



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Report of the unannounced inspection at Cavan General Hospital, part of the Cavan Monaghan Hospital

Monitoring programme for unannounced inspections undertaken
against the National Standards for the Prevention and Control of
Healthcare Associated Infections

Date of on-site inspection: 3 March 2015

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is the independent Authority established to drive high quality and safe care for people using our health and social care services. HIQA's role is to promote sustainable improvements, safeguard people using health and social care services, support informed decisions on how services are delivered, and promote person-centred care for the benefit of the public.

The Authority's mandate to date extends across the quality and safety of the public, private (within its social care function) and voluntary sectors. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, the Health Information and Quality Authority has statutory responsibility for:

- **Setting Standards for Health and Social Services** – Developing person-centred standards, based on evidence and best international practice, for those health and social care services in Ireland that by law are required to be regulated by the Authority.
- **Supporting Improvement** – Supporting services to implement standards by providing education in quality improvement tools and methodologies.
- **Social Services Inspectorate** – Registering and inspecting residential centres for dependent people and inspecting children detention schools, foster care services and child protection services.
- **Monitoring Healthcare Quality and Safety** – Monitoring the quality and safety of health and personal social care services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health Technology Assessment** – Ensuring the best outcome for people who use our health services and best use of resources by evaluating the clinical and cost effectiveness of drugs, equipment, diagnostic techniques and health promotion activities.
- **Health Information** – Advising on the efficient and secure collection and sharing of health information, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.

Table of Contents

1. Introduction	1
2. Cavan General Hospital Profile	3
3. Findings	4
3.1 Progress since unannounced inspection on 9 October 2014.....	4
3.2 Key findings of the unannounced inspection on 3 March 2015	5
3.3 Key findings relating to hand hygiene.....	6
4. Summary	10
5. Next steps	11
6. References	12

1. Introduction

The Health Information and Quality Authority (the Authority) carries out unannounced inspections in public acute hospitals in Ireland to monitor compliance with the *National Standards for the Prevention and Control of Healthcare Associated Infections*.¹ The inspection approach taken by the Authority is outlined in guidance available on the Authority's website, www.hiqa.ie – *Guide: Monitoring Programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*.²

The purpose of the unannounced inspection is to assess hygiene as experienced by patients at any given time. It focuses specifically on the observation of the day-to-day delivery of hygiene services, in particular environmental and hand hygiene under the following standards:

- Standard 3: Environment and facilities management
- Standard 6: Hand hygiene.

Other Standards may be observed and reported on if concerns arise during the course of an inspection. It is important to note that the Standards are not assessed in their entirety during an unannounced inspection and therefore findings reported are related to a particular criterion within a Standard which was observed during an inspection. The Authority uses hygiene observation tools to gather information about the cleanliness of the environment and equipment as well as monitoring hand hygiene practice in one to three clinical areas depending on the size of the hospital. The Authority's approach to an unannounced inspection against these Standards includes provision for re-inspection within six weeks if standards on the day of inspection are poor. This aims to drive improvement between inspections. In addition, in 2015, unannounced inspections will aim to identify progress made at each hospital since the previous unannounced inspection conducted in 2014.

An unannounced inspection was carried out at Cavan General Hospital on 3 March 2015 by Authorised Persons from the Authority, Alice Doherty, Katrina Sugrue, Leanne Crowe and Noelle Neville between 10:10hrs and 15.45hrs. The areas assessed were:

- The **Theatre Department** which has four theatres and three bays in the recovery area.
- The **Renal Dialysis Unit** which is an 18-bedded ward and consists of one eight-bedded room, one six-bedded room, one three-bedded room and one single room.
- The **Physiotherapy Department** which consists of a Gymnasium and a Women's Health/Out Patient Physiotherapy Department.

In addition, Surgical 1 and Surgical 2 Wards were inspected during an unannounced inspection by the Authority on 9 October 2014. They were re-visited to assess the level of progress which had been made after the 2014 inspection.

The Authority would like to acknowledge the cooperation of staff with this unannounced inspection.

2. Cavan General Hospital Profile[‡]

Cavan General Hospital and Monaghan Hospital are 45km apart and they operate as a single hospital, with an integrated managerial and clinical governance system, care pathways and support functions. Cavan General Hospital opened in 1989 and with Monaghan Hospital formed Cavan General Monaghan Hospital Group in 1998.

Cavan General Hospital (CGH) has 233 beds (181 public, 33 private/semi-private and 19 non-designated beds (Coronary Care Unit (CCU), Intensive Care Unit (ICU), High Dependency Unit (HDU)). The total number of attendances to the Emergency Department (ED), including the Medical Assessment Unit, in 2011 was 31,547. The number of attendances to Outpatients Department was 38,960.

Under the national emergency clinical care programme, the CGH ED forms part of the North East Emergency Clinical Care Network. The Medical Assessment Unit, opened in March 2009, operates from 8.30am to 9pm from Monday to Friday. CGH provides a range of services, including:

- emergency medicine
- general medicine
- short-stay unit
- general surgery
- obstetrics / gynaecology including midwifery-led unit
- paediatrics
- acute psychiatry
- day services
- outpatient services
- renal dialysis services
- pathology services
- radiology services
- physical medicine services
- ICU/CCU
- anaesthesia
- oncology – outreach service from Mater Hospital, Dublin
- dermatology (sessional one day per week – visiting consultant)
- orthopaedics (sessional one day a week – visiting consultant)
- palliative care.

[‡] The hospital profile information contained in this section has been provided to the Authority by the hospital, and has not been verified by the Authority.

3. Findings

This report is structured as follows:

- **Section 3.1** outlines the level of progress made in the implementation of the Quality Improvement Plan (QIP)³ after the unannounced inspection on 9 October 2014.
- **Section 3.2** presents the key findings of the unannounced inspection on 3 March 2015.
- **Section 3.3** describes the key findings relating to hand hygiene under the headings of the five key elements of the World Health Organization (WHO) multimodal improvement strategy⁴ during the unannounced inspection on 3 March 2015.

This report outlines the Authority's overall assessment in relation to the inspection, and includes key findings of relevance. In addition to this report, a list of additional low-level findings relating to non-compliance with the standards has been provided to the hospital for completion. However, the overall nature of all of the findings are fully summarised within this report.

3.1 Progress since unannounced inspection on 9 October 2014

The Authority reviewed the QIP³ published by Cavan General Hospital following the 2014 inspection which was last updated on its website in December 2014. Evidence was provided during the inspection that demonstrated the implementation of the QIP. Inspectors revisited Surgical 1 and Surgical 2 Wards which were inspected during the unannounced inspection in 2014. Individual QIPs were developed for each ward to address the findings of the 2014 inspection.

It was evident that progress has been made in both areas. For example, the role of healthcare assistