ministry of Health to easily consolidate, search, and visually analyze all of its human resource data. During Year 6 Quarter 4, after orienting the ministry's HR unit in its usage, the project handed over the licenses to the ministry for its use by HR management.

of medical records, an instrument for donor coordination, and a mechanism to raise citizen awareness of the essential services to which they are entitled.

The SOC are now available in ministry clinics in a user-friendly packet of five essential PHC tasks: the treatment of NCDs, nursing services, integrated child health management, reproductive health, and health center management. The project produced the unified SOC in response to a ministry request. After reviewing existing protocols and guidelines, the project discovered that many of the topics were out of date, some did not exist (e.g., nursing services), and existing protocols were underused because they were not user-friendly or in an accessible language. The project worked with the ministry, NGOs, the World Health Organization, and USAID to ensure the up-to-date SOC are also in line with international standards. An-Najah National University initiated a donor-funded training-of-trainers course on the SOC after the ministry adopted the guide.

In addition to the EPS and SOC, the project supported the ministry in developing key guidelines and protocols (including infection prevention and control (IPC) protocols, a PHC Nursing Orientation Guide, First Aid Manual, and First Aid Training Manual) and user-friendly job aides for clinicians (covering diabetes mellitus, hypertension, nutrition related to NCDs, and clinical breast exams). Technical checklists were also developed to standardize procedures among clinics for IPC and supportive supervision and monitoring.

Along with the project's other PHC interventions, these PHC service guides have enhanced ministry accountability to meet fundamental standards and measurably improved the quality of care provided by ministry clinics. The quality of PHC services improved by as much as 52 percent on average as a result of a new culture of quality improvement adopted in PHC directorates, according to a pre-/post-client satisfaction survey conducted at targeted PHC clinics.[16] (See Chapter Three. Improving High-Quality Services: Culture of Quality in Primary Health Care Created.)

Other reform products, protocols, job aids, and manuals were developed with the ministry and institutionalized with project support to ensure high-quality care that meets international standards. (See Chapter Three. Improving High-Quality Services: Capacity to Provide High-Quality Secondary Health Care Enhanced.) Examples include protocols for the operation and clinical use of computerized tomography (CT) scanners,[17] provision of

16. "PHC Quality Assessment Results," Flagship Project (Pre: June 2012 and Post: March 2013).

17. The project provided four CT scanners to Ministry of Health hospitals (valued at $3.4 million) to enable the ministry to provide advanced diagnostic services that were previously only available to Palestinian citizens through costly referrals in the private sector or abroad.

emergency medical care, management of neonatal intensive care units (NICUs), manuals for behavior change communications (BCC), preventive maintenance, and the Champion Community Approach. The ministry has also institutionalized training guides developed by the project, including for BCC, performance improvement, and the HIS. (See Chapter Three. Improving High-Quality Services.)

The project also enabled the ministry to expand its health system regulation beyond the borders of its own facilities. During its 2008 self-assessment exercise, the ministry recognized that a lack of coordination among service providers was a major weakness of the health system. Through an integrated multi-sectoral approach to improving health care services, the project brought representatives from all health service providers together, including the ministry, NGOs, United Nations Relief and Works Agency, the private sector, health education institutions, and civil society organizations, to coordinate health planning and improve services to the community. Throughout its life, the project supported the ministry in collaborating with health providers and donor technical teams on planning and implementation of services, including development of the HIS, the EPS and SOC, NCD response, and emergency preparedness plans. By engaging stakeholders in these processes, the project supported the ministry in unifying health sector practices and promoting the uptake of new systems and guidelines, such as the HIS and the PHC standards. As a result, the ministry has enhanced its capacity to regulate through coordinated health planning with multiple sector stakeholders and standardized health information. The ministry can capitalize on the new clinical and operational standards and guidelines developed in coordination with other health providers to evaluate and lay the foundation for working to enforce quality across the health sector.

With project support, the ministry also made progress on strengthening national capacity for **licensing providers and facilities**. Before the narrowing in project focus in Year 3, the ministry was able to oversee, participate in, or contribute to the drafting of licensing and re-licensing bylaws for 13 health professions, with project support. The ministry obtained national endorsement of bylaws governing community health workers, leading to official recognition of their work as health professionals. The mostly female health workers engage communities to improve the health status of the local population — primarily through health education and community mobilization — and play a key role in providing antenatal and postnatal care and health education on women's and children's health topics in rural communities. (See Chapter Two. Recommendation No. 6.)

In Year 5, an e-learning and testing portal was launched, procured by the project, and housed at the Palestinian Medical Council, which is the licensing body for medical specialties. The council uses the new testing system to

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STORY: **"This will strengthen the education process in our country and improve the health situation in the Palestinian society," said Dr. Said Hammouz, secretary general of the Palestinian Medical Council. As the Palestinian licensing body for medical specialties, the council is responsible for testing graduates to certify them to practice as doctors in a variety of specialties.**

provide standardized medical specialization exams for doctors seeking licensing. The system also supports continuing medical education by providing an online resource library for medical professionals and a virtual academic forum for residency programs. By supporting the council, the project increased the national capacity to regulate medical competency and enable doctors to continually improve their professional skills through continuing health care education (CHCE).

The online resource center also serves as a practical step toward application of the concept of re-licensing medical professionals. The Palestinian Medical Council will be able to use analysis from examination results to design new exams to respond to demonstrated gaps in knowledge, attitude, skills, and practice among health professionals and care providers. The council also used the system to digitize its personnel files of medical specialists practicing in the Palestinian health sector, establish standards and medical criteria for CHCE, and identify the resources and training needed by doctors working toward licensure/re-licensure. It can be used as a basis for the council to work toward establishing a continuous medical education system for improving the quality of health professionals.

Similarly, the newly opened National Calibration and Training Center provides the Ministry of Health with the potential to certify medical equipment used by public and private health providers as part of the facility accreditation process.

With the introduction of the HIS at the national blood bank, the ministry can now use the HIS to regulate national blood supplies. The National Blood Bank and the blood banks in all eight HIS hospitals are now ordering blood units through the system. The

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STORY: **"We built this health clinic together. This is the fruit of collaboration using community resources to bring positive changes to our quality of life," states Dr. Inshirah Nazzal, a Ministry of Health mother-child health specialist, pictured checking a baby at the new Deir Abu Deif clinic.**

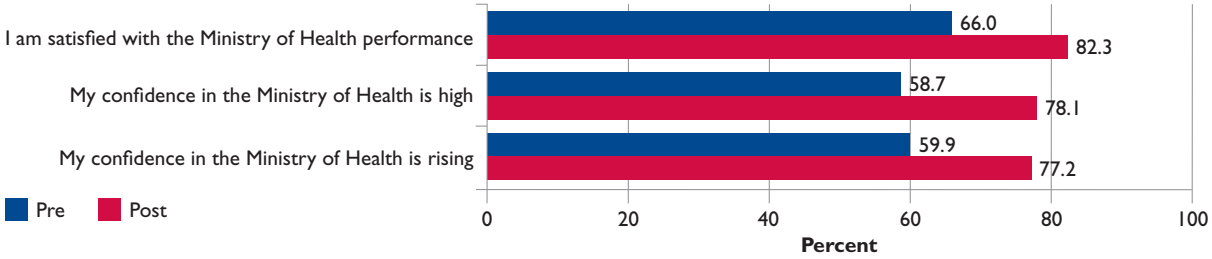
standardized work flow created by the direct communication channel between the blood banks provided a long-awaited solution for the ministry to the challenge of managing multiple regional centers.

COMMUNITY PARTICIPATION IN HEALTH PLANNING ACTIVATED

The ministry governance goal of enhancing community participation in health planning was greatly strengthened by engaging in — and integrating at the directorate level — the project's community mobilization initiative (known as the Champion Community Approach). The approach provides an opportunity for district health supervisors, community representatives, and local authorities to work together through community-clinic boards to systematically address public health issues. Ministry PHC directorate and clinic staff joined with residents to form the community-clinic

CHART 1. HOUSEHOLD SATISFACTION WITH MINISTRY OF HEALTH SERVICES

People Surveyed: 1,100 pre-HIS, 1,088 post-HIS



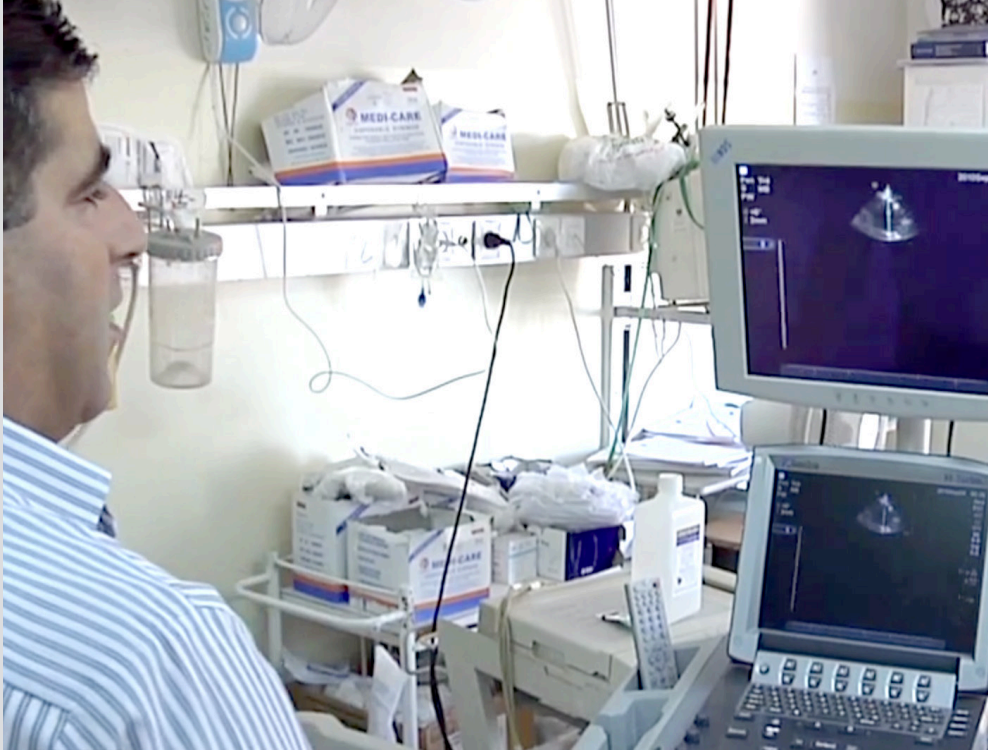
boards to identify and respond to local health priorities in 82 communities in the West Bank. The community-clinic boards bridged a historical gap between communities and clinics by soliciting and acting on citizen feedback.

The increased citizen participation in and advocacy for health has created a feedback mechanism to guide the ministry in increasing the effectiveness of the health system to meet the needs of community residents. For example, when a ministry district manager visited remote Deir Abu Deif village, she found that many residents failed to seek health care because the nearest clinic was too far away. The community formed a community-clinic board and mobilized local resources to build a clinic, for which the ministry provided staff and equipment. As a result, residents are now able to access high-quality services in their own community without facing the financial and social obstacles associated with travel.

Satisfaction with PHC services rose significantly in communities benefiting from the project's quality improvement and community mobilization interventions. For example, overall satisfaction with ministry PHC services rose 20 percent among surveyed households, with 82 percent reporting satisfaction. Trust in the ministry also increased: 78 percent of household residents surveyed had more confidence in its services, and 77 percent said their confidence was rising.[18]

Citizen participation in health planning was institutionalized at the directorate level when the ministry adopted the Champion Community Approach, and district managers began using it as a means of working with communities to identify health priority needs and set strategies for improving the services provided by the clinic. (For more information about the Champion Community Approach and the project's integrated PHC interventions, see

18. Household survey, Champion Community Approach subcontractors partners (Year 3 Annual Report).



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VIDEO: **"The routine maintenance of an anesthesia machine depends on a (onsite) daily test. In addition, we have to test it with a calibration machine specifically for the device," said Sa'ed Basheer, Ministry of Health biomedical engineer on the impact of the new NCTC.**

Chapter Three. Improving High-Quality Services.)

