

A CLINICAL GOVERNANCE HANDBOOK FOR DISTRICT CLINICAL SPECIALIST TEAMS

This handbook has been developed and published by Health Systems Trust in support of the RMCH programme. The programme is implemented by GRM Futures Group in partnership with Health Systems Trust, Save the Children South Africa and Social Development Direct, with funding from the UK Government. The views expressed do not necessarily reflect the UK Government's official policies. All reasonable precautions have been taken to verify the information contained in this publication.

ISBN number: 978-1-919839-79-0

Suggested Citation:

Connell L. A clinical governance handbook for District Clinical Specialist Teams. Durban: Health Systems Trust; 2014.

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RMCH (Reducing Maternal and Child Mortality through Strengthening Primary Health Care in South Africa) is committed to helping reduce the high number of avoidable maternal and child deaths in South Africa by strengthening the primary health care system. The programme provides technical assistance to the South African National Department of Health (NDoH) and the Districts to improve the quality of, and access to, reproductive, maternal and child health services for women and children living in poorer, underserved areas in South Africa.

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ACKNOWLEDGEMENTS

This handbook was written by Lucy Connell with a valued contribution from Nancy Coulson who authored Chapter 5, which explores how to motivate and inspire health professionals.

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A team of reviewers enriched the handbook with their insightful and robust critique. The dedication of their time and effort is greatly appreciated. The review team included:

- Prof Eckhart Buchmann
- Dr Shuaib Kauchali
- Dr Gert Marincowitz
- Dr Gugu Ngubane
- Prof David Sanders

We also thank all the District Clinical Specialists Team (DCST) members countrywide who participated in the National DCST Induction and Orientation programme between August 2012 and May 2014. The energy and commitment they brought to the process of defining their emerging professional identity was the inspiration for this booklet.

We are grateful for permission from UNICEF to include quotes gathered in a UNICEF-funded independent evaluation of the Leadership and Mentorship Induction Programme for District Clinical Specialists Teams in KwaZulu-Natal. These quotes, gathered from DCST and District Health Management Team members during the qualitative component of the evaluation, aptly illustrate the spirit, practical implementation and fruits of clinical governance endeavours.

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LIST OF ACRONYMS

CHC	Community Health Centre
Child PIP	Child Healthcare Problem Identification Programme
CoMMiC	Committee on Morbidity and Mortality in Children
DCST	District Clinical Specialist Team
DHIS	District Health Information System
EMS	Emergency Medical Services
HIV	Human Immunodeficiency Virus
IMCI	Integrated Management of Childhood Illness
KZN	KwaZulu-Natal
MCWH	Maternal, Child and Women's Health
MNCWH&N	Maternal, Neonatal, Child and Women's Health and Nutrition
MDG	Millennium Development Goal
MOU	Midwife Obstetric Unit
MTT	Ministerial Task Team
NaPeMMCo	National Perinatal Mortality and Morbidity Committee
NCCEMD	National Committee for the Confidential Enquiry into Maternal Deaths
NDoH	National Department of Health
NGO	Non-governmental Organisation
PCR	Polymerase Chain Reaction
PDSA	Plan Do Study Act Cycle
PHC	Primary Health Care
PRM	Perinatal Review Meeting
QI	Quality Improvement
PIIP	Perinatal Problem Identification Programme
SAM	Severe Acute Malnutrition
SOP	Standard Operating Procedure

1. ABOUT THIS HANDBOOK

Who is this handbook for?

- This handbook was designed primarily as a tool for **district clinical specialist teams** (DCSTs), and for the **provincial specialists** who will guide and support their work
- This handbook will also be useful to **managers of health facilities, heads of clinical units and nurses, doctors and allied health workers** at the coalface of clinical care
- This handbook will be of interest to **district managers** and other members of the district management team who are dedicated to developing the capacity of the district health system to respond effectively to the health needs of the population they serve. It will help them understand the role of the DCSTs and the type of activities they need to engage in to improve the quality of care. Thus, it is hoped that this handbook will assist the district management team to be valuable partners in these initiatives.

In fact, this handbook will be helpful to all clinicians and managers who consciously ask the question, “How could our care be better?”

Why was this handbook developed?

- To outline the key elements and practical approaches of clinical governance for District Clinical Specialists, a new cadre of health worker introduced by the National Department of Health (NDoH) in 2012. This handbook was created especially for DCST members who joined their DCST teams after the conclusion of the National DCST Induction and Orientation Programme.¹
- To assist DCST members to put the principles of clinical governance into practice and develop clear strategies to improve the quality of care and clinical outcomes for women and children in their districts

¹The NDoH launched a national induction and orientation programme to equip new DCST members with the very different skill sets they would require in addition to the clinical proficiency for which they were selected, namely, an understanding of the theory and practice of clinical governance, building and working as effective teams, clinical leadership, clinical mentorship, working with health information to effect change for improvement, and an understanding of the building blocks of the health system. This induction and orientation programme ran from September 2012 to May 2014.

- To help DCSTs to identify and access resources to support their quality improvement efforts, such as case studies, tools, relevant readings
- To help DCSTs identify and link up with potential quality improvement partners within their districts.

What is in this handbook?

The first chapter defines clinical governance and explores some of the elements that make up clinical governance. You can decide which elements to introduce and when, and you can make plans that meet your own circumstances.

In the following chapters we discuss some of the key elements of clinical governance in more detail and explore activities and tools.

Next, we consider some of the practical issues for getting clinical governance off the ground in your district. These include finding time to think consciously about and plan your clinical governance strategy with your team and how to identify and enrol partners and allies in the district who can support and participate in your clinical governance initiatives.

We have not included detailed information and advice about every aspect of clinical governance. Thus, at the end of each chapter there is a resource section that will direct you (via internet links) to other places where you can find more detailed information, tools and practical examples.

The Handbook for District Clinical Specialist Teams

Anybody who is a member of a DCST or who works together with DCSTs should read the NDoH's booklet "Handbook for District Clinical Specialist Teams".² This concise handbook describes the role of the DCSTs, how they fit into the district health system, and provides guidance about approaches to strengthening the health system.

The handbook is also a useful reference for provincial specialists,

²National Department of Health. Handbook for District Clinical Specialist Teams (DCSTs). Pretoria: Department of Health: 2014. http://www.rmchsa.org/wp-content/uploads/2013/05/Handbook_for_DCSTs_Version-8_Final_2014-07-4-FOR-BOOKLET-PRINTING.pdf [Accessed 11 September 2014]

provincial DCST co-ordinators, Maternal, Newborn, Child, and Women’s Health (MNCWH) managers at provincial and district level, and broader district management teams. The handbook can be used as a quick induction tool for new members of the DCST who joined the team after the completion of the formal National DCST Induction and Orientation Programme.

Figure 1: Cover page: Handbook for District Clinical Specialist Teams



2. AN INTRODUCTION TO CLINICAL GOVERNANCE

What is clinical governance?

Clinical governance is a framework that helps managers and clinicians (such as nurses, doctors, physiotherapists) to improve the quality of their services and safeguard standards of care, continuously, thoughtfully and in a co-ordinated fashion, by creating an environment in which excellence in clinical care will flourish.

Put simply, clinical governance is an umbrella term for everything that helps to maintain and improve high standards of patient care. Clinical governance covers a whole range of quality improvement activities that many managers and clinicians are doing already, some examples being conducting surveys of patient satisfaction, development and dissemination of evidence-informed guidelines, conducting audits of antenatal cards, and holding monthly perinatal review meetings. Clinical governance provides a framework to draw these activities and tools together in a co-ordinated way, while an understanding of clinical governance will assist DCSTs to make these activities more effective.

What is clinical governance really about?

The following key points illustrate what clinical governance is about:³

- Clinical governance is about every member of the health facility staff **recognising their role** in providing high quality of care
- Clinical governance is about **improving care** using whatever method is the most suitable – for example, by identifying aspects of care that need improvement, making plans to improve them, and monitoring your success
- Clinical governance puts **patients' experience** at the heart of clinical care and involves patients and the public in defining quality and in efforts to improve it
- Clinical governance is not only about identifying what is wrong – it is also about identifying **good practice** and what is working well

³ Adapted from: Roland MO, Baker R. Clinical Governance: A practical guide for primary care teams. University of Manchester, National Primary Care Research and Development Centre; 1999 and Scally G, Donaldson LJ. Clinical governance and the drive for quality improvement in the new NHS in England. British Medical Journal. 1998 July 4; 317(7150): 61-65.

- Clinical governance is about changing **organisational culture** – away from a culture of blame to one of **learning** so that aspiring towards quality infuses all aspects of the organisation’s work
- Clinical governance is about nurturing a sense of **accountability**
- Clinical governance is about developing true **partnerships** – between managers and clinical staff and between clinical staff and patients.

What are the elements of clinical governance?

There are four main components or pillars of clinical governance. These include:

1. Clinical effectiveness

- Evidence-informed practice
- Clinical guidelines
- Clinical audit – measuring the quality of care offered and comparing this against standards

2. Patient safety

- Risk management – identifying potential risks and taking action to avoid them
- Adverse events – detection, investigation and learning lessons

3. Patient focus

- Complaints management
- Patient information
- Patient involvement

4. Continuing professional development

- Reading to keep up to date with latest evidence and guidelines
- Taking an active part in journal clubs and multi-disciplinary training activities
- Seeking feedback on performance from clinical colleagues

Why is clinical governance needed?

In every country, the quality of health care varies across regions, facilities and levels of care. So, health organisations need a way to reduce inappropriate variations in standards of care and minimise the risk that care will not go well. Clinical governance provides the framework to guide and support this.

The concept of clinical governance recognises that health professionals are part of a public service. They have a duty to the clients and communities they serve to maintain the quality and safety of care and they must be accountable for what they do. Whatever structures, systems and processes are put in place, they must be able to show evidence that standards are upheld.

In South Africa, the quality of care in many facilities is not as good as we would like it to be. It seems clear that we will not succeed in our efforts to reach the Millennium Development Goals for maternal health. However, there are promising initiatives underway to strengthen the district-based primary health care (PHC) approach and to improve the building blocks of the health system. Yet, many health workers are demoralised because there seems to be little improvement despite the fact that they are working hard and giving of their best. The aim of an energetic and enthusiastic focus on clinical governance is to encourage a culture where health professionals are able to reflect on how they are working, to envision new possibilities and to find ways to improve the outcomes of their efforts, even in very challenging circumstances.

*“Yes, there are some problems here. Some we can do nothing about, but some we **can** change. It may be good for people who come to our clinic, but mostly it will make my job feel better.”*

Participant during a Health Worker for Change workshop in South Africa⁴

⁴ Fonn S, Xaba M. Health workers for Change. A Manual to Improve Quality of Care. <http://www.who.int/tdr/publications/documents/health-workers.pdf> [Accessed 20 march 2014]

Why should DCSTs be concerned with clinical governance?

“The aim of the DCSTs is to strengthen the district health system in order to improve the quality of care for mothers, newborns and children, reduce mortality and improve health outcomes in these groups.”

Ministerial Task Team (MTT) Report on District Clinical Specialist Teams⁵

The MTT Report specifically tasks DCSTs with strengthening clinical governance of district-based services, detailing their role to:

- Assist, support and participate in risk management activities for patients (e.g. critical event analysis, morbidity and mortality meetings), practitioners (e.g. infection control) and the organisation (e.g. performance reviews)
- Assist, support and participate in clinical audit and quality improvement cycles in health facilities within the district.

The role of the DCST is to strengthen the understanding and practice of clinical governance in health facilities. Their role is not to take on sole responsibility for clinical governance but rather to inspire and enable managers and clinicians to take up this role in their own facilities with diligence and passion, because they can see that it works. DCSTs may start off by initiating and driving clinical governance plans and activities. However, by including stakeholders in the process (operational and clinical managers, clinicians, patients and communities) and supporting them as they take on an active role, the DCSTs need to move from the doing to building staff with the motivation and capacity to proceed alone. Chapter 5 explores how to motivate and inspire health workers.

