STANDARD OPERATING PROCEDURE FOR THE CONSOLIDATED REPORTING OF MATERNAL, NEONATAL AND CHILD DEATHS AND STILLBIRTHS IN KWAZULU-NATAL AND REVIEW OF PRIMARY HEALTH INDICATORS

1. Background

The United Nations Sustainable Development Goals (SDGs) for health and the Global Strategy for Women's' Children's and Adolescent's Health, are grouped into 3 broad objectives:

- "Survive": - eliminate avoidable and preventable deaths - the immediate and non-negotiable priority
- "Thrive": - promote wellness, prevent and manage illness - to be addressed at the same time but with an increasing focus once we have ensured survival, and
- "Transform": - transform health systems, transform the patient experience of care, and transform social factors determining ill health. This runs as a thread through all our efforts.

In line with the Sustainable Development Goal of objective "Survive", an" Integrated *plan for reducing mortality in mothers, newborns and under-fives*" has been approved by the NHC. Its major focus is on bringing down mortality to below established "target limits". This does not in any way imply that the accompanying SDG objectives of "Thrive" and "Transform" are irrelevant or unimportant; and indeed, the three are completely complementary.

A death that could have been avoided is however, a critical event that is completely unacceptable and therefore subject to a specific focus.

2. Purpose and Applicability of the SOP

Currently in KZN there are multiple death notification/reporting/auditing systems leading to duplication and excessive workload at facility level. The purpose of this SOP is to build on and integrate these existing processes.

The process includes the identification and notification of each death occurring in a health facility or institution, the auditing of these deaths completely and accurately, to understand the events and underlying causes leading up to the death, and by learning from these, to take all needed measures to correct any deficiencies identified along the entire care pathway. This has been summarised as the "MR4P"- Mortality **R**ecording, **R**eporting, **R**eview and **R**esponse **P**rocess.

It describes an easier, uniform, streamlined process for the consolidated notification and reporting of:

- All deaths/morbidity of stillbirths, new-born babies, mothers & children from birth to 12 years.
- Quality of care indicators.
- Modifiable/Avoidable factors.
- Action plans.

It highlights responsibilities for clinicians and managers, at individual facilities or institutions as well as at a health system level (district, referral area) through formal inclusion in the planning and monitoring or performance review processes.

The procedure outlined in this SOP is applicable to all health facilities – Hospitals, Community Health Centres (CHCs) and Primary Health Care (PHC) clinics.

3. Process (See **Appendix A** for Flow chart)

Step 1: Identification of death (Recording**)**

The Operational Manager of every nursery, maternity unit, children's ward, CHC and PHC clinic must:

1. Identify every death in their unit on a daily basis.
2. Ensure each death is captured in the ADD /Labour ward register.

Step 2: Notification of death (Reporting**)**

1. The shift leader must inform nursing management of any death by completing the death notification book & including the top copy (yellow) in the Matron's Report Book.
2. The doctor present at the death must complete the Death Notification form BI 1663 (Natural deaths) and it is sent to the mortuary.
3. For maternal deaths- Within 24hrs the shift leader must notify the maternity ANM and senior hospital management of the death. Senior management must then inform the DCST team.
4. For neonatal and child deaths-within 24 hours the doctor and professional nurse present at the death must notify the head of unit or clinical manager of the death and of any challenging circumstances around the death. They can do this by completing:
   - Neonates-The Death notification and debrief section of the Neonatal death/PPIP summary form.
   - Children-The Death notification and debrief section of the Child PIP Death Data Capture Sheet.
   - The Operational Manager must submit the form to:
     - The Head of unit/Clinical manager for review and any required response.
     - The form must then be returned to the unit for a full death audit.
     - A duplicate copy must be submitted to the Mat./ Paed. Assistant Nurse Manager.
   - Monthly, following the full PPIP/Child PIP review of each death (below) or neonatal encephalopathy, the district and provincial offices must receive notification of the details of each death/encephalopathy including: date, age, place, cause, HIV and nutrition status for child deaths and gestation and weight for neonatal deaths/stillbirths.

Step 3: Review/Audit of death (Review**)**

Every death (maternal, stillbirth, neonatal, child) that has occurred in a health facility (including theatre, outpatients, gynaecological wards, ICU etc.) must be audited to identify any modifiable/avoidable factors.

