USAID FROM THE AMERICAN PEOPLE QUALITY HEALTH SERVICES URC

Transitioning the Cambodian health system to self-reliance: URC's contribution 2002-2019

SAVING MOTHERS AND NEWBORNS:

INVESTING IN EMERGENCY CARE AND REFERRAL SYSTEMS

Protecting the health and wellbeing of mothers and children is one of the world's most urgent needs. Most maternal deaths are preventable through quality health services including antenatal care in pregnancy, skilled care during childbirth, and care and support in the weeks after childbirth. Newborns can be similarly kept alive by skilled health professionals who can recognize and treat complications in a timely manner.

Maternal and child health (MCH) has been a key area of focus for URC's support to the Cambodian Ministry of Health (MOH) since 2002. While initial efforts focused on expanding and improving quality of care at hospitals and health centers, URC quickly recognized the need to strengthen the linkages between levels. Using a health systems strengthening approach, URC has supported the MOH to strengthen the foundations for quality improvement, strengthened the capacity of the health workforce in MCH service delivery, and contributed to the development of a culture of shared learning and teamwork, contributing to improvements in maternal and child health.

University Research Co. LLC (URC) supported the Royal Government of Cambodia (RGC) to strengthen the health system through four USAID projects:

- Health Systems Strengthening in Cambodia (HSSC), 2002-2008
- Better Health Services Project (BHS), 2009-2013
- Quality Health Services Project (QHS), 2014-2019
- Social Health Protection Project (SHP), 2014-2019

Through these projects, USAID sought to support the RGC improve the quality of primary care and hospital services, increase demand for health services and reduce financial barriers to access, and build provincial and operational district (OD) capacity to manage services and social protection programs.

CONTEXT

During the past two decades, Cambodia has made significant improvement in maternal and newborn health. According to Demographic and Health Surveys, the maternal mortality ratio declined from 472 maternal deaths per 100,000 live births in 2005 to 170 in 2014 and infant mortality from 66 deaths per 1,000 live births in 2005 to 28 in 2014. Neonatal mortality also decreased but more slowly, from 28 per 1,000 births to 18, and now accounts for half of under-five mortality.[i]

In addition to overall economic growth and poverty reduction, these rapid declines are due to the increase in facility-based births and skilled birth attendance which increased from 44% in 2005 to 89% in 2014. Increased utilization is attributed to increased availability of well-equipped health centers, the midwifery incentive scheme, and expansion of the pro-poor health financing mechanism, the Health Equity Funds (HEF).[ii]

Further reductions to maternal and newborn deaths required going beyond the basics of developing protocols and strengthening health provider skills. Maternal and newborn care involve teamwork, which has so far been discouraged by the traditionally top-down, physician-dominated system. Increased efforts were needed to strengthen joint problem-solving within facilities, and to encourage shared learning and collaboration between them.

KEY INTERVENTIONS

GUIDELINES AND PROTOCOLS

To establish the foundation for quality in MCH care, URC supported the MOH to develop and update Safe Motherhood Protocols under both BHS and QHS projects. URC also assisted in developing clinical practice guidelines and other forms of standards (for clinical care, infection control, hygiene, laboratory processes, etc.) to improve skills and standards-based care. Over time, URC introduced key maternal and newborn interventions, such as the active management of third stage of labor (AMTSL), treatment of postpartum hemorrhage, correct use of magnesium sulfate for eclampsia and severe pre-eclampsia, newborn resuscitation, immediate newborn care, essential newborn care, and others.

QUALITY OF CARE AT HEALTH CENTERS AND HOSPITALS

URC rolled out these key interventions through competency-based, hands-on training which strengthened clinical skills using a team-based learning approach. Both health center quality improvement (HCQI) and hospital clinical skills practice (CSP) use coaching and mentoring techniques on-site, and rely on routine follow-up to ensure that the lessons learned continue to be practiced. They have resulted in measurable improvements in quality (see brief: *Transforming the Health Workforce*). Performance is measured through Level 1 and Level 2 Quality Assessments, and further incentivized through linkages with the HEF program (see brief: *Building the Foundations for Quality Services*).

