



**Health  
Information  
and Quality  
Authority**

An tÚdarás Um Fhaisnéis  
agus Cáilíocht Sláinte

# **Report of the unannounced inspection at Tallaght University Hospital, Dublin.**

Monitoring programme undertaken against the National Standards for the prevention and control of healthcare-associated infections in acute healthcare services

Date of on-site inspection: 19 April 2018



## About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is an independent authority established to drive high-quality and safe care for people using our health and social care services in Ireland. HIQA's role is to develop standards, inspect and review health and social care services and support informed decisions on how services are delivered.

HIQA aims to safeguard people and improve the safety and quality of health and social care services across its full range of functions.

HIQA's mandate to date extends across a specified range of public, private and voluntary sector services. Reporting to the Minister for Health and engaging with the Minister for Children and Youth Affairs, HIQA has statutory responsibility for:

- **Setting Standards for Health and Social Services** — Developing person-centred standards, based on evidence and best international practice, for health and social care services in Ireland.
- **Regulation** — Registering and inspecting designated centres.
- **Monitoring Children's Services** — Monitoring and inspecting children's social services.
- **Monitoring Healthcare Safety and Quality** — Monitoring the safety and quality of health services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health Technology Assessment** — Providing advice that enables the best outcome for people who use our health service and the best use of resources by evaluating the clinical effectiveness and cost-effectiveness of drugs, equipment, diagnostic techniques and health promotion and protection activities.
- **Health Information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.



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## 1.0 Introduction

HIQA monitors the implementation of the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*<sup>1</sup> in public acute hospitals in Ireland to determine if hospitals have effective arrangements in place to protect patients from acquiring healthcare-associated infection. The *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services* will be referred to as the National Standards in this report.

In 2017, HIQA commenced a revised monitoring programme against the National Standards. The aim of this revised monitoring programme is to assess aspects of the governance, management and implementation of designated programmes to prevent and control healthcare-associated infections in hospitals. This monitoring programme comprises Phases One, Two and Three which will be described next.

The National Standards were updated in 2017 and therefore supersede the previous version. Hospitals should work towards implementing these revised National Standards.

### Phase One

All public acute hospitals were requested to complete and return a self-assessment tool to HIQA during April and May 2017.

### Phase Two

Using the revised assessment methodology HIQA commenced a programme of unannounced inspections against the National Standards in public acute hospitals in May 2017. The lines of enquiry which are aligned to the National Standards are included in this report in Appendix 1.

Further information can be found in the *Guide to the monitoring programme undertaken against the National Standards for the prevention and control of healthcare-associated infections*<sup>2</sup> which was published in May 2017 and is available on HIQA's website: [www.hiqa.ie](http://www.hiqa.ie)

In October 2017, the Minister for Health activated a Public Health Emergency Plan<sup>\*</sup> and convened a National Public Health Emergency Team as a public health response

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<sup>\*</sup> A National Public Health Emergency Plan was activated on 25 October 2017 by the Minister for Health in response to the increase and spread of Carbapenemase Producing *Enterobacteriaceae* (CPE) in Ireland. As a result a National Public Health Emergency Team was convened and they have been meeting on a weekly basis since 02 November 2017. Please refer to the Department of Health webpage for further details: <http://health.gov.ie/national-patient-safety-office/patient-safety-surveillance/antimicrobial-resistance-amr-2/public-health-emergency-plan-to-tackle-cpe/nphet-press-releases-minutes-of-meetings/>

to the increase of Carbapenemase Producing *Enterobacteriales* (CPE)<sup>†</sup> in Ireland. In light of the on-going national public health emergency the focus of inspections in 2018 will be on systems to detect, prevent and respond to healthcare-associated infections and multidrug-resistant organisms in line with national guidelines.

### **Phase Three**

Phase Three of this monitoring programme will focus on the reprocessing of reusable medical devices and HIQA will commence onsite inspections in this regard in 2018.

### **Information about this inspection**

This inspection report was completed following an unannounced inspection carried out at Tallaght University Hospital by Authorised Persons from HIQA; Kathryn Hanly, Noreen Flannelly Kinsella and Kay Sugrue. The inspection was carried out on 19 April 2018 between 09:00hrs and 17:15hrs.

Inspectors spoke with hospital managers and staff, and members of the Infection Prevention and Control Team. Inspectors requested and reviewed documentation and data and observed practice within the clinical environment in a small sample of clinical areas which included:

- Crampton Ward: Medical ward
- Lane Ward: Urology and general surgical ward
- Lynn Ward: Infection Control Cohort ward.

The inspection team used designated monitoring tools during this inspection and focused specifically on aspects of the prevention and control of transmission of antimicrobial-resistant bacteria and healthcare-associated infections.

