



Healthcare staff prepare medical instruments for the autoclave in a hospital in Yemen.

The Improvement Collaborative in Yemen: A Scale-Up Approach for Expanding Access to Postpartum Maternal and Newborn Care and Family Planning

Scaling-Up Best Practices in Yemen

This paper shows how the Extending Service Delivery Project – a global leader in family planning – is scaling-up best practices in reproductive health and family planning in partnership with the Yemen Ministry of Public Health and Population, using an approach that combines traditional interventions and quality improvement with a shared learning methodology.

BACKGROUND

Yemen is one of the poorest countries in the Middle East, ranking low in nearly all health and socioeconomic indicators. It suffers from an infant mortality rate of 51 per 1000 live births, a neonatal mortality rate of 29 per 1000 births, and a maternal mortality ratio of 365/100,000.^{1,2} Yemeni women have a low contraceptive prevalence rate (23%) and a high fertility rate (5.0 in 2006).^{3,4}

In 2007, a contingent of health care professionals and Ministry of Health professionals from Yemen attended an ESD-organized, USAID-funded conference in Bangkok, “Scaling-Up High Impact FP/MNCH Best Practices in Asia/ Near East Region.” The Yemen delegation – acting as the “Yemen Country Team” – engaged in working sessions to identify country-specific gaps that contributed to poor maternal and child health status, including the low rate of family planning use, low access to postpartum care (PPC), and the infrequent practice of immediate and exclusive breastfeeding. With

the assistance of the , USAID-funded Basic Health Services Project (BHS), led by Pathfinder International, the Yemen country team chose to address the gaps through adoption and scaling-up of seven best practices:

1. Essential newborn care/infection prevention
2. Kangaroo Mother Care (KMC)
3. Immediate and exclusive breastfeeding
4. Postpartum family planning (PPFP)
5. Healthy Timing and Spacing of Pregnancies (HTSP) counseling and education
6. Lactational Amenorrhea Method of contraception (LAM)
7. Vitamin A

Starting in 2008, the Yemen team introduced these best practices via key interventions in provider training and updating service standards in Al-Sabeen Hospital in the capital city of Sana’a. By introducing the seven selected best practices, the hospital made a number of improvements, including establishing an infection

The Extending Service Delivery (ESD) Project, funded by USAID’s Bureau for Global Health, is designed to address an unmet need for family planning (FP) and to increase the use of reproductive health and family planning (RH/FP) services at the community level, especially among underserved populations, to improve health and socioeconomic development. To accomplish its mission, ESD has strengthened global learning and application of best practices; increased access to community-level RH/FP services; and improved capacity for supporting and sustaining RH/FP services. ESD has worked closely with USAID missions to devise tailored strategies that meet the RH/FP service delivery needs of specific countries. A five-year Leader with Associate Cooperative Agreement, ESD is managed by Pathfinder International in partnership with IntraHealth International, Management Sciences for Health, and Meridian Group International, Inc. Additional technical assistance is provided by Adventist Development and Relief Agency International, the Georgetown University Institute for Reproductive Health, and Save the Children.

¹ “At a glance: Yemen,” UNICEF, accessed June 28, 2011, http://www.unicef.org/infobycountry/yemen_statistics.html

² Yemen Ministry of Public Health and Population, accessed June 28, 2011, <http://www.mophp-ye.org/english/index.html>

³ Yemen Summary, Population Reference Bureau, accessed June 28, 2011, http://www.prb.org/DataFinder/Geography/Summary.aspx?region=135®ion_type=

⁴ Yemen Ministry of Public Health and Population, accessed June 28, 2011, <http://www.mophp-ye.org/english/index.html>

prevention committee, a patient education committee, and securing a sufficient supply of Vitamin A and vaccines. Other improvements include the Ministry of Public Health and Population (MOPHP) adding Vitamin A to the reproductive health (RH) essential drugs list; creation of a postpartum counseling room; creation of an Infection Prevention Committee; and enhanced opportunities for integrated vaccination.

