

BMJ Open Quality Rapid review of the ideal clinic realisation and maintenance programme among primary healthcare providers in the Gauteng Province, South Africa

Dorina Onoya , Idah Mokhele, Refiloe Cele, Nozipho Musakwa , Sharon Kgowedi, Khumbo Shumba, Cornelius Nattey, Nelly Jinga, Alice Kono, Jacqui Miot

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Health Economics and Epidemiology Research Office, University of the Witwatersrand Johannesburg Faculty of Health Sciences, Johannesburg, South Africa

Correspondence to

Dr Dorina Onoya;
donoya@heroza.org

ABSTRACT

Background The ideal clinic realisation and maintenance (ICRM) programme in South Africa aims to elevate primary healthcare clinic (PHC) service quality in preparation for the National Health Insurance rollout. This study investigated ICRM implementation from clinic workers' and patients' experiences in the Gauteng province.

Methods A mixed-methods cross-sectional survey was conducted across 45 Gauteng PHCs. Anonymous semistructured interviews with 335 clinic staff explored their knowledge and experiences with the ICRM programme. Facility assessments captured structural factors impacting ICRM implementation. Log-binomial regression was used to assess factors related to confidence in ICRM implementation and improvements in ICRM certification, and thematic analysis examined patient and staff experiences.

Results While 86.9% of clinical/management staff (95% CI 75.1 to 93.6) reported understanding ICRM, only 41.9% (95% CI 32.6 to 53.0) could cite specific guidelines. Enablers included guideline training (reported by 47.9% of staff, 95% CI 39.6 to 56.3) and support from district teams (44.6%, 95% CI 36.6 to 52.8). Barriers included facility size (32.9%, 95% CI 25.7 to 40.9) and infrastructure challenges (28.4%, 95% CI 21.6 to 36.2). Staff confidence in ICRM implementation was moderate (63.1%, 95% CI 56.1 to 69.6), higher when ICRM champions were present (relative risk ratio (RRR) 2.3 vs not present, 95% CI 1.0 to 5.2), guidelines were clear to staff (RRR 2.3, 95% CI 1.1 to 5.0) and sufficient training was perceived (RRR 2.7, 95% CI 1.4 to 5.3). From 2018 to 2021, 60.3% of facilities (95% CI 43.8 to 74.8) improved in ICRM classification. Compared with facilities with no status change, staff from clinics with downgraded stats were less likely to report clear guidelines (RRR 0.5, 95% CI 0.2 to 1.0) to identify an ICRM champion (RRR 0.3, 95% CI 0.1 to 0.7) or have a knowledgeable manager (RRR 0.01, 95% CI 0.01 to 0.3).

Conclusion Challenges in ICRM implementation persist. Staff knowledge, training and district support play significant roles, while clear guidelines, sufficient resources and effective leadership are essential for sustaining and enhancing ICRM performance.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ While primary healthcare quality improvement initiatives are recognised as essential, the contribution of healthcare providers in the implementation remains uncertain.

WHAT THIS STUDY ADDS

⇒ These findings underscore the varying understanding and adherence to ideal clinic realisation and maintenance (ICRM) guidelines among clinic staff, highlighting the significance of clear guidelines, dedicated quality improvement champions and structured training. Moreover, the study identifies challenges in integrating ICRM standards due to discrepancies among policy objectives, staff perceptions and available resources.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The findings highlight the critical role of leadership, advocacy, training and resource allocation in implementing and sustaining quality standards. The disparities between provider perceptions of service quality and ICRM certification status reveal a misalignment with the programme's objectives. To achieve the intended outcomes of the quality enhancement initiative, it is crucial to ensure fidelity in implementation across all operational and support staff. Additionally, it is imperative to collect and monitor data on both process and service outcomes to accurately assess the programme's impact.

BACKGROUND

South Africa is currently facing multiple population health challenges, such as HIV, TB, non-communicable diseases and, more recently, the COVID-19 pandemic.^{1 2} With nearly 8 million persons infected, the HIV epidemic is the most significant health challenge the South African Health services face.³ The country now boasts the world's largest HIV care programme, necessitating focused efforts to maintain the health gains of people

living with HIV.^{4 5} While public access to comprehensive health services has improved significantly, socioeconomic inequalities persist, directing access to quality healthcare more favourably towards the wealthy.^{6–10}

The public health sector caters to over 80% of the population using less than 50% of the country's health resources, resulting in strained facilities and healthcare professionals who prioritise quantity over the delivery of high-quality care.^{16 11–13} In the 2012 audit, public health facilities in South Africa collectively scored less than 50% compliance with vital quality measures in two out of the six priority areas, scoring 34% in patient safety and security and 30% around positive and caring attitudes. Within clinical services, the area of health technology recorded the lowest (38%) compliance for both primary healthcare clinic (PHC) and hospital facilities followed by Pharmacy.^{14 15}

