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# PATIENT SAFETY GOALS, AFRICA: CONTEXT FITTING TOOL FOR PATIENT SAFETY AND QUALITY OF CARE ASSESSMENT IN AFRICA, DEVELOPED USING THE DECIDE (HUMAN FACTORS) MODEL, VERSION 2 (2026-2027).

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Patient safety Goals, Africa: Context fitting tool for patient safety and quality of care assessment in Africa, developed using the DECIDE (Human Factors) model, version 2 (2026-2027).

Key words:
Patient safety Goals, Africa
Patient Safety and care quality assessments in Africa
Quality of care assurance and improvements in Africa

Introduction

Patient safety practice refers to processes or structures which when applied, reduce the probability of adverse events resulting from exposure to the healthcare system across a range of diseases and procedures. It aims at making health care safer for both clients and staff (Kohn, Corrigan, & Donaldson, 2000). It is "A framework of organized activities that create cultures, processes, procedures, behaviours, technologies and environments in health care that consistently and sustainably lower risks, reduce the occurrence of avoidable harm, make errors less likely and reduce the impact of harm when it does occur." (WHO, 2021).

Quality of care is "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (IOM, 1990 and *ahrq.gov*., 2016). Healthcare quality is a level or value provided by any healthcare resource, as determined by some measurement *(Maxwell, 1984)*. As with quality in other fields, it is an assessment of whether something is good enough and whether it is suitable for its purpose. Other definitions of healthcare quality include: "the degree of conformity with accepted principles and practices (standards), the degree of satisfying the patient's needs, and the degree of attainment of acceptable outcomes, while making appropriate use of resources." The Joint Commission defines care quality as "the optimal achievement of therapeutic benefit and avoidance of risk and minimization of harm". Care quality is also referred to as freedom from deficiencies and therefore less costly because deficiencies which often lead to customer dissatisfaction require additional costs to manage them. Quality care conforms to relevant requirements or standards - the needs and expectations of clients or patients.

A recurrent denominator in the definitions and descriptions of care quality above is the assumption of objective measurement against requirements or standards, that is: (measurement-conformity-standardisation) which is lacking in most clinical settings because of the uniqueness of the commodity healthcare. Furthermore, Dale et al., 1997, p. 3, opined that while many people say that they know what is meant by quality, it is in fact quite difficult for many people to grasp and understand the concept. This makes the development of objective and formal care quality measurements and benchmarking (standardisation) for patient safety assessments and continuous care quality improvements difficult.

To meet this goal of objective assessment (measurement) of patient safety and care quality in Africa, Patient Safety Africa embarked on the development of a SMART - *Specific, Measurable, Attainable. Relevant and Time bound* tool for care quality and patient safety assessment using the DECIDE (Human Factors) model, the results were first published in 2024 (Isemede et al. https://doi.org/10.46344/JBINO.2024.v13i03.16). Following rapid changes in the African healthcare environment and the

availability of technology to drive innovations, standards are changing fast, in response to this, Patient Safety Africa on World Patient Safety Day (17th September), 2025, resolved to have two yearly reviews of the Patient Safety Goals, Africa using same or similarly sound scientific methodology to update (develop) patient safety and care quality assurance and improvement tool for the African healthcare environment. The result of the first review of the 2024 version for use in 2026 and 2027, using the same DECIDE (human factors methodology) is presented in this paper.

The original problem or research question was, can Patient Safety and Care Quality be measured or assessed? And what are the valid parameters?

To which has been added, what parameters are valid for the measurement of patient safety and quality of care in Africa today?

Methodology

DECIDE model is a human factors model used as a pedagogic stratagem to develop a process of risk management for making informed decisions (Guo, 2018). DECIDE is an acronym of six activities involved in the decision-making process to analyse adverse events and risks in order to formulate an action plan to minimise future risks.

