

Innovation Working Group

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EVERY WOMAN
EVERY CHILD

Checklists for the Last Kilometre

Innovative Strategies to Ensure that
Life-Saving Commodities and Information
Reach Women and Newborns
at the Moment of Care



A report by:
The IWG Task Force on Checklists



Every Woman Every Child Initiative

The Every Woman Every Child (EWEC) initiative was launched by the United Nations Secretary-General Ban Ki-moon during the United Nations Millennium Development Goals Summit in September 2010. The initiative is an unprecedented global movement aimed at saving the lives of 16 million women and children in the 49 poorest countries by 2015 and accelerating achievement of the Millennium Development Goals.

EWEC works to mobilize and intensify international and national action by governments, multilaterals, the private sector and civil society to address the major health challenges facing women and children around the world. The initiative puts into action the Global Strategy for Women's and Children's Health. This presents a roadmap on how to enhance financing, strengthen policy and improve delivery of the health services and products needed in the countries to help women and children. For more information on the Every Woman Every Child effort, please visit www.everywomaneverychild.org.

The Innovation Working Group (IWG)

The Innovation Working Group (IWG) was convened by the United Nations Secretary General in 2010 to harness the power of cost-effective innovation to accelerate progress towards achieving the health Millennium Development Goals (MDGs). In support of the Global Strategy for Women's and Children's Health, the IWG serves as the global hub for innovation in the UNSG's Every Woman Every Child initiative. In contributing to improve women's and children's health, the IWG catalyzes the initiation and enables the scaling of innovations across technological, social, financial, policy and business domains. The IWG also pursues leadership in supporting collaborative efforts among mHealth stakeholders.

The IWG is a broad network of interested parties with a small secretariat, working through partner organizations. The IWG comprises members of governmental, inter-governmental and non-governmental, profit and non-profit private-sectors, with everyone on an equal footing.

The IWG is co-chaired by Tore Godal, Special Adviser to the Prime Minister of Norway on Global Health, and Scott Ratzan, Vice President of Global Health, Government Affairs & Policy at Johnson & Johnson. Project management is provided by the Norwegian Agency for Development Corporation (NORAD) and a Secretariat is housed at the Partnership for Maternal Newborn & Child Health (PMNCH).

Four IWG task forces have been convened to develop innovations for improving maternal and child health: Sustainable Business Models, Checklists, Medical Devices and Innovative Finance. For more information on IWG, please visit www.everywomaneverychild.org/resources/innovation-working-group.

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1. Summary

The successful deployment of essential childbirth practices, many of which are dependent on specific life-saving commodities, is fundamental to preventing avoidable harm. Constructing a list of proven, most-effective commodities and ensuring their ready availability at points of care are critical steps in developing a sound foundation for safe childbirth. Health workers must know exactly how to use these resources appropriately in order to conduct essential practices in the right way, in the right place and at the right time for every woman and child.

This report, “Checklists for the Last Kilometre”, describes the ways in which programmes based on checklists have the potential to help health workers to triumph in the final leg of delivering the benefits of life-saving commodities to women and newborns at the time that it matters most: when care is delivered at the bedside.

The development, implementation, assessment and prioritizing of strategies that maximize the correct use of life-saving commodities are recommended in this report. These strategies build on the previous success of checklist-based health programmes, whose aim is to reduce avoidable harm at the most important moments in childbirth.

2. Recommendations

1. By 2014, 10 high-priority countries that have high rates of maternal and child deaths will have developed, implemented, assessed and scaled the deployment of simple tools, such as checklists, that maximize the likelihood of the rational use of life-saving commodities by health workers and their beneficiaries at the point of care.
2. By 2015, all 74 countries where 98% of maternal and child deaths take place will have implemented simple, practical, scalable strategies such as checklist-based health programmes that maximize the likelihood life-saving commodities being properly used by health workers and their beneficiaries at the point of care.