PROCUREMENT AND OVERSIGHT OF MEDICAL EQUIPMENT SYSTEMIZED

Health technologies are essential for a functioning health system. Medical devices in particular are crucial in prevention, diagnosis, and treatment of illness and disease, as well as patient rehabilitation. The Ministry of Health is reliant on international donors and/or foreign governments for procurement and provision of medical equipment and supplies. Although most donations are made with good intentions, the outcomes are not always positive if the donations are not properly planned and coordinated. The ministry prioritized the need to adopt a more strategic approach to procurement of equipment and supplies as a key part of health reform.

The project worked with the ministry to establish and institutionalize an integrated procurement system that reflects the real needs of health facilities, reduces inefficiencies and costs, extends the life expectancy of equipment, increases equipment usage, and improves access to health care services for all Palestinians. With project support, the ministry ensured that equipment, supplies, and pharmaceuticals procured were based on actual need by visiting health facilities to discuss their needs, analyze patient flow and human resource capacity, assess how equipment is currently used, and identify equipment needed to improve services.

The project also helped the ministry adopt the concept of preventive maintenance, which requires its biomedical engineers to conduct scheduled maintenance on medical equipment to detect and correct potential failures. This ap-

proach represented a dramatic and positive shift from the ministry's previous reactive repair approach. Before the project, the biomedical engineers had not prioritized routine evaluations of equipment performance and usage and did not have preventive maintenance schedules. The project introduced preventive maintenance through its own medical equipment procurement process, by requiring medical equipment suppliers to provide formal and on-the-job training on preventive maintenance to the biomedical engineers. The approach was further institutionalized by the ministry's adoption of a Preventive Maintenance Manual developed with the project. The application of preventive maintenance across the ministry plays a major role in extending the usable life of the equipment donated by USAID and other donors. It is also reducing costs, improving the quality of care, and ensuring patient safety.

The initiation of the preventive maintenance effort was the first step toward establishment of the first medical equipment calibration and training center, opened in Year 5 with more than $600,000 in project procurement and technical assistance. The ministry's National Calibration and Training Center (NCTC) further strengthens its capacity to manage and regulate medical devices. The NCTC is the culmination of the project-ministry partnership to create needs-based, sustainable procurement of medical equipment that is actively and accurately used to diagnose and treat Palestinian citizens. (See Chapter Two. Promising Practice No. 2.)

The ministry can use the NCTC to calibrate and maintain medical equipment, enforce preventive maintenance, and upgrade technical skills of its biomedical engineers. Through the HIS, the ministry can manage and maintain its medical equipment in all HIS facilities through the system, which can feed procurement budgeting with real-time data. For the first time, all equipment and medical supplies can be inventoried and tracked through the computerized HIS developed through the project, allowing decision-makers to quickly determine gaps and identify the need for new equipment and services. The center can reduce annual expenditures for equipment service through reduced equipment failures and elimination and/or reduction of shipping equipment outside of the country for repair.

The Ministry of Health will also be able to use the center to strengthen its regulation of the national health sector. As its regulatory capacity grows, the ministry can use the center for potential certification of NGO and private sector facility equipment.

LEADERS FOR CHANGE DEVELOPED

During the 2008 needs assessment, Ministry of Health staff stressed the importance of building their capacity to use data for management, planning, and informed policy formulation, leading to better service delivery and public satisfaction with the public health system. The project responded to this need for enhanced health management capacity through formal and informal training

STORY: **"Participation in the USAID Leadership Development Program provided by the project helped me realize that leadership is not dependent on a position or a title. Leadership is taking the initiative to change and make a difference in health facilities," said Nablus Health Director Nazmyia Abu Samra, pictured directing nurses and doctors on their daily schedule.**

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designed to build leadership and administrative skills. The project identified and supported "change agents" throughout the ministry, its grantee partners, and at the community level to promote institutionalization of new skills and behaviors, highlighted as a "laudable" intervention in the USAID mid-term evaluation. (See Chapter Two. Promising Practice No. 5.)

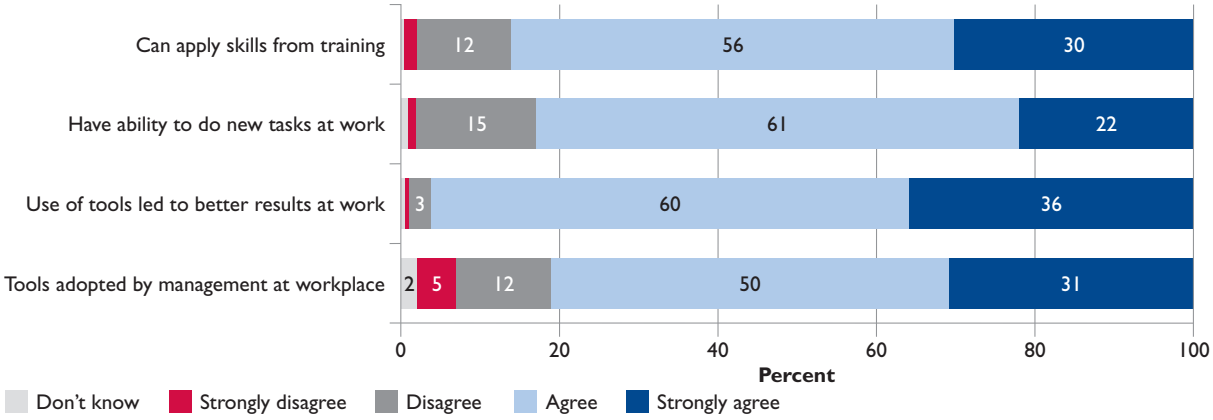
A three-course Leadership Development Program was a key component of the project's comprehensive capacity-strengthening program for the ministry, health education institutions, and NGOs. Described as "excellent" by the mid-term evaluation,[19] the program developed a cadre of 100 mid-level managers from across the ministry and health service delivery NGOs who were trained to lead change from within the Palestinian health sector. The managers were coached to identify and then move forward with strategic innovations within the health sector. The courses comprehensively addressed the eight leadership competencies that the ministry identified as critical to effective leadership.[20] Changes introduced as a result of the program include enhanced quality assurance in PHC laboratories, regulations for private sector use of medical narcotics, improved managerial skills among nursing managers, and establishment of the NCTC.

19. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project – Mid-term Evaluation (December 2010), p. 82.

20. The eight critical leadership competencies identified by the ministry are strategic thinking and planning, communication, leading change, situational leadership, performance monitoring and feedback, coaching, team development, and decision-making.

CHART 2. APPLICATION OF TRAINING AMONG TRAINEES SURVEYED

366 trainees surveyed in 2011, 2012, 2013 (N = 366)



Health Management Graduates. With project support, the ministry also increased health management capacity by enrolling 96 managers in a bachelor of arts in health management degree program at Al-Quds Open University. By offering this degree, the project supported a more credible and competent leadership team that will ultimately reflect on operations of the ministry. Twenty-one managers graduated from this two-year program in June 2013.

With budget constraints on health providers and limited affordability by patients, the ministry has identified health financing and financial management as a priority in its institutional development plan (IDP). The project responded to this priority by providing Financial Capacity Strengthening Program training to build the capacity of 63 ministry staff on financial sustainability, transparency, and accountability through sound financial management. The training introduced a three-pronged approach and familiarized participants with health system reform and finance management systems, in general terms and in the Palestinian context. In addition, a module on provider payment mechanisms was offered afterward to increase trainee capacity on the policy implications of financial reform in the health sector. In an effort to ensure sustainability of this program, project consultants developed a health finance training framework and tailored the technical material to serve as an e-learning course. The e-learning program will support sustainable capacity building for ministry financial and administrative personnel by ensuring that they have the necessary skills for financial management and planning.

In total, 2,516 people from the ministry and NGO providers

were trained on health systems operations.[21] When surveyed, 85 percent of those trained by the project reported applying skills/knowledge acquired from U.S. government-funded training provided under the project. Furthermore, when tools were developed during the training, almost all trainees surveyed (96 percent) reported an improvement in their work, while 81 percent[22] said their managers had adopted the new administrative or health management tools.[23]

Piloting Health System Decentralization. Decentralization in the health sector has been recognized as a means to improve the efficiency and quality of services and was identified as a priority by the ministry. Currently, most decision-making is at the central level, which makes it difficult for facilities to prepare their own budgets and develop sound financial plans. In Year 3, Qalqilya Hospital was chosen as a decentralization model. After three staff toured a Jordanian hospital that was in the process of decentralization, the ministry determined that it was not yet ready to transfer fiscal authority and responsibility to its facilities.

The minister was presented with three scenarios aimed at improving facility-level financial management capacity, which was identified as a prerequisite for the decentralization process. In 2011, the ministry's Finance Department shared the annual budget with Qalqilya Hospital for the first time and provided the guidance and tools needed for accounting staff to track and record their revenues and expenditures as a basis for monthly needs. Collecting this information demonstrates a first step in preparing hospital managers to project costs, identify needs, and prepare budgets, thereby strengthening their capacity for decentralization.

NETWORK OF COMPLEMENTARY SERVICES EXPANDED

Palestinians needing referral services unavailable through the ministry depend on the private sector in the West Bank and Gaza, NGO service providers, and external providers outside the West Bank and Gaza that provide such tertiary services. However, the sustainability of some of these services is undermined by limited managerial capacities. The project assisted seven NGO health service providers[24] of primary, secondary, rehabilitative, and emergency care

21. In the PMP, health systems operations is defined as including management, finance, leadership, and HIS.

22. Trainee follow-up survey, Flagship Project (Year 3-Year 5). Tools.

23. For example, as part of her participation in the Leadership Development Program, Ministry of Health Dangerous Drugs Department Director Safa' Blaibleh developed a protocol for dispensing narcotic drugs and psychotropic substances in hospitals and health centers, which was then accredited by the minister of health and distributed to private sector hospitals and health centers in booklet form.

24. Bethlehem Arab Society for Rehabilitation, Nablus Association for Social and Community Development/Askar Camp, Four Homes of Mercy, Palestine Save the Children Foundation, Al-Makassed Hospital, St. John Eye Hospital, and Holy Family Hospital.

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STORY: Mothers are admitted alongside their children at the Jerusalem Princess Basma Center for Disabled Children and learn to care for their disabled children and help them integrate into their communities, with USAID's support.

to move toward financial sustainability by making their service management more efficient.[25] Based on self-assessments, the NGOs created five-year plans for institutional development, guided by internal change agents identified and trained by the project on key governance, planning, financial management, and administrative skills. The USAID mid-term evaluation described this approach as an "effective model" for the project's NGO partners and noted anecdotal evidence of sustainable impact, including one grantee's description of the project's support as having "a real strengthening impact for a small NGO in the long run." Additionally, the grantee credited the capacity building training and grant assistance as enabling him to develop income streams to continue the funded activities upon grant closure.[26] (See Chapter Two. Promising Practice No. 6 and Chapter Three. Recommendation No. 4.)

In Year 4, the project continued to work with these grantees to strengthen their capacity to identify and respond to funding proposals. The approach, consistent with USAID Forward principles, sought to give the grantees the tools they needed to explore funding options that best fit their organization. The project provided a two-day workshop for 13 grantees on responding effectively to solicitations and developing successful proposals. The project provided the NGOs with tools to enhance their ability to secure funds from available resources, particularly important

25. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project – Mid-term Evaluation (December 2010), pps. 76-81.

26. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project – Mid-term Evaluation (December 2010), p. 80.

STORY: **"I feel much more confident in our ability to assist (our premature babies) knowing this equipment is here. Our main goal is to manage our premature babies, keep them growing and thriving until discharge," said Suha Awadha, NICU nurse, Al-Makassed Hospital. The NGO hospital in Jerusalem, which is a Ministry of Health referral hospital, received a high-frequency ventilator for premature newborns and pediatric patients from the project.**

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in the context of limited Palestinian Authority resources.

