

IMPRESS

RESEARCH BRIEF #1

JANUARY 2023



Hospital Management in Malawi

What areas of management are most in need of improvement?

Background

It is well established that skilled clinical staff and health technologies, including novel drugs and equipment, are a necessary ingredient for delivering quality health care in hospitals. However, in practice, patients do not always get these clinical interventions even when resources are available. Commonplace problems, such as drug stockouts, staff shortages and power outages, may be due to organisational failings that are rooted in poor management. Improving management practices – so that hospitals effectively manage staff, drugs and medical supplies, optimise patient pathways, have sound financial management and are data-driven in how they make decisions – offers the potential to turn the situation around.

There is a need to know the current state of management in hospitals and what areas of management are in greatest need of improvement. A first step in moving this research agenda along is to measure, in a systematic and rigorous manner, the quality of management in hospitals. To ground the research, management is often examined through the lens of a specific hospital department. In Malawi, a clinical area that has received considerable attention in recent years is small and sick newborn care. Babies in their first 28 days of life represent some of the most vulnerable users of the health system as they can die quickly. Globally, 2.5 million newborns die every year; most of these deaths happen in hospital and could be prevented. Malawi has been one of the fastest progressing countries in Africa for newborn survival. In 2020, the neonatal mortality rate was 19 deaths per 1,000 live births, down from 70 deaths in 1970. Now that most births happen in health facilities, there is an urgent need to improve hospital care for newborns and their families.

KEY MESSAGES

- The Kamuzu University of Health Sciences, in collaboration with the London School of Hygiene & Tropical Medicine (LSHTM), developed a novel tool to measure hospital management practices in Malawi across five domains: delivery of clinical care in the neonatal unit, human resource management, target setting and monitoring, financial management, and leadership and governance.
- A national survey was carried out between April and May 2022 using the tool. It found that there is considerable room to improve hospital management practices in almost all hospitals and across all management domains.
- Central hospitals performed worse than lower-level hospitals – an important finding given that central hospitals treat considerably more newborns and deal with more complex cases than other types of hospitals.
- The areas of management in greatest need of improvement were ‘target setting and performance monitoring’ and ‘human resource management’, partly due to the absence of autonomy in government hospitals.
- Systematic, rigorous measurement of the quality of management in Malawi’s hospitals is feasible using this tool. Going forward, the tool will be valuable in monitoring progress in hospital management in Malawi and can potentially be tailored for use in other settings.
- The extent to which management affects the quality of care delivered in hospitals is the subject of ongoing research led by Kamuzu University of Health Sciences in collaboration with LSHTM, the Ministry of Health and NEST360.

Purpose

This report highlights the key findings and implications from research that assessed the quality of hospital management in Malawi. As part of the formative phase of the IMPRESS project, we developed a novel tool to measure management practices, with a focus on management in support of small and sick newborn care. We then carried out a survey of management practices in the 36 largest hospitals in the country between April and

May 2022, both interviewing managers and reviewing management records. The survey included the 4 central government hospitals, 22 district government hospitals, and 8 hospitals run by the Christian Health Association of Malawi (CHAM). We describe how well hospitals performed on different dimensions of management and explore some of the possible reasons for this variation. To our knowledge, this is the first large scale assessment of hospital management in Malawi.

MEASURES OF MANAGEMENT

Interviews with managers: Our main measure of management is based on interviews with the hospital managers, in which the survey team evaluated 28 management practices, scoring each on a 1 to 5 scale as explained below. To generate an overall score of management for a hospital, we took the mean across the 28 management practices.

5

Structured management practices and systems in place which are being fully and correctly implemented

4

3

Some management practices or systems in place, but they are not being fully or correctly implemented

2

1

Few structured management practices or systems in place

Record review: An alternative, complementary measure of management is based on the record review. To generate the summary measure for a hospital, we take the availability of the 25 items. The advantage of this measure is that the presence of items in a hospital is easy to assess, even if the measure lacks in-depth exploration of management within the hospital.

