A Concept note and Terms of Reference on Assessment of Community-Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI) Program

Background
Nepal has a long history of implementation of community based maternal and child health programs. To improve the health status of under-five children, Community Based Integrated Management of Childhood Illness (CB-IMCI) program was introduced in 1997 and nationwide scaling up was completed in 2009. Likewise, Community Based-Newborn Care Program (CBNCP) was designed (2008), piloting initiated (2009), scaling up commenced (2011) and finally evaluation of 10 pilot districts was conducted in 2012. Based in part on the findings of CB-NCP assessment, CB-IMCI and CB-NCP programs were integrated in October 14, 2014 and it was renamed as Community Based-Integrated Management of Neonatal and Childhood Illness program (CB-IMNCI). CB-IMNCI is comprised of both newborn and child-survival interventions. With regard to interventions targeted to newborn and sick young infants CB-IMNCI includes essential new born care, counseling on breastfeeding and newborn complications (non-breathing babies at birth, neonatal sepsis, jaundice, hypothermia, low birth weight and preterm births) as well as treatment of PSBI at HP and PHCC. For children aged 2 to 59 months, it addresses major childhood killer diseases such as pneumonia, diarrhea, malaria, and malnutrition.

In CB-IMNCI, the primary role of FCHVs as health promoters/educators and includes dispensing essential commodities, for example, distribution of iron, zinc, ORS, chlorhexidine etc. The role of health workers is to provide treatment services especially on neonatal sickness and childhood illness. As per WHO guideline, in CB-IMNCI program, amoxicillin is the first line drug of choice for the treatment of neonatal sepsis and pneumonia. Furthermore, CB-IMNCI program has included various social and behavioral change community level activities including demand generation activities for the newborn and child health services, primarily undertaken by FCHVs.

The revised CB-IMNCI package was first introduced in Rasuwa, Nuwakot and Nawalparasi districts in late 2014 with all trainings delivered in a single phase (i.e. HF and community level training done typically over a period of less than 6 months). In mid-2015, modality for introduction was revised and a phase-wise approach was adopted. Unlike CB-IMCI and CB-NCP programs where implementation was done at a single phase, in CB-IMNCI, it is implemented in three phases. The first phase consists of situation
analysis, district planning, and trainings to selected health workers, orientations (remaining HWs, Dhami/Jhankri, mothers group etc.), community level trainings, onsite coaching and implementation of SBCC activities. The second phase consists of trainings of remaining health workers, reviews, onsite coaching and monitoring, and the third phase consist of review of activities carried out in the previous two phases. Once Training of Trainers (TOT) of the district staffs (MO and supervisors) is completed at central/ regional level, district planning workshop is conducted with the main objective of developing an implementation plan of CB-IMNCI program. Then first phase of health workers trainings is attended by selected health workers from the all of the health facilities (health post-2, health post with birthing center- 3, PHCC- 4 and district hospital- 6 to 8) of a district. Those health workers who previously had received training on CB-NCP are provided 3 days training while those who were not are provided 6 days training. Health workers, who are not included in the first phase, will receive one day orientation from trained health facility in charge and later they will get full training on the second phase. Improvement in service delivery is also monitored while implementing the second phase of training implementation. In addition, three days management training is designed for managers, non- technical supervisors as well as administration and finance staff of the district.

With the phase-wise approach, within one year, program has been introduced in 30 districts, with all phases completed including up to community level in 15 districts. In the current fiscal year, the plan was to complete roll out in 25 districts however some delays were experienced due to timely release of the program budget.

**Rationale of CBIMNCI assessment**

Multiple data sources suggest that a high proportion of young infants do receive treatment. From NDHS 2011, only 25% of infants under 12 months of age with symptoms of fever or cough over the preceding 2 weeks had been taken nowhere outside the home for treatment. MICS 2014 shows a similar proportion. In CBNCP pilot districts, care-seeking for NB danger signs rose from an already high 77% to 86% (with FCHVs as first point of contact for 11% of cases). HMIS data for the most recently available year found 12,000 in-patient admissions of newborns (note that some private hospitals are not reporting but this figure should represent the overwhelming majority of inpatient NB care); two thirds of these cases were reported as being for possible sepsis and an additional 5% for pneumonia, yielding a total of about 8,500 admitted cases of PSBI.
Also from HMIS outpatient reporting from PHCC/HP/SHPs, there were an additional 8,000 cases of PSBI. Using an estimate of about 7% of newborns developing symptoms compatible with sepsis, these 16,500 cases represent about ¼ of the expected number assuming about 600,000 births per year. From MICS and NDHS data on care-seeking for illness in infancy (through 12 months of age) approximately 3 times more cases are treated in the private sector than in the public sector, with roughly equal proportions taken to drug shops and to private clinics/hospitals. This can’t be taken as a direct measure of care-seeking specifically for NBs or infants <2 months of age, but it can be inferred that there’s likely to be a similar pattern for this age group as for infants under 12 months with significantly more cases treated in the private than in the public sector. So, in summary, it appears that a fairly high proportion—perhaps over 80%—of young infants with symptoms compatible with PSBI are receiving treatment of some kind. And, it appears that most of this care is sourced from the private sector.