1. Depending on the number of deaths to be reviewed weekly or monthly death review meetings need to be held in the respective units. These meetings will include the clinical manager/head unit, the unit MOs and nursing staff. They focus on analysing each death using PPIP/Child PIP process, identifying modifiable factors and compiling a unit level action plan.
2. Maternal deaths
   - Within 24hours a debrief meeting must be called with key role players including senior nurses & clinicians. Following the meeting complete the Maternal Death Notification form (MDNF).
   - Within 72 hrs a second formal audit meeting must be called including senior management, the DCST team and relevant stakeholders at which point the PPIP form must also be completed.
   - Send copy of form (MDNF) and file to provincial office to be reviewed by Maternal National Committee for Confidential Enquiry in Maternal Deaths (NCCEMD) assessor.
3. Stillbirths must be audited and recorded using the PPIP stillbirth form.
4. Neonatal Deaths must be audited by the obstetric and neonatal team & recorded on the Neonatal death/PPIP summary form (Pg 2&3).
5. Child deaths must be audited and recorded on Child PIP Death Data Capture Sheet. In addition for deaths related to severe acute malnutrition, the Integrated Management of Malnutrition audit tool must be completed.
6. Cause of death and modifiable/avoidable factors must be identified.
7. A unit level action plan must be compiled for any modifiable factors identified.
8. **NB.** At district hospitals the outreach consultant must review at least 2 audited deaths to ensure quality of auditing process.
9. All cases of neonatal encephalopathy must also be reviewed within one week (modifiable factors identified and whether this morbidity was avoidable or not) and notified monthly.

Step 4: Facility data preparation meeting (Review **)**

Prior to the facility Perinatal and Child mortality meetings a preparatory meeting must be held in order to prepare for the mortality meetings.

1. The purpose of this meeting is to:
   - Verify and analyze the data.
   - Prepare for the perinatal and paediatric mortlaity meetings
2. At district level this may be a combined meeting but at regional/tertiary level separate perinatal and child preparatory meetings may be held.
3. Suggested personnel to be present at this meeting:
   - Data management-FIO.
   - Medical
     - District: Doctors responsible for pediatrics and obstetrics and clinical/medical manager.
     - Regional/Tertiary: Obstetric, paediatric and neonatal Head of units or senior specialists and MOs/registrars who will do the presentations.
   - Nursing:
     - Paediatric and Maternity ANM's.
     - District: Maternity and Paediatric Operational managers.
     - Regional/Tertiary: Labour ward, post-natal, neonatal and paediatric operational managers.
4. Process:
   - FiO must prepare and bring up to date data for all required data elements. See **Appendix B** for required data elements.
   - Verify required raw data from unit records against DHIS and PPIP/Child PIP data and identify any significant changes.
   - Identify the most significant avoidable/modifiable factors as identified on PPIP/Child PIP forms.
   - Identify any significant changes in required quality of care indicators.
   - Identify 1-2 relevant cases for presentation at the meeting. For the Perinatal Meeting these must include both maternal and neonatal learning points. Populate the standardized PowerPoint presentation.
   - Follow up on implementation of previous month's action plan.
   - Identify possible actions for current month's action plan that will be updated at the Perinatal/Child Mortality meeting.

Step 5: Monthly Perinatal/Child Mortality and PHC Data review meetings (Response & **R**eporting**)**

1. The purpose of these meetings is to:
   - Provide a forum for communication, learning and feedback in the sub district.
   - To develop a facility/district level action plan to prevent morbidity, mortality and improve quality of care.
   - Ensure senior management oversight, input into and support for action plans.
2. At district level this may be a combined meeting but at regional/tertiary level separate perinatal and child meetings should be held.
   - It is important if these meetings are combined, that presentation of each data group (e.g. perinatal) and formulation of a facility level action plan is completed before moving on to the next data group (e.g. paediatric)
   - **NB.** Presentation of each data group/ meeting should last no longer than 90 minutes in order to ensure all relevant roll players attend and remain present for the duration.
3. Personnel to be present at each of these meetings:
   - Senior hospital management- CEO, Medical & Nursing Managers (Min. of one)
   - Medical:
     - District: Doctors responsible for pediatrics and obstetrics, doctors covering maternity/paediatrics after hours and sessional doctors.
     - Regional/Tertiary: Obstetric, paediatric, neonatal and anaesthetic Head of units and Students, Interns/MOs/Registrars.

