MONITORING MANUAL

Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services

The Baby-friendly Hospital Initiative

unicef

World Health Organization

Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services

The Baby-friendly Hospital Initiative: Monitoring manual

unicef | World Health Organization

Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services - The Baby-friendly Hospital Initiative: monitoring manual

ISBN (WHO) 978-92-4-010376-4 (electronic version)
ISBN (WHO) 978-92-4-010377-1 (print version)

Contents

Acknowledgements

This document was developed under the leadership of Laurence Grummer-Strawn, World Health Organization Department of Nutrition and Food Safety (NFS), Nina Chad (NFS), Fatmata Fatima Sesay, United Nations Children's Fund (UNICEF) and Grainne Moloney (UNICEF). The first draft of content on internal monitoring was developed by Amber Hromi-Fielder (Yale University, USA), Anne Merewood (Yale University, USA), Mireya Vilar-Compte (Montclair University, USA), and Rafael Perez-Escamilla (Yale University, United States of America (USA)). The first draft of content on external monitoring was developed by Sharon Dawson (Hera, Belgium), Marianne Eelens (Hera, Belgium), Justine Jensen (Hera, Belgium), Marta Medina (Hera, Belgium), Thomas Warichet (Hera, Belguim), Leo Devillé (Hera, Belguim), Ronald Horstman (Hera, Belgium) and Amardeep Thind (Hera, Belgium). The first draft of content on national monitoring was drafted by Rim Mouhaffel (University of Toronto, Canada) and Laurence Grummer-Strawn. Anne Merewood consolidated the text and provided insights on design of the manual.

Anita Pavičić Bošnjak (Croatia), Priscilla Wobil (Ghana), Andrea Isabella Sagoe-Moses (Ghana), Veronica Quartey (Ghana), Ekua Ampah (Ghana), Cynthia Obbu (Ghana), Maria Claudia Santizo (Guatemala), Susana Aguilar (Guatemala), Elise Chapin (Italy), Mary Kimani (BFHI Network, Kenya), Brian Njerogo (BFHI Network, Kenya), Esther Mogusu (BFHI Network, Kenya), Maryse Arendt (BFHI Network, Luxembourg), Janet Guta (BFHI Network, Malawi), Jane Cartwright (BFHI Network, New Zealand), Cara Haftner (BFHI Network, New Zealand), Mette Hansen (BFHI Network, Norway), Saba Shuja (BFHI Network, Pakistan), Maria Elena Flores-Ramirez (BFHI Network, Peru), Milagros Raffo (BFHI Network, Peru), Olga Stanojlovic (BFHI Network, Serbia), Dr. Andreja Taukec Golob (BFHI Network, Slovenia), Dhammica Rowel (BFHI Network, Sri Lanka), Anne Woods (BFHI Network, United Kingdom), Dr. Doung Huy Luong (BFHI Network, Viet Nam), Handrea Njovo (BFHI Network, Zimbabwe), and Ruth Karidza-Machaka (BFHI Network, Zimbabwe) contributed to the development of this manual.

WHO and UNICEF HQ extend their gratitude to Elise Chapin, (BFHI Network, Italy), Roger Mathisen, (FHI360, Viet Nam), Binh Ta, (FHI360, Viet Nam), Penjani Kamudoni, (UNICEF, Kenya and Fiji), Laura Kiige, (UNICEF, Kenya), and Pontsho Sepoloane, (UNICEF, Malawi) for their comprehensive review of the final draft of this manual.

WHO thanks the Bill & Melinda Gates Foundation for providing financial support. Donors do not fund specific WHO products and do not participate in any decision related to content development, review or drafting. UNICEF thanks the United States Government for providing financial support through the United States Agency for International Development.

List of acronyms

BFHI	Baby-friendly Hospital Initiative
CDC	Centers for Disease Control and Prevention
DHIS	District Health Information System
DHS	Demographic and Health Survey
EHR	Electronic health record
HMIS	Health management information system
MoH	Ministry of health
NGO	Non-governmental organization
QA	Quality assurance
QI	Quality improvement
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Introduction

The Baby-friendly Hospital Initiative (BFHI) is a global strategy developed by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) in 1991 to scale up the implementation of the Ten Steps to Successful Breastfeeding to protect, promote and support breastfeeding in maternity care facilities[1] (see Box 1).[2]

For many years, the BFHI was organized as a strategy for maternity care facilities that adhered to the Ten Steps and met all the BFHI accreditation criteria to be designated as "baby-friendly." In 2018, the revised guidance on the BFHI shifted focus to a more integrated health systems approach to institutionalize the Ten Steps in facilities providing maternity and newborn services.[3] The revised guidance emphasizes the need for well-functioning internal monitoring including and data-management systems that facilitate continuous quality assurance and improvement of adherence to the Ten Steps. The guidance also recommends both streamlined external monitoring procedures to reduce the burden of compliance as well as national monitoring to strengthen accountability. Strengthening the implementation of the BFHI through assessment and monitoring is essential to ensure the maintenance of quality standards across all maternity care facilities. This updated implementation guidance moves the BFHI away from a traditional model that focused on facility designation as a main outcome to a towards systemwide integration as a driver of practice change that ultimately leads to improved breastfeeding outcomes.

BOX 1

Ten Steps to Successful Breastfeeding

Critical management procedures

1a. Comply fully with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions.

1b. Have a written infant feeding policy that is routinely communicated to staff and parents.

1c. Establish ongoing monitoring and data-management systems.

2. Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding.

Key clinical practices

3. Discuss the importance and management of breastfeeding with pregnant women and their families.

4. Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth.

5. Support mothers to initiate and maintain breastfeeding and manage common difficulties.

6. Do not provide breastfed newborns any food or fluids other than breast-milk, unless medically indicated.

7. Enable mothers and their infants to remain together and to practise rooming-in 24 hours a day.

8. Support mothers to recognize and respond to their infants' cues for feeding.

9. Counsel mothers on the use and risks of feeding bottles, teats and pacifiers.

10. Coordinate discharge so that parents and their infants have timely access to ongoing support and care.

---

1 Maternity care facility refers to any health care facility that provides maternity and newborn services.

2 Baby-friendly hospital initiative: revised, updated and expanded for integrated care. Geneva: World Health Organization and United Nations Children's Fund; 2009. (https://iris.who.int/bitstream/handle/10665/43593/9789241594967_eng.pdf, accessed 9 October 2024).

3 Implementation guidance. Protecting, promoting, and supporting breastfeeding in facilities providing maternity and newborn services: the revised Baby-friendly Hospital Initiative. Geneva: World Health Organization and United Nations Children's Fund; 2018 (https://iris.who.int/handle/10665/272943, accessed 9 October 2024).

Audience

This document provides countries with various tools and strategies for monitoring adherence to the Ten Steps at the internal facility, external oversight and national levels. It is intended to guide governments and key stakeholders in planning BFHI monitoring activities, including data collection and analysis. The primary intended audience includes:

- quality improvement/quality assurance teams within maternity care facilities
- regional or administrative entities responsible for monitoring and overseeing the quality of perinatal care
- policy- and decision-makers working at national governments, such as public health officials or programme managers/coordinators in the ministry of health (MoH).

Levels of monitoring

Monitoring is needed within health care facilities themselves, externally to provide quality assurance checks, and at the national level for programme planning and evaluation (Fig. 1). In all cases, monitoring should lead to learning and corrective action as appropriate.

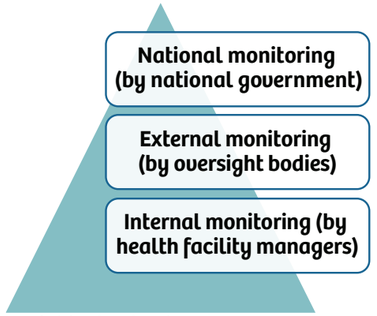


Figure 1: Monitoring Levels

Internal monitoring consists of ongoing evaluations of service quality at the facility level. An example of an internal assessment would be having the facility manager review facility data on key clinical practice indicators and assess the quality of breastfeeding services offered at the facility, therefore, ensuring that the facility is adhering to the Ten Steps.

External monitoring involves the independent assessment by an oversight body in evaluating whether maternity care facilities are adhering to the Ten Steps. This type of assessment is for quality assurance and should be tied to mechanisms for providing technical assistance when improvements are needed.

National monitoring is completed at the federal/country level to track the overall application of evidence-based practices that support breastfeeding. Data are used for programme planning and evaluation to optimize infant and young child feeding. In large countries, where health planning is decentralized to provincial levels, this monitoring may also be carried out by subnational authorities.

Internal monitoring

Step 1c of the Ten Steps to Successful Breastfeeding recommends that maternity care facilities "establish ongoing monitoring and data-management systems." This section of the Monitoring Manual presents strategies and a tool that facilities can adapt to establish ongoing internal monitoring systems that will track their progress towards meeting Steps 3 to 10 of the Ten Steps. Internal monitoring is defined as a facility assessing its own practices with regard to breastfeeding support in antenatal and labour and delivery services. Each facility should determine a priori a structure around implementation and oversight of internal monitoring practices, and for the analysis and dissemination of data generated. This Monitoring Manual is designed to be used in an integrated fashion with external monitoring entities, as delineated in subsequent sections.

Purpose

By establishing and implementing an internal monitoring system, facilities will be able to identify practices that need improvement, track progress, and obtain data for presentation to external monitoring entities. Monitoring will enable facilities to celebrate successes, and, if concerns are identified, to improve practices by implementing quality improvement (QI) measures or alternative strategies. Facilities will also be able to share data generated with internal staff in the unit and with local, district, regional (relevant decentralized levels) and national entities working with hospitals on the implementation and sustainability of the Ten Steps.

Integration

To the extent possible, data on compliance with the Ten Steps/BFHI should be integrated within other monitoring systems already being used in maternity care facilities and the health system more broadly. Monitoring of the Ten Steps is most likely to be sustained over time if data fields or questions are incorporated into existing data collection platforms rather than attempting to create separate stand-alone systems. However, if such platforms do not already exist, then implementation of simple methods for data collection should be explored until such time as they are in place.

Indicators

As described in the 2018 BFHI Implementation Guidance, indicators for facility-based monitoring should focus on key clinical practices (i.e., Steps 3–10). Periodic evaluation of the management procedures covered in Steps 1 and 2 is important but generally does not require routine data collection. The recommended indicators for facility-based monitoring published in 2018 have been adjusted slightly to reflect updated evidence (see Annex 1, Table A1.1).

Two of the indicators, assessing early initiation of breastfeeding and exclusive breastfeeding in the facility, are considered sentinel indicators because they reflect the breastfeeding behaviours that are affected by the other Steps. All facilities should routinely track these indicators for each mother–infant pair.

