

Health Check

Expensive ICU equipment goes to waste in hospitals

Experts say the Auditor General's report highlights a classic problem in health systems: investing heavily in equipment without ensuring the ecosystem needed to use it.

BY YAHUDU KITUNZI

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Agnes Nabiryo, a medical laboratory technician: At the core is a disconnect between procurement and service delivery capacity. Equipment appears to have been treated as a standalone solution rather than part of a broader critical care ecosystem.

Hospitals failed to utilise the equipment procured by the Health ministry due to gaps in Intensive Care Unit (ICU) infrastructure, staffing, power stability, and inadequate oxygen support systems, a government audit has disclosed.

According to the Auditor General's Report of 2020, the Health ministry procured and delivered ICU equipment to 15 regional referral hospitals (RRHs), three national referral hospitals, and seven general hospitals over the last five years.

The records reviewed showed that the equipment was worth Shs150 billion, including heating, ventilation and air conditioning systems for ICUs and assorted critical-care equipment for new-born Intensive Care Units (NICU).

Several hospitals could not utilise the purchased equipment due to systemic gaps, such as power supply that was unreliable in five regional referral hospitals—Hoima, Jinja, Mubende, Fort Portal, and Kabale.

“These facilities lacked adequate backup systems, with generators of insufficient capacity, faulty switching systems, or no alternative power

sources. As a result, critical equipment such as ventilators and patient monitors remained boxed and uninstalled,” the report reads in part.

It further shows that diagnostic equipment was non-functional or overdue for servicing. X-ray machines at Entebbe, Hoima, and Jinja RRHs were out of service due to delayed maintenance and technical faults. This undermined ICU operations and limited hospitals' ability to provide timely and accurate diagnoses for critically ill patients.

The report also shows that the oxygen supply systems were inadequate. Facilities such as Mubende, Fort Portal, and Kabale RRHs lacked fully installed pipeline systems, had non-operational oxygen plants, or faced unresolved technical failures. These gaps restricted hospitals' ability to meet oxygen demand in ICUs, theatres, and emergency units.

“The maintenance budgets were insufficient. Only nine of 26 oxygen plants were serviced once during the year, despite requiring quarterly maintenance. Funding for X-ray machine servicing covered just 21 of 59 machines. The maintenance budget has remained stagnant at Shs7.6b since the Financial Year 2015/2016, representing only 23 percent of the required Shs33b, despite the acquisition of sophisticated medical equipment,” the report reads.

Last-mile problem

Critical care units refer to specialised units that provide intensive care to patients with life-threatening conditions such as severe injuries or illnesses. These include ICUs, high dependency units, coronary care units, neonatal ICUs, and paediatric ICUs, among others. Such units require highly specialised technology and trained personnel.

Dr Ronald Kyagulanyi, a senior lecturer at Muteesa I Royal University, notes that the Auditor General's report highlights a classic “last-mile problem” in health systems: investing heavily in equipment without ensuring the ecosystem needed to use it effectively.

“Many ICU/NICU devices—ventilators, incubators, monitors—require stable environments. These machines cannot function without reliable electricity, medical-grade oxygen systems, adequate space, and infection control design. In several facilities, equipment was delivered to hospitals that simply aren't physically equipped to host ICU-level care. This creates ‘equipment without context,’ leading to idle assets,” Dr Kyagulanyi says.

He stresses that human resource constraints remain a major barrier. Critical care is highly specialised, requiring intensivists, neonatologists, critical care nurses (with low patient-to-nurse ratios), and biomedical engineers. Uganda, like many countries, faces shortages in these cadres. Even when staff are present, they may lack training on specific equipment models, leaving machines unused or underused.

Dr Kyagulanyi points out that ICU/NICU equipment requires regular servicing, spare parts supply chains, and biomedical support.

