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# Handbook for District Clinical Specialist Teams (DCST)

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South Africa

# **Handbook for District Clinical Specialist Teams**

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This handbook is a result of the collaborative efforts of the National Department of Health (NDoH) and the Reducing Maternal and Child Mortality through Strengthening Primary Health Care in South Africa (RMCH) Programme.

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## ACRONYMS

<b>ANC</b>	Antenatal Care
<b>ART</b>	Antiretroviral Treatment
<b>CARMMA</b>	Campaign on the Accelerated Reduction of Maternal Mortality in Africa
<b>CHC</b>	Community Health Centre
<b>CEO</b>	Chief Executive Officer
<b>DCST</b>	District Clinical Specialist Team
<b>DDG</b>	Deputy Director- General
<b>DHIS</b>	District Health Information System
<b>DHP</b>	District Health Plan
<b>DEM</b>	District Executive Manager
<b>DMT</b>	District Management Team
<b>ENMR</b>	Early Neonatal Mortality Rate
<b>ESMOE</b>	Essential Steps to Managing Obstetric Emergencies
<b>HCT</b>	HIV Counselling and Testing
<b>HIS</b>	Health Information System
<b>ISHP</b>	Integrated School Health Programme
<b>KMC</b>	Kangaroo Mother Care
<b>KZN</b>	KwaZulu-Natal
<b>MCWH</b>	Maternal, Child and Women's Health
<b>MNCWH&amp;N</b>	Maternal Neonatal, Child and Women's Health and Nutrition
<b>MDG</b>	Millennium Development Goals
<b>MMR</b>	Maternal Mortality Review
<b>MTT</b>	Ministerial Task Team
<b>NaPeMMCo</b>	National Perinatal Mortality and Morbidity Committee
<b>NCCEMD</b>	National Committee for the Confidential Enquiry into Maternal Deaths
<b>NDoH</b>	National Department of Health
<b>PDSA</b>	Plan – Do – Study - Act Model
<b>PHC</b>	Primary Health Care
<b>PIH</b>	Pregnancy Induced Hypertension
<b>PMR</b>	Perinatal Mortality Review
<b>PPH</b>	Post-partum Haemorrhage
<b>PPIP</b>	The Perinatal Problem Identification Programme
<b>SOP</b>	Standard Operating Procedures
<b>UN</b>	United Nations
<b>WBOT</b>	Ward-Based Outreach Team

## 1. Introduction

In 2010, South Africa's report to the United Nations General Assembly on progress towards reaching the Millennium Development Goals (MDGs) by 30 September 2015 was not optimistic<sup>1</sup>. In particular the report stated that MDGs 4 and 5, to reduce child and maternal mortality respectively, were unlikely to be achieved.

South Africa has since taken several bold steps in order to improve maternal and child health outcomes. These include:

- 1) A remodelling of the primary health care (PHC) system through three interventions known as the "three streams of PHC". These three streams comprise: i) ward-based PHC outreach teams (WBOTs), ii) integrated school health teams, and iii) district clinical specialist teams (DCSTs). The DCST stream was launched in September 2012, guided by a report from the Ministerial Task Team<sup>2</sup> (MTT).
- 2) The South African launch of the Campaign on the Accelerated Reduction of Maternal Mortality in Africa (CARMMA)<sup>3</sup> in May 2012. The main aim of CARMMA is to accelerate the implementation of key strategies that will reduce maternal, newborn and child mortality in the country.<sup>4</sup> The CARMMA campaign was launched together with the Maternal, Newborn, Child and Women's Health and Nutrition (MNCWH&N) strategy 2012-2016. A dashboard of indicators was developed to monitor implementation and progress on CARMMA and MNCWH&N (see Annexure 1a).
- 3) Identifying the major causes of mortality in pregnant women, newborns and children under five years of age, including recommendations on ways to address these causes by the three Ministerial mortality committees (see Annexure 2a-c).
- 4) The commissioning of the countdown strategy by the NDoH, based on the Ministerial Mortality Committees<sup>5</sup> recommendations of the causes of maternal and child mortality. The Priority Cost Effective Lessons for Systems Strengthening – South Africa (PRICELESS- SA) used the LiST<sup>6</sup> tool to model the additional mother's, newborn's and children's lives saved if the Ministerial Mortality Committees' recommended interventions were implemented to scale (see Annexure 2d).

<sup>1</sup> Millennium Development Goals South Africa Country Report 2010, UNDP

<sup>2</sup> District Clinical Specialist Teams in South Africa, Ministerial Task Team Report to the Honourable Minister of Health, Dr Aaron Motsoaledi, 2012

<sup>3</sup> South Africa's National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa (CARMMA), 2012, NDoH

<sup>4</sup> Maternal, Newborns, Child and Women's Health and Nutrition (MNCWH&N) Strategic Framework 2012-2016

<sup>5</sup> National Committee for the Confidential Enquiry into Maternal Deaths (NCCEMD), the National Perinatal Mortality and Morbidity Committee (NaPeMMCo) and the Committee on Morbidity and Mortality in Children under 5 Years (CoMMiC)

<sup>6</sup> <http://www.futuresinstitute.org/spectrum.aspx>

## 2. Purpose of the handbook

The DCSTs are made up of a number of clinical specialists who provide clinical mentorship and guidance to health facilities to improve their ability to provide effective maternal, neonatal and child health services. By the end of 2013, DCSTs had been established in all health districts, although most districts do not have complete teams<sup>7</sup>.

Over the past year the DCSTs have found different ways of working, gaining much experience on various means to overcome the challenges they are trying to address in strengthening the health system. **This handbook aims to use the lessons learned from the past year to provide further guidance to the DCSTs as roll out of the programme continues.**

The handbook will also serve as a useful reference for provincial specialists; provincial DCST coordinators; Maternal, Newborn, Child, and Women’s Health (MNCWH) managers at provincial and district level; and broader district management teams (DMTs). The handbook can also be used as a quick induction tool for new members of the DCST who join the team after the completion of the formal induction and training.

## 3. Induction and orientation of the DCSTs

The DCSTs are recruited to a district in order to provide clinical guidance to existing staff in health facilities. DCSTs are expected to dedicate a maximum of 70% of their time to clinical governance, 20% on clinical work and 10% on teaching and research. The DCSTs are therefore expected to possess basic competencies that will enable them to provide leadership in clinical governance.

With support from the National Department of Health, the initial DCST recruits across eight provinces (excluding the Western Cape) participated in a yearlong modular induction and orientation training to develop their management and leadership skills.

The DCST induction and orientation programme aimed to build the capacity of DCST members to work as effective teams; understand the building blocks of the health system; work with health information to effect change for improvement; and understand the theory and practice of clinical governance, clinical leadership and clinical mentorship.

Table 1 summarises the five modular trainings that DCSTs underwent in order to strengthen their capacity to support the strengthening of clinical governance, as well as links to the training materials, tools and resources.

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<sup>7</sup> A complete DCST is comprised of an obstetrician, a paediatrician, a family physician, an anaesthetist, an advanced midwife, an advanced paediatric nurse and a PHC nurse.

Table 1: Strengthening the clinical competencies of the DCSTs

Training Objective	Motivation	Expected Output	Resources
<p><b>Module 2a</b> Conduct district wide and institutional level situational analyses of the status of MNCWH service delivery</p>	<p>The situational analysis provides a comprehensive view of the MNCH environment. It enables focused action and serves as a proactive point of departure for interventions over and above the data received from indicators. The situational analyses include:</p> <ul style="list-style-type: none"> <li>• An assessment of the implementation of the CARMMA components.</li> <li>• A baseline on the implementation of recommendations from all ministerial reports, including equipment needs for all settings.</li> <li>• A baseline on obstetric and neonatal signal functions for all birthing facilities.</li> <li>• An analysis of the use of current or self-designed tools.</li> </ul>	<p>Baseline reports from all situational analyses undertaken detailing the gaps identified.</p> <p>Situational analyses should be completed annually.</p>	<p><a href="#">Training materials</a></p> <p><a href="#">Additional resources</a></p> <p>Available at: <a href="http://www.rmchsa.org/dcst-toolkit-training-modules-1-and-2/">http://www.rmchsa.org/dcst-toolkit-training-modules-1-and-2/</a></p>
<p><b>Module 2b</b> Conduct a root cause analysis</p> <p><b>Use evidence and data to prioritise problems for resolution</b></p>	<p>A root cause analysis identifies the root causes of challenges within the health facility or system and not merely the symptoms of problems. More targeted interventions can therefore be developed.</p> <ul style="list-style-type: none"> <li>• A root cause analysis can be done for perinatal audits and inquiry into adverse events, as well as for general programmatic and clinical problems.</li> </ul> <p>Evidence-based prioritisation makes use of data to inform decisions on required interventions. It is an economically sound and just approach to dealing with competing demands in low resourced areas.</p> <ul style="list-style-type: none"> <li>• Implementation of low cost, high impact interventions should receive priority.</li> <li>• Implementation of recommendations of the ministerial committees should ideally receive priority as these are already evidence based.</li> </ul>	<p>A mapped out root cause analysis using either a fishbone diagram or the 5 WHYS strategy.</p> <p>A detailed report of the key problems prioritised for resolution based on the evidence.</p> <p>Documentation of the prioritisation process.</p>	<p><a href="#">Training materials</a></p> <p><a href="#">Additional resources</a></p> <p>Available at: <a href="http://www.rmchsa.org/dcst-toolkit-training-module-2b/">http://www.rmchsa.org/dcst-toolkit-training-module-2b/</a></p>



<p><b>Module 3</b>  <b>Ensure effective clinical governance through quality improvement processes - PDSA, clinical auditing, process mapping and management of health risks</b></p>	<p>The effectiveness of clinical activities needs to be analysed in order to ensure that interventions will be successful. This effectiveness can be measured through the use of clinical audits, process mapping and the plan, do, study, act (PDSA) models.</p> <p>Risk management is crucial to minimise the potential risks that contribute to maternal and child morbidity and mortality. This is done through:</p> <ul style="list-style-type: none"> <li>• Conducting risk management meetings.</li> <li>• Following the processes for reporting and auditing adverse events and redressing them.</li> <li>• Planning and conducting the requisite essential obstetric services training (EOST).</li> </ul>	<p>Report on the quality improvement process and findings.</p> <p>Report on the audit process and findings using the recommended audit reporting framework.</p> <p>A clinical governance strategy.</p> <p>Meeting agenda and minutes with action points. Evidence of follow-up on action points.</p> <p>Schedule for EOST.</p>	<p><a href="#">Training materials</a></p> <p><a href="#">Additional resources</a></p> <p>Available at:  <a href="http://www.rmchsa.org/dcst-toolkit-training-module-3/">http://www.rmchsa.org/dcst-toolkit-training-module-3/</a></p>
<p><b>Module 4</b>  <b>Provide clinical leadership</b></p> <p><b>Support the strengthening of management and internal systems</b></p>	<p>Effective clinical leadership addresses the structures, systems and processes that assure the quality, accountability and proper management of a facilities operation and delivery of service.</p> <p>Strong internal systems and effective management ensure the successful running of facilities, contributing to the reduction of maternal and child mortality. Key aspects include:</p> <ul style="list-style-type: none"> <li>• Advocating for family centred care at all levels of care.</li> <li>• Advocating for the policy revision and implementation.</li> <li>• Ensuring the availability of supplies and equipment in facilities.</li> </ul>	<p>Mentorship plans for each clinical session provided in the facility.</p> <p>Support MNCWH managers to:</p> <ul style="list-style-type: none"> <li>• Document policy revisions and implementation plans.</li> <li>• Develop systems for tracking and maintaining equipment and supplies.</li> </ul>	<p><a href="#">Training materials</a></p> <p><a href="#">Additional resources</a></p> <p>Available at:  <a href="http://www.rmchsa.org/dcst-toolkit-training-module-4/">http://www.rmchsa.org/dcst-toolkit-training-module-4/</a></p>
<p><b>Module 5</b>  <b>Support the integration of the 3 streams of PHC Re- engineering</b></p>	<p>PHC Re-engineering provides a three pronged approach to the reduction of maternal and child mortalities. Ensuring an integrated implementation of the three streams is critical to the success of the model.</p>	<p>Support MNCWH managers to develop action plans that show integrated interventions across the three streams of PHC re-engineering.</p>	<p><a href="#">Training materials</a></p> <p><a href="#">Additional resources</a></p> <p>Available at:  <a href="http://www.rmchsa.org/dcst-toolkit-training-module-5/">http://www.rmchsa.org/dcst-toolkit-training-module-5/</a></p>

#### 4. District level operations and collaboration

The DCSTs alone will not be able to achieve the desired outcomes of reducing maternal and child mortality. A collaborative effort with other role players, including the provincial specialists, the district management team and the MCH unit is essential to achieve the intended targets for the country.

The DCSTs are expected to work closely with the district management teams. As noted below, provincial specialists in provinces should provide technical support to the DCSTs where they have been appointed. However, for administrative support and direction, the district manager is the focal person.

DCSTs should have office space located either at the regional hospital, the district hospital or the district management office in the district. It is not expected that the members of the DCST will spend their time attending management meetings, except to report on their own functioning. Their primary role is to support front line health workers to improve their clinical practice through their role in improving clinical governance. In order for the members of the DCST to maintain and strengthen their own clinical skills, it is expected that members of the team perform clinical work. In typical circumstances, the members of the DCSTs are expected to spend about 70% of their time on clinical governance work, 20% on clinical work and 10% on teaching and research.

In instances where there are no specialists in the regional hospital then the DCST may increase their clinical work up to a maximum of 30%. This clinical work will enable members of the team to have affiliations with schools of health sciences at supporting universities.

##### 4.1 Role of District Executive Managers (DEM)

The MTT recommendation identified the need for the DCSTs to report to the district executive manager in order to:

- Ensure that the activities of the DCSTs are included in the District health plans (DHP).
- Manage the performance of the DCST as first line manager. Provincial specialists will act as second line managers of the DCST.
- Make provision for the budgeting processes for the DCST activities.
- Verify and account for the reports generated by the DCST before forwarding them to the provincial and national health departments.
- Monitor the adherence of the DCST to the national core standards.
- Ensure that facility specific improvement plans are implemented.