In response to the audit results and preparation for South Africa's planned rollout of the National Health Insurance (NHI) fund,^{16 17} the Ideal Clinic Realisation and Maintenance (ICRM) programme was introduced to help PHCs shift their focus from ensuring access to upgrading service offerings to meet the quality and safety standards required for NHI accreditation by the South African Office of Health Standards Compliance (OHSC).^{16 18–20} The ICRM programme's implementation strategy mirrors the approach used to rapidly scale up HIV services while enhancing patient-centred integrated primary care by addressing known challenges.^{6 11 19 20}

ICRM implementation progress is monitored through annual reviews, awarding clinics with a Silver, Gold or Platinum status.¹⁹ All facilities, including those that do not meet the minimum certification standards (not achieved (NA)), receive post-assessment recommendations for improvements before the next review. By 2019, 99% of facilities nationwide had completed the baseline assessments, but only 33.3% (1145/3467) of assessed clinics achieved either a Platinum (55.9%), Gold (30.2%) or Silver (13.9%) certification.^{19 21} The Gauteng province led with 87.3% of PHC facilities certified, followed by KwaZulu-Natal with 67.5%.²² However, the 2019/2020 OHSC audit revealed that only 14.7% of inspected facilities met the required minimum standard post-certification (ranging from 46% in Gauteng to 0% in the North West and Limpopo provinces).²³

After over five years of ICRM implementation, it is imperative to take stock of the programme's impact on the key indicators of health system optimisation success. While the annual certification offers some insight into clinics' overall progress on the ICRM quality continuum, it does not describe the effect of the ICRM programme on process, clinic operations or patient outcomes, including health provider and patient experiences and perception of the changes in the quality of health services. It is also unclear whether growth in certification is linear and how lags or regression are managed. The ultimate success of the ICRM programme must be measured by healthcare workers' perception of the quality of the work

environment, positive patient experiences of healthcare service and patient care outcomes.^{6 13 24} Patient experience and outcomes are also significant predictors of future participation in NHI schemes.²⁵

The overall aim of the study was to examine health provider perspectives and experiences of the implementation of the ICRM programme in the Gauteng province of South Africa.

METHODS

Study design

We conducted a mixed-methods cross-sectional survey of approximately 10% (~45) of public-sector primary healthcare facilities that had completed baseline ICRM self-assessments in the Gauteng Province, South Africa.

Recruitment procedures

Clinic staff were conveniently recruited based on their roles within the clinic, following recommendations from clinic managers of participating facilities. We selected one individual from each of the following staff categories: Doctor, Facility Manager, Professional Nurse, Enrolled Nurse, Lay Counsellor/Social Worker, Pharmacist, Receptionist/Clerk and Cleaner. Our goal was to conduct eight staff interviews per site, resulting in a realised sample size of $n=335/360$. No personal identifiers beyond professional titles were collected from the health facility staff.

Data collection

Staff survey data

The survey was interviewer administered on clinic premises, conducted in English, and lasted approximately 30 min. The semistructured interviews allowed clinic staff to discuss their experiences and perceptions regarding the following.

1. Detailed implementation of ICRM at their facilities.
2. Quality and acceptability of administration and ICRM evaluation.
3. Satisfaction with and appropriateness of services.
4. Suggestions for improving services to achieve ideal clinic certification status.
5. Strengths and weaknesses of each ICRM component from the providers' perspectives.
6. The impact of the ICRM intervention on providers.

All questions included quantitative elements, with a comment section provided for participants to elaborate on their answers.

ICRM status data

An assessment of participating facilities provided data on structural factors that can impact ICRM implementation. These data included patient headcount, number of available consulting rooms, staffing completeness and services offered by the clinic. Participating clinics' ICRM accreditation status for 2018–2021 was retrieved from the National Department of Health ICRM monitoring database. These data were used to determine changes in clinic ICRM status over time. An endpoint variable indicating the

clinic's ICRM status progression since 2018 was created, classifying clinics as having improved, maintained its 2018 status or regressed to a lower status in 2021.

COVID-related infection control measures

The following precautions were implemented to ensure the safety of study staff and participants. A separate COVID-19 standard operating procedure (SOP) was provided, with detailed guidance on safety protocols during fieldwork, including infection prevention control measures and personal protective equipment (PPE) use at clinic facilities. Fieldwork commenced only when permitted according to the country's lockdown regulations. Data collection plans for the study team were reviewed regularly, and if the COVID-19 risk was deemed too high, staff interviews were paused. PPE, including masks, hand sanitisers and other applicable items, were supplied to the study team. Regular screening of study team members for COVID-19 symptoms was conducted, and any team member showing symptoms was immediately reported to the study PI, with action taken as specified in the COVID-19 SOP for occupational exposure. Study interviewers captured responses directly in RedCap during interviews, thereby eliminating the need for paper questionnaires.