HOSPITAL MANAGEMENT SURVEY

- The Kamuzu University of Health Sciences collaborated with the London School of Hygiene & Tropical Medicine to develop a novel tool to measure hospital management practices. The tools were designed and calibrated specifically for hospitals in Malawi.
- The development of the tools was informed by: a literature review identifying quantitative tools that have previously been used to measure management in a health care setting; a review of relevant Government of Malawi policies and guidelines; in-depth interviews with hospital managers; a four-day tool development workshop; and iterative piloting.
- The survey team made a three-day visit to each study hospital. They conducted interviews with five managers in each hospital: the Sister-in-Charge of the neonatal unit, Unit Matron, Hospital Administrator, District Nursing Officer, and District Medical Officer.
- Adapting an approach from the World Management Survey, they used an objective scoring grid to evaluate 28 management practices (see Table 1) across the following five management domains: delivery of clinical care in the neonatal unit; human resource management; target setting and monitoring; financial management; and leadership and governance.
- The survey team also completed a hospital record review of 25 management items by observing the presence of meeting minutes, clinical manuals, administrative documentation and forms. These items were selected on the basis that they indicate whether management systems and processes are in place.

Figure 1: Distribution of management scores



Key findings

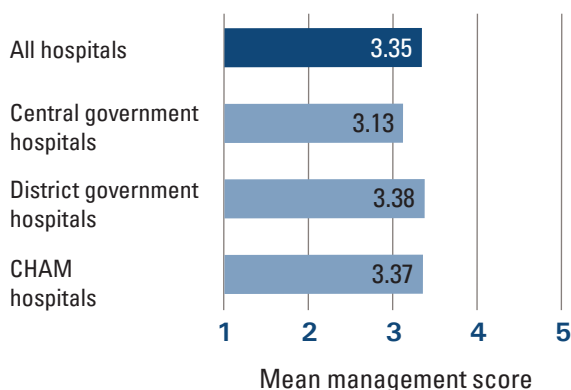
1 There is considerable room to improve hospital management practices

Table 1 (page 4) shows the score for each management practice evaluated. Combined, the mean management score was 3.35, indicating that the average hospital has clear room to improve. Almost one-fifth of the 36 hospitals had a management score of less than 3, suggesting that they are poorly managed, and only one hospital scored higher than 4 (Figure 1).

2 Management practices were worst in the central hospitals

On average, central hospitals performed worse than district and CHAM hospitals, with a gap in the overall management score of 0.24 – equivalent to a difference of more than one standard deviation (Figure 2). This matters because central hospitals deal with more complex cases and a higher number of patients – admitting on average two and a half times more newborns than a district hospital, and six times more than a CHAM hospital.

Figure 2: Management score by type of hospital



3 The domains of management in greatest need of improvement are 'human resource management and target setting' and 'monitoring of performance'

Whilst there is room for improvement across all five management domains, the lowest scores were in 'target setting and monitoring of performance' and 'human resource management' (Figure 3).

Government-run (central and district) hospitals scored low on many of the practices under human resource management because they lack the autonomy to implement what is considered to be best practice. Management practices in support of the delivery of clinical care in neonatal units scored relatively well compared to other management domains.