## 4.2 Role of Provincial Specialists and Provincial Maternal and Child Health (MCH) Units

In addition to the establishment of the DCSTs, the National Health Council agreed that senior specialists in obstetrics and paediatrics be appointed in the provincial health office. These specialists provide technical support to the DCSTs.

In contrast, the key roles of the MCH programme managers are to provide routine management of the MCH programmes, including ensuring policies are in place and planning and monitoring and evaluation. However, there are areas of overlap between the roles; for example, in programme coordination and monitoring and evaluation.

The broad roles of the Provincial Specialists and the MCH units are reflected in table 2 below.

**Table 2: Roles of provincial specialists and MCH managers**

Provincial Specialists	Manager: MCH
<b>Clinical Governance</b>	<b>Policy, Planning &amp; Monitoring</b>
Mentorship of DCSTs Development of clinical guidelines	Develop provincial programme policy and planning
Surveillance, review of clinical audits	Translate recommendation from the provincial specialists into operational activities
Build the capacity of DCSTs in all areas	Set targets and budgets
Represent DCSTs at provincial and national level on clinical governance issues	Represent DCSTs at national level on system related issues
Review data generated at the districts through different systems such as the PPIP, Child PPIP, District Health Information System (DHIS), Mortality Review Meetings	Monitor routine MCH information and prioritise interventions based on data

## 4.3 Role of Provincial Specialists and Coordinators in providing on-going clinical supportive supervision and mentorship to DCSTs

Provincial Specialists and Provincial MCWH Coordinators have a responsibility to provide on-going clinical supportive supervision and mentorship to the DCSTs by:

- supporting and mentoring existing DCST members,
- organising induction and orientation training for new DCST members,
- identifying and addressing skills gaps amongst DCSTs, and
- ensuring prompt implementation of clinical updates.

In the absence of the modular workshops where best practices and provincial challenges were shared, provincial quarterly DCST forums should be established with clearly defined objectives. These forums should be used to promote information sharing and sustainability of DCST effectiveness.

#### **4.4 Role of the DCSTs**

The Ministerial Task Team proposed that whilst individuals in the team have a primary responsibility with regards to their discipline, they should also act collectively as a team.

In each district the DCSTs will be responsible for the following areas of work, which will form the basis of annual performance assessments:

- Improving the quality of clinical services,
- Providing clinical training and monitoring and evaluation,
- Supporting district level organisational activities,
- Supporting health systems and logistics,
- Ensuring collaboration, communication and reporting, and
- Teaching and research activities.

These activities form part of the broader principles of clinical governance.

### **5. Clinical governance**

The following section discusses the principles and practice of clinical governance as it applies to the role of the DCST. Clinical governance is defined as the clinical leadership and accountability, as well as the organisation's culture, systems and working practices, that ensure that quality assurance, quality improvement and patient safety are central components of all activities of the health care organisation.

#### **5.1 Implementation of clinical governance by DCSTs**

The four pillars of clinical governance provide the framework for the improvement of quality of care of health services to the community as outlined in table 3.

**Table 3: Four pillars of clinical governance**

PILLAR	COMPONENTS	SUB COMPONENTS	ACTIONS / ACTIVITIES
<b>PILLAR ONE: CLINICAL EFFECTIVENESS</b>			
<b>Clinical effectiveness involves the 6Rs</b>  right care right patient right time right clinician right skills right way	Clinical standards	National Core Standards.	Review of clinical records.
	Clinical audits	Guidelines and policies that are aligned to the maternity guidelines published by the NDoH.	Ensure the availability of the skilled health worker at the point of service delivery.
	Clinical indicators <sup>8</sup>	Clearly displayed protocols. Specific targets (national/ provincial/district). Develop Standard Operating Procedures (SoPs). Develop or adapt already existing early warning charts.	Promote accessibility of higher level of care through the establishment of effective patient transport systems.  Promote the use of early warning charts in order to facilitate relevant and prompt referral to the next level of care.
<b>PILLAR TWO: CLINICAL RISK MANAGEMENT</b>			
<b>Clinical risk management</b>	Risk to patient	Incident and adverse event reporting, monitoring and trend analysis.	Identify risks.
	Risk to health care provider	Event reporting, monitoring and clinical investigation.	Assess the credentials of staff qualifications and quality of training.
	Risk to organisation	Risk profile analysis. Maternal mortality review meetings. Perinatal mortality review meetings.	Analyse incidents – critical events, complaints, reviews.  Develop plan, do, study, act (PDSA) cycle from the morbidity and mortality meetings.  Recommend improvement plans to prevent the recurrence of deaths due to the avoidable factors.

<sup>8</sup> Facility mortality indicators and a key to target generation are shown in Annexure 3A and 3B, respectively.

<b>PILLAR THREE: PROFESSIONAL DEVELOPMENT AND MANAGEMENT</b>			
<b>Professional development and management</b>	Continuing professional development	Regular skills audits. Human resource policies and guidelines.	In service training. On site staff mentoring.
	Competency standards	Skilled health care workers.  Recommend changes based on evidence-based practice.	Identify opportunities and needs for formal education.  Monitor the coverage on mandatory trainings and arrange appropriate trainings. Motivate and coordinate operational research within the facilities.
<b>PILLAR FOUR: CREATE DEMAND AND IMPROVE ACCOUNTABILITY FOR MCWH</b>			
<b>Integration of demand-side perspectives to assess supply-side interventions and patient behaviour.</b>	Evaluation of services through satisfaction surveys	Identify community based factors that contribute to the under or over utilisation of services.	Liaise with WBOTS on health preventative and promotional activities.
	Service user participation		Liaise with health communication officers and health promoters on the development of health messages to the community.

## 5.2 Application of the principles of clinical governance by the DCST

To illustrate how the principles of clinical governance can be applied in practice, table 4 below shows the example of a maternal death arising from post-partum haemorrhage (PPH), the factors contributing to the cause of death, and what actions the DCST could take to mitigate these risks.

**Table 4: Applying the principles of clinical governance to mitigating risks for maternal death due to post-partum haemorrhage (PPH)**

### PILLAR ONE: CLINICAL PERFORMANCE AND EVALUATION

#### Investigations by DCST

##### Clinical standards

Is there a clinical practice guideline on the management of PPH?  
 Is the guideline still relevant to the current situation?  
 Do all clinicians have access to the guidelines?

##### Clinical audits

Was the patient examined, monitored and managed according to the existing clinical guideline?

##### Clinical indicators

Were there any reported cases of death due to PPH in this unit before?

#### Action by DCST

##### Clinical standards

Provide policy guidelines.  
 Review the existing guidelines based on current evidence.  
 Communicate the details of the policy guidelines.

##### Clinical audits

Review records for compliance to the guidelines.  
 Identify the possible avoidable factors.

##### Clinical indicators

Document the incident according to the existing tools (death notification forms, PPIP, etc.).

**PILLAR TWO: CLINICAL RISK**

**Investigations by DCST**

**Risk related to the patients**

Are there individual factors that contributed to the death?

Are there community practice factors that contributed to the cause of death?

Explore the environmental factors that may hinder the development of an effective treatment plan.

**Risk related to health care providers**

Was the patient managed by the skilled health personnel?

Did the health practitioner demonstrate caring in the process of rendering care to the patient?

**Risk related to the organisation**

Were the systems in place to manage the patient effectively?

**Action by DCST**

**Risk related to the patients**

Establish a high risk clinic for early identification of high risk mothers such as <18years, previous history of PIH, etc.

Teach health professionals to identify high risk pregnancies early.

**Risk related to health care providers**

Identify the skills, knowledge and competency of the health professionals who managed the patient.

**Risk related to the organisation**

Check the functionality of the equipment.

Review the service delivery platform (clinic, community health centre (CHC), district hospital, regional hospital).

Assess the emergency care provided to the patient.



### PILLAR THREE: PROFESSIONAL DEVELOPMENT AND MANAGEMENT

#### Investigations by DCST

##### Continuing professional development

What is the competency level of the health workers who attended to the patient?

##### Competency standards

What is the level of intervention that is required?

#### Action by DCST

##### Continuing professional development

Identify the skills gap in the management of the patient.

##### Competency standards

Determine the type of intervention required: i.e. mentoring, in-service training or formal training, and develop an action plan and time frames to achieve the required outcomes.

### PILLAR FOUR: CREATE DEMAND AND IMPROVE ACCOUNTABILITY FOR MCWH

#### Investigations by DCST

##### Consumer liaison

Was the patient prohibited from accessing health services due to community pressures, for example religious or cultural pressures?

##### Consumer participation

Are there any cultural or community factors that hindered the patient's use of the health services?

#### Action by DCST

##### Consumer liaison

Collaborate with the Integrated School Health Teams, WBOTs and educational awareness initiatives within the community.

##### Consumer participation

Participate in community mobilisation activities such as community dialogues, imbizos, clinic committees, etc.

### 5.3 Case studies to illustrate clinical governance by DCSTs from selected provinces

#### Example 1: KwaZulu-Natal DCST: “Solution focused approach”

KwaZulu-Natal (KZN) has adopted a DCST model that maximises functionality even though dyads are not complete. Efficiency in implementation of clinical governance roles is achieved with an emphasis on teamwork.

While it may be too early to expect major changes in health outcomes directly resulting from DCST activities, the DCST induction and orientation programme has encouraged a change in approach to improving healthcare. Early successes in outcomes will require a change in approach from “problem focused” to “solution focused” (Table 5).

Achievements of outcomes are best achieved through interaction with leadership within the district and directly with front line practitioners at the point of care.

**Table 5: KZN DCSTs improved approach to problem solving**

Previous Conventional Approach	Improved Approach
Identify problems	Identify problems and devise specific practical and achievable interventions
Try to achieve too much with too little	Each intervention may be just a small step
“Complain about problems”	Collaboratively find solutions
Share experiences, “talk shop”	Devise practical implementation plans
Have objectives without a clear action plan for practical interventions	Develop data driven, practical, quality improvement action plans

Some examples of small early successes by the KZN DCST are shown in the table 6 below:

**Table 6: Small early successes achieved by the KZN DCST**

Activities	Improvements
Conduct maternal and perinatal mortality review meetings	<ul style="list-style-type: none"> <li>▪ Meetings established and led by DCSTs and MCH manager.</li> <li>▪ Format of meeting has improved according to the guidelines developed in the DCST orientation and induction training programme.</li> <li>▪ Data presentations are more concise, focused and analytical.</li> <li>▪ Action plans are being set.</li> </ul>
Strengthen health care worker skills	<ul style="list-style-type: none"> <li>▪ The DCST facilitated and enabled surgical training of district hospital doctors in caesarean section by the regional obstetrician by:               <ul style="list-style-type: none"> <li>- Conducting a skills audit of clinicians in district hospitals</li> <li>- Identifying the skills gap</li> <li>- Engaging the regional obstetrician to train the district based doctors</li> <li>- Creating a training rotation roster</li> <li>- Obtaining district funding for accommodation and transport</li> </ul> </li> </ul>
Implement key CARMMA components	<ul style="list-style-type: none"> <li>▪ Advocated for waiting mothers’ lodges at district management team meetings.</li> <li>▪ Met with hospital management to discuss the establishment of the waiting lodges.</li> <li>▪ Conducted facility visits to identify potential sites for the waiting lodges.</li> <li>▪ Established three functional waiting lodges in the district hospital and one in the CHC.</li> </ul>

Reduce maternal deaths from post-partum haemorrhage following caesarean section	<ul style="list-style-type: none"> <li>▪ The DCST linked district hospitals to regional hospitals for direct supervision by the regional obstetrician (outreach).</li> <li>▪ Set up weekly obstetric visits to supervise clinical care of district hospital doctors.</li> <li>▪ Established communication between the regional and district hospital to discuss all maternal deaths.</li> <li>▪ No maternal mortality due to PPH has been recorded since the commencement of this initiative.</li> </ul>
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#### 5.4 Example 2: Tshwane District, Gauteng DCST: “Strength as a unit”

Tshwane district, with the privilege of having the full DCST team complement, maximises the potential of what could be achieved through team work. While each member of the team has an area of speciality, the coordination of activities assists the team to identify the key intervention strategies along the continuum of health care.

**Table 7: Strategies of Tshwane DCST to improve functionality**

Strategy	Activities
Coordination of activities	Team members identified a team leader who is able to coordinate the activities of the team, provide a leadership role and facilitate the group cohesion.
Effective and efficient strategic communication	<ul style="list-style-type: none"> <li>▪ The team makes use of both formal and informal means of communication such as using a “whatsapp group chat” which assists in keeping all the team members informed about group activities, even if they are not able to access emails.</li> <li>▪ The team makes use of different types of meetings that are focused around a pre-planned agenda, such as: <ul style="list-style-type: none"> <li>- weekly one hour meetings, one day monthly strategic meetings and half day progress review meetings.</li> <li>- adhoc meetings, through use of existing social media communication channels such as Facebook.</li> </ul> </li> </ul>
Flexibility and accountability	The team accommodates unavoidable changes in the programme, coordinated by the team leader. For example addressing reports of a maternal death or identifying potential health risks, such as lack of service accessibility, etc.
Marketing of the services they are rendering	The team responds to collaboration opportunities with stakeholders such as MCWH managers, Integrated School Health Teams and WBOTS.
Be a change agent	The team participates in the process of implementing a change rather than merely giving a suggestion. For example if handing over a report is a critical intervention strategy, team members will present themselves at that session.

Some examples of small early successes by the Tshwane DCST are shown in the table 8 below.