Data analysis

All interviews were conducted by trained staff researchers between January and August 2021, with data directly captured during the interviews on mobile tablets and exported to STATA. Open-ended responses were managed in Excel for thematic analysis. Data cleaning and statistical analyses were conducted using STATA 16/17 (Stata Corporation, College Station, Texas), employing STATA survey commands to adjust for sampling probability weights. Categorical variables were described using proportions with corresponding 95% Confidence Intervals (CI), while continuous variables were summarised using medians with corresponding 95% CI. Determinant of specific outcome variables, including ICRM confidence (coded 1=Yes and 0=No), were determined using bivariate general estimating equation modeling to estimate relative risk ratios (RRRs) and corresponding CIs, with statistical significance set at 95% ($p < 0.05$). The exploration of predictors of ICRM status change, coded as 0 ('No change'), 1 ('Regressed') and 2 ('Improved'), was conducted using weighted bivariate multinomial logistic regression. Independent variables included clinic patient volume, facility size, ICRM implementation enablers/hindrances, the presence of an ICRM implementation champion at the clinic and ICRM knowledge.

For the qualitative data, open-ended questions regarding clinic staff experiences during the ICRM programme implementation were thematically analysed. The analysis began with identifying emerging themes by reading respondents' comments, followed by categorising these using pre-assigned codes based on the structured interview questions. Inductive coding was then employed

to deepen the analysis, with the process repeated until no new themes emerged. Two researchers independently coded two transcripts to ensure intercoder reliability, leading to the revision and finalisation of the codebook used for analysing the remaining transcripts.

RESULTS

Characteristics of participating clinics and staff

Overall, 335 clinic staff members participated, 125 (36.8%) represented clinical or management roles, while 60 (17.6%) were engaged in counselling/linkage to care support roles (table 1). This distribution of staff roles remained consistent across districts and ICRM classifications. Most of the recruited staff had been in their roles at the participating facilities for a minimum of five years (83.5%), with 62.6% having five or more years of professional experience. Also, 46.5% of the selected facilities were situated in formally organised urban areas. The remaining clinics were in areas characterised by a blend of formal and squatter settlements, referred to in this context as 'urban informal areas'. The study aimed for a convenient sample of 50 patients per selected facility, with a total target sample of 2229 out of 2250 successfully realised.

Staff knowledge of the ICRM programme

Most clinic staff exhibited a broad understanding of the ICRM programme objectives (table 2). Notably, clinical and management staff demonstrated higher ICRM knowledge levels (86.9%, 95% CI 75.1 to 93.6), while HIV linkage and counselling staff showed the lowest levels (73.8%, 95% CI 55.4 to 86.5). However, a minority (29.3%, 95% CI 24.3 to 34.8) spontaneously mentioned the ICRM requirement for clinics to adhere to SOPs, use guidelines/ICRM tools/checklists or align with the standards set by the OHSC for the NHI plans. This detailed ICRM knowledge remained consistently low across ICRM categories, being highest among clinical/management staff (41.9%, 95% CI 32.6 to 53.0) compared with counselling staff (14.0%, 95% CI 7.0 to 26.2). Low knowledge was particularly apparent among staff who were also not aware of any ICRM implementation plan for the clinic. ICRM knowledge was higher when the clinic had a designated ideal clinic champion. Staff who expressed that sufficient training was provided were 50% more likely to have more in-depth ICRM knowledge (RRR 1.5, 95% CI 1.0 to 2.4) than those who reported inadequate training.

Only 46.2% of clinic managers accurately reported the clinic's ICRM status at the time of the survey, with an even lower proportion (27.4%) among non-management clinic staff being aware of the clinic's ICRM certification status. A lower proportion of clinic staff demonstrated in-depth ICRM knowledge when the manager did not know the clinic's correct ICRM status (RRR 0.5 compared with when the manager knew the current clinic status, 95% CI 0.4 to 0.8).

Table 1 Interviewed staff profile (individual summary by district and ICRM status at start (April–May 2019) col proportions)

	Districts					Total
	CoJ	Ekur	Sed	Tshwane	WR	
	N (col%)	N (col%)	N (col%)	N (col%)	N (col%)	
Staff role						
Clinical or management	32 (31.4)	27 (31.0)	10 (41.7)	31 (42.5)	25 (46.3)	125 (36.8)
Support and counselling	19 (18.6)	21 (24.1)	4 (16.7)	8 (11.0)	8 (14.8)	60 (17.6)
Admin and data support	24 (23.5)	16 (18.4)	7 (29.2)	18 (24.7)	11 (20.4)	76 (22.4)
Other	27 (26.5)	23 (26.4)	3 (12.5)	16 (21.9)	10 (18.5)	79 (23.2)
Years at facility						
<1 year	5 (7.2)	6 (10.0)	2 (9.5)	3 (6.7)	1 (1.9)	17 (6.9)
1–5 years	8 (11.6)	5 (8.3)	1 (4.8)	9 (20.0)	1 (1.9)	24 (9.7)
5–10 years	49 (71.0)	43 (71.7)	16 (76.2)	23 (51.1)	43 (81.1)	174 (70.2)
>10 years	7 (10.1)	6 (10.0)	2 (9.5)	10 (22.2)	8 (15.1)	33 (13.3)
Years of work experience						
<1 year	1 (2.6)	2 (4.4)	1 (5.3)	2 (4.5)	1 (2.0)	7 (3.5)
1–5 years	7 (17.9)	14 (31.1)	7 (36.8)	12 (27.3)	27 (52.9)	67 (33.8)
5–10 years	20 (51.3)	19 (42.2)	9 (47.4)	21 (47.7)	11 (21.6)	80 (40.4)
>10 years	11 (28.2)	10 (22.2)	2 (10.5)	9 (20.5)	12 (23.5)	44 (22.2)
Facility in formal urban community (Yes)	6 (50.0)	6 (54.6)	2 (50.0)	3 (33.3)	5 (62.5)	20 (46.5)
CoJ, City of Johannesburg; Col %, Column %; Ekur, Ekurhuleni District; ICRM, ideal clinic realisation and maintenance; Sed, Sedibeng District; WR, West Rand District.						