The other recommended indicators may not require constant monitoring but are particularly important during an active process of QI. Once acceptable levels of compliance have been achieved, the frequency of data collection on these additional indicators can be reduced, for example and at a minimum to annually. On the other hand, if goals are not met, or if adherence falls below a certain threshold, it will be important to examine other aspects of care, which might include direct observations of service delivery, staff interviews, or a detailed review of medical records to determine sources of the problem. Examination of management procedures may also be needed to identify what needs to be done to improve outcomes. Options for examining the management procedures are discussed in the external monitoring chapter below.

BOX 2

Birthing Experience Monitoring Tool in Cambodia, the Lao People's Democratic Republic and Viet Nam

The **Birthing Experience Monitoring System** was developed in Viet Nam in 2019. The Ministry of Health in Viet Nam requested a nationwide scale-up in 2020, and it was replicated in the Lao People's Democratic Republic in 2022 and in Cambodia in 2023.

The Birthing Experience Monitoring Tool surveys mothers on the quality of care they received at the hospital where they gave birth. Mothers' telephone numbers are collected at discharge and provided to an independent monitoring agency. Surveys are conducted by telephone during the first month of every quarter. Investigators record participants' responses into the Kobo Collect platform from a tablet computer. Telephone numbers are separated into those provided by mothers who gave birth by caesarean section and those who gave birth vaginally. Investigators select telephone numbers from the two lists of phone numbers at random and invite mothers who answer to participate in the survey. The investigator works through the list of telephone numbers until enough complete responses are collected to achieve the required sample. If fewer than 50% of mothers gave birth via caesarean section during the preceding quarter, all mothers who gave birth via caesarean are invited to complete the survey. The ministry of Health, Department of Health randomly selects and re-surveys 5% of respondents for quality assurance. Central/provincial and district hospitals that have obstetric or neonatal / paediatric units and are not yet recognised as Centers of Excellence for Breastfeeding must sample 100 mothers and 50 mothers respectively. Hospitals that are already recognised as Centers of Excellence for Breastfeeding must sample 20 mothers per quarter.

Central/provincial and district hospitals that have both obstetric and paediatric/neonatal units must include 20 mothers who have given birth within the previous month, of whom ten must be mothers of infants born prematurely. Hospitals that are already recognised as Centers of Excellence for Breastfeeding must sample 20 mothers per quarter, including ten mothers of infants less than one month of age, of whom, five must be mothers of infants born prematurely.

The survey measures breastfeeding and early essential newborn care practices, such as skin-to-skin contact, rooming-in, early initiation of breastfeeding, exclusive breastfeeding, breastfeeding counselling, and adherence to national legislation related to the International Code of Marketing of Breast-milk Substitutes. Online platforms are employed for data collection, analysis and visualization, while the auto-calculation feature enables real-time data analysis. This helps hospitals swiftly evaluate and enhance maternal and newborn care. It also allows for the disaggregation of data by demographics such as ethnicity, obstetric and paediatric indicators, vaginal or caesarean births, and preterm or full-term births. The tool offers access controls for health authorities at various levels, facilitating the decentralization and autonomy of health service management and QI.

The Birthing Experience Monitoring Tool was introduced in Viet Nam in 2019. At that time, 20 hospitals had been recognized as Centers of Excellence for Breastfeeding. By September, 2024, 37 hospitals had achieved this recognition. By September 2024, 21 provincial or central hospitals and 44 district hospitals were using the system. Eleven of these are private hospitals. Participation in the Birthing Experience Monitoring programme increased the prevalence of exclusive breastfeeding during the hospital stay, reduced promotion of breast-milk substitutes in the hospital setting. Furthermore participating hospitals doubled the proportion of mothers who reported experiencing prolonged skin-to-skin contact (S2S) with their babies immediately after birth. By late 2020, 86% of mothers surveyed who gave birth vaginally reported experiencing prolonged S2S. By the second half of 2021, 69% of mothers surveyed who had given birth by caesarean section reported experiencing prolonged S2S, after peaking at 79% in 2020.

The recommended indicators do not cover all the global standards listed above because of the need to keep the monitoring system as simple as possible so they are feasible and implemented. Countries or individual facilities however could include additional indicators where feasible.

Potential information sources

Patient exit/follow-up surveys.

The most reliable source of information on the postnatal care a mother receives is generally from the mother herself based on her personal experience. Surveying mothers upon discharge from the maternity unit or shortly thereafter is therefore the preferred option for internal monitoring. Exit surveys or satisfaction surveys are regularly used across clinical specialties and across the globe to assess patient perspectives on quality of care. Questions on experience with the Ten Steps can be added to such surveys. External bodies have traditionally used exit interviews to assess hospital compliance with the Ten Steps.

An Infant Feeding Patient Exit Survey is included in Annex 2. This survey can be incorporated into other surveys (e.g., patient satisfaction surveys) or administered as a stand-alone survey. Respondents should be selected randomly to ensure that the results are representative of all babies born in the facility.

Surveys can be administered electronically or on paper, depending on the preferences of the facility the mother or the context. Electronic surveys avoid extra data entry steps, and analysis can be easily automated. Administration via mobile devices after usability testing may be convenient if most mothers have ready access to them.
For populations facing barriers in language, literacy or numeracy, in-person or telephone surveys may be necessary. Such surveys should be administered by individuals from departments outside the maternity unit (such as QI or quality assurance (QA)), or by independent data collectors.

If it is impractical to conduct surveys at the time of discharge, mothers could be contacted a few days later through messaging or a phone call, perhaps having agreed to conduct the survey before discharge so they are more likely to accommodate the request. However, delays should be kept to a minimum as maternal recall of the care they receive at the facility is likely to further decrease with time.

Strengths: A key advantage of maternal surveys is that they present the perspective of the mother, who is the focus of the intervention, around childbirth. Surveys are relatively simple to perform, particularly if mothers have access to electronic devices. Asking the questions shortly before the mother is discharged can result in a high response rate and accurate recall. Results from electronic surveys can be analysed immediately and shared with the facilities for action.

© UNICEF/UNI630591/Rotzoll/Cambodia

Limitations: A mother may not be aware of everything that happened during her stay in the maternity care facility; for example, whether her baby was supplemented while she was asleep or whether she was separated from her baby. She may not be able to estimate the length of time that she was skin-to-skin with her baby or exactly when she first breastfed. Mothers cannot provide information on staff training or policies (i.e., Steps 1 and 2). The number of questions may need to be truncated if the survey is being incorporated into other surveys that already have a long list of questions. Administration of surveys for populations facing barriers in language, literacy or numeracy or who lack access to mobile electronic devices (after usability testing) will require additional staff work and potentially introduce biases in the results.

Implementation tips

- Patient exit surveys should be pretested with mothers giving birth in the facility to make sure that the questions are correctly understood and that mothers know how to answer them.
- Facility leaders should discuss with various facility departments how patient exit surveys can be used for multiple purposes to maximize their usefulness.
- Statisticians or those in charge of organizing monitoring can help decide whether and how mothers can be randomly sampled to provide reliable results.

Routine administrative data systems

Many health care facilities collect electronic data on key indicators using a health management information system (HMIS) that is designed to support planning, management and decision-making. HMIS is "a data collection and electronic information system particularly designed to support planning, management and decision-making in health facilities and organizations."[4] These systems track clinical performance and outcomes in patients and have built-in reporting functions that aggregate, analyse and regularly report on indicators. Data can be collected from both private and public health care facilities that provide maternity and newborn services; for example, the electronic medical records, also referred to as electronic health record (EHR), used in some high-income countries.

Data to inform some indicators on the Ten Steps may already be collected in an existing HMIS. For example, antenatal counselling, timing of first breastfeed and how the baby is being fed may be routinely collected data items. Additional work may be needed to transform these data into relevant indicators, such as by aggregating data across multiple feeding episodes to determine if the baby was supplemented during the stay in the maternity care facility. If data on key indicators are not already collected, there may be opportunities to insert additional data fields into the HMIS.

It may also be possible to link data collected via patient exit or follow-up surveys to the HMIS record for each mother. This would likely serve to streamline data analysis by using built-in features of the HMIS system. It would also allow such data to be shared with district and health managers for use in external and national monitoring systems.

Strengths: An automated HMIS can provide real-time access to information on how clinical practices are being applied in the facility. Because data are available for all patients, there is no need to select samples. Inclusion of data fields on standard data collection forms can also serve as reminders to clinical staff about the services they should provide and thus help to improve adherence to recommendations.

Limitations: The key challenge with HMISs and EHRs for monitoring the Ten Steps is that staff may have a tendency to overreport practices that they have been taught they are supposed to do. Additionally, routine administrative data collection is often fraught with data quality issues, such as data irregularities, inaccuracies, incompleteness and inconsistencies that are in part due to the large number of indicators collected. HMISs and EHRs are dependent on having well-functioning technology, which is a greater problem for small or under-resourced facilities. Private facilities that are not part of larger health system may find it difficult to establish or maintain good HMIS systems. If these systems become too complicated, they can quickly become costly and error-prone. Also, there are specific limitations to the different Ten Steps/BFHI related indicators. For example, counselling indicators do not track the quality of the counselling or the specific content; they simply track whether counselling was done.

4 Health Management Information Systems. North Carolina: MEASURE Evaluation. (https://www.measureevaluation.org/resources/training/capacity-building-resources/health-management-information-systems-hmis-1, accessed 9 October 2024).

BOX 3

District Health Information Systems

District Health Information System, version 2 (DHIS2), is a software platform developed in 2006 to manage health information systems. More than 80 low-and middle-income countries have adopted the DHIS2 to manage and visualize routine health data, especially facility-based data.[5,6] This online platform provides information on health and nutrition indicators and assembles state- and district-level health data to review policies and resource allocation. At all levels of the health care system, quality, facility-based data provide reliable information about service delivery and the extent to which populations are accessing and receiving high-quality services. DHIS2 is a fundamental tool for digitalizing health information and improving the quality of maternal and newborn services. This system improves data quality by preventing errors in data transmission and aggregation from the facility to the national level. Core DHIS indicators are designed to be relevant at all levels of the health system, including at the health facility.

UNICEF has developed a metadata package on nutrition within the DHIS2 platform to support the uptake of standard nutrition indicators and analyses. The nutrition package includes indicators on antenatal care contacts, with counselling on breastfeeding, early initiation of breastfeeding, and counselling on feeding in the first six months of life. Additional indicators can be incorporated at the country level.

5 For more information, see: https://dhis2.org/.

6 Bhattacharya AA, Umar N, Audu A, Felix H, Allen E, Schellenberg JR, Marchant T. Quality of routine facility data for monitoring priority maternal and newborn indicators in DHIS2: A case study from Gombe State, Nigeria. PloS One. 2019 Jan 25;14(1):e0211265.