**Table 8: Examples of process achievements by Tshwane DCST**

Focus areas	Activities	Improvements
Clinical effectiveness: Effective use of the clinical indicators	Improved access to MCWH services for the community by advocating that every district hospital provides ANC services daily.	There is a marked improvement in the early booking rate for ANC.  In 2012 early booking was 13.9 % for Soshanguve, which has increased to 39% at the end of 2 <sup>nd</sup> quarter of 2013.
Compliance with the clinical standards	Assisted every district hospital to establish Kangaroo Mother Care (KMC) units.	Launched a KMC workshop in Kalafong Hospital, improved the functionality of the KMC unit in Tshwane Hospital, and supported other hospitals to develop plans on KMC that will be implemented in the next financial year, due to capital budget implications.
Clinical audits	Conducted partogram or ANC card audits and committed hospitals to implement activities that will assist them to increase their audit scores by the next assessments.	Improved the general audit score from 4/10 during the baseline in 2012 to 6/10 by August 2013.
Clinical risk management	Monitored perinatal and maternal mortality reviews (PMR / MMR) in order to assist facilities to develop action plans.	Every district hospital now conducts monthly reviews and have developed action plans to address the findings.
Continuing professional development	Developed a training programme according to DCST specialities.	Four ESMOE trainings were held by the end of December 2013.
Service users' liaison	Raised awareness through community radio about the importance of early antenatal bookings and the use of contraceptives within the community.	The DCSTs have made themselves available as alternative sources of information for the community.
Service users' liaison	Coordinated a child fun day to encourage mothers to bring their children for HIV Counselling and Testing (HCT).	Initiated all babies who attended the fun day that required treatment on antiretroviral treatment (ARVs).

Several other case studies from Tshwane District, as shown in table 9 below, illustrate what DCSTs can achieve, even in a short time.

**Table 9: Examples of other case studies from the Tshwane District**

Focus area	Activities	Lessons learned
Clinical risk management	Supported the establishment of a high risk clinic for pregnant women since the review of the PMR report indicated late identification of risk factors because of the lack of a high risk clinic for pregnant women.	Conducting the PMR for compliance with standards without developing an action plan based on problems identified will not improve the quality of care.
Clinical risk management	Bolstered the correct understanding and presentation of data in PMR/ MMR sessions.  Senior clinical managers are now taking responsibility for clinical plans to protect pregnant women.	Lack of clinical accountability from the people directly involved with care giving will affect quality improvement.
Clinical effectiveness	Reviewed the patient flow process to identify the root causes for children not being initiated on ART at the right time.	Patients do come to facilities for health care but the systems issues (e.g. poor patient flow) deny them the opportunity to access services on time.
Clinical effectiveness	Regular clinical audits involving facility staff members resulted in the identification of the need to establish a KMC unit.	Being able to identify the link between the absence of services and the high neonatal mortality rate motivates staff to implement changes in a facility.

**An example of what a well-functioning district health team can achieve is illustrated by the case study of the reduction of maternal and neonatal mortality in the Free State province. The Free State had one of the highest rates of maternal mortality in 2011. Through concentrating on the provision of Caesarean sections in facilities with the necessary skilled personnel and equipment, and the use of dedicated inter-facility transport, the maternal mortality ratio was decreased by 43% and the neonatal mortality by 11% in one year.**

## 6. Monitoring and evaluation of DCST activities

The effective planning of DCST activities is based on coordinated work plans which are developed within the dyads and then integrated into the comprehensive district MCWH plans.

### 6.1 Developing work plans

In order to coordinate activities, DCSTs are required to develop monthly work plans and share these work plans with district managers. The purpose of sharing the work plan is to ensure that there is no duplication of efforts and that there is proper allocation of resources to ensure the implementation of the proposed plans.

Several formats for the development of work plans are available depending on the activities planned for the district. Table 10 shows the components of a standardised DCST work plan. This does not exclude other relevant activities performed in the districts.

**Table 10: Key components of a DCST work plan**

Objectives	Activities
Conduct a situational analysis and develop plans to address major causes of MNCWH morbidity and mortality.	Review annual district health plan (DHP) MNCWH interventions (2012/13). Make inputs into DHP 2013/14 based on a full situational analysis.
DCST to function as a team.	Schedule DCST meetings. Ensure minutes are taken that include actions and assign responsibility.
Support visits to health facilities.	Schedule regular support visits to district hospitals, CHCs and clinics to review MNCWH activities.
Participate in district management meetings and review meetings.	Attend and provide input at DMT meetings. Attend review meetings (e.g. maternal and perinatal mortality).
Conduct ESMOE training.	Help to identify the need for, schedule and participate in ESMOE training.
Training (in-service, preferably on-site)	Help to identify the need for and schedule training sessions in key areas related to improving quality of MNCWH care.
Clinical work (no more than 30% of time)	Carry out clinical work in regional or district hospitals.
Formal teaching and research – not related to in-service training (no more than 10% of time)	Identify and participate in teaching and research activities.

After the work plan has been developed and shared with the district managers, it can be further developed into monthly calendar allocations for each member of the DCST. The allocation of activities to different members will allow for a coordinated effort to target a particular challenge that has been identified during the situational analysis. For example, if there are an increasing number of mothers with pregnancy induced hypertension (PIH) within the district, the DCSTs' coordinated activities could be allocated in a manner shown in table 11 below in order to deal with the problem along the continuum of care.

**Table 11: Example of the allocation of activities amongst the DCST team members**

Team member	Activity
PHC nurse and the family physician	Schedule and conduct a review of ANC cards in order to identify other health factors that may predispose the women to hypertension.
Advanced midwife and obstetrician	Schedule and conduct ESMOE training and monitor that each facility is conducting the fire drills in pre-eclampsia.
Anaesthetist	Schedule and conduct in-service training for all the doctors who are performing caesarean sections on how to stabilise a women with pre-eclampsia.
Paediatrician and paediatric nurse	Schedule and conduct in-service training for midwives and doctors on the routine care of newborns and helping babies breathe (HBB) techniques.

Following the implementation of the activities as planned in the work plan, the team will report back to the team leader on the progress made with regards to the management of women with pregnancy induced hypertension.

The DCSTs will then present the progress made on each activity, the challenges encountered during the implementation of such activities and the plan to overcome the challenges at the monthly DMT Review meetings. Depending on the activity, the report may indicate the early changes observed or the quality improvement plan that was developed in order to address the challenge.

### **6.2 Reporting schedule for the DCSTs**

A robust reporting system is necessary to ensure DCST activities are effective and are improving MNCWH services in order to achieve targets and improve health outcomes.

This system should encourage effective communication by all key role players, including an active feedback loop through all levels of care. It should also support the timeous submission of reports and the sharing of lessons learned (including failures) to the next level of accountability.

Table 12 below provides guidance on the components of an effective reporting template. An example of a DCST quarterly report is also available in Annexure 4.

**Table 12: Reporting system to monitor DCST functionality**

Level of reporting	Who	What	When	Report submitted to
District	DCST (in monthly district forums)	Progress report of activities responding to clinical governance issues	Monthly by 7 <sup>th</sup> of each month	District Manager
Province	District Manager	DCST activity reports  Achievements (“early successes”)  Recruitment status	Monthly by 15 <sup>th</sup> of each month	Provincial specialist and Provincial MCWH coordinator
Province	Provincial specialist and Provincial MCWH coordinator	Summary by District of key achievements  Activity summary according to work plans	Monthly by 20 <sup>th</sup> of each month	National DCST coordinator
Provincial quarterly review meetings	Provincial specialist and Provincial MCWH coordinator host quarterly review meetings	DCST review meeting (integrated with the MCWH programme review), presented in the provincial health council	Quarterly	Quarterly review meeting reports submitted to National DCST coordinator

### 6.3 Evaluation of the effectiveness of the DCST activities

The monitoring and the evaluation framework for the effectiveness of the DCST should relate to the Strategic Plan for Maternal, Neonatal, Child and Women’s Health and Nutrition (MNCWH&N) in South Africa 2012-2016 (annexure 5). The activities planned by the DCSTs must be informed by the key objectives of the MNCWH programme.

The DCST must be able to identify the inputs and processes to be followed in the implementation of activities. Each activity should focus on yielding the output that will build towards the reduction in maternal and child mortality rates. The responsibilities of the DCST are to further follow up on the outputs through the mentoring process that will lead to the change in outcome indicators of the facilities.

Table 13 below provides guidance for the alignment of the activities, inputs, processes, outputs and outcome indicators.



**Table 13: Example of evaluating the effectiveness of the DCST activities**

Objective	Activity	Inputs	Processes	Outputs	Outcomes
<b>Effective implementation of BANC in primary care facilities</b>	Education and training of PHC providers	BANC guidelines, check lists, worksheets, training materials	Onsite training for 5 hours with actual pregnant women	Number of professional nurses trained in BANC in PHC facilities	On clinical audit, 95% of pregnant women are managed according to BANC guidelines
<b>Identify gaps in District Health services</b>	Situational analysis	Facility review forms  Transport to the facilities	Visit the district health facilities  Interview 5 patients per facility  Collect HIS information from that facility  Identify the human resource available in that facility	# of health facilities visited  # of patients interviewed  Current status of the facility indicators  # of skilled personnel in the facility	QIP developed per facility  % of patient satisfaction level  New targets set for the facility  Training plan developed for the facility
<b>Effective implementation of ESMOE</b>	Clinical outreach visits	ESMOE guidelines	Conduct fire drills in the facility every month	# of fire drills conducted per month	# of obstetrical emergencies identified and managed effectively

### Conclusion

In the year since its launch, the DCST programme has shown that it can play a crucial role in improving systems at the heart of primary health care. DCSTs across the provinces are successfully following different models, adapting what they learn from the trainings and induction and orientation meetings to the realities on the ground.

In order to extend their reach and impact, DCSTs should strive towards continuously strengthening their teams, improving their work plans and monitoring systems, and building and strengthening collaborations with key stakeholders in the healthcare system, government and communities.

Through learning from each other by sharing lessons learned and good practices, the DCST programme could potentially sustain itself, build the primary health care system and save the lives of countless South African mothers and children.

## Annexures

## Annexure 1: MNCHWH, CARMMA and MDG Countdown Indicators

South Africa										
DHIS Indicator	Category	Performance 2012/2013	Target 2013/2014					Performance 2013/2014	Robot	Trendline
				Qtr1	Qtr2	Qtr3	Qtr4			
Couple year protection rate (annualised)	CARMMA	32.7	36.0	34.7	38.0	38.7	37.6	37.3		
Antenatal 1st visit before 20 weeks rate	MNCWH/CARMMA	44.0	60.0	47.6	51.5	50.8	50.0	50.0		
Antenatal client initiated on ART rate	MNCWH/Countdown	81.6	90.0	69.6	74.2	80.6	82.2	76.7		
Delivery in facility rate (annualised)	MNCWH/CARMMA	81.2	95.0	81.7	84.1	78.0	84.2	82.0		
Delivery in facility under 18 years rate	CARMMA	7.7	6.9	7.9	8.2	7.6	7.6	7.8		
Maternal mortality in facility ratio (annualised)	Countdown	138.6	130.0	142.5	127.4	135.2	127.7	133.1		
Still birth in facility rate	MNCWH/Countdown	21.8	10.0	21.6	20.2	22.1	21.9	21.4		
Live birth under 2500g in facility rate	MNCWH/CARMMA	13.5	12.0	13.5	12.9	13.6	13.7	13.4		
Neonatal mortality in facility rate (annualised)	Countdown	10.1	11.0	10.4	9.5	10.4	10.9	10.3		
Mother postnatal visit within 6 days rate	MNCWH/CARMMA	65.1	79.0	71.2	73.5	73.4	73.2	72.8		
Infant 1st PCR test around 6 weeks uptake rate	MNCWH	101.4	100.0	101.1	106.5	102.0	100.4	102.5		
Infant 1st PCR test positive around 6 weeks rate	MNCWH	2.4	2.5	2.2	2.1	1.7	2.0	2.0		
Infant exclusively breastfed at HepB 3rd dose rate <sup>2</sup>	MNCWH/CARMMA	15.4	32.0	32.6	39.2	43.9	42.6	39.5		
DTaP-IPV/Hib 3 - Measles 1st dose drop-out rate	MNCWH	-8.6	10.0	3.3	12.9	8.4	-0.4	6.3		
Immunisation coverage under 1 year (annualised)	MNCWH	83.6	90.0	84.0	84.9	81.2	87.6	84.4		
Measles 2nd dose coverage (annualised)	MNCWH/CARMMA	74.9	90.0	73.1	76.1	72.1	78.7	75.0		
Inpatient death under 1 year rate	MNCWH	5.8	5.2	7.0	6.8	7.1	7.3	7.1		
Child under 5 years diarrhoea with dehydration incidence (annualised)	Countdown	11.2	5.2	14.4	11.3	11.5	19.1	14.1		
Child under 5 years diarrhoea case fatality rate	MNCWH/Countdown	4.3	4.0	4.2	3.6	3.6	3.9	3.9		
Child under 5 years pneumonia incidence (annualised)	MNCWH/Countdown	62.5	56.3	60.6	55.9	44.6	51.8	53.2		
Child under 5 years pneumonia case fatality rate	Countdown	3.8	3.4	3.6	3.9	3.7	3.1	3.5		
Child under 5 years severe acute malnutrition incidence (annualised)	Countdown	4.1	5.0	4.2	4.0	3.8	6.0	4.5		
Child under 5 years food supplementation coverage (annualised) <sup>2</sup>	Countdown	0.0	2.0	1.4	1.6	1.5	1.7	1.5		
Child under 5 years severe acute malnutrition case fatality rate <sup>2</sup>	MNCWH/Countdown	12.7	11.0	11.8	11.0	10.1	11.6	11.2		
Inpatient death under 5 year rate	MNCWH	4.5	4.0	5.5	5.1	5.5	5.5	5.4		

Annexure 2a: Table of major causes of maternal mortality and key interventions (NCCEMD 2011)