URC also developed innovative tools and job aids to support MCH service delivery, including:

- The AMSTL stamp: The stamp is used by the provider to record the provision of the three components of AMTSL on the partograph.
- The eclampsia kit: All the necessary equipment, including MgSO4, and short instructions for use, including pictorials, are being provided across the country in a shoe-box sized "eclampsia kit".

REFERRAL LINKAGES

Under BHS, URC piloted a set of referral system improvements. These were refined into a comprehensive provincial referral system and scaled up in the nine target provinces under QHS. Components are:

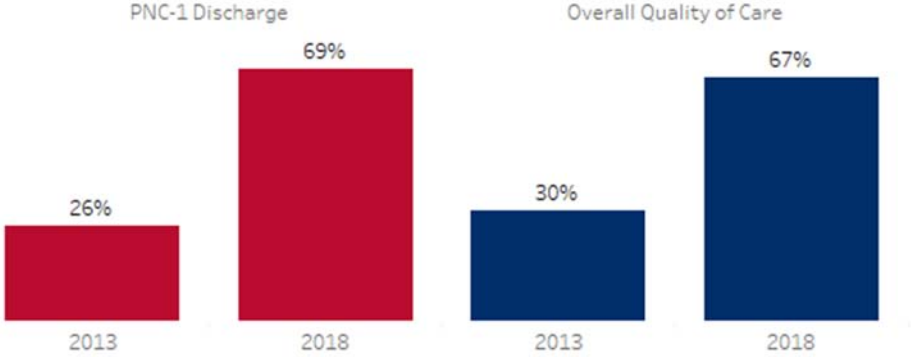
1. A standardized **referral** with 4 color coded copies, each with a distinct destination.
2. A provincial **clinical hotline** that reaches the on-duty staff at maternity, pediatrics and emergency departments.
3. A standardized **emergency referral job-aid** which includes the numbers for provincial clinical hotlines, referral procedures and stabilization care and guidance for referring facilities.
4. **Patient care report** (PCR) form to document care provided during ambulance transport.
5. Appropriate **triage procedures** for incoming emergency patients.
6. A **regular quality assurance process** within each RH for referral on at least a monthly basis to reinforce referral system improvements.
7. A standard **referral feedback form** to provide appropriate and consistent feedback on referrals.

The referral slip, PCR, and referral feedback form are included in the MOH's Minimum Package of Activities (MPA) Operational Guidelines for health centers which was finalized in 2018.

URC also focused on strengthening referral systems through other project activities like HCQI, and midwifery and pediatric coordination alliance teams (MCAT and PCAT) (see brief: *Transforming the Health Workforce*). Coaching modules were developed to strengthen skills on identification and referral of sick newborns and mothers/newborns at risk of infection, and hospital emergency stabilization and referral. In addition to strengthening clinical skills, these capacity building models emphasize teamwork and shared learning. MCAT and PCAT specifically bring together health staff from different levels to discuss problems, referrals, and cases, strengthening collaboration between health centers and hospitals.

Maternal and Child Health by the Numbers

QHS improved the quality of PNC-1 post-delivery care and overall quality of care



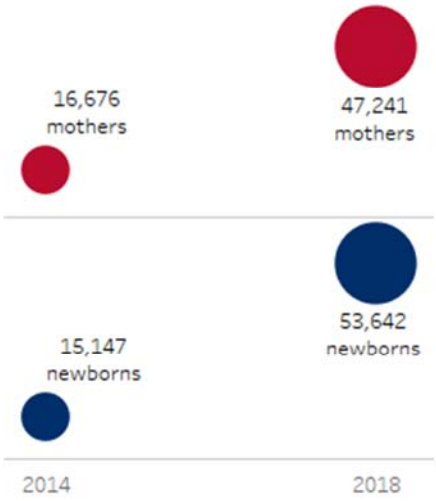
Non-Pneumatic Anti-Shock Garments (NASG)