*“You know, **we** did this. No one gave us extra money or staff. The advanced midwife (on the DCST) worked with us to evaluate how we were implementing the Initiative for Newborn Care. She helped us pick up weaknesses and we made changes. Here, look at our statistics since 2012, see how it has dropped each quarter ...”*

Midwives speaking about a decline in early neonatal deaths at a district hospital

⁵ National Department of Health. District Clinical Specialist Teams in South Africa. Ministerial Task Team Report to the Honourable Minister of Health, Dr Aaron Motsoaledi. Pretoria: Department of Health; 2012. http://www.rmchsa.org/wp-content/resources/resources_by_type/DistrictLevelResources/MinisterialTTRreport_DCSTInSouthAfrica.pdf

Clinical governance and the National Core Standards

The National Core Standards for Health Establishments in South Africa, developed in 2011 by the Office of Health Standards Compliance, is a potentially powerful tool to promote and support clinical governance. The chief purpose of the National Core Standards is to support quality improvement by:

- Developing a common definition of quality of health care to guide the planning of health services and inform the public about what they have a right to expect
- Establishing a national benchmark for quality care against which delivery of services can be measured
- Providing a common tool for managers, supervisors and health-care workers to identify gaps, appraise strengths and guide quality improvement
- Providing a framework for the assessment and certification of health facilities.

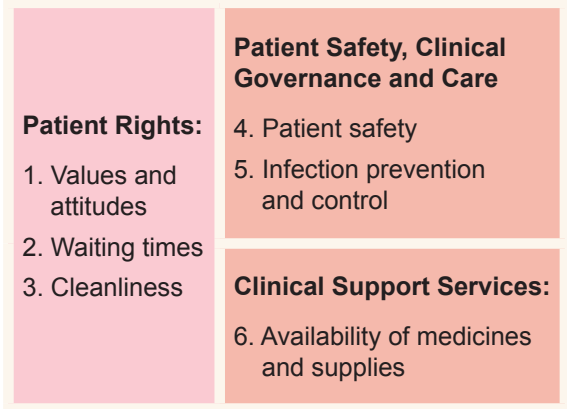
The National Core Standards are divided into seven domains (Figure 2 below), which are areas of potential risk to quality or safety. Domain 2 – Patient Safety, Clinical Governance and Clinical Care – covers how to: ensure quality nursing and clinical care and ethical practice; reduce unintended harm to healthcare users or patients in identified cases of greater clinical risk; prevent or manage problems or adverse events, including healthcare-associated infections; and support any affected patients or staff.

Figure 2: The seven domains of the National Core Standards



Each domain is divided further into sub-domains. The NDoH has prioritised six sub-domains for immediate implementation. The six fast-track priority areas are listed in Figure 3. Two of these areas – Patient safety and Infection prevention and control – fall under Domain 2.

Figure 3: The six fast-track areas from the first three domains of the National Core Standards



Three key resources have been developed by the NDoH to support the implementation of the National Core Standards. These documents are essential reading for DCST members.

1. National Core Standards for Health Establishments in South Africa. DoH 2011.
2. National Core Standards for Health Establishments in South Africa, Abridged version. DoH 2011.
3. Fast Track to Quality: The six most critical areas for patient-centred care. DoH 2011.

The National Core Standards provide a strong policy framework to promote clinical governance activities. Managers have already been appointed at national, provincial, district, sub-district and facility levels who are tasked with ensuring that health care establishments are using the Core Standards to improve their quality of care. Every facility should have a Quality Committee. Members of these quality committees are potential partners and may bring valuable experience, insights and resources to the clinical governance table. DCSTs should

make an effort to find out as much as possible about the structures and personnel responsible for Core Standards in their districts and facilities, initiate contact and explore opportunities for collaboration.

Resources for Chapter 2

1. National Department of Health. Handbook for District Clinical Specialist Teams (DCSTs). Pretoria: Department of Health; 2014. http://www.rmchsa.org/wp-content/uploads/2013/05/Handbook_for_DCSTs_Version-8_Final_2014-07-4-FOR-BOOKLET-PRINTING.pdf [Accessed 11 September 2014]
2. National Department of Health. District Clinical Specialist Teams in South Africa. Ministerial Task Team Report to the Honourable Minister of Health, Dr Aaron Motsoaledi. Pretoria: Department of Health; 2012. http://www.rmchsa.org/wp-content/resources/resources_by_type/DistrictLevelResources/MinisterialTTRReport_DCSTInSouthAfrica.pdf
3. National Department of Health. National Core Standards for Health Establishments in South Africa. Pretoria: Department of Health; 2011. http://www.rmchsa.org/wp-content/resources/resources_by_type/SANationalDoHPolicies_Strategies/National-CoreStandardsHealthEstablishments_2012.pdf
4. National Department of Health. National Core Standards for Health Establishments in South Africa, Abridged version. Pretoria: Department of Health; 2011. <http://www.sarrahsouthafrica.org/LinkClick.aspx?fileticket=61Nfb3rrDTc%3d&tabid=2327>
5. National Department of Health. Fast Track to Quality: The six most critical areas for patient-centred care. Pretoria: Department of Health; 2011. <http://www.sarrahsouthafrica.org/LinkClick.aspx?fileticket=dtozG3V0geE%3d&tabid=2327>
6. Fonn S, Xaba M. Health workers for Change. A Manual to Improve Quality of Care. <http://www.who.int/tdr/publications/documents/health-workers.pdf>.

3. CLINICAL EFFECTIVENESS

The five Rs:

Clinical effectiveness can be described as achieving:⁶

1. **Right care** – the right care is provided to the patient
2. **Right patient** – right patient who is informed and involved in their care
3. **Right time** – at the right time
4. **Right clinician** – by the right clinician with the right skills
5. **Right way** – in the right way

The key components of clinical effectiveness include:

- Evidence-informed practice
- Clinical guidelines
- Clinical audit – measuring the quality of care offered and comparing this against standards.

Evidence-informed practice and evidence-informed guidelines

The National Department of Health consistently generates comprehensive policy and guidelines that have a strong and current evidence basis and are tailored to the South African context. However, the high quality of these guidelines is not matched by implementation that leads to effective care. One reason for this is that the contents of these guidelines often do not filter down to the clinicians at the coalface of clinical care. Guidelines often remain in cupboards and files far away from casualties and consulting rooms. The practical guidance within them is not brought alive to guide and support daily practice.

There are several ways that DCST members can bring the guidelines alive for clinicians:

- Make guidelines accessible to the users

⁶ Victorian Government, Australia. Victorian clinical governance policy framework: A guidebook. Melbourne: Victorian Government; 2009.

- Make the guidelines easy to access. Collect and keep together all the guidelines various clinicians are likely to need – for example, put together a file of protocols for the medical officer who rotates through the paediatric wards.
- Put up wall charts, laminating them and displaying them where they are needed for easy reference. There are many protocol wall charts produced by the NDoH and its NGO partners. Relevant pages from guidelines can also be adapted and enlarged.
- Assist clinicians to engage with the content of the guidelines and to reflect on how they are implementing them. While in-service, didactic training may be an important part of spreading knowledge about protocols, the time spent mentoring while working side-by-side with clinicians is priceless. Clinical audit is a useful tool to help health professionals gauge how they are implementing evidence-informed practice.

“They [the DCST members] help us understand the guidelines. It is no good that the guidelines are neatly filed in the manager’s office. No. She (the PHC nurse specialist) collected all the guidelines we need and made a booklet for us to use in the consulting rooms. She encouraged us to display important pages on the wall. For example, with malnutrition, staff are now classifying children properly and management is improving.”

PHC supervisor, KwaZulu-Natal

“In our province, the DoH takes the national guidelines and “provincialises” them, making them relevant to our main problems and ways of working. We also take the guidelines and see what they mean for the different levels of care in PHCs, CHCs, district and regional hospitals. We collate the various guidelines and put all of the ones relevant to maternal care or child health together. We help our colleagues in the facilities understand what the guidelines mean for them in their facility.”

DCST obstetrician

“First of all, they are so used to seeing me in the labour ward and happy to see me because I often help out. Now I just go up to any cubicle, I pick up the file and say, “Who is looking after this patient? Would you mind presenting her case to me, please?” Then we manage the patient together and talk about our approach. I ask her questions. I support all she is doing right and discuss how to do things better. They feel they are really learning and I get calls all the time to come back.”

Advanced midwife, explaining how she conducts clinical mentoring

Clinical audit

What is clinical audit?

Clinical audit is an essential tool to help health professionals to assess the quality of care they offer in an objective manner, whether best practice is being followed, and whether the patient outcomes are the desired ones.

“Clinical audit is a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria ... Where indicated, changes are implemented ... and further monitoring is used to confirm improvement in health care delivery.”

Principles for Best practice in Clinical Audit⁷

Clinical audit is not just a single data collection activity. Rather it is a quality improvement **process** or **cycle** that includes the following steps:

- Measuring procedures for diagnosis, care and treatment against explicit criteria or the “gold standard”, and investigating what impact these have on patient outcomes
- Identifying opportunities for improvement and planning and implementing changes, if necessary
- Following up by further audit to see if the changes have been successfully implemented and are yielding the expected outcomes.

⁷ National Institute for Health and Care Excellence. Principles for Best Practice in Clinical Audit. Oxford: Radcliffe Medical Press; 2002.

*All too often, the clinical audit cycle is not completed. The most important part of the cycle is making a change. Without checking if performance has improved by collecting data for a second time there is no way to tell if this change has occurred. Chapter 6 explores the concept of the **quality improvement cycle** in more depth.*

What aspects of clinical practice can be audited?

Clinical audits may explore:

- **Inputs** – the availability and organisation of resources and personnel

Examples of clinical audits evaluating inputs include:

- Checking the contents and placement of resuscitation trolleys
- Direct observation of the appropriateness of labour ward infrastructure
- Evaluating staff complement against staff norms.

- **Processes** – the activities undertaken with these resources

Most clinical audits look at processes. Examples include:

- Reviews of antenatal cards for completeness of information and/or accuracy of plots of gestational age and fundal height
- Audit of the partogram
- Reviews of inpatient files to assess whether vital signs in post-Caesarean section women are being assessed according to protocol in recovery and the postnatal wards
- Reviews of Child Health Booklets for completeness of information on growth, vaccination history and development progress.

Process or clinical pathway mapping is also a type of clinical audit and is discussed in greater detail below.

- **Outcomes** – the effect of the activities on the health and well-being of the individual

Examples include:

- The annual maternal, neonatal and child mortality audits (NCCEMD, PPIP, Child PIP) done in health facilities across South Africa.

The key stages of a clinical audit

The main stages of the clinical audit process are:

1. Selecting a topic
2. Agreeing on standards of best practice (audit criteria)
3. Collecting data
4. Analysing data against standards
5. Feeding back results to all stakeholders
6. Discussing possible changes
7. Implementing agreed changes
8. Allowing time for changes to embed, before re-auditing
9. Collecting a second set of data
10. Analysing the re-audit data
11. Feeding back the re-audit results
12. Discussing whether practice has improved
13. Considering how to sustain positive changes

Finding a topic for audit

Because clinical audit projects take time and resources the topic you choose to investigate should be a priority and the information gained should be of potential benefit to the services. Certain conditions or practices may be a priority because they are extremely common, have a high morbidity or mortality, or are very expensive to manage.

Fortunately, in South Africa, the national mortality audits identify priority areas and there is lucid guidance from the NDoH on key, high impact, cost-effective interventions to improve maternal, newborn and child health.

Ideas for audit topics may also arise from patients' views or complaints, adverse event reporting, critical event review meetings, or research. Also important to consider is whether the process or activity you are auditing is amenable to change.

Who should be involved in a clinical audit?

A clinical audit should involve three main categories of stakeholders:

- Service providers – clinical and non-clinical
- Service users (patients, community members)
- People who will be required to implement change (such as operational managers, HR).