“Another critical weakness is oxygen supply. Modern ICU care is oxygen-intensive, yet many facilities lack piped oxygen systems, consistent cylinder supply chains, or on-site oxygen generation plants,” he

STAFFING LEVELS

A review of staffing levels in 16 regional referral hospitals and five national referral hospitals revealed acute shortages across all categories of critical care staff, with understaffing levels exceeding 90 percent in most cases and reaching 100 percent in some. Out of 20 approved positions for senior consultants (intensivists), only one was filled. Similarly, just one of the 24 consultant (intensivist) posts and one of the 43 medical officers' special grade (intensivist) posts were occupied. For medical officers (critical care), only two of the 60 approved positions were filled. Nursing cadres were equally affected.

says.

Solutions

To address this, he urges the Health ministry to adopt a coordinated “systems activation” approach, ensuring that infrastructure, staffing, power, and oxygen are strengthened together around specific facilities. “By combining readiness audits, infrastructure upgrades, workforce development, power and oxygen stabilisation, maintenance systems, aligned procurement and coordinated partnerships, the Ministry of Health can transform idle assets into functional, life-saving critical care units,” he says.

“The Ministry of Health should collaborate with the Ministry of Public Service and the Health Service Commission to develop a comprehensive strategy to address these acute staffing shortages and strengthen the country's critical care workforce,” Mr Edward Akol, the Auditor General, said.

Bigger picture

Mr Paddy Mugambe, a senior consultant in finance at Uganda Man-

agement Institute (UMI), observed that at the heart of Uganda's ICU challenges lies a simple reality: many hospitals were not ready. “Equipment was delivered to facilities without proper ICU installation requirements, or reporting infrastructure. In effect, machines arrived before the system was prepared to use them,” he adds. “Overall, these challenges point to weak planning and poor coordination. Equipment was distributed using a ‘one-size-fits-all’ approach, without fully considering each hospital's readiness.”

The Auditor General recommended that the government develop targeted strategies and interventions to attract and retain specialists in public health facilities, including competitive remuneration incentives, and streamlined recruitment processes.

Experts say the solution lies in shifting focus from machinery to the entire health system. Hospitals must be prepared before equipment is delivered. This requires, Mr Mugambe, “infrastructure investment—ensuring proper ICU installation requirements, and infection control design.”

Mr Yusuf Serunkuma, a policy analyst and researcher, tells *Weekend Monitor* that Uganda's health sector challenges cannot be reduced to the mere purchase of specialised equipment. What is required, he notes, “is a functional ecosystem in which such equipment becomes useful.”

The researcher highlights a structural conflict of interest within the Health ministry, reflecting a broader national malaise since neoliberal reforms. Many medical professionals employed in the public sector also operate as private investors in the same sector. This role undermines public accountability: those tasked with protecting government interests often benefit from the collapse of the public system, as it drives patients into private facilities.

Chokepoints

The leadership deficits are what typically translate into chokepoints like stockouts. The Health ministry, through the Uganda National Expanded Program on Immunisation (Unepi) and the National Medical Stores (NMS), procured and distributed 159,902 doses of vaccine worth Shs30.896b during the year.

However, several systemic challenges undermined the effectiveness of this programme. For one, nearly 50 percent of the national cold chain infrastructure was deteriorated more than seven years ago and has suffered from inconsistent preventive maintenance. Without timely replacement, vaccine efficacy and accessibility are at risk.

In addition, 10 districts received 1.7 million doses worth Shs17.6b without comprehensive needs assessments, raising the risk of overstocking, wastage, and expiry. Logistical challenges at NMS also caused delays averaging 16 days in three districts that received 266,708 doses, leading to vaccine stockouts and interruptions in immunisation programmes.

When contacted, Mr Emmanuelle Ainebyoona, the Health ministry's senior public relations officer, referred *Weekend Monitor* to the Auditor General's latest report, noting that it captures their comments.

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Mr David Eyatu, a health expert: The infrastructure upgrades must come first. Facilities designated to host ICUs should meet clear minimum standards—reliable power (with backup), piped oxygen, adequate space, and infection control systems. These should not be optional add-ons.



Arua District Woman MP Lillian Paparu inspects idle machines at the ICU ward at Arua Regional Referral Hospital in 2021. PHOTO/FILE