Key cause of mortality	Interventions
<p><b>HIV and AIDS</b></p> <p><i>50% of maternal deaths are HIV associated</i></p>	<ul style="list-style-type: none"> <li>Promote the “Know your status” and “plan your pregnancy” messages in communities and in the health sector and ensure non-judgemental approaches.</li> <li>Ensure every maternity facility is able to screen for HIV infection and perform early initiation of HAART therapy; and to recognise and treat co-infections, especially respiratory infections.</li> <li>Use efavirenz (EFV) instead of nevirapine (NVP) when initiating women on HAART after the first trimester.</li> </ul>
<p><b>Haemorrhage</b></p> <p>Haemorrhage post CS is responsible for a quarter of maternal deaths due to haemorrhage</p>	<ul style="list-style-type: none"> <li>Promote preventive interventions including community education, prevent prolonged labour, prevent anaemia; use of safe methods for induction of labour and practice active management of the third stage of labour (AMSTL).</li> <li>Severe obstetric haemorrhage must have the status of a ‘major alert’ requiring a team approach with immediate attention to diagnosis of the cause of haemorrhage, resuscitation and stepwise approach to arresting the haemorrhage.</li> <li>A doctor must be called to assess and coordinate further treatment of all women who are suspected of bleeding more than 1 litre.</li> <li>Women who have a C section, must be observed frequently and action on abnormal observations taken timeously.</li> </ul>
<p><b>Hypertension</b></p> <p><i>Approximately 50% of women who died from hypertension in pregnancy were under the age of 25 years and a large proportion were teenagers</i></p>	<ul style="list-style-type: none"> <li>All maternity facilities must provide calcium supplementation to all women throughout their antenatal care and ensure the detection, early referral and timely delivery of women with hypertension in pregnancy.</li> <li>All maternity facilities must be able to administer magnesium sulphate to prevent convulsions, administer rapid acting agents to lower severely raised blood pressure, provide close monitoring prior to and following delivery and manage fluid balance safely.</li> <li>Cerebral complications were the final cause of death in half the women with complications of hypertension; aggressively control the high blood pressure, especially persistent systolic blood pressure, prior ,during delivery and in the immediate post delivery period (first 48 hours, by the use of colour coded early warning observation charts).</li> <li>Pulmonary oedema is the most common final cause of death in women with complications of hypertension; the fluid balance must be very carefully monitored before and following delivery in severe hypertension, imminent Eclampsia, Eclampsia and the HELLP syndrome.</li> <li>Promotion of Family Planning Services in the population (women, their partners, families and communities); Contraceptive Services (including reproductive health matters) must be promoted amongst teenagers in particular and in women over the age of 35 years.</li> </ul>
<p><b>Health worker training</b></p>	<ul style="list-style-type: none"> <li>Train all health care workers involved in maternity care in the ESMOE-EOST programme and obstetric anaesthetic module, with emphasis on the following:</li> </ul>

	<ul style="list-style-type: none"> <li>○ Standardised observation and monitoring practices which stipulate the frequency of observations and aid interpretation of severity e.g. early warning monitoring charts. These would enable earlier detection of haemorrhagic shock following delivery and after CS; and also enable earlier interventions for complicated pre-Eclampsia.</li> <li>○ The skills of safe labour practices; use of and interpretation of the partogram, AMTSL, use of uterotonic agents, safe CS, and additional surgical procedures for complicated CS.</li> <li>○ To achieve competence in the management of obstetric emergencies e.g. PPH, Eclampsia, acute collapse.</li> <li>● Train all health care workers who deal with pregnant women in HIV advice, counselling, testing and support (ACTS), initiation of HAART, monitoring of HAART and the recognition, assessment, diagnosis and treatment of severe respiratory infections.</li> </ul>
<p><b>Health system strengthening</b></p>	<ul style="list-style-type: none"> <li>● Ensure 24 hour access to functioning emergency obstetric care (EmOC) both basic and comprehensive, as well as:             <ul style="list-style-type: none"> <li>○ Adequate and appropriately trained staff for acute areas such as labour wards and theatres but also for antenatal clinics and postnatal monitoring areas.</li> <li>○ Maternity dedicated inter-facility transport system within health care facilities.</li> <li>○ Standardised referral criteria for set conditions e.g. hypertension.</li> <li>○ The development of maternity waiting homes.</li> <li>○ Maternal mortality and morbidity audit meetings to occur regularly with minutes documenting plans for rectifying modifiable factors. Progress on key indicators to be displayed as graphs and charts for staff to review.</li> </ul> </li> <li>● Ensure accessible and appropriate contraceptive services for all women which are integrated into all levels of health care and which must be available on site for women post-miscarriage and postpartum women.</li> </ul>

**Annexure 2b: Table of neonatal survival strategies: key interventions to reduce mortality (NaPeMMCo 2012)**

Key cause of mortality	Interventions
<p><b>Improve the health system for mothers and babies:</b></p>	<ul style="list-style-type: none"> <li>• Contraception, including for post miscarriage and postpartum.</li> <li>• 24 hour access to functioning emergency obstetric and neonatal care including clear referrals routes with dedicated obstetric and neonatal ambulances.</li> <li>• Maternal waiting homes, KMC sites in all hospitals.</li> <li>• CEOs to ensure that there is <b>no</b> rotation of nursing staff providing neonatal care.</li> </ul>
<p><b>Improve knowledge and skills of health care providers:</b>  <i>Most hypoxic deaths are as a result of inadequate intrapartum care provided by health care providers.</i></p>	<ul style="list-style-type: none"> <li>• Train all health care workers providing maternity and neonatal care in the ESMOE-EOST programme and in managing the immature infant using the SA INC toolkit.</li> <li>• Train all health care workers who deal with pregnant women in HIV advice, counselling, testing and support, initiation of HAART, monitoring of HAART.</li> <li>• Train all health care workers in correct management of intrapartum care (use of the Partogram, 3rd stage of labour).</li> </ul>
<p><b>Reduce deaths due to asphyxia:</b>  Asphyxia was the leading cause of neonatal deaths in the birth category &gt;1kg. 70% of death in the &gt;2,5kg group were classified as hypoxia related.</p>	<ul style="list-style-type: none"> <li>• Every woman in labour must be monitored appropriately by a skilled birth attendant.</li> <li>• All birth attendants must skilled in at least bag and mask ventilation of the neonate.</li> <li>• The partogram must be used to monitor labour according to prescribed norms.</li> <li>• All complicated and obstructed labours must have access to Caesarean section when indicated.</li> <li>• <i>A birth attendant skilled in neonatal resuscitation can reduce deaths to hypoxia by up to 40%.</i></li> </ul>
<p><b>Reduce deaths due to prematurity:</b>  <i>The use and application of nasal CPAP at a district hospital can reduce mortality by up to 40%.</i></p>	<ul style="list-style-type: none"> <li>• Corticosteroids must be given where possible to every woman in preterm labour.</li> <li>• Antibiotics must be given to every woman with preterm premature rupture of membranes.</li> <li>• All hospitals (especially district hospitals) must have staff skilled in the use of nasal CPAP.</li> <li>• All mothers of immature infants must have easy access to Kangaroo Mother Care.</li> </ul>
<p><b>Reduce deaths due to infection:</b>  Infection is the third largest cause of neonatal deaths in all weight categories, but highest in the 1000g-2000g group</p>	<ul style="list-style-type: none"> <li>• There must be strict adherence to basic hygiene in labour wards and nurseries. D-germ alcohol sprays, soap, clean water and paper towels must be available in all nurseries as essential consumables.</li> <li>• There must be presumptive antibiotic therapy for newborns at risk of bacterial infection.</li> <li>• There must be case management of neonatal sepsis, meningitis and pneumonia.</li> <li>• As breast milk provides the best nutrition and protection for the preterm baby, districts should provide breast milk (not preterm formulas) to all preterm babies by the establishment of human milk banks.</li> <li>• Infection dashboard must be introduced in all neonatal nurseries to reduce infections by heightening awareness and surveillance of infection rates.</li> </ul>

**Annexure 2c: Table of child survival interventions (CoMMiC, 2012)**

Key cause of mortality	Intervention						
<p><b>HIV</b></p> <p>50% of under-5 deaths are associated with HIV</p>	<ul style="list-style-type: none"> <li>• Ensure a functional PMTCT programme (100% HIV status known for mothers at the time of delivery/before discharge post-delivery).</li> <li>• Improve 6-12 week PCR coverage – (aim for 10% increase).</li> <li>• Improve HAART services for children – (aim to ensure children comprise 10–15% of patients on HAART).</li> </ul>						
<p><b>Malnutrition</b></p> <p>32% of under-5 deaths are associated with severe acute malnutrition</p>	<ul style="list-style-type: none"> <li>• Achieve fully effective implementation of WHO 10 Steps for the Management of Severe Acute Malnutrition.</li> <li>• Ensure hospital mealtime and snack schedules are child friendly (which would need to be defined/stated).</li> </ul>						
<p><b>Care in outpatients and casualty</b></p> <p>The assessment &amp; care on arrival in hospital is poor</p>	<ul style="list-style-type: none"> <li>• Develop a functional dedicated paediatric “corner” in casualty / OPD – this includes appropriate facility, equipment &amp; staff.</li> <li>• Ensure 24 hour access to effective triage &amp; resuscitation for children in the hospital.</li> </ul>						
<p><b>In-patient care</b></p> <p>There are too few nurses, no resuscitation facilities and no access to critical care beds</p>	<ul style="list-style-type: none"> <li>• Appoint a dedicated, full time doctor to run the children’s ward.</li> <li>• Ensure 50% of nursing staff in the children’s ward are permanently based in the ward &amp; DO NOT rotate.</li> <li>• Establish 2 functional “high care” beds in each children’s ward.</li> </ul>						
<p><b>Strengthen child survival programmes</b></p> <p>In-hospital case fatality rates are high:</p> <table border="0"> <tr> <td>Severe acute malnutrition</td> <td>19.6%</td> </tr> <tr> <td>Diarrhoeal disease</td> <td>9.2%</td> </tr> <tr> <td>Acute respiratory infection</td> <td>9.3%</td> </tr> </table>	Severe acute malnutrition	19.6%	Diarrhoeal disease	9.2%	Acute respiratory infection	9.3%	<ul style="list-style-type: none"> <li>• The Paediatric EDL must be available in all children’s wards &amp; OPDs &amp; issued to all doctors working with children.</li> <li>• The EDL standard treatment guidelines must be followed as the minimum standard of care.</li> <li>• Implement a training package for nurses &amp; doctors in the assessment &amp; resuscitation of critically ill children &amp; the care of common paediatric emergencies.</li> <li>• Provide facilities to allow the primary caregiver to remain in hospital with each sick child.</li> </ul>
Severe acute malnutrition	19.6%						
Diarrhoeal disease	9.2%						
Acute respiratory infection	9.3%						
<p><b>Strengthen data systems</b></p>	<ul style="list-style-type: none"> <li>• Implement a standardised children’s ward admission register (ADD Triplet).</li> <li>• Ensure that every childhood death is audited using the Child Healthcare Problem Identification Programme (Child PIP).</li> </ul>						

*Annexure 2d: Sixteen interventions could save 18 thousand maternal and child lives (NDoH, PRICELESS- SA, 2014)*

BY 2015, 16 INTERVENTIONS COULD SAVE 18,000 MATERNAL AND CHILD LIVES			
Maternal lives saved =1559		Newborn and Child lives saved =16,661	
1	Labour and delivery management**	1	Promotion of breastfeeding
2	Early detection/ treatment of HIV	2	Hand washing with soap
3	TB management in pregnant women	3	Therapeutic feeding - for severe wasting
4	MgSO4 - for pre-eclampsia	4	Antenatal corticosteroids for preterm labour
5	Clean birth practices	5	Water connection in the home
6	Hypertensive disease case management	6	KMC - Kangaroo mother care
		7	Labour and delivery management**
		8	PMTCT
		9	Case management of severe neonatal infection
		10	Oral antibiotics : case management of pneumonia in children
		11	Appropriate complementary feeding

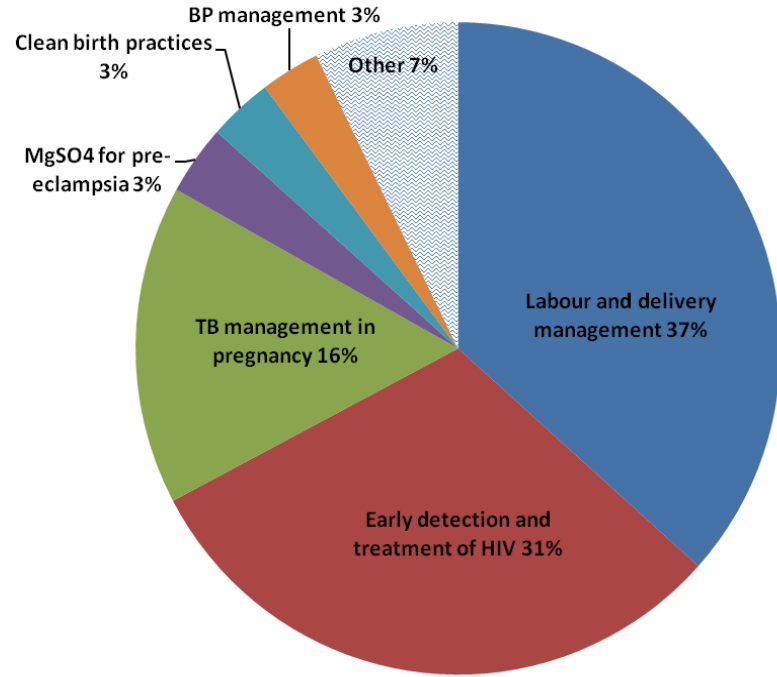
\*\* Appears in both columns

SPECIFIC ACTIONS FOR SAVING MOTHERS LIVES (2014-2015)

HOW MANY MOTHERS DIE (TOTAL)