3. Background

The Every Woman, Every Child Innovation Working Group and Task Force on Checklists

The *Every Woman, Every Child* (EWEC) Innovation Working Group (IWG) was created by the United Nations Secretary-General, Ban Ki-moon, in April 2010 to support the United Nations Global Strategy for Women's and Children's Health announced at the United Nations special session in September 2010. The IWG aims to be the global hub for innovation for the EWEC initiative, and to catalyse both the initiation and the expansion of innovations in health, as well as technological, policy, social, financial and business innovations.¹

As a core of the Global Strategy, the IWG Task Force on Checklists looks at how checklist-based programmes can measurably improve the health of disadvantaged women and newborns by supporting the delivery of essential health practices at crucial moments in care. The factors that promote the adoption of successful checklists and their sustained use in diverse contexts are a central focus, as is the identification of partnerships and mechanisms that can accelerate the reach and impact of checklist programmes.

The UN Commission on Life-Saving Commodities for Women and Children

The UN Commission on Life-Saving Commodities for Women and Children, in association with the UN Global Strategy for Women's and Children's Health and co-chaired by President Goodluck Jonathan of Nigeria and Prime Minister Jens Stoltenberg of Norway, was created to advocate and ultimately increase access to essential life-saving commodities across the continuum of care in reproductive, maternal, newborn and child health. The Commission has identified an initial list of 13 life-saving commodities ranging from female condoms and emergency contraception to antibiotics and newborn resuscitation equipment. These are based on three criteria: first, high impact and effectiveness; second, inadequate funding; and third, untapped potential. However, a widely recognized barrier to access is that health workers lack awareness of how and when to use the commodities. Now, as one of its crucial next steps, the Commission is charging its Technical Working Group with building consensus on priority actions for best practice and innovation in increasing the rational use of life-saving commodities.²⁻⁴

Health checklists

Checklist programmes bundle vital elements of existing guidelines into a simple, user-friendly format consisting of actionable items. These toolkits identify essential health practices, provide reminders to complete these practices at the right place and at the right time, enable stakeholders to rapidly assess and address gaps in the integrity of their own health systems, and – if designed well – should promote the integration of these services across the continuum of maternal, newborn and child health care. Checklist programmes can enhance communication between staff and beneficiaries, and be integrated into current practice with the goal of sustainable behavioural and social change.

Evidence. Checklists aid management of complex or neglected tasks.⁵ The checklist approach for improving health has an increasingly large evidence base and checklist-based solutions have been shown to reduce complications and save lives.

Two large-scale health checklist programmes in particular helped to inform the current initiative. First, a five-item checklist for central-line placement reduced catheter-related bloodstream infection by two thirds statewide in the United States.⁶ The programme is now rolling out in several countries.⁷

Second, a two-minute checklist was developed through the WHO's "Safe Surgery Saves Lives" campaign to help ensure that practices identified to be critical for safe surgery were adhered to. The tool was tested in operations for approximately 8000 patients in eight hospitals internationally. Every site experienced a significant reduction in complications and death rates dropped by almost half.⁸ WHO endorsed the checklist as a recommended standard of care for all hospitals; it has since been adopted for use in more than 4000 hospitals worldwide and is currently national policy in more than 20 countries.

Attributes. The checklist types referred to in this report are not protocols, guidelines or algorithms. Nor do they contain items that describe new knowledge or practice. Rather, the checklists discussed here are tools that distill existing knowledge from sources including published guidelines (by WHO and others), evidence-based literature (including mortality audits), expert consensus and field testing. The central benefits are thought to derive from clearly identifying the practices with the highest impact, grouping essential practices in a novel way and providing prompts to complete these practices at crucial moments in care.

Effective checklist programmes are associated with ready adoption into practice and sustained use. Certain design features are critical if the checklists are to be successfully implemented.⁹ They must integrate logically with the natural flow of care.