Less than six months after the start of the intervention, the hospital was providing three times as many BCG vaccinations as before. The MOPHP established a permanent subgroup for the Best Practices Initiative within the Ministry's Reproductive Health Technical

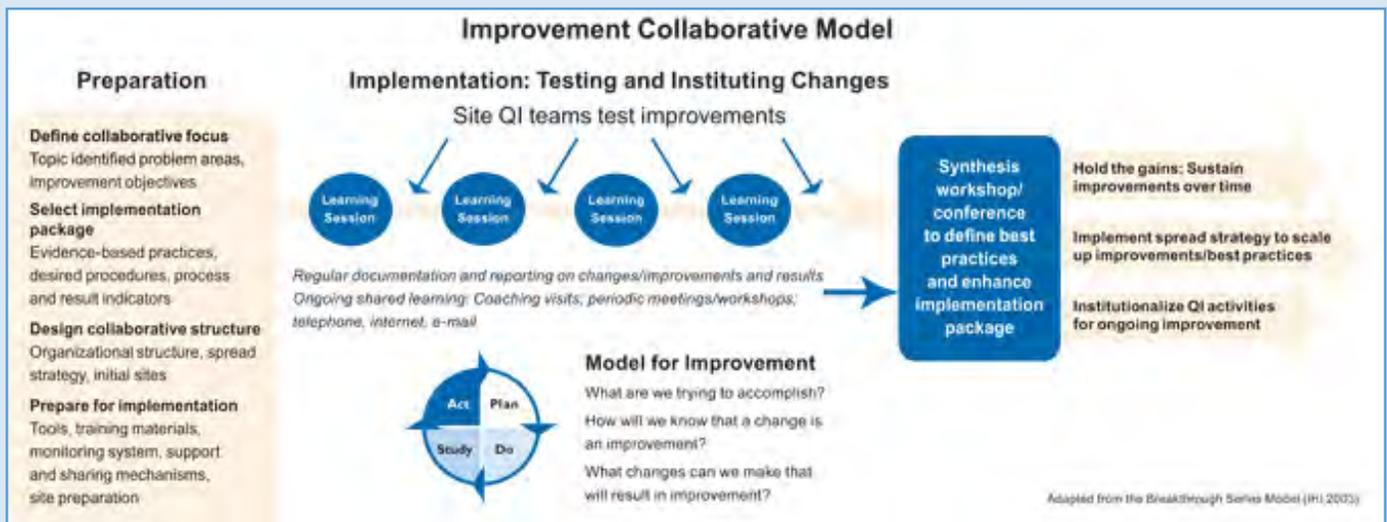
Working Group (RHTG). This group comprised of all donors and NGO partners of the MOPHP. In 2009, the MOPHP, the country team, and BHS scaled up the seven best practices in six major hospitals in six governorates: Aden, Amran, Ibb, Lahaj, Sa'ada, and Taiz. The Ministry of Health (MOH) Population Sector endorsed the action plans and integrated it into the 2009 Population Sector Work Plan.

To build on this intervention's momentum, the MOPHP asked ESD for additional strategies for rapidly improving the quality of care. As a result, ESD introduced the Yemen Team to the Improvement Collaborative methodology.

Improvement Collaborative ⁵

The Improvement Collaborative is a methodology where improvement teams from different clinics, hospitals, and other levels of the health system work together on common aims to improve particular aspects of the system. Members share experiences as they test changes for improvement and then apply the successful changes on a wider scale.

- Since 1998, the University Research Corporation (URC) has implemented over 80 Improvement Collaboratives with USAID support to address a wide variety of health issues in developing countries.
- In 2009, URC did a study reviewing data from more than 1300 teams that participated in 27 Collaboratives from 1998–2008. Researchers analyzed 135 measures of provider performance and patient outcomes related to services for maternal, newborn, and child health, HIV/AIDS, family planning, malaria and tuberculosis
- The Collaboratives achieved performance levels of 80% or higher, regardless of baseline levels, for 88% of the measures studied and performance levels of 90% or higher, regardless of baseline levels for 76% of the measures studied.



