Meeting Report: Newborn Health Indicators Working Group Meeting
October 17 and 18, 2011

Saving Newborn Lives
Save the Children
Washington, DC

November 2011
The Newborn Health Indicators Technical Working Group (TWG) met on October 17th and 18th at the MCHIP office. On the 17th, a smaller group met to 1) discuss findings from recent Saving Newborn Lives (SNL) surveys and make recommendations on indicators for newborn behaviors and practices and 2) review a draft health facility assessment tool for newborn care and develop indicators. On the 18th, a larger group met to hear updates on maternal HMIS indicators and PNC data from DHS and MICS and to discuss the work of the smaller group from the previous day.

**MONDAY, OCTOBER 17th:**

1. **Newborn behaviors and practices**
   Tanya Guenther from Save the Children/Saving Newborn Lives presented data from five SNL endline surveys (Bangladesh, Nepal, Malawi, Indonesia, and Vietnam) on the four newborn behaviors and practices indicators agreed upon by the TWG during the previous meeting in December 2010. The indicators were 1) percent of newborns dried as soon as baby is born, 2) percent of newborns with delayed bath at least six hours after birth, 3) percent of newborns with cord cut with clean instrument, and 4) percent of newborns with nothing (harmful) ever applied to the cord.

   The group discussed findings for each indicator:

   **Drying as soon as baby is born**
   There were two questions asked about drying the baby: 1) “Was the baby dried as soon as it was born?” and 2) “If yes, how soon after birth?” (coded as minutes, hours, and days). The first question was straightforward and few women reported “Don’t know” or there were few missing responses in any of the SNL household surveys. However, the question on timing was more difficult for respondents as well as for analysis. The group agreed on the following:
   - The first question on whether or not the baby was dried is feasible to ask in a survey.
   - The second question on timing should be optional since it is not required to calculate the indicator.
   - The group also agreed to simplify the timing categories and limit it to: immediately (less than 1 hour) and hours, following the same approach used in the DHS core questionnaire to capture timing of immediate breastfeeding.

   **Bath delayed at least 6 hours**
   There was one question on bathing of the baby: “How long after delivery was (NAME) bathed for the first time?” (coded in hours, minutes, days). In the SNL household surveys, there were few “Don’t know” or missing responses. However, as the timing was coded in minutes, hours, and days, it was labor intensive for respondents and for analysis. The group agreed on the following:
   - The indicator on delayed bathing is feasible to ask in a survey.
   - The timing categories should be simplified to record immediately (less than 1 hour) and hours. Countries may have the option to record days, if promoting delayed bathing >1 day after delivery. Otherwise, days can still be recorded in hours (1day=24hrs, 2days=48hrs, 3days=36hrs, etc).

   **Cord cut with clean instrument**
   This indicator was calculated based on 3 questions: 1) “What was used to cut the cord?”, 2) “Was it new?”, and 3) “Was it boiled?”. In the SNL household surveys, many women, especially those delivering at facilities, did not know the type of instrument used or whether the instrument was cleaned. However, the proportion of women reporting “Don’t know” was much smaller among women who gave birth at home. The group agreed on the following:

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These questions are feasible to ask among women who gave birth at home, but not among women who gave birth in a facility.

Among women who gave birth at facilities, clean cutting of the cord should be assessed through other methods (e.g. health facility assessments).

In countries where clean delivery kits are promoted, a question on use of blades from clean delivery kits could be included as optional questions/indicators.

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**Nothing (harmful) ever applied to cord**

This indicator included two questions: 1) “Was anything ever applied to the cord?” and 2) “If yes, what was applied?” (multiple response). In the SNL household survey findings, there were few “Don’t know” or missing responses, especially for the time period until the cord fell off. However, some SNL surveys included two different time periods – immediately after the cord was cut and until the cord fell off – to be comparable with baseline surveys. As a result, the findings are difficult to interpret. The group agreed on the following:

- This indicator is important, but it requires additional testing in other household surveys given the difference between baseline and endline questions in SNL surveys.
- The question should ask what substance has been applied to the cord from the time it was cut until it fell off.
- The list of response items should be tailored for each country context, with guidance on which practices are potentially “harmful” for the analysis plan.
- The group discussed related practices (e.g. binding), but did not want to complicate the question on substances applied. In the future, the group can consider a question about additional practices for areas where such practices are common.