Identify a team to undertake the clinical audit. It is best that this is a multi-disciplinary team because a patient's care is never provided by one discipline only. Remember to include non-clinical staff too – for example ward clerks, data capturers, equipment depot staff and security personnel, as appropriate.

How to conduct a clinical audit – practical advice

The Department of Paediatrics at the Pietermaritzburg Metropolitan Complex provided this advice about conducting a clinical audit:⁸

- Make sure you have the most recent national or provincial guideline on the management of your chosen topic – this will form the basis for a “gold standard” against which to compare your practice
- Select two to four parameters each for the history, examination, investigation and management of the condition that you expect to be applied to every patient with that condition – these will form the indicators with which you will compare your current practice and the “gold standard”
- Develop a data capture form
- Define the time period, patient demographic and patient numbers for your sample
- Identify patients who fulfil the criteria for your sample
- Find their medical record
- Review the medical record objectively and complete the data capture form
- Analyse the data to compare your performance against the “gold standard”

⁸ Pietermaritzburg Metropolitan Hospitals Complex, Department of Paediatrics. Paediatric Clinical Audit. Quality Improvement.
<http://www.kznhealth.gov.za/chrp/documents/Quality%20Improvement/Audit/Clinical/Clinical%20Audit%20-%20Principles%20HeRP%202007.pdf>

- Inform your staff/colleagues of how well your practice compares to the expected “gold standard”
- Develop and implement a response to correct any deficiencies in your practice.

Support for the process

There are many potential sources of support for planning and conducting clinical audits. DCST members will need to embark on a fact finding mission to identify these resources locally and across the country.

These include:

- The NDoH for clinical guidelines that can be used as the “gold standard” for the management of common conditions
- The Office of Health Standards Compliance
- Departments of academic hospitals that may have copies of various audit tools
- An array of websites that provide detail covering all aspects of the clinical audit process (listed and hyperlinked at end of chapter)
- The NDoH “Handbook for DCSTs” that provides guidance, tools and a national dashboard of indicators critical to quality and the clinical governance role of DCSTs.

Process mapping⁹

Process mapping is another useful clinical governance tool. Clinical

⁹ Content for this section was drawn from:

1. Phillips J, Simmonds L. Use of process mapping in service improvement. *Nurs Times* 2013, May 1-14; 109(17-18): 24-6.
<http://www.nursingtimes.net/Journals/2013/04/26/t/w/k/Use-of-process-mapping-in-service-improvement-010513.pdf> [Accessed on 10 March 2014.]
2. National Health Service Institute. Quality and Service Improvement Tools. http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/process_mapping_-_a_conventional_model.html [Accessed on 10 March 2014.]
3. The Scottish Government. Understanding the Patient Journey - Process Mapping. <http://www.scotland.gov.uk/Resource/Doc/141079/0036023.pdf> [Accessed on 10 March 2014.]
4. Victorian Quality Council. Process mapping: A guide for health service staff. June 2007. http://www.health.vic.gov.au/qualitycouncil/downloads/process_mapping.pdf [Accessed on 10 March 2014.]
5. National Department of Health. Quality Improvement Guide: Quality improvement – the key to providing improved quality of care. Pretoria: Department of Health; 2012.
6. Institute for Healthcare Improvement, NDoH and University of KZN/20,000+. The five steps to Quality Improvement: a facility-based guide to improving clinical outcomes and quality mentorship. Pretoria: Department of Health; undated.

pathways or processes are audited to reveal bottlenecks and quality improvement needs.

“Service improvement seeks to continuously adapt and improve processes and pathways to benefit patients, carers and healthcare providers, and to support clinical excellence.”

NHS Institute for Innovation and Improvement, 2008

What is process mapping?

A process is a series of connected steps or actions that achieve an outcome. A process map is a visual representation or picture that documents the steps of any process or pathway. The concept of process mapping originated in the manufacturing industry but is now used all over the world to understand, simplify and optimise processes in all sorts of sectors, such as building cars, customer care in business enterprises, and providing efficient, quality care to patients.

The exercises of mapping the steps of a process or clinical pathway and displaying these visually is a simple but powerful tool to help managers and clinicians to understand clearly how things work in reality, recognise constraints, bottlenecks and unnecessary steps and to identify opportunities for improvement.

Process maps can be used to explore and clarify processes at a high or more detailed level. Examples of mapping high level processes or pathways might include:

- Mapping the current referral pathway and feedback mechanisms for women referred for colposcopy from primary health clinics following abnormal pap smears within a sub-district
- Exploring and documenting the management (screening, diagnosis and treatment) of HIV-exposed infants at a PHC facility.

Sometimes the process map focusses on one element of a bigger pathway and explores this element in more detail, for example:

- The complete diagnostic pathway for HIV DNA PCR testing of HIV-exposed infants at six weeks, in a Community Health Centre (CHC).
- Mapping the process for assessment and acute management of

young children presenting with diarrhoeal disease in a busy casualty or outpatients department.

What is the value of process mapping?

“I was skeptical of the value of the tool (process mapping) at first. But it really opened our eyes. Process mapping enabled us to explore and unpack what usually happens in our clinics, rather than what we think is happening or what we know should be happening.”

DCST obstetrician, after process mapping the clinical pathway followed by 1st visit antenatal care attenders in primary health clinics.

- Often staff accept the current processes without question because “that’s the way it has always been done” rather than because “this is the best way”. Using a process map allows staff to see processes clearly and critically, often for the first time, and this highlights problems, lessons and solutions that would otherwise have remained hidden.
- Most clinical pathways have evolved over time into their current forms. Often these changes have been in response to factors such as new protocols, system constraints or the increasing burden of particular diseases, without conscious reflection on how to improve the processes. This can result in complex patient pathways that lack logic and are characterised by bottlenecks and inefficiencies that undermine both the patient and health worker experience.
- Process mapping can prevent costly mistakes. Clearly understanding a process ensures that the potential solutions are directed at problems that are the real culprits and that have the biggest impact on patients and staff. Actions based on mistaken assumptions can backfire.
- Process mapping helps managers and clinicians understand how complicated the systems can be for patients, showing how many times the patient has to wait and how many different people a patient meets.
- By nature, clinical pathways are complex and may involve a number of staff in different roles and even geographical locations. It is rare that a single healthcare worker knows all the steps involved in a particular patient’s journey or clinical pathway. Thus it is important to involve the full range of people who represent the different

roles involved in a clinical pathway or in carrying out a process. For example, a process mapping exercise focused on EMS responses to emergency obstetric referrals to a district hospital would be more complete, transparent and fruitful if it was informed by insights from all stakeholders involved, namely EMS and health facility managers, clinicians, call centre personnel, paramedics and patients.

- Inclusive process mapping can build and strengthen multi-disciplinary teams, revealing the complete process and allowing co-workers to see and understand the views and roles of each person involved in the patient journey. Involvement in the scrutiny and diagnosis of processes promotes a sense of ownership in staff members and their personal investment in the success of system changes increases if they have participated in the design of solutions.
- Mapping things out can spark brilliant ideas, especially from staff members who don't normally have the opportunity to contribute to service improvement, but really know how things work.
- Process mapping can lead to solutions that cut down the time and energy wasted by clinicians due to inadequate equipment, duplication of tasks, chasing down information and results, doing work that doesn't make sense, and other similar issues.
- Process mapping is a relatively quick and inexpensive tool to use. The only real cost is the time commitment of the individuals involved.

A successful process mapping exercise can reveal many useful insights, such as:

- Understanding how the patients experience the clinical pathway
- Variations from standards of care
- Unnecessary steps, handovers and delays
- Any waste or duplication of effort
- Bottlenecks and constraints
- Things that do not make sense or do not add value to the patient journey
- Potential to create safer care
- Where things are working well
- Where further analysis is required.

How to conduct a process mapping exercise

Getting started:

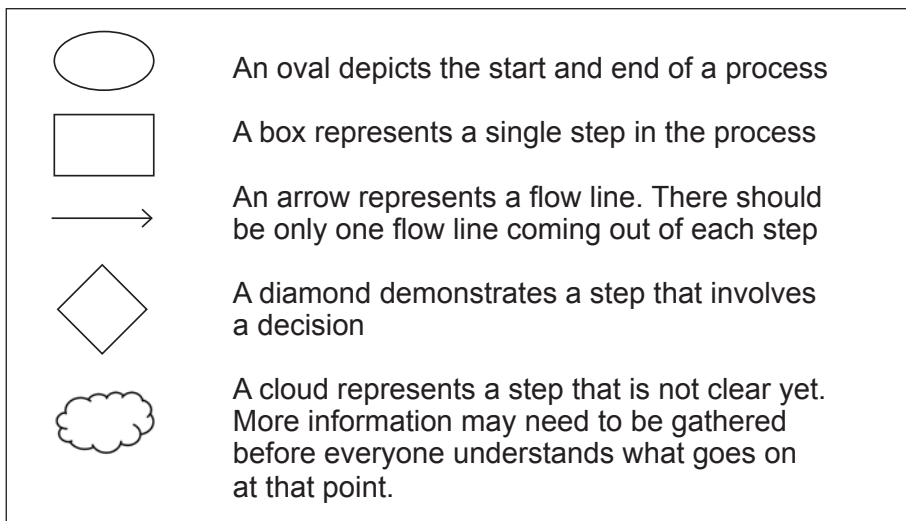
1. Gather a team that will be involved in the process mapping exercise. Ideally, this team should involve representatives of all those who will be required to deliver any of the changes that are suggested by the mapping process. Always emphasise that the core values of any audit or pathway review are a focus on improving patient care and, in a supportive and non-punitive environment, learning how to do this more effectively. This is vital because process mapping can cause anxiety and defensiveness and can be interpreted as judgement and criticism, if not handled sensitively.
2. DCST members, if they have built good relationships with managers and clinicians on the ground, are well placed to facilitate the actual process mapping exercise.
3. Help the team work out what they want or need to know. Concentrate on areas that the team feels need improvement or where they feel there are gaps in their understanding. Patient complaints may also guide the team in choosing which pathway or process to analyse.
4. Decide if you are working at a high level along the whole pathway, or focusing in more detail on one part of it.
5. Work out who else's views you will need and how best to engage with them.
6. Think about how you will capture the patients' views if the mapping exercise includes part of the service that they experience.

There are several steps to process mapping:

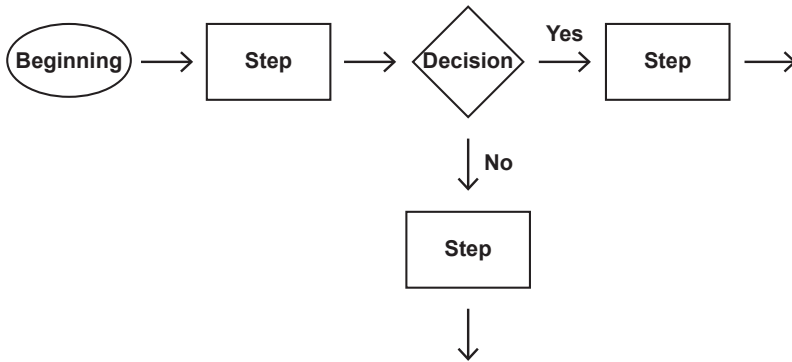
1. Start off by brainstorming and **LIST ALL THE STEPS** in the process. Decide on the start and end points of the process and then fill in the intermediate steps. It may require a lot of discussion and changes before the different participants agree that this represents the process as it usually occurs.
2. While the discussion unfolds, start to **DRAW THE PROCESS**.