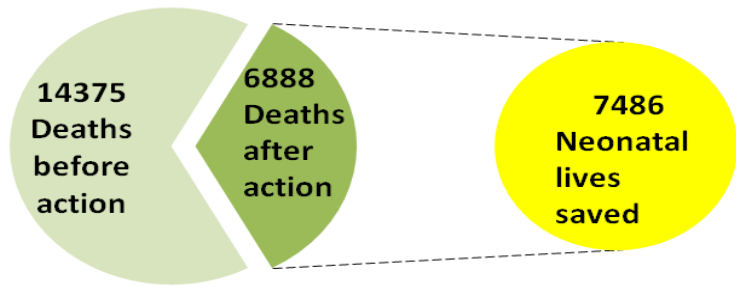
6 INTERVENTIONS ACCOUNT FOR 90% OF MATERNAL LIVES SAVED



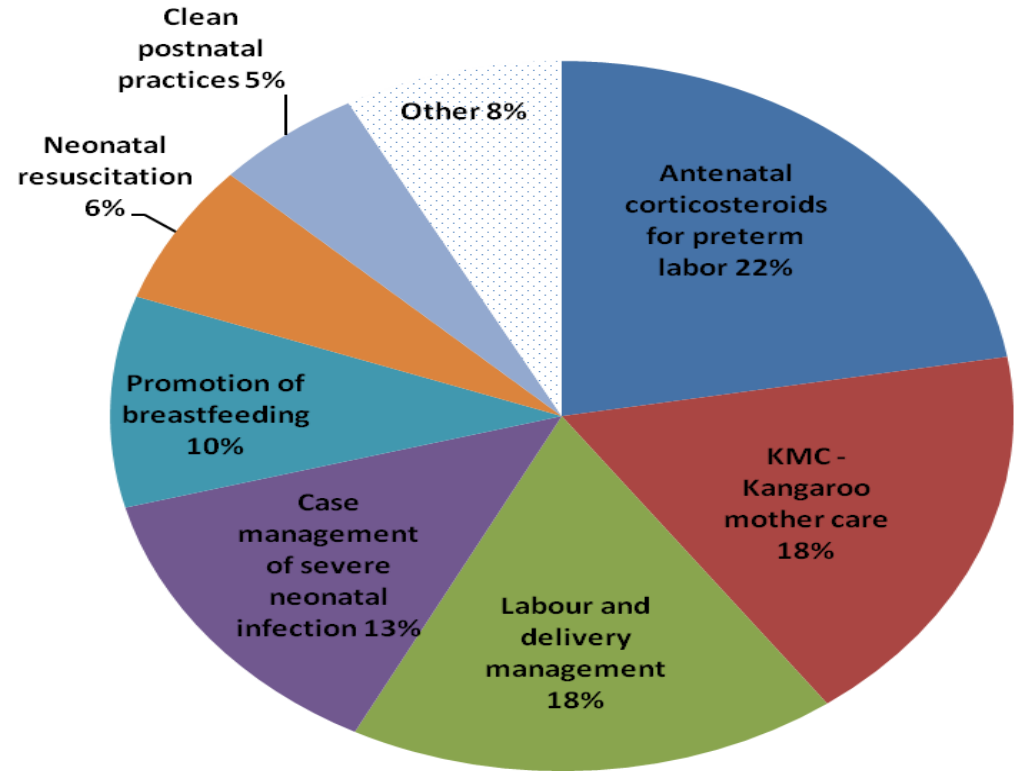


**SPECIFIC ACTIONS FOR SAVING NEW-BORN LIVES (2014-2015)**

**HOW MANY NEONATES DIE (TOTAL)**



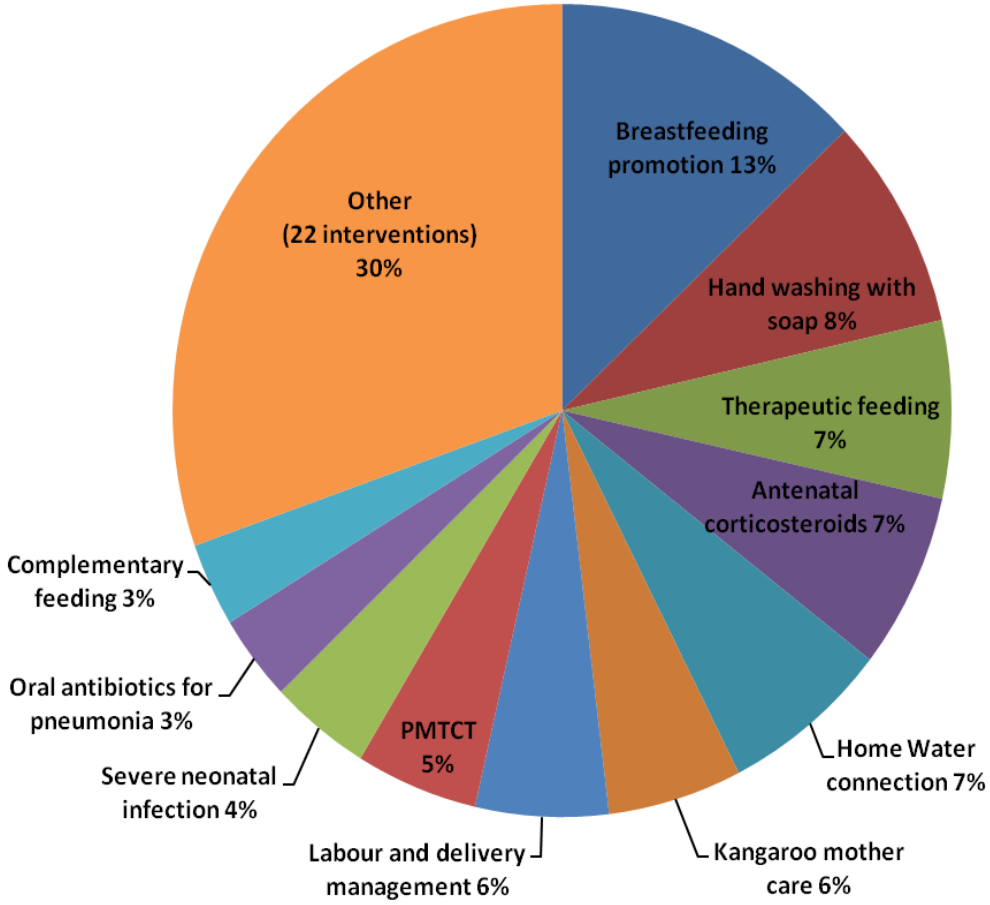
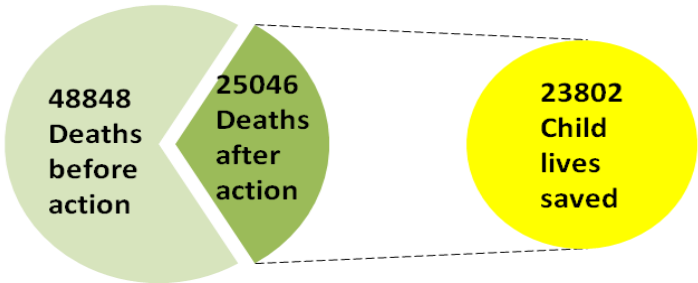
**7 INTERVENTIONS ACCOUNT FOR 90% OF NEONATAL LIVES SAVED**



SPECIFIC ACTIONS FOR SAVING CHILD LIVES (2014-2015)

HOW MANY CHILDREN DIE (TOTAL)

11 INTERVENTIONS ACCOUNT FOR 70% OF CHILD LIVES SAVED



**Annexure 3a: Definitions of mortality indicators**

Indicator	Type	Numerator	Denominator	Description
<b>Severe malnutrition case fatality rate under 5 years</b>	%	Severe malnutrition under 5 years - death	Severe malnutrition under 5 years - admitted	The proportion of all admissions under 5 years due to severe malnutrition that died
<b>Diarrhoea with dehydration case fatality rate under 5 years</b>	%	Diarrhoea with dehydration under 5 years - death	Diarrhoea with dehydration under 5 years - admitted	The proportion of all admissions under 5 years due to diarrhoea with dehydration that died
<b>Pneumonia case fatality rate under 5 years</b>	%	Pneumonia under 5 years - death	Pneumonia under 5 years - admitted	The proportion of all admissions under 5 years due to pneumonia that died
<b>Facility mortality under 1 year rate</b>	%	Inpatients death under 1 year total	Inpatient separations under 1 year total	The proportion of inpatients under 1 year that died during their stay in the facility
<b>Facility mortality under 5 years rate</b>	%	Inpatients death under 5 years	Inpatient separations under 5 years	The proportion of inpatients under 5 years that died during their stay in the facility
<b>Maternal mortality ratio in facility</b>	per100000	Maternal deaths in facility	Live births in facility	Women who die as a result of childbearing, during pregnancy or within 42 days of delivery or termination of pregnancy, per 100,000 live births, and where the death occurs in a health facility
<b>Still birth rate in facility</b>	per1000	Still births in facility	Total births in facility	Still births in facility as a proportion of total births in a facility
<b>Perinatal mortality rate in facility</b>	per1000	Still births in facility + Inpatients death (early neonatal)	Total births in facility	Perinatal deaths per 1,000 births. Perinatal deaths are still births and early neonatal deaths
<b>Neonatal mortality rate in facility</b>	per1000	Inpatient deaths (neonatal)	Live births in facility	Inpatient deaths within the first 28 days of life per 1,000 live births

**Annexure 3b: Keys on target generation**

**1. Maternal death rate**

It is proposed that all institutions with rates <100/100000 decrease their baseline by 5% for 2013/14

It is proposed that all institutions with rates between 100 and 199.9/100000 decrease by 10% for 2013/14

It is proposed that all institutions with rates 200 and above decrease by 15% for 2013/14

**2. Stillbirth rate**

It is proposed that all institutions with rates <10/1000 decrease their baseline by 5% for 2013/14

It is proposed that all institutions with rates between 10 and 19.9/1000 decrease by 10% for 2013/14

It is proposed that all institutions with rates between 20 and 29.9/1000 decrease by 15% for 2013/14

It is proposed that all institutions with rates 30/1000 and above decrease by 20% for 2013/14

**3. Neonatal mortality rate**

It is proposed that all institutions with rates <10/1000 decrease their baseline by 5% for 2013/14

It is proposed that all institutions with rates between 10 and 19.9/1000 decrease by 10% for 2013/14

It is proposed that all institutions with rates 20 and above decrease by 15% for 2013/14

**4. Inpatient under one mortality rate**

It is proposed that all institutions with rates <5% decrease their baseline by 5% for 2013/14

It is proposed that all institutions with rates between 5 and 9.9% decrease by 10% for 2013/14

It is proposed that all institutions with rates 10% and above decrease by 15% for 2013/14

**5. Death rate from admissions for severe acute malnutrition (children admitted to hospital)**

It is proposed that all institutions with rates <10% decrease their baseline by 5% for 2013/14

It is proposed that all institutions with rates between 10 and 19.9% decrease by 10% for 2013/14

It is proposed that all institutions with rates 20% and above decrease by 15% for 2013/14

**6. Death rate from admissions for pneumonia and diarrhoeal disease**

It is proposed that all institutions with rates <10% decrease their baseline by 5% for 2013/14

It is proposed that all institutions with rates 10% and above decrease by 10% for 2013/14

**Annexure 4: Example of the DCST quarterly report based on the work plan**

Objectives	Achievements	Challenges	Planned intervention
<b>1. Advocate for implementation of ANC booking before 20 weeks</b>	WRHI is collecting data on utilisation of antenatal care facilities within Hillbrow area.	<p>Shortage of staff in the facilities providing antenatal care in this area is still a challenge and these results in patients being turned away.</p> <p>Facilities are not offering full antenatal care services on daily basis, some CHCs, both provincial and local authority facilities.</p> <p>Some nurses who are not trained in BANC don't see a necessity of why patients should book early.</p>	<p>Programme managers to make own assessment and assist with interventions.</p> <p>Programme managers to need to support facilities that are offering antenatal care.</p> <p>Antenatal audit to assess reasons for late bookings.</p>
<b>2. Improve the skill and competency of midwives and PHC nurses who provide ANC services</b>	Three sessions of BANC training were conducted and 89 Nurses including midwives were trained on BANC in Johannesburg Metro.	<p>BANC trainings were cancelled due to Midwifery Conference; training in Region B was poorly attended due to double bookings of trainings.</p> <p>Region E still outstanding.</p>	<p>To continue with BANC Trainings.</p> <p>Schedule training for Region E in the next quarter</p> <p>BANC to be prioritised with follow up mentoring of trained nurses.</p>
<b>3. Improve the skill and competency of doctors and midwives providing intra-partum care</b>	<p>Launched ESMOE Training for nurses all MOUs and all Hospitals were represented.</p> <p>Conducted ESMOE training in Johannesburg – 16 midwives and</p>	<p>One MOU did not send a participant</p> <p>Doctors do not attend drills.</p> <p>District, Sub district and facility managers</p>	<p>CHC ESMOE to be strengthened at least 10 midwives per session</p> <p>Continue with the drills in the next quarter</p> <p>Plan PEP training for the second group next quarter.</p>

<p><b>services</b></p>	<p>20 doctors were trained quarter.</p> <p>Conducted emergency Obstetric Simulation Drills in all MOUs and South Rand Hospital – trained 178 midwives and 13 doctors.</p> <p>PEP training completed by 8 midwives in Hillbrow MOU.</p> <p>M&amp;M Meetings facilitated and supported in all MOUs and South Rand Hospital.</p>	<p>do not support M&amp;M Meetings.</p> <p>Some facilities not holding meeting monthly.</p>	<p>Programme managers and managers need to support the meetings.</p> <p>Mangers to establish reasons for non-compliance of monthly meetings.</p>
<p><b>4. Ensure that within 6 days postnatal care is conducted in all the clinics that provide ANC</b></p>	<p>All the MOUs, clinics and South Rand Hospital provide postnatal care</p>	<p>Percentage of patients that have received PNC as per DHIS stats is not a true reflection as most patients attend PNC in a different facility and not where they delivered.</p>	<p>Working together with the ward-based outreach teams will ensure that as many patients as possible will receive postnatal care.</p>

### **Annexure 5: Framework for monitoring and evaluating the effectiveness of the DCSTs**

The following tables represent a model of how the activities of the DCSTs relate to the key objectives defined in the Strategic Plan for Maternal, Neonatal, Child and Women’s Health and Nutrition (MNCWH&N) in South Africa 2012-2016. A set of indicators to evaluate the effectiveness of these activities are then identified as well as the sources of these indicators. The tables are organised in terms of the community, primary care and district hospital levels as well as broader health system related issues.