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**Skin-to-Skin contact**

SNL surveys asked women 1) “Was your baby were placed in skin to skin (STS) contact at any time?” and 2) “When was your baby first placed in STS contact?”. Of women that reported “yes” to the first question in SNL household surveys, the majority reported placing the baby in STS contact within 1 hour after delivery. Data were from intervention areas where STS was being promoted, so women may have been more familiar with the term and practice than in other areas. Since immediate STS contact is of interest, the group recommended the following:

- This indicator is important, but requires additional testing.
- The initial question should be “Was the baby put in STS contact as soon as she was born?”.
- A definition of skin to skin and/or a picture of a woman and baby in STS contact could be included to help define the term.
- The question on timing of first STS contact is optional, and the group agreed to simplify how time is recorded. Interviewer should record immediately (less than 1 hour) or hours.
- The group also recommended adding a question on where baby was placed immediately after delivery.

The group presented these recommendations to the larger TWG on the second day of the meeting for further discussion. Revised indicators and questions can be found later in the report.

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**2. Facility care of newborns**

Deborah Sitrin from Save the Children/SNL gave an overview of the sections of a draft health facility assessment tool for newborn care, which was developed after the previous TWG meeting in December 2010. Questions came from MCHIP, CSHGP, and SNL health facility assessment tools. The group decided having a tool for assessing newborn care services would be helpful as people in the working group have been contacted by other groups looking for a tool. Deborah also presented SNL’s facility indicators.
Heather Rosen from JHU/MCHIP presented data from MCHIP facility assessments. Data were collected during observations at facilities.

The group came up with a short list of indicators for facility level care, based on “signal functions” of a facility to prevent and manage the three main causes of newborn death (intrapartum-related deaths, infection, and complications of prematurity). A small group will meet in December 2011 to define these indicators and refine questions from the draft facility assessment tool. These indicators and questions can be recommended for inclusion in existing health facility assessments or for a stand-alone rapid assessment of newborn services. The full health facility assessment tool will also need to be reviewed, tested, and revised.

**TUESDAY, OCTOBER 18th:**
A series of presentations were followed by report-out from the previous day.

1. **Update on MCHIP work on HMIS indicators for maternal health – Steve Hodgins, MCHIP**

   Steve Hodgins gave an update on progress towards finalizing maternal indicators to include in routine health management information systems (HMIS) reporting.

   Current maternal ‘benchmark’ indicators (SBA, ANC1, and ANC4) mark progress towards MDGs in terms of coverage, but do not include content or quality of contact and are not closely correlated with maternal mortality. MCHIP and WHO have been working to come to consensus on indicators to assess content and quality of antenatal and delivery care contacts to be tracked in routine HMIS systems. There will be a meeting the last week of November in Geneva where this working group hopes to make a definitive recommendation that can be endorsed by WHO. During the meeting, the group will try to come to consensus on 3 indicators: 1) use of uterotonic in the 3rd stage of labor, 2) c-section rates, and 3) Quality of Intraparatum Care (QUIP-care) which measures intrapartum stillbirths and very early neonatal deaths.

   The group also plans to develop an index of ANC content questions that are already collected in countries (TT, IPT for malaria, HIV testing, iron, etc.), which will differ by country. Other topics for discussion will be magnesium sulfate for preeclampsia, near miss audits, and quality of postpartum and postnatal care.

   **Discussion:**
   - It is unlikely any data will come from the private sector, which often does not report to governments and we cannot assume reporting systems will change. The group can recommend governments move towards comprehensive data collection.
   - Routine HMIS rarely captures home births and there is enough difficulty capturing what is going on in facilities, so unlikely to get much data on home births except through special studies.
   - Could link to HBB training to measure what is done to resuscitate babies.

2. **Update on MICS4 – Holly Newby, UNICEF**

   Holly Newby gave an update on the new MICS4 module that includes postnatal care contacts at home and at health facility, before and after “discharge” for woman and baby. A number of countries have adopted the module, and data will be available early next year. The module is currently optional since many countries were far along with planning process, but MICS is committed to including PNC in the core questionnaire for MICS5. UNICEF will start getting ready for MICS5 next year, and will review the findings on PNC coverage from current
DHS surveys and MICS4 surveys in developing MICS5. It is still unknown what countries will participate in MICS5.