HIQA would like to acknowledge the co-operation of the hospital management team and all staff who facilitated and contributed to this unannounced inspection.

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<sup>†</sup> Carbapenemase Producing *Enterobacteriales* (CPE), are Gram-negative bacteria that have acquired resistance to nearly all of the antibiotics that would have historically worked against them. They are therefore much more difficult to treat.

## **2.0 Findings at Tallaght University Hospital**

The following sections 2.1 to 2.4 present the general findings of this unannounced inspection which are aligned to monitoring lines of enquiry.

### **2.1 Risk identified during this unannounced inspection 19 April 2018,**

A risk was identified in relation to a failure to effectively and consistently implement transmission-based precautions.

Specifically, inspectors observed that the doors to two single isolation rooms on Lynn Ward accommodating patients requiring airborne infection isolation precautions were open at the beginning of the ward based inspection.

This issue was brought to the attention of the clinical nurse manager (CNM) and representatives from the Senior Management Team at the hospital during the inspection and was immediately mitigated.

HIQA sought assurance regarding the measures that had been enacted to prevent such a situation from occurring again. In response, the Director of Quality, Safety & Risk Management at the hospital outlined key actions implemented by the hospital to mitigate the risk identified by HIQA. Specifically these key actions included:

- daily inspections by the Executive Management Team to ensure compliance with airborne infection isolation precautions
- education to clinical staff on the management of patients with actual or suspected tuberculosis (TB).

A copy of a letter issued by HIQA on 20 April to the Chief Executive Officer (CEO) of Tallaght University Hospital regarding the risk identified during the inspection and a copy of the response received from the Director of Quality, Safety & Risk Management of Tallaght University Hospital are shown in Appendices 2 and 3 of this report.

## 2.2 Governance and Risk Management

National standards<sup>1</sup> recommend that governance and communication arrangements need to be clearly defined and communicated to relevant staff to ensure that there is clarity on individual roles and responsibilities in addition to reporting lines and accountability. Findings on inspection evidenced a lack of clarity in relation to reporting relationships.

Tallaght University Hospital had recently reconfigured its governance arrangements for infection prevention and control with a view to having one overarching Infection Prevention and Control Committee which had oversight of both clinical and environmental infection prevention and control. The inspection team found that these recent changes were not fully communicated or understood in practice leading to ambiguity amongst some senior members of the Infection Prevention and Control Team.

It was explained at interview that the Infection Prevention and Control Committee was to have a dual reporting relationship with the Executive Management Team and the Quality, Safety and Risk Management Executive Committee. However, the organogram provided to HIQA did not reflect the proposed dual reporting structure as explained by senior management during interview. This lack of clarity was a concern.

### Infection Control Team

Hospital management informed inspectors that additional support had been provided to the Infection Prevention and Control Team in recent months with the appointment of an additional 4.5 whole time equivalent<sup>‡</sup> (WTE) infection prevention and control nurses. The current compliment was six WTE infection prevention and control nurses, including an assistant director of nursing. However inspectors were informed that as a consequence of staff turnover and the need for new infection prevention and control staff to go through a period of orientation, the level of experience and training among infection prevention and control nurses at the hospital had declined. It was identified at the time of this inspection, that 4.5 WTE out of six staff employed as infection prevention and control nurses had significant experience and had completed formal post-graduate training in this field. It was reported at interview that the demands of training up and supporting newly appointed infection prevention and control nurses further impacted on implementation of an infection prevention and control programme at the hospital.

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<sup>‡</sup> Whole-time equivalent (WTE): allows part-time workers' working hours to be standardised against those working full-time. For example, the standardised figure is 1.0, which refers to a full-time worker. 0.5 refers to an employee that works half full-time hours.

The hospital had a suite of infection prevention and control policies, procedures and guidelines which covered aspects of standard precautions, transmission-based precautions and multidrug-resistant organisms including outbreak management. Documentation reviewed by inspectors showed that the review cycle for local policies, procedures and guidelines was every three years. Infection prevention and control policies, procedures and guidelines were available to staff through the hospital's controlled document management system. However, staff on one of the wards inspected reported that they had difficulty accessing and locating policies, procedures and guidelines on this system.

The hospital must ensure all staff have the necessary technical skills to access and navigate the document management system.

### Infection Prevention and Control Education

The Infection Prevention and Control Team provided a range of educational sessions to personnel on infection prevention and control programme, procedures and practices. These included both formal and informal lectures, ward and department based education sessions and hands-on training. The Infection Prevention and Control Team were represented on the Mandatory Education Committee. However inspectors were informed that infection prevention and control training was not delivered according to the national framework<sup>3</sup> for such knowledge and skills.

Inspectors were informed that the HSEland online training for "Breaking the Chain of Infection" had recently become a mandatory component of induction training.