- Draw all the steps of your process. Use a box for each step and arrows to link all the boxes/steps to show the direction of the flow of the process.
- Try to make your process map big enough for everyone in the group to see easily. Some people use large pieces of paper stuck together, newsprint or a white/blackboard to draw the process map.
- Write with bold colours and large-tipped Koki pens so that the diagram is visible to all members of the group.
- Some groups find it useful to write the steps on coloured slips of paper or Post-It notes and then stick them onto the newsprint or a wall. By doing this, one can change the order of the steps quite easily without making too much of a mess.
- Be prepared to use several pieces of newsprint before you finally have a flowchart that represents the process to the group's satisfaction.
- Standard flowchart symbols are used to identify specific activities or types of steps in a process map. A few basic symbols are illustrated in Figure 4.

Figure 4: Basic flowchart symbols



So, for example:



Photographs and pictures of the actual places and equipment described in the process map can be very useful. They bring your representation of 'how things really are' to life. A picture speaks a thousand words and they may be more effective in convincing managers of the need for change and re-allocation of resources than pages and pages of reports.

Figure 5: Flow diagram exploring the cervical screening process in a district once a pap smear has been performed at a facility (This is an example of a high-level process map.)



3. Next, **UNDERSTAND** the “5 Ws and 1 H” of each step:
 - a. **What** happens to the patient (or the tissue specimen, blood result or referral letter – as the case may be) at each step?
 - b. **When** does this happen?
 - c. **Where** does this happen?
 - d. **How** does this happen?
 - e. **Who** is involved?
 - f. **Why** does it happen like this? It is important to seek clarification about the reasons behind a step or decision made during the clinical pathway.

4. Once the team has agreed on and described the steps in the process, **ANALYSE** the process map to determine where there are problems – such as bottlenecks that cause significant delays or parts of the process that are not working well. Examine the process for waste, error and duplication and parts of the process which would flow better if undertaken in a different order. Also look for aspects that are working well. Encourage the team to brainstorm freely, there is no such thing as a silly question or observation.

The following lists of questions can aid analysis of a process map.

Analyse the process from the patient’s perspective:

- What is the approximate time between the first and last step?
- How many steps are there for the patient?
- How many times is the patient passed from one person to another (hand-off)?
- What is the approximate time taken for each step (task time)?
- What is the approximate time between each step (wait time)?
- How many steps add no value for the patient?
- Where are the problems for the patient?

Analyse the process from a resource perspective:

- For each step, is it being done by the most appropriate person?
- What are the inputs and resources required for each step?
- Where is the wastage?
- Where are the problems for staff?

Analyse each step:

- Can any step or component be eliminated?
- Can the process be done in some other way?
- Can it be done in a different order?
- Should it be done somewhere else?
- Can it be done in conjunction with another process?
- Can any bottlenecks (places where people wait) be removed?

5. **DIG DEEPER.** Remember to always challenge participants to go beyond their assumptions when trying to understand why certain steps do not work well or are unnecessary. Teach them how to ask “Why?” again and again until they get to the root cause of problems.

Have a look at the process map. Which steps are causing the most delays? Consider mapping these steps in more detail. This can be done several times, each time getting a greater level of detail.

6. Brainstorm and **IDENTIFY SOLUTIONS** and prioritise and plan changes.
7. Ensure that the exercise results in a **QUALITY IMPROVEMENT PLAN** and that the improvement cycle is completed, i.e. that the team implements the planned changes, evaluates whether these have the desired impact on the pathway, and plans how to embed or institutionalise positive changes.

Two different methods of process mapping

The process mapping described above is what is known as the **conventional process mapping**, a table-top exercise involving all stakeholders who map out each step together. There is another type of process mapping which involves observing the clinical process first hand so that the observer can note the patient's experiences while mapping the pathway. This is known as **observational process mapping** and it involves "going and seeing for yourself".

Integrated Management of Childhood Illnesses (IMCI) facilitators have a strong tradition of clinical audit and process mapping by direct observation. Many IMCI facilitators are skilled in approaching facility managers and clinicians in a non-judgemental and supportive manner and do not make facility staff feel threatened.

- When using observational process mapping it is important to capture the patients' perspective without preconceived ideas. The observer should try, where possible, not to intervene in the steps of the clinical pathway. For example, if a patient arrives in a department and is not greeted courteously by a clerk or nurse, the role of the observer is not to intervene in the communication, but to wait with the patient to see what happens "in reality". However, if at a point in the pathway it is clear that the patient receives sub-standard health care, the observer does have a duty to intervene before the patient leaves the facility.
- When completing an observational process mapping exercise it is useful to record the time the patient spends at each step. It is important to annotate each step of the clinical pathway with detailed observations about the patient's experience and more general observations. For example, "*crowded waiting room with little ventilation, several patients coughing continuously throughout the long wait*" or "*the nurse made sure the mother understood all aspects of her infant's care*".
- The process map should not be drawn up until after the observation to make sure the observers focus on experiencing the clinical pathway and are not distracted by capturing the process. Not writing up until after the event also gives an opportunity for reflection, which is a valuable in considering solutions to problems. However, write-up should not be left too long after the observation so that the events are still fresh in the observers' memories.

Case study 1: Observational process mapping to explore integration of maternal and child health services¹⁰

The problem: One of the priority problems our team (DCST) identified through our Situational Analysis was very low couple year contraception rates in some clinics. We spent time with nurses in the family planning cubicles in clinics to explore this further and realised that there was a need to increase knowledge about and demand for contraceptive methods among clients and to improve their access to contraceptive services. The 2012 National Contraception Guidelines call for the integration of contraceptive and fertility planning services into other health services as appropriate, such as at postnatal check-ups, immunisation, well-baby visits and IMCI visits.

The question: We wanted to understand how the staff in these clinics used routine encounters with clients to promote fertility planning and counsel about contraceptive methods among women in the reproductive age group.

The mapping exercise: We decided to do unannounced direct observation in order to be able to build an accurate picture of how contraceptive counselling and services are integrated with child health services in PHC facilities. After our observations we were able to map the typical clinical pathways experienced by mothers who bring their infants to the clinic.

Before we started we discussed our objectives and plans with our Director of District Health Services and he supported us. He informed facility managers that DCST members would be visiting to conduct direct observation, sometimes unannounced, of infrastructure, equipment and processes in the facilities for the purposes of quality improvement.

Three of our DCST members dressed in civvies (casual attire) and visited six different clinics on different days. At the clinic gates, they introduced themselves to mothers who had brought very young infants to the clinic and asked their consent to accompany them through the process as the “auntie” of the child. In this manner they quietly accompanied the mother/child pair through the entire visit. This usually

¹⁰ Adapted from a personal account of a Family Physician member of a DCST

took hours. One visit took more than 6 hours. The DCST members timed the waits at each step, the number of steps each pair had to go through, the general attitude and behaviour of staff and if and how the topics of contraception and fertility planning were raised by both mothers and clinicians.

The insights gained: This exercise of observational process mapping yielded useful information that could only come from experiencing the process from the client's perspective.

The key revelations were that:

- Waiting times just to collect a file were very long – from 3 hours to more than 6 hours.
- There was little integration of services and, as a consequence, clients experienced more steps, each with further delays, to complete their clinic visit. For example, a child usually has to access at least two visit points per clinic visit. This happens because the nurse doing immunisations is often different from the nurse doing postnatal checks or the IMCI nurse. In response to direct questions from mothers about symptoms or concerns, nurses informed mothers that they were only doing immunisations and referred mothers to join another queue to see a different nurse.
- There was no integration of maternal and child health services, particularly with respect to fertility planning. Only rarely did staff raise the topic of contraception with mothers, even at the 6-week postnatal visits. Where contraceptive advice was requested, clients were referred for an extra visit on another day to deal with the issue.

The feedback process: We gave feedback on our observations and typical process maps at district level and to the facilities concerned. We reported on both the weaknesses and strengths. We are now in a process of assisting the clinics to identify which aspects of the pathway they feel they can improve.

It is important that direct observational activities by DCST members are accepted as a supportive tool by clinical staff members at the coalface. If these activities are not based on a strong relationship of trust and understanding then the feeling of being inspected and judged can engender resentment and defensiveness which will undermine

the learning process. This does not mean that staff members need to know the date and time of the observations. We tend to work differently when we know we are being observed. However, it is possible to discuss the idea of observational process mapping up front with staff before it happens in order to explain the process, get input into what processes the staff would like explored and how to feed the findings back to the staff.

Ethical considerations

Human Research Ethics Committees in South Africa differentiate between different types of information gathering activities. Activities, such as patient record reviews, process mapping, scrutiny of DHIS data and patient interviews, that are conducted in order to assess performance of programmes and services for the purposes of quality improvement within an institution do not require ethics approval, unless there is an **intention to publish** the information. On the other hand, ethics approval **is** a requirement for all research studies involving similar activities where there is an intention to publish or disseminate results outside the institution in a research journal or research conference.

Clinical audit should always be conducted within an ethical framework, ensuring patient and staff confidentiality and ensuring that data are collected and stored appropriately.

If you think that there are ethical concerns with your project you must discuss these with your local Human Research Ethics Committee.

Resources for Chapter 3

Clinical audit and process mapping:

1. University Hospitals Bristol Clinical Audit Team. A Brief Introduction to Clinical Audit, version 3. NHS Foundation Trust; 2009. <http://www.uhbristol.nhs.uk/files/nhs-ubht/2%20Introduction%20to%20Clinical%20Audit%20v3.pdf>
2. Phillips J, Simmonds L. Use of process mapping in service improvement. Nurs Times. 2013, May 1-14;109(17-18):24-6. <http://www.nursingtimes.net/Journals/2013/04/26/t/w/k/Use-of-process-mapping-in-service-improvement-010513.pdf>
3. NHS Institute for Innovation and Improvement. Quality and Service Improvement Tools. Accessed on 10 March 2014. http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/process_mapping_-_a_conventional_model.html
4. The Scottish Government. Understanding the Patient Journey - Process Mapping. <http://www.scotland.gov.uk/Resource/Doc/141079/0036023.pdf>
5. Victorian Quality Council. Process mapping: A guide for health service staff. June 2007. http://www.health.vic.gov.au/quality-council/downloads/process_mapping.pdf
6. National Department of Health. Quality Improvement Guide: Quality improvement – the key to providing improved quality of care. Pretoria: Department of Health; 2012. <http://rudasa.org.za/index.php/resources/document-library/category/10-quality-improvement>
7. Institute for Healthcare Improvement, NDoH and University of KZN/20,000+. The five steps to Quality Improvement: a facility-based guide to improving clinical outcomes and quality mentorship. http://www.mspsouthafrica.org/files/page/288850/5_steps_to_QI_final_APlan_facility_guide_.pdf

4. PRACTISING SAFELY

Risk management

“A good safety culture is one where staff have a constant and vigilant awareness of the potential for things to go wrong, are able to identify and acknowledge mistakes, learn from them, and take action to put things right in order to make patient care safer.”¹¹

Providing health care is a risky business. No matter how well a health system functions, and no matter how dedicated and competent the professional staff in a health facility might be, things can still go wrong. The potential for patient harm is even greater within a weak health system, with a high disease burden, where many staff members may feel unsupported, helpless and demoralised.

What can be done to manage risks?

The National Core Standards (specifically Domain 2, which is related to Patient Safety, Clinical Governance and Clinical Care) highlight the need for facilities to engage with patient safety **proactively**. It is important for DCSTs to be familiar with these Core Standards because they endorse the focus on risk management and elucidate the important components thereof. This understanding will help DCSTs build a collaborative relationship with managers and structures in facilities that deal with risk management.

Broadly, these are the steps that facilities should take to ensure patient safety:

1. The first step is to **assess how patients may be harmed even before this happens**. An understanding of the adverse incidents that have occurred in the past and identifying common problems can help identify future risk. Clinical risk identification and analysis should take place in every ward to prevent patient safety incidents. Facilities should monitor for these risks and ensure that control measures are carried out. Categories of patients that are at high risk, such as pregnant mothers, children, the mentally

¹¹ National Health Service, National Patient Safety Agency (NPSA). Seven steps to patient safety for primary care. 2009. Available at: <http://www.nrls.npsa.nhs.uk/resources/collections/seven-steps-to-patient-safety/?entryid45=59804> [Accessed 12 September 2014.]

ill, elderly or foreigners, should be identified and receive special attention.