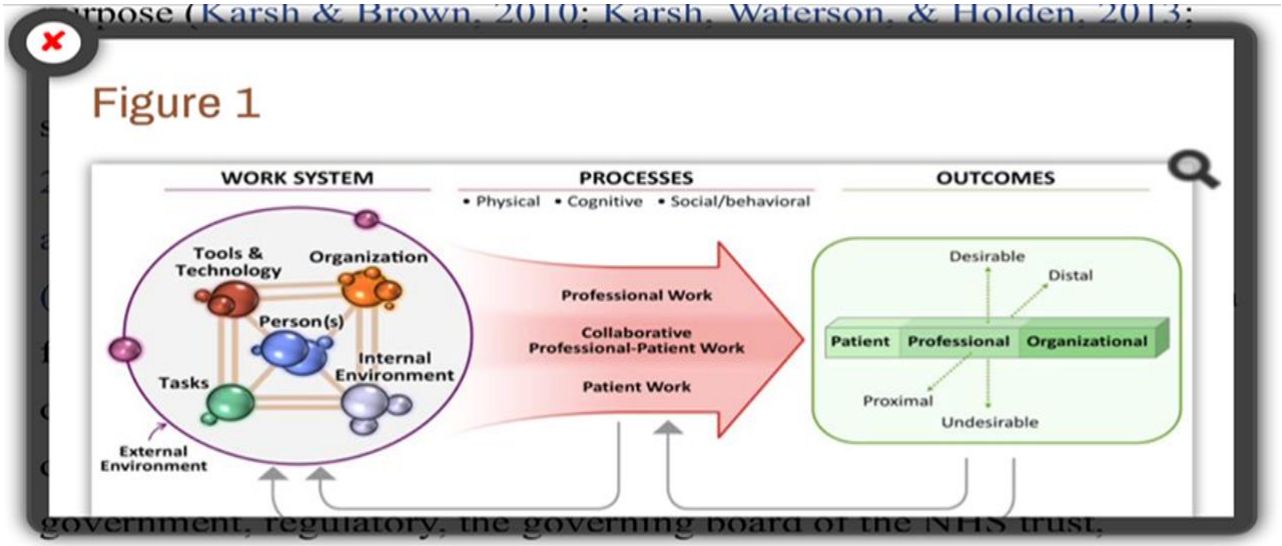
D = define the problem,
E = establish the criteria,
C = consider all the alternatives
I = identify the best alternative (most valid options),
D = develop and implement a plan of action and
E = evaluate and monitor and feedback.

Problems or Research Questions

Can Patient Safety and Care Quality be measured or assessed? And How?

And for the development of updated versions, what are valid parameters to measure patient safety and quality of care in Africa today?

**Criteria**: SMART – Specific, Measurable, Achievable, Relevant and Time bound.




SMART: The Specific, Measurable, Achievable, Relevant and Time bound criteria were determined from comprehensive reviews of Systems, Processes and Outcomes/SPO (Donabedian, 1978), the System Engineering Initiative for Patient Safety (SEIPS - Carayon et al. 2006, Carayon et al. 2014, and Carayon et al. 2020), and a review of human performance factors for elementary work and servicing (DuPont, 1993) in: Persons (Patients/Staff), Tasks (use of care bundles, data management), Tools & Technology (medical

devices, ICT), external environment (legal and regulation), Organisational culture (infection prevention and control (IPC), transfusion safety, medicines safety, surgical safety), Clinical Governance (leadership, communication and learning) provided the alternatives/options for considerations.


Domains of quality in IOM, 1990 and AfiHQSA, 2021, provided a useful baseline for Quantifying care quality - Safety, Timeliness, Efficiency, Effectiveness, Equity, Person centeredness, Integration, Integrity and Sustainability – STEEEP-IIS. Most fitting options (and weights) for meeting the challenges of quality care are set out under results below, with total score of 100.

Results: Best options are in 10 domains with total score of 100.

## 2027 Patient Safety Goals, Africa 2026-27.

The purpose of this Patient Safety/Care Quality Goals, Africa is to improve care quality and patient safety in Africa. The goals focus on common challenges of healthcare quality and safety in the African care environment and how to meet these challenges through the development of policies, standard operating procedures (SOPs), training and visible leadership.

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PSGAfr.27.01 **Identification: Staff and Patients including allergy status [**5]

- Staff Photo ID [1] [ ]
- Patient ID band [1] [ ]
- Bar coded Patient ID band [1] [ ]
- Colour coded Patient ID band for allergy [1] [ ]
- Allergy status on medical notes [1] [ ].