Implementation tips

- As part of the training package on HMIS, staff should be trained in how to correctly record information on the Ten Steps in the administrative data systems.
- Results obtained from the HMIS should be regularly communicated to staff to motivate them to adopt recommended practices and improve data quality or to sustain their quality performance if the data reports this.
- Teams within the facility should learn how to extract data from the HMIS and generate relevant reports to inform programme review and reorientation as needed.

Medical chart review

Even in facilities where automated data systems do not exist, data pertaining to indicators on the Ten Steps may be recorded in the mother's or the infant's medical record at the time of birth and during the postpartum stay. In both electronic and paper medical records, appropriate fields may need to be created to track specific indicators. Adaptations to the medical record may be needed at the facility level or at broader systems levels. For example, where an entire nation, region or hospital system uses uniform medical records, changes to data forms will need to occur across all related facilities.

Thought should be given to the location and specificity of data pertaining to the Ten Steps indicators. For example, data on skin-to-skin care could be charted in either the mother's or the infant's medical record, but consistency is needed to facilitate the use of these data. To assess whether the baby experienced at least one hour of immediate, uninterrupted skin-to-skin contact following the birth, fields in the medical chart would be needed to record the time of birth, the start time of skin-to-skin care, and the time when skin-to-skin contact ends.

Staff should be fully involved and sensitized on changes to the medical records to facilitate their buy-in and implementation. They need to understand the purpose of the added data fields and be trained in data entry. Verification and triangulation of data collected can help to reduce data entry errors, particularly when changes are being made.
Data from the medical charts can be extracted manually by an assigned staff member reviewing the medical records, or a sample thereof, on a regular basis. In some cases, hospital QA teams may extract the data. The extracted data must be entered into spreadsheets or other data analytic software to calculate indicators and generate reports. Because manual extraction of data is time-consuming and costly, it is typically conducted on a sample of patient records during a fixed period.

Because of the effort required to conduct medical record abstraction, routine collection may focus only on the sentinel indicators of early breastfeeding initiation and exclusive breastfeeding during the facility stay. Extraction of data on other practices may be done when the sentinel indicators are showing declines or are not improving as expected.

Strengths: Collection and extraction of data in the medical charts may be the only option in settings where electronic data systems do not exist. If electronic records are maintained, this approach could also be completed entirely remotely. Data from the medical chart may provide better quality because the data are collected at the point of service rather than on recall. For example, if each infant feeding episode is recorded, the rate of exclusive breastfeeding may be more accurately calculated compared to reliance on retrospective reports of whether breastfeeding was truly exclusive over a 24–72-hour period. As with an HMIS, the inclusion of data fields in medical charts can serve as reminders to clinical staff, thus improving practices.

Limitations: The limitations of medical chart review are similar to those of an HMIS. Data reported by clinicians are overly optimistic and suffer from many data quality issues. Further, the inclusion of too many requirements in the medical charts may result in missing data, staff discontent, wasted time and pushback. Finally, medical chart abstraction incurs heavier recurrent costs and may be difficult

© UNICEF/UNI235503/Willocq/Guatamala

to sustain over time. This approach could also be labour- and time-intensive, especially if a large sample size is chosen for review.

Implementation tips

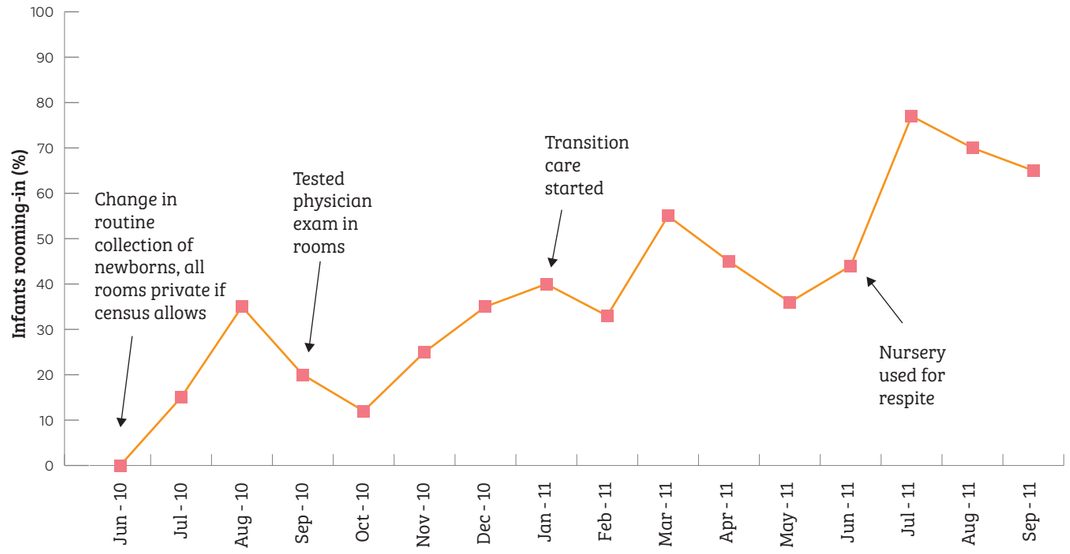
- Medical charts may need to be redesigned to provide space for recording information on the key indicators of the Ten Steps/BFHI.
- Use of open-ended, free-text fields in medical records should be avoided wherever possible as this type of data is hard to interpret and use for assessing indicators.
- Sampling of medical records should be representative of all births in the facility.
- Data checks should be performed regularly to ensure quality of the extraction.
- Extracting data on only a few Steps at a time may make medical chart abstraction more feasible.

Data collection and processing

The frequency of data collection will depend on the system being used. For example, data collection in administrative systems is inherently continuous. On the other hand, if questions are added to patient exit surveys that are already ongoing, the periodicity will be a function of the ongoing survey's periodicity. If data collection is intermittent, care should be taken around the timing of data collection to ensure that outcomes are not biased. For example, data should be collected from mothers admitted to the facility during different seasons, day and night shifts, weekdays and weekends, holiday periods and so forth.

Depending on the size and capacity of the facility, relevant data may be gathered for the entire patient population or from a sample. If mothers or records on mothers are sampled, it is important to ensure that the samples are representative and large enough to generate reliable statistics. Percentages based on fewer than 20 mother–infant pairs will be unstable and may lead to erroneous conclusions.

Data should be processed regularly so that leadership and QA/QI teams can meet in a timely manner to review the results, assess the status of the BFHI indicators, relay information to clinicians, and where needed, react to improve practices. A standard practice in QI is to generate run-charts, plotting indicators monthly to identify overall patterns of improvement or deterioration over time (see example on right).



Data run chart for Breastfeeding Quality Improvement in Hospitals Learning Collaborative

Facilities should have a group or committee that coordinates the application of the Ten Steps. This group must review progress at least every six months. During concentrated periods of QI, monthly review is needed. The purpose of the review is to continually track the values of these indicators, determine whether established targets are met, and, if not, plan and implement corrective actions.

Goals and thresholds

Continuous QI should be a goal for all facilities. It is useful for facilities to establish specific thresholds for performance on indicators that will trigger key actions. For example, if the level of the sentinel indicators falls below a specific threshold, a more in-depth assessment of both the clinical practices and all management procedures should be conducted to determine where the bottlenecks are and what needs to be done to improve the sentinel indicators.

© UNICEF/UNI594410/Dejongh/Belize

Alternatively, when indicators have improved above an acceptable threshold, facilities may decide to reduce the frequency of monitoring.

Thresholds for performance on indicators are often set at the system, regional or national level. The 2018 BFHI Implementation Guidance calls for an 80% threshold for most indicators. However, these may need to be adjusted based on the conditions at the facility. Facilities that have poor compliance with the Ten Steps, perhaps due to lack of attention to them in the past or due to low breastfeeding rates in the community, may need to establish lower time-specific goals regarding compliance, and adjust these goals upwards over time in accordance with progress and capacity. Facilities that have already attained a high standard of compliance may set higher targets.

Dissemination and use of internal monitoring data

The aggregated information generated through internal monitoring should be widely shared with clinical staff of the maternity and prenatal services. Facility floor managers should be regularly be provided with a well-structured report, with such reports presenting time trends per indicator, and potentially annotated with relevant information. It is important to focus on and celebrate success, as well as to plan for remediation.

External monitoring

The 2018 BFHI Implementation Guidance calls for the development of external assessment systems to regularly evaluate adherence of maternity care facilities to the Ten Steps. This section of the Monitoring Manual presents guidance and options to assist external entities in conducting ongoing, impactful oversight of facility adherence to the indicators for the Ten Steps. External monitoring is defined as monitoring by an oversight body responsible for assuring the quality of care provided by maternity care facilities.

External monitoring builds upon internal monitoring within facilities and thus focuses on assessment of adherence to Steps 1 and 2 of the Ten Steps. Where internal monitoring is inadequate, it also describes options for checking on the implementation of Steps 3–10. This section should be read in conjunction with the preceding section on internal monitoring and the subsequent section on national monitoring, since monitoring activities connect across multiple levels.

Purpose

The primary purpose of external assessment is to assist facilities in improving the quality of health care by providing information to identify gaps in practices and make improvements, a process known as QA. Oversight bodies, or entities from outside the facility that monitor health care quality, could include hospital accreditation boards, health district supervisors or private health care system quality departments. In some cases, a national breastfeeding committee, health care professional associations or selected non-governmental organizations have taken on this oversight role.

BOX 4

BFHI indicators in hospital accreditation standards

In 2013, **Viet Nam** embedded the BFHI criteria as part of the MoH Hospital QA Criteria and national accreditation standards as a way to make the Ten Steps of BFHI mandatory across all public and private maternity and childcare hospitals in the country.[7] The model supports implementation of the Ten Steps to Successful Breastfeeding by providing hospitals with additional guidance, tools and assessments to support improved programme implementation and sustained change.

In response to the decline in early initiation rates between 2005 and 2010, the **Serbian Government** took necessary measures to improve the quality of care around birth. As a result, the MoH, in collaboration with other stakeholders, increased its support to the BFHI, and in 2017, Serbia integrated the BFHI criteria into its hospital accreditation standards as a voluntary criterion to make BFHI more sustainable and to facilitate scale-up.[8]

In the **United States**, the Joint Commission (TJC – formerly the Joint Commission on Accreditation of Healthcare Organizations) made reporting on exclusive breastfeeding during the facility stay a mandatory part of its facility accreditation standards. However, the reporting is no longer mandatory.

7 Huy LD, Ngoc KL, Do Hong P, Le MD, Daly AN, Thu TD. The Status of Baby Friendly Hospital Initiative under Hospital Quality Assessment Criteria Implementation: A Report in Vietnam. Diversity and Equality in Health and Care. 2018; 15(4): 129–136.

