SA's ailing public health sector 'responding to treatment'?

Only one of the most vital patient care domains in public healthcare facilities today meets minimum local and international standards – that of positive caring staff attitudes – but while patient waiting times have increased, other critical areas show 'marginal to good' improvements.

This emerged from a comparison of the most recent (relatively small) sampling of facilities nationally, ranging from clinics all the way up to regional hospitals, with a comprehensive sampling of national healthcare facilities done 2 years ago by the same survey agents, using the same criteria. The 2012 results shocked the nation, with the national Department of Health (NDoH) unsuccessfully trying to keep the findings under wraps (*City Press*, a Johannesburg weekly newspaper, used the Promotion of Access to Information Act to pry loose the full audit). *Izindaba* can now show the best available data snapshot of the current situation after being assured by none other than Dr Carol Marshall, CEO of the Office for Healthcare Standards Compliance (OHSC), that both surveys were conducted by the same agents her office hired, using the same criteria. Infection prevention and control (IPC) and cleanliness were among five (of six) vital patient care areas that have shown improvement since the frightening reality of a 2012 baseline national facility audit stung the NDoH into a multipronged response.

Five of six vital patient care areas still below par

These two crucially related areas (IPC and cleanliness), taken together for measurement and arguably responsible for thousands of avoidable patient deaths (especially of babies) in recent years, have improved by an overall 7% (from a cross-facility average of 50% to 57%) over the past 2 years. However, and crucially importantly, this marginal gain – and measurements in all but one of the vital patient care areas – remains below the minimum acceptable score of 70% set by local and international patient care standards. The percentage rating for patient waiting times has actually gone down by 5% (from 68% to 63%), almost certainly as a result of inexorably increasing patient pressure on insufficient facilities and staff. The most encouraging statistic to emerge is a 40.1% leap in 'positive caring attitudes' held by public health facility staff members (from 30% to the 70% threshold), followed by a 27% improvement in patient safety and security (34% to 61%), with availability of medicines and supplies increasing by nearly 12% (54% to 65.5%). This last improvement is a hopeful sign that woefully inadequate supply management systems, corruption and theft might actually be yielding slightly to the raft of new initiatives. *Izindaba* singled out for interrogation the 7% improvement in the combined category of 'IPC and cleanliness' – chiefly because of unacceptably high nosocomial infection rates, the runaway drug-resistant tuberculosis (TB) pandemic and intermittent but ongoing episodes of multiple, avoidable neonatal inpatient deaths. What emerged was that direct support of the worst-performing facilities by agents of the OHSC improved training, expanded all-round IPC, boosted staff hygiene awareness, improved equipment supplies and led to the incorporation of IPC into the hospital revitalisation programme.

Infection control veteran Prof. Shaheen Mehtar.

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This was the view of Prof. Shaheen Mehtar, internationally renowned IPC authority and former head of Stellenbosch University and Tygerberg Hospital's academic unit for IPC. Mehtar, one of the louder protesting voices 8 years ago when a slew of baby deaths in Eastern Cape rural and urban hospitals was attributed to poor nurse hygiene practices and a lack of basic equipment, said the findings of the resultant 2012 national hospitals baseline audit proved to be the much-needed catalyst for the improvements, however far below the minimum threshold they fell. 'They [the NDoH] got the shock of their lives. They thought they were amazing, but they weren't. We're very lucky to have Motsoaledi [national health minister],' she added. The 2012 National Health Care Facilities Baseline Audit, conducted by a consortium of four independent bodies (Exponant, Health Information Systems Program, Arup (consulting engineers) and the South African Medical Research Council), found that only one of 394 hospitals, Witrand Psychiatric Hospital in North West Province, ticked all the 'accepted standards boxes' for cleanliness, infection control, drug stocks, staff attitude, patient safety and waiting times. The baseline audit was conducted in 3 880 healthcare facilities between May 2011 and May 2012 to assess the feasibility of the proposed multi-billion rand National Health Insurance (NHI) – hence its huge political sensitivity.

From 'annoying but true' to 'some progress' – expert

Inspectors went around the country checking hospital infrastructure, the condition of medical equipment, opening hours, workload, staff numbers and standards. They found that only 32 of all the hospitals and clinics complied with infection control guidelines and that only two facilities could guarantee patient safety. According to Marshall, the second similar audit showing the improvements was done in August this year. Mehtar described the results of the original 2012 survey, especially the IPC results, as 'very annoying, but true', adding that the latest sampling 'seems to indicate some progress'. A founder member and chairperson of the Infection Control African Network (ICAN), chairperson of the World Health Organization (WHO)'s Sterile Service and filoviruses and personal protective equipment committees plus a co-author of the WHO's Waste Management Interim Guidelines, Mehtar said that WHO guidelines recommended one infection control professional (ICP) per 250 beds. South Africa (SA), however, had one ICP per hospital, 'whether it has 200 or 1 500 beds'.

'The point is that it's not nearly enough. Yes, it will cost billions to get this right, but think of the billions that will be spent treating avoidable hospital-acquired infections if we don't!' On the positive side, hand hygiene now stood at over 70% compliance (on average), the result of an ambitious awareness campaign, providing adequate handwash basins, soap and paper towels/driers, plus placing alcohol drop containers at every ward entrance and next to each high-care bed. 'I think they realised that here you have a very inexpensive investment that gives very handsome returns,' Mehtar added. Given the post-2012 interventions, strongly driven by Motsoaledi and his Director-General Malebona Precious Matsoso, there was now 'no reason for us not to have done exceptionally well in infection control. I do know that we are now leaders on the continent in a very sustained sort of way,' she added. Asked to outline how the hospital revitalisation programme had contributed to this, she said that refurbished/redesigned hospitals plus all new hospitals now had vastly improved isolation facilities, good negative-pressure ventilation and better personal protection equipment, with improved and better monitored IPC policies.