3. **PNC Coverage Data Analysis from DHS- Joy Fishel, DHS**
Joy Fishel presented PNC data analysis from recent DHS surveys for the 2012 Countdown to 2015 report.

Prior to 2010, DHS only asked about a postnatal health check for women who gave birth at home. In 2010, the core questionnaire was revised to include a postnatal health check for women regardless of where they gave birth, as well as a question about a postnatal health check for babies who were delivered at home.

The tabulated postnatal health check for the mother within 2 days includes reported visits 0-71 hours or 0-2 days after birth. Because time of birth varies, visit on the second day may be up to 71 hours after birth. Using a longer time frame allows for problems with maternal recall as well as with recording time. These data currently include a check by any provider; an expert decision is needed as to whether TBAs should be included in the final indicator tally. Data are not usually disaggregated by place of birth. DHS currently measures contact, not quality of care.

4. **Discussion on recommendations from previous day**

**Newborn behaviors and Practices**
The group reviewed recommended indicators and questions developed the previous day. The following changes were made:

- **Drying**: Changed time frame in question from “immediately after birth” to ‘after delivery’
- **Nothing (harmful) put on cord**: Changed time frame to ‘after cord was cut and tied until the cord fell off’ so responses do not include materials used to tie the cord. The group felt these questions need further testing.
- **Skin-to-skin**: Changed time to ‘after delivery’ and replaced ‘skin-to-skin’ with language used in Armenia 2005 DHS (along the lines ‘Was baby placed on mother’s bare chest after delivery?’). Agreed to keep question on timing of first STS contact, which may be removed and is not used to calculate the indicator. No agreement reached on question about where baby is placed after delivery, so question was removed. The group felt STS questions need further testing.

Based on this discussion, the TWG recommends 3 indicators/questions for an optional DHS or MICS module and agreed on 2 indicators/questions for further testing. The proposed indicators are in Annex 3, the questions for the optional module are in Annex 4, and the full definitions of existing and proposed newborn indicators for household surveys by location (core questionnaire, optional module, and optional module with further testing required) are in Annex 5.

**Next steps:**
- The TWG will work with DHS and MICS on developing an optional household survey module.

**Facility care of newborns**
The group again reviewed the sections of the draft facility assessment tool and discussed the process for developing indicators. Due to time constraints, the larger group was unable to review the draft indicators.
from the previous day. A small group will work on definitions and questions and will make recommendations at the next TWG meeting.

Next steps:
• Define indicators and questions to present at the next TWG meeting.

Recommendations for the next Indicators TWG meeting
The TWG will meet again in April or May 2012. DHS and MICS data will be available and shared, as well as findings from SNL surveys on content of PNC visits. Additional topics may include:

• Update on National Evaluation platforms (work of Jennifer Bryce and others)
• MCHIP and WHO work on integration of maternal indicators into HMIS and plans for PPC/PNC
• MCHIP efforts to include immediate newborn care indicators in delivery room registers
• How to move forward on measuring rare events: asphyxia, LBW, and sick babies (may have NCID data on LBW, trial on treatment from India, etc)
## AGENDA

**Newborn Health Indicator Technical Working Group**  
SNL, Washington, DC • 17-18 October 2011

### Objectives of the Meeting:

1. Review progress since December 2010 TWG meeting
2. Discuss suggested indicators and tools for measurement
3. Develop plan for Next Steps

### 17 October 2011

<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Activity</th>
<th>Presenter (s)</th>
</tr>
</thead>
</table>
| 9:30-9:45am     | Welcome and Introduction  
Objectives of Meeting                                                          | Allisyn Moran          |
| 9:45-10:30am    | Present SNL preliminary findings on NB Behaviors/Practices                  | Tanya Guenther         |
| 10:30am-12:30pm | Discussion and Group Work                                                     | All                    |
| 12:30-1:30pm    | Lunch                                                                            |                        |
| 1:30-2:00pm     | Present draft facility assessment tool (developed at Dec 2010 TWG meeting)      | Deborah Sitrin         |
| 2:00-2:15pm     | Present preliminary findings from MCHIP Quality of Care Assessments          | Heather Rosen          |
| 2:15-4:15pm     | Discussion and Group Work                                                     | All                    |
| 4:15-4:30pm     | Wrap up                                                                          | Allisyn Moran          |