PROMISING PRACTICES

1. **Enabling the Ministry of Health to take the lead in assessing and planning for sector-wide reform and development.** To further the ministry's reform process and initiate its own implementation, the project worked with the ministry to assess the public health system and prioritize areas for interventions, following the six areas of health systems strengthening established by the WHO.[27] In recognition of the ministry's commitment to reform, the project tailored the USAID Health Systems 20/20 Assessment Approach tool for the ministry within the Palestinian context, shifting its focus from external use (by short-term international consultants) to internal use (by ministry staff). This modification provided the ministry with a sophisticated, yet responsive, guide to assessing its needs and was commended by USAID in the mid-term evaluation.[28]

   The success of the assessment goes beyond the critical identification of priority reform needs of the Palestinian health sector. The process resulted in an unprecedented participation of staff at the district and health facility level, in line with the project's focus on

27. World Health Organization. "Everybody's Business: Strengthening Health Systems to Improve Health Outcomes." 2007.

28. The project was commended by the USAID mid-term evaluation for having the ministry do a self-assessment, rather than sending in a team of outside consultants: USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project: Mid-term Evaluation (December 2010), p.82.

capacity-building and decentralization. The process also enabled ministry staff to take a critical look at the system and their role in strengthening it, motivating them to produce a multi-year institutional development plan. The creation of a plan based on the self-assessment empowered the ministry to define roles and responsibilities of health system actors and develop an action plan to address gaps in system efficacy.[29]

Based on priorities identified in the self-assessment, the project supported the ministry in developing health planning guides and tools, including the EPS. In addition to the EPS' use as standards of care for PHCs, it is used for evaluating and planning for services at the district and facility level. This was one of the first such standards adopted and disseminated throughout all PHC. The project also used the health facility assessment (which identified the resources clinics need to correspond with the EPS), and the Champion Community Approach (which solicits citizen feedback through open dialogue sessions and community-clinic boards). (For more information, see Chapter Three. Improving High-Quality Services.) The tools have had demonstrated success in reforming and developing the ministry's health planning processes.

2. **Modeling unified PHC planning practices through project interventions.** The ministry provided the Palestinian health sector with a new PHC quality framework when it developed and adopted the EPS with project support. Although the EPS was formally adopted in Year 4, the project used the draft package to guide its interventions in improving PHC quality throughout its life. For instance, the project used the draft EPS to develop the health facility assessment, which was used by the ministry and the project to assess and select clinics for the integrated PHC interventions. In addition, procurement needs were assessed and verified against a checklist based on the EPS. This modeling of the EPS as a strategic planning standard demonstrated its cross-sector relevancy and promoted the ministry's practice with and ownership of the tool prior to its formal adoption.

3. **Modeling best practices in project procurement to institutionalize Ministry of Health reforms in the procurement process.** The USAID mid-term evaluation described the project's model of coordination, training, and follow-up on the correct use and maintenance of the equipment procured as a best practice among USAID projects. It noted that the process was "a good learning experience for the Ministry of Health

29. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project: Mid-term Evaluation (December 2010), p.92.

in how to conduct procurement in a transparent and coordinated way."[30] From its beginning, the project used procurement as a technical reform tool by establishing a rigorous, transparent, and collaborative process for procuring medical supplies and commodities for the ministry. The project ensured that procurement was needs-based, verified by ministry biomedical engineering staff, coordinated with stakeholders, and transparent. The project worked to ensure the sustainable and effective use of procured equipment by integrating preventive maintenance into all procurement activities, with all vendors mandated to provide preventive maintenance and training on preventive maintenance, and providing clinical training for ministry staff using the newly procured devices.

4. **Creating a comparative baseline of facility costs to indicate the financial impact of the HIS.** The assessment of the financial impact of the HIS on Rafidia Hospital revealed where the hospital was experiencing cost savings. The ministry can use this study as a guide in developing comparative baselines for measuring HIS impact on individual facilities, as well as the wider system. At the time of writing, estimates of the financial impact of the HIS were difficult to measure accurately, given the limitations of existing recordkeeping and challenges of the current fiscal environment. In addition, major savings cannot be expected until the data supplied by the HIS are more directly incorporated into ministry administrative and planning processes (especially pharmaceutical procurement). To support the ministry in this effort, the project conducted baseline assessments at the five new hospitals connected to the HIS in Year 6 to establish baselines against which the impact of the HIS can be measured. One of the three indicators was annual net cash flow (measured by financial records analysis). In the coming year, the ministry will be able to use the baseline assessment to measure financial impact of the HIS on these five hospitals.[31] The project was able to use the study and the subsequent impact analysis of the HIS on the ministry to identify further reform interventions needed to promote its capacity to use the HIS as an effective management tool. (See Chapter Two. Lesson Learned No. 2.)

5. **A) Identifying (mid-level) "change agents" when reforming management practices.** Mid-level managers were the most active agents of change during the project, because they were able to apply and see an

30. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project – Mid-term Evaluation (December 2010), p. 80.

31. The other two assessment indicators were unit heads' satisfaction with information (measured by a survey questionnaire) and patient time (measured by patient-administered time stamp cards).

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STORY: **"So many of our staff have been isolated from improving their medical knowledge, with limited access to travel or continuing education…these workshops are invaluable to updating essential knowledge of our staff," said Dr. Hassan Fitian, Rafidia NICU director.**

immediate benefit of the tools developed through the project. As a result, they continued to use, develop, and institutionalize the tools. Nursing supervisors in the Nablus and Qalqilya PHC districts have adopted the project's community mobilization approach and initiated their own Champion Communities to engage other villages in improving their health services. Similarly, hospital management acted as "champions" in promoting HIS use and argued for the system's expansion across the ministry, citing rapid improvements in efficiency, cost-savings, and accountability. (See Chapter Three. Improving High-Quality Services.) The project also engaged senior leadership to foster buy-in to the changes from mid-level management. However, as noted in Chapter Two. Lessons Learned, political will for system change was inconsistent, and the system's impact was occasionally limited by insufficient contextual support. **B) Empowering change agents to lead in institutional development as an effective model for the NGO sector.** The mid-term evaluators reported that the NGO hospital providers who received institutional development support were unanimously positive about the support and training provided by the project, as part of its support for the NGO sector. The evaluators concluded that the project approach — identifying change agents in an organization and leading the organization through self-assessment — was effective and successful and should be expanded.[32]

32. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project: Mid-term Evaluation (December 2010), p. 79.

STORY: "Words cannot express my gratitude. Now I truly feel when my eyes open up, it's as if I am opening up to life. Everything is so much more colorful, vibrant, and alive." Ahmed Abed Elal, a high school student from Gaza, underwent cataract removal surgery in both eyes at St. John Eye Hospital Clinic in Gaza, using the phacoemulsification machine procured by the project. Ahmed suffered from blurred vision since birth, but surgery restored his vision.

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6. **Using practical training approaches to create immediate and sustainable changes in practices and environment.** Practical training approaches, like on-the-job coaching (OJC) or mentoring, enable individuals to build their skills in direct response to the needs of their professional environment. The project adopted a practical approach to clinical and operational training whenever possible, including in hospital costing, procurement inventory, NICU services, preventive maintenance, and PHC performance improvement. The project also modeled to PHC supervisors the use of OJC as a supportive supervision tool.

LESSONS LEARNED

1. **Sector-wide reform was an ambitious mandate for a five-year project.** The project supported the ministry in designing an IDP that responded to its sector-wide priorities identified through the ministry's self-assessment. The USAID mid-term evaluation described the process as "a valuable exercise in terms of capacity building and promoting ownership."[33] However, as a sector-wide plan, the scope of the IDP was beyond the project's timeframe and resources. In the last two years, USAID directed the project to narrow its focus to key ministry priorities in which impact was already apparent. However, before the reduction in scope, the project supported the ministry in developing strategic plans and resources for other technical priorities that can guide future health sector reform, including the PMC,

33. USAID/West Bank and Gaza: Health Sector Reform and Development Flagship Project: Mid-term Evaluation (December 2010), p. 5.

secondary health care (SHC) medical waste management, health insurance, emergency preparedness, CHCE, leadership development, visiting professionals, and a donor intervention archive. (See Chapter Two. Recommendation No. 5.)

2. **The Ministry of Health needs to continue to build capacity to realize the potential of the HIS.** The HIS's impact can be expanded as the ministry gains the confidence of the cultural shift toward data for decision-making. The project's ability to work hand in hand with the ministry to introduce a foundation for an electronic HIS has been tremendous; however, continued support for capacity building is needed. As noted above, the HIS has resulted in a tangible change to management practices at the ministry, particularly in Rafidia Hospital, leading to greater efficiencies and cost savings. However, hospital managers were not always able to maximize the system's potential because they lacked the capacity to do trend analysis and budget forecasting on date-to-day activities from on the data collected by HIS. Engaging hospital administrators in using reports generated from the system on a weekly basis and strengthening the ministry's headquarters staff to use the data routinely will engender a more confident ministry team working with the HIS system.

3. **The impact of training is greater when follow-up creates an enabling environment.** Training was at the core of the project and the core of the interventions to strengthen institutional capacity and improve performance in the Palestinian health sector. The project provided training on leadership, management, finances, monitoring and reporting, and clinical topics, designed to impart new skills and refresh existing competencies. Project analysis found that its training program was effective in meeting the unique training needs of diverse groups, including health providers, managers, community members, and journalists. More than 85 percent of trainees were able to apply what they learned, including sharing knowledge, from training to the use of tools developed during or after training. However, trainees also reported barriers, including limited availability of medicines, equipment, and electricity at facilities; weak administrative support (at the facility level); an overwhelming number of patients (at the clinic level); and insufficient awareness campaigns (at the community level). The identification of barriers at various levels serves as a reminder that, in addition to providing training, follow-up is required across all levels to prepare the ground for application of training by trainees.

4. **The time was not right for USAID's support of the Palestine Medical Complex (PMC).** The project supported the ministry in creating the PMC from what were previously four independent medical facilities. In Year 2, the project

provided the ministry with a strategic assessment of the separate management structures to enable it to plan for integration of the facilities. Bylaws were created for the PMC and were endorsed by the minister. Also created was a guide for hospital management and operations for the complex that defines the organizational structure and job descriptions. (Both products can also be used in other ministry hospitals and can serve as a reference for its hospital management.) However, a decision was made to suspend its support for the PMC and, following guidance from USAID, the project shifted its technical focus away from support for the PMC management capacity.

5. **The impact on health systems in Gaza is limited by the regulatory and political context.** The project's original technical plans for implementation in Gaza focused on improving the quality of health services provided by NGOs, primarily through institutional capacity building, grant support, and procurement. However, restrictions on access to Gaza for project staff and procured commodities, conflict-related suspension of activities, and the limited pool of eligible NGO partners resulted in the project narrowing its technical approach to focus on grant support for rehabilitative health services and procurement for select health institutions. Access restrictions made it difficult for the project to provide the regular monitoring and hands-on support provided to non-Gaza grantees or the comprehensive procurement approach (described above), although project staff visited as frequently as permitted. Despite these restrictions, the project was able to significantly upgrade and create new rehabilitation and referral services available to the population of more than 1.6 million, through $273,600 in grants and $1.63 million in medical procurement for select NGO health providers. (See Chapter Three. Improving High-Quality Services.)

6. **Data quality is a critical foundation for effective health data analytics.** In Year 6, the project built the ministry's managerial capacity to understand and use HIS data analytics to improve health services. The project provided the ministry with a comprehensive managerial reporting tool to model the use of data analysis for assessing health service quality and efficiency, identifying at the same time gaps or deficiencies in service delivery. Because data analysis depends on the quality of collected data, the project identified ICD-10CM[34] coding as a source of data weakness for HIS data quality. The ministry must ensure that system users are trained on and motivated in their collection of high-quality data to prevent poor data qual-

34. International Classification of Diseases – 10 Clinical Modification.

ity from limiting the scope and sustainability of the HIS as a performance evaluation tool.