Items should be actionable and must include those tasks that are either commonly omitted or that, if omitted, lead to severe harm. Balance of content is a major consideration; checklists should be sufficiently comprehensive to effect sensible change but at the same time remain simple in appearance and simple to carry out. It is essential that users perceive the tool to be a means of support rather than a burdensome chore. Formatting is also important; sentence structure should be succinct and length should be kept to as few pages as possible (ideally a single page).

Checklist programs can harness the potential of new information and communication technologies (e.g. mHealth) to improve performance and accountability between health providers and beneficiaries/end users, and integrate these technologies into current practice with a goal of sustainable behavioral and social change of both providers and beneficiaries/end users.¹⁰

Checklists could enhance health literacy by integrating evidence based practice into individual decision making. Opportunities for developing cues for checklist adoption including rewards for routine use could help develop health enhancing habits.¹¹

Finally, checklists should generally be adapted by users to ensure that they are appropriate and consistent with local practice. A one-size-fits-all tool, suitable for every context, is unlikely to work. Checklist programmes can usually be modified locally such that the core content is preserved.

Design and evaluation. Health checklists can be developed in different ways. One process, described by the makers of the “Surgical Safety Checklist”, involves five key steps:

1. determining content and format based on existing guidelines, evidence and other sources;
2. determining timing (i.e., the natural pause points at which the checklist should be used);
3. trial and feedback to assess the tool’s language and in real-life settings;
4. formal testing and evaluation;
5. local modification.⁹

Checklists for the Last Kilometre

Essential childbirth practices and the commodities required to successfully adhere to them together represent a vital intervention package that is fundamental to preventing avoidable maternal and newborn deaths.^{4, 12, 13} Assuring the ready availability of safe, effective, life-saving commodities at the point of care in high-priority settings is the first step. The next step is to formulate a strategy which will facilitate crossing the final hurdle of delivering the benefits of these commodities to women and newborns by making sure these commodities are used in the most sensible way. Checklists are user-friendly, practical, cost-effective tools that can actively help health workers to use life-saving commodities in the right way, at the right place and at the right time.

Three key intervention points identified by the Task Force indicate where checklist programmes may be of the greatest benefit to increase the rational use of these commodities to reduce childbirth-related mortality:

1. at the time of birth, to ensure health workers adhere to essential clinical practices;
2. during pregnancy, to enhance preparedness for childbirth;
3. in the postpartum/postnatal period, to foster recognition by women and companions of danger signs that should trigger immediate care-seeking.¹⁴

At present, checklists for use during maternal and newborn health care at each of these periods are in varying stages of development and evaluation.

There are numerous obvious illustrations of how checklist-based programmes may facilitate access to high-impact commodities. Oxytocin and misoprostol are life-saving medicines that prevent obstetric bleeding, the leading cause of maternal death globally which is responsible for an estimated 127 000 deaths annually.¹⁵ Access to these medicines at the point of care alone will not ensure they are appropriately used. Checklist programmes have the potential to ensure that health workers adhere to standard childbirth practices in which, for example, oxytocin and/or misoprostol are administered to women at critical periods in care. In the same way, commodities themselves are insufficient to meet the unmet need of 215 million women globally without adequate access to family planning.¹⁵ Checklist-based programmes have the potential to be a practical, user-friendly and cost-effective approach to contraceptives being offered to and used by women at times when it matters most. Similar examples exist for each of the life-saving commodities identified by the UN Commission (for more examples, see the boxed “illustrative examples” described in this report).^{16, 17}