8 Jovanovic B. Hospital accreditation as method for assessing quality in health care. Archive of Oncology. 2005;13(3/4):156.

Depending on the country context, oversight bodies may be responsible for conducting the monitoring, which includes: a) data collection; b) analysis of the external assessment data; and c) provision of technical assistance in response to assessment results. By operating outside of the facility, oversight bodies are often better able to objectively identify gaps in care and noncompliance with standards than monitoring efforts within the facility. To improve the quality of care for all mothers and babies, external monitoring is important for all maternity care facilities, not just those volunteering to be assessed. External monitoring should facilitate technical assistance, either directly by providing feedback to the facility, or indirectly, by passing information along to other groups, such as professional bodies or non-governmental organizations, who are able to provide more in-depth technical assistance. External assessment can also create incentives for QI.

© UNICEF/UNI683367/India

Integration

Sustainability of the Ten Steps can best be achieved by embedding monitoring of the Ten Steps into existing QA systems. Such integration will help to institutionalize the Ten Steps as the standard of care for all maternity care facilities. QA systems may operate as part of routine supervisory processes, pay-for-performance financing schemes, or for facility certification/accreditation for health insurance reimbursement.

For many countries, some of the Ten Steps may already have been integrated into maternal and child health monitoring systems. Indicators on early initiation of breastfeeding and skin-to-skin care are commonly assessed as part of standard perinatal care assessment systems. Monitoring systems for enforcement of national legislation on the International Code of Marketing of Breast-milk Substitutes (the Code) may include monitoring in maternity care facilities.

The process of integrating more of the Ten Steps into existing QA systems could include a range of approaches. The national BFHI coordination body would likely need to establish a working group to evaluate the potential opportunities for integration. In some cases, a gradual or stepwise approach may need to be taken. Opportunities for integration may present themselves when new systems are under design or revision. The coordination working group would need to manage communications with the authorities who operate existing systems and advocate for inclusion of the Ten Steps.

Decisions on the sequence of integration, methods of verification and benchmarks will be critical. For example, there may be advantages to incorporating a full set of indicators on the Ten Steps at once, accompanied by a communications effort to explain why they are important, or to taking a stepwise approach of only adding one or two questions on the Ten Steps at a time to minimize disruption. The validity of data collected may be checked only at the beginning, as a sort of pilot testing, on a spot-check basis or as a continuous function through triangulation of data across multiple data sources. Discussions would need to cover how the results from these systems would be used as benchmarks for accreditation or authorization of facility reimbursements.

Indicators

If maternity care facilities effectively implement internal monitoring systems as discussed in the previous section, the oversight bodies do not need to invest significant time collecting data on the implementation of Steps 3–10 at the facility level. It is generally sufficient to examine internal monitoring reports and note any issues of concern. In this case, direct assessments can focus on indicators of adherence to the critical management procedures (Steps 1 and 2). Annex 1, Table A1.2 provides a suggested list of indicators for these management practices.

However, where internal monitoring systems are inadequate, oversight bodies may find it necessary to collect independent data on Steps 3–10 within facilities and then generate indicators from Annex 1, Table A1.1.

Examination of the sentinel indicators on early initiation of breastfeeding and the rate of exclusive breastfeeding throughout the hospital stay would be particularly important for oversight bodies in order to evaluate whether outcomes are improving or worsening. Where indicators are incorporated into other health care QA systems, it might be necessary to select fewer BFHI indicators. The sentinel indicators on early initiation of breastfeeding and the rate of exclusive breastfeeding throughout the facility stay should be prioritized in this case.

Potential information sources

Oversight bodies can obtain information on implementation of the Ten Steps within maternity care facilities by reviewing results from internal monitoring systems, collecting their own independent data, examining key facility documents, interviewing staff or conducting site visits. For integration with existing systems to be effective, the modes of collecting data will likely need to mirror those of the existing external QA systems. For example, if site visits are already occurring, then data collection on the Ten Steps during these visits would be preferred. If desk reviews are already occurring, then desk reviews on the Ten Steps would be appropriate.

Review of facility internal monitoring reports

The previous section on internal monitoring presents guidance on how facilities can assess their own adherence to the Ten Steps and related indicators. If facilities are successfully performing internal monitoring, the oversight body could access these reports for each facility and review them to evaluate facility performance. Alternatively, the raw data from medical records or maternal surveys may also be made available to the oversight bodies for their own analysis. A framework must be created to share information between facilities and the oversight bodies to ensure data are transferred in a transparent manner, while protecting the anonymity of patient records. Data collected at the facility level using the HMIS are often already set up to be aggregated and compiled into a database or repository and analysed at subnational, regional or other external levels. Given their widespread use, technical infrastructures may already exist.

This option provides no information on compliance with the Code, facility policies or staff competency. As such, it needs to be combined with other approaches below for QA on Steps 1 and 2.

Strengths: The strengths of using systems already employed at the facility level are that additional work does not need to be performed, and the methodology by default integrates facilities and external monitoring agencies. This approach would reinforce for individual facilities the importance of their internal monitoring systems and ensure consistency of messages on what indicators are important.

Limitations: This option is dependent on the existence of well-functioning internal monitoring systems. Data from internal monitoring systems may be inaccurate, incomplete or not collected at all. At the facility and at the overseeing entity level, resources may be lacking to implement such systems. Facilities without internal monitoring reports are likely to be performing worse on other aspects of the Ten Steps, so the facilities most in need of input from the oversight bodies would receive it if this is the only data source considered. There is also the risk that facilities find ways to exaggerate their performance results to impress the oversight bodies.

Implementation tips

- Oversight bodies should establish clear and simple systems for regularly transmitting and reviewing records and reports from maternity care facilities.
- Provision of technical assistance to facilities should include assistance in the operation of the internal monitoring systems, as this will improve both the quality of service delivery within facilities and the utility of the systems for external QA.
- Oversight bodies may be able to insert new data fields in HMIS systems, including quality of care indicators for assessing quality of care for mothers, newborns and children (including small and sick newborns), more easily than individual facilities can, having broader impacts on multiple facilities at once.

Independent collection of data on clinical practices

For facilities that have not implemented adequate internal monitoring (e.g., data are incomplete, inconsistent, or not periodically collected per recommendations), the oversight body could do its own assessment of clinical practices using the same procedures available for internal monitoring. They could directly administer patient exit surveys, analyse routine administrative data or review medical charts. Oversight bodies may need to collect such data and/or help with analysis of raw data because the facilities do not have the capacity to analyse or interpret their own data.

Even for facilities that have implemented internal monitoring, the oversight body may perform data quality checks to check the validity of the information shared from the internal monitoring systems. This could entail independent data collection to triangulate the results from the internal monitoring. For example, if internal monitoring reports are based on routine administrative data systems, the oversight body may wish to administer a separate patient exit survey and compare results. Alternatively, they may repeat the procedures already conducted in internal monitoring on a sub-sample as a spot check. Maternity facilities could be randomly selected for such spot checks or selected based on apparent data inconsistencies or aberrant findings in the information provided by the facility.

Because the data collection described here only cover the clinical practices, they must be combined with other approaches below for QA on Steps 1 and 2.

Strengths: Independent data collection would allow for QA of the key clinical practices, even where maternity care facilities do not have effective internal monitoring systems. It can also provide greater trust in the information coming from individual facilities by confirming or triangulating

© UNICEF/UNI468538/Prasad Ngakhusi/Nepal

results. For more information on the strengths and limitations of each of the specific data collection methods, see the previous section.

Limitations: Beyond the inherent limitations of each specific data collection method, a key concern for this approach is that it would be costly for oversight bodies to collect independent data for all facilities in the country. It may be challenging to obtain contact information for mothers who have delivered in the facilities to carry out a patient exit survey.

Implementation tips

- Independent data collection by oversight bodies should be kept limited to reduce costs and ensure the sustainability of the QA processes.
- Where independent data collection is used to triangulate results from facility internal monitoring reports, the conclusions from these comparisons should be communicated back to the facilities.
- Because medical charts are typically considered confidential, special procedures may be needed to grant access to these records for the oversight body if medical chart review is a chosen method.

Desk review of key documents from the facility

A variety of documents and records within facilities can provide evidence of the application of Steps 1 and 2 without requiring additional data collection. These could include:

- breastfeeding/infant feeding policy documents
- policies on conflicts of interest and engagement with the commercial milk formula industry
- relevant clinical protocols or standards
- marketing policy
- purchasing records and stock records of breast-milk substitutes, feeding bottles and teats
- records of staff competency assessments or other documentation of competency
- staff training records
- minutes or notes from internal monitoring meetings.

Oversight bodies can request copies of these documents and assess their consistency with the standard for Steps 1 and 2. Annex 1, Table A1.2 lists several indicators to be used to evaluate adherence to these Steps. QA on Steps 3–10 will require the use of additional methods, as described above.

Strengths: Review of existing documents can be done at relatively low cost. It can provide important qualitative information and offer insights into gaps and discrepancies that need to be addressed to improve quality of service delivery.

Limitations: These documents provide information on what is supposed to be done in the facility, but not necessarily what is actually done. For example, posters from a formula company may still be posted on a wall despite the existence of a policy against the display of marketing materials from companies that manufacture breast-milk substitutes. Records showing enrolment in breastfeeding courses do not guarantee that staff actually attended these courses.

Implementation tips

- Oversight bodies should establish clear criteria for the information to be extracted from facility documents and the periodicity of reviewing these.
- Breastfeeding policies and protocols should be reviewed by breastfeeding experts because slight differences in wording or key omissions in the policy could create barriers to breastfeeding that may not be picked up by non experts.

Key-informant interviews or surveys

Oversight bodies can gather considerable information about how a maternity care facility implements the Ten Steps by interviewing facility leadership or administering a survey. Respondents might include the head of maternal and child health services, paediatrics, obstetrics, midwifery or nursing. Such leaders can summarize the policies and procedures of the maternity unit and provide insights on problem areas. Interviews with staff members can assess their knowledge and describe usual practices in the provision of care. Such surveys may be administered in person, by telephone, through written surveys or online.

Key-informant interviews are unlikely to provide quantitative information about service delivery unless internal monitoring reports are easily accessible. However, even semi-quantitative information on whether specified services are carried out (for example, always, routinely, occasionally, or never) can be useful in identifying opportunities to improve quality.

Strengths: Such surveys can be conducted at relatively low cost. They provide a rich understanding of the problems the maternity care facility is having with implementation of the Ten Steps. This may lead to more practical solutions for improving quality compared with simply examining quantitative information on performance indicators. Results from key-informant surveys can be fed back to the facility using benchmark reports that compare the facility to reports from other facilities, thus driving further QI.