Staff in Tallaght University Hospital were required to attend hand hygiene training on an annual basis over and above the HSE requirement of two yearly training.<sup>4</sup> Hospital staff can avail of either practical onsite hand hygiene training or the HSEland eLearning training programme (the HSE's online resource for learning and development). Hospital staff were deemed to be trained in hand hygiene if they have completed one or both training modes.

Documentation indicated that 77% of hospital staff had attended mandatory hand hygiene training in the previous two years. Management stated that this was an underestimation of overall compliance as deficiencies in respect of accurately quantifying the number of staff trained were reported.

HIQA was informed that hand hygiene compliance reports were reviewed monthly at Directorate meetings. Summary reports were reviewed at Executive Management Team meetings each month and were included in the quality section of the Board of Directors integrated management report.

## Risk Management

Infection prevention and control related clinical incidents were addressed at clinical area level or were documented and escalated to directorate level or higher as required. However, there were reported inconsistencies in the level and timeliness of feedback to staff once an incident report had been escalated.

Healthcare-associated infections (HCAIs) are frequently occurring hospital incidents which can be analysed by systems analysis.<sup>§</sup> National guidelines recommend that the processes for reporting and investigating infections by systems analysis should be aligned with the governance arrangements that apply for other types of incidents in the hospital.<sup>§</sup> Inspectors were informed that HCAI systems analysis were not routinely preformed for all HCAIs at the time of the 2018 inspection. A proposal had been submitted to the HSE suggesting the implementation of HCAI system analysis led by hospital and was being progressed at the time of the HIQA inspection.

The Infection Prevention and Control Team carried out infection prevention and control formal risk assessments where risks required a management plan. The Infection Prevention and Control Team had developed an infection prevention and control risk register<sup>\*\*</sup>. This was reviewed regularly and high-rated risks escalated to the Executive Management Team via the Director of Laboratory. Inspectors were informed by management that risks identified in clinical areas were addressed locally and high risks were escalated to the Dublin Midlands Hospital Group through corporate risk management processes. Risk was a standing item on the Infection Prevention and Control Committee agenda. The risks reported by hospital management were reflective of the risks identified by HIQA during this inspection. The risks identified and the measures taken by the hospital to mitigate these risks are described below and will be discussed further in section 2.4 of this report.

High rated risks identified by management included:

- CPE hospital outbreak
- risk of missed CPE cases due to non-compliance with hospital screening guidelines

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<sup>§</sup> Systems analysis is 'the systematic analysis of all the factors which predisposed to, or had the potential to prevent, an error. *The term 'root cause' analysis/investigation has been replaced with 'system' analysis/investigation as there is rarely one 'root cause' for any incident.*

<sup>\*\*</sup> A risk register is a database of assessed risks that face any organisation at any one time. Always changing to reflect the dynamic nature of risks and the organisation's management of them, its purpose is to help hospital managers prioritise available resources to minimise risk and target improvements to best effect. The risk register provides management with a high level overview of the hospital's risk status at a particular point in time and becomes an active tool for the monitoring of actions to be taken to mitigate risk.

- risk of transfer of multidrug-resistant organisms<sup>††</sup> to all patients and possible risk of infection due to availability of dedicated single patient use equipment for patients with multidrug-resistant organisms
- risk of CPE contacts not being appropriately followed up and screened and risk of patients incorrectly labelled as CPE contacts. This was attributed to inadequate IT systems and patients being incorrectly assigned to the wrong bed space by the patient information system
- inadequate infrastructure, design and configuration, bed-space sizing and inadequate single and or isolation room facilities.

### 2.3 Infection Surveillance

The hospital performed extensive screening of patients for CPE and in 2017 had processed up to 25,000 CPE patient screens. The hospital had identified through its enhanced CPE screening programme that there was a reservoir of people in the hospital catchment area chronically colonised with CPE being detected on admission to hospital.

Management of the on-going CPE outbreak in the hospital will be presented in section 2.4 in this report.

Arrangements were in place to measure and report on the service's overall performance in infection prevention and control.

In compliance with the National Standards<sup>1</sup>, the infection prevention and control programme included an extensive infection surveillance programme which included surveillance of:

- 'alert' organisms and 'alert' conditions<sup>††</sup>
- multidrug-resistant organisms
- catheter-related bloodstream infection (CRBSI)<sup>§§</sup> and ventilator-assisted pneumonia (VAP) in the Intensive Care Unit
- surgical site infections in relation to elective orthopaedic implant and spinal surgeries
- bloodstream infections.

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<sup>††</sup> Multidrug-resistant organisms are bacteria and other microorganisms that have developed resistance to antimicrobial drugs. Common examples of these organisms include: MRSA - Methicillin/oxacillin-resistant *Staphylococcus aureus*, CPE- Carbapenemase Producing *and* VRE - Vancomycin-resistant enterococci.