PSGAfr.27.02 **Medical Records** [10]

- Collection, analysis and publication of services statistics (monthly) [2] [ ]
- EMR – providers and provisions compliant with international IG standards) [1] [ ]
- Timely and efficient Outpatient appointment system [2] [ ]
- Information Governance (IG) training [1] [ ]
- Patients have access to records and pregnant women are offered copies of their notes[2] [ ]
- A named lead to manage all of the above including data confidentiality and feedback[2] [ ]

PSGAfr.27.03 **Acute/Emergency Care -** Track and Trigger patients to safety [10]

- Maternal Early Warning Scores tool training and use (MEWS) [2] [ ]
- Early Warning Scores tool raining and in use (EWS) [2] [ ]
- Basic Life Support (BLS) Training for staff [2] [ ]
- Availability/Rapid access to blood/blood products for transfusion [2] [ ]
- Call 4 Concern policy in use [1] [ ], And named lead for emergency care [1] [ ]

PSGAfr.27.04 **Diagnostic & Blood Transfusion Safety** [10]
(Patient ID policy should be followed*)

- Correct labelling of samples at bedside policy [2] [ ]
- Availability of essential Lab equipment and safe environment for samples and work [2] [ ]
- Internal quality assurance & confidentiality policies -processing & reporting of samples [2] [ ]
- Transfusion safety training [2] [ ]
- SHOT Audits and a named lead to manage the above [2] [ ]

PSGAfr.27.05 **Infection Prevent & Control (IPC)** [10]

- Water available for WASH (hand hygiene) [3] [ ]
- PPEs, Sanitizers and Clinical sharps safe boxes available [3] [ ]
- Staff routinely offered vaccination against Hepatitis B & relevant VPDs [2] [ ]
- Local antibiotics guidelines [1] [ ]
- A named IPC lead to coordinate hand hygiene and above IPC audits and education [1] [ ]

PSGAfr.27.06 **Medicines Safely** [10]

- Drug prescription, dispensing and administration continuous audit [2] [ ]
- Medicines storage, labelling and checking guidelines (SASHOM) [2] [ ]
- Insulin Pens - availability and use for insulin administration [2] [ ]

- Incidents management and education – communication and learning system [2] [ ]
- A named lead to coordinate medications safety [2] [ ].

PSGAfr.27.07 **Surgical Safety** [10]

- Surgical and invasive procedures consenting and transfusion guidelines [2] [ ]
- Five steps to safer surgery –
  - WHO surgical safety checklist [1] [ ],
  - Surgical team communication (safety huddles – team brief and team debrief) [1] [ ]
- Perioperative antibiotic guidelines [1] [ ], Perioperative pain assessmt & mgt. guidelines[2] [ ]
- Monthly data of surgical case numbers and incidents [2] [ ].
- A named lead to coordinate audits of the above and manage learning from events [1] [ ].

PSGAfr.27.08 **Medical Devices Safety** [8]

- Database of all medical devices in the organisation – including service history [2] [ ]
- Availability of essential equipment (phototherapy, suction & sterile services machines [2] [ ]
- Avail. of power for equipment and critical supplies such as temp. sensitive vaccines [2] [ ]
- Access to national and international Medical Devices Alerts (MDA) [1] [ ]
- A named responsible person for the above [1] [ ].

PSGAfr.27.09 **Safeguarding, Teamwork and Communication** [15]

- Falls prevention: protocols, training and named lead [2] [ ],
- Safeguarding Children: training and named lead [2] [ ],
- Safeguarding women, the elderly and vulnerable people: training and named leads [3] [ ],
- Team handover guidelines [1] [ ], Patients' referral guidelines [1] [ ], Training and use of SBAR [1] [ ]. Patient satisfaction and complaints (feedback) team using satisfaction surveys such as Friends and Family Test (F&FT), etc. to manage feedback for learning & improvements [2] [ ]. Excellence Reporting and or Excellence Awards for staff [2] [ ].
- Investments and progress towards digitalization (ICT for Health) [1] [ ].