Limitations: The perspectives of facility leaders may be biased, usually being overly favourable, as they wish to be seen having high-quality performance. Subjective information from facility leaders on clinical practices may be out of touch with actual day-to-day practices.

Implementation tips

- Survey respondents should be carefully selected to obtain reliable information; high-level facility leaders may be unaware of actual clinical practices, but frontline staff may only be able to report on narrow aspects of care.
- Questionnaires for key-informant surveys should be piloted before widespread use to ensure that the questions are clearly understandable.
- Systems to notify potential respondents in advance and issue reminders to non-respondents may be needed to improve response rates to surveys.

Site visits

Most countries have some type of system to periodically visit health care facilities for supportive supervision, accreditation or QA. Such visits provide opportunities to directly observe the clinical environment and see procedures being administered.

BOX 5

The Maternity Practices in Infant Nutrition and Care Survey – United States of America

The United States Centers for Disease Control and Prevention (CDC) administers a biennial survey – the Maternity Practices in Infant Nutrition and Care Survey – to all hospitals and birthing centres across the country.[9] The primary respondent is the mother–baby nurse manager or manager of the labour and delivery unit. The survey assesses maternity care practices and provides feedback to encourage hospitals to make improvements that better support breastfeeding, including:[10,11]

- Hospital policies
- Staff training
- Immediate skin-to-skin contact
- Early and frequent breastfeeding
- Teaching families about breastfeeding
- Exclusive breastfeeding
- Rooming-in
- Follow-up after discharge.

CDC sends a report to every participating hospital showing specific areas of care where changes can be made to support breastfeeding families. State health departments and other partners can also use the survey data to support work with partner agencies, organizations, policy-makers and health professionals to improve evidence-based maternity care practices and policies at hospitals in their state.

9 Maternity Practices in Infant Nutrition and Care (mPINC™) Survey. Centers for Disease Control and Prevention; 2024 (https://www.cdc.gov/breastfeeding/data/mpinc/index.htm, accessed 9 October 2024).

10 WHO/UNICEF Ten Steps to Successful Breastfeeding and Corresponding Indicators from the mPINC Survey. Centers for Disease Control and Prevention; 2024 (https://www.cdc.gov/breastfeeding/data/mpinc/steps.htm#).

11 Nelson JM, Grossniklaus DA, Galuska DA, Perrine CG. The mPINC survey: Impacting US maternity care practices. Matern Child Nutr. 2021 Jan;17(1):e13092. doi: 10.1111/mcn.13092. Epub 2020 Nov 4. PMID: 33150737; PMCID: PMC7729529.

Application of the Ten Steps can be incorporated into these site visits. Substandard actions can be identified by direct observation that are not captured in the usual quantitative indicators (e.g. "skin-to-skin" care with the mother being clothed, inappropriate messages being delivered in counselling, or breast-milk substitute marketing materials displayed on a desk).

It is most cost-effective to conduct site visits that meet multiple purposes, not just for monitoring adherence to the Ten Steps. While a greater depth of information can be obtained in visits specifically for the purpose of monitoring the Ten Steps, the cost of travel and time to provide this level of monitoring for all maternity care facilities is cost-prohibitive in most countries.

Site visits can incorporate other forms of information gathering beyond direct observation. For example, they often include interviews with leaders and clinical staff members. Policy documents can be provided and reviewed in person or copied to be examined later. Clinical records or medical charts can be examined directly without having to send data out of the maternity care facility.

Strengths: Site visits provide the most in-depth assessment of what happens in the facility and may be the most reliable source of information. They may be taken more seriously by the maternity care facilities compared with the more impersonal methods that entail sending data or reports to a far-away entity.

Limitations: Site visits are quite costly due to the amount of time spent by the visiting team, plus travel expenses. While travel expenses can be reduced by relying on local teams to conduct the visits, such teams may be less experienced and knowledgeable in the aspects of quality of care they are expected to evaluate. Local teams may also be more likely to know people who work at the facility, increasing the potential for conflicts of interest. Site visits tend to focus more on qualitative information at the expense of quantitative information, leading to a need to combine them with other methods of data collection.

Implementation tips

- Site visits should be carefully planned to gather the most critical information in a short amount of time.
- Oversight bodies should try to incorporate immediate feedback and technical assistance on how to improve quality into the site visits in order to be more efficient and utilize information that is fresh and salient.
- Because of their high cost, oversight bodies may elect to conduct site visits only as spot checks or only for facilities that show poor performance or exceptional performance based on other monitoring information for learning purposes.

Combinations of the above

Because each data collection method above has its limitations and leaves information gaps, multiple data collection modes may be used in conjunction to better understand the true application of the Ten Steps in maternity care facilities. Use of multiple data collection methods can triangulate information from other sources. The traditional model of BFHI designation often relied on such combinations of methods.

Strengths: Providing more in-depth information on the policies and practices within each maternity care facility will lead to better QA and technical assistance for each facility. The use of multiple data collection methods to triangulate results is especially important if the facility has something to gain from positive ratings, such as public recognition, accreditation or qualification for better reimbursement rates.

Limitations: Each additional form of data collection incurs some costs. Complex external monitoring that relies on multiple sources of information may be hard to sustain over time.

Data collection and processing

External assessment should review documentation on both the key clinical practice indicators proposed in Annex 1, Table A1.1 and the critical management procedure indicators proposed in Table A1.2.

BOX 6

Service Provision Assessments – Macro International

Macro International has developed a multi-pronged assessment of quality of care at health facilities across a country, called the Service Provision Assessment (SPA).[12] The SPA examines quality of care from multiple perspectives by looking at infrastructure, human resources, clinical interactions and client perspectives. Data are collected through a variety of instruments, including an inventory questionnaire on the physical and human resources in the facility, health worker interviews, direct observation of consultations and exit interviews with women. A number of data elements provide information on the application of the Ten Steps within any facilities that provide maternity services (or antenatal care facilities for Step 3).[13] Across the four data collection instruments, all Ten Steps are assessed with at least one indicator:

Facility inventory

- Display of breast-milk substitutes, bottles, teats, or posters of these (Step 1a)
- Guidelines on routine care of newborns immediately after birth, including breastfeeding (Step 1b)
- Antenatal care counselling on breastfeeding (Step 3)
- Breastfeeding initiation within the first hour is routinely observed (Step 4)
- Placing newborn to the abdomen is routinely observed (Step 4)

Health worker interview

- Personnel received in-service training on breastfeeding in the past two years (Step 2)

Observations of consultations

- Antenatal care counselling on the importance of breastfeeding, early initiation of breastfeeding, exclusive breastfeeding, and support services for breastfeeding (Step 3)
- Counselled on breastfeeding, by content (Step 5)

Interviews with mothers

- Counselled on exclusive breastfeeding (Step 5)
- Whether baby received liquids or foods other than breast-milk (Step 6)
- Whether mother and baby were separated for more than one hour at any one time (Step 7)
- Counselled on signs that a baby has had enough to eat (Step 8)
- Counselled on signs that the baby is hungry (Step 8)
- Counselled on dangers of using feeding bottles, teats and pacifiers (Step 9)
- Counselled on where to access breastfeeding support in the community (Step 10).

12 For further information about the SPA, see: https://dhsprogram.com/methodology/Survey-Types/SPA.cfm.

13 For further information about breastfeeding indicators collected in the SPA, see: https://blog.dhsprogram.com/dhs-data-support-breastfeeding-among-working-parents/.

© UNICEF/UNI553334/Willocq/Guatamala

The external assessment process is most likely to be sustained over time if it is kept simple, low cost and integrated with other systems of health care QA. Use of existing systems to collect, process and transmit information from health care facilities to oversight bodies is likely to be the lowest cost and the most likely to be maintained over time. External assessments should be conducted regularly; this should be done at least every five years, but preferably more often, especially if quality issues are a known concern. The depth and frequency of the external assessments depends on the quality and frequency of internal monitoring, and which information is reported to higher levels.

Goals and thresholds

The primary purpose of external monitoring is to assist maternity care facilities to improve the quality of care they provide. The external monitoring process should lead to meaningful advice and technical assistance in making changes. As such, arbitrary pass/fail goals are likely to be less meaningful than goals that emphasize improvement over time. Setting goals that are seen to be unachievable can demoralize staff in the health care facility. Targets for relative improvement, such as increasing indicators of adherence by 20% over a defined time frame, may be considered.

However, where external monitoring is tied to eligibility for public recognition, accreditation or higher reimbursement rates, oversight bodies may need to set specific benchmarks that can be applied universally across all facilities. WHO and UNICEF have established global standards of achieving 80% for the indicators presented in Annex 1. These standards may, however, be adjusted upwards or downwards, depending on local, regional or national norms and current levels of adherence to the Ten Steps. Thresholds for the indicators can also be used to trigger a more in-depth external examination of a facility if its indicators fall below specified thresholds.

Provision of technical assistance from external entities

The data gained and reviewed using external monitoring systems can be used by the oversight body to pinpoint facilities that need extra assistance, or to highlight institutions that excel.

External monitoring should identify strengths and weaknesses, facilitate technical assistance and lead to improved practices, through a supportive process rather than a punitive one. Positive relationships between maternity care facilities and oversight entities will make it more likely that facilities willingly supply data and records, knowing that they will be used by the oversight bodies to improve the support they can offer.

Facilities or services found to be below agreed upon thresholds or failing to improve indicators should be provided with technical assistance targeted to areas of underperformance, with a focus on sustainably achieving the necessary improvements. In some instances, professional associations or non-governmental organizations may be designated to provide in-depth technical assistance. Providing assistance in a decentralized way may be more practical, with local facilitators visiting facilities to support them and assist in training on QI, the Ten Steps and competency assessment, and providing in-service training and mentorship.

BOX 7

Technical assistance provision in Malawi

In Malawi, technical assistance has been used for national planning and to introduce QI processes and provisions, including building and strengthening the capacity of providers. As part of a decentralized process, QI offices at the zonal level are responsible for providing technical assistance. Officers visit facilities to support them and assist in training on QI issues, including those related to the BFHI.[14] The offices are supported by technical backstopping at the district level, which provides in-service training and mentorship.

This system has proved to be successful in Malawi. Health workers reported that BFHI technical assistance was important for overcoming challenges, including those related to staff shortages, by strengthening professional competency and ensuring quality of service delivery.

14 Mukuria-Ashe A, Klein A, Block C, Nyambo K, Uyehara M, Mtengowadula G, Nyirongo G, et al. Implementing two national responsibilities of the revised UNICEF/WHO Baby-Friendly Hospital Initiative: A two-country case study. Maternal & Child Nutrition. 2023; 19, e13422.