#### **Annexure 5a - Supporting service delivery in the community**

Activities	Objectives	Indicators	Source
Engage with the ward-based PHC teams and provide appropriate education and training e.g. immunisations, breastfeeding, uptake of postnatal care, uptake of antenatal care, nutrition, vitamin A, de-worming, oral dehydration, childhood danger signs, care seeking behaviour.	Ensure that ward based PHC teams engage with effective health promotion and disease prevention activities for MCH and if necessary collect additional MCH health information.	% of mothers and babies who receive post-natal care within 6 days of delivery	DHIS
		% of HIV exposed infants who are tested for HIV (using PCR) at six weeks	DHIS
		% of eligible mothers still taking ART at six weeks	DHIS
		% of pregnant women who book before 20 weeks gestation	DHIS
		% of children fully immunised by 1 year	DHIS
		% of children fully immunised by 1 year	DHIS
		% of children age 1 to 5 years who receive at least one dose of Vitamin A per year	DHIS
Women year protection rates for family planning	SADHS		
Engage with district management teams, ward-based primary health care teams and school health services on key risk factors and social determinants of health.	Running health promotion campaigns on specific MCH issues.	Implementation of health promotion campaigns	DCST reports
Support for school health services, including incorporating key reproductive and adolescent health messages.	Provision of school health services to targeted learners.	Delivery rate for women <18 years	DHIS
		TOP rate for women <18 years	DHIS
		Women year protection rates for family planning	SADHS

**Annexure 5b – Further support for service delivery in the community**

Activities	Objectives	Indicators	Source
Situational analysis Quality improvement cycles (IMCI) Education and training of PHC providers Engagement with district/facility management team Clinical outreach visits	Identify gaps in PHC level services and expand the range of services to provide the defined package of care.	% of children with diarrhoea who receive zinc  Coverage with Pneumococcal and rotavirus vaccines	QIC (clinical audit)  DHIS
Quality improvement cycles (25 item checklist for BANC) Implementation of BANC guidelines Education and training of PHC providers Clinical outreach visits	Effective implementation of BANC in primary care facilities.	% of PHC facilities effectively implementing BANC  Cervical cancer screening coverage	QIC (clinical audit)  DHIS
Support for messaging at PHC level on early uptake of ANC Education and training of PHC providers	Increase uptake of ANC before 20 weeks.	% of women attending ANC  % of pregnant women who initiate ANC before 20 weeks gestation	DHIS  DHIS
Quality improvement cycle (PMTCT) Implementation of PMTCT guidelines Education and training of PHC providers Clinical outreach visits	Effective implementation of the PMTCT programme.	% of eligible antenatal clients initiated on ART  % of eligible antenatal clients initiated on AZT on time during antenatal care	DHIS  DHIS
Quality improvement cycle (EPOC) Implementation of EPOC guidelines Education and training of PHC providers Clinical outreach visits	Effective implementation of EPOC.	% of mothers and babies who receive post-natal care within 6 days of delivery  % of facilities offering family planning	DHIS  DHIS
Support for health promotion at PHC level Quality improvement cycle (criteria for mother baby friendly hospital initiative) Education and training of PHC providers Engagement with district/facility management	Promotion of early and exclusive breastfeeding including ensuring that breastfeeding is made as safe as possible for HIV-exposed infants.	% of PHC facilities that meet criteria for MBFHI	QIC (clinical audit)



Situational analysis Collaborate with existing IMCI training programmes or ensure that such programmes are initiated	Ensure that all PHC providers are IMCI trained.	% of PHC facilities in which 60% of PHC providers are IMCI trained	DCST report
Quality improvement cycle (IMCI) Implementation of IMCI guidelines Clinical outreach visits	Ensure coverage of EPI package.	% of children fully immunised by 1 year	DHIS
Quality improvement cycle (IMCI) Implementation of IMCI guidelines Clinical outreach visits	Provision of vitamin A supplementation 1-5 years.	% of children age 1 to 5 years who receive at least one dose of Vitamin A per year	QIC (clinical audit)
Quality improvement cycle (Paediatric HIV) Implementation of guidelines for paediatric HIV Education and training of PHC providers	Effective implementation of HIV care for children.	% of HIV exposed infants who are tested for HIV (using PCR) at six weeks % of eligible children initiated on ART % of eligible children initiated on ART % of HIV exposed and infected children who receive Cotrimoxazole prophylaxis	QIC (clinical audit)  DHIS QIC (clinical audit)

**Annexure 5c - Supporting service delivery at district hospital level**

Activities	Objectives	Indicators	Source
Situational analysis Engagement with district/facility management team Education and training of staff	Identify gaps in DH level services and expand the range of services to provide the defined package of care	% of sub districts providing TOP service % of hospitals providing high risk antenatal care Provision of lodging facilities for pregnant women awaiting onset of labour where appropriate % of hospitals providing KMC % of hospitals accredited for MBFHI	DCST report CST report DCST report DCST report DCST report
Situational analysis Quality improvement cycle (BIC, ESMOE) Implementation of BIC and ESMOE guidelines Education and training of staff Critical event review Clinical outreach visits	Effective implementation of BIC guidelines  Effective implementation of ESMOE	% of hospitals which achieve a score of 80% on the BIC checklist for intrapartum care (based on use of the partogram) % of hospitals where all staff who supervise deliveries are trained in obstetric emergency care, neonatal resuscitation and new-born care (ESMOE) % of mothers and babies receiving 6 hour postnatal check % of babies born to HIV positive mothers initiating ARVs	QIC (clinical audit) DCST report QIC (clinical audit) QIC (clinical audit) QIC (clinical audit)
Situational analysis Quality improvement cycle (diarrhoea, RTI, emergencies, Child PIP) Critical event review (Child PIP) Guideline implementation Education and clinical training Clinical outreach visits	Effective in-patient management of children	% of all nursing staff on the paediatric ward and all doctors trained to provide emergency care to children In-hospital case fatality rate for children (U5) with diarrhoea In-hospital case fatality rate for children (U5) with pneumonia	DCST report ChildPIP ChildPIP

<p>Situational analysis</p> <p>Quality improvement cycle (malnutrition, WHO 10 steps)</p> <p>Critical event review (ChildPIP)</p> <p>Guideline implementation (WHO 10 Steps)</p> <p>Education and clinical training</p> <p>Clinical outreach visits</p>	<p>Effective management of severe malnutrition</p>	<p>In-hospital case fatality rate for children (U5) with severe malnutrition</p>	<p>ChildPIP</p>
<p>Situational analysis</p> <p>Quality improvement cycle (post-rape care) and Guideline implementation</p> <p>Education and clinical training</p> <p>Clinical outreach visits and Critical event reviews</p>	<p>Effective management of rape survivors</p> <p>Implementation of critical event reviews for maternal, perinatal and child deaths</p>	<p>% of hospitals with designated staff with specific training in comprehensive post-rape care</p> <p>% of rape survivors receiving comprehensive care</p> <p>% of hospitals which regularly review maternal and perinatal deaths / child deaths</p>	<p>DCST report</p> <p>QIC (clinical audit)</p> <p>DCST reports</p> <p>PIPP</p> <p>ChildPIP</p>

**Annexure 5d - Strengthening the capacity of the health system to support quality MCH care**

Activities	Objectives	Indicators	Source
Quarterly reporting to district, province and national levels	Regular reporting on progress and activities of DCST	% of quarterly reports received for the year on time	SADHS
Situational analysis Engage with district management team	Ensure sufficient staffing levels to provide quality MCH	Gap between staffing norms and current staffing situation	DCST report
Evaluation of staff knowledge, skills and attitudes vs. clinical guidelines e.g. IMCI, ESMOE	Ensure competency of clinical staff	Report on evaluations done and outcomes	DCST report
Structural criteria in quality improvement cycles Engage with district/facility management team	Ensure adequate clinical support services (medication, diagnostic services and health technology, blood, sterilisation) as per EDL and national core standards	National survey of core standards at PHC facilities and hospitals: clinical support services for MCH	NDoH
Structural criteria in quality improvement cycles Engage with district/facility management team	Ensure adequate infrastructure to support quality MCH services (buildings, utilities, safety, security, cleanliness, waste, laundry, food)	National survey of core standards at PHC facilities and hospitals: facilities and infrastructure	NDoH
Situational analysis Quality improvement cycle (EMS) Engage with district management team	Improve the quality of EMS for pregnant women, newborns and children	Report on the situational analysis and quality improvement process	DCST report
Audit the accuracy of data within the DHIS, ensuring feedback on results and assisting health workers to interpret results, revising the dataset Engage with district management team	Effective functioning of the routine health information systems for MCH	Report on activities to improve routine health system and data accuracy per facility	DCST report

**Annexure 6a: Getting to know the district****Getting to know the District****Instructions**

- This form has been designed to assist the District Clinical Specialist Teams (DCSTs) to begin to 'Get to know the District'. It is intended to assist the DCSTs to describe the demographic and socioeconomic context of the district, as well as the health system context.
- Where possible, data and information must be collected from the District Information Officer, or other relevant members of the District Health Management Team.
- Where data and information is not available from members of the District Health Management Team, other secondary sources of information must be used, for example District Offices of other sectors (Education, Social Development, and Home Affairs) or from published reports.
- It is important, therefore, not only to collect the data, but begin to recognise, and establish linkages with other resources in the District.

Date of data collection:

Form completed by:

**A: General information**

Name of District:

Names and contact details of key district health personnel

Post	Name and surname	Contact number	Email address
District Manager			
Director Clinical Programmes			
District Information Officer			
MCWH Coordinator			
PHC Coordinator			
PMTCT Coordinator			
District M&E Officer			
District Quality Assurance			
Other:			

**B: Demographic information**

What is the total population of the district?

What is the total population <1yr in the district?

What is the total population <5yr in the district?


Complete the table below for the sub-districts in this district

Name of Sub-district	Sub-district population	Name of District (Level 1) Hospitals in the sub-district*	Name of CHCs/MOUs**in the sub-district	Number of clinics in the sub-district
	Total			
	<1			
	<5			

	Total			
	<1			
	<5			

	Total			
	<1			
	<5			

	Total			
	<1			
	<5			

	Total			
	<1			
	<5			

\* Usually there is one District (Level 1) Hospital in per sub-district, but some sub-districts do have more than one. Complete as applicable.

\*\*CHCs – Community Health Centres; MOUs – Midwife Obstetric Units

### C: Mapping the sub-districts in the district

1. Develop a crude map for each sub-district illustrating the key resources available that could be harnessed towards the improvement of maternal and child health within the sub-district. This could include major routes, health facilities (hospitals, community health centres, clinics, mobile clinic points), other social services (schools, police stations, churches, EMRS), non-governmental organisations and community based organisations.

**Hint:** You may liaise with your Hospital Boards/Clinic Committees/PHC coordinator for assistance in developing this map.

2. Liaise with the District Information Officer to obtain from the Health GIS Unit more formal maps of the District as a whole. Maps can also be obtained of sub-districts, illustrating not only the health facilities, but catchment populations for each facility (within a 5km and 10km of the facility).
3. For each sub-district develop a 'Table of Distances', illustrating the distances between each facility and its referral centre.

### D: Other sectors

Post	Name and surname	Contact number	Email address
EMRS Manager			
NHLS Manager			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			

## E: Socio-economic status of the district

Statistics on the socio-economic status of the district can be obtained from the latest census 2011 from statistics South Africa at their website: <http://www.statssa.gov.za/Census2011/default.asp>. District level information is available in the municipal reports.

<b>Indicator</b>	<b>Year 2011</b>
Percentage of the population with	
▪ No education	
▪ Primary education	
▪ Higher education	
Percentage of the population with access to piped water	
Percentage of the population with no access to electricity	
Percentage of the population with no refuse removal	

**The following information is available at provincial level only** and is available at: Children Count: Statistics on children in South Africa. Child Health Institute, University of Cape Town. <http://www.childrencount.ci.org.za/domain.php?id=2>)

<b>Indicator</b>	
<i>Proportion of children living in income poverty</i>	
<i>Proportion of children living in household without an employed adult</i>	
<i>Proportion of children living far from the nearest clinic</i>	
<i>Proportion of children living in child headed households</i>	



## F: Community-based care

	Sub-district #1	Sub-district #2	Sub-district #3	Sub-district #4	Sub-district #5
How many CCGs are there in each sub-district?					
How many households on average is each CCG responsible for?					
How many CCGs in the sub-district have been trained in HCC-IMCI?					

**Annexure 6b: Clinic and community health centre/MOU review form**

**Clinic and Community Health Centre/MOU Review Form**

**Instructions**

**This form has been designed to assist the District Clinical Specialist Teams (DCSTs) to assess the baseline situation of maternal and child health services in clinics their districts.**

**The data from a sample of clinics will be used to contribute to the findings of the baseline assessment.**

**The DCST should visit as many clinics per sub-district as possible during the field work.**

**Begin with the bigger clinics in each sub-district and then proceed to the smaller clinics.**

**Section 1: General information**

District:

Sub-district or Municipality:

Name of Facility:

Contact Information: 

Tel:	Fax:	Contact person:
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Type of Facility: 

Clinic	Community Health Centre
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Location of Facility: 

Urban	Rural	Peri - urban
-------	-------	--------------

Operational Hours: 

8 hours	12 hours	24 hours
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Date of Assessment: 

Day:	Month:	Year:
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Infrastructure

Running water available Yes / No	Electricity available Yes / No	Telephone Communication available Yes / No
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### Section 2: Maternal and Child DHIS Indicators - data verification

#### Review of data for indicators reported by the DHIS

1. Please speak to your District Information Officer (DIO) to extract the following the latest quarterly report for the clinic/CHC/MOU.
2. Together with the facility staff, conduct a data quality assessment (quarterly review) to verify the data for selected child and maternal health indicators. E.g. You could verify:

PHC total headcount under- 5 years  
 Number of children fully immunised  
 Number of diarrhoea cases under-5 years  
 Number of 1<sup>st</sup> ANC visits <20 weeks

Compare the totals for the selected data items obtained from the registers with the data collation forms submitted to the DIO in the last quarter, and then compare the data form in the monthly collation form with the report from DIO of what has been captured in the DHIS.

3. Establish with the facility staff how frequently they conduct similar data verification processes within their facility. Ask for the minutes of previous meetings.

### Section 3: Child Health

1. How many infants have died in this facility in the last year?
2. Number of clinical staff trained and updated on IMCI guidelines
3. Total number of staff
4. Is there documented evidence of dissemination of training done?
  - IMCI
  - PMTCT
  - Nutrition

Please circle Yes / No Yes / No Yes / No

5. Proper Infection Control measures adhered to:
  - Hand washing
  - Injection/ Vaccine room precautionary measures taken
  - Disposal of waste

Please circle Yes / No Yes / No Yes / No
---

## Section 4: Maternal Health

1. Number of 1<sup>st</sup> ANC visits testing HIV positive screened for TB
2. Total number of 1<sup>st</sup> ANC visits testing HIV positive
3. Provision of 1<sup>st</sup> trimester termination
4. If not providing terminations have referral system for TOPs

Yes /	No
Yes /	No

## 6: Review of the Environment of Care

### Child Health

Indicate your response by a means of a 'Tick' in the appropriate column.