4. Detailed Recommendations

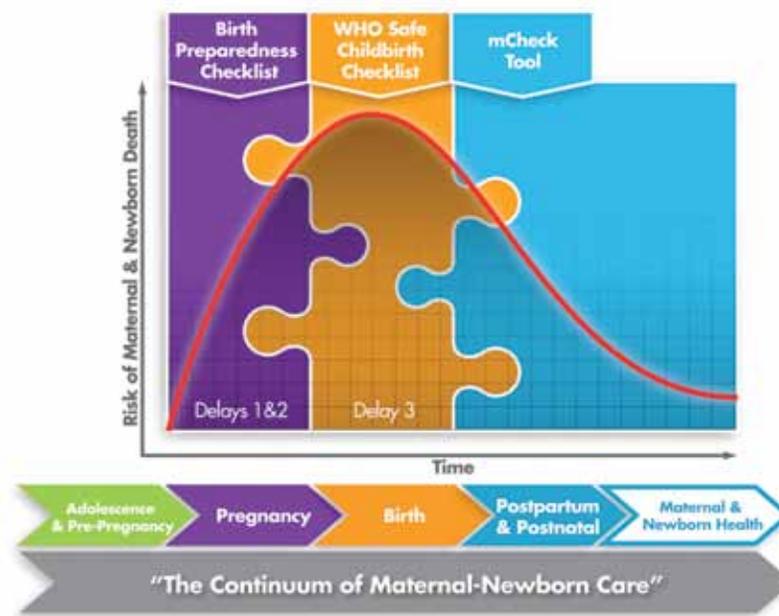
Vital “pieces” for safe childbirth

Ensuring safe childbirth and preventing avoidable complications require that essential interventions for mothers and newborns are conducted properly and at the right time. In order to achieve this, skilled workers must be present when needed. They must have reliable access to essential commodities, know how to effectively perform routine practices and be able to detect when a potentially harmful deviation from the normal childbirth process has occurred.

Most maternal and newborn deaths are clustered at the times of labour, delivery and just after birth (see Figure). Preventing avoidable deaths therefore requires above all the successful adherence to clinical care standards at the time of birth. The process of achieving the best care at the time of birth is dependent on delivery taking place at the right location (i.e., at facilities equipped to offer the safe practices that are anticipated to be needed for any given mother-baby dyad) and at the right time (ideally before complications develop that would increase the risk of avoidable harm). This means that it is also necessary to have life-saving interventions in place that enhance birth preparedness during pregnancy. In addition to helping to ensure preparedness, there may also be other practices carried out during pregnancy that are exceptionally high-impact interventions for saving the lives of mothers and newborns. Finally, because the rates of maternal and newborn harm continue to be high in the hours and days after birth, it is critical that danger signs are recognized that should trigger immediate care provision in the postpartum/postnatal period. It is vital to ensure that a core set of evidence-based practices are conducted at each of these three interconnected periods (during pregnancy, at the time of birth and in the postnatal period) in order to reduce avoidable harm across the continuum of childbirth.¹⁸

FIGURE

“INTERLINKING STRATEGIES TO PROMOTE SAFE CHILDBIRTH ACROSS THE CONTINUUM OF MATERNAL-NEWBORN CARE”



A checklist solution at the time of birth

The greatest burden of maternal and newborn mortality occurs at the time of birth: most deaths happen within the first 24 hours after delivery.¹⁹ A strategy to help health workers to deliver essential childbirth practices during labor, delivery, and in the immediate postpartum/postnatal period has the potential to have a high impact on maternal and newborn health. The WHO Safe Childbirth Checklist is a 29-item instrument that targets the major killers of mothers and babies in institutional deliveries in low-resource settings and promotes effective family planning. Preliminary testing demonstrated marked improvements in health workers' adherence to essential childbirth practices.²⁰ A large-scale randomized-comparison trial is now under way to measure the effect of the WHO Safe Childbirth Checklist's programme's on severe maternal, fetal and newborn harm in north India.