2. **Prevent or manage risks.** Make staff aware of risks in the environment. Put in place robust systems to prevent common errors and ensure that safety protocols are in place to protect patients undergoing high risk procedures such as surgery, medication administration, blood transfusions or resuscitations. Check that clinical and support staff are adequately qualified and trained to recognise and manage risk.
3. **Report and analyse adverse events.** Facilities need to actively encourage reporting of adverse events so that adverse events are identified promptly and managed to minimise harm and suffering. This is more likely to happen if it is commonplace and easy for all members of the multi-disciplinary team to speak up about concerns, taking care to reduce the impact of hierarchical relationships. There should be a procedure in place for acknowledging, investigating and dealing with patient complaints. Complaints should be screened to ensure adverse events are identified and appropriately managed.
4. **Learn from such incidents.** Morbidity and mortality meetings are a key vehicle for learning from adverse events. It is critical to move away from just blaming individuals to trying to understand the role of system factors in patient safety.
5. **Implement solutions to minimise the likelihood of them re-occurring.**

Morbidity and mortality audits

The Minister of Health has appointed three committees that regularly review maternal, perinatal and childhood deaths. These are the National Committee on the Confidential Enquiries 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). Their aims are to identify inequities in care within each health district and suggest strategies and interventions for implementation so that these inequities in access and quality of care can be minimised.

Morbidity and mortality audits that are conducted at facility level include:

- Maternal death reviews
- The Perinatal Problem Identification Programme (PIIP)
- The Child Healthcare Problem Identification Programme (Child PIP).

Key components of an effective perinatal audit process:^{12,13}

There are four crucial activities that comprise an effective perinatal audit process:

1. Review of each perinatal and maternal death within 24 hours of the death:
 - This review should be carried out by the midwife and doctor in charge of the maternity unit, while the details are still fresh in the memories of all involved
 - The relevant patient records should be collated and copied as soon as possible
 - The aim of the review is to make a preliminary assessment of the primary cause of death, the final cause of death and preventable factors.
2. Preparatory review meeting before the monthly perinatal review meeting (PRM):
 - A small committee (at least the PRM chairperson and a senior manager from both nursing and medical) should meet to plan and prepare for the monthly PRM to
 - review the outcomes of all the pregnancies within the month and prepare the statistics for the PRM. This should involve the facility or sub-district information officer if there is one.
 - confirm the agenda and distribute it

¹² This section draws on the work of: Philpott H, Voce A. Four key components of a successful perinatal audit process. Kwik Skwiz 29. Health Systems Trust; 2001. <http://www.hst.org.za/sites/default/files/kwiksk29.pdf>

¹³ This section draws on the work of: Voce A. Guidelines for perinatal review meetings at facilities. Undated manuscript. <http://www.kznhealth.gov.za/perinatal.pdf> [Accessed 12 September 2014.]

- select learning cases for presentation
- prepare educational topics for presentation and notify presenters
- prepare a preliminary action plan (based on the stats and lessons to be learnt from selected cases). The action plan will be further developed through discussion at the meeting.

3. Perinatal review meetings:

- Every hospital should hold a PRM at least every month
- These meetings should be attended by midwives and doctors from the CHCs, midwife obstetric units and clinics within the hospital's catchment area
- The PRM should be scheduled at a regular time each month so that the participants can plan their schedule accordingly. The dates of the meetings should be distributed well in advance (e.g. yearly).
- It is critical that senior management from the hospital attend the PRMs. Their role is to
 - take responsibility for the meeting occurring regularly and running smoothly
 - be involved in decision making and action planning
 - facilitate implementation of actions decided on at the meetings
 - be role models for their subordinates in encouraging quality improvement in the facility
 - keep in touch with what is happening in their institution with regard to perinatal care.

4. Quarterly or six-monthly epidemiological analysis of perinatal and maternal deaths:

It is unlikely that there will be sufficient maternal and perinatal deaths to make possible a study of trends on a monthly basis. This is best done quarterly or six-monthly.

The information to be reviewed should include the following:

- The primary causes of maternal and perinatal deaths
- The final causes of maternal and perinatal deaths
- The preventable causes of these deaths.

DCSTs are playing a critical role in ensuring that facilities respond promptly and effectively to maternal deaths and that perinatal review meetings and child health review meetings at facility and district level occur regularly, efficiently and with greater effect.

The roles that DCSTs can play in facilitating effective perinatal review meetings at facility and district level^{14,15}

- Ensuring meetings happen regularly in facilities
- Ensuring that the meeting follows the desired format
- Ensuring that a feedback process is in place, so that information and actions arising from the meeting are known throughout the sub-district
- Ensuring that good action plans are developed and that follow-up on the actions occurs
- Adding value by sharing their clinical expertise and disseminating new guidelines
- Although DCSTs might initially find themselves in the role of champions of efforts to get PRMs functioning effectively, ideally they should work towards assisting other appropriate leadership (such as district managers, MCWH co-ordinators, facility CEOs and managers) to take over this responsibility.
 - To this end, DCST members should avoid taking over the meeting – if PRMs are not happening or are poorly conducted, the DCST member can chair one meeting to demonstrate how a meeting should be run, and co-chair the next meeting, but by the third meeting s/he must observe the meeting being chaired by someone from the hospital and provide reflective feedback
 - DCSTs can participate in an organising committee for district PRMs

¹⁴ KZN DoH, UKZN SPH and UNICEF. Guidelines for District Perinatal and Child Health Review Meetings.

¹⁵ Voce A. Guidelines for perinatal review meetings at facilities. Undated manuscript. <http://www.kznhealth.gov.za/perinatal.pdf> [Accessed 12 September 2014.]

- DCSTs can mentor and coach other key participants in key skills needed for running effective perinatal meetings – for example the preparation, interpretation and presentation of health information, how to chair meetings and how to draw up action plans
- DCSTs can use leadership skills (even when not chairing the meeting) to get programme managers, facility managers, supervisors and staff to interact meaningfully in the district meeting, rather than attend passively. This can be done by asking their inputs on action items from previous meetings, asking them to take responsibility for items, and by generally seeking their opinion.

“Perinatal mortality meetings are a wonderful opportunity and excellent method of teaching and learning. When the cases are presented, the participants at the meeting should identify problems and errors in the management and suggest what should have been done to avoid the problem or manage the problem better. Learning from one’s mistakes is very effective.”

David Woods

The spirit of mortality audits: Accountability through learning or sanction?*

Audit meetings should be conducted in a spirit of mutual learning – with the triple aims of education, quality improvement and team-building – that includes both clinical and selected non-clinical staff. The facilitator of the meeting should be guided by the principle of “no naming, no blaming and no shaming”. Further, the facilitator must ensure that the meeting concludes with a clear plan of action to prevent recurrence of a similar fatal incident. Such action could include focused training, improved supervisory arrangements, local adaptation of key practice guidelines, and rectifying administrative bottlenecks undermining optimal clinical practice, such as unavailability of emergency blood.

However, in the occasional situation where serious misconduct has been identified as contributing to the death being reviewed, a

*Provided by Sue Fawcus and David Sanders

separate disciplinary process may need to be instituted in parallel to the audit process. A distinct and separate process of enquiry within the disciplinary framework of the Department of Health will need to be initiated by the supervisor of the individual concerned and the senior clinical manager of the institution.

A minority of maternal and perinatal deaths result in a medico-legal process, initiated usually by close family members of the deceased. This, again, is a separate process from the audit and has a defined procedure that is usually co-ordinated by the relevant medico-legal unit of the province concerned.

Audit meetings can be a powerful way to enhance quality care, strengthen accountability and improve teamwork. While they are 'confidential' in the sense of being anonymous, they should not be seen as a means to cover up malpractice. Dealing with cases of malpractice, as described above, is part of ensuring ethical behaviour and accountability, and is a separate but parallel process to the audit meeting.

“A ‘great save’ is when a good diagnosis was made and good care prevented a maternal or perinatal death. As perinatal mortality meetings can become very depressing, it is helpful to mention a few ‘great saves’ as part of the meeting to emphasise the good care that was given.”

David Woods¹⁶

¹⁶ Woods D. Saving Mothers and Babies: Maternal and perinatal mortality audits. Chapter 4 in the book “Newborn Care”. 2008. http://www.oerafrica.org/system/files/8984/saving-mothers-and-babies-maternal-and-perinatal-mortality-audits_0.pdf?file=1&type=node&id=8984

Resources for Chapter 4

Guidelines for DCSTs on how to prepare for and conduct perinatal review meetings:

1. Philpott H, Voce A. Four Key Components of a Successful Perinatal Audit process. Kwik Skwiz No.29. Health Systems Trust; 2001. <http://www.hst.org.za/sites/default/files/kwiksk29.pdf>
2. Woods D. Saving Mothers and Babies: Maternal and perinatal mortality audits. Chapter 4 in the book “Newborn Care”. http://www.oerafrica.org/system/files/8984/saving-mothers-and-babies-maternal-and-perinatal-mortality-audits_0.pdf?file=1&type=node&id=8984
3. The KZN DoH, in partnership with UKZN School of Public Health and UNICEF, has produced a set of guidelines that DCSTs in other provinces may find useful. These guidelines were compiled in collaboration with the DCST members who participated in the DCST Induction Programme of 2012 and 2013. These are available on request from Dr Anna Voce (Voceas@ukzn.ac.za) and Dr Neil Moran (neil.moran@kznhealth.gov.za), and include the following:
 - Responding to a Maternal Death at a Healthcare Facility
 - Guidelines for Perinatal Review meetings (PRNM) at Facilities
 - Perinatal Morbidity and Mortality Meeting Minutes
 - Guidelines for District Perinatal and Child Health Review Meetings
 - Guidelines for Outreach Support by District Clinical Specialist Teams

5. MOTIVATING AND INSPIRING HEALTH PROFESSIONALS

“Change will not come if we wait for some other person, or if we wait for some other time. We are the ones we’ve been waiting for. We are the change that we seek.”

Barack Obama

“The effectiveness of the on-site support will be determined by the extent to which the DCSTs can build a trusting, non-threatening, non-punitive relationship with the people at the site being visited. Therefore, DCSTs should give recognition to the knowledge and experience of the people on site.”

Anna Voce, School of Public Health, UKZN

As a DCST member you may often have asked yourself these questions:

- How can I inspire clinicians to give of their best in a challenging environment?
- What can I do when I meet health workers who seem to have lost interest in doing their jobs well?
- What can I do when health workers report feeling unappreciated?
- What can I do when a team of health workers no longer speaks constructively to each other, or about each other?

This chapter of the handbook focuses on how to support individuals and groups of people to work more effectively. It highlights the factors that contribute to the present demotivation of many health workers and identifies six key strategies that can be taken by the DCST to address this.

The chapter also focuses on you, the DCST member, and how to improve your thinking in a complex and challenging environment. It introduces the 10 components of a thinking environment. Lastly, this chapter discusses working in an appreciative paradigm rather than a blaming or criticising paradigm to encourage effective working in individuals and teams.

What contributes to the demotivation of health workers?

Motivation is the strong desire and energy to achieve something. Health workers are often criticised for having lost motivation. Demotivation generally results in poor goal setting by individuals and teams, a lack of co-operation, and deterioration in the relationships between team members and in the quality of services offered to patients.

Health workers across several southern African countries have identified the following six main obstacles working against delivering a better service:¹⁷

1. Inadequate equipment and supplies
2. Heavy workload
3. Poor infrastructure, such as building and/or water and electricity supply and transport routes
4. Poor relationships between team members
5. Inadequate telecommunication or telephone service.
6. Low salary. Recognising this obstacle, the South African Government has improved the salaries of nurses and doctors considerably over the last five years.

In an isolated rural health facility or overcrowded clinic these underlying obstacles can feel overwhelming. Taken together, these obstacles appear to make addressing the demotivation of health workers an insurmountable task.