STRATEGY FOR IMPROVEMENT

The Improvement Collaborative⁶ is an approach that incorporates traditional interventions for improving services – such as provider training and updates to service standards – and adds to them quality improvement techniques such as creating a quality improvement team composed of local healthcare providers. These providers identify obstacles to new practice implementation, seek solutions to address them, and monitor the overall results. All providers receive clinical training to provide new methods of care and implement the new standards in their local setting. Common improvement objectives and indicators are shared by all the teams in the Collaborative.

A key component of the Collaborative is shared learning. A series of shared learning sessions are held among teams from the different hospitals, with each team sharing its problems and solutions to leverage their work. For example, if one team has discovered a problem that has been affecting all the hospitals – and found a potential solution – the other hospitals can also test the solution and potentially adopt it. One solution to increase family planning counseling and use was the “missed opportunity” room and the referral system created by Ibb hospital (described in more detail in the “Strategies and Solutions” section below). Between shared learning sessions, each quality improvement team tests their ideas for improvement and holds team meetings at regular intervals to monitor their work. Each team receives visits at regular intervals by individuals who can “coach” them in applying new quality methodologies to improve care.

In Yemen, the Best Practices Improvement Collaborative was conducted and managed by a combination of staff from the MOPHP and BHS. The Collaborative coordinator made periodic visits to each hospital team to assist them as they identified and tested improvements while monitoring monthly indicators. BHS provided management support and a staff statistician that compiled the hospital data.

STARTING THE INTERVENTION

The initial training and workshop for establishing the Improvement Collaborative was held in January 2009 for six hospitals in the six governorates where the second phase of scale-up would take place; it was orga-

nized by BHS with the technical and financial support of ESD. Experiences and lessons learned from the first phase of the training were shared and integrated into the plan for the next phase of scale-up. Participants learned the basics of the Improvement Collaborative methodology and regularly met as a quality improvement team. When the participants returned to their hospitals, key personnel involved in providing maternal and neonatal health care were invited to form the quality improvement team for that facility. Members of the Improvement Collaborative and MOPHP developed spread plans that would take place after the scaling-up in the target governorates.

In addition to the seven previous best practices, three more were added by the summer of 2009: newborn immunization, active management of the third stage of labor (AMTSL), and newborn resuscitation.

In the fall of 2009, a third phase of the Improvement Collaborative extended the best practices to an additional eight referral hospitals in Amran, Sa’ada, Mareb, Shabwa, and El Jawf, and to an additional 130 facilities in their respective catchment areas (51 rural hospitals and 79 health centers).

In March 2010, USAID sponsored an ESD-organized follow-up conference for the Asia and Middle East region “Reconvening Bangkok: 2007-2010: Progress Made and Lessons Learned,” which was attended by Yemen Country Team members representing new governorates targeted in the scale-up. In April 2010, the Yemen delegates and the MOPHP convened the country team and all the health directors from the governorates for a national consultation, where they collectively decided to scale-up the best practices to the remaining 13 governorates of Yemen. Two additional best practices were identified for maternal care (for a total of twelve best practices): the use of magnesium sulfate (for eclampsia) and essential obstetric care, including the use of the partograph during labor.

ESD and BHS provided additional training, including:

- Postpartum training on family planning and counseling services, including skills for specific family planning methods
- Several orientation courses based on the Family Planning Handbook⁷, including seminars on the

⁵ “Improvement Collaborative,” URC, accessed June 28, 2011, <http://www.urc-chs.com/innovation>

⁶ For additional resources on the collaborative improvement and its shared learning approach, see <http://www.hciproject.org/node/419> and <http://www.urc-chs.com/innovation>.

⁷ “Family Planning: A Global Handbook for Providers, 2011 Update,” Family Planning: A Global Handbook for Providers, accessed June 28, 2011, <http://www.fphandbook.org/>

benefits of family planning and additional technical information.

- One-week course for providers in the six governorates on Contraceptive Technology Updates and the Balanced Counseling Strategy for family planning.
- Training on immediate postpartum IUD insertion, which was conducted for a group of doctors as part of the HTSP counseling best practice. (Since many Yemeni doctors want more evidence on IUD insertion, a proposal to strengthen and expand IUD and other family planning services in the postpartum period was planned, with documentation on IUD retention, follow-up experience, and client satisfaction).