7. **Ministry of Health leaders have not fully integrated the HIS into their management of health services.** By the end of Year 6, the project identified a lack of appetite for and buy-in from the ministry management for data-driven approaches to health management. This low level of interest affected the data quality efforts.

RECOMMENDATIONS

1. **A) Continue to institutionalize HIS as a national health management system** through sustaining the multi-pronged investment in integration/roll-out at facility level; expanding its coverage to non-ministry facilities (using the USAID-funded open license); strengthening leadership use for analysis, reporting, and budgeting; and continuing cross-health sector dialogue/ownership in preparation for a potential future national rollout. **B) Build the capacity of Ministry of Health central institutions to use HIS for strategic planning,** particularly in monitoring of service performance indicators and use of data-analytical tools provided in Year 6. As noted in Chapter Two. Lesson Learned No. 2, the ministry needs to strengthen its capacity to use the HIS in its budgeting and procurement processes to realize the reform potential of the HIS. The capacity of the ministry's Health Information Department to use the HIS also needs to be continually enhanced, preferably through systems-building support. **C) Increase district-level manager support for the HIS installed at PHC clinics.** The HIS is currently operational at eight PHC clinics in the West Bank. The follow-up and oversight of system use by PHC district management is critical to ensure the successful continuation of its use by PHC staff.

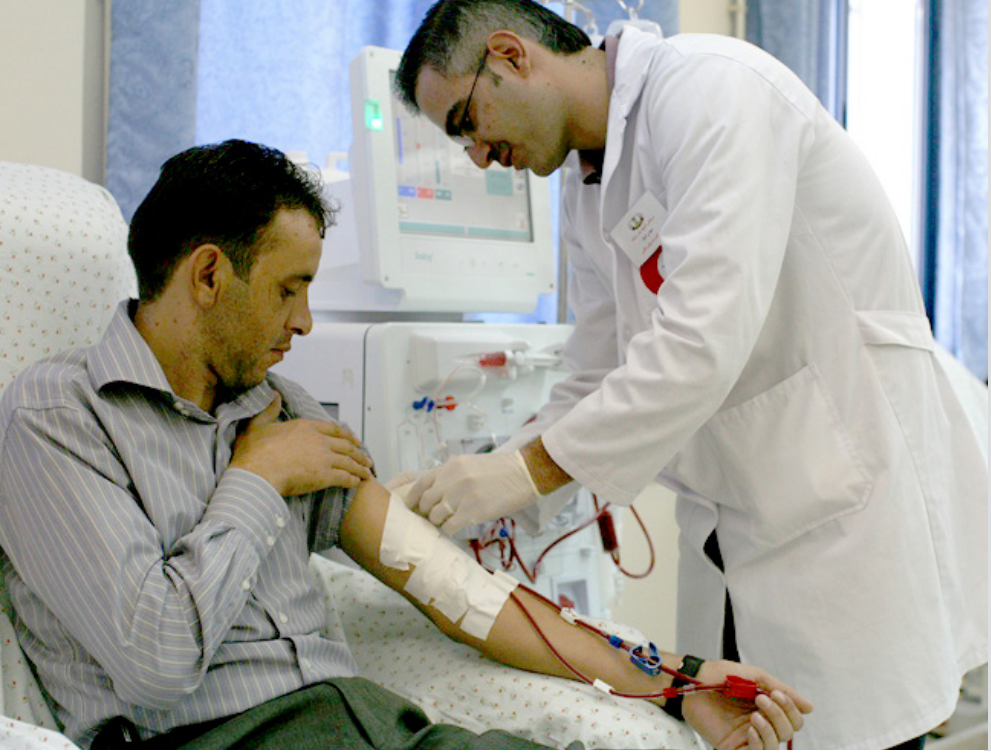
2. **Strengthen the capacity of the National Calibration and Training Center** to institutionalize strategic procurement and preventive maintenance practices across the ministry. Continued investment in the NCTC will also support the ministry in activating its regulation of medical devices across the health sector, which will be a key criterion for accreditation and licensing of health sector facilities. Needs listed by the ministry for activating the NCTC as a sustainable and ministry-wide resource include a greater mandate to supervise biomedical engineers based in its facilities and more physical resources (e.g., spare parts and transportation).

3. **Facilitate operationalization of the EPS and SOC as tools for planning for PHC service delivery.** Possible institutionalizing mechanisms include continued training/OJC at the central and district levels and mobilization of communities to use the EPS as a citizen-focused list of mandated ministry services and the SOC as a guide for management and improvement of these services.

4. **Continue a multi-sectoral approach to foster coordination in planning and delivery of health services nationwide.** Including other health sector stakeholders in ministry-led development and reform initiatives promotes their sustainability by ensuring their immediate relevance to non-ministry health providers. Ministry priorities that would benefit from continued coordination with multiple stakeholders include completion of the HIS, community mobilization around PHC services, dissemination of and training on the EPS and SOC, regulation of CHCE, and finalization of the National Emergency Plan.

5. **Create a resource library at the Ministry of Health for ministry planning and donor interventions.** The project supported design and establishment of a resource library for the ministry before the reduction in scope in Year 4. Since the library's establishment in 1994, ministry staff, experts, and international donors and consultants have written documents, guides, training materials, and presentations that are decentralized across the organization. The lack of a centralized knowledge management system limits the use of such data and sharing of information to avoid duplication by other donor-supported interventions. The project recommends that the ministry establish a resource library that would house all key documentation, training materials, presentations, research, and reports in a cataloged and systematic manner to be maintained and easily searchable by ministry staff, consultants, and international donors.

6. **Build on the adoption of community health worker CHCE criteria** by providing bridging training to existing community health workers to enable them to apply for formal recognition. In 2012, more than 200 women took the first professional accreditation examination for community health workers delivered by the ministry. Many more community health workers remain uncertified and lack the training to help them prepare for the examination. The project recommends that community health workers be encouraged and prepared for accreditation to expand their role in supporting the ministry's community outreach, particularly after the end-of-project-supported community health mobilization.



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STORY: **Through project-supported coordination, Al-Makassed NGO Hospital donated a hemodialysis machine to the ministry's Salfit Kidney Unit. "The donation of the device came at the right time and place… This is a beautiful example of the strengthening of the NGO sector with the public, not as competitors, but using available resources at a national level," said Salfit Hospital Director Dr. Ghassan Barakat.**

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The focus on improving quality of service at primary health care facilities led the ministry in establishing triage areas in the emergency rooms in Palestine Medical Complex, a key emergency service center in the West Bank.

CHAPTER THREE

IMPROVING HIGH-QUALITY SERVICES

CULTURE OF QUALITY IN PRIMARY HEALTH CARE CREATED

Improving the quality of health services at the PHC level is fundamental to strengthening the health system as a whole. The project triggered immediate improvements in the quality of care by activating PHC and citizen leadership to improve Ministry of Health services through an integrated multi-sectoral approach, centered on enabling PHC staff to plan for and provide responsive services, equipping clinics with essential medical supplies, strengthening the level of community involvement in clinics, and enhancing coordination among health service providers.

The project introduced an integrated quality improvement program for delivery of an essential package of primary care services, achieving tangible results in the quality of care provided by motivated supervisors, enthusiastic clinic staff, and passionate citizen advocates. An end-of-project assessment of clinics that received the comprehensive support found that they improved an average of 52 percent against quality improvement indicators.[35]

35. The quality of care improved most in PHC directorates that experienced concurrent project support to the clinic and community mobilization, as explained in Chapter Three. Promising Practice No. 1. For instance, the project provided clinics in the Toubas and Salfit directorates with the full spectrum of quality interventions without the funding-related interruptions experienced in other directorates. Clinics assessed in those two districts improved an average of 52 percent compared to before project interventions, compared to 22 percent in clinics in Hebron, where funding holds resulted in activity suspensions.

As noted by program evaluators, the project's quality improvement initiatives created a culture of quality at the facility level, which can now be built on to develop a quality improvement framework. (See Chapter Three. Recommendation No. 7.)

The project supported the ministry in producing national guidelines for quality improvement in PHC services, including the EPS, SOC, protocols, and job aids. (See Chapter Two. Regulation of National Health Care Strengthened.) Following formal adoption of the guidelines by the ministry in Year 4, ministry supervisors planned and initiated rollout of the guidelines to more than 460 clinics across the West Bank. The project supported the rollout in five directorates before it suspended its PHC interventions in Year 5. In those directorates, PHC supervisors conducted orientation workshops for all PHC staff, with 627 clinic staff participating.

Building on these quality guidelines, the project used a comprehensive and integrated approach to strengthening, improving, and sustaining the quality of essential PHC services. Launched in the Nablus directorates and then rolled out to all 12 West Bank directorates, the project's collaborative **supportive supervision** approach took PHC supervisors into the field to identify vulner-

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POSTER: **Communities led grassroots health reform. Through the Champion Community program, citizens in the West Bank are finding sustainable solutions to community health needs by partnering with the Ministry of Health.**

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STORY: "I used to focus on the negative and berate staff on what they were doing wrong. Now, we are building trust between the ministry, clinics, and communities, sharing new skills and communicating," said Hanan Al-Salous, Nablus PHC supervisor.

able communities, evaluate service gaps against the EPS, develop action plans, and mobilize citizens to join their service improvement initiatives.

Supervisors coached clinic staff on implementing the new service standards and protocols, using new and updated health information provided in the EPS, SOC, and job aids provided through the project. These focused on IPC and the models of care for NCDs, such as diabetes, hypertension, and cardiovascular disease. Citizens noticed; 54 percent more of those surveyed felt that their treatment provider was professional, 30 percent more were treated in privacy, 69 percent more felt they had been treated courteously, 60 percent more felt they were able to ask questions, and 67 percent more felt that their questions had been answered clearly.[36]

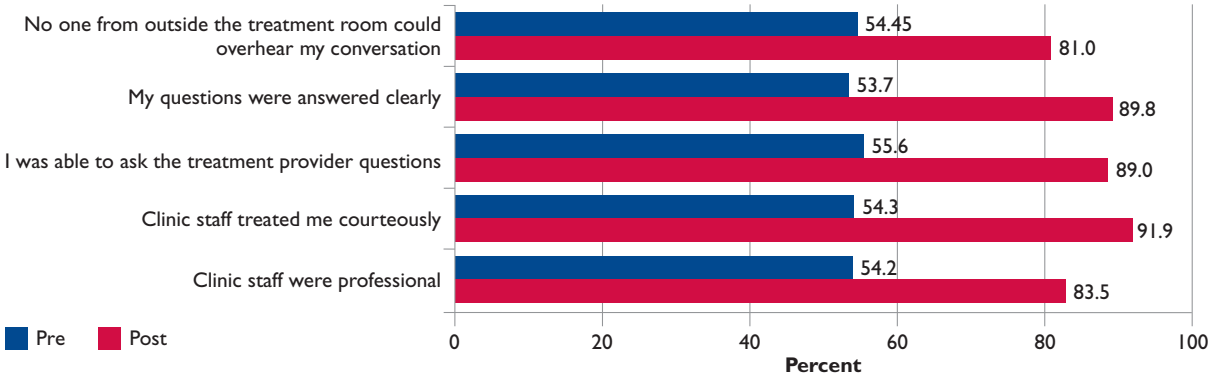
Through formal training and follow-up OJC, the project worked with PHC supervisors to provide assistance and support to staff at the clinics that help them solve problems, improve performance, provide on-the-job training, and most importantly, build a trusting relationship that allows supervisors to conduct these visits to support, coach, and be a resource for clinic staff to allow them to reach higher performance standards.