Exercise:

1. Think about a facility where you have spent time recently. Visualise in your mind the colleagues you have worked with there:
 - What demotivates them in their work?
 - What motivates them?
2. Now, reflect on your feelings about being a DCST member:
 - What demotivates you in your work?
 - What motivates you?

¹⁷ Fonn S, Xaba M. Health workers for Change. A Manual to Improve Quality of Care. <http://www.who.int/tdr/publications/documents/health-workers.pdf>. [Accessed 20 March 2014.]

What motivates health workers?

Although the listed six obstacles to working effectively may seem overwhelming, surprisingly, resolving these issues is not at the heart of building motivation.

Motivation is an intrinsic function inside us that is nurtured by three things:

- Enjoyment of work
- Genuine achievement
- Personal growth.¹⁸

The obstacles to building motivation are not necessarily the same as the obstacles to effective work in a health facility. It is important to understand that the demotivation of health workers is not entirely linked to the poor working conditions of many health facilities. There are other ways in which to build the intrinsic function of motivation inside an individual. For example, studies in the health sector consistently show that non-financial incentives are more important when it comes to improving health worker performance than a salary increase or bonus payment. Non-financial incentives include career development and continuing education, a good physical work environment, the availability of resources to perform the job, a positive relationship with management, and personal recognition and appreciation from colleagues.¹⁹ Notice how closely these non-financial incentives relate to the three things necessary to nurture motivation. For instance, enjoyment of work is often dependent on good working relationships with management and recognition from work colleagues.

How can the DCST motivate health professionals?

The DCST has the opportunity to change the motivation of health workers. Improving the level of motivation in health workers is an explicit goal of the DCST and an appropriate intervention can enable this to happen. Table 1 makes the connection between the three elements of motivation to be nurtured and the application of non-financial incentives. The table also illustrates how the DCST can change the motivation of health workers by setting goals that target motivation and by implementing specific strategies.

¹⁸ Pink D. Drive. The surprising truth about what motivates us. New York: Riverhead Books; 2009.

¹⁹ Willis-Shattuck M, Bidwell P, Thomas S, Wyness L, Blaauw D, Ditlopo P. Motivation and retention of health workers in developing countries: a systematic review. BMC Health Serv Res. 2008; 8: 247.

Table 1: DCST strategies to build health worker motivation

What nurtures motivation?	Non-financial incentives towards motivation	Motivation-related goals for the DCST	Motivation-related strategies for the DCST
Enjoyment of work	<ul style="list-style-type: none"> • A positive relationship with management • Personal recognition and acknowledgement from colleagues • A good physical environment 	<ul style="list-style-type: none"> • Build clinical leadership skills in health facilities • Facilitate team building • A proactive programme to repair and maintain health facility environment 	<ul style="list-style-type: none"> • Role model clinical leadership in personal interactions • Role model the appreciative approach to team work • Advocate for health facility repairs and maintenance
Genuine achievement	<ul style="list-style-type: none"> • Personal recognition and acknowledgement from colleagues • The availability of resources (equipment and supplies) to do job 	<ul style="list-style-type: none"> • Facilitate team building • Enable health facilities to take control of equipment and supplies, and auditing and undoing bottlenecks 	<ul style="list-style-type: none"> • Role model the appreciative approach to team work • Role model clinical leadership in personal interactions • Encourage and assist clinicians to disseminate their successes through meetings and articles
Personal growth	<ul style="list-style-type: none"> • Career development • Continuing education 	<ul style="list-style-type: none"> • Identify leadership skills and potential at the local level • Relevant training targeted at the correct individuals 	<ul style="list-style-type: none"> • Provide career mentoring for key individuals • Role model and encourage continuous learning as an element of excellent professional practice • Facilitate the design and delivery of essential training programmes

Key strategies for the DCSTs to build health worker motivation

Table 1 shows us that there are a number of strategies that a DCST can use to influence health worker motivation. These strategies will not address all the challenges facing many health facilities but if pursued they can change health worker motivation. This is because they directly address the factors that nurture motivation in an individual and they are linked to proven non-financial incentives in the health sector that drive better performance.

The key strategies recommended to the DCST are:

1. Role model clinical leadership in personal interactions
2. Role model the appreciative approach to team work
3. Role model and encourage continuous learning as an element of excellent professional practice
4. Advocate for health facility repairs and maintenance
5. Provide career mentoring for key individuals who demonstrate potential
6. Facilitate the design and delivery of essential training programmes.

The first three of these strategies rely on you as a DCST team member to effectively role model a better way of responding to challenges. Role modeling relies on an individual consciously revealing the skills and attitudes necessary to complete a task successfully. Two skills discussed in this section to help you do this are, firstly, learning how to think more effectively and, secondly, learning to work using the appreciative approach.

The fourth strategy to address health worker motivation is to proactively support improvements to the physical conditions of health facilities. A coat of paint on a clinic wall, a colourful mural painted by local school children or local advocacy to fix up decaying or inadequate structures, all contribute to the individuals working there feeling valued and important.

The fifth and sixth strategies are about deeply appreciating the opportunity that is provided to individuals through training and through the right bit of career advice at the right time. Recognising the potential

in individuals for excellence is an important mentoring skill. The DCST should be able to provide concrete advice to local health workers about training and career advancement opportunities in their district, in the province and beyond.

Effective thinking

How do I learn to think more effectively and encourage this in others?

Before we can effectively role model important skills, such as those associated with clinical governance, it is essential to understand how those skills are nurtured in ourselves. One example of this is “thinking”. Why are some people more able than others to think effectively about what to do in challenging circumstances? How are they able to have ideas about what can change and what they themselves can do to personally influence change? By understanding our own approach to thinking we can then more effectively encourage and recognise this in others.

One useful framework to understanding “thinking” has been developed by Nancy Kline.²⁰ She developed a ten-component framework to encourage “thinking for yourself”. She argues that, too often, the society we live in has encouraged us to stop thinking. This is very true in our health facilities. Not enough health workers are asking the question, “What can I do here to change things?” Rather, we wait for an outside intervention or instruction from an external source about what is the best course of action before something happens. One individual able to think independently and exercise leadership can make a profound impact on the quality of services. It is precisely this type of thinking individual we require for clinical governance to be successful.

Many people fear thinking for themselves because the status quo is more comfortable. It is easier to live with what is known than to live with the fear of change, even if it means surviving in a chaotic and badly run clinic.

The key to stimulating thinking is to create the right conditions or environment for this to happen.

²⁰ Kline N. Time to think. Listening to ignite the human mind. Cassell; 1999.

Reflect on the following questions and answer them for yourself. Then read through Table 2 and look for synergies between your experience and the information in the table.

1. When do I think most effectively for myself?
2. What is it in the environment that helps me think best for myself at these times?
3. What are the qualities of the people who are with me when I am thinking at my best?
4. What stops me thinking at my best?

Table 2 summarises the ten components of an environment that encourages thinking. Once you can understand the times when you have been able to think best then you will be able to facilitate this for other people. Table 2 includes ideas for the DCST about how you can create this thinking environment in the clinical context. The two skills that you need to develop for this are active listening skills and the ability to ask incisive questions.

Table 2: Components of a thinking environment and ideas for the DCST

Components of the thinking environment	Characteristics of component	Ideas for the DCST
Attention	Listening with respect, interest and fascination.	Learn active listening skills. Don't rush in with a solution. Allow the speaker to find their own solution.
Incisive questions	Asking questions that do not limit ideas and that do away with underlying assumptions that limit thinking.	Develop a list of questions that encourage health workers to think without limiting their ideas.
Equality	Even within a hierarchy people can be equal as thinkers. Knowing you will have your turn to share your ideas improves the quality of your listening.	Create as many opportunities as possible for health workers to share their ideas as equals.

Components of the thinking environment	Characteristics of component	Ideas for the DCST
Appreciation	Practice a 5 to 1 ratio of appreciation to criticism. Appreciation keeps people thinking.	Become expert at seeing the achievements of others.
Ease	Offer space from rush and urgency.	Look for the opportunity to take off the pressure on health workers in busy clinics to encourage a greater feeling of ease.
Encouragement	Move beyond competition.	Build a supportive team rather than individuals who feel in competition with each other.
Feelings	Thinking stops when we are upset – either sad or angry. When we share enough of our feelings then thinking can be restored.	Provide opportunities for health workers to share their feelings.
Information	Information is needed at the right moment to support the thinker.	Plan how and when you will give what information to health workers. Make sure it is in such a manner that it builds confidence and participation.
Place	A physical environment that tells people they matter.	Find a place, room or corner in the health facility that provides the best opportunity for health workers to feel important.
Diversity	The best thinking is often done in groups that are diverse.	Make time to celebrate the different cadres of health worker needed in a clinic. Find opportunities to bring the whole team together.

Appreciative enquiry

What is the appreciative approach?

As a member of the DCST you will continually be asked to intervene in situations that on the outside look almost impossible to improve. Probably the biggest challenge you will face is how to stay optimistic and not feel overwhelmed by problems.

One of the best tools to do this is to become an expert at seeing what is working rather than what is not. Most of us have been trained to identify the gaps, the problems, the inefficiencies and the weaknesses. Most of us are very poor at identifying what is working. It can be very useful to remind yourself that in any situation, something will be working!! Most of us operate in a 'problem-focused' paradigm rather than an 'appreciative' paradigm.

“There can be 100 deliveries in a row. All will go well. But, on the 101st delivery, there will be a problem. It is so depressing. All people see is that problem – not all the things that were going well.”

Advanced Midwife in labour ward

The appreciative paradigm requires us to believe in the capacity of individuals and groups of individuals to generate solutions to their situation. For example, despite the numerous gaps and problems in our health system, it does still function! Our challenge is to understand what makes it function where it does and how to get more of that happening. The appreciative paradigm is a radical departure from continuous problem solving. In fact, a good indication of whether there is an overemphasis on the gaps and problems is how unappreciated health workers feel.

Often, what is working is not the first item on our checklist. However, you can make it yours. Check for things such as the strong, constructive relationships between team members, look for pockets of good leadership practice, notice when someone has completed a partogram or classified and managed a child with diarrhoea well, notice when equipment and resources are being carefully managed and maintained. Once you can identify what is working, you can then take the time to feedback to others what you notice about good practice. Make time to **talk to individuals and teams about what they are**

doing well. Do this **before** you talk about problems. This is called using the ‘appreciative approach’.²¹ If we think back to the creation of a thinking environment, one of the ten components is ensuring that appreciation is practiced in the ratio 5:1 with criticism! In other words give five times more praise and recognition than criticism.

One piece of underlying theory to this approach is the Pygmalion Effect. In a famous experiment, a teacher was told who in the class had high potential and who did not. In reality, these learners were randomly selected and not selected on the basis of their potential at all. As the experiment unfolded learners who had been identified as high potential dominated and over-shadowed other learners. In other words learners live up or down to their teacher’s expectations. This tells us that your personal belief as a DCST member in the high potential of the clinical team is a powerful predictor of success.

Using appreciative enquiry for organisational change

The appreciative approach to working with individuals and teams is drawn from an approach to organisational development called ‘Appreciative Enquiry’. There are four steps to the Appreciative Enquiry (AE) process. These are:

- **DISCOVER** what you are doing well in your work
- **DREAM** about what you would like to achieve in your work
- **DESIGN** actions to achieve these aims
- **DELIVER** by sharing what you have achieved in support of your aims.

These steps can be used to take a group through a process of change. The essence of Appreciative Enquiry is asking good questions and encouraging meaningful conversation between all the involved individuals and groups. Appreciative Enquiry encourages teams to build a process of change by working to the strengths and passions of members of the team. A facilitator (who could be a DCST member) works with the team to identify and give substance to the four D’s.

²¹ Coulson N, et al. Developing Capacity for Health: A Practical Approach. Heinemann; 2010.

Here is an example of how the Mopani District DCST in Limpopo used the Appreciative Enquiry approach.