ILLUSTRATIVE EXAMPLE

Berta arrives at a facility in labour. She feels warm. On her initial assessment the birth attendant neglects to take Berta's temperature and fails to recognize that she is indeed febrile. Fortunately, the birth attendant reviews the childbirth checklist before diverting her attention to another woman. She is prompted to take Berta's temperature, identifies that Berta is in a febrile state and subsequently administers antibiotics. The labour progresses. Just before delivery, the birth attendant is reminded by the checklist to prepare oxytocin and newborn resuscitation equipment. A vaginal birth occurs. The baby emerges apneic and limp. The birth attendant quickly reaches for the bag-and-mask in order to perform newborn resuscitation. Since the bag-and-mask is readily available, manual breaths are able to be administered within the first "golden" minute of life and the baby begins to cry and act normally. Since the oxytocin was prepared, the birth attendant is also able to quickly administer this intramuscular uterotonic to Berta in order to protect her against postnatal haemorrhage. Given the risk of maternal chorioamnionitis, the birth attendant is prompted by the checklist to administer antibiotics to the baby. The baby is kept warm on Berta's chest. Just before discharge, the birth attendant reviews the checklist again and is prompted to educate and offer family planning methods to the mother. Female condoms are distributed. Berta and her baby are happily both discharged home in good condition.

In this example, missed opportunities to provide Berta with standard care practices linked with life-saving commodities during the delivery would have resulted in severe avoidable complications. Potential infection risks needed to be assessed as soon as Berta was admitted. Antibiotic administration was indicated since fever was present. Failure to give antibiotics would have put both Berta and her unborn baby at high risk for infectious complications. Preparation for birth is crucial. A clean and functioning bag-and-mask should always be near the bedside and ready for use in the event the baby is distressed at birth and needs resuscitation, as was the case here. In addition, oxytocin should be prepared in a syringe prior to the birth in order to facilitate its ready administration immediately after the baby's head is delivered. WHO recommends uterotonic administration within one minute after birth. Failure to successfully complete this task is a known risk for postnatal haemorrhage, the major cause of maternal death in this setting. Finally, antibiotic administration to the baby was indicated because of the maternal infection. Newborns' immune systems are immature and they succumb quickly to bacterial infection. Timely and appropriate antibiotics were a crucial intervention for Berta's baby. The oxytocin, injectable antibiotics and female condoms described in this scenario are life-saving commodities that, despite their availability in the facility, would not have been effectively accessed by Berta and her baby without the active prompts supplied by the childbirth checklist. Together, the checklist and commodities ensure that essential practices are successfully performed.

Potential linkages between checklist-based programmes at the time of birth and life-saving commodities identified by the UN Commission on Life-saving Commodities for Women and Children

- Reproductive health: female condoms, implants
- Maternal health: oxytocin, misoprostol, magnesium sulfate
- Newborn health: injectable antibiotics, antenatal corticosteroids, chlorhexidine, resuscitation equipment

Specific recommendation

- Actively support diffusion of the WHO Safe Childbirth Checklist programme, measure its impact, and understand barriers and enablers to adoption in various settings; conduct similar processes with other birth checklists as they are developed and validated

A checklist solution during pregnancy to save lives at birth

Numerous antenatal care models and checklist-type instruments have been developed and disseminated by various governments and organizations concerned with improving maternal and child health. In general, the main strength of these tools is their comprehensiveness. Most provide appropriate guidance for the full spectrum of recommended care during pregnancy. However, as a result of their broad content, many of them are limited by their failure first, to identify for users a concise, core set of essential items proven to be directly linked with lives saved; and second, to be provided in formats and vehicles that promote their successful and sustained adoption into practice and so as to achieve changes in behaviour. Ensuring that women deliver at the right time, in the right place, so that they receive the right care is likely to be a high-impact intervention.^{19, 21} The value of using a checklist at the appropriate times during pregnancy would be to support women, their companions, their families, community members and/or health workers in childbirth planning, in the successful execution of other essential practices that are particularly effective for saving maternal and newborn lives, in changing behaviour patterns during pregnancy for safe childbirth, and in family planning education after delivery.

ILLUSTRATIVE EXAMPLE

18-year-old Nala is pregnant and at near-term gestation. She has been experiencing worsening blurred vision and severe headaches for the past day. Guided by a birth preparedness checklist that Nala, her mother-in-law and their community health worker have referred to during the pregnancy, they together determine that it is now urgent that Nala bypass the primary health centre and go to the larger community-health centre for medical care and possible delivery. The checklist had also helped them to prepare a transport plan, with money set aside for vehicular transport, in the event that a complication such as this occurred. Nala is transported quickly. The health workers at the community health centre recognize Nala's severe pre-eclamptic condition and rapidly administer magnesium sulfate. An eclamptic seizure (fit) is averted.