Mehtar said that taking baseline TB prevalence into account, European hospitals had a nosocomial infection rate of 5/100 000 TB patients compared with SA's 1 000/100 000. About 35% of all local admissions were TB smear-positive, with 7 - 9% resistant to multiple drug interventions. Some of her current research centred on quantifying the number of healthcare workers who were TB-positive and lobbying provinces to consider classifying all TB among healthcare workers as 'occupationally acquired'. Needlestick injury data also revealed that a quarter of all infected bloods were both HIV- and TB-positive, meaning that if healthcare workers were compromised, they were well advised not to work in TB wards.

In an exclusive interview with Izindaba, Marshall revealed that her OHSC (initiated 6 years ago) had now covered 'about 20%' of the nation's public health facilities, benchmarking minimum norms and standards and then measuring the processes they'd put in place. She said her teams had targeted facilities at National Health Insurance pilot sites, particularly district hospitals, 'because this is where most people go and where most of the problems are'.

Update by new hospital standards chief

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Asked how she believed her office had contributed to improving infection control and hygiene, she said that after the 2012 facilities baseline report 'we produced a list of what facilities must have in order to maintain standards of infection control. We now inspect for those things and check whether supplies and equipment are on site. We're talking detail like whether they have the right kinds of disinfectants – soap and water are not enough when we're talking about specialist care.'

Marshall emphasised that the comparison being done by *Izindaba* was based on a small v. large sampling of facilities (221 v. 3 880), and said her own office did not currently measure outcomes, but farmed this work out. 'We will when the [to be published] regulations empower us. What we're doing is ramping up our capacity, training inspectors. We're just appointing more staff now and moving into our own building,' she added. She said the National Health Amendment Act dictated that the OHSC inspect facilities every 4 years. 'We're not there to supply stats, we're there to determine which institutions comply with our norms and standards. I'd say that we've now probably got enough information to calibrate our instruments.' (The national core standards were drafted in 2008 and published in 2011.) Waxing philosophical, Marshall said this was 'not a long time, given what has been achieved, even if to me it felt like forever – but people tell me it's an amazingly short time to set up a new institution from scratch.' Responding to Mehtar's highlighting of the woeful inadequate number of infection control officers at larger hospitals, she said more had been appointed, 'but not as many as we should have – this is one of the things we'll start measuring. I can't tell you about IPCs per hospital … I know we've debated that … but I can't recall whether there's a proposal being put forward. Our position would be let's start somewhere.' She reiterated that the OHSC was 'pitching care at the level of district hospitals – we've deliberately resisted pressure to turn this into something pitched at academic institutions which generally do better.'

Training expanded and improved

Mehtar said that since 2005 her department had trained hundreds of people in a basic 5-day IPC course and helped set up infection control forums in most provinces. She began an IPC Master's course at Stellenbosch 2 years ago, which had grown from half a dozen students to about 90 currently. Turning to the Ebola outbreak in West Africa, she said that because of the positions she held at the WHO, she had been asked to set up IPC training resource centres in Uganda and Sierra Leone and had been provided with 9 months of funding to do so. Working under the auspices of the ICAN, the training would begin in earnest in November 2014. Of the rampant West African outbreak, which is

accelerating with infections tripling every fortnight, she said she believes that 'it will be a year before we even see the light of day', adding that she thought SA was better than the USA at containing viral hemorrhagic fever outbreaks, with far more experience.

MSF Ebola decontamination procedures questioned

Told about the death and infection rate among Médecins Sans Frontières (MSF) healthcare workers in West Africa, Mehtar criticised their use of spraying off personal protection suits with heavily chlorinated water, saying this was an outdated and inappropriate adaptation from cholera outbreaks, which she claimed was where MSF's greatest experience lay. 'The principle of infection control is to keep things dry! There's a big problem with taking those damn big suits off – you need a buddy for dressing and undressing (doubling the infection risk). You also shouldn't have water squishing around all over the place. We always use impervious or semipervious gowns and face shields. Can you imagine being completely covered in a plastic bag where your core temperature rises to 38.6ºC and working for over an hour at a time? You get pretty hot and sweaty, your goggles get fogged up and you can't even see properly to put up a drip. Basically you end up with heavily reduced function and awareness and a lot of mistakes can happen, especially if you're stumbling all over the place with wee, poo and chlorine on the floor.'

MSF's humanitarian affairs advisor Jens Pedersen, a nurse who recently returned from working as an Ebola medical team leader in Monrovia, Liberia, told *Izindaba* that in MSF's 20-year experience of containing Ebola outbreaks in six West and Central African countries, chlorinated water was 'very effective in preventing infection' and the 'most appropriate' measure for the resource-limited settings MSF worked in, where basic remedies were often the most efficient. 'We're aware of the debates questioning the use of chlorinated water, but we've yet to see any credible alternatives.' Addressing the personal protection equipment process, he said the 'buddy system' was used as a supportive mechanism in the high-risk zone to ensure safety, but 'buddies' were not involved in the undressing process. From when MSF began responding to the Ebola outbreak in March this year, 540 international staff had worked with 3 000 national colleagues. To date (23 October), 23 MSF staff members had been infected, of whom 13 had died, 7 had recovered and 3 were still in care. Every time a volunteer was diagnosed with Ebola, an investigation was done to determine the 'exact circumstances' of contamination, focusing on verifying the efficacy of the biosecurity measures used and how well implemented and respected they were. An MSF probe also established that of the 23 staff who contracted Ebola, most were infected in the local communities, while none of the 'handful' of staff infected in the treatment centre itself were contaminated during the process of undressing.

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