### 18 October 2011

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| 10:00-10:15am   | Welcome and Introductions  
Objectives of Meeting                                                          | Allisyn Moran          |
| 10:15-10:30am   | Update on MICS4                                                                  | Holly Newby            |
| 10:30-11:00am   | PNC coverage data analysis                                                       | Joy Fishel             |
| 11:00-11:30am   | Update on MCHIP work on HMIS indicators                                          | Steve Hodgins          |
| 11:30am-12:00pm | Discussion                                                                       | All                    |
| 12:00am-1:00pm  | Lunch                                                                            |                        |
| 1:00-2:00pm     | Update on measurement of NB Behaviors/Practices and Discussion                  | TBD                    |
| 2:00-3:00pm     | Update on measurement of Facility Care and Discussion                            | TBD                    |
| 3:00-3:30pm     | Discussion and Next Steps                                                        | All                    |

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## Appendix 2: Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jennifer Luna</td>
<td>ICF Macro</td>
</tr>
<tr>
<td>Heather Rosen</td>
<td>JHSPH</td>
</tr>
<tr>
<td>Joy Fishel</td>
<td>Macro</td>
</tr>
<tr>
<td>GoldyMazia</td>
<td>MCHIP</td>
</tr>
<tr>
<td>Barbara Rawlins</td>
<td>MCHIP</td>
</tr>
<tr>
<td>Steve Hodgins</td>
<td>MCHIP</td>
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<tr>
<td>Linda Wright</td>
<td>NIH</td>
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<tr>
<td>Kate Kerber</td>
<td>SC</td>
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<tr>
<td>Nathalie Gamache</td>
<td>SC</td>
</tr>
<tr>
<td>Tanya Guenther</td>
<td>SC</td>
</tr>
<tr>
<td>Claudia Morrissey</td>
<td>SC</td>
</tr>
<tr>
<td>Allisyn Moran</td>
<td>SC</td>
</tr>
<tr>
<td>Jessica Hulse</td>
<td>SC</td>
</tr>
<tr>
<td>Rachel Taylor</td>
<td>MCHIP</td>
</tr>
<tr>
<td>Deborah Sitrin</td>
<td>SC</td>
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<tr>
<td>Holly Newby</td>
<td>UNICEF</td>
</tr>
<tr>
<td>Indira Narayanan</td>
<td>Consultant</td>
</tr>
<tr>
<td>Soumya Alva</td>
<td></td>
</tr>
<tr>
<td>Leanne Dougherty</td>
<td>kmsg</td>
</tr>
</tbody>
</table>
Appendix 3: Proposed indicators for optional module

Indicators for Optional Module on Newborn behaviors and practices

<table>
<thead>
<tr>
<th>Standard Indicators</th>
<th>Recommended Indicators (Need further testing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of newborns dried after delivery</td>
<td>Percent of newborns with nothing harmful applied to the cord after the cord was cut and tied until the cord fell off</td>
</tr>
<tr>
<td>Percent of newborns with delayed bath at least 6 hours after birth</td>
<td>Percent of newborns placed on the mother’s bare chest after delivery</td>
</tr>
<tr>
<td>Percent of newborns delivered at home and cord cut with a clean instrument</td>
<td></td>
</tr>
</tbody>
</table>

Appendix 4: Questions for optional module

Standard Questions

Now I’m going to ask you some questions about what happened soon after (NAME) was born.

1. Was (NAME) dried (wiped) after delivery?
   - Yes…………………………….………….1
   - No…………………………………...……2
   - Don’t know . . . …………………….…….98

   1a. How soon after birth was (NAME) dried (wiped)?
       If less than one hour, record 00.
       Optional question and may be removed.
       Immediately: 00
       HOURS: [ ]
       Don’t know…………………………….998

2. How long after delivery was (NAME) bathed for the first time?
   If less than one hour, record 00.
   May also record Days in areas where it is recommended to delay bathing >1 day.
   Otherwise, days can be recorded in hours (1day=24hrs, 2days=48hrs, 3days=36hrs, etc)
   Immediately: 00
   HOURS: [ ]
   Don’t know…………………………….998

3. Ask for home births only:
   What was used to cut the cord?
   List of answer options may be modified.
   Blade from delivery bag or New blade............1
   Blade used for other purposes......................2
   Sickle ..................................................3
   Scissor ..................................................4
   Other, Specify: ________________________________4
   Don’t Know/Can’t Remember.........................98