<sup>††</sup> Alert conditions include physical symptoms such as skin rashes, vomiting, diarrhoea, respiratory illness that could be due to an infectious illness

<sup>§§</sup> Catheter-related bloodstream infection (CRBSI) is defined as the presence of bacteraemia originating from an intravenous catheter.

In 2017 hospital management monitored and regularly reviewed performance indicators in relation to the prevention and control of healthcare-associated infection in line with HSE national reporting requirements<sup>6</sup> and the HSE's Business Information Unit.<sup>7</sup>

The Surveillance Scientist produced surveillance reports with a breakdown of cases of infection which were fed back locally at the Infection Prevention and Control Committee meetings. Surveillance data was also fed back monthly to the Executive Management Team and bimonthly to the Hospital Board via quarterly infection prevention and control assurance reports for each Directorate.

The hospital had implemented a strategy for the reduction of healthcare-acquired *Staphylococcus aureus* bloodstream infections. The hospital planned to continue implementation in 2018 with a focus on surveillance of *Staphylococcus aureus* blood stream infections and audit of practice with international, national and local hospital guidelines for the insertion and management of intravascular devices.

### Care bundles

A care bundle is a group of evidence-based practices that improve the quality of care when consistently applied to all patients. Tallaght University Hospital had a programme of audit, feedback and quality improvement plans in relation to peripheral vascular access devices, urinary catheters, central venous access device and ventilator-associated pneumonia care bundles at the hospital.

Inspectors reviewed documentation and spoke with staff relating to care plans for peripheral vascular access devices, urinary catheters and central venous access devices in the areas inspected. Inspectors observed that compliance with documentation of care bundle elements was variable and demonstrated that there was scope for improvement in the management and documentation of invasive device management.

Care bundle implementation was monitored every two months using Nursing Instrument of Quality Assurance (NIQA) tool. Low levels of compliance achieved in some areas demonstrated the need for ongoing audit followed by targeted training and education to ensure compliance with the infection control care bundles. Such assurances are important as full implementation of all evidenced-based components of care bundles have shown improved patient outcomes.

### Invasive Device Surveillance

National guidelines recommend healthcare-associated infection surveillance in relation to central venous access device-related infection, urinary catheter-associated

urinary tract infection and ventilator-associated pneumonia for high risk groups including patients admitted to intensive care.<sup>8,9,10</sup>

On-going surveillance of central venous access device bloodstream infections had commenced in the Intensive Care Unit in February 2018. Rates of ventilator-associated pneumonia were also monitored. However action was required in monitoring of catheter-associated urinary tract related infection rates which were not actively monitored at the time of the inspection.

#### Surveillance surgical site infection

Surgical site infection surveillance represents good practice and demonstrates a commitment to monitoring the quality of patient care and is an important patient safety and quality assurance initiative.

The hospital had developed targeted surgical site infection surveillance programmes in relation to elective orthopaedic implant surgeries. This surveillance programme was expanded to include spinal surgery in 2016. Inspectors were informed that diagnosis of an surgical site infection was based on Centers for Disease Control and Prevention (CDC) definitions for Surgical Site Infection Surveillance issued by the Health Protection Surveillance Center.

Inspectors were informed that orthopaedic surgery infection rates were monitored and trended over time. Rates were used for benchmarking with international surgical site infections rates. Infection rates were broadly comparable with published data from Public Health England.<sup>11</sup>

## **2.4 Prevention and control of healthcare-associated infections and multidrug-resistant organisms**

As with the control of all potentially transmissible infectious diseases in healthcare settings, adherence to best practice in relation to transmission based precautions are absolutely critical to protect patients and staff from colonisation and infection from such organisms. The inspection team, in conducting its inspection of the hospital therefore focused on measures to prevent the spread of multidrug-resistant organisms and implementation of aspects of transmission-based precautions.

### **CPE Outbreak Management**

In August 2016 Tallaght University Hospital declared an outbreak of CPE.\*\*\* An outbreak control committee was convened and the local Public Health Department was informed. The hospital implemented measures to prevent, detect and measures to control the spread of CPE. These included but were not limited to:

- the establishment of a dedicated multidisciplinary CPE outbreak management committee. This committee was led by the most senior management and with active participation by senior clinicians and the infection control team. An individual epidemiological review was carried out for all new cases of CPE.
- increased screening and surveillance of CPE in excess of national recommendations on screening patients for CPE<sup>12</sup> which included targeted patient screening on and during admission to hospital for CPE
  - in high risk wards and where transmission within a unit had been established, the hospital had implemented a programme of universal CPE screening on admission and weekly thereafter
  - rapid turnaround time processing for CPE screens
  - targeted environmental screening
- establishing an infection control cohort ward for the management of patients with multidrug-resistant organisms and alert organisms including CPE (observations from a visit to this ward are presented below)
- the provision of additional resources and increased cleaning frequencies with better oversight in addition to a dedicated cleaning team for terminal decontamination following discharge of patients infected or colonised with CPE.
- targeted staff education programme
- a pro-forma letter was sent to the admitting consultant and GP of every patient once confirmed as carrying CPE.