PSGAfr.27.10 **Leadership (Clinical Governance/CG)** [12]:

- Budget for Patient Safety and Clinical Governance program [1] [ ]
- Availability of functional CG program led by the CEO/delegated director that reports directly to the Board [1] [ ]
- Evidence of registration of the facility with authorities – LGA, State Govt. & FGN/HSR[1] [ ]
- Evidence of registration & Licensing of facility – in a unique identifier on signage [1] [ ]
- Risks: Incident reporting (IR) system and evidence of progress towards Just Culture [2] [ ].
- Data collection/Audits: data collection, monthly analysis, communication and LfE [2] [ ].
- Co-development of care quality policies (patients, professionals and providers) [1] [ ].
- Education – Essential training including safeguarding (multi-professional teams) to support staff appraisals and revalidation [2] [ ]
- Clear QI vision and mission that are well communicated to staff and patients [1] [ ].

**Organization: Service Level** - Primary care [ ] Secondary care (Surgical/Invasive procedures under general anaesthetic included) [ ], Tertiary centre (ICU services included [ ].
**Organization: Type** – Public (Government) [ ], Private [ ], Missionary/Voluntary [ ].
**Quality Improvement (QI) Score: …/100 Date: dd/mm/yyyyy.***VPD – vaccine preventable diseases, LfE – learning from events, EMR – electronic medical records, HSR – health services regulator, CG – Clinical Governance.
**SMART QI**: *Specific, Measurable, Attainable, Realistic and Time bound*/patientsafetyafrica.org/Isemede2026.
**References:** AfiHQSA (2021), Donabedian (1978), Guo (2018), JCI (2019), Isemede (2020), SEIPS/Carayon (2006).

**Discussions**

**2027** Safety Goals, Africa 2026-2027.

e of this Patient Safety/Care Quality Goals, Africa is to improve care quality and patient safety in Africa. The goals focus on common challenges of healthcare quality and safety in the African care environment and how to meet these challenges through the development of policies, standard operating procedures (SOPs), training and visible leadership – to ensure:.

Correct Staff and Patients' Identification

PSGAfr.27.01 Healthcare Staff should be correctly identified by names and roles, photo ID should be displayed.

Patients: Use at least two ways to identify patients, ideally, three methods - use the patient's names and date of birth. A unique patient care number is recommended in addition to the above two. (This is done to make sure that each patient gets the correct medicine and treatment) (WHO, 2019).

Timely Access to Medical Records

PSGAfr.27.02 and 01. Patients and their nominated family doctor should be offered written summary of clinical interactions – diagnoses, test results and treatments (including a list of common side effects) for their information and to aid continuity of care when they visit other healthcare organisations. This is especially important for pregnant woman who should be given copies of all relevant records, test and scan reports. EMR to facilitate these processes shd be IG compliant.

Acute/Emergency Care Safety

PSGAfr.27.03. MEWS and EWS for Tracking and Triggering escalation of acutely deteriorating patients to Safety should be available and in routine use. All relevant staff should be trained in the use of the MEWS and EWS. All relevant staff should be trained in the ABCDE approach to emergency care and in the use of SBAR tool for handovers and referral communication. Call4Concern policy should be in place (Isemede 2020).

Diagnostic & Blood Transfusion Safety

PSGAfr.27.04 (Incl.01 & 02). The right Patient gets the right test and result and the right blood products (if needed) by following standard patient ID and blood products collection and administration standards. All clinical staff should have regular blood transfusion training (UKBT/NICE, 2021).

Infection Prevent & Control (IPC)

PSGAfr.27.05. Availability of water for hand hygiene, clinical sharps safe boxes and the segregation and disposal of clinical wastes according to written protocols (AFR/RC58/8). Hand hygiene posters to be displayed to aid staff, patients and visitors (WHO, 2021). WHO guidelines for PPEs and vaccination for staff. A local antibiotics policy should be available to guide clinicians. IPC lead to coordinate regular audits and learning for continuous improvements.

Medicines Safely

PSGAfr.27.06 (Incl. 01 & 02). Drug labelling: before admin. – label medicines in syringes, cups and bottles, do this in the area where medicines and supplies are set up. Double check drugs with a colleague (where possible) before administration.

Insulin pens: Special caution should be taken with insulin dosing. Ensure availability and use of insulin pens for insulin administration to avoid errors (JCI 2019).