Accessibility: of approximately 3,000 peripheral public-sector HFs (below hospital level) despite the fact that under CBIMCI they have been authorized to treat such cases for the past 10 years, fewer than ¼ reported having treated any PSBI cases in the most recent annual report of HMIS data.

This much we know, but there remain important gaps in our knowledge. What proportion of cases of PSBI are only getting treatment when they’re already at death’s door? What proportion are receiving safe, effective treatment? In what segments of the population is effective coverage markedly lower? What about more remote communities? What proportion are receiving dangerous treatments like injectable dexamethasone? To what extent are drug dosages accurately determined based on weight? How adequate is follow-up? What are the specific barriers that families are encountering that prevent receipt of timely and appropriate treatment?

Evidently non-protocol regimens are used in public-sector PHCC/HP/SHPs. Officially, a year ago CHD moved from cotrim-genta to amoxicillin-gentamicin (both for 7 days). Although the official protocol calls for 7 days of injection it is unclear what proportion of cases receive such “full treatment”. As currently designed, HMIS reporting on this question is uninterpretable. The current protocol provides little guidance on individualizing treatment depending on patient response (whether to prioritize facilitated referral for danger signs or to discontinue injectable treatment early because of recovery).
Note that multiple formulations of gentamicin and amoxicillin are available at the peripheral level. This has not been standardized and the resulting confusion may contribute to reluctance to take on such cases. Furthermore, with more ready availability of preferred antibiotics in the private sector, this may incentivize referral out.

Currently rapid-respiratory rate as a single sign is not managed differently from PSBI. Pre-referral dosing for severe cases does not appear to be standard practice. Treatment in the private sector is not well characterized but there is anecdotal evidence suggesting that injectable steroid use is not uncommon.

While studies on care seeking pattern from community and private sector management of sick young infants are in progress it is also important that an assessment of the CB-IMNCI program is timely conducted in order to identify gaps in the services, draw lessons and bring necessary modifications in the CB-IMNCI program before it is scaled-up. In particular, this assessment will provide actual service delivery status at community level focusing on quality and coverage of CHX and management of neonatal sepsis, pneumonia and diarrhea. Therefore this assessment, which will be conducted under the aegis of CHD, will explore the service provision patterns at the community level.

**Objectives for IMNCI assessment**

To determine current status with regard to management of cases of child and newborn at PHCC, HP and community levels, considering level of utilization and quality, and factors influencing utilization and quality, focusing primarily on ARI, diarrhea and young infant PSBI. The following will be the specific objectives of the assessment:

1. Assess situation of service readiness in the health facilities for IMNCI services particularly focusing on sick young infants (availability of trained human resource in IMNCI, drugs and syringe, guidelines, recording and reporting tools etc.)
2. Assess knowledge and skills of service providers for management of sick young infants (e.g. recognition of danger signs, method of assessment, treatment protocol, confidence, referral etc.)
3. Assess volume of service provided to sick young infants and children aged 2-59 months in the last 3 months and explore reasons for low or no service offered by health facilities and reasons for reluctant to service delivery.
4. Explore quality of service provided to the clients in terms of prescription of appropriate drugs, appropriate dosing, follow-up visits by clients, referral, clients compliance etc.

**Key areas for focus and evaluation questions will be based on:**

- **UTILIZATION, CASE VOLUME, VARIATION BY PLACE AND TIME**, review of HMIS data available at national level. What contribution has been made at PHCC and HP levels (including FCHVs) according to HMIS data, looking at trends over—say—the last 5 years. How has this varied by geographic setting? In hilly and mountainous areas, and particularly in VDCs at a distance from municipalities what case-volume are we seeing from HMIS and how does that translate into number of cases treated per population below 5 years of age [to get a sense of contribution at this level to population effective coverage].

- Review of DOCUMENTATION/ DATA at HF level: From assessment at HF level, how accurate and complete does it appear that documentation of these cases has been in HF-level registers and monthly HMIS reports (including CBIMCI register, general OPD register and others)? Look specifically at whether or not there are cases of PSBI in young infants recorded. If not, ask HF in-charge and others about whether or not they actually see such cases and, if not, why not?

- QUALITY-From registers and other HF documentation and from interviewing HWs, document quality and appropriateness of treatment (e.g. ORS and zinc for non-bloody diarrhea, not giving inappropriate treatments like metronidazole for diarrhea; indications of appropriate antibiotic use for ARI with rapid respiration but not for uncomplicated upper respiratory tract infection, appropriate third-day follow-up assessment; appropriate drugs, dosages, and duration for PSBI, etc.).

- HEALTH WORKER READINESS: what training received (either pre-service or in-service)-CBIMCI, CBNCP? Actual knowledge in practice, assessed using simulated cases, to determine how health workers report managing cases.

- LOGISTICS: Current stock status and history of stock outs for key program commodities (drugs, needles, syringes).

- Interview providers about any particular DIFFICULTIES they have that prevent optimal management of ARI, diarrhea and PSBI or that result in them referring rather than treating cases.