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\*\*\* Guidelines advise that where three or more patients with the same CPE associated with a hospital in the past three months this should be interpreted as prima facie evidence of transmission in your hospital and an outbreak control team should be convened to assess what if any further action is required.

There was evidence that the number of new cases of CPE had decreased significantly at the hospital since the measures had been introduced, indicating better control of the outbreak. Surveillance data reviewed showed that there were 132 cases in 2016, 97 new cases of CPE colonisation detected in 2017 and only 25 cases of colonisation detected to date in 2018.

While inspectors identified that rates of CPE acquisition had reduced and improvements had been made, a number of outstanding areas of challenge had been identified by the hospital and were reflected in the hospital's risk register. Risk factors that likely contributed to the continued transmission of CPE at the hospital included:

- a hospital operating over capacity. Patients were regularly boarded on ward corridors (the hospital was in escalation on the day of the inspection, inspectors observed two extra patients in beds located on the corridor of Lane ward)
- insufficient numbers of single rooms with ensuite facilities
- lack of dedicated equipment for patients in isolation
- poor infrastructure in older inpatient wards
- frontline staffing deficits
- challenges in ensuring compliance with visiting restrictions in affected wards.

Inspectors were informed by management that systems analysis was not routinely performed in all cases of hospital acquired CPE to identify contributing factors and areas for improvement. Such analysis is important from a learning perspective and should be considered.

### **Antimicrobial stewardship**

The hospital had an established antimicrobial stewardship programme in place which was coordinated by a multidisciplinary antimicrobial stewardship team.

The antimicrobial stewardship committee annual report for 2017 included the expansion of stewardship rounds and the development of an electronic process for team pharmacists and ward pharmacy technicians for review by the antimicrobial pharmacist. However, this did not appear to have been progressed at the time of inspection.

National guidelines<sup>13</sup> recommend that hospitals have a process in place to facilitate pre-authorisation for the use of all Carbapenem antibiotics by an infection specialist (Consultant or Specialist Registrar in Clinical Microbiology or Infectious Diseases). Hospital guidelines detailed a list of restricted antimicrobials, including meropenem. However preauthorisation from a Consultant Microbiologist was not essential and post prescription intervention was described as persuasive rather than restrictive, comprising a post-prescribing review rather than pre-authorisation of restricted

agents. The hospital needs to review the current approach to restrictive prescribing rights, with an initial focus on a smaller number of important antimicrobials such as carbapenems.

### **CPE Cohorting**

In an effort to manage the onward spread of CPE the hospital had dedicated a corridor on the Lynn Ward to accommodate patients colonised or infected with CPE colonised patients. Lynn Ward comprised 36 beds, 29 of which were single rooms with ensuite facilities. There was also one three and one four-bedded room with ensuite facilities. The ward comprised two main corridors which were separated by a connecting corridor. One side had 19 single rooms which were designated for the isolation of CPE patients, 18 of which were occupied. The remaining 10 single rooms were on the opposite corridor and facilitated both private patients and patients requiring infection control isolation. Shared ancillary rooms including the clinical room and dirty utility room and the two multi-bedded rooms were located in the connecting corridor between both sides of the ward. A demarcation line clearly separated the CPE isolation facilities from the rest of the ward. It was clear that efforts had been made to differentiate equipment used in the CPE designated area of the cohort ward.

Inspectors were informed that the hospital planned to locate a three-bed HDU for surgical patients in within Lynn Ward. However, an updated infection prevention and control risk assessment had not been undertaken by senior management to support this decision. It is HIQA's view that the intended location of the HDU is inappropriate and needs to be reconsidered in the context of the current arrangements, infrastructure and ongoing CPE outbreak. Any review of this plan should include at a minimum infection prevention and control risk assessment and appropriate advice from the Infection Prevention and Control Team.

The inspection team found that refurbishment of designated CPE isolation rooms was in progress at the time of the inspection. In general, the cohort ward was clean but cluttered in places. However, on the day of the inspection, the doors to all 18 single rooms accommodating CPE patients in the designated infection cohort ward had been left open. This is a similar finding to the 2015 inspections and is not in line with best practice and should not occur.

A transmission-based precaution nursing care plan documentation had been developed. However, risk assessments for the requirement for doors to remain open were not consistently documented on this care plan. The inspection team had concerns that the broad application of these arrangements as observed at the time of the inspection may not effectively control the spread of infection.