Record and pass along Correct Information about a Patient's medicines. Find out what medicines the patient is taking. Compare those medicines with new medicines given to the patient. Make Sure the patient knows which medicine to take when they are at home and to bring their up-to-date list of Medicines every time they visit a clinic (Gluyas H, 2018).

Surgical Safety

PSGAfr.27.07 (Incl. 01 & 02). Surgical/invasive procedures and blood transfusion consenting guidelines and forms should be available and in use. The Five steps (Team Brief, WHO -3 parts and Team Debrief) to safer surgery protocols including guidelines for diff. airway mgt., correct surgical site marking, pause before invasive procedure and acute pain mgt. should be available and used at all times to ensure that the correct Surgery is done on the correct patient at the correct site of the patient's body and that pain is assessed and appropriately managed (Haynes et al 2008, Vickers 2011, Isemede and Beckley, 2021). Peri-operative antibiotic guideline to support evidence based antibiotics prescribing for the prevention of infection after Surgery should be available. Surgical safety audits should be regularly led by a named lead.

Medical Devices Safety

PSGAfr.27.08. Have a database of essential medical devices incl. their service histories. Ensure access to national and International medical devices alerts (MDA). Named lead for essential medical devices and sustainability – to record medical devices alerts in the risk register and ensure compliance.

Safeguarding & Team Communication

PSGAfr.27.09. Have in place - policies, training (mandatory) and visible leadership for preventing falls, safeguarding children and vulnerable adults. Develop a robust incident reporting system (IR) through a Just Culture (Dekker, 2010). Ensure professional analysis of events and learning (from events/LfE) through effective communication. Ensure support systems for first and second victims (Dekker, 2012) when incidents occur. Recognise and reward excellence in staff and teams. Have a robust co-development programme for Quality Improvement (QI) policies - patients, professionals and providers partnership.

Clinical Governance (Accountability Framework for Quality Care thro' Effective Leadership).

PSGAfr.27.10. Have a budget for and establish a formal Clinical Governance (CG) system to coordinate hospital quality improvement (QI) programme. Ensure compliance of all staff with annual statutory and prof. registration and licensing. Ensure all prof. and support staff have up to date background checks. Ensure registration of facility with authorities – demonstrate this on hospital signage. The QI programme should be led by the CEO or his/her delegated director who should report directly to the board and be known to all staff (to communicate vision, mission and ensure visible leadership for QI). SMART QI: Specific, Measurable, Attainable, Realistic and Time bound/patientsafetyafrica.org/Isemede2026.

Refs: AfiHQSA (2021), Donabedian (1988), Guo (2018), JCI (2019), Isemede et al. JBINO (2024), SEIPS/Carayon (2006).

This tool is deepening understanding of patient safety and care quality in Africa by adding to the body of knowledge on these concepts, it is also making the assessment of patient safety and quality of care more readily available to non-specialists in the subject. It is hoped that these developments will speed up the understanding of the triple bottom line in healthcare - Sustainability Value (SV) in healthcare (SV = outcomes for patients and populations /Environmental + Social + Financial Impacts) - the triple bottom line (Mortimer et al, 2018).

A smart version (online assessment and support version of this tool) is being developed. Feedback from this publication shall be used to fine tune the digital version before launch.

## Conclusion

Whilst the framework of organized activities that create cultures, processes, procedures, behaviours, technologies and environments in health care that can consistently and sustainably lower risks, reduce the occurrence of avoidable harm, make errors less likely and reduce the impact of harm are identifiable, their measurements posed a huge challenge. Similarly, although the domains of quality – safety, timeliness, effectiveness, efficiency, equity, person centeredness, integration, integrity (candour) and sustainability can be identified, their measurements posed a daily challenge for non-specialists in the subject in the African healthcare environment until the first publication of this tool in 2024 using the DECIDE (human factors model) that supports decision-making and risk management which are critical elements of any strategy to reduce cognitive errors and adverse events (Thabane et al., 2012; Vincent, Taylor-Adams, and Stanhope, 1998). A refinements of the 2024 version developed in response to technological and services changes using the same validated DECIDE (human factors model) has been presented here to aid continuous quality improvements in Africa.

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