ICRM enablers and hindrances

Facility staff mostly reported ICRM guideline training (47.9%, 95% CI 39.6 to 56.3) and the support from district teams and partner organisations (44.6%, 95% CI 36.6 to 52.8) as enablers of ICRM implementation. Conversely, facility size (32.9%, 95% CI 25.7 to 40.9), patient volumes (29.3%, 95% CI 22.0 to 37.8) and infrastructure challenges (28.4%, 95% CI 21.6 to 36.2) were the most cited hindrances to ICRM implementation.

ICRM implementation confidence

We also enquired about the clinic staff's overall confidence in successfully implementing the ICRM programme in their respective facilities (table 3). Overall, 63.1% of facility staff reported ICRM implementation confidence. ICRM implementation confidence was similar among staff in Platinum and Silver clinics and did not vary by facility characteristics such as patient density or patient/nurse ratio. However, ICRM confidence was also higher when an ICRM champion was present (RRR 2.3, 95% CI 1.0 to 5.2) and staff generally knew about the programme's objectives (RRR 2.1, 95% CI 1.2 to 4.0) (table 3). Similarly, ICRM confidence was higher when staff perceived that clear ICRM guidelines (RRR 2.3, 95% CI 1.1 to 5.0) with sufficient training were provided (RRR 2.7, 95% CI 1.4 to 5.3).

Clinic staff were asked to qualitatively describe the reasons for their confidence to implement the ICRM programme successfully (table 4). Staff with ICRM confidence considered the programme's requirements

integral to their existing commitment to quality health-care for their patients. Therefore, ICRM quality standards were not new or considered as additional to their current work. Second, the training and support provided by district teams and managers imparted knowledge and clarified the implementation processes. The training on the tools and how to use the various guidelines were seen as necessary implementation support. ICRM implementation confidence was low when staff experienced limited clinic leadership support in training and motivating of staff members to actively transform clinic conditions and practices in line with the protocols.

Staff motivation, involvement and teamwork were cited as critical enablers to the successful implementation of ICRM. Additionally, clinic improvements addressing structural and resource challenges were important drivers of ICRM implementation confidence (table 4) and were pivotal to the staff's adherence to ICRM guidelines and recommended processes. However, even well-meaning staff were demotivated by their inability to manage the new protocols when infrastructure and necessary resources were deemed inadequate. Furthermore, persisting staff shortages limited their ability to change processes because of the ongoing pressures.

Staff factors associated with ICRM status improvements 2018–2021

Overall, 60.3% (95% CI 43.8 to 74.8) facilities in Gauteng improved on their ICRM classification between 2018 and 2021, with 48.3% (95% CI 32.6 to 64.4) improving to a

Table 2 General and in-depth ICRM knowledge among clinic staff

	Distribution (Total)	General ICRM knowledge (Yes)	In-depth ICRM SOP/guidelines knowledge (Yes)
	Col % (95% CI)	% (95% CI)	% (95% CI)
Staff role			
Clinical/Management	36.7 (32.2 to 41.5)	86.9 (75.1 to 93.6)	41.9 (31.6 to 53.0)
Linkage/Counselling officer	17.7 (14.3 to 21.8)	73.8 (55.4 to 86.5)	14.0 (7.0 to 26.2)
Admin/Data support	23.3 (19.9 to 27.0)	78.5 (68.1 to 86.3)	29.4 (19.2 to 42.2)
Other	22.3 (18.6 to 26.5)	79.7 (65.7 to 88.9)	23.3 (14.2 to 35.8)
Was there a plan in implementing the ICRM?			
Yes	53.8 (45.9 to 61.5)	92.8 (86.6 to 96.3)	42.0 (33.5 to 51.1)
No	9.6 (6.3 to 14.6)	70.8 (48.1 to 86.4)	23.0 (11.7 to 40.4)
Do not know	36.6 (29.3 to 44.6)	69.1 (58.7 to 78.0)	15.5 (9.5 to 24.1)
ICRM classification 2021			
Platinum	64.5 (47.7 to 78.4)	81.1 (71.4 to 88.0)	24.9 (16.0 to 36.6)
Gold	22.5 (11.6 to 38.9)	75.9 (59.7 to 87.1)	34.5 (22.3 to 49.1)
Silver	9.5 (3.4 to 23.8)	80.8 (59.0 to 92.4)	32.9 (13.0 to 61.7)
NA	3.5 (0.6 to 17.0)	83.0 (75.6 to 88.5)	36.1 (19.5 to 56.8)
Does the clinic have a designated ICRM champion?			
Yes	51.0 (42.8 to 59.2)	87.6 (79.3 to 92.9)	37.2 (29.1 to 46.0)
No	49.0 (40.8 to 57.2)	71.3 (62.9 to 78.4)	21.0 (13.1 to 32.0)
Manager knows the current ICRM status			
Yes	46.2 (30.6 to 62.6)	82.5 (72.6 to 89.4)	39.3 (28.6 to 51.1)
No	53.8 (37.4 to 69.4)	77.1 (67.0 to 84.8)	20.7 (13.7 to 30.0)
Sufficient training in ICRM SOP			
Yes	67.5 (59.4 to 74.7)	86.5 (80.1 to 91.0)	32.7 (24.4 to 42.2)
No	32.5 (25.3 to 40.6)	69.7 (58.5 to 79.0)	21.6 (14.2 to 31.5)
Staff report correct current ICRM status			
Yes	27.4 (18.7 to 38.1)	78.8 (70.8 to 85.1)	36.6 (26.3 to 48.3)
No	72.6 (61.9 to 81.3)	81.8 (70.4 to 89.4)	26.5 (19.1 to 35.5)
Ideal clinic champion on site			
Yes	51.1 (34.9 to 67.0)	78.0 (68.5 to 85.2)	34.8 (24.2 to 47.2)
No	48.9 (33.0 to 65.1)	81.3 (70.5 to 88.8)	23.5 (15.8 to 33.3)