Please note: Norms for child health at clinic level are still being developed.

Assessment	Yes/Adequate	No/Inadequate
Enough space available to see patients (consulting rooms and waiting area)		
Reliable telecommunications		
Functioning Oral Rehydration Treatment corner <ul style="list-style-type: none"> <li>- Clean water</li> <li>- Spoons</li> <li>- Cups</li> <li>- Oral Rehydration Solution</li> </ul>		
Functioning refrigerator with appropriate temperature monitoring and regulation		
All essential IMCI drugs including vaccines available and in stock		
Thermometer		
Tongue depressor		
Torch		
Nebuliser		
Weighing Scale		

### Assessment of records:

Check on the Child Health and EPI registers: Check for appropriate use, assess adequacy of classification and treatment for IMCI, and completeness of records for EPI

Comments:

Check whether children TB suspects have been recorded in the TB register YES / NO

**Maternal Health****Drugs for ANC Clinic**

Item	Not available	Available
	0	1
Calcium carbonate		
ARV Drugs AZT, TDF, 3TC, Efv		
Injectable anticonvulsants MGSO4		
Injectable antibiotics Benzyl Penicillin Ceftriaxone		
Injectable oxytocins Syntocinon Syntometrine		
Ferrous sulphate		
Folic acid		
Betamethasone		
Methyldopa		
Nefidipine		
Oral contraceptives		
Injectable contraceptives		
IUCD		
Male condoms		
Female condoms		
Emergency contraception:  Progesterone only		
Oral antibiotics Cephalexin for UTI Amoxicillin Erythromycin Metronidazole Cefixime for STD		

## Equipment for ANC Clinic

Item	Norm	Not available	Available not functional	Available and functional
		0	1	2
Adult scale (for weight and height)	1 : clinic			
Doptone	1 : clinic			
Cusco speculums with adequate light source	1 : clinic			
Equipment for taking Pap smears	1 : clinic			
Resuscitation trolley	1 : clinic			
Oxygen supply	1 : clinic			
Equipment for setting up intravenous lines	1 : clinic			
Foley catheters	1 : clinic			
Eclampsia box	1 : clinic			
Emergency delivery pack	1 : clinic			
Obstetric calendar wheel	1 : consult room			
Tape measure	1 : consult room			
Blood pressure machine with normal adult and large adult cuff sizes	1 : consult room			
Pinard stethoscope	1 : consult room			
Clinical stethoscope	1 : consult room			
Equipment / kits for on-site syphilis tests	1 : consult room			
Equipment / kits for on-site Rh blood group test	1 : consult room			
Equipment / kits for on-site HIV test	1 : consult room			
Equipment / kits for on-site Hb test	1 : consult room			
Glucometer	1 : consult room			
Urine dipsticks	In consult room			

**Equipment for Intrapartum Care in CHC/MOU**

Item	Norm	Not available	Available not functional	Available and functional
		0	1	2
Delivery bed with wedge	3:100 deliveries			
Sphygmomanometer	1:bed			
Stethoscope	1:bed			
Clinical thermometer	1:bed			
Haemoglobinometer	1:labour ward			
Hand-held Doppler instrument	1:labour ward			
Episiotomy repair pack				
Delivery packs				
Cusco vaginal speculum				
Vacuum extractor and suction	2:labour ward			
Fully equipped resuscitation trolley				
Defibrillator				

**Staffing for Intrapartum Care in CHC/MOU**

Item	Yes	No
ADM on every shift		
ESMOE master trainer available		
Non-rotating staff in maternity section		

**Assessment of records:**

Check on relevant registers: Check for appropriate use and completeness.

Comments:

Check whether ANC patient held cards are reviewed monthly with the BANC Checklist

Comments:

**Referrals**

Check on availability of hotline number for referral of patients to the District /Level 1 Hospital

YES / NO

Comments:

What is the Colposcopy waiting time for clients requiring referral?

**Annexure 6c: Baseline data collection tool for ESMOE-EOST**

**Baseline data collection tool for ESMOE-EOST**

**NB Explanations for questions in italics are to be found in the letter attached**

<b>1. Date of Survey:</b>	<b>DD</b>	<b>MM</b>	<b>YYYY</b>	<b>OFFICE USE ONLY</b>
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<b>2. Form completed by</b>			
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<b>2a. Form verified by</b>		<b>OFFICE USE ONLY</b>
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<b>3. Name of Healthcare Facility</b>	
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<b>4. Type of facility</b>	CHC	District Hospital	Regional Hospital	Provincial Tertiary Hospital	Central hospital
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<b>5.</b>	<b>Name</b>
<b>District</b>	
<b>Province</b>	

<b>6. Estimated size of population served by facility</b>	
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<b>7. Hospital beds</b>	<b>Number</b>	<b>NA</b>
• Number of antenatal ward beds if applicable		
• Number of labour ward beds		
• Number of delivery beds		
• Number of post natal ward beds		
• Number of neonatal ward beds (Nursery High care ICU)		
• Total number of beds in facility		

**NA= not applicable**

<b>8. Referrals</b>	<b>Facility</b>	<b>Distance (kms)</b>
<b>8a. Receive referrals/transfers from</b>		
<b>8ai. Transport available (tick all that apply)</b>	<b>Type</b>	
	Patient own transport	
	Dedicated ambulance	
	General ambulance service	
	Other (specify	
<b>8b. Send referrals/transfers to</b>	<b>Facility</b>	<b>Distances (kms)</b>



<b>8bi.</b> Transport available at your facility for use to refer/transfer patients(tick all that apply)	<b>Type</b>			
	Patient own transport			
	Dedicated ambulance			
	General ambulance service			
	Other (specify			
<b>8c.</b> Do you have prescribed referral routes?	Yes		No	
<b>8d.</b> Do you have prescribed criteria for referral?	Yes		No	
<b>8e</b> Do you have any official documentation regarding 8c and 8d	Yes		No	

**8f. Comments with regard to functioning of referral system**

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**8g. FOR OFFICE USE ONLY (V)**

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<b>9.</b> Is the maternity facility open 24 hours a day	<b>Yes</b>	<b>No</b>
<b>9a.</b> If no specify hours		

<b>10. Number of staff providing Emergency Obstetric and Newborns Care</b>										
Numbers of staff		Numbers								
		Maternity/labour ward*			Post C/S ward/postnatal			Female/Gynae. ward		
Full time- FT		FT	PT	PoV	FT	PT	PoV	FT	PT	PoV
Part time –PT/sessions										
Posts vacant -PoV										
Nurses	Advanced midwives									
	PN/ Midwives									
	Staff nurse									
	Nursing assistants									
Doctors	Community service									
	Medical officers									
	MO with O&G training (e.g. O&G Diploma)									
	Registered specialist O&G									
Clinical Associates										
<b>Total</b>										

<b>10a.</b> Number of Nurses/Midwives on the labour ward per shift and per 24 hrs.	<b>Per shift</b>		<b>Total Per 24 hours</b>
	Day	Night	

**10b. Comments if any to expand on any issues from the above tables.**

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**10c FOR OFFICE USE ONLY**

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<b>11. Sources of MNH data</b>		<b>Availability of essential MNH registers (Please use all to complete this form)</b>		
	<b>Type of Register</b>	<b>No</b>	<b>Yes</b>	<b>Remarks*</b>
1.	Delivery/Maternity register			
2.	General admissions register or book			
3.	Operating theatre register			
4.	Referral/transfer book			
5.	Female/Gynae ward register			
6.	Maternal mortality register			
7.	Blood book			
8.	Drug book			
9.	Other (Specify)			
1. 10.	Other (Specify)			

**MNH= Maternal and neonatal health**

\*Improvised or standard register

**11a FOR OFFICE USE ONLY (V)**

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**12. Information on the number of staff at the facility involved in obstetric care and infant care and number of staff trained in ESMOE course:**

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Cadre		No. employed	No. ESMOE trained
Midwives/ Nurses	Advanced midwives		
	PN/ Midwives		
	Staff nurse		
	Nursing assistants		
Doctors	Community service		
	Medical officers		
	Medical officers with special training <ol style="list-style-type: none"> <li>1. O&amp;G training (e.g. Diploma in Obstetrics)</li> <li>2. Paediatrics (e.g. Diploma in Paediatrics)</li> <li>3. Anaesthetics (e.g. Diploma In Anaesthetics)</li> </ol>		
	Registered Specialist O&G <ol style="list-style-type: none"> <li>1. O&amp;G</li> <li>2. Anaesthetics</li> <li>3. Paediatrics</li> </ol>		
Clinical associates			

13. Availability of EOC & NC signal function performed in facility in the <u>past 3 months</u> *							
	Signal function		Availability		Skills performed by (Y or N)		
			No	Yes	CA	N/M	Dr
1.	Administer parenteral (injection or intravenous infusion) antibiotics	Any penicillin			<b>Do Not Complete (DNC)</b>		
		Metronidazole					
		Gentamycin					
		Any cephalosporin					
		Others:					
2.	Administer uterotonic drugs	Oxytocin					
		Ergometrine					
		Misoprostol					
3.	Administer parenteral anticonvulsants for pre Eclampsia/ Eclampsia	Magnesium sulphate					
		Diazepam					
4.	Partogram routinely used						
5.	Manually remove placenta						
6.	Remove retained products	Manual vacuum aspiration					
		Dilatation and Curettage					
7.	Perform assisted vaginal delivery	Vacuum extraction delivery					
		Forceps delivery					
8.	Perform basic neonatal resuscitation (e.g. with bag and mask)						
9.	Perform Maternal resuscitation						
10.	Perform blood transfusion						
11.	Perform Surgery	Caesarean section					
		Hysterectomy					
		Laparotomy					
2.	How often are C/S's performed?	<b>Not at all</b>	<b>1 per week or less</b>	<b>&gt;1 per week</b>	<b>&gt;1 per day</b>		
3.	If a C/S needed to be performed as an emergency would there be sufficient staff on site to do so at all time?			<b>YES</b>	<b>NO</b>		

CA- -clinical associates, N/M – nurse/midwife, D-doctor

1. If a **CHC** gives an answer that indicates non-availability of any of the functions 1-9 reasons for this must specified below. Some prompts are given below
2. If any other institution gives an answer that indicates non availability of any function 1-11, reasons must be specified below. Some prompts are given below \*\*\*

\*\*\*Training issues, Supplies issues, Equipment issues, Drugs issues, Management issues, Not in scope of practice

**13a. Comments on Section 13.** Please indicate number from above table of the particular function followed by the reason for non -availability

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**13b. FOR OFFICE USE ONLY (V)**

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**14. Availability of EOC & NC drugs and Equipment in facility in the past 3 months**

	Signal function	Equipment/drugs required	Availability and number functional*				
			Yes	Nu	No	Nu	NA
	<b>Antibiotics</b>	Antibiotics available		DNC		DNC	
		Parenteral antibiotics					
		Syringes needles					
		Drip infusion sets					
		Suitable IV fluids					
<b>1</b>	<b>Administer uterotonic drugs Storage</b>	Uterotonic drugs		DNC		DNC	
		Refrigerator for oxytocin/antibiotic storage					
<b>2</b>	<b>Administer parenteral anticonvulsants for pre Eclampsia and Eclampsia  Check for side effects of drugs</b>	Magnesium sulphate		DNC		DNC	
		Calcium gluconate					
		Patella/reflex hammer					
<b>3</b>	<b>Manually remove placenta</b>	Elbow length surgical gloves		DNC		DNC	
<b>4</b>	<b>Remove retained products</b>	MVA sets (Karman Syringe) and cannulas of various sizes					
		D&C set					
<b>5</b>	<b>Perform assisted vaginal delivery</b>	Vacuum extractor	Malstrom				
			Kiwi disposable				

			Kiwi reusable					
			Others specify:					
		Obstetric forceps:	Type					
<b>6</b>	<b>Perform basic neonatal resuscitation with bag /mask</b>	Paediatric Ambubag						
		masks (different sizes)						
<b>7</b>	<b>Intubation of neonate</b>	Laryngoscope (different size blades)						
		ET tubes (different sizes)						
<b>8</b>	<b>Maternal resuscitation</b>	Ambubag and mask, Laryngoscope ET tubes (different sizes)						
<b>9</b>	<b>Emergency trolley in maternal unit</b>							
<b>10</b>	<b>Perform blood transfusion</b>	Blood available						
		Blood fridge						
		Blood bank on site						
<b>11</b>	<b>Perform surgery</b>	Functional operating theatre for Emergency obstetric surgery i.e. C/S						
		Complete C/S set						
		Complete laparotomy set						

Please tick appropriate 'yes' or 'no' block. Indicate after "yes" block the number (Nu) that are functional. Indicate after the "no" block the number (Nu) that are not functional if information available.

Please use this “Comments” section to expand on any issues raised in Section 14 on the previous page

**14a. Comments on Section 14:** Please note down the number from the above table and followed the reason for why the equipment is either not functional or not available

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**14b. FOR OFFICE USE ONLY (V)**

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15.	Quality improvement activities at health facility in the <u>past 3 months</u>				
	QI activity	Availability		Activity frequency in last 3/12	Name of coordinator/chairperson
		No	Yes		
1	Quality improvement committee				
2	Maternal death reviews*				
3	Perinatal death review				
4	Criterion based audits**				
5	CME/CPD activities	Nurses/midwives			
		Clinical associates			
		Medical doctors			

CME = continuing medical education CPD= continuing professional development

**N.B. \*\* “Criterion based audit”** This is an audit where a particular aspect of care is looked at (for example antenatal care – this is audited by means of the **antenatal card score**, similarly the care in labour is audited by means of the **partogram score**)

**15a Comments on Section 15** Please indicate number from above table and indicate why this activity is not performed in your facility

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**15b. FOR OFFICE USE ONLY**

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**P.T.O.**

**15c. Percentage of maternal deaths audited/reviewed in the last 3 months (i.e. of the maternal deaths in the facility how many were audited X100?)**\_\_\_\_\_

**15d. Proportion of cases in the labour ward with a partograph in use on the day of survey**\_\_\_\_\_ **FOR OFFICE USE ONLY**

**16 General comments/remarks:**

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**16a. FOR OFFICE USE ONLY**

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**Annexure 6d: Review of child health services level 1 hospital****Review of child health services Level 1 hospital(s)****INSTRUCTIONS**

This form has been designed to assist the District Clinical Specialist Teams (DCSTs) to assess the baseline situation of child health services in their districts. It is intended to map out the extent to which services are available and effective, overall child health programme performance and areas for improvements. This exercise also seeks to determine health systems factors that impact on child health.