- Nursing:
  - Paediatric and Maternity ANMs.
  - District: Maternity and Paediatric Operational managers & available midwives & nurses.
  - Regional/Tertiary: Labour ward, post-natal, neonatal and paediatric operational managers & available midwives & nurses.
- Programme Managers: M&E, QA, PMTCT, IPC, Resus, dieticians, social workers
- PHC Supervisors who cover the catchment area of the hospital.
- Representatives from each of the CHCs and PHCs in the catchment area.
- Nursing College Representative (where relevant).
- District:
  - DCST representative/s.
  - MCWH and PMTCT Coordinators.
  - EMRS representative (By invitation).

4. Process for each meeting/ data set presentation.
   1. Welcome
   2. Appoint minute taker
   3. Confirm previous minutes. **NB Do not read previous minutes.**
   4. Follow up on implementation of previous month's action plan. Comment on progress achieved in implementing actions, reason for failure to complete and any further action required.
   5. Present mortality, morbidity, quality of care data and unit level action plans.
   6. Present case/s with identified modifiable factors for discussion.
   7. Present a teaching presentation.
   8. Discuss any system/facility/district recommendations arising from data, cases and teaching.
   9. Develop a facility/district level action plan. Using analysis of death, modifiable factors, quality of care data and case presentations- Prioritize actions required (Include any outstanding actions from previous month). Focus on actions that will directly result in improved quality of care or outcomes. Do not focus on in-service training unless the impact on outcomes of this training is measured.
5. By close of day every 2nd Monday of the month a consolidated death report must be submitted to the District office. This death report must include:
   - Required verified data elements including morbidity, mortality and quality of care.
   - Notification of each death.
   - Modifiable factors identified.
   - Actions plans (and follow up).
   - Minutes of mortality/data review meetings with attendance registers (incl. prep. meetings).

Step 6: District Response to death (Review, **R**esponse & **R**eporting**)**

1. The DCST team and MCWH coordinator must ensure that all facilities complete all action plans arising from the death audits and that these result in a positive impact on outcomes.
2. The DCST team, MCWH coordinator, Quality manager and DIO must complete a monthly consolidated death report for the District including:
   - Verified facility deaths against DHIS.
   - Consolidated facility morbidity, mortality and quality of care data.
   - Identification of challenges/problems and successes at district level.
   - **Documentation of what further intervention, if any, is needed and planned interventions (Action Plan).**
   - **Follow up on implementation of previous month's action plan.**
     - By close of day on the 3rd Monday of every month the District Manager must authorize the report prior to submission to the provincial office. bongi.nyathi@kznhealth.gov.za