It is recommended by national guidelines that hospitals should ensure that patients colonised or infected with CPE are cared for by designated staff during their shift.<sup>14</sup> Inspectors were informed that staff working on the designated CPE section were allocated for the duration of day shifts. However, it was reported to the inspection team at interview that there had been some occasions when staff designated to the CPE patients were moved due to competing challenges within the hospital; this was more likely to have occurred at night.

National guidelines recommend that isolation and cohort areas have a higher ratio of staff to patients (patient care and cleaning staff) than that which applies in most circumstances, in particular if the patients have high care requirements.<sup>14</sup> While additional cleaning resources were allocated to affected wards to manage the CPE outbreak, it was reported by ward staff that that sufficient numbers of frontline nursing and healthcare assistants had not been provided. These findings reflect the risk identified by the hospital relating to deficits in frontline staffing. Local risk assessment or audit is recommended to ensure that there is adequate staffing and skill mix to meet the clinical needs of patients in isolation.

Scope for improvement was identified relating to other issues identified on the infection control cohort ward at the time of the inspection including:

- dedicated equipment was not always available for patients in isolation
- a lack of awareness among some staff on the cohort ward regarding the highly mobile resistance mechanisms of CPE which allows it move from one species of *Enterobacteriaceae* to another very quickly<sup>+++</sup>
- inconsistent and inaccurate documentation of patient CPE status. For example, documentation of patient CPE status in one record viewed was incorrectly recorded
- poor performance demonstrated in a recent infection prevention and control audit of patient equipment, transmission- based precautions, infection control knowledge and practice and a multidisciplinary hygiene audit
- some maintenance issues were observed relating to wall surfaces and damaged paintwork
- a fridge specifically for storing patient food and a microwave (used for heating patient hot packs and food) were inappropriately located in the clean utility room.

HIQA was informed by management that to comprehensively address the wider CPE issue, additional external resourcing and supports would be necessary. It was reported by senior management that a business case for additional resources had

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<sup>+++</sup> "The same CPE" refers to the genetic mechanism of resistance (OXA, NDM, KPC, VIM, and IMI). Organisms of different species with the same genetic mechanism of resistance should be considered as "the same CPE".

been submitted to the National HSE Leadership team in 2017 but had yet to be addressed. In addition, senior management told the inspection team that funding provided to the hospital to date to address the CPE issue fell well below the estimated cost of the outbreak.

### **Additional findings relating to the prevention and control of healthcare-associated infections and multidrug-resistant organisms**

Documentation viewed by HIQA found that the hospital had actively endeavoured to address the issues identified in HIQA's previous unannounced inspection in 2015.

Inspectors observed that in general, patients who required transmission-based precautions were appropriately isolated in single rooms and signage to communicate isolation precautions was in place. In addition to the interventions implemented to address the CPE outbreak already outlined, the hospital had the following in place:

- hospital management were working to mitigate risks in respect of hospital infrastructure through gradual upgrading and on-going refurbishment plans of existing facilities. It was reported that 77% of multi-bed wards and 44% of single rooms had been refurbished since 2014. Due to high patient occupancy levels there were no rooms vacant and available to refurbish in 2016 or 2017. The focus during this period was on ancillary rooms
- an electronic infection prevention and control flag system to record patients infection status to ensure that transmission-based precautions were used for subsequent admissions
- a weekly progress report detailing patients colonised or infected with a transmissible infection was disseminated by the Infection Prevention and Control Team to clinical areas
- a hierarchy of isolation prioritisation policy for management of patients with transmissible infection as a reference guide in relation to screening and isolation requirements was in place
- an established antimicrobial stewardship programme coordinated by a multidisciplinary antimicrobial stewardship team was in place
- availability of infection prevention and control information leaflets
- regular scheduled multidisciplinary audits formed part of the on-going management and supervision of ward and department hygiene
- a hand hygiene hand strategy was in place
  - disposable hand hygiene wipes were available for patients unable to attend to their own hand hygiene needs before meals and after toileting
  - alcohol gel was available at the point of care in the clinical areas.
  - hand hygiene advisory posters were appropriately displayed in the areas inspected.

On the day of inspection other outstanding areas that needed to be addressed included:

- issues relating to patient equipment hygiene were highlighted as a concern by the hospital through audits conducted in 2017. Inspectors were informed that arrangements regarding staff's responsibility for the cleaning of patient equipment were under review. Appropriate cleaning and management of patient equipment is of particular importance in the midst of an ongoing CPE outbreak and therefore needs to be prioritised by the hospital as a focus of improvement
- screening for Vancomycin- resistant *Enterococci* (VRE) did not occur in line with national guidelines
- the hospital had insufficient numbers of ventilated isolation rooms
  - a lack of awareness among staff that the engineering controls on the ventilated isolation rooms at ward level had been decommissioned was also identified by inspectors
- some maintenance issues were observed relating to wall surfaces, damaged paintwork and finishes on bed tables and bed space curtains in one area inspected
- in two of the three wards inspected, minimal spatial separation between beds did not comply with best practice guidelines<sup>15,16</sup>
- poor practice in relation to manual cleaning and disinfection of reusable bedpan supports between uses<sup>15</sup>
- some mobile clinical waste collection bins were unlocked and inappropriately placed
- inconsistent application of transmission-based precautions; specifically the consistent application of personal protective equipment by staff
- not all single rooms in the hospital had dedicated hand wash sinks
- the design of clinical hand wash sinks in some clinical areas did not conform to Health Building Note 00-10 Part C: Sanitary assemblies<sup>17</sup>
- local leadership and management of ongoing audit followed by targeted training and education. A wide variation of performance was observed in local hand hygiene audits carried out in March 2018. The low level of compliance achieved in some wards and failure to meet the HSE's desirable target of 90% in the national hand hygiene audit in October/ December 2017 demonstrated the need for ongoing audit and leadership at ward level
- a formal legionella hospital site risk assessment had been performed at the hospital in July 2016. However, assurance was not provided that annual review of this risk assessment had been undertaken by the hospital in line with national guidelines.<sup>18</sup>

### 3.0 Conclusion

Overall HIQA found that Tallaght University Hospital was committed to improving infection prevention and control practices in the hospital and were endeavouring to fully implement the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*.<sup>1</sup>

Multidrug-resistant gram-negative bacteria, including carbapenemase-producing *Enterobacteriaceae* (CPE), place patients at risk of potentially untreatable infection.<sup>19</sup> The hospital has experienced an ongoing outbreak of CPE since August 2016 and was screening in excess of the national HSE CPE screening guidelines.<sup>12</sup> The hospital possibly has a greater degree of visibility in relation to this problem as a consequence of its extensive level of screening. While the hospital has not seen a reversion to zero cases of cases of CPE it has seen a significant reduction in the prevalence of new CPE cases and has identified a relatively low number of CPE related bloodstream infections. The hospital has also identified background rates of CPE in the community which may indicate it may not be possible to fully eradicate CPE in the hospital.

It is acknowledged that the hospital had identified inherent infection prevention and control risks within the facility and had escalated such risks within the HSE risk management system.

Tallaght University Hospital had an established infection surveillance programme. In the absence of a nationally coordinated programme, the hospital had also established a local system of surgical site infection surveillance.

The hospital had implemented a number of evidence-based care bundles. The hospital should continue with their work to date to ensure care bundles are consistently implemented throughout the hospital.

HIQA notes that the hospital had adopted a multimodal strategy in improving hand hygiene practices. The hospital needs to continue to build on the awareness and best practices relating to hand hygiene to ensure that its performance is improved particularly in reaching and maintaining the national target of 90% hand hygiene in both the national and local audits.

Notwithstanding the extensive implementation of a number of measures by hospital management and staff to manage the CPE outbreak and the reduction in CPE in 2018, HIQA found during this inspection that more could be done in addition to the control measures already implemented to further address the CPE threat.

HIQA recommends that the hospital puts measures in place to address the deficiencies identified in this report so that the hospital complies with the National

Standards<sup>1</sup> for the Prevention and Control of Healthcare Associated Infection with particular emphasis on the following matters:

- a review of environmental hygiene auditing to ensure consistency of audit processes and scheduling of more frequent managerial hygiene audits of moderate and high risk clinical areas as recommended in line with national guidance<sup>20</sup>
- communication to all relevant staff concerning revised governance structures and arrangements for the IPC programme
- systems analysis of healthcare infections be carried out in line with national guidelines<sup>5</sup>
- enhancement of the hospital's antimicrobial stewardship programme including the introduction and enforcing of antimicrobial pre-authorisation and restriction policies to avoid unnecessary use of broad-spectrum agents as recommended in the National Policy on Restricted Antimicrobial Agents<sup>13</sup>
- consistent application of transmission based precautions where required
- improvements in equipment hygiene and oversight of same
- all future refurbishment and reconfiguration of existing in-patient accommodation including the proposed relocation of the HDU, be planned in consultation with the Infection Prevention and Control Team
- review arrangements regarding ventilated isolation room to ensure that there are appropriate facilities for patient isolation and that there is clear understanding of this at local level
- allocating sufficient staff resources taking into account the increased demands placed by applying transmission-based precautions and generally accepted increased patient needs and care requirements.<sup>14</sup>

It was evident that in many instances the hospital had themselves clearly identified areas of concern and had sought external assistance in dealing with many of these risks. Tallaght University Hospital, as a member of the Dublin Midlands Hospital Group, needs to be supported within group and national structures to ensure the hospital has the necessary capability and capacity to manage the on-going threat presented by CPE to the patients under the hospital's care.