Figure 3: Management score by domain of management

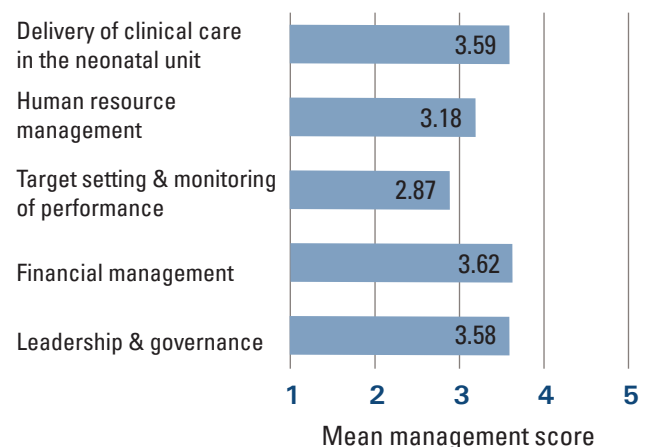


Table 1: Management score for each practice

DOMAIN	MANAGEMENT PRACTICE	DESCRIPTION OF BEST PRACTICE (SCORED AS A 5)	MGMT SCORE
Delivery of clinical care in the neonatal unit	Layout	Neonatal unit layout optimizes patient flow and promotes IPC	4.15
	Triage	Standardised triage system is known and used consistently. Emergency box is always available and emergency drills are done	3.54
	COIN protocols	COIN protocols are known and used by all health workers consistently and regularly followed up on through monitoring or oversight	3.83
	IPC protocols	IPC protocols are known and used by all health workers and regularly monitored	3.81
	Handover	A standardised process exists for handover and is used by clinicians and nurses. The process is regularly monitored for compliance	3.4
	Referrals	A standardised process for receiving inward referrals exists. Referral communication is functional using a referral form and organised transport. There is feedback between facilities	3.25
	Audit	A standardised process for auditing neonatal deaths exists	3.46
	Supervision	Supervision is conducted weekly, using standardised tools. Supervision is supportive and involves demonstration	2.88
	Equipment	System exists to fix equipment in a timely manner. Preventive maintenance is carried out routinely	4.03
Human resource management for health workers	Appraisal	Annual appraisals are conducted against a formal set of criteria to evaluate performance	3.08
	Promotion	Promotions are strongly influenced by performance. Hospital managers have influence on promotion decisions	2.23
	Reward	There is a system which rewards or recognises individuals from all cadres based on performance	2.56
	Poor performance	There are clear disciplinary procedures which are followed in a timely manner	3.56
	Recruitment	Systematic process for forecasting gaps, identifying and recruiting skilled health workers to permanent contracts in a timely manner	2.79
	Temporary staff	Well-functioning system in place to forecast and address critical staff gaps and to hire appropriately skilled locum and temporary staff to fill these	3.64
	Staff allocation	Hospital has a responsive and systematic approach to assessing which staff are needed by the neonatal unit and allocating staff accordingly	4.01
	Capacity strengthening	Hospital has a programme in place to plan capacity strengthening activities for staff on a regular basis according to the needs	3.58
Hospital and neonatal ward level target setting and monitoring of performance	Monitoring errors	Systems for avoiding/reducing harmful practices are in place and monitored	2.4
	Performance review	Performance (patient and quality of care indicators) is reviewed and reported monthly and actions are followed up	2.53
	User satisfaction	Multiple systems are functioning to capture patient/family concerns and protocols exist for follow up	3.41
	Target range	Targets cover key areas of clinical care, including the neonatal ward. Targets are tailored to the hospital and are set through a consultative process. Hospital is pushed by the targets	3.06
	Target communication	Targets are well-defined, communicated and understood by staff. Targets are displayed around the hospital and reinforced at all levels	2.96
Financial management	Budget setting	Budget preparation involves key stakeholders and prioritises the needs of the hospital	3.7
	Budget expenditure	Financial position is reviewed monthly and results are regularly communicated. There is a strategy for dealing with delays and deficits	3.56
Leadership and governance	Snr leadership governance	A multidisciplinary hospital management team meets regularly; they define, approve and monitor the implementation plan and communicate this to staff	3.25
	Quality of care governance	Hospital level QIST and neonatal ward level WIT exist and are represented by key stakeholders; they meet regularly; Activities are monitored	3.85
	Drug procurement	There is a functional drug and therapeutics committee. Needs for the neonatal unit are forecasted, communicated and there are strategies for addressing shortages of medicines and supplies	3.81
	IPC governance	Multi-disciplinary IPC committee exists and meets regularly; meetings have a purpose and minutes are taken; follow-up steps are documented. Antimicrobial stewardship is often included in the agenda	3.42

4 The record review shows that hospitals had on average half of the management items available on the day of the visit, confirming the findings of interviews with facility managers.