In this example, delay in providing Nala with essential care practices linked with life-saving commodities during her late stage of pregnancy would have resulted in a severe avoidable complication. The checklist helped Nala and her companions to identify a danger sign for which immediate care-seeking was a critical intervention, and also helped to ensure that Nala presented in a timely manner at a facility that could effectively manage her complication with a life-saving commodity. Delays in administration of magnesium sulfate to Nala could have resulted in death or severe harm for both Nala and her unborn child.

Potential linkages between checklist-based programmes during pregnancy and life-saving commodities identified by the UN Commission on Life-saving Commodities for Women and Children

- Reproductive health: female condoms, implants, emergency contraception
- Maternal health: oxytocin, misoprostol, magnesium sulfate
- Newborn health: injectable antibiotics, antenatal corticosteroids, chlorhexidine, resuscitation equipment

Specific recommendations

- Conduct research that will inform the content, parameters and critical components of a draft birth preparedness checklist
 - Conduct a landscape review of antenatal care interventions and existing antenatal resources
 - Determine proven, high-impact practices that save maternal and newborn lives
 - Explore use of visual messages for settings where literacy rates are low
 - Refine draft content and conduct field testing for usability
- Evaluate the checklist and study factors important for implementation in larger settings
 - Investigate impact on process indicators and/or health outcomes in one high-priority setting
 - Expand implementation in three different settings to understand operational concerns related to wide-scale deployment and adaptation in different countries
- Investigate linkages with complementary resources and programmes
 - Deployment through mHealth platforms and different phone application clients
 - Community-based referral systems
 - Mobile banking for transport funds
 - Ambulatory care systems

A checklist solution that saves lives in the postpartum/postnatal period

The first week after birth is an established high-risk period for women and newborns, with almost two thirds of maternal and perinatal deaths taking place at this time. Mothers and/or their companions may not easily discern abnormal clinical signs in either themselves or their newborn babies. This naturally may cause delay in seeking and receiving skilled and potentially life-saving health care. Data suggest that awareness of danger signs in settings with high rates of maternal and child deaths is extremely limited. Studies from sub-Saharan Africa, for example, show that 37.7–72% recently delivered women knew at least one postnatal danger sign, but only 19% of the women were aware of three or more danger signs.²²⁻²⁴ WHO has a tool in the early stages of development, the “Mother/baby 7-day mCheck tool”, that aims to increase safety during the high-risk postpartum/postnatal periods by: first, helping to ensure safe discharge from skilled care whether at a facility or at home; and second, facilitating a mother’s decision to access skilled care in a timely and appropriate manner in the postnatal period. This approach will support women, their partners, community health workers and/or other community members to identify potential complications reliably before they lead to severe harm or death. The “7-day mCheck tool” comprises a paper-based instrument and a complementary mobile phone system consisting of SMS reminders, pre-recorded audio messages, and interactive information and phone-based checklists to enable women to recognize and respond to 12 critical danger signs (relating to themselves and their newborns).

ILLUSTRATIVE EXAMPLE

Lucienne and her new baby, Mateo, left the hospital three days ago. They had stayed only five hours after Mateo was born because Lucienne needed to get home to resume care of her two other children. Mateo has now stopped feeding well. He has become floppy and less responsive. Other women in the community join Lucienne in reviewing a pictorial checklist that Lucienne was given when she was discharged. The checklist lists danger signs that warrant immediate skilled care-seeking. The community health worker also detects this complication in Mateo; she has a similar checklist (with short descriptive videos) on her mobile phone. Lucienne immediately takes her baby back to the hospital where the health workers diagnose newborn sepsis and administer injectable antibiotics. Mateo improves after a day of receiving antibiotics and begins feeding well again. After several days of antibiotic treatment, Lucienne is able to take healthy Mateo back home.