Step 7: Six Monthly review meetings (Review & **R**esponse & **R**eporting**)**

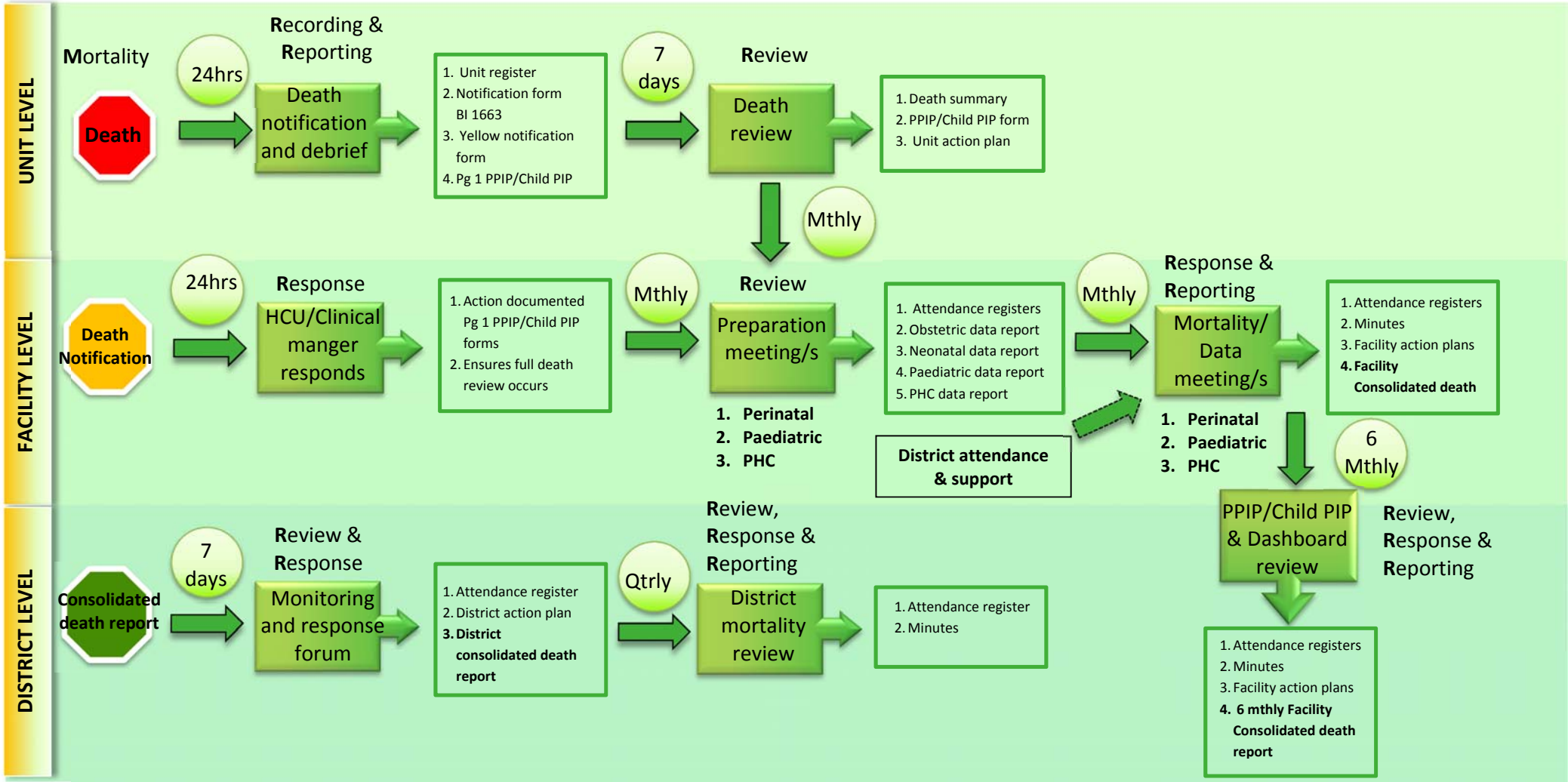
Every 6 months (October and April) the Perinatal and Child Mortality meetings must focus on trends in mortality against targets, detailed PPIP and Child PIP data analysis and progress on implementation of programmes/recommendations.

1. At the preparatory meeting the following data must be prepared:
    - Usual monthly data elements as described above.
    - Numerator, denominator and rate for each data element including: annual target, previous year's rate, previous and current 6 months.
    - PPIP/Child PIP 6 monthly analysis including most common causes of deaths in weight bands and modifiable factors.
    - Progress in completion of all previous action plans/district recommendations.
    - Progress in neonatal and child health implementation dashboards and action plans.
2. Perinatal/child health meetings.
    - The personnel attending will be the same.
    - The structure (Steps 1-5 in point 5.4 above) remains the same –monthly data will be discussed and action plans drawn up.
    - Presentation of the 6mthly indicator trends, PPIP/Child PIP analysis and presentation of the neonatal and child health dashboards replaces the case presentations and teaching.
    - Review of action plans from the previous 6 months and comment of achievements/non completed items and any problems that keep recurring must also be presented.
3. By close of day on the 2nd Monday of the month (April and October) submit completed Monthly (See Step 5.5 above) **AND** 6 monthly Consolidated Death Reports to the District office. The 6 monthly report should include:
    - Targets, numerators, denominators and rates for each data element.
    - PPIP/Child PIP 6monthly analysis.
    - Reviewed action plans
    - Neonatal and child health implementation dashboards and action plans.
4. As in Step 6 above the district team must:
    - Consolidate all facility provided data elements and identify challenges/problems and successes at district level.
    - **Determine what further intervention, if any, is needed and facilitate such interventions (District Action Plan).**
    - **Follow up on implementation/completion of previous 6 month's action plan.**
    - Verify and collate the facility reports and submit **both** monthly and 6 monthly District reports by close of day on the 3rd Monday of the month (May and November).

Appendix A

"MR4P" Flowchart

Mortality **R**ecording, **R**eporting, **R**eview and **R**esponse **P**rocess.