There was considerable variation in the proportion of management items available across hospitals, ranging from a low of 28 percent to a high of 77 percent. As shown in Table 2, some items were almost universally available (e.g., neonatal death review form), while other items were rarely available (e.g., suggestion box in neonatal unit). Central hospitals again performed worst on this measure of management.


Table 2: Availability of each management record item across hospitals

DOMAIN	MANAGEMENT ITEM	% of hospitals with item present
Delivery of clinical care in the neonatal unit	Care of infant and newborn (COIN) manual	69%
	Infection prevention and control (IPC) manual	47%
	Poster displayed on IPC in neonatal unit	78%
	Neonatal referral forms	75%
	Neonatal death review forms	86%
	Last dated neonatal death audit consolidation form	50%
	Emergency box for neonatal care	75%
	Handover report or book in neonatal unit	100%
	Routine preventive maintenance schedules for neonatal equipment	50%
Human resource management	Staff appraisal record in the personnel file	25%
	Continuous professional development (CPD) schedule for hospital staff	39%
	Nurse roster in neonatal unit for month ahead	31%
	Clinician rota in neonatal unit for month ahead	8%
Target setting and monitoring of performance	Targets for quality indicators in neonatal unit	54%
	Performance data on quality of care indicators in neonatal unit	56%
	Information on ombudsman's office	17%
	Suggestion box in neonatal unit	11%
	Targets for hospital	10%
Financial management	Hospital budget for this financial year	75%
	Hospital expenditure against each budget line	70%
Leadership and governance	Last dated minutes of hospital senior management meeting	62%
	Last dated minutes of Quality Improvement Support Team (QIST) meetings	68%
	Last dated minutes of IPC meetings	52%
	Last dated minutes of Work Improvement Team meetings in neonatal unit	57%
	Display of posters on Work Improvement Team activities in neonatal unit	39%
Average availability of items across hospitals		52%

5 The management survey was feasible to implement

The survey was well received by hospital managers who appreciated the opportunity to discuss issues around management. Feedback on the findings were received from participants in face-to-face dissemination visits to each hospital.

Implications

- Management practices need to be strengthened in most hospitals. These findings can be used by managers in the study hospitals to identify and prioritise specific areas of management for improvement.
 - Some of the management challenges can be addressed at the hospital level, but others will require engagement with district, zonal and central levels of government.
 - The results provide a rationale for, and indeed are guiding, the development of a management intervention to support quality improvement in Malawian hospitals.
 - More research is needed to understand the reasons behind the difference in quality of management between central government and lower-level hospitals in Malawi.
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- These tools to measure hospital management can be tailored to other clinical areas and health systems in other countries. This would require careful adaptation of the questions and the scoring to reflect, in particular, differences in government systems and established standards.

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About this brief

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Photo credits: Page 1: Mangochi District Hospital corridor. © www.DirectRelief.org; Page 6: Mphatso Gumulira with her son Zayitwa in the Queen Elizabeth hospital in Blantyre, Malawi. © Lindsay Mgbor/Department for International Development.

About IMPRESS

IMPRESS (Innovative Management PRactices to Enhance hoSpital quality and Save lives in Malawi) focuses on hospital management in Malawi. Building on an existing platform, Newborn Essential Solutions & Technologies (NEST360), we are identifying practical ways to enhance management practices in hospitals in Malawi, to improve quality of care and reduce newborn deaths. We are also strengthening the capacity and capability of the next generation of health systems researchers.

IMPRESS is a four-year NIHR-funded project that started in October 2020. The Principal Investigators are Prof Timothy Powell-Jackson and Prof Victor Mwapasa. At the core of the research is an equitable partnership between Kamuzu University of Health Sciences and London School of Hygiene & Tropical Medicine. We are working with the Ministry of Health and other stakeholders to generate high quality evidence that has direct relevance for policy and practice in Malawi, the African region, and beyond.

More information on IMPRESS: www.lshtm.ac.uk/research/centres-projects-groups/impres

More information on NEST360: <https://nest360.org> & www.newborntoolkit.org