In this example, a delay in delivering essential medical care to Mateo in the postnatal period would likely have resulted in a fatal outcome. Lucienne and Mateo left the hospital rather soon after birth, at a time when postnatal complications might not have developed yet. It is therefore imperative that Lucienne (and her companions, if possible) be aware of the danger signs for which care-seeking is urgently indicated. Poor feeding, floppiness and unresponsiveness in a baby are symptoms of infection. Injectable antibiotics represent a life-saving commodity in this scenario. Without active prompting by the checklist, however, Mateo might not have been in a position to access this medicine in an appropriate and timely manner.

Potential linkages with checklist-based programmes in the postpartum/postnatal period and life-saving commodities identified by the UN Commission on Life-saving Commodities for Women and Children

- Maternal health: magnesium sulfate
- Newborn health: injectable antibiotics, chlorhexidine

Specific recommendations

- Finalize the design of the paper and mHealth mCheck tool, and deploy in one or more settings to determine the value of the mCheck for the health of mothers and their babies in the first seven days after birth, and see if there are operational difficulties using the checklist system at a larger scale
 - Adapt and implement the mCheck package (paper and mHealth) in three different countries, to evaluate their usability and impact on appropriate health-seeking behaviour
 - Assess and document operational and technical requirements of scaling up both paper-based and mHealth solutions
 - Use the mCheck solution in one or more countries to evaluate the impact on maternal and neonatal outcomes
- Investigate linkages with potentially synergistic resources
 - Explore deployment of the mCheck mHealth tool through other widely deployed mHealth platforms.
 - Assess the benefits of leveraging scaling platforms including MoTech and CommCare

Recommendations for tools in support of all validated checklists

- Create mechanisms that support the dissemination of validated checklists
 - Develop an implementation support team for such checklists with a global footprint, particularly in Africa and Asia.
 - Create a mechanism to both receive and disseminate the lessons learned from the checklist design, content, evaluation, implementation and diffusion in individual contexts
 - Design and provide checklist programme training
- Develop an electronic resource to support local adaptation, independent implementation and evaluations of validated checklists
 - Create and make freely available a web-based platform for helping new users to modify checklists' content appropriately for their local contexts
 - Ensure that there is a mechanism to deliver checklists in standardized mobile formats appropriate for any mobile phone hardware and supporting the local adaptation of checklists
 - Support evaluation that determines the marginal benefits of deploying checklist instrument through mHealth tools in addition to paper modalities
- Determine the appropriate electronic mechanisms to ensure that validated mHealth checklists are linked to beneficiary tracking systems (pregnancy registries), and widely deployed mHealth server-side platforms (e.g. MoTech) and phone-based clients (e.g. CommCare), and link to mHealth tools that ensure consistent commodity supplies

5. Conclusion

This report describes the ways in which checklist-based programmes in health have the potential to help health workers to triumph in the final leg of delivering the benefits of life-saving commodities to women and newborns. These strategies build on the previous success of checklist-based programmes in health, and aim to reduce avoidable harm at the periods of highest impact across the childbirth continuum.

The focus thus far has been on supporting the capability of the “health intermediary” to have critical information and be prepared to act at the time it matters most: at the bedside at the moment that care is delivered. Future considerations may include checklist tools that are designed for simple and easy use by patients and consumers in multiple settings of varying economic profile and health literacy in order to provide easily accessible, understandable, and actionable health information.

The Innovation Working Group will continue to apply multidisciplinary approaches to identify simple strategies that can be accepted, applied, and diffused to ultimately make a difference for people’s health everywhere. Checklist-based programmes are designed to be user-friendly and low-cost. Along with unparalleled scaling opportunities now available through online and mobile communication technologies, they provide new promise and opportunities to advance the goals of Every Women Every Child.