National monitoring

© UNICEF/UNI472309/Dejongh/Côte D'Ivoire

The seventh national responsibility in the BFHI Implementation Guidance is that countries should monitor the implementation of the Ten Steps at a national level. The Global Nutrition Monitoring Framework, approved by the World Health Assembly in 2015, called upon countries to report upon the percentage of babies born in a calendar year that experience care in line with the Ten Steps.[15] Countries have also been recommended to report progress on BFHI coverage in reports to the Committee on the Right to Food, the Committee on the Rights of the Child, and the Scaling Up Nutrition movement. This section of the Monitoring Manual presents options for national monitoring, several of which build upon the data collection methods mentioned in the previous sections.

Purpose

The primary purpose of national monitoring is to provide national governments with information needed for planning and evaluating the, protection, promotion and support of breastfeeding in maternity care facilities. Each of the other nine national responsibilities of the BFHI are dependent on having reliable information on how the Ten Steps are actually being implemented. Results from the monitoring can be used to identify which Steps need greater attention, with important implications for training, technical assistance, communications and financing. Results on geographic patterns of implementation can assist in targeting efforts where they are most needed.

Integration

Just as integration with other systems is important for internal and external monitoring, it is also critical for national monitoring. The cost-effectiveness and sustainability of national monitoring systems will be the greatest if monitoring of the Ten Steps can be integrated with other national monitoring efforts. Adding questions onto existing household surveys or utilizing data collected for internal and/or external monitoring will allow national authorities to invest greater resources in interpreting the data and utilizing them to strengthen programmes that support implementation.

Indicators

Recommended indicators for national monitoring focus on mothers' experience with the Ten Steps (Annex 1, Table A1.3). These indicators match closely with the clinical practice indicators recommended for internal monitoring. Because the clinical practices reinforce one another and are more effective when implemented as a set, an additional indicator is recommended to assess the percentage of mothers experiencing at least six of the above seven practices included in the indicators. This will require that information on the indicators is collected from the same mothers.

In addition to the clinical practices, national monitoring of other aspects of supporting the Ten Steps, such as incorporation into local regulations, coverage in pre-service training and regular operation of external monitoring, is also recommended. Countries may wish to add additional measures of BFHI programme activities to be monitored at the national and subnational levels.

Potential information sources

This section presents five alternative methods that could be used for national monitoring of the Ten Steps. It discusses strengths and limitations for each suggested mode of monitoring. The proposed monitoring mechanisms/systems include routine administrative data collection, patient exit or follow-up surveys, population-based household surveys, aggregation of information from facility QA processes, and facility key-informant surveys. Inclusion of data on the Ten Steps in multiple systems can serve for validation purposes.

Routine administrative data collection

While data from HMIS can be used by oversight bodies for QA processes, they can also be analysed in national aggregates. This approach provides insight into whether maternity care hospitals and facilities are operating as intended. Electronic medical records may be used similarly if the same data elements are applied across the country. As noted earlier, some indicators on application of the Ten Steps are probably already included within the HMIS, but more detailed data fields will likely need to be added to capture information on each of the Ten Steps.

At the national level, data can be aggregated and analysed annually. Reporting functions within the HMIS/EHRs, such as data visualizations and multiple embedded features, may already be in place to summarize the key indicators. However, less sophisticated systems may require separate data extraction and statistical analysis.

Strengths: Information in the HMIS is collected on an ongoing basis and can be readily accessible at different levels of the health system, providing up-to-date information at a frequency rarely achievable through other data collection methods. When an HMIS is also used for internal and external monitoring of facility practices, it provides a level of consistency throughout the health system, serving to harmonize communications and understanding of the Ten Steps. Additional strengths and limitations are discussed previously in the section on internal monitoring.

Limitations: As noted above, routine administrative data collection typically suffers from various data quality issues. Moreover, in many instances, when data are entered by clinical staff at the facility level, there may be an overreporting of recommended practices due to social desirability bias. Other potential challenges include the scarcity of resources to implement such systems, including funds, time and technical expertise. While some private facilities use administrative data systems, many opt out of using them, meaning that populations using private sector facilities are left out of national reporting.

Implementation tips

- It is important to consider available resources and a proper functioning system to ensure sustainability and scalability.
- Ministries of health should work closely with maternity care hospitals and facilities and conduct periodic staff training to optimize the quality of data collection and system use.
- Maternity care facilities already using electronic medical records, should be directly linked to the national HMIS/DHIS2.
- Maternity care facilities using paper-based records should be tied into a secured mailing system to aggregate data to the district or national level (when applicable).
- Ministries of health are recommended to monitor data quality regularly and to validate, analyse and disseminate results to maintain QA.
- National governments are encouraged to collaborate with multiple stakeholders, including the ministry of technology and national statistical offices.

15 Country reporting on progress for these indicators is available at: https://www.who.int/data/nutrition/nlis/gnmf.

Patient exit/follow-up surveys

As discussed in the previous sections, patient exit or follow-up surveys can provide high-quality information on the Ten Steps relying on maternal reports of experiences around the time of their babies birth. National authorities could access data already collected at the facility level or through external monitoring, but they could also administer such surveys themselves. These surveys are typically conducted electronically through mobile devices (mHealth) or by simple questionnaires, sometimes with other questions (e.g., patient satisfaction). More detail is provided in the internal monitoring section, discussed previously.

Strengths: Patient exit surveys can produce high-quality data as they are based on mothers' own reports of experiences with a very short recall period. They can be an efficient way to collect information and provide timely information. Electronic distribution can greatly simplify quick access to results.


© UNICEF/UNI683536/India

Limitations: A key concern about electronically administered maternal surveys is that they exclude mothers who face barriers in language, literacy and/or numeracy, who have difficulties following the survey instructions, or who lack electronic access. If health workers assist mothers in completing the survey or administer it in person, there are opportunities to introduce biases. Response rates may be poor if mothers are already exposed to many other requests for information. The number of questions that can be asked may be limited, particularly if the questionnaire is also used for other purposes. Although costs are decreasing, resources to establish nationwide electronic data systems can be an issue in many low- and middle-income countries.

Implementation tips

- Countries should develop robust security and data privacy protections to avoid information breach and data leakages to third parties.
- Ministries of health are advised to partner and collaborate with multiple stakeholders, including maternity care facilities, NGOs and mobile technology companies, to implement electronic data platforms for data collection.
- It is important to consider available resources and a proper mHealth functioning system to ensure sustainability and scalability.

Population-based household surveys

Indicators on maternal experience with the Ten Steps can be assessed using population-based household surveys. Most countries conduct such surveys, with the Demographic and Health Survey (DHS) and the Multiple Indicator Cluster Survey as two key examples. Other examples include Maternal and Child Health Surveys, Reproductive Health Surveys and World Bank Household Budget Surveys.

Using a questionnaire similar to that proposed for patient exit surveys or using the example in Annex 3 the BFHI clinical practice indicators can be assessed by directly asking about the experiences of mothers who have given birth within the last few years.

Strengths: Population-based household survey data provide information representative of all births in the country, eliminating biases inherent in systems that exclude certain types of health facilities. For example, data include mothers delivering in both private and public health facilities. If standard questions are used, results are internationally comparable. These surveys can provide indicators disaggregated by background characteristics that reveal inequalities between geographic regions, socioeconomic groups and other subpopulations. By assessing experiences from the mothers' perspectives, biases of health care professionals can be eliminated.

Limitations: Large nationally representative surveys are typically only conducted once every four to six years, so results may be less timely than desired. Mothers' recall of the details of their facility stay may be inadequate, particularly among those who gave birth several years earlier. Sampling errors for subnational estimates or population subgroups may be quite wide. Representative surveys are generally quite expensive, although these costs can be spread across a wide spectrum of health issues and budgets. These surveys are often quite long and so the number of questions allowed for indicators on the Ten Steps may be limited by questionnaire length.

Implementation tips

- Countries should consider integrating questions on indicators of the Ten Steps into their existing surveys within the maternal, newborn, child health and nutrition section.
- Survey administrators and enumerators should be trained on the meaning and collection of data on the Ten Steps.
- Biases and limitations of population-based household surveys must be accounted for when interpreting the data.

BOX 8

Demographic and Health Survey questions on the Ten Steps

The DHS collects and processes basic health information based on face-to-face interviews with a representative sample of women of reproductive age. Many low- and middle-income countries have implemented the DHS, often repeating the data collection every four to six years. A core questionnaire is applied in nearly all countries, with optional modules that countries can choose to add to delve deeper into specific health topics. In 2019, the core questionnaire was revised to include additional questions on support for breastfeeding.[16] Questions relevant to the Ten Steps include:

- ❒ As part of your antenatal care during this pregnancy, did a health care provider do any of the following:
  - ◆ Talk with you about breastfeeding?
- ❒ After the birth, was **(NAME)** put on your chest?
- ❒ Was **(NAME)**'s bare skin touching your bare skin?
- ❒ How long after birth was **(NAME)** put on the bare skin of your chest?
- ❒ During the first two days after **(NAME)**'s birth, did any health care provider do the following:
  - ◆ Talk with you about breastfeeding?
  - ◆ Observe **(NAME)** breastfeeding to see if you were doing it correctly?
- ❒ How long after birth did you first put **(NAME)** to the breast?
- ❒ In the first two days after delivery, was **(NAME)** given anything other than breast-milk to eat or drink – anything at all like water, infant formula, or **[INSERT COMMON DRINKS AND FOODS THAT MAY BE GIVEN TO NEWBORN INFANTS]**?

16 DHS Model Questionnaire – Phase 8. DHS Program; 2020. (https://dhsprogram.com/publications/publication-DHSQ8-DHS-Questionnaires-and-Manuals.cfm, accessed 9 October 2024).

Aggregation of facility accreditation or supervision records

External monitoring processes should create reports of the results for every facility they assess. Since all facilities should be assessed every three to five years, the aggregation of the results in these reports will provide a moving average of the status of Ten Steps implementation. Since the monitoring reports typically combine quantitative information on clinical practices and qualitative information on the facility policies and practices regarding Steps 1 and 2, these reports likely give a more complete picture of BFHI implementation.

Strengths: Utilization of existing reports is cheaper than doing independent data collection. The extra costs of aggregating data from standard external monitoring reports would be minimal. By using the same criteria as in the hospital QA process, there will be greater consistency across policies, procedures and records at all levels.

Limitations: Although WHO and UNICEF recommend that every facility be assessed at least every three to five years, actual implementation may be costly and challenging to implement in countries with restricted resources. If many facilities are left out of the external monitoring processes, then the national aggregates will not reflect the true situation in the country. Because facilities that do not participate in QA processes are likely to be performing worse than those participating, the national summary from the assessments that are completed will be overly optimistic about the true state of implementation.