Col %, column %; ICRM, ideal clinic realisation and maintenance; NA, not achieved; SOP, standard operating procedure.

new Platinum status (table 3). However, 18.5% (95% CI 8.7 to 35.1) regressed, with most facilities classified as NA retaining this status. Overall, 76.9% of facilities that retained their 2018 classification were already Gold or Platinum certified.

Compared with facilities that maintained their 2018 ICRM status in 2021, staff from regressing facilities were less likely to have experienced ICRM guidelines as clear and enabling of implementation (RRR 0.5, 95% CI 0.2 to 1.0) compared with those from facilities with no ICRM status change. Similarly, regressing facilities were less likely to have an ICRM champion (RRR 0.3, 95% CI 0.1 to 0.7) or a manager who was aware of the clinic's active ICRM status (RRR 0.01, 95% CI 0.01 to 0.3) (figure 1).

DISCUSSION

The objective of this survey was to examine the knowledge, motivation and experiences of PHC staff with the ICRM programme implementation at public PHCs in the Gauteng province in South Africa.

While most clinic staff demonstrated a general understanding of the ICRM programme objectives, in-depth knowledge was very low. Staff expressed moderate confidence in implementing the ICRM programme, indicating ongoing challenges in integrating ICRM standards with clinic operations. Staff knowledge was associated with their confidence to successfully implement the ICRM programme but was conditional on the clarity of ICRM guidelines and adequacy of training accessed. A recent