STRATEGIES AND SOLUTIONS

At the individual hospital sites, the teams identified and tested several of the following solutions:

- To reduce infection in the nursery, nurses in Lahaj designed culturally acceptable scrubs and veils that they washed and wore only in the nursery. Prior to this, they had worn scrubs on top of their daily clothes and niqab (full face veil).
- All hospitals added a discharge and counseling room, with a private space for discussing family planning.
- All hospitals provided BCG vaccinations for the newborns and family planning counseling for fathers and mothers.
- Some hospitals have posted a midwife in the postpartum room to counsel mothers on exclusive and immediate breastfeeding and family planning while they are resting from the delivery.
- Some hospitals created a private space for nursing mothers.
- Staff trained cleaners on infection prevention and assigned each one to a specific area to control the spread of infection.
- Staff placed bottles of antiseptic hand cleaning solution on the trolley when making rounds, for use between exiting one patient's room and entering the next.
- Staff in Ibb created a "missed opportunity" room for family planning counseling and services and an internal referral for mothers and their babies. The women can receive family planning counseling and contraception during the same visit. A documentation system for patient referrals measures the effect of this change. Initial data show this approach is very effective and should be generalized to other hospitals.
- In Ibb, staff provided mothers of low birth weight babies with demonstrations on KMC and printed instructions to take home. The photos to the left show two babies that successfully gained weight via KMC. The first weighed 1400 grams at birth and more than doubled his weight to 3000 grams. The second was born weighing 1200 grams and gained 1700 grams to reach 2900 grams.

Baby 1: Before and after Kangaroo Mother Care



Wt. 1400 grams



Wt. 3000 grams

Baby 2: Before and after Kangaroo Mother Care



Wt. 1200 grams



Wt. 2900 grams

RESULTS

The charts on the following pages show results for the original five sites where the Improvement Collaborative was introduced during a 16-month period from September 2009 to December 2010.

Chart 1 shows the improvement in family planning counseling. Although counseling was not available in all the hospitals at the start of the intervention, the data show a marked increase in the proportion of women counseled for family planning use immediately after giving birth or after miscarriage. The hospital in Aden is highlighted for its steady improvement since it assigned a midwife to counsel women at the postpartum room. In contrast, Sana'a did not improve much due to the low number of midwives working afternoon and night shifts.

Chart 2 shows the five hospitals increased the percentage of women receiving a family planning method before leaving the hospital, rising from 4% in 2009 to 25% in 2010. This was impressive given that family planning methods were not offered to women at most hospitals after delivery or miscarriage at the start of the intervention. Taiz Hospital serves as an example of steady improvement in family planning service delivery. In contrast, the Ibb Hospital team believed that a woman's stress during the immediate postpartum period interfered with her receptiveness to accepting a contraceptive, so they chose not to offer family planning methods until six weeks postpartum. After other hospitals presented their success with the uptake of family planning methods before discharge, however, the Ibb team decided to change their approach. This example illustrates the advantages of shared learning in the Improvement Collaborative.

Chart 3 (next page) shows an increase in the number of women receiving counseling on exclusive breastfeeding, which rose from 36% to 73% in the five hospitals during the intervention. In contrast to the previous chart, the Ibb team was a strong proponent of exclusive breast feeding from the beginning of the intervention and led all hospitals in counseling it.

CHALLENGES

Human Resources: A primary challenge was achieving full participation by the hospital staff. In the initial

Chart 1: Proportion of Mothers who Received Counseling on Family Planning Before Discharge