Implementation tips

- Ministries of health should collaborate with national accreditation standards bodies to facilitate the integration of BFHI indicators.
- National accreditation bodies should consider including indicators of the Ten Steps as part of their existing hospital QA criteria to assess breastfeeding-related clinical practices within maternity care hospitals.
- It is important to consider available resources and a proper external monitoring system to ensure sustainability and scalability.

© UNICEF/UNI621576/Al-Asadi/Syria

Facility key-informant interviews or surveys

As described in the section above on external monitoring, key-informant interviews or surveys can provide in-depth understanding of how the Ten Steps are implemented in facilities. Such surveys can be administered by oversight bodies, but they can also be administered by national authorities to describe application of the Ten Steps across the country. Data can be disaggregated to the district or provincial level for more decentralized health care systems to use in planning and evaluation. While external monitoring by oversight bodies requires data collection for all facilities being supervised, national monitoring could be done with a representative sample of facilities, provided the sample is large enough to produce reliable results.

Strengths: Whereas routine administrative systems and maternal surveys provide data on the clinical practices of Steps 3–10, key-informant interviews can provide more information about management policies and practices in Steps 1 and 2. If administered annually, these surveys would provide more timely information than is typically available from household surveys. Providing benchmark reports to participating facilities can be used as a motivator for facility leadership to improve practices.

Limitations: As noted previously, reliance on reports from clinical staff may result in biases, such as overstating compliance with recommended protocols. Careful selection of key-informants is critical to obtaining reliable information. Information on the indicators of clinical practices will be based on subjective observations, unless the informants have ready access to data systems and reports that can provide more objective data. Response rates among health care providers are often quite poor, leading to additional biases in the results. Collecting and analysing data may be time-consuming.

Implementation tips

- Key-informant questionnaires should be carefully designed in a way that does not unintentionally influence the respondent to overreport desirable answers.
- The MoH must consider the advantages and disadvantages of protecting facilities' confidentiality when publishing reports.
- The MoH should consider administering these surveys annually or biennially to ensure that results are timely and can be used for ongoing evaluation.

Data collection and processing

Where collection of data on the Ten Steps is added onto other data collection platforms, such as HMIS systems or population-based surveys, data processing and reporting are generally done as a routine part of those platforms. National governments and BFHI committees can access these reports for planning and evaluation purposes. However, if new platforms are created for BFHI monitoring, greater investment will be needed to establish systems to collect, clean, analyse and report on the data collected.

To create a national picture of the quality of maternal and newborn care, information that is obtained at the facility level, such as from accreditation records or key-informants, including mother/family surveys, should be weighted by the number of births that occur in each facility. Counting the number of facilities that meet specific benchmarks is not particularly informative if facility size varies widely across the country.

Policies and practices beyond maternity care facilities

While the Ten Steps are focused on the protection, promotion and support of breastfeeding in maternity care facilities, national authorities working to institutionalize the Ten Steps must also keep track of the various policies and practices that facilitate their application. Annex 1, Table A1.4 presents a few indicators that countries may consider tracking to monitor activities that support implementation of the Ten Steps, although additional indicators may also be considered.

Legislation and enforcement of the BMS Code is critical for protecting breastfeeding. It would also alleviate barriers to the application of the Code within maternity care facilities. As such, careful evaluation of current national Code legislation and assessment of Code monitoring reports is an important component of national BFHI monitoring.

Indicators on the inclusion of breastfeeding in the pre-service curriculum of paediatricians, neonatologists, obstetricians, nurses and midwives are important in understanding the competency gaps of staff working in maternity care facilities. Ministries of health should work closely with universities, and with ministries of higher learning, to ensure that breastfeeding and infant and young child feeding are part of these pre-service curricula. The extent to which the competencies of these health care professionals are assessed is similarly important to track over time. Tracking the quality of breastfeeding support in primary health care facilities and in communities, particularly through breastfeeding counselling, would provide information on the full continuum of care within which the maternity care facilities are working.

In decentralized health care systems, indicators on the percentage of provinces/states/districts that have developed BFHI policies or regulations would provide information on institutionalization of the Ten Steps as the standard of care for all mothers and babies.

By building robust monitoring systems across different aspects of breastfeeding policies and programmes, countries can strengthen the protection, promotion and support of breastfeeding and improve the health of mothers, babies and children nationwide.

Annexes

© UNICEF/UNI669248/Dejongh/Côte D'Ivoire

Annex 1. Recommended indicators

Table A1.1 Recommended indicators for facility-based monitoring of the key clinical practices for the protection, promotion and support of breastfeeding

Key clinical practice	Proposed indicator definition	Numerator	Denominator	Potential source of information
Step 3: Discuss the importance and management of breastfeeding with pregnant women and their families	The percentage of mothers of infants who received prenatal care at the facility who received antenatal counselling on breastfeeding at this facility	Mothers of infants who received antenatal care at the facility and received prenatal counselling on breastfeeding at the facility	Mothers of infants who received antenatal care at the facility	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
Step 4: Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth	The percentage of infants who were placed in skin-to-skin contact continuously with their mothers immediately after birth and for at least 60 minutes	All infants placed in skin-to-skin contact continuously with their mothers immediately after birth and for at least 60 minutes	Mothers of all infants	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
	SENTINEL INDICATOR: The percentage of term infants who were put to the breast within one hour after birth	Term infants who were put to the breast within one hour after birth	Term infants	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
Step 5: Support mothers to initiate and maintain breastfeeding and manage common difficulties	The percentage of breastfeeding mothers who were counselled how to position their baby for breastfeeding at the facility	Breastfeeding mothers who were taught how to position their baby for breastfeeding	Breastfeeding mothers	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
	The percentage of breastfeeding mothers who were taught how to identify whether a breastfed baby consumes adequate amounts of milk at this facility	Breastfeeding mothers who were taught how to identify whether a breastfed baby consumes adequate amounts of milk	Breastfeeding mothers	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
	The percentage of breastfeeding mothers who were taught how to express breast-milk in this facility	Breastfeeding mothers who were taught how to express breast-milk	Breastfeeding mothers	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review

Key clinical practice	Proposed indicator definition	Numerator	Denominator	Potential source of information
Step 6: Do not provide breastfed newborns any food or fluids other than breast-milk, unless medically indicated	SENTINEL INDICATOR: The percentage of infants who received only breast-milk (either from their own mother or from a human milk bank) throughout their stay at the facility	Infants who received only breast-milk (either from their own mother or from a human milk bank) throughout their stay at the facility	Infants	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
Step 7: Enable mothers and their infants to remain together and to practise rooming-in 24 hours a day	The percentage of term infants who stayed with their mother throughout their stay at the facility	Term infants who stayed with their mother throughout their stay at the facility	Term infants	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
Step 8: Support mothers to recognize and respond to their infants' cues for feeding	The percentage of mothers of term infants who were taught about feeding cues at this facility	Mothers of term infants who were taught about feeding cues	Mothers of term infants	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
Step 9: Counsel mothers on the use and risks of feeding bottles, teats and pacifiers	The percentage of breastfeeding mothers of term infants who were taught about the risks of using feeding bottles, teats and pacifiers at this facility	Breastfeeding mothers of term infants who were taught about the risks of using feeding bottles, teats and pacifiers	Breastfeeding mothers	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review
Step 10: Coordinate discharge so that parents and their infants have timely access to ongoing support and care	The percentage of mothers of infants informed by a staff member about where they can access breastfeeding care and support after discharge	Mothers of infants informed by a staff member about where they can access breastfeeding care and support after discharge	Mothers of infants	· Patient exit/follow-up surveys · Routine administrative data systems (e.g., HMIS) · Medical chart review

Table A1.2 Recommended indicators for facility-based assessment of critical management procedures for the protection, promotion and support of breastfeeding

Recommendation	Proposed indicators	Numerator	Denominator	Potential source of information
Step 1a: Comply fully with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions (the Code)	Evidence that all breast-milk substitutes, feeding bottles and teats used in the facility have been purchased through normal procurement channels and not received through free or subsidized supplies	N/A	N/A	· Review of facility records · Key-informant interviews or surveys · Site visits
	No display of products covered under the Code or items with names or logos of companies that produce breast-milk substitutes, feeding bottles and teats	N/A	N/A	· Site visits · Key-informant interviews or surveys
	Existence of a policy that describes institutional compliance with the Code	N/A	N/A	· Review of facility records · Key-informant interviews or surveys · Site visits
	The percentage of health professionals who provide antenatal, delivery and/or newborn care who can explain at least two elements of the Code	≥80%	Interviews with clinical staff	· Key-informant interviews or surveys · Desk review of key documents from the facility · Site visits

Recommendation	Proposed indicators	Numerator	Denominator	Potential source of information
Step 1b: Have a written infant feeding policy that is routinely communicated to staff and parents **1.** **2.** **3.**	Existence of a written infant feeding policy that fully complies with the Ten Steps	N/A	N/A	· Review of facility records · Key-informant interviews or surveys · Site visits
	Display of a summary of the infant feeding policy for pregnant women, mothers and their families	N/A	N/A	· Site visits · Key-informant interviews or surveys
	Alignment of clinical protocols or standards related to breastfeeding and infant feeding with BFHI standards and current evidence-based guidelines	N/A	N/A	· Review of facility records · Key-informant interviews or surveys · Site visits
	The percentage of clinical staff who provide antenatal, delivery and/or newborn care who can explain at least two elements of the infant feeding policy that influence their role in the facility	Clinical staff who provide antenatal, delivery and/or newborn care who can explain at least two elements of the infant feeding policy that influence their role in the facility	Clinical staff who provide antenatal, delivery and/or newborn care	· Key-informant interviews or surveys · Desk review of key documents from the facility · Site visits
Step 1c: Establish ongoing monitoring and data-management systems **4.**	Existence of an ongoing monitoring and data-management system to comply with the eight key clinical practices	N/A	N/A	· Review of facility records · Key-informant interviews or surveys · Site visits
	Records demonstrating frequent meetings among clinical staff at the facility to review implementation of the system	N/A	N/A	· Review of facility records · Key-informant interviews or surveys · Site visits