Table 3 Factors associated with ICRM confidence and ICRM certification status improvement									
ICRM confidence			Facility ICRM status change						
Yes %	RRR	No change (ref)		Regressed		Improved			
95% CI	95% CI	Col % (95% CI)	Col % (95% CI)	Col % (95% CI)	RRR (95% CI)	Col % (95% CI)	RRR (95% CI)		
ICRM status (2021)									
NA	52.3 (39.3 to 65.0)	1	18.3 (3.4 to 58.8)	59.7 (25.5 to 86.5)	1	–	–		
Silver	78.0 (60.6 to 89.1)	4.0 (0.6 to 29.1)	13.3 (1.7 to 57.2)	20.8 (4.6 to 58.6)	1.0 (0.3 to 3.1)	–	–		
Gold	54.1 (38.6 to 68.8)	1.8 (0.2 to 14.0)	40.6 (13.9 to 74.3)	7.2 (0.9 to 40.9)	0.2 (0.1 to 0.5)	20.8 (8.6 to 42.5)	1		
Platinum	67.4 (58.0 to 75.5)	3.4 (0.5 to 21.2)	27.8 (9.8 to 57.8)	12.3 (1.5 to 55.7)	0.1 (0.02 to 0.2)	79.2 (57.5 to 91.4)	1.3 (0.7 to 2.4)		
ICRM status change									
No change	63.6 (47.4 to 77.3)	1	–	–	–	–	–		
Regressed	64.1 (51.2 to 75.2)	0.5 (0.2 to 1.9)	–	–	–	–	–		
Improved	62.6 (53.0 to 71.3)	0.9 (0.4 to 1.7)	–	–	–	–	–		
Patient volumes—Hindrance									
No	63.5 (54.9 to 71.4)	1	69.8 (61.2 to 77.3)	64.3 (45.5 to 79.5)	1	73.2 (60.8 to 82.8)	1		
Yes	60.3 (45.3 to 73.5)	1.5 (0.8 to 3.0)	30.2 (22.7 to 38.8)	35.7 (20.5 to 54.5)	1.3 (0.5 to 3.0)	26.8 (17.2 to 39.2)	0.8 (0.4 to 1.7)		
Facility size—Hindrance									
No	65.1 (57.7 to 71.8)	1	73 (55.5 to 85.5)	65.5 (48.8 to 79.2)	1	65.9 (54.9 to 75.3)	1		
Yes	55.9 (43.7 to 67.4)	1.7 (0.8 to 3.5)	27 (14.5 to 44.5)	34.5 (20.8 to 51.2)	1.4 (0.5 to 3.9)	34.1 (24.7 to 45.1)	1.0 (0.4 to 3.0)		
Infrastructure—Hindrance									
No	64.6 (57.6 to 71.0)	1	73.6 (52.7 to 87.5)	66.3 (56.2 to 75.1)	1	72.8 (61.6 to 81.8)	1		
Yes	55.7 (41.3 to 72.2)	1.0 (0.5 to 1.9)	26.4 (12.5 to 47.3)	33.7 (24.9 to 43.8)	1.4 (0.5 to 4.0)	27.2 (18.2 to 38.4)	1.4 (0.6 to 3.5)		
Clear guidelines—Enabler									
No	53.2 (45.0 to 61.3)		36.6 (22.2 to 54.0)	55.8 (45.2 to 65.9)	1	55.6 (43.9 to 66.7)	1		
Yes	74.9 (63.9 to 83.3)	2.3 (1.1 to 5.0)	63.4 (46.0 to 77.8)	44.2 (34.1 to 54.8)	0.5 (0.2 to 1.0)	44.4 (33.3 to 56.1)	0.5 (0.2 to 1.1)		
Support from district/partners—Enabler									
No	59.9 (50.9 to 68.3)	1	61 (46.7 to 73.6)	54.6 (43.5 to 65.3)	1	54 (42.0 to 65.6)	1		
Yes	68.0 (59.0 to 75.9)	1.6 (0.8 to 3.2)	39 (26.4 to 53.3)	45.4 (34.7 to 56.5)	1.3 (0.6 to 2.7)	46 (34.4 to 58.0)	1.3 (0.6 to 2.8)		
General ICRM knowledge									
No	50.8 (36.2 to 65.2)		19.5 (13.2 to 28.0)	16.2 (8.3 to 29.3)	1	22.1 (14.2 to 32.6)	1		
Yes	65.7 (58.5 to 72.2)	2.1 (1.2 to 4.0)	80.5 (72.0 to 86.8)	83.8 (70.7 to 91.7)	1.3 (0.5 to 3.1)	77.9 (67.4 to 85.8)	0.9 (0.4 to 1.7)		
In-depth ICRM knowledge									
No	63.6 (53.8 to 69.6)	1	65.2 (51.0 to 77.1)	67.3 (48.5 to 81.8)	1	73.6 (62.5 to 82.3)	1		
Yes	62.0 (53.8 to 69.6)	0.7 (0.3 to 1.3)	34.8 (22.9 to 49.0)	32.7 (18.2 to 51.5)	0.9 (0.3 to 2.4)	26.4 (17.7 to 37.5)	0.7 (0.3 to 1.5)		

Continued

Table 3 Continued

ICRM confidence		Facility ICRM status change					
Yes %	RRR	No change (ref)		Regressed		Improved	
95% CI	95% CI	Col % (95% CI)	Col % (95% CI)	Col % (95% CI)	RRR (95% CI)	Col % (95% CI)	RRR (95% CI)
Ideal clinic champion at site							
No	52.30 (41.2 to 62.5)	1	40.7 (25.6 to 57.9)	69.4 (57.3 to 79.4)	1	44.5 (34.3 to 55.2)	1
Yes	72.3 (62.5 to 80.3)	2.3 (1.0 to 5.2)	59.3 (42.1 to 74.4)	30.6 (20.6 to 42.7)	0.3 (0.1 to 0.7)	55.5 (44.8 to 65.7)	0.9 (0.4 to 1.9)
Sufficient training in SOP							
No	47.5 (34.4 to 61.0)		21.7 (13.2 to 33.7)	29.4 (16.7 to 46.3)	1	36.7 (26.7 to 48.0)	1
Yes	71.1 (62.9 to 78.1)	2.7 (1.4 to 5.3)	78.3 (66.3 to 86.8)	70.6 (53.7 to 83.3)	0.7 (0.3 to 1.7)	63.3 (52.0 to 73.3)	0.5 (0.2 to 1.0)
Manager knows correct ICRM certification status							
No	64.2 (54.7 to 72.8)	1	10.5 (1.3 to 50.5)	90.8 (52.5 to 98.9)	1	54.4 (33.0 to 74.4)	1
Yes	61.8 (51.3 to 71.2)	1.1 (0.6 to 2.0)	89.5 (49.5 to 98.7)	9.2 (1.1 to 47.5)	0.01 (0.01 to 0.3)	45.6 (25.6 to 67.0)	0.1 (0.01 to 1.0)
Staff knows correct ICRM certification status							
No	59.4 (51.1 to 67.1)	1	76.4 (55.5 to 89.4)	74.8 (54.5 to 88.0)	1	70.7 (55.4 to 82.5)	1
Yes	72.0 (57.6 to 82.9)	1.7 (0.9 to 3.6)	23.6 (10.6 to 44.5)	25.2 (12.0 to 45.5)	1.1 (0.3 to 4.1)	29.3 (17.5 to 44.6)	1.3 (0.4 to 4.3)

col %, column %; ICRM, ideal clinic realisation and maintenance; NA, not achieved; RRR, relative risk ratio; SOP, standard operating procedure.