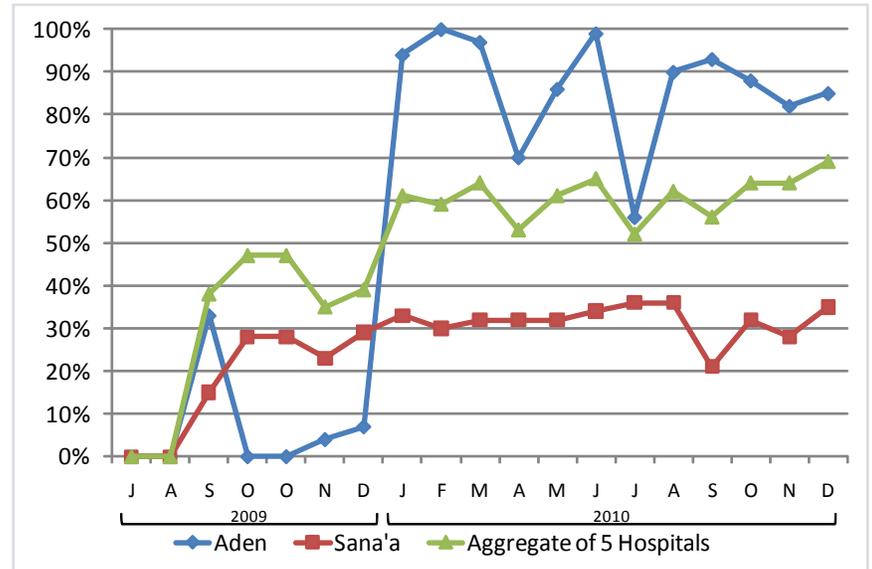


Chart 2: Proportion of Mothers Who Were Given a Family Planning Method Before Discharge

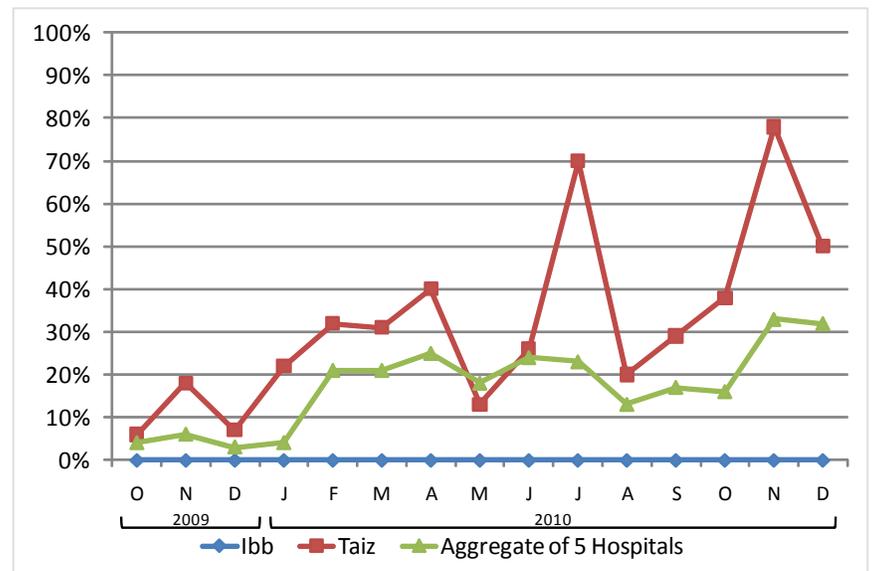
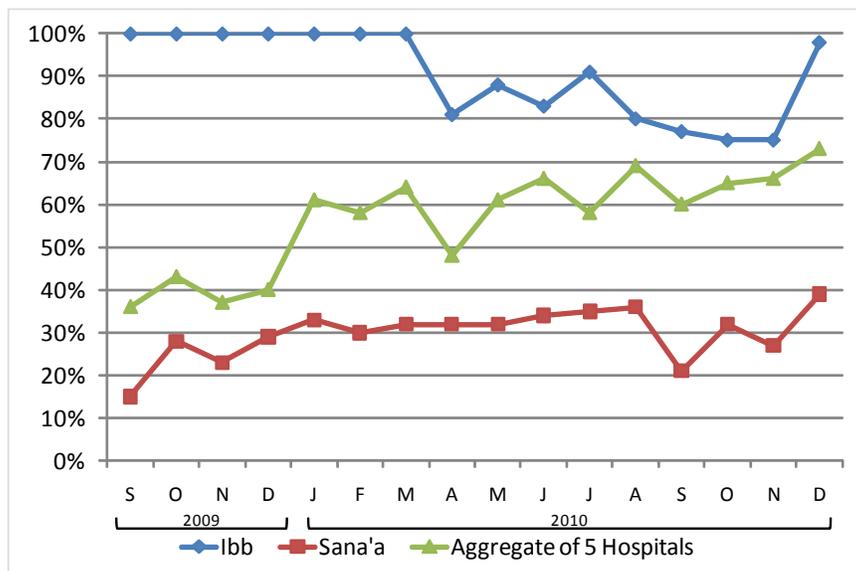