Case study 2: Building stronger, more effective teams using the Appreciative Enquiry approach²²

Implementing the Appreciative Enquiry approach

The DCST began implementing the Appreciative Enquiry Approach in their interactions with maternal and child health teams in the Mopani District since their inception in June of 2012. They also use this approach at training sessions and support meetings as a means of reflection, and to strengthen their own teamwork. They have found this approach to be very effective in assisting teams to identify problems and develop action plans to resolve these problems in a non-threatening and collaborative way. The approach has built morale and strengthened relationships and team work.

“By focusing on the positive (using the Appreciative Enquiry approach), people are encouraged to be more open and receptive to working as a team, discussing and addressing problems as a unit.”

Gert Marincowitz, Family Physician

The DCST implemented the approach more intensively in several hospitals in the Mopani District that were experiencing high rates of maternal and neonatal deaths. At these facilities maternal and neonatal mortality review meetings were not productive as team members became defensive when discussing the causes of death, leading to tensions and a disconnect within the team. Since making use of the Appreciative Enquiry approach these meetings are conducted in a more positive atmosphere, and the members are actively discussing problems and possible solutions. There is improved teamwork as staff members are more motivated and they see the benefits of working together.

²² Adapted from the web article: Strengthening maternal health teams through Appreciative Enquiry: A case study of the Mopani District DCST, Limpopo Province. The Reducing Maternal and Child Mortality through Strengthening Primary Health Care (RMCH) Programme, National Department of Health. http://www.rmchsa.org/wp-content/uploads/2014/03/DCST_Case_Study-Appreciative_Enquiry_Approach_Limpopo_Final.pdf [Accessed 1 May 2014.]

How does the AE approach work?

Instead of allowing teams to get dragged into a downward spiral of blame and despondency when discussing problems, the DCST facilitator would use specific questions under each of the four D's to guide the reflection of the group to awaken a spirit of appreciation, possibility and a personal investment in change.

For example:

Discover

- What are you doing well in at your work?
- What do you feel proud of?
- What gives you energy to do your work?
- What are the positive things in your environment that helps you to reach your goal?
- What are the challenges you face that may interfere in reaching your goal?

Dream

- What are your dreams for your work?
- What would you like to achieve?
- Where do you see yourself in five years?

Design

- What small things do you think you (each individual) can change to reach your dream?

Deliver

- What have you managed to implement in support of your dream? (Discuss these during subsequent meetings)
- What do you think was the most significant change in the quality of the lives of the patients you served?
- What support do you need to do your work even better?
- What do you find difficult in your setting and what support may be necessary to change that?

At subsequent meetings the team, with the support of the facilitator, would review the past two months (or the agreed upon time period) and team members would reflect on the improvements and successes from that period.

The information and learning gathered from these reflections were used to develop concrete action plans on how to address problems and move forward in a positive manner.

The Mopani District in the Limpopo Province has seen a more than 50% reduction in maternal deaths and a 30% decrease in perinatal deaths between January 2012 and September 2013. This success is due in large part to the dedicated training and support provided by the DCST and their commitment to building appreciative relationships characterised by trust, collaboration and hope.

6. THE QUALITY IMPROVEMENT CYCLE – BRINGING IT ALL TOGETHER²³

Understanding quality improvement activities as a cycle

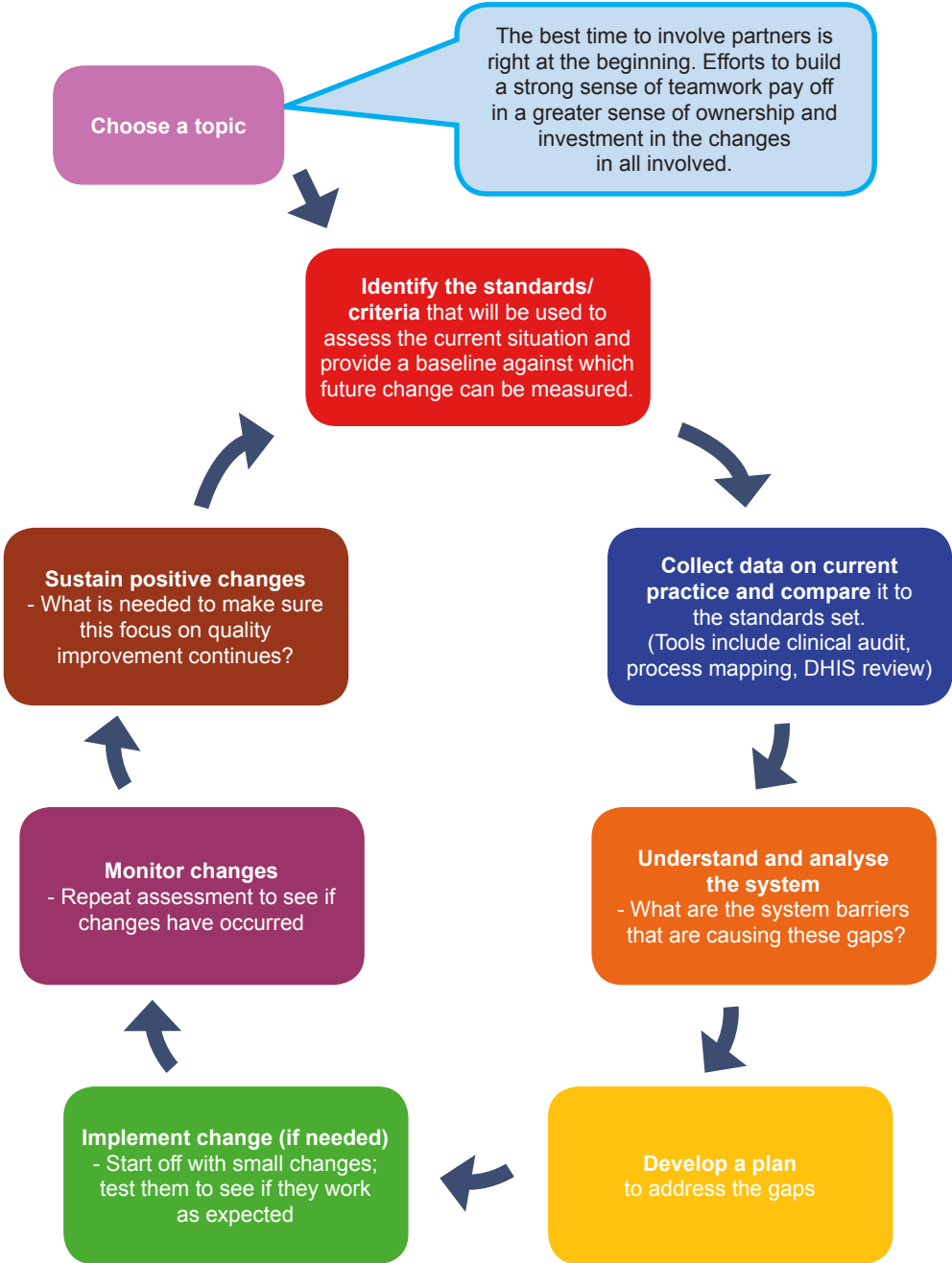
As emphasised in Chapter 3 the process of identifying gaps, using clinical audit and process mapping, is part of a larger cycle of quality assurance and improvement, as depicted in Figure 5. Note how the QI cycle mirrors the clinical audit cycle.

This cycle includes: the use a set of agreed standards for assessment; a gap analysis and problem solving exercise; a process for trying out, testing and measuring changes; and a focus on sustaining changes.

The cycle is an ongoing and systematic way to improve health care systems and processes so that they are safe, effective, efficient, patient-centred, reliable, timely and evidence-informed.

²³ Adapted from the NDoH manual; “Quality Improvement Guide: Quality improvement – the key to providing improved quality of care”. Pretoria: Department of Health: 2012.

Figure 5: The Quality Improvement Cycle:



Forming a Quality Improvement Team

- Quality improvement (QI) is best achieved through a multi-disciplinary team approach. Teams bring together varied understanding and insights into the various components of the system, problems and possible solutions.
- The Quality Improvement Team consists of the people who will own and drive the quality improvement initiative. The whole team should be involved in every step of the cycle.
- The formation and composition of quality improvement teams will vary, depending on the area that needs improvement and who is interested in getting involved in the quality improvement activities. While some facilities may already have QI officers and QI teams that DCSTs can work with, in most facilities the DCSTs will have to initiate the formation of a quality improvement team that will work on a specific area or project.
- Each team embarking on a QI initiative identifies an improvement leader who will be the key contact person for the team. Improvement leaders should be able to motivate the team, sustain momentum, schedule regular meetings and, most importantly, follow up on the improvement plan.
- The team should be large enough to represent the different disciplines involved in the particular service or process under scrutiny, but small enough to be swift and efficient.

The NDoH has published a manual entitled; “The Five Steps to Quality Improvement”.²⁴ This is a short and very practical guide that describes a step-by-step process that quality improvement teams can follow when engaging in quality improvement initiatives. One of the tools described in this manual is the Plan–Do–Study–Act (PDSA) cycle.²⁵

²⁴ National Department of Health. The Five Steps to Quality Improvement: A facility-based guide to improving clinical outcomes. Pretoria: Department of Health; undated. http://www.mspsouthafrica.org/files/page/288850/5_steps_to_QI_final_APlan_facility_guide_pdf [accessed 12 September 2014]

²⁵ Langley GL, Nolan KM, Nolan TW, Norman CL, Provost LP. The Improvement Guide: a practical approach to enhancing organisational performance. 2009: 23-24.

The following case study illustrates how important it is that the quality improvement team draws in all stakeholders that impact upon a service and how effective communication and collaboration can be.

Case Study 3: Building partnerships to improve EMS response rates and saving lives²⁶

During monthly midwife obstetric unit (MOU) meetings attended by the Nelson Mandela Bay Health District DCST, the most common complaint from MOU staff was that delays in ambulance services were negatively impacting the health outcomes of mothers and babies. The DCST investigated the problem and determined that despite dedicated obstetric ambulances being made available to the district, the following key factors accounted for these delays:

- Dedicated obstetric ambulances are not based at the facilities where they are needed, especially at midwife obstetric units
- Obstetric ambulances are being utilised for non-obstetric related cases
- The ambulances are not fitted with adequate medical equipment
- Referral routes are not well defined and do not meet the standard referral protocols.

In order to address these challenges, the DCST met with Emergency Medical Services (EMS) personnel and management to develop a shared understanding of the challenges faced by the EMS and the effects they were having on patients and MOU staff. During this meeting a tour was made of the EMS department, each ambulance was checked for equipment, and staff issues and referral routes were discussed. Together they agreed to resolve these challenges by implementing several solutions.

²⁶ The Reducing Maternal and Child Mortality through Strengthening Primary Health Care (RMCH) Programme and National Department of Health. This case study is a shortened version of one which appears on the RMCH website: Improving emergency medical services to midwife obstetric units in the Eastern Cape Province: A case study of the Nelson Mandela Bay DCST. http://www.rmchsa.org/wp-content/uploads/2014/03/DCST_Case_Study-Improving_EMS_Waiting_Times_ECape_Final.pdf

Solutions implemented to address challenges with EMS services

- EMS personnel were invited to attend MOU meetings and the EMS was included on the agenda as a standing item
- A memorandum of agreement was adopted between MOUs and the EMS documenting agreed upon requirements, roles and responsibilities of both parties
- Referral routes and referral protocols were redefined to ensure consistency and efficiency
- Obstetric ambulances were mandated to remain on site and be used for obstetric emergencies only
- The contact details of all parties (EMS management, MOU management and the DCST) were shared with each other to be able to contact the appropriate parties to rectify any problems that arise
- Agreement was reached, and implemented, that an incident report be written and discussed for any delay of greater than an hour
- Weekly meetings between the EMS and DCST were scheduled to discuss delays, challenges and solutions.