Table 4 Reasons for clinic staff's perceived ICRM implementation confidence

	Themes	Quotes from clinic staff
Reasons for high ICRM implementation confidence	Normal work/familiar	"I pay attention to detail and understand law and guidelines of medicines. Interested in people's health and confidentiality. Responsible (sic)" "I know what is expected from me as a nurse in every situation and with assistance from other colleagues."
	Staffing training/support	"I did a health promotion course, health and safety, so it makes my role or my job very easy because I know most of the things that I'm doing." "I am very connected to the staff, so it's easy for me to communicate with them."
	Guidelines/instructions are clear	"Yes, it has been successfully implemented because most times we deal with patients coming from other facilities due to the good services and the waiting time is much better as compared to the facilities they are coming from, and we also try to check patients' complaints and compliments and we have meetings every Wednesdays to see where we need to improve so that the clinic status can be ideal to everyone."
	Space/resources improved	"Yes, because I can see consultation rooms are enough, and the X-ray rooms and each room has a computer. Cupboards and dustbins and even the pharmacy, our files and the reception I am happy with them and even the emergency room."
	Teamwork	"Yes, because our clinic staff members are dedicated to providing services to patients in a holistic manner. With our hard work and love for providing our services, we work together as one and try to make it possible for the patient to get quality help and avoid long queues even though it's a challenge at times because of lots of patients crowding the clinic."
Reasons for low ICRM implementation confidence	Leadership support/training	<i>"Because there is some resistance from staff when I try to enforce something. The staff is discouraged because of the broken health system. Sometimes, I must use my own money to get supplies." (Manager)</i> <i>"It was easy and difficult because some things I used to find out about the review during the audit visit."</i>
	Heavy workload/new role	"Due to lack of knowledge among staff the importance of ideal clinic and the patients need to be attended. They also don't understand why the assignment is to be done." "Not every colleague is willing to participate. There is already a lot to do within my daily tasks. Then there is the difficulty of allocating time to do this."
	Poor clinic conditions	"No, because we are still don't have electricity, we can't even do the reports due to that, and when it rains heavily, water enters the clinic. We also have space challenges."
	Inadequate resources	"No, we struggle with equipment (buying). We are failing due to equipment shortages; the pharmacy doesn't have an air conditioner for more than six months. It takes us months to wait, and we sometimes take money from our own pockets. We also struggle with the linen to be washed. I don't know where the struggle is. We have been struggling with size eight surgical gloves. We can't successfully implement the ICRM program." "Lack of resources. To get the ICRM status, we had to outsource or borrow from (another clinic). My previous manager and I ended up using our money for transport to buy the resources such as NJ tubes."
	Inadequate space/infrastructure	"No. There is no waiting area as we share this facility with municipal services. The facility is small, and there is not enough room. There is no emergency room." "The building layout is wrong. It was previously a police station. The resources are a big challenge, bathroom for both patients and staff are not in good condition. We share a bathroom, and it's only a single toilet. For the whole facility, we only have three toilets, two functioning and one not functioning."
	Staffing challenges	"We don't have pharmacists right now. We only have one pharmacy assistant, human resources shortage, high turnover, six midwives left. Others came and went. Infrastructure problems, no waiting areas, patients have to sit outside. Screening now being done in the parking lot." "ICRM exists on paper and is not perceived as instructions for operation. ICRM is seen by staff as a nuisance to be done for inspection purposes only." "No, staff was not fully equipped when the program was introduced. The training was not the same for everyone, which created a clash of information and caused many problems as the shared information misled other staff members."
ICRM, ideal clinic realisation and maintenance.		

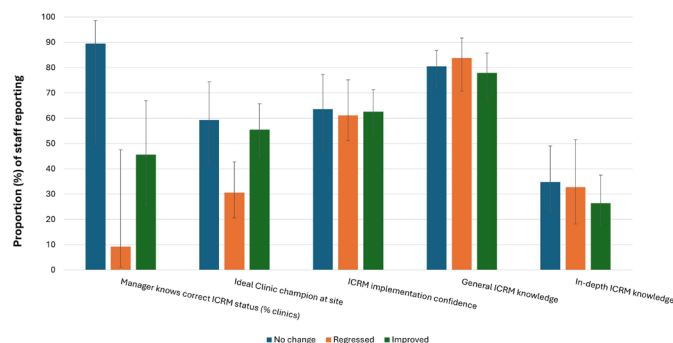


Figure 1 ICRM accreditation status change and clinic characteristics (% staff reporting). ICRM, ideal clinic realisation and maintenance.