were successfully used

282

times to prevent death due to post-partum hemorrhage

Number of Woman-Newborn Pairs who Received at Least Three PNC Visits



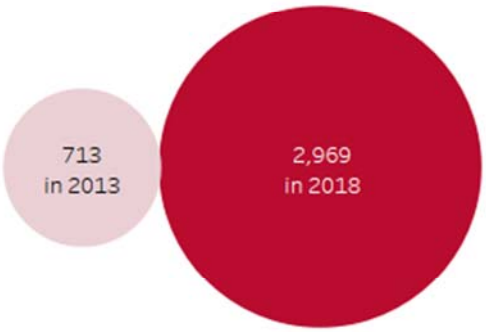
93%

of newborns

in QHS target provinces received a postnatal health check

within two days of delivery by the end of QHS implementation

Number of newborn complications referred from health centers to referral hospitals



Provincial Clinical Hotlines

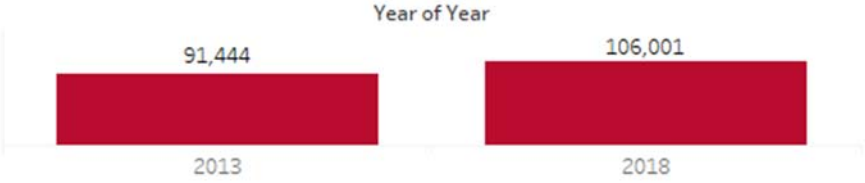
were successfully initiated in maternity, emergency and pediatric wards in

all hospitals

in the nine QHS target provinces

% of Pregnant Women who Received the Appropriate Number of IFA Tablets During Pregnancy

Number of Women Giving Birth who Received Uterotonics in the Third Stage of Labor



EMERGENCY CARE

URC's interventions to improve emergency medicine were developed under BHS and scaled up under QHS. A key component is the ***1-2 Triage System*** developed specifically for Cambodia, and the accompanying improvements to patient flow patterns. During the first stage of triage, a quick assessment reveals whether the patient needs emergency care. If so, he or she is quickly taken for care. If not, the second stage collects vital signs and a brief history to determine where and how urgently the patient should be seen. The system has been established in all provincial and district referral hospitals in the nine provinces supported by QHS.

URC developed and rolled out a training curriculum for emergency medical technicians and training materials on conditions common in Cambodian emergency departments. Signal functions were also incorporated into HCQI and CSP to improve the clinical skills and confidence of basic emergency obstetric and newborn care (BEmONC) providers.

Under BHS, URC piloted the **non-pneumatic anti-shock garment** (NASG), a low-technology first-aid device used to stabilize a woman with postpartum hemorrhage and to buy time to get her to a higher-level facility. Based on the positive results, the use of NASG was scaled up under QHS and is now being used in the nine target provinces and in national hospitals in Phnom Penh.

Woman wearing NASG being helped into an ambulance

INCREASE ACCESS THROUGH HEALTH EQUITY FUNDS

The HEF is a pro-poor health financing scheme that targets identified poor households in a given area and provides financial and social support so they can better access government health services. Developed and scaled-up with significant support from URC, the HEFs have substantially increased utilization by the poor of public health services (see brief: *From a Health Financing Pilot to a National Social Health Protection System*). While HEFs have always covered MCH services, under BHS and QHS URC successfully advocated for revisions to the HEF Standard Benefit Package that further expanded coverage of deliveries (specifically referrals) and postnatal services.

CONCLUSIONS

During the past three decades, URC has supported the MOH to strengthen the foundations of quality MCH services by developing protocols, improving service delivery platforms, strengthening clinical and management skills, increasing the use of data in problem-solving and quality improvement, and scaling up HEFs. Going beyond health systems strengthening building blocks, URC has also focused on building linkages between levels and fostering a culture of teamwork, moving the country further toward self-reliance.

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[i] Ministry of Health Department Information (2016) Health Strategic Plan 2016-2020.
[ii] Liljestrand J and Sambath MR (2012) Socio-economic improvements and health systems strengthening of maternity care are contributing to maternal mortality reduction in Cambodia. *Reproductive Health Matters*, 20(39):62-72.

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