- FCHV ROLE Interview in-charge and others at the HF; how does their role depend on distance from HF? To what extent are FCHVs still involved in ARI or diarrhea treatment? What do HWs feel is appropriate and necessary for FCHV role in CBIMCI at this time, i.e. continued role in providing cotrim for ARI?

- How are severe cases are managed, i.e. what arrangements made for referral? What about pre-referral dosing?
**Assessment Method**

This assessment will adopt mix method approach; both primary qualitative and secondary quantitative data (service data) will be collected. In addition review of secondary information from various surveys, data from HMIS and LMIS will be also reviewed and analyzed. Methods of data collection will include documents review, observation of records and store, and in-depth interviews.

For collection of primary data six districts will be purposively selected considering the ecological region, CB-NCP vs non-CBNCP districts, year of IMNCI implementation (maturity), implementation approach etc. In each district focal persons for IMNCI and MNH will be interviewed. From the sample district, health facilities will be selected on the basis of PSBI services provided in the last 3 months, remoteness, type of health facility, presence of private providers etc. From each district we propose to select six health facilities using the above criteria. Attention will be given to select those health facilities which have not provided or have provided services for a very few PSBI cases in the last 3 months. For this data from HMIS will be reviewed and consultation with district focal person/Statistical officer will be done. Thus, the sample will comprise of 36 health facilities. From each sampled health facility, two service providers (HF In-charge and SBA) will be interviewed. From the catchment area of each sample health facility two FCHVs- one from nearby and another from a distance from the health facility (remote) will be considered in the sample, making a total sample of 72 FCHVs for the study. In order to assess quality of service provision and compliance to recommendation from each health facility two young infants (0-6 months) who had been sick in the last three months and who had obtained services from the health facility will be followed-up to assess quality of service. If there are more than two such cases the most recent cases will be considered for follow-up. Moreover, exit interviews with mothers/care-takers of clients who had visited health facility for IMNCI services (only for ARI, pneumonia, diarrhea, PSBI) for children under 5 will be also interviewed if they become available on the day of visit to the health facility.

The following table provides information on data sources to meet the objectives and tools that will be used for data gathering:

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<tr>
<th>Study objectives</th>
<th>Data sources</th>
<th>Data collection tool</th>
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Assess situation of service readiness in the health facilities for IMNCI services particularly focusing on sick young infants, ARI and diarrhea treatment (trained HR, commodities and tools etc.)

Health facility and store

- Observation of commodities
- Record reviews (HMIS and LMIS)
- Interview with HF In-charge
- Interview with FCHVs

Assess knowledge and skills of service providers for management of sick young infants and under five children

Health service providers

- Observation of service record such as IMNCI register
- In-depth Interviews with service providers

Assess service provided to sick young infants in the last 3 months and explore reasons for low or no provision of services offered by health facilities.

Service providers Data record

- Record review
- Interview with service providers
- Interview with FCHVs

Explore quality of service provided to the clients in terms of prescription of appropriate drugs, appropriate dosing, follow-up visits by clients, referral, compliance etc.

Mothers of young infants who received services in the last 3 months, and service providers

- Record review
- In-depth Interview with mother/care takers of sick young infants
- Exit interviews

**Timeframe**

This assessment will be completed within 5 months from the date of award of the assessment contract. Detail breakdown of activities and their expected number of days is given below.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Expected no. of days</th>
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<tbody>
<tr>
<td>Development of Concept note</td>
<td>7 days</td>
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<tr>
<td>Sharing of the concept note in IMNCI working group and Safe sub motherhood committee</td>
<td>7 days</td>
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<tr>
<td>Prepare the memo (tippani) for approval</td>
<td>7 days</td>
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<tr>
<td>Develop ToR and call for research proposals</td>
<td>10 days</td>
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<tr>
<td>Contract award</td>
<td>15 days</td>
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<td>Task</td>
<td>Days</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>Develop methodology, tools and pretest</td>
<td>35</td>
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<tr>
<td>Recruit and train field researchers</td>
<td>15</td>
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<tr>
<td>Data collection</td>
<td>40</td>
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<tr>
<td>Data analysis and draft report preparation</td>
<td>35</td>
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<tr>
<td>Submission of final report and dissemination of findings</td>
<td>10</td>
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<tr>
<td><strong>Total</strong></td>
<td>178</td>
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**Terms of Reference:**

1. Desk review on IMNCI implementation and CB-IMNCI package in Nepal.
2. Conduct series of meetings with relevant GoN officials, other partners and team who drafted the CB-IMNCI package and are implementing the CB-IMNCI package.
3. Identify and review similar kind of assessments in other countries.
4. Prepare detail methodology of the assessment including sampling technique for national representation.
5. Share the methodology with the TWG, CHD and partners for approval.
6. Conduct the CB-IMNCI implementation assessment in coordination with CHD.
7. Share the preliminary findings of the assessment with TWG and CHD for review and feedback.
8. Finalize the CB-IMNCI assessment report incorporating the feedback and review from CHD and TWG.
9. Submit the final assessment report to CHD and WHO.

**Expected Output:**

E-copy and hard copy of the report of the CB-IMNCI assessment

**Important Note:**

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