review of the ICRM programme in the Limpopo province highlighted the concerns that the ICRM was implemented too abruptly, with limited staff training and knowledge regarding the programme's content.^{26 27}

Although the presence of an ICRM champion positively influenced staff ICRM implementation confidence, even motivated staff struggled to implement new protocols in the face of inadequate infrastructure and resource constraints. A qualitative study among government officials in the Gauteng and Mpumalanga provinces highlighted incoherences in ICRM-specific responsibilities of the different levels of government, a mismatch of quality ideals with available resources and clinic staff uncertainty about the programme's sustainability.²⁸ Clinic managers, constrained by limited budgets, often resorted to borrowing equipment to demonstrate compliance, masking the impact of unmet funding and infrastructure requests to rectify the existing shortcomings.^{28 29}

Contrary to a 2017 patient survey showing a positive correlation between ICRM accreditation and patient satisfaction, our survey did not find a correlation between ICRM accreditation status and clinic staff confidence in successfully implementing the programme.³⁰ Importantly, healthcare providers primarily associate quality of care with infrastructure adequacy, accountability and support from district and provincial authorities rather than the existence of national quality standards.³¹ The extent to which patient experiences are integrated into providers' perceptions of quality healthcare remains unclear.

Comparing facilities that maintained their 2018 ICRM status with those that regressed, patients from regressing facilities reported language barriers, healthcare workers being too busy to listen and perceptions of inadequate respect from clinic staff. These findings underscore the significance of patient-provider communication and respectful treatment in maintaining positive clinic performance. The literature on nurse-patient interactions in sub-Saharan Africa consistently highlights poor communication, with care providers dominating the process, neglecting patient needs and concerns as well as abusing and humiliating them.³² While this problem is often caused by pressures and challenges that nurses themselves experience in the execution of their daily

duties,²⁷ health provider communication styles characterised by high psychological regard for their patients could improve patient care-seeking behaviour.³³

Regressing facilities were also less likely to have staff perceiving ICRM guidelines as clear, having an assigned ICRM champion, or a manager aware of the clinic's active ICRM status, emphasising the role of leadership and internal advocacy in sustaining positive outcomes. The uncertainty of clinic managers regarding active ICRM status points to a potential disconnect in ownership of the programme and reiterates previous calls for improved training.²⁶

The study findings should be interpreted in light of its limitations. The survey did not intend to examine the implementation of recommended clinical and operational ICRM guidelines but focused on the knowledge of healthcare workers as well as their motivation and perception of the ICRM programme. A technical evaluation may highlight other changes brought about by the ICRM programme. While the semi-structured survey collected open-ended responses, these were not in-depth qualitative interviews of PHC staff. The strength of this approach is the ability to conduct a broad, high-level review by collecting comments from many healthcare workers, which were encoded to allow for quantitative analyses. However, there is a need to conduct a deeper exploration of the issues raised to further inform training and support programme improvements. Additionally, the distribution of ICRM certification status in Gauteng is skewed towards the Platinum classification limiting our ability to appropriately compare in some districts facilities that had NA a certification and progression from Silver status to Gold or Platinum. Nevertheless, the sample included as many NA and Silver clinics as possible. Finally, the data collection was carried out during the COVID-19 pandemic and the beginning of the COVID-19 vaccination programme in the country. Therefore, PHC resources might have been focused on the COVID response measures, potentially affecting the provider and patient experience.

Achieving a sustainable ICRM programme requires shifting from superficial compliance measures to evidence-based resource allocation, strategic investments and comprehensive staff development.^{34 35} A structured, multilayered approach is essential, beginning with systematic facility assessments and targeted resource allocation for renovations and equipment procurement. Additionally, an efficient supply chain is critical to ensuring the consistent availability of medicines and supplies, as demonstrated in successful low-resource settings.³⁶ Adequate staffing must also be prioritised through optimised hiring and task-shifting strategies.³⁷ Budgetary provisions should account for ongoing equipment maintenance and functionality. Strengthening training on national standards and ICRM requirements—particularly through practical, on-the-job training and mentorship—will facilitate skill development and ensure consistent programme implementation. Furthermore, leadership and management training is vital to equipping clinic managers with the

skills needed to drive positive change. Regular professional development programmes will ensure that staff remain up to date with evolving guidelines, best practices and technologies. Ultimately, ICRM accreditation should take into account the care and patient outcomes to capture the endpoint impact of the programme on the actual quality of care.

CONCLUSION

Leadership, teamwork and staff motivation are critical to the success of the ICRM programme. An ideal clinic champion plays a pivotal role in sustaining staff motivation, but training must be complemented by responsive resource support to achieve lasting improvements. Strengthening empathic and professional communication at all patient–staff engagement points is essential to fostering a health-care environment that upholds both quality and dignity.

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Patient consent for publication Not applicable.

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ORCID iDs

Dorina Onoya <http://orcid.org/0000-0002-2664-7342>

Nozipho Musakwa <http://orcid.org/0000-0002-8842-155X>

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