Throughout the life of the project, 1,064 PHC health professionals received formal training on such topics as supportive supervision, NCDs, first aid training for trainers, basic life support and advanced cardiac

36 The client satisfaction survey was one of two pre-/post-surveys conducted by the project to evaluate implementation of its integrated PHC interventions. For further information, see Annex 4.

CHART 3. CLIENT SATISFACTION WITH MINISTRY OF HEALTH PHC SERVICES

People surveyed: 363 pre-HIS, 383 post-HIS



life support, IPC, electrocardiogram use, mammography use and interpretation, and leadership. A total of 350 people at more than 50 PHC clinics received OJC by project staff on such topics as IPC, diabetes mellitus, and hypertension.

The project supported integration of the EPS and SOC at the community level by procuring nearly $2.5 million in **essential medical equipment and supplies** for 156 PHC clinics, with clinical and operational training provided to ensure effective utilization. As a result, the ministry was able to upgrade PHC services, implement the newly adopted EPS and SOC, and respond to community requests for new services. Clinics are now able to offer services that correspond to their designated level. For example, the clinic in Sabastya offers testing services in accordance with its Level 2 classification, with newly installed laboratory equipment. The delivery of equipment required for services outlined in the EPS and SOC, such as chemistry analyzers and NCD blood tests, enables clinic staff to comply with the new publicly available guidelines and standards. Directorate services were also enhanced through installation of pharmaceutical cold rooms in seven PHC directorate clinics to ensure the functioning of the cold chain system, thereby maintaining an efficient vaccination schedule and safe storage of temperature-sensitive drugs and vaccines.

The impact has been significant in remote rural areas, where citizens have limited access to medical services. Clinic staff use the equipment to streamline medical checks on waiting patients. As a result, more patients are returning to follow through on health checks and treatment because they can receive more services more quickly and accurately in their own community. When surveyed, 89 percent of clients said they would return to their PHC clinic for health care, compared to 55 percent before the project's interventions. More than 86 percent said they would recommend the clinic to their

friends and family, compared to 54 percent before.

The project also worked with the ministry to strengthen and prioritize delivery of breast cancer-related services to overcome cultural taboos about discussing the disease and inspire women to take control of their health and their lives. The project augmented the ministry's capacity for **early breast cancer detection** at the PHC level with advanced screening methods. Mammography equipment was installed in six PHC centers across the West Bank in the Bethlehem, Hebron, Jericho, Jerusalem, Qalqilya, and Toubas health directorates. In accordance with the project's procurement approach, effective use of the equipment was ensured through follow-on training, and OJC was provided for mammography technicians and nurses. (See Chapter Three. Promising Practice No. 3.)

The project connected eight key PHC clinics in four directorates to the local hospital through the HIS. PHC directorate staff described the HIS system as a technological breakthrough that minimizes paperwork and allows for better archiving of patients' files. They also noted that the system allows management to better supervise staff and performance. About 82 percent of PHC staff surveyed said the HIS helped or-

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STORY: **"I feel better knowing I can get the care I need nearby and now have more energy to play with my children," said diabetic patient Nuaf Snobar. Diabetic patients are now able to receive regular specialized counseling and check-ups through their PHC clinics.**

VIDEO: **"With support of international organizations and support from USAID, we have equipment to provide early-detection mammograms across all parts of the nation. As we're talking about 40 percent (of women) who can be diagnosed early on and given treatment, it has become part of our duty and commitment (to care for these women). We believe prevention is part of the treatment," said Assad Ramlawi, PHC director general.**

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ganize information relating to the clinic operations, while 74 percent said the HIS gave them easier access to this information.[37]

The project actively engaged communities to ensure that clinics respond to the specific needs of the communities they serve by working with the ministry to establish the **Champion Community Approach**. This community-centered approach gives the opportunity for district health supervisors, community leaders, citizens, and volunteers to work together to improve health services in their communities and systematically address public health priorities.

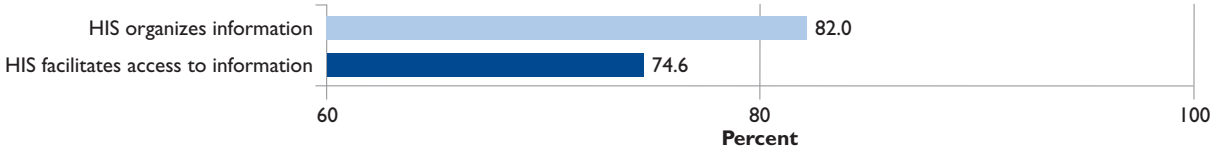
The approach was established in 83 communities in all 12 health directorates, led by community-based organizations (CBOs) subcontracted by the project to work with the ministry in mobilizing local residents. With the support of the CBOs, citizens, clinic staff, and district supervisors formed community-clinic boards to identify health needs and develop community health action plans focused on promoting healthy living. In partnership with their local Ministry of Health clinics, the community-clinic boards conducted health education, health screening, and environmental-awareness campaigns on topics such as NCDs, women's and children's health, and environmental health.

The approach led to increased citizen participation in and advocacy for health and created a feedback mechanism on the effectiveness of the health system. The Champion Community Approach built community capacity to self-identify

37. "Assessing the Effectiveness of the Palestinian Ministry of Health, Health Information System," Alpha International (2013 and 2014).

CHART 4. HIS IMPACT ON AVAILABILITY OF PHC INFORMATION

78 people surveyed at 3 PHC clinics



priorities, needs, resources, and solutions, in such a way as to promote representative participation, good governance, accountability, and change. As citizens pushed forward with requests for new services, ministry district managers gained experience in using the EPS to plan new services, better allocate resources, and expand overall access to clinics. When community-clinic boards complained about limited clinic staff and equipment, the ministry responded by rotating doctors more frequently through the clinics and hiring additional staff to ease the administrative burden on nurses.

Communities reported feeling more "in touch" with the ministry and more empowered to communicate directly with them about needs. For example, after requests

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VIDEO: **"Community coordinators are supporting clinic staff in making tangible changes through health education. I go to people's homes and introduce the services at the clinic. I tell them they should take advantage of the health services offered by their ministry," said Haya Awisa, Champion Community coordinator.**

STORY: **"We reach everyone because the young users tell their families. Old women come to tell us they heard about us via Facebook," said Areen Jenazreh, Wadi Al-Fara'a, Hebron PHC Directorate. Communities participating in the project's Champion Community Approach have also increased citizen access to cancer services by hosting screening events. For instance, Bani Naim, a village in Hebron, hosted a multi-day breast screening event in partnership with Augusta Victoria Hospital's mobile clinic.**

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from residents in Urif (Nablus), the ministry added women's health services to the clinic using portable ultrasounds requested from the project. In other communities, the ministry moved clinics to more accessible locations and increased doctors' visits to remote clinics.

Communities demonstrated increased knowledge and awareness of ministry services. Health education activities soared, from only two or three times a year to as many as multiple activities each week, reaching hundreds of people a day. Community health coordinators working with the community-clinic boards extended the reach of PHC services significantly.

The coordinators held educational sessions on busy clinic days so the volunteers could speak with residents waiting to see clinic staff and made home visits to distribute behavior change communications materials and encourage clinic visits. The community-clinic boards held community health days, at which residents learned about healthy lifestyles, received screenings by health professionals from the ministry and other health providers, and were encouraged to seek follow-up care.

With project encouragement, the community-clinic boards used social media to increase citizen participation in their community health activities, with more than a third (30) of the Champion Communities creating Facebook pages by Year 5. With its focus on networking, Facebook was well-suited to the Champion Community Approach, which emphasizes community-driven PHC reform. Announcements for health activities organized by the boards (e.g., health screenings, clean-up campaigns, or health education) were frequently posted, and advanced medical services, such as

cancer screenings, were promoted through Facebook.

Social media provided the community-clinic boards with an efficient and wide-reaching communications tool, instantly accessible even in large communities and unrestricted by social restrictions common in conservative rural communities. Community pages even attracted attention and support from abroad, with one community-clinic board raising financial donations from expatriate residents through its Facebook page.

More than 1 million (1,352,327) participants benefited from activities carried out through the Champion Community Approach, while more than 1,000 community volunteers were mobilized across the West Bank to conduct a variety of health and environmental awareness campaigns and outreach. An estimated $373,753 in local community contributions was leveraged in support of community-based health activities and in support of the local PHC clinic. Seven communities in four districts were awarded the title Champion Community and received second subcontracts.

Sustainability of the Champion Community Approach was demonstrated in Year 4, when the Ministry of Health and four communities across the West Bank independently conducted

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STORY: "When I saw how much (the Ministry of Health) had achieved and how hard the communities worked, I thought others could do the same. We just need to give them the opportunity," said Marwa Dimyati, PHC nursing supervisor, Nablus Directorate.

community mobilization. The ministry piloted its own Champion Community initiative in the Nablus PHC Directorate in Beit Imreen. Working directly with the community, the ministry led formation of a community-clinic board to identify local health priorities.

The new board quickly leveraged community engagement to re-paint the clinic and conduct health-awareness activities. Through the ministry's directorate staff, the Beit Imreen board communicated and collaborated with the nearby project-initiated Champion Communities of Al-Naqura, Burqa, and Sabastya. Communities also expanded their mobilization efforts, without direct support from the project. For example, the CBO and the local ministry clinic in Burin (Nablus) invited two surrounding communities to join their activities and a joint community-clinic board was formed that now coordinates health campaigns.

Health and non-health professionals play an essential role in disseminating **behavior change communications** to clients and the community, which is critical to enhancing the impact of clinical and community-based health service delivery.

With project support, the ministry's Health Education and Promotion Department (HEPD) developed a range of materials for

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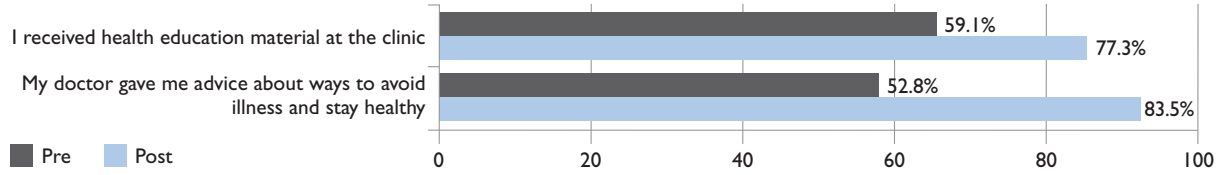
VIDEO: **An animated Ministry of Health spot on precautions to be taken when driving while taking medication (developed in partnership with the USAID Palestinian Authority Capacity Enhancement project) was aired on local television.**

CHART 5. CLIENT SATISFACTION WITH PHC BCC SERVICES

Client survey (Pre = 363 and post = 383)



promotion of healthy living for 15 BCC modules, including NCDs, nutrition, injury and accident prevention, women's health, community first aid, and healthy lifestyles. The radio spots, cartoon episodes, pamphlets, and booklets bolster ministry efforts to improve health care by educating the public on its role in improving health outcomes.

The project also supported the ministry in delivering three annual summer camps in communities participating in the Champion Community Approach, with nearly 3,000 children participating. By Year 4, the healthy living summer camps had grown into a BCC mechanism for reaching the entire community. In addition to teaching children about healthy behavior through fun activities, the ministry trained mothers on proper nutrition, hygiene, and safety to reinforce the basic health messages the children received at the summer camps so they could pass these messages on to their other children and relatives.

The project strengthened the ministry's capacity for wide-reaching, evidence-based health education by developing a BCC guide to train health educators, community health workers, and other health professionals on administering behavior change messages and materials and developing strategic campaigns to institutionalize BCC.