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| 3a | Was the instrument used to cut the cord boiled prior to use? | Yes……………………………………….1  
No………………………………………...2  
Don’t know . . . ………………………....98 | → 4  
→ 4  
→ 4 |
| 3b | ASK FOR FACILITY BIRTHS ONLY:  
Did you bring a Clean Delivery Kit or a new blade to the facility the time you gave birth to (NAME)? | Yes……………………………………….1  
No………………………………………...2  
Don’t know . . . ………………………....98 |

*Question may not be appropriate in all settings and may be removed.*

### Questions Recommended for Further Testing

| 4 | After the birth, was (NAME) put directly on the bare skin of your chest?  
SHOW MOTHER EXAMPLE OF SKIN-TO-SKIN POSITION | Yes……………………………………….1  
No………………………………………...2  
Don’t know . . . ………………………....98 | → 5  
→ 5 |
| 4a | When was (NAME) first put directly on the bare skin of your chest?  
IF LESS THAN ONE HOUR, RECORD 00.  
Optional question and may be removed. | Immediately: 00  
HOURS:  
Don’t know…………………………….998 |
| 5 | Was anything applied to the cord after the cord was cut and tied until the cord fell off? | Yes……………………………………….1  
No………………………………………...2  
Don’t know . . . ………………………....98 | → End  
→ End |
| 6 | What was applied to the cord?  
Probe: Anything else?  
(MULTIPLE RESPONSE) | List must be specific to each setting. Harmful and non-harmful substances need to be determined in analysis plan and will vary by setting. |
## Annex 5. Proposed Newborn Care Indicators for Household Surveys

<table>
<thead>
<tr>
<th>Program element</th>
<th>Indicator</th>
<th>Numerator</th>
<th>Denominator</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postnatal care visit for baby within 2 days</td>
<td>Percent of newborns receiving a postnatal care visit within 2 days³ of birth</td>
<td># of newborns who received a postnatal care visit within 2 days of birth</td>
<td># of last live last births in the xx years prior to the survey</td>
<td>Core questionnaire</td>
</tr>
<tr>
<td>Immediate breastfeeding</td>
<td>Percent of newborns breastfed within 1 hour of birth</td>
<td># of newborns breastfed within 1 hour of birth</td>
<td># of last live last births in the xx years prior to the survey</td>
<td>Core questionnaire</td>
</tr>
<tr>
<td>Thermal care: drying</td>
<td>Percent of newborns dried after delivery</td>
<td># of newborns dried after delivery</td>
<td># of live last births in the xx years prior to the survey</td>
<td>Optional module</td>
</tr>
<tr>
<td>Thermal care: delayed bath</td>
<td>Percent of newborns with delayed bath</td>
<td># of newborns with first bath delayed at least six hours⁴ after birth</td>
<td># of live last births in the xx years prior to the survey</td>
<td>Optional module</td>
</tr>
<tr>
<td>Cord care</td>
<td>Percent of newborns born at home with cord cut with clean instrument</td>
<td># of newborns born at home with cord cut using new blade or boiled instrument</td>
<td># of live last births at home in the xx years prior to the survey</td>
<td>Optional module</td>
</tr>
<tr>
<td>Thermal care: skin-to-skin contact</td>
<td>Percent of newborns placed on the mother’s bare chest after delivery</td>
<td># of newborns placed on the mother’s bare chest after delivery</td>
<td># of live last births in the xx years prior to the survey</td>
<td>Optional module; Needs further testing</td>
</tr>
<tr>
<td>Cord care</td>
<td>Percent of newborns with nothing (harmful) applied to cord</td>
<td># of newborns with nothing (harmful) applied to cord</td>
<td># of live last births in the xx years prior to the survey</td>
<td>Optional module; Needs further testing</td>
</tr>
</tbody>
</table>

¹ Indicators include deliveries at home and at facilities, except the indicator on the instrument used to cut the cord.

² Surveys will vary in period of recall. Typically, DHS surveys use a recall period of five years while UNICEF/MICS surveys use a two year period. NGO surveys may include a recall period of 1 year.

³ Newborns with a check 0-71 hours or 0-2 days after birth

⁴ Timing could be modified based on WHO/country policy

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