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<tr><td>Theme 2</td><td>

Patient safety
Preventing adverse events that may cause a patient harm.
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We have chosen to report our patient safety incidents at a rate per admission. This allows a patient to understand their risk on being admitted, which is obscured when a rate per 1 000 in-patient days is the reporting standard. This methodology is aligned with the international standards from the Agency for Healthcare Research and Quality (AHRQ).

Falls and pressure lesions

Our prevention strategies for falls and Stage III and IV pressure lesions (wounds that have become large and deep, reaching muscle and bone) include evidence-based assessment of patients. We use the Morse Fall Scale to identify patients at risk of falling and the adapted Norton Scale to assess the likelihood of a pressure lesion developing for a particular patient. Special precautions are then applied for patients identified as being at risk.

Netcare outcomes

A patient's risk of falling and being injured when admitted to a Netcare hospital is 0.1%, a result that is lower than the ranges published in international studies[9]. A patient admitted to a Netcare hospital has a 0.01% chance of acquiring a Stage III or IV pressure lesion. These rates have increased marginally off a very low base in 2017/18 due to embedding a culture of increased reporting.

Falls and lesions (lower score is better)	2019	2018	2017
Falls with injury (per 1 000 admissions)	1.06	1.00	0.99
Stage III and IV pressure lesions (per 1 000 admissions)	0.14	0.13	0.14

Measure definition for falls with injury: in-hospital falls with injury per 1 000 admissions for patients older than 18 years[10].
Measure definition for pressure lesions: Stage III and IV pressure lesions acquired in hospital per 1 000 admissions for surgical or medical patients 18 years and older. Excludes admissions of less than three days and obstetric patients[11].

Infection prevention and control

People, technology and data underpin our infection prevention and control (IPC) efforts to address the global health risk of infections caused by organisms that are resistant to many of the drugs available. One of the most effective ways to prevent the spread of infections is for doctors, nurses, patients and visitors to wash their hands. We are exploring innovative behavioural and training solutions to improve compliance to hand hygiene practices, which is monitored using a Netcare developed app.

Other IPC practices and interventions include:

▪ Surveillance programmes to identify organisms of concern, drug resistance and hospital acquired infections (HAI).

▪ Screening patients on admission to identify the presence of drug resistant organisms.

▪ Monitoring compliance with clinical care bundles to ensure that evidence-based care is uniformly applied for every eligible patient to prevent HAIs.

▪ The Netcare surgical antibiotic prophylaxis app, which ensures that patients get the right antibiotic at the right time and in the right dose before, during and after surgery.

▪ Using ultraviolet robots for environmental cleaning has dramatically reduced the time taken to disinfect a room or theatre from up to eight hours, to between four and 10 minutes. This has allowed us to adjust our disinfection policy from disinfecting targeted rooms where resistant micro-organisms are identified, to disinfecting all rooms after patient discharge. We currently have ultraviolet robots in 20 hospitals, and will expand our fleet to 25 in 2020.

▪ The Netcare antibiotic stewardship programme, which promotes the responsible use of antibiotics. The programme is well established at all Netcare hospitals.

Hospital acquired infections

HAIs are infections patients acquire while in a hospital being treated for another condition. Patients who undergo invasive procedures, are admitted for prolonged periods in an intensive care unit (ICU) and/or are immune-compromised, are at a higher risk for an HAI.

9. Source: Najafpour Z,. et al. (2019). Risk factors for falls in hospital in-patients: A prospective nested case control study. International Journal of Health Policy Management, 8(5), 300–306. doi:10.15171/ijhpm.2019.11.
10. National Quality Forum measure number 0202 - falls with injury.
11. AHRQ Patient safety Indicator_03 Pressure Ulcer Rate.

Antibiotic stewardship

We introduced our antibiotic stewardship programme eight years ago – a pharmacist driven collaborative model, which reduced our antibiotic consumption over a five-year period by 20%. The introduction of the personalised clinical information (PCI) tool to over 2 000 specialists in 2019 has enhanced the achievement of the programme's objectives, enabling the comparison of antibiotic usage data by doctor.

Netcare outcomes

The HAI rate decreased by 0.3% and the catheter associated urinary tract infection (CAUTI) rate increased by 3.2% from 2018 to 2019. The downward trend of surgical site infections (SSI), with a 19.1% decrease over the same period, pleasingly reflects the success of our surgical antibiotic prophylaxis app.

IPC (lower score is better)	2019	2018	2017
Hospital acquired infection			
Overall HAI rate per 100 admissions	**0.96**	0.97	0.94
CAUTI rate per 100 urinary catheters	**1.16**	1.12	1.19
SSI rate per 100 major surgeries	**0.11**	0.14	0.16
Antibiotic stewardship			
DDD per 100 bed days	**86.8**	84.7	84.0

Measure definition for HAI: rate per 100 admissions/catheters or major operations[12, 13].
Measure definition for antibiotic stewardship: the assumed average dose per day for a drug used for its main indication for adults (World Health Organization (WHO) defined daily dose (DDD)) per 100 bed days.

Key strategic initiative

Advancing Netcare's antibiotic stewardship programme

We are taking a fundamental step in antibiotic stewardship and using machine learning to develop an automated clinical decision support system to:

- Accurately determine the appropriate level of antibiotic consumption in each Netcare hospital based on its unique factors.
- Guide antibiotic therapies and detect inconsistencies in prescribing antibiotics.
- Predict bacterial outbreaks.

Predicted antibiotic consumption is being finalised for 50 Netcare hospitals, helping us understand the appropriateness of antibiotic prescribing in each hospital and where intervention is required. This step prepares Netcare for future funder requirements on antibiotic consumption reporting. It will also enhance our engagement with doctors on their use of antibiotics and empower our pharmacists to intervene when necessary. We will also drive shared learning from hospitals that perform within their estimated benchmark.

Hospital Group antibiotic consumption[14]

For the period January 2018 to August 2019

Group actual
84.35
DDD/100 bed days

Group predicted
84.15
DDD/100 bed days
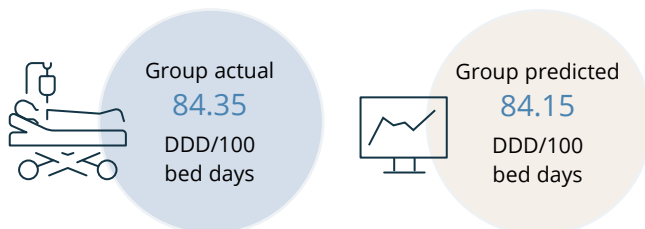
Foundational steps are being made towards a multidrug-resistant outbreak prediction model, which will be driven with the launch of EMRs, enhancing our ability to initiate early intervention.

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12. Events are the number of admissions for the HAI rate, the number of urinary catheters inserted for the CAUTI rate, and the number of major surgeries for the SSI rate.
13. Infection definitions from the Centers for Disease Control and Prevention's National Healthcare Safety Network.
14. Data excludes paediatric patients, outpatients and those patients on cotrimoxazole (Bactrim).