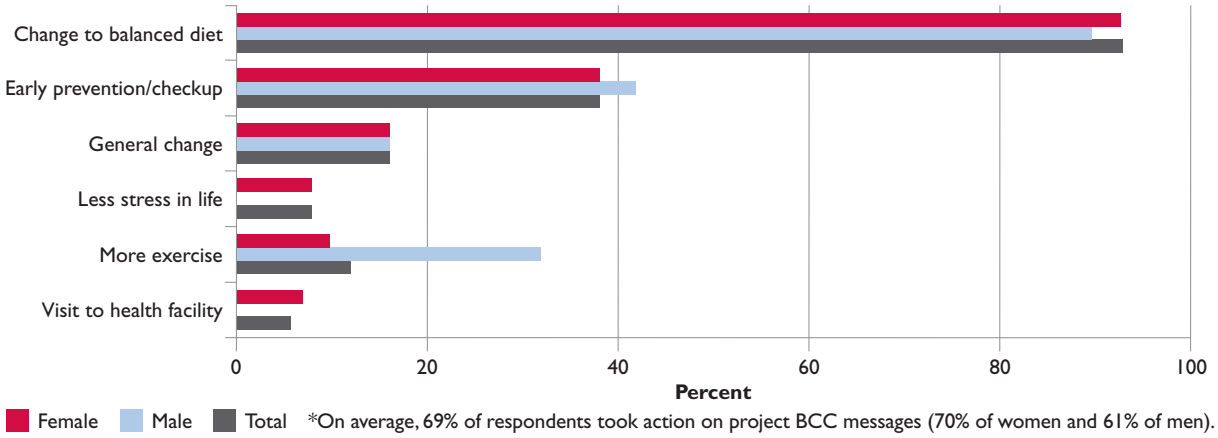
The project found a resulting increase in the provision of health advice to patients during clinic visits. The provision of health education material increased significantly during project interventions, with more than 77 percent of respondents reporting receiving health education material compared to about 59 percent before.[38] Health counseling also improved, with 30 percent more respondents saying that they had received advice on healthy living.

Furthermore, the impact of project-supported health education initiatives was higher than that for BCC materials from any other source, according to a message recall survey on BCC. Respondents had the highest recall for BCC materials funded by the project on healthy lifestyles, women's health,

38. Client satisfaction survey (Year 4). For further information, see Annex 4.

CHART 6. ACTION TAKEN ON PROJECT BCC MESSAGES

People surveyed: BCC follow-up survey (2011)



*On average, 69% of respondents took action on project BCC messages (70% of women and 61% of men).

children's health, and nutrition. Most respondents were exposed to project BCC materials during their visits to ministry clinics. Of the 65 percent of respondents who recalled BCC messages, 69 percent took actions to improve their health and well-being, such as changing to balanced diets, exercising, and visiting health care facilities for screenings and check-ups.[39]

HIS LEADS TO IMPROVED MANAGEMENT PRACTICES

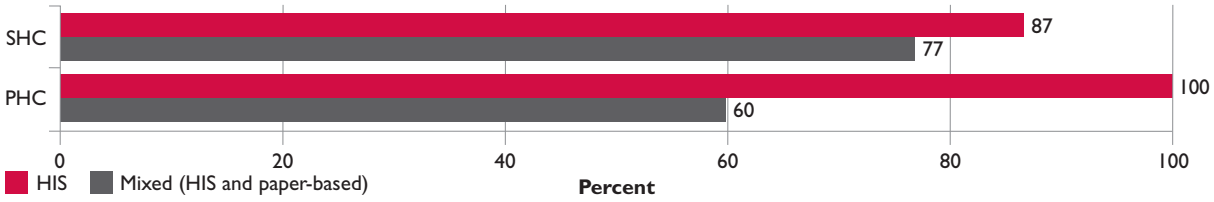
As a result of project support, the Ministry of Health has taken initial steps toward greater management of SHC services through the HIS, more responsive emergency services, and enhanced clinical and leadership skills among nurses. The ministry also introduced new tools for quality improvement and quality of care and expanded diagnostic and treatment services as a result of responsive procurement. The project promoted evidence-based decision-making for planning and provision of health care in select SHC facilities and departments, supported by hands-on training and follow-up.

The ministry is using the **comprehensive HIS** introduced by the project to improve the management and flow of health service delivery to Palestinian citizens. The HIS is a centralized system that has created greater availability of accurate, timely data in two-thirds of the hospitals and several large PHCs. The system standardizes patient administration and management procedures across health facilities. The HIS has improved the perception of

39. Behavior change communications recall survey (Year 3).

CHART 7. MANAGER SATISFACTION WITH INFORMATION SOURCES FOR PATIENT CARE

74 managers surveyed in 2014



in-patient tracking at every level, according to 80 percent of users surveyed.

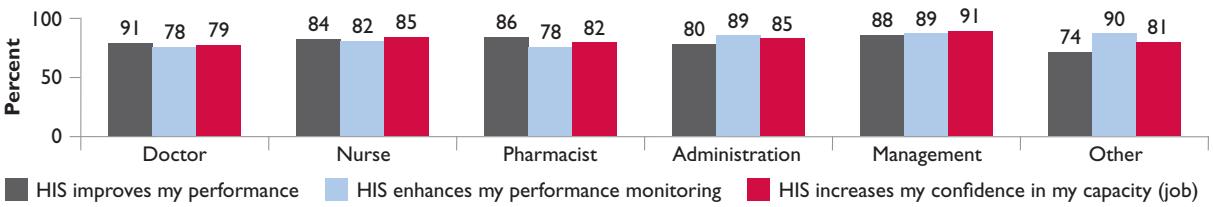
When surveyed, users of the system say it is easier to share information among staff and departments (89 percent) and facilities connected to the system (88 percent). As a result, the ministry can better supervise and evaluate health services through the HIS. Facility managers say the HIS has improved their follow-up on patient care, control of pharmaceutical distribution, and calculation of hospital income. Specifically, the HIS enhances their capacity to retrieve information quickly, follow-up on patient treatment and nutrition, manage patient flow through outpatient clinics, and monitor the performance of hospital departments and staff.

All managers who have to make patient care-related decisions say that patient information is organized, and 80 percent are satisfied with information available for patient care. Managers who have to make patient care-related decisions using the HIS are more satisfied. Satisfaction was highest at the PHC level: 100 percent of PHC managers were satisfied with the HIS, compared to 60 percent who were satisfied with paper-based information sources.

The system provides a tool that allows all professionals involved in a patient's medical care to share information and maintain it in one

CHART 8. USER PERCEPTION OF HIS IMPACT ON PERFORMANCE AND ACCOUNTABILITY

1,136 HIS users surveyed



centralized electronic database. The HIS provides attending medical staff with immediate access to a patient's medical record (within privacy parameters developed by the project), which is especially crucial in emergency situations. Patient information is described as more available and accurate by 88 percent of users, because the system unifies and enhances procedures in recording patient information.

Providers think the HIS improves their management of patient care. The HIS provides clear instructions (89 percent) and enables evidence-based decision-making (87 percent), according to a user survey. Health professionals describe increased confidence in their capacity to carry out their work (78 percent) and an improved ability to provide timely care (78 percent). Managers were the highest to report improved performance and accountability overall, followed by nurses and doctors.

The project enhanced the ministry's capacity to provide high-quality emergency response, particularly by improving emergency facilities, strengthening emergency health skills, and widening strategic planning. One spin-off effect of introducing the HIS was the transformation of emergency rooms from static units into dynamic and integrated hospital divisions.

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STORY: **"Triage training is empowering nurses and is part of (the) process of changing mentality from the community up the referral system. Health reform is not only about reshaping walls, but minds," said Dr. Mazen Abu Gharbieh.**

To this end, the project helped the ministry establish triage areas in the emergency rooms (ERs) at Alia Hospital, the Palestine Medical Complex, and Rafidia Hospital, which are the key emergency service centers in the West Bank. It also supported use of the Emergency Severity Index, which improves patient flow and emergency care by classifying patients according to the acuteness of their injury or illness. Emergency services at the PMC were further streamlined by creation of a fast track for critical cases and a pediatric emergency section. The project provided advanced training for front-line providers: 46 ER staff received Emergency Severity Index triage training, 27 doctors and nurses were trained on trauma life support, and — for the first time — 54 ambulance drivers were trained as first responders.

The project also improved management of the three ERs, in coordination with USAID's Emergency Water and Sanitation (EWAS) II Program, which provided infrastructural renovation. Crowd control policies were established and security personnel at the PMC were trained in managing patient and visitor areas in and around emergency rooms to ensure that medical staff are able to work without interference.

The project supported the ministry to address the scarcity of qualified ER doctors by activating its Emergency Medicine Residency program. The project provided an emergency resident curriculum and resident log books and OJC, mentoring, and bedside training for 15 residents at Alia and Rafidia hospitals and at the PMC. To promote a culture of continuing medical education, the project procured and distributed textbooks on emergency medicine, pediatric medicine, and nursing at the three target hospitals and Ibn Sina College.

The project also assisted the ministry in planning for emergencies at the facility and national levels. With project support, the ministry drafted a national framework for emergency preparedness planning and began developing facility-level plans at Alia Hospital, the PMC, and Rafidia Hospital. Project interventions in these hospitals resulted in development of a structured planning agenda, aligned with district and national plans, which can be replicated at hospitals throughout the West Bank. The project worked to sustain this planning process by supporting the ministry in creating a task force involving local and international stakeholders, such as the Palestine Red Crescent Society and the Palestinian Authority Civil Defense, which clarified their roles and responsibilities.

Despite the fact that nurses serve as the principle caregivers in Ministry of Health hospitals, they have historically not been empowered. The project **empowered nurses** at the central level and the hospital level to develop nursing clinical standards that guide them to becoming active members of interdisciplinary teams of caregivers and to make decisions related to patient care. The project trained nurses to actively lead patient care according to the new standards through practical train-

STORY: "In the past, we would panic when a critical case came to the emergency ward, but with our new technical skills, we are more confident and organized as a team," said Saleh Hajeer, head ER nurse (PMC). Just days after having completed the project's basic life support and advanced cardiac life support courses, Saleh was able to apply his newly learned skills to save the life of a dying woman.

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ing in lifesaving techniques, use of newly procured treatment and diagnostic equipment, management of emergency cases, and communication with patients and families. The project enabled the three targeted hospitals to expand their support to nurses, including activating an in-service training committee and developing a nursing system framework to tackle staffing deficiencies and patient care. The ministry also hosted a series of scientific nursing days to educate and boost the confidence of nurses.

The project provided support in various areas of **quality improvement,** working closely with the ministry's Quality Assurance Department to launch basic best practices to advance ministry support for quality assurance. Using international quality standards such as Joint Commission International standards and World Health Organization Patient Safety Goals, the project supported the ministry in its efforts to adopt and modify selected quality standards. A core group of a number of donors and the ministry has been established to support the ministry in conducting quality improvement activities, such as implementing the World Health Organization Patient Safety Initiative in two target hospitals. This pilot project was the initial project for the ministry in exploring ways to promote a culture of quality assurances best practices.

Project staff provided on-the-job coaching on patient identification, incident reporting, effective communication, and safety improvements for high-alert medications as part of interventions to improve and implement standards related to medication management and use. The project also supported the Ministry of Health in conducting quality improvement activities in laboratory safety, with the project providing a draft Laboratory Quality Manual

to guide hospital management in creating plans for laboratory quality improvements and reviewing related laboratory standards of practice. Other promising achievements in quality improvement, such as formation of medication management and use and IPC committees in all three hospitals, were suspended in Year 4.

The project's quality improvement efforts in hospitals also focused on enhancing the ministry's Nutrition Department. Food and nutrition service assessments were conducted in all 12 ministry hospitals, and reports were submitted to the department to serve as a baseline for creating plans and applying interventions to improve the quality of food and nutrition services in hospitals and ensure uniformity of nutrition services in all facilities. National dietary-based guidelines and a related training program outline were developed and submitted to the ministry to assist department staff in updating their skills and improving the quality of services they provide.

The project enhanced care provided by ministry facilities for newborn babies through an integrated package of quality improvements, bedside coaching, and responsive procurement for neonatal intensive care units. The project focused its support for NICUs on Rafidia Hospital, which experiences a heavy caseload as the central referring

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STORY: **"In the past year, we have seen more upgrades than in decades…this is because of the USAID project and the new direction of the Ministry of Health," said Dr. Hassan Fitian, Rafidia Hospital NICU director.**

NICU center in the northern West Bank.