Recommendation	Proposed indicators	Numerator	Denominator	Potential source of information
Step 2: Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding **5.** **6.**	The percentage of health professionals who provide antenatal, delivery and/or newborn care who report they have received pre-service or in-service training on breastfeeding during the previous two years	Health professionals who provide antenatal, delivery and/or newborn care who report they have received pre-service or in-service training on breastfeeding during the previous two years	Health professionals who provide antenatal, delivery and/or newborn care	· Key-informant interviews or surveys · Key-informant interviews or surveys · Site visits
	The percentage of health professionals who report receiving competency assessments in breastfeeding in the previous two years	Health professionals who report receiving competency assessments in breastfeeding in the previous two years	Health professionals	· Review of facility records · Key-informant interviews or surveys · Site visits
	The percentage of health professionals who provide antenatal, delivery, and/or newborn care who are able to correctly answer three out of four questions on breastfeeding knowledge and skills to support breastfeeding	Health professionals who provide antenatal, delivery, and/or newborn care who are able to correctly answer three out of four questions on breastfeeding knowledge and skills to support breastfeeding	Health professionals who provide antenatal, delivery, and/or newborn care	· Key-informant interviews or surveys · Desk review of key documents from the facility · Site visits

Table A1.3. Indicators for national monitoring of protection, promotion and support of breastfeeding in facilities providing maternity and newborn services

Indicator	Definition	Numerator	Denominator	Potential source of information
Clinical practice indicators				
Antenatal counselling	The percentage of mothers who received antenatal counselling on breastfeeding	Mothers who received antenatal counselling on breastfeeding	Mothers	· Routine administrative data collection (e.g., HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Aggregation of facility accreditation or supervision records · Facility key-informant interviews or surveys
Uninterrupted/early skin-to-skin contact	The percentage of mothers who were placed in skin-to-skin contact with their baby immediately after birth and for at least 60 minutes	Mothers who were placed in skin-to-skin contact with their baby immediately after birth and for at least 60 minutes	Mothers	· Routine administrative data collection (e.g HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Aggregation of facility accreditation or supervision records
Early initiation of breastfeeding	The percentage of infants who breastfed within one hour of birth	Infants who breastfed within one hour of birth	Infants	· Routine administrative data collection (e.g., HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Aggregation of facility accreditation or supervision records
Support with breastfeeding	The percentage of mothers who received support with learning to breastfeed after childbirth	Mothers who received support with learning to breastfeed after delivery	Mothers	· Routine administrative data collection(e.g., HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Aggregation of facility accreditation or supervision records · Facility key-informant interviews or surveys

Indicator	Definition	Numerator	Denominator	Potential source of information
Exclusive breastfeeding during facility stay	The percentage of infants who received only breast-milk (either from their own mother or from a human milk bank) throughout their stay at a facility	Infants who received only breast-milk (either from their own mother or from a human milk bank) throughout their stay at a facility	Infants	· Routine administrative data collection (e.g., HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Aggregation of facility accreditation or supervision records
Rooming-in	The percentage of infants who stayed with their mother throughout their stay at a facility	Infants who stayed with their mother throughout their stay at a facility	Infants	· Routine administrative data collection (e.g., HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Aggregation of facility accreditation or supervision records · Facility key-informant interviews or surveys
Referral to community support	The percentage of mothers informed by a staff member about where they can access breastfeeding care and support after discharge	Mothers informed by a staff member about where they can access breastfeeding care and support after discharge	Mothers	· Routine administrative data collection (e.g., HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Aggregation of facility accreditation or supervision records · Facility key-informant interviews or surveys
Overall compliance with BFHI standards **(alternative BFHI coverage indicator)**	The percentage of mothers answering affirmatively on at least six of the above seven practices	Mothers who answer affirmatively on at least six of the above seven practices	Mothers	· Routine administrative data collection (e.g., HMIS) · Patient exit/follow-up surveys · Population-based household surveys · Facility key-informant interviews or surveys

Table A1.4. Indicators for national monitoring of policies and programmes that support the BFHI

Indicator	Definition	Numerator	Denominator	Potential source of information
Regulation of BFHI standards (if regulation is decentralized to provincial level)	The percentage of provinces, states or districts with regulations on baby-friendly standards	Number of provinces, states or districts with regulations on baby-friendly standards	Number of provinces, states, or districts	· Aggregation of facility accreditation or supervision records · Facility key-informant interviews or surveys
Pre-service training on the BFHI standards	The percentage of newly graduated health professionals who received training on the updated BFHI standards	Number of newly graduated health professionals who received training on the updated BFHI standards	Number of newly graduated health professionals	· Aggregation of facility accreditation or supervision records · Facility key-informant interviews or surveys
Ongoing operation of the external assessment process	The percentage of facilities providing maternity and newborn services that have completed an external assessment in the past three to five years	Number of facilities providing maternity and newborn services that have completed an external assessment in the past three to five years	Number facilities providing maternity and newborn services	· Aggregation of facility accreditation or supervision records · Facility key-informant interviews or surveys

Annex 2. The Infant Feeding Patient Exit Survey

The Infant Feeding Patient Exit Survey presented here can be used to track indicators on the application of Ten Steps to Successful Breastfeeding comprehensively, from the patient perspective. The survey is a facility-level, low-cost, rapid-response internal monitoring tool that relies on maternal self-reports at discharge.

The survey is divided into two sections. **Section 1** has two basic questions about the baby's birth and feeding that, once answered, can allow mothers to bypass questions that may not apply to them.

Section 2 contains nine primary questions that are intended to measure the indicators of Steps 3–10 of the Ten Steps. Some of these questions have subsections to partition information linked to the steps and ask simpler questions to mothers. A user-friendly online interface can be built to simplify data collection by allowing patients to respond using their own cell phones, or on tablets provided by the facility. Ideally, the web-based platform would be linked to the maternity care facility's HMIS that would allow the facility easy access to the online data from the survey.

The Infant Feeding Patient Exit Survey

Congratulations! You are about to be discharged from the maternity ward. Many thanks for taking the time to take this brief survey about your recent experience in the maternity ward with the delivery and feeding of your baby. Your responses will help us improve our care for mothers and infants.

Please respond to each of the questions by filling the bubble of the answer that most accurately describes your experience.

Section 1. Information about baby's birth and feeding	
1. Was your baby born more than three weeks earlier than your due date? (If "Yes" skip questions 5c, 5d, 5e, 5f, 10a and 10b).	❒ Yes ❒ No ❒ I don't know
2. Did your baby ever breastfeed (meaning that your baby was put to the breast and suckled)? (If "No" skip questions 5a, 5b, 5c, 8, 9a and 9b).	❒ Yes, my baby breastfed at least once. ❒ No, my baby never breastfed. (Choose this answer if your baby was not put to the breast or if your baby only took breast-milk from a bottle, cup, tube or another device but never fed at your breast.)
Section 2. Experience with BFHI Steps 3–10	
3. Did you visit this clinic or hospital for health checks during your pregnancy?	❒ Yes ❒ No (skip to question 3) ❒ I don't remember (skip to question 3)
4. When you visited this clinic or hospital for health checks during your pregnancy, did someone counsel you about breastfeeding?	❒ Yes ❒ No ❒ I don't remember
5. During your stay, did someone in this clinic or hospital: help you or teach you:	
a. how to position your baby for breastfeeding? (Instructions: skip if baby was not breastfed)	❒ Yes ❒ No ❒ I don't remember

Continue to next page

b. how to know that your baby was getting enough breast-milk? (Instructions: skip if baby was not breastfed)	❒ Yes ❒ No ❒ I don't remember
c. how to express your breast-milk? (Instructions: skip if baby was not breastfed)	❒ Yes ❒ No ❒ I don't remember
d. help you learn when your baby was hungry? (Instructions: skip if baby was born preterm)	❒ Yes ❒ No ❒ I don't remember
e. help you learn how to know when the baby was full? (Instructions: skip if baby was born preterm)	❒ Yes ❒ No ❒ I don't remember
f. about the risks of using feeding bottles? (Instructions: skip if baby was born preterm)	❒ Yes ❒ No ❒ I don't remember
6. Was your baby placed on your bare chest or belly immediately after being born?	❒ Yes ❒ No (skip to question 8) ❒ I don't remember (skip to question 8)
7. Did your baby stay on your bare chest or belly without being removed for at least one hour after being born?	❒ Yes ❒ No ❒ I don't remember
8. Was the baby put to the breast in the first hour after being born? (Instructions: skip if a baby was not breastfed)	❒ Yes ❒ No ❒ I don't remember
9a. Did you give your baby anything other than your breast-milk (such as infant formula or water) during your stay at this hospital or clinic? (Instructions: skip if a baby was not breastfed)	❒ Yes (check all that apply) __ Infant formula __ Water with or without sugar in it __ Some other food or drink ❒ No ❒ I don't remember
9b. Did anyone else give your baby anything other than breast-milk (such as infant formula or water) during your stay at this hospital or clinic?	❒ Yes (check all that apply) __ Infant formula __ Water with or without sugar in it __ Some other food or drink ❒ No ❒ I don't remember

Continue to next page

10a. Did anyone take your baby away from you for any reason during your stay at this hospital or clinic? (Instructions: skip if baby was born preterm)	❒ Yes ❒ No ❒ I don't remember
10b. Did your baby stay with you in your room for your whole hospital stay (Instructions: skip if baby was born preterm)	❒ Yes ❒ No ❒ I don't remember
11. Did someone in this clinic or hospital tell you where you could get help with breastfeeding after leaving the hospital? By help with breastfeeding we mean, for example, breastfeeding support provided by health providers, community counsellors, either at clinics, hospitals, community centres or at home.	❒ Yes ❒ No ❒ I don't remember

Thank you for your participation. Your input will be useful to keep good breastfeeding practices in our hospital.

Annex 3. Potential questions to be included in population-based surveys

Question	Responses
Q1. When you were pregnant with [INSERT CHILD NAME], did any health care provider (or community health worker)[+] talk with you about breastfeeding?	Yes 1 No 2 Don't know 8
Q2. Immediately after the birth, was (NAME) put on your chest?	Yes 1 No 2 Don't know 8 Responses 2 and 8 skip to #3
Q2A. Was (NAME)'s bare skin touching your bare skin?	Yes 1 No 2 Don't know 8
Q2B. How long did (NAME) stay on your chest in this position?	Less than one hour 1 An hour or more 2 Don't know / don't remember 8
Q3. How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '000'; IF LESS THAN 24 HOURS, RECORD HOURS; OTHERWISE, RECORD DAYS.	IMMEDIATELY 000 HOURS 1 __ __ DAYS 2 __ __
Q5. In the first two days after delivery, was (NAME) given anything to drink other than breast-milk?	Yes 1 No 2 Don't know 8
Q6. In the first two days after childbirth, did (NAME) stay in the same room with you during the day as well as at night?	Yes 1 No 2 Don't know 8
Q7. Did a health worker/the person who assisted with the delivery of [NAME] tell you where you could get help with breastfeeding?	Yes 1 No 2 Don't know 8

For more information, please contact:

Department of Nutrition and Food Safety
World Health Organization

Avenue Appia 20
CH-1211 Geneva 27
Switzerland

Email: nfs@who.int
www.who.int/teams/nutrition-and-food-safety