Appendix B

A. Required Monthly Data Elements.

1. Obstetric

1. No. of postpartum implants
2. No. of post partum Intra Uterine Contraception Devices (IUCD) insertions
3. Caesarean delivery (CD) Rate
4. CD audit result
5. Basic ante natal care (BANC) audit score
6. Partogram audit score
7. No. of Essential Steps in the Management of Obstetric Emergencies (ESMOE) fire-drills conducted
8. % Maternity Staff completed individual Helping Babies breath (HBB) fire-drill
9. No. of avoidable steroid misses
10. No. of avoidable HIE cases
11. Regional Hospitals: No. of referring hospitals
12. Regional Hospitals: No. of obstetric outreach visits made
13. District Hospitals: Obstetric outreach report received?
14. District Hospitals: DCST midwife report received?
15. Total no. of births
16. No. of live births
17. No. of deliveries between 10-19 yrs.
18. No. of low Birth weight babies
19. No. of BBAs
20. No. of maternal deaths
21. No. of postpartum haemorrhages
22. No. of perinatal deaths (excl BBAs)
23. Total no. of stillbirths (SB)
24. No. of fresh Stillbirths (FSB)
25. No. of macerated Stillbirths (MSB)
26. No. of confirmed Hypoxic Ischaemic Encephalopath (HIE) cases
27. No. of HIE deaths

2. Neonatal

1. Dashboard completed
2. Regional Hospitals: No. of referring hospitals
3. Regional Hospitals: No. of neonatal outreach visits made
4. District Hospitals: Neonatal outreach report received?
5. District Hospitals: District neonatal report received?
6. No. of live births
7. No. of preterm births (<37 weeks)
8. No. of neonatal separations.
9. No. of nosocomial sepsis separations
10. No. of HIE separations
11. Total no. of neonatal deaths
12. No. of inborn neonatal deaths-early 0-7 days
13. No. of inborn neonatal deaths-late 8-28 days

14. No. of out born neonatal deaths-early 0-7 days
15. No. of out born neonatal deaths-late 8-28 days
16. No. of preterm deaths
17. No. of neonatal sepsis deaths
18. No. of HIE deaths

3. Paediatric

1. Dashboard completed
2. Regional Hospitals: No. of referring hospitals
3. Regional Hospitals: No. of paediatric outreach visits made
4. District Hospitals: Paediatric outreach report received?
5. District Hospitals: District paediatric report received?
6. No. of U1 separations (Including neonatal)
7. No. of U5 separations (Including neonatal)
8. No. of SAM Separations
9. No. of diarrheal Separations
10. No. of pneumonia Separations
11. No. of under 1 deaths
12. No. of under 5 deaths
13. No. of SAM deaths
14. No. of diarrheal deaths
15. No. of pneumonia deaths

4. PHC (HIV/MCWH)

1. Couple year protection rate (Annulised)
2. Antenatal client <20 weeks booking rate (%)
3. ANC client initiated on ART
4. % ANC client with viral load done at specific interval
5. Infant PCR test positive around 10 weeks
6. % Breastfeeding client on ART with viral load done at specific interval
7. PCR test 6 weeks post cessation of breast feeding
8. Child under 1 year initiated on ART
9. Number of Phila Mntwana Sites
10. Child screened at Phila Mntwana Centre
11. Child referred from Phila Mntwana Centre and received interventions
12. Child referred from Phila Mntwana Centre - Malnutrition
13. Child referred from Phila Mntwana Centre - TB
14. Child referred from Phila Mntwana Centre – HCT

B. Required 6 Monthly Data Elements.

1. Obstetric

1. In hospital maternal mortality rate (iMMR)
2. Maternal haemorrhage incidence
3. Haemorrhage iMMR
4. Hypertension iMMR
5. Low birth weight rate (LBWR)

6. Stillbirth rate (SBR)
7. Perinatal Mortality Rate (PNMR)
8. HIE incidence
9. Case fatality rate (CFR)-HIE
10. Induction of labour success rate (IOL)
11. Caesarean delivery rate (CD)
12. Steroid coverage

2. Neonatal

1. Neonatal mortality rate (iNMR)
2. Early neonatal mortality rate (ENMR)
3. In hospital mortality rate (IHMR)-Inborn
4. In hospital mortality rate (IHMR)-Outborn
5. Case fatality rate (CFR)-Under 1000g
6. Case fatality rate (CFR)-1000-2500g
7. Case fatality rate (CFR)-Greater than 2500g
8. Case fatality rate (CFR)-Prematurity
9. Sepsis incidence
10. Case fatality rate (CFR)-Sepsis
11. Bed utilisation rate (BUR)
12. Average length of stay (LOS)

3. Paediatric

1. Under 1 mortality Rate
2. Under 5 mortality Rate
3. Case fatality rate (CFR)-Diarrhoea
4. Case fatality rate (CFR)-Pneumonia
5. Case fatality rate (CFR)-Severe Acute Malnutrition (SAM)
6. Bed utilisation rate (BUR)
7. Average length of stay (LOS)