The project coordinated upgrades to the NICU by USAID EWAS II, procured vital equipment and trained staff on its proper use and preventative maintenance, and provided continuing medical education resources for pediatric care to help staff improve their skills and learn the latest techniques and best practices. The project also introduced a new reference guide for all NICU staff in the Ministry of Health and other health providers by adapting an Egyptian NICU manual for printing and distribution. In the last year of the project, a neonatal working group was created to ensure a direct dialogue among Ministry of Health and NGO hospitals in sharing information and insight of the NICU. The project also invested in future NICU doctors by funding the Holy Family Hospital in Bethlehem to support a neonatal residency rotation for pediatric medical students.

The Ministry of Health highlighted improving its **medical waste management** as a key priority during its 2008 self-assessment. The project responded by providing technical assistance in the assessment of the three targeted hospitals and creation of mitigation plans. EWAS II used the project's assessments of medical waste management in its renovations of the Beit Jala, Jericho, and Rafidia hospitals.

The ministry's diagnostic and treatment services in hospitals were upgraded through needs-based **procurement** of more than $6.28 million in medical equipment by the project. Interventions in pediatrics and emergency medicine at Rafidia Hospital identified critical lifesaving procurement needs. Secondary health care support procurement was provided in the form of high-frequency ventilators, nasal continuous positive airway pressure machines, electrocardiograms, hemodialysis machines, infusion pumps, incubators, orthopedic equipment, defibrillators, CT injectors, and numerous monitoring systems. Training on equipment included formal training and countless OJC sessions at the facility.

Procurement was always supported by operational and clinical training and, where relevant, system development. For instance, the project expanded CT scanning services at the ministry by installing a 64-slice CT scanner at Ramallah Hospital and three 16-slice CT scanners at Alia, Beit Jala, and Rafidia Ministry of Health hospitals. In parallel, the project supported these CT departments with formal and on-the-job capacity building, as well as development of CT department policies and work instructions for hospitals.

As part of the project's comprehensive approach to procurement, training on infant incubator use and coaching on IPC within the NICU was conducted. To tackle continuing IPC at the unit, the project supported the IPC committee at Rafidia Hospital to identify and address causes of the spread of infection, using data collected by the HIS. This was the first time that many com-

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STORY: "No more referring patients to other hospitals. We now have the ability to treat them right here," said Amin Kabha, Ministry of Health CT technician. One of the three 16-slice CT scanners procured by the project is equipped with a cutting-edge ambient experience that provides a relaxing environment during the lengthy scanning process. The ambient experience relaxes the patients, limiting the need for re-scans, therefore increasing safety and saving resources.

mittee members had conducted such analysis, offering them a framework for conducting similar analyses in the future to address clinical challenges that arise.

RESPONSIVE HIGH-QUALITY REFERRAL AND REHABILITATION SERVICES STRENGTHENED

The project improved access for Palestinian citizens to high-quality health care by supporting local NGOs through more than $8.24 million in grants, procurement, and institutional development assistance. Through this support, the project enabled NGOs to provide services not available through the ministry and to provide continuing health education for Palestinian health professionals.

The project provided 21 grants ($1.8 million) to 17 NGOs in the West Bank and Gaza. (See Annex 8.) These grants have strengthened community-based services and built health care service capacity. The impact of the grants program was deepened through complementary procurement and institutional development assistance.

The project's grant program was described by the USAID mid-term evaluation as "an effective mechanism to reach patients in local communities." Evaluators noted that grant assistance had enabled organizational changes that ultimately contributed to systemic change by the grantees. They highlighted as an example the Princess Basma Center for Disabled Children, which has incorporated the outreach activities developed through the project grant into its five-year strategic plan.

The project also assisted seven grantees in moving toward financial sustainability by making their service management more efficient. Based on self-assessments, the NGOs created five-year plans for institutional development,

STORY: **"The USAID grant gave us a new outlook. We expanded our work and developed the capacity of small organizations," said Maha Tarayra, from the Princess Basma Jerusalem Center for Disabled Children. "Before, we had only provided in-patient services." The center can now find and treat disabled children like three-year old Mohammed who was born without a leg and could not walk until he was referred for rehabilitative support through the project-supported outreach program.**

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guided by internal change agents identified and trained by the project in key governance, planning, financial management, and administrative skills.

Thirteen NGOs used the grants to create or expand outreach programs to screen children and adults, provide rehabilitation services in the community, and refer at-risk patients for advanced treatment. The project enlarged the outreach potential of the grants program by connecting its Champion Community partners to the grant-supported outreach, such as the mobile clinics run by St. John of Jerusalem Eye Hospital (for visual screening), the Care for Children with Special Needs Society (for speech and auditory screening), and the Augusta Victoria Hospital (for breast cancer screening), which continued to visit project-supported communities even after the grant closed.

Overall satisfaction with the grants program was almost universal, according to beneficiary assessments conducted by the project.[40] A total of 93 percent of beneficiaries surveyed said they were satisfied with the quality of services they received from the grantees. Nearly 90 percent reported improved health as a result of the grantee services. More than 87 percent of grantee beneficiaries surveyed said they had been educated on home-based rehabilitative care, either for themselves or their dependents, with a significant impact on their capacity to proactively cope with the challenges they faced. Beneficiaries are

40. The project evaluated the impact of its grants program on rehabilitative services available to the Palestinian people by conducting two rounds of grantee beneficiary satisfaction assessments. For more information, see Annex 4.

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VIDEO: **"We've been able to enter and screen children at schools in larger numbers. Before, we could only target 4,000 children. Now we can reach 8,500 children. As a result, children with difficulties in speaking and hearing, those suffering from cerebral palsy or other learning disabilities, are referred to the center for services, and the number of children benefiting from the services provided at the center dramatically increased," said Sirab Malhas, director of care for children with special needs.**

now more empowered. A majority of respondents have greater confidence and knowledge as a result of their project-supported experience (64 percent). Nearly all respondents (94 percent) would recommend the facility to others seeking treatment, and 95 percent said they would return to the grantee if further treatment was needed.

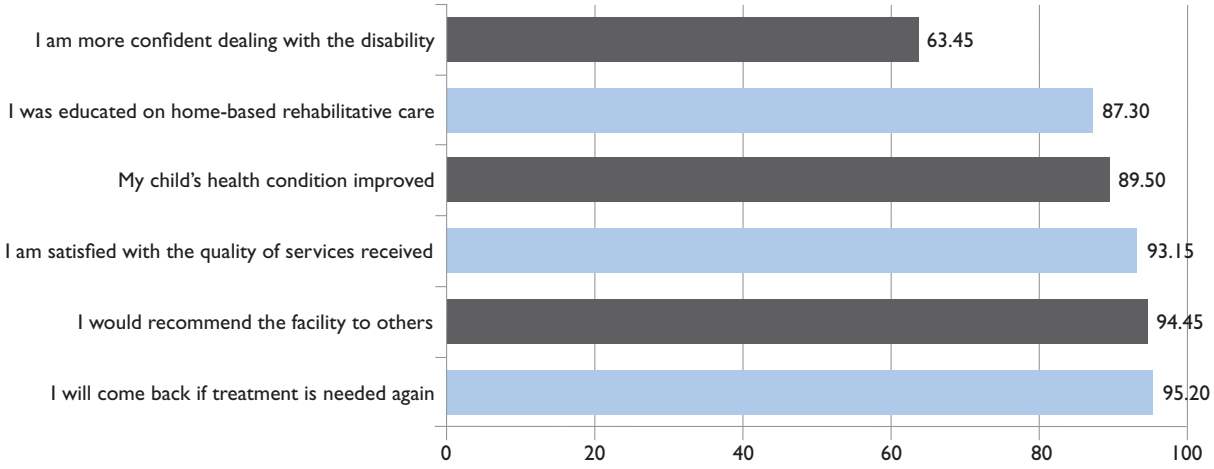
The remaining grants to four NGOs enabled Palestinians to access advanced orthopedic treatment through the Ministry of Health (Al-Makassed Hospital), support residents at the first neonatal residency program (Holy Family Hospital), and support continuing medical education (Al-Quds Open University and Al-Ahli Hospital).

To complement its grants program, the project improved health services at 15 NGOs by procuring more than $7.2 million in specialized medical equipment and supplies. Almost all the procurement for NGOs supported grantees; the project supported nine of the 17 grantees through more than $6.8 million in procurement.[41] Using the equipment, the NGOs were able to expand services (e.g., screening for visual disability at Jabalia Rehabilitation Society), introduce new services (e.g., advanced surgery at St. John Eye Hospital Clinic in Gaza and Al-Makassed Hospital), and improve rehabilitation for Palestinians with special needs (e.g., physiotherapy at Palestine Save the Children). Through its procurement to grantees, the proj-

41. The total value of procurement for NGOs was $7,236,318. Grantees received $6,884,817, as described above. The remaining $351,501 in procurement was provided to six NGOs providing health care or health education. (Five of these NGOs are in Gaza, including Al-Azhar University, Atfaluna Society, Caritas Medical Center, Cystic Fibrosis Friend Center, and El Amal Rehabilitation Center. The sixth NGO [Ittihad Hospital] is in Nablus.)

CHART 9. SATISFACTION WITH GRANTEE SERVICES

300 staff from seven grantees were surveyed



ect enabled NGO providers to increase services to meet patient demand, particularly in parallel with project-supported health-awareness campaigns.

As it assisted the ministry in promoting early detection of breast cancer, the project also provided a $4.98 million radiation therapy system to the Augusta Victoria Hospital, the only cancer treatment center in the Palestinian public health care system. With the new radiation therapy system, the Augusta Victoria Hospital was able to double its capacity and can now provide cancer treatment that is comparable to or better than other regional medical centers. The project's intervention has strengthened the hospital's role as a cancer treatment center, improved the quality and availability of such treatment, and reduced the number of costly referrals abroad, meeting the priorities of those it serves. Additionally, the cancer center can now expand its focus on pediatric cancers, which are largely curable if treated immediately.

Similarly, an integrated package of grant and procurement support enabled Al-Makassed Hospital in Jerusalem to provide a new service through the Ministry of Health for patients who previously would have been referred abroad. Advanced arthroscopic surgery is now available to Palestinians at the hospital, directed by a surgeon trained through the project and using a project-procured $235,000 arthroscopy unit. The ministry has already started referring patients who require arthroscopic surgery to the hospital rather than to facilities abroad, which will reduce public health care costs.

In addition, the project used $1.63 million in procurement to support nine NGOs in Gaza. The procured equipment upgraded high-quality health service and education opportunities for the

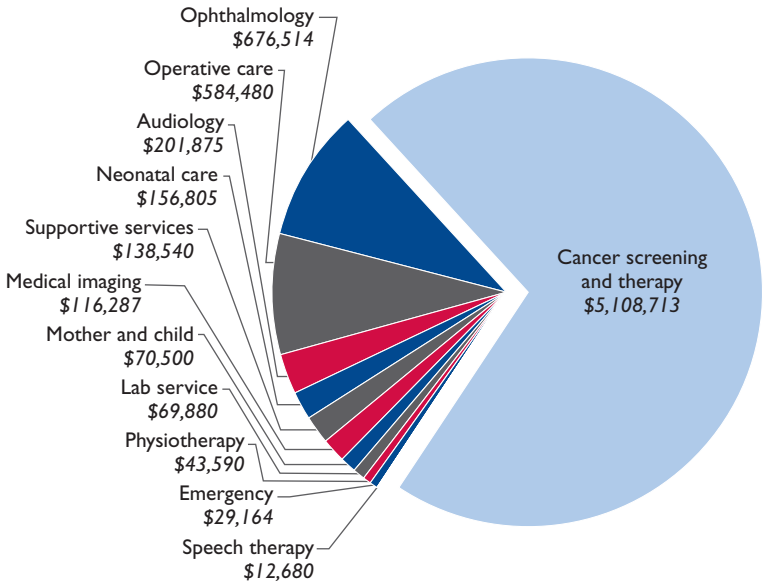
1.6 million residents of the coastal region, where providers struggle with deteriorating equipment, insufficient stocks, and financial strain. As a result, these NGOs can now provide access to higher-quality medical and health educational services. St. John Eye Hospital Clinic offers a package of screening, diagnostic, and clinical services previously unavailable to most of the population in Gaza. With a high prevalence of diabetes in Gaza, these diagnostic and treatment services are critical and under great demand. Medical students at Al-Azhar University are now graduating with hands-on experience with advanced diagnostic equipment. At the same time, health NGOs can now operate with increased safety, greater frequency, and more accuracy. Other institutions were able to improve screening, dental care, rehabilitative care for disabled children, and diagnostic services for cystic fibrosis patients.