Table 3: Proportion of Women who were Counseled on Exclusive Breastfeeding Before Discharge



demonstration phase, many staff considered the best practices as beyond their routine duties, while others requested to have their pay and status increased. Some were unavailable to work afternoons and weekends, resulting in the disruption of services. Management often lacked the communication and coordination skills to inspire staff and achieve high standards of care. To address this issue, the quality improvement teams at each facility tried to motivate the hospital staff to implement and monitor the best practices during learning sessions; select facilities offered non-monetary incentives to encourage staff to offer the new best practices during the afternoon and night shifts. The teams also pointed out that best practices were not an added job burden, but a better way to provide services, achieve good results, and avoid bad outcomes.

National Challenge: Although the MOPHP supports continued scale-up, the breadth of success will depend on the priorities of decision-makers at each district and governorate level. Budget allocations, for instance, depend heavily on local councils and the influence of local health directorates in budgeting processes. In some cases, hospitals generate their own income from services, such as mammograms, to support the implementation of best practices.

Formal Quality Structure: BHS conducted weekly meetings with Al-Sabeen Hospital departmental directors to discuss their progress, but the hospital still lacked a quality management or improvement team when

the project commenced. By summer 2010, a quality improvement team for scaling-up best practices was formed under the leadership of the Director of Gynecology and Obstetrics, who took the lead in assembling a team for scaling-up best practices, including a quality expert, a statistician, and representatives from the different service delivery sites in the hospital.

Budgetary Issues: To provide quality services to clients around the clock, budget shortages, staff shortages, inadequate supplies for infection prevention, and other services must be addressed. BHS shared these concerns with Ministry officials. Some governorate health offices were more proactive and allocated sufficient funds for the scale-up best practices.

Institutionalization: Because of budget shortfalls and the need for sustained technical assistance, it will be difficult for the Yemen MOPHP to bring the best practices to all eligible hospitals across the country without external funding. However, several Directors of Health in the governorates have taken the lead to scale-up Best Practices using local resources, and the MOPHP may be able to generate further support from development partners. ESD continued to support the best practices through country team involvement in technical meetings and exchange opportunities until the project's end in June 2011.

FUTURE DIRECTIONS AND RECOMMENDATIONS

The Improvement Collaborative team and the quality improvement teams in each health center intend to continue the spread of best practices. The Yemen Country Team mapped the geographic spread of the best practices and will lead the development of a timeline to achieve full national coverage by 2012, resources-permitting. The plan includes bringing best practices to all primary health centers and health units providing maternity services, maternity centers, and to community-based reproductive health services, particularly through the outreach of community midwives.

The Collaborative approach has provided Yemeni providers with a model for improving quality and expanding services that encouraged ownership, participation, and shared learning – three characteristics often missing in earlier, traditional approaches. Three essential ingredients in the success of the Improve-

ment Collaborative were: 1) the national leadership and institutional support; 2) active support from a local USAID-funded project to provide the technical and financial support for jump-starting the initial scale-up of Collaborative activities and the monitoring of results; and 3) the technical assistance and support from ESD in introducing the Improvement Collaborative approach to Yemen.

More work is needed on generalizing the Collaborative approach to all facilities. Health directors are needed at the governorate level while Collaborative leaders and coordinators are needed at the central level. More investment in governorate coaches is also needed, which can be achieved by utilizing the coaches trained during the first two phases of the Improvement Collaborative.

The learning sessions should also be institutionalized as an essential step for the success of the Collaborative. This can be achieved by rotating the venue and host of the learning sessions on a quarterly basis, which will share the responsibility among Collaborative members and give experience to each in organizing sessions. The session content should continue to include state of the art best practices through sharing materials, e-learning, continued focus on quality improvement approaches, and sharing successful changes, challenges, and work plans.



Private midwifery clinics, like this one in the Amran Governorate, benefited from the spread of best practices through the Improvement Collaborative.



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