**Section 1: General information**

1. District

2. Sub district or Municipality

3. Name of Facility

4. Type of Facility (Tick)

MOU within Level 1 hospital	Level 1 hospital
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5. Total number of hospital beds

6. Total number of children's Beds [paeds+ neonates = 20% of total hospital beds (norm)]

No of paeds general beds	No of paeds high care beds	No of paeds isolation beds
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7. Date of assessment

Dd:	Mm:	yy yy:
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8. Facility contact details

Contact person	Tel:	Fax:
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## Section 2: Data Verification Exercise

### Review of data for indicators reported by the DHIS

1. Please speak to your District Information Officer (DIO) to extract the following the latest quarterly report for the Hospital.
2. Together with the facility staff, conduct a data quality assessment (quarterly review) to verify the data for selected child indicators.

Compare the totals for the selected data items obtained from the registers, with the data collation forms submitted to the DIO in the last quarter, and then compare the data form in the monthly collation form with the report from DIO of what has been captured in the DHIS.

3. Establish with the facility staff how frequently they conduct similar data verification processes within their facility. Ask for the minutes of previous meetings.

### Comments: Section 4: Review of environment of care

#### Children's Ward Assessment (Facility manager to fill in):

Indicate your response by a means of a 'Tick' where appropriate.

Access:		Available; Functional	Available; Not Functional	Not available
	Single entrance Access control with intercom			
Patient area:				
Nurses' station:	Counter & work surface			
	Telephone & hand basin			
	Oversee high care beds & "Tiny tots" cubicle			
Space allocation – room:				
Maximum bed number per cubicle	6			
Minimum room/cubicle size	10 m <sup>2</sup>			
Minimal wall length of cubicle	2,6 m			
Direct vision of all beds / cots from nurses' station or corridor via glass viewing panel				
Space allocation - bed:				
Bed space	5 m <sup>2</sup>			

Wall length at head of bed	1,8 m			
Space between adjacent beds	90 cm			
Space between bed & wall – right side left side	90 cm 60 cm			
Aisle width – foot of bed to opposite wall foot of bed to opposite bed	1,2 m 1,5 m			
Services:				
Hands-free basins	1 per cubicle / room			
Oxygen point	1 per 2 beds Minimum - 1 per cubicle			
Suction	1 per 2 beds			
Electrical point	1 per bed			
Child appropriate fittings	Position of handles on exterior doors Position of electrical points in non-clinical areas			

<b><i>High care beds:</i></b>		<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
Number of beds	8% of beds in children's ward Minimum of 2 per ward			
Position	Within a general cubicle In direct view of nurses' station			
Bed space	5 m <sup>2</sup>			
Services per bed	Oxygen, suction & 6 electrical points Spot light			
<b><i>"Tiny tots/Hot box" cubicle:</i></b>				
Number of beds	2 - 4			

Position	Separate, dedicated facility In direct view of or adjacent to nurses' station Glass front wall			
Heated facility	Wall mounted thermo-regulated heater Keep cubicle at 26° C			
Minimum room size	12 m <sup>2</sup>			
Bed space	4 m <sup>2</sup>			
Services per bed	Oxygen, suction & 6 electrical points			
<b>Isolation:</b>				
Total number of isolation beds according to bed norms for level of care (33%)				
Number of isolation cubicles	3 per general paediatric ward 1 each - burns, GE & other infectious disease			
Beds per cubicle	2 - 4			
Minimum room size	12,5 m <sup>2</sup>			
Space per bed	5 m <sup>2</sup>			
Services	Hands free basin at entry to cubicle Oxygen, suction & 2 electrical points / bed			

<b>Patient support area:</b>		<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
Patient ablutions:				
Facility	Joint facility for children < 6 years Separate ♀ & ♂ facilities if children > 6 years Separate facility / en suite for isolation cubicles			
Bath / shower	1 per 12 patients Free standing bath with hand held shower for burns patients			
Toilet	1 per 8 patients			
Hand basin	1 per 2 toilets			
Treatment / procedure room	10 m <sup>2</sup> with hands-free basin & work surface Electrical points, O <sub>2</sub> & suction Spot light			
Counselling room				
Play room	Access to outdoor play area Storage cupboards			
Outdoor play area	Fenced, controlled access via ward			

<b>Staff support area:</b>		<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
Sister's office	6 – 8 m <sup>2</sup> , hands-free basin			
Staff locker room				
Tea room / lounge				
Ablutions	1 per 36 beds / ward			
Doctor's office	6 – 8 m <sup>2</sup> , hands-free basin			
<b>General support area:</b>		<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
Clean utility rooms				
Sundries store	5 m <sup>2</sup> , work surface & hand basin			

Linen & haberdashery store	5 m <sup>2</sup> , shelving			
Pharmaceutical store	Shelves & medicines cupboard			
Patient kit room				
Dirty utility room	5 m <sup>2</sup> for stand-alone unit Add: 2 m <sup>2</sup> if combined with dirty linen room additional 2 m <sup>2</sup> if includes cleaner's room Hand basin, sluice sink & drying racks			
Cleaner's room	Shelves, hand basin, low level sink & slop hopper			
Ward kitchen	4 m <sup>2</sup> increasing by 1,5m <sup>2</sup> per 10 beds Single bowl sink, work surface, storage space & hand basin			
<b>Ancillary service support:</b>		<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
<i>Lodger mother's facility:</i>				
Bed numbers	1 per 2 paediatric & neonatal beds			
Dormitory	Maximum 6 beds per cubicle 4 cubicles per dormitory Minimum 7,5 m <sup>2</sup> / bed			
Lounge / Dining room	10 m <sup>2</sup> / 5 mothers			
Ablution	1 bath / shower per 12 mothers 1 toilet & basin per 7 mothers			
Laundry	Wash trough, work surface & clothes line			
Outdoor "recreation" space				

<i>Central Milk Kitchen:</i>		<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
Required for hospitals with >20 neonatal &/or paediatric beds				
Ideally situated in or near CSSD with access to an autoclave				
“Dirty” area – to clean feeding utensils	Hands-free basin, work surface, double sink & bottle cleaner / sufficient work surface for “3-bowl” cleaning process			
Storage space	Work surface, storage shelves or cupboards			
“Clean” area to prepare feeds	Hands-free basin Work surfaces for sterile & unsterile purposes 3 electrical points (fridge, urn & mixers) Hydro boil is <b>NOT</b> an appropriate hot water source			

### Children’s Ward Equipment (For DCST to fill in):

#### Item per ward:

<b>Item</b>	<b>N<sup>o</sup></b>	<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
Electronic infant scale	1			
Bathroom scale	1			
Sitting scale	1			
Stadiometer	1			
Diagnostic set	2			
Patella hammer	2			
Glucometer	2			
Haemoglobinometer	1			
Peak flow meter	1			
Feeding pump	1 per 10 beds			
Spot light	2			
Torch	1			
Calculator	1			
X-ray viewing box	1			
“Cradle”	2			
Traction	2			

Resuscitation set:				
Laryngoscope handle	2			
Blade – straight size 0	1			
Blade – straight size 1	1			
Blade – straight size 2	1			
Blade – curved size 1	1			
Blade – curved size 2	1			
Blade – curved size 3	1			
Blade – curved size 4	1			
McGill forceps – neonate	1			
McGill forceps – paediatric	1			
McGill forceps – adult	1			
Ambubag – 500 ml (child)	1			
Ambubag – 1600 ml (adult)	1			
Ambubag masks sizes 00 - 5	1 each			

### **Equipment per cubicle**

Equipment required to support the functioning of individual cubicles within the ward:

<b>Item</b>	<b>N<sup>o</sup></b>	<b>Available; Functional</b>	<b>Available; Not Functional</b>	<b>Not available</b>
Heater	1			
Fan	1			
Portable O <sub>2</sub>	1			
Portable suction	1			
Screen	2			
Multiparameter monitor (T <sup>o</sup> , pulse, Resp, SpO <sub>2</sub> , NIBP)	1			



**Equipment per bed**

**General bed:** Dedicated equipment required for individual critical care beds according to their function.

Item	General bed	Available; Functional	Available; Not Functional	Not available
Cot – large	1			
Juvenile bed	0.15			
Locker	1			
Cardiac table	1			
Stool / chair	1			
Clipboard	1			
Stethoscope	0.3			
Double O <sub>2</sub> flow meter	1 per point			
Suction unit	1 per point			
Head box	0.2			
Infusion pump	0.2			
Drip stand	0.2			
Pulse oximeter	0.15			
Dina map	0.15			

**Isolation bed:** Dedicated equipment required for individual critical care beds according to their function.

Item	Isolation bed	Available; Functional	Available; Not Functional	Not available
Cot – large	1			
Juvenile bed	0.25			
Locker	1			
Cardiac table	1			
Stool / chair	1			
Clipboard	1			
Stethoscope	1			
Double O <sub>2</sub> flow meter	1 per point			
Suction unit	1 per point			
Head box	0.2			
Infusion pump	1			
Drip stand	1			
Pulse oximeter	0.5			
Dina map	0.5			

**High care bed:** Dedicated equipment required for individual critical care beds according to their function.

Item	High care bed*	Available; Functional	Available; Not Functional	Not available
Cot – large	1			
Juvenile bed	0.5			
Locker	1			
Cardiac table	1			
Stool / chair	1			
Clipboard	1			
Stethoscope	1			
Double O <sub>2</sub> flow meter	1			
Suction unit	1			
Infusion pump	2			
Syringe pump	2			
Drip stand	2			
Multiparameter monitor (T <sup>o</sup> , pulse, Resp, SpO <sub>2</sub> , NIBP)	1			

\* Each children's ward should have a minimum of 2 high care beds

#### **Children's Outpatient Department (POPD) Assessment (For DCST to fill in):**

##### **Equipment per department**

Equipment required to support the general functioning of the department.

Item	N <sup>o</sup>	Available; Functional	Available; Not Functional	Not available
Electronic infant scale	1			
Bathroom scale	1			
Sitting scale	1			
Stadiometer	1			
Tape measure	2			
Stethoscope	2			
Glucometer	1			
Haemoglobinometer	1			
Torch	1			
Calculator	1			
Spot light	1			
Fan	1			
Portable oxygen	1			
Portable suction	1			

**Equipment per consulting room**

Equipment required supporting the functioning of each component/cubicle within the POPD.

Item	N <sup>o</sup>	Available; Functional	Available; Not Functional	Not available
Examination couch	1			
Diagnostic set	1			
Patella hammer	1			
Peak flow meter	1			
Growth charts	Adequate No.			
X-ray viewing box	1			

**Equipment for resuscitation / procedure room**

Item	High care bed status	Available; Functional	Available; Not Functional	Not available
<b>Per room:</b>				
Resuscitation set	1			
Laryngoscope handles	1			
Blades straight – sizes 0, 1, 2	1 each			
curved – sizes 0, 1, 2	1 each			
McGill's forceps - small	1			
medium	1			
Ambubag - infant	1			
child	1			
Portable O <sub>2</sub>	1			
Portable suction	1			
<b>Per bed in resus/procedure room:</b>				
Juvenile bed	1			
Double O <sub>2</sub> flow meter	1			
Suction unit	1			
Stethoscope	1			
Infusion pump	1			
Dina map	1			
Pulse oximeter	1			

**Annexure 7: Obstetric Signal Function (OSF) and Neonatal Signal Function (NSF) checklist**

Dimensions of Facility Care	Obstetric	Newborns	
<b>General requirements for health facility</b>	Service availability 24/7		
	Skilled providers in sufficient numbers		
	Referral service to higher-level care, communication tools		
	Reliable electricity and water supply, heating in cold climates, clean toilets		
<b>A. Routine care (for all mothers and babies)</b>	Monitoring and management of labour using partograph	Thermal protection including KMC	
	Infection prevention measures (hand-washing, gloves)	Immediate and exclusive breastfeeding	
	Active management of third stage of labour (AMTSL) <sup>b</sup>	Infection prevention including hygienic cord care	
<b>B. Basic emergency care (for mothers and babies with complications)</b>	Parenteral magnesium sulphate for (pre-) Eclampsia	Antibiotics for preterm or prolonged PROM to prevent infection	
	Assisted vaginal delivery	Corticosteroids in preterm labour	
	Parenteral antibiotics for maternal infection	Resuscitation with bag and mask of non-breathing baby	
	Parenteral oxytocic drugs for haemorrhage	KMC for premature/very small babies	
	Manual removal of placenta for retained placenta	Alternative feeding if baby is unable to breastfeed	
	Removal of retained products of conception	Injectable antibiotics for neonatal sepsis	
		PMTCT	
	<b>C. Comprehensive emergency care (functions in addition to Basic)</b>	Surgery (e.g.-section) including anaesthesia, blood transfusion	Intravenous fluids Safe administration of oxygen (includes provision of CPAP)

## **Additional DCST Resources**

*DCST Toolkit*

Available at: <http://www.rmchsa.org/district-level-resources-dcst-dhmt-and-others/>

*Maternal, Newborn, Child and Women's Health and Nutrition Strategic Plan 2012-2016*

Available at: <http://www.rmchsa.org/sa-national-doh-policies-and-strategies/>

*Maternal, newborn, child and women's health and nutrition dashboards DHIS performance indicators 2013/14*

Available at: <http://www.rmchsa.org/new-knowledge-lessons-learned-and-best-practice-resources/>

*Ministerial Task Team Report on DCST in South Africa*

Available at: <http://www.rmchsa.org/district-level-resources-dcst-dhmt-and-others/>

*National DCST Induction Launch Reports*

Available at: <http://www.rmchsa.org/district-level-resources-dcst-dhmt-and-others/>

*National DCST recruitment status*

Available at: <http://www.rmchsa.org/district-level-resources-dcst-dhmt-and-others/>

*The implementation of PHC re-engineering in South Africa*

Available at: <http://www.rmchsa.org/sa-national-doh-policies-and-strategies/>

## Notes

## Notes

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The North West Province DCST team

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