Outcomes

Since these measures were introduced in February 2013 the district has seen an improvement in EMS services. Specifically:

- Dedicated, functional obstetric ambulances are now on site at all MOUs; however, two MOUs are sharing an ambulance due to staff shortages
- All ambulances now have the critical medical equipment needed to address obstetric emergencies
- The number of reported instances of poor EMS services from the MOUs has been reduced from approximately five per month in January 2013 to one or zero instances reported per month in September 2013 (Data from Motherwell MOU)
- Transfer times to referral facilities of more than 1 hour have been reduced from 12 in February to four by October 2013 (Data from Motherwell MOU)
- There are fewer cases where delayed ambulances are a contributing cause of maternal and perinatal mortality. (Data from Motherwell MOU, between January and October 2013).

Key lessons that have been learned from the implementation of this initiative include:

- Ongoing communication between all of the stakeholders is critical to identify and address problems and to sustain improved service delivery
- Open communication with EMS top management ensures that vital institutional resolutions can be found and sustained
- Gaining the buy-in and support from Maternal, Neonatal and Child Health Programme Managers means that all stakeholders can support the process and help to resolve systemic issues
- Effective co-ordination of obstetric ambulances is necessary to ensure limited resources are used effectively
- Monitoring and evaluation is central to ensure that planning, decision-making and implementation are informed by accurate and current information
- Other districts in the Eastern Cape have learnt from this initiative and have begun to implement it
- Additional human resources and ambulances are needed to ensure coverage for maternal waiting homes.

The following case study is an example of a quality improvement project that was very successful in reducing the case fatality rate associated with severe acute malnutrition in two hospitals in one of the most under-resourced areas in the country, Alfred Nzo district in the Eastern Cape. The case study has been broken down into the steps of the quality improvement cycle, to provide a true to life demonstration of how the cycle can unfold in reality. You can read more detail about this study in the South African Medical Journal.²⁷

²⁷ Puoane T, Sanders D, Ashworth A, Chopra M, Strasser S, McCoy D. Improving the hospital management of malnourished children by participatory research. *Int J Qual Health Care* 2004 Feb; 16(1):31–40. Free article available at: <http://intqhc.oxfordjournals.org/content/16/1/31.long>

Case study 4: Saving Lives through better implementation of the WHO 10 Steps for the Management of Severe Acute Malnutrition

Background – choosing the topic

Severe acute malnutrition (SAM) is an important cause of preventable mortality in most South African hospitals. The literature shows that many deaths occur as a result of outdated clinical practices and that improving these practices reduces case fatality rates. In 1998, Eastern Cape Department of Health partnered with the School of Public Health of the University of the Western Cape and Health Systems Trust to develop a model district-based Integrated Nutrition Programme. Of particular concern to this team was the high case fatality rates associated with SAM in the district, up to 46% in one district hospital. This prompted more in-depth research into the treatment of SAM at two district hospitals in order to understand the problems and make recommendations for improvement. One of the first steps in this process was the formation of a team at each hospital, called the hospital nutrition team, to drive the quality improvement process. This team included members of the district nutrition team.

Identify the standards/criteria for assessment

The team used the WHO 10 Steps for the Management of Severe Acute Malnutrition as the standard to guide their evaluation of the management of severely malnourished children. Using a summary of the 10 Steps, they created clinical audit and interview tools to help them collect the data they needed, which included:

- Checklists to collect information from retrospective record reviews
- Checklists to collect information from direct observation of the outpatient departments and the paediatric wards
- Structured interview guides for nurse and doctor interviews.

Collect data on current practice and compare it to the standards

Retrospective record reviews

A list of all the malnourished children admitted to the paediatric wards over the previous year was obtained for each hospital and the corresponding files were reviewed. The checklist was used

to gather information about age, date of admission, diagnosis, presence of oedema, weight on admission, lowest weight during admission, treatment prescribed, number of days in hospital, outcome (discharged, died, referred, or absconded), and final weight. A detailed review of six cases, randomly selected, was conducted by a doctor and nurse to illustrate the general management of children with severe malnutrition.

- **Direct observation of the outpatient departments and the paediatric wards**

Using a checklist, observations were made regarding the admission, assessment and management of malnourished children in casualties and outpatient departments, cleanliness of the wards, the adequacy of toilet and bathing facilities, ward infrastructure, and availability of resources needed for the care of children.

- **Interviews with nurses and doctors**

Semi-structured interview guides were used to interview doctors and ward sisters about the management of malnourished children, including investigations, methods used to detect and treat hypoglycaemia and hypothermia, assessment and management of dehydration, frequency of feeds and their composition, drug treatment, involvement of mothers in patient care, play and stimulation of children, and discharge and follow-up procedures. Interviewees were also asked about the problems they encountered in treating severe malnutrition.

The team used the information gathered to assess the extent to which each of the 10 Steps are being practiced in each hospital. Table 3 gives an example of actual versus recommended practice for Step 1 in the guidelines:

Table 3: A comparison of the recommended practice vs. actual practice for Step 1

Step 1: Treat and prevent hypoglycaemia	
Recommended Action	Start feeding straight away Feed every 2 hours during the day and night
Actual Practice	In both hospitals, children were left waiting in the queue in the outpatient department and during admission procedures. Children were fed frequently up to 7 p.m. but thereafter no feeds were given until 6 a.m. With a gap of eleven hours, there was a high risk of hypoglycaemia.

Similar information was collected by the team for each of the other nine steps showing clear deficiencies in recommended practice.

Understand and analyse the system:

The team gained valuable insight from the interviews with doctors and nurses about some of the factors which led to this poor quality of care. The team members probed deeply to try and understand why these factors might occur. Some of the key factors were:

- Lack of knowledge about risks of hypoglycaemia
- Lack of knowledge about how to prevent it
- Shortage of staff, especially during the night
- No supplies for testing for hypoglycaemia.

Develop a plan:

The assessment approach of clinical audit of records, direct observations of infrastructure, equipment and practice and the staff interviews was successful in highlighting areas needing improvement. A plan was made to develop a standardised protocol to manage SAM, based on the WHO 10 Steps and tailored to the district’s resources. The staff were eager to receive training in this protocol. The team identified problems with respect to each step and developed ways to remedy these. The plan also included an advocacy component around social

and economic factors associated with malnutrition. The results of the evaluation were presented to a Government Commission on Social Welfare and were featured in an article in major regional and national newspapers, while partnering with a civil society organisation advocating for children’s access to welfare resulted in a documentary being screened on national television that raised debates in parliament and helped accelerate distribution of the Child Support Grant. Examples of the interventions related to the key shortcomings linked to step 1 (Prevention and treatment of hypoglycaemia) are illustrated in Table 4.

Table 4: The planned interventions related to Step 1 and changes reported at successive follow-up visits

Step 1: Treat and prevent hypoglycaemia	
Planned interventions	Changes reported at follow-up
<ul style="list-style-type: none"> • Training to explain why malnourished children are at increased risk • Training on how to prevent and treat hypoglycaemia • Motivated for more night staff in paediatric wards • Motivated the Department of Health to provide resources (10% glucose and Dextrostix) 	<ul style="list-style-type: none"> • Training to explain why malnourished children are at increased risk occurred • Training on how to prevent and treat hypoglycaemia occurred • Successfully motivated for more night staff in paediatric wards • Successfully motivated the Department of Health to provide resources (10% glucose and Dextrostix).

Similarly, interventions for each of the other nine steps were recommended, all of which resulted in significant changes in management.

Implement the changes:

The changes listed in Table 4 were implemented, as were changes suggested for the other nine steps.

Monitor change:

Analysis undertaken six months after commencing the training sessions showed a reduction in case fatality rates in both hospitals.

Sustain the changes:

Despite the impressive successes of this project in the first few years,

the quality of care that was achieved was not sustained. Two years after this project ended, major staff role players had left the hospital or entered management posts. Because they were no longer there to be active champions of quality improvement and because provincial authorities did not invest in supporting the continuation of this initiative, the examination of data to monitor performance waned, the quality of care was eroded and case fatality rates began to increase once more.

Lessons learned:

- The quality improvement project worked very well because the ward staff and hospital management were involved in the quality improvement team, resulting in a strong sense of ownership of the project and investment in recognising shortcomings and addressing these
- Major improvements in quality of care are possible even in very under-resourced areas
- Staff are willing to address quality of care issues
- An integrated approach, also involving advocacy, is necessary. Research evidence is important for advocacy – in this case follow-up of malnourished children discharged from these hospitals revealed serious poverty and food insecurity, and that none of the children’s caregivers had been able to access the Child Support Grant, even though they all qualified for it.
- Partnership with civil society organisations is key to success of advocacy
- Intersectoral collaboration works around concrete issues and requires sustained activity
- Sustaining such a quality improvement initiative requires support to and from many levels and sectors – ward, hospital, district, province and national.

Sustaining change and commitment to ongoing improvement

The last case study proved that considerable improvement in service delivery and health outcomes is possible, even within daunting resource constraints. However, disappointingly, these changes were not sustained. This final section of the handbook explores the

characteristics of sustainable improvement activities and how to build a culture and practice of ongoing improvement within facilities, even when DCST members or other change agents are no longer present.

The following paragraphs (with minor changes in language and punctuation) are taken from the booklet; “The Five steps to Quality Improvement: A facility-based guide to improving clinical outcomes”.²⁸

Sustainability is more likely when:

- The care pathway targeted has been transformed; old ways of accomplishing tasks are no longer an option for new or incoming staff members
- Quality improvement as a value is respected and facilitated by senior leaders at the facility, with leaders asking “What are we going to improve next?”
- The Quality Improvement Team at a facility is no longer reliant on the “Improvement Leader” or the DCST. Rather, there are other members who are capable of taking the team forward if one member moves to a new opportunity
- Facility leaders are able to interpret and use their facility data to make key management decisions, and all staff members understand, appreciate, and use data.

How to build a habit of continual improvement

1. Assist the Quality Improvement Team to work sequentially through the care pathway that has been targeted for improvement.
2. Start at the beginning – establish baseline performance and identify barriers to care.
3. Test your ideas for improvement and use data to measure whether the situation has changed for the better as expected.
4. Evaluate how much clinical performance has improved. Re-evaluate the aims set at the beginning of the improvement process.

²⁸ Institute for Healthcare Improvement, NDoH and University of KZN/20,000+. The five steps to Quality Improvement: A facility-based guide to improving clinical outcomes. http://www.mspsouthafrica.org/files/page/288850/5_steps_to_QI_final_APlan_facility_guide_.pdf

5. If needed, go back to the beginning, setting more ambitious aims and starting at the beginning of the care pathway again, looking for new challenges and new solutions.
6. If the care pathway targeted requires no further improvement, evaluate the value of applying these lessons to a new care pathway in your facility.

How to institutionalise change

1. Meet together as a Team to review the success of a change you have tested and have decided to implement in your facility.
2. Review all relevant data, confirming with the Team the evidence that the change you have made has resulted in an improvement. Together come to consensus on the value of the change implemented.
3. Develop a standard operating procedure (SOP) that defines the new way of working within the care pathway. This SOP can act as a reference to how things should be accomplished in the future regarding the standard of care in your facility.
4. As new staff join the facility, train them according to the SOPs developed as a result of the improvement process in which you have engaged. This will effectively eliminate the “old way” of doing things.
5. As new staff join the facility, cycle them onto the improvement team, exposing them to the improvement process and creating in them the ability to continue to improve the health system they now work within.

Resources for Chapter 6

1. National Department of Health. Quality Improvement Guide: Quality improvement – the key to providing improved quality of care. 2012. <http://rudasa.org.za/index.php/resources/document-library/category/10-quality-improvement>
2. Institute for Healthcare Improvement, NDoH and University of KZN/20,000+. The five steps to Quality Improvement: A facility-based guide to improving clinical outcomes and quality mentorship. http://www.mspsouthafrica.org/files/page/288850/5_steps_to_QI_final_APlan_facility_guide.pdf