Notes

1. Every Woman Every Child - Innovation Working Group Charter May 2012.
2. <http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities/frequently-asked-questions>.
3. <http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities/about>.
4. <http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities/life-saving-commodities>.
5. Gawande A. The Checklist Manifesto. New York: Metropolitan Books of Henry Holt and Company; 2009.
6. Pronovost P, Needham D, Berenholtz S, Sinopoli D, Chu H, Cosgrove S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med*. 2006; **355**(26): 2725-32.
7. Clancy CM. Getting to zero: new resources aim to reduce health care-associated infections. *Am J Med Qual*. **25**(4): 319-21.
8. Haynes AB, Weiser TG, Berry WR, Lipsitz SR, Breizat AH, Dellinger EP, et al. A surgical safety checklist to reduce morbidity and mortality in a global population. *N Engl J Med*. 2009; **360**(5): 491-9.
9. Weiser TG, Haynes AB, Lashoher A, Dziekan G, Boorman DJ, Berry WR, et al. Perspectives in quality: designing the WHO Surgical Safety Checklist. *Int J Qual Health Care*. 2010; **22**(5): 365-70.
10. Bosk CL, Dixon-Woods M, Goeschel CA, Pronovost PJ. Reality check for checklists. *Lancet*. 2009; **374**(9688): 444-5.
11. Duhigg C. *Power of Habit: Why We Do What We Do in Life and Business*. New York: Random House; 2012.
12. The Essential Interventions, Commodities and Guidelines for Reproductive, Maternal, Newborn, and Child Health – A global review of key interventions related to reproductive, maternal, newborn and child health.
13. Priority medicines for mother's and children's health, 2011, WHO.
14. The Task Force also explored a number of potential checklist strategies in the childbirth continuum that, while not ultimately pursued in this initiative, may be fruitful for future research. These included: a spouse/male partner checklist, a labour and delivery critical events checklist package, an "eight month"/ANC (antenatal care) checklist, a management checklist and a mortality registration or mortality audit checklist.
15. http://www.who.int/pmnch/media/news/2012/20120323_un_commission_lifesaving_commodities/en/index.html.
16. Note that the Task Force recognized that the majority of under-five deaths still occur beyond the first month of life and that child health interventions targeting the most common killers of children in that age group (e.g. pneumonia, diarrhoea, malaria) exist and are also potentially amenable to a checklist approach.
17. Use of commodities should follow the recommendations endorsed by WHO's Guidelines Review Committee (GRC).
18. Members of the Task Force and Advisory Group also agreed that certain interventions during adolescence and pre-pregnancy might also be useful for improving outcomes at the time of birth.
19. Kerber KJ, de Graft-Johnson JE, Bhutta ZA, Okong P, Starrs A, Lawn JE. Continuum of care for maternal, newborn, and child health: from slogan to service delivery. *Lancet*. 2007; **370**(9595): 1358-69.
20. Spector JM, Agrawal P, Kodkany B, Lipsitz S, Lashoher A, Dziekan G, et al. Improving Quality of Care for Maternal and Newborn Health: Prospective Pilot Study of the WHO Safe Childbirth Checklist Program. *PLoS One*. 2012; **7**(5): e35151.
21. Lawn JE, McCarthy B, Ross SR. *The healthy newborn: a reference guide for program managers* CDC and CARE. Atlanta, Georgia; 2001.
22. Pembe AB, Urassa DP, Carlstedt A, Lindmark G, Nystrom L, Darj E. Rural Tanzanian women's awareness of danger signs of obstetric complications. *BMC Pregnancy Childbirth*. 2009; **9**: 12.
23. Hailu M, Gebremariam A, Alemseged F. Knowledge about Obstetric Danger Signs among Pregnant Women in Aleta Wondo District, Sidama Zone, Southern Ethiopia. *Ethiop J Health Sci*. 2010; **20**(1): 25-32.
24. Kabakyenga JK, Ostergren PO, Turyakira E, Pettersson KO. Knowledge of obstetric danger signs and birth preparedness practices among women in rural Uganda. *Reprod Health*. 2011; **8**: 33.



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