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## 5.0 Appendices

### Appendix 1: Lines of enquiry for the monitoring programme undertaken against the National Standards for the prevention and control of healthcare-associated infections in acute healthcare services

Number	Line of enquiry	Relevant National Standard
1.1	The hospital has formalised governance arrangements with clear lines of accountability and responsibility around the prevention and control of healthcare-associated infections.	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 5.2, 5.3, 5.4, 6.1, 7.1
1.2	Risks in relation to the prevention and control of infection are identified and managed.	2.1, 2.3, 2.5, 3.1, 3.6, 3.7, 3.8
2	The hospital has policies, procedures and guidelines in relation to the prevention and control of infection and hospital hygiene.	2.1, 2.5, 3.1, 3.6, 3.8, 5.4, 7.2
3	Hospital personnel are trained and in relation to the prevention and control of healthcare-associated infection	2.1, 2.8, 3.1, 3.2, 3.3, 3.6, 6.1, 6.2
4.1	The hospital has implemented evidence-based best practice to prevent intravascular device-related infection and urinary catheter-associated infection, ventilator-associated pneumonia and surgical site infection.	1.1, 2.1, 2.3, 3.5
4.2	The hospital has systems in place to detect, prevent, and respond to healthcare-associated infections and multidrug-resistant organisms in line with national guidelines.	2.1, 2.3, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8,

## Appendix 2: Copy of the letter issued to Tallaght University Hospital regarding the high risk identified during HIQA's inspection at Tallaght University Hospital



David Slevin  
Chief Executive Officer  
Tallaght Hospital  
Tallaght  
Dublin 24  
[ceo@amnch.ie](mailto:ceo@amnch.ie)

20 April 2018

Ref: PCHCAI 2018/25

Dear David

### **National Standards for the Prevention and Control of Healthcare Associated Infections (NSPCHCAI) Monitoring Programme**

During the course of an unannounced inspection at Tallaght Hospital on 19 April 2018, inspectors identified an immediate high risk that had the potential to present a serious risk to the health or welfare of patients, visitors and staff. Immediate measures need to be put in place to mitigate the potential for the reoccurrence of this risk.

The risk identified relates to a failure to effectively and consistently implement transmission based precautions. Specifically inspectors observed that the doors to two of the single isolation rooms accommodating patients requiring airborne infection isolation precautions were open at the beginning of the ward based inspection.

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This issue was brought to the attention of the Clinical Nurse Manager and representatives from the Senior Management Team at the hospital during the inspection for immediate mitigation.

Given the level of potential risk associated with these findings, please formally report back to the HIQA by **27 April 2018** to [qualityandsafety@hiqa.ie](mailto:qualityandsafety@hiqa.ie), outlining the measures that have been enacted to prevent such a situation from occurring again. Details of the risk identified, and proposed mitigating actions will be included in the report of this inspection.

Should you have any queries, please do not hesitate to contact me at [qualityandsafety@hiqa.ie](mailto:qualityandsafety@hiqa.ie). Please confirm receipt of this letter by email ([qualityandsafety@hiqa.ie](mailto:qualityandsafety@hiqa.ie)).

Yours sincerely



**KATHRYN HANLY**  
Authorised Person

CC: Mary Dunnion, Director of Regulation, HIQA  
Trevor O' Callaghan, CEO, Dublin Midlands Hospitals Group

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**Appendix 3: Copy of response letter from Tallaght University Hospital, Dublin regarding the high risk identified during HIQA's inspection at Tallaght University Hospital.**

THIS NOTEPAPER MUST NOT BE USED FOR  
PRESCRIPTIONS OR INVOICING PURPOSES



**THE ADELAIDE & MEATH  
HOSPITAL, DUBLIN**  
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Ms. Kathryn Hanly  
Inspector  
Health Information and Quality Authority  
George's Court  
George's Lane  
Smithfield  
Dublin 7  
D07 E98Y

26<sup>th</sup> April 2017

**Re: PCHCAI 2018/25**

Dear Ms Hanly,

I am writing to you in response to your recent letter (dated April 20<sup>th</sup>, 2018) to the Chief Executive where you outline your concerns in relation to the consistent application of standard transmission based infection control precautions on Lynn Ward, specifically the opening of doors in two rooms with patients requiring airborne infection isolation precautions.

I can reassure you that the importance of such precautions have been fully addressed and reemphasised with staff on the ward. Daily inspections are now taking place by the Executive Management Team to ensure compliance with same along with education to clinical staff on the management of patients with actual or suspected TB .

I hope this gives you the assurances which you require. Please contact me if you have any more requirements.

Yours sincerely,

Dr. Daragh Fahey  
Director of Quality Safety & Risk Management



**For further information please contact:**

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