PROMISING PRACTICES

1. **Using an integrated multi-sectoral approach to improve high-quality care at the community level.** The quality of care improved most in the PHC directorates that experienced concurrent project support to the clinic and community mobilization. For instance, the project provided clinics in Toubas and Salfit directorates with the full spectrum of quality interventions without the funding-related interruptions experienced in other directorates. Clinics assessed in those two districts improved an average of 52 percent compared to before the project interventions, compared with 22

CHART 10. PROCUREMENT VALUE BY NGO SERVICE

$7.209 million



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VIDEO: **"With the new (radiation therapy system) machine, we are able to (treat) at least 80 to 100 patients per day (compared to) 50 on the old machine. These two machines will be capable of taking the whole current load of the West Bank and Gaza," said Dr. Tawfiq Nassar, chief executive officer at Augusta Victoria Hospital.**

percent in clinics in Hebron, where funding holds resulted in activity suspensions. The project also widened its impact on community health by achieving community contributions (e.g., volunteering and financial/in-kind donations), building cross-sectoral coordination (e.g., non-ministry providers participating in ministry health days), and linking community-clinic boards to specialized service providers (e.g., screenings for cancer, health risks, and disabilities).

2. **Using social media to spread the impact of Champion Community activities.** With project encouragement, community-clinic boards used social media to increase citizen participation in their community health activities. By the end of the project, 31 of the 82 communities were using Facebook pages to promote healthy living, announce community health training, increase the uptake of public health care, and solicit volunteers for environmental clean-up events. With its focus on networking, Facebook is well-suited to the Champion Community Approach, which emphasizes community-driven PHC reform.

3. **Integrating the community into health promotion activities for children.** By involving mothers in the summer camps, the Ministry of Health created a network of health champions across the West Bank, with mothers and campers continuing to meet at CBO-sponsored activities long after the camps ended. In many communities, the health messages continued to inspire new activities. CBOs held follow-on activities for campers, their mothers, and other children or created new

health-related initiatives for community residents, including a year-long "Child-to-Child" campaign in Skaka, through which campers taught their classmates about the health habits they learned at camp.

4. **Maximizing the effective use of procured medical equipment by providing sequential clinical and operational training.** Donors are often accused of taking the "shop-and-drop" approach to procurement, with the delivery of equipment and basic operational training signaling the end of donor involvement. The project ensured that all procured equipment was used immediately and fully to support high-quality health services by using sequential training as a key activating component of its procurement approach. The project provided basic operational training on installation of the equipment and then — once the operators were more familiar with the equipment — provided follow-on training to ensure that the equipment was still being used accurately and effectively. Technicians received follow-on training on the safe operation of diagnostic devices, such as ultrasound and mammography machines and electrocardiograms, while clinicians were trained on the full interpretation of the results.

CHEMONICS INTERNATIONAL INC.

VIDEO: **Through the Champion Community Approach, the town of Burqa (Nablus Directorate) planned an emergency action day in collaboration with multiple health providers and government organizations. The event was the first of its kind in emergency action preparedness.**

LESSONS LEARNED

1. **The Ministry of Health did not have a defined structure to manage development of a ministry-wide quality improvement framework.** Significant and sustainable change in quality improvement requires a functional institutional counterpart to build and maintain an overarching quality framework and ensure that quality improvement activities and tools have the input and ownership of the multiple relevant ministry departments. Although the project was able to activate the ministry's Quality Improvement Department in its first years and support its expansion into hospital facilities, the department was dissolved after appointment of a new minister in 2012. In addition, the ministry's culture of distinct departments is impeding long-term development of a system across the levels of health care. However, as described above, the project supported the ministry to develop, and institutionalize when possible, quality improvement tools for the PHC (e.g., health facility assessment, EPS, SOC, and job aids) and multiple departments (e.g., Emergency Severity Index, IPC SOC, draft Laboratory Quality Manual, and the NICU Manual). In addition,

CHEMONICS INTERNATIONAL INC.

VIDEO: **"We are passing (on) the messages we learned during the summer camp," said 11-year old Islam, one of the Child-to-Child leaders. "I learned a lot during that camp. Most importantly, I quit lots of bad eating habits, such as eating fast food and drinking soda drinks."**

CHEMONICS INTERNATIONAL INC.

STORY: "We were using the new equipment at minimum capacity, not fully realizing the power of these new machines. What I love is that this is not a one-stop shop; for the next training, I will be armed with new questions," said Saleh Amro, an operating room nurse.

the project strengthened the quality improvement capacity at the facility and district levels, particularly through its work with PHC district supervisors. The project team thinks the ministry remains interested in developing a quality improvement framework and that future interventions should be designed to strengthen the ministry's capacity to translate its National Quality Strategy into a quality improvement framework. (Further interventions in this area can follow the roadmap established by the project.[42] See Chapter Three. Recommendation No. 7.)

2. A) Quality improvement is most effective when provided as an integrated package and ministry staff are supported to maximize community support. An analysis of the quality of PHC clinics supported by the project suggests that the integrated approach was key to achieving impact. The project completed its interventions in 57 clinics in six districts (albeit with lengthy suspensions in 37 clinics), but the remaining 25 clinics received only a few months of support before the project closed its PHC activities in Year 5, due to reduced funding. The pre-post-evaluation suggests that facilities that receive the different dimensions of quality support as a comprehensive package (e.g., Toubas and Salfit directorates) perform better than those whose quality improvement support is fragmented over time (e.g., Nablus Directorate) or is incomplete

42. Arscott-Mills, Sharon and Maha El-Saheb. Quality Assurance and Improvement in Primary and Secondary Care, Flagship Project, February 12, 2010.

(e.g., Hebron Directorate). (See Chapter Three. Promising Practice No. 1.) **B) Greater training of PHC staff participating in the community-clinic boards would increase the Ministry of Health's capacity** to solidify and sustain the boards' role as a mechanism for facilitating and acting on community dialogue with the ministry. The community-clinic board created through the Champion Community Approach played a central role in evaluating and prioritizing community needs for inclusion in the ministry's service delivery. To maximize the partnership opportunities resulting from the community-clinic board, the ministry should prioritize training relevant to community-based PHC staff in the Champion Community Approach to ensure their active participation in the mechanism, if such a board is established in their community.

RECOMMENDATIONS

1. **Support application of the EPS as a management standard and the SOC as a service provision standard** by strengthening the new management culture of supportive supervision to strengthen quality improvement at the PHC level. Possible institutionalizing mechanisms include continued training/OJC at the central and district levels and mobilization of communities to use the EPS as a citizen-focused listing of mandated Ministry of Health services and the SOC as a guide for management and improvement of these services. Additionally, the project-supported Nursing Orientation Manual is an important tool for the standardization and enhanced performance of PHC nurses. The project printed the manual for distribution among Ministry of Health PHC directorates and clinics. Ministry support for the rollout and implementation of the manual is strongly encouraged.

2. **Strengthen Ministry of Health capacity to partner with the community on public health** by supporting the continued institutionalization and expansion of the Champion Community Approach at the directorate level. Continued ministry involvement in community-clinic boards should be facilitated, particularly to sustain open dialogue with community. Health education facilities should be encouraged to include community mobilization in curricula nationwide, following incorporation of the approach into the nursing curriculum of Ibn Sina Nursing College.

3. **A) Widen the impact of behavior change communications** by fostering strategic planning links between PHC and SHC, building on the manual and training provided through the project. There is a need for greater linkage of the ministry's HEPD into the practice of service delivery to promote the strategic planning health messaging to respond to evolving needs and opportunities of SHC and PHC, including donor-supported BCC

CHEMONICS INTERNATIONAL INC.

VIDEO: **"If we invest in children, we can improve their health behaviors. We hope that, with the support of their families and communities, they will continue in their healthy habits," said Lubna Al-Sader, Ministry of Health HEPD director. The summer campers learned about healthy eating habits, such as checking the freshness of food.**

initiatives. The capacity of the HEPD to measure program impact should also be supported to ensure that BCC campaigns are developed and refined based on assessed population needs. **B) Sustain healthy lifestyle summer camps,** which have been a landmark success in behavior change communications. The Ministry of Health can and should continue to work with communities on this effort. The approach used in Year 4 (in which the mothers of summer camp participants were trained on the same health messages to be received by their children) is an excellent model and should be replicated.

4. **A) Continue or expand on grants assistance for rehabilitative care and outreach programs.** NGOs continue to be the main providers in this area, with well-established networks, and the Ministry of Health relies on their services. However, these NGOs need financial support to maintain services. Supporting outreach services by referral hospitals from East Jerusalem (e.g., cancer screenings) is a recommended way to bring high-level specialist care directly to Palestinian citizens, particularly those unable to access the main facility. If possible, the grant assistance should be accompanied with in-depth institutional development capacity support, using the "change agent-led assessment" approach taken by the project (See Chapter Two. Promising Practice No. 5.) **B) Increase early rehabilitation intervention by strengthening the Ministry of Health's referral links to rehabilitation networks.** The ministry's early detection/screening programs (particularly at the PHC level) do not always result in a referral to a relevant rehabilitation provider, largely due to insufficient knowledge by clinic staff about

STORY: **Augusta Victoria Hospital's mobile mamography unit helps support breast cancer awareness and early detection across the Palestinian territories.**

the rehabilitation resources available. Patients with disabilities or special needs have the right to receive available care. Therefore, the ministry must strengthen its links at the PHC level to rehabilitation networks to maximize the services available to Palestinian citizens. The Champion Community links to rehabilitation grantees are a model that can be adopted by the ministry and maintained in future community mobilization activities.

5. **Solidify the Ministry of Health's application of the ER systems to strengthen its emergency care,** preferably accompanied by investment in the Emergency Medicine Residency program. The project recommends that support for an emergency residency program should depend on the ministry's capacity for and commitment to supporting the components required for an effective program, including curricula, staffing, allocated space and time for resident learning, and coordination. Training of trainers in the program should occur and is a key to its development and improvement.

6. **Create a national network of high-quality NICU health providers** by building on the project's interventions. This includes facilitating rollout of the NICU manual across the Ministry of Health and integrating the centers' protocols and guidelines to guide therapy among all NICUs in the West Bank and Gaza. The ministry should also work toward regionalization of NICU services and definition of individual center scopes of care. The project recommends that NICU nurses be empowered to implement the Standards of Care and improve NICU communication with patients' families. In addition, the new

NICU working group should continue to support improvement of neonatal training and care at ministry hospitals.

7. **Activate the Ministry of Health's capacity to regulate high-quality services by strengthening its quality improvement structure.** The ministry was able to develop and institutionalize quality improvement tools at the PHC and SHC level, but it still lacks an overarching quality improvement framework, which is a national priority and a prerequisite for future accreditation of medical facilities. The project recommends that future interventions focus on defining and building a multi-focal quality improvement structure in the ministry, with a central department and facility-level representation, and supporting the ministry in building a quality improvement framework based on its National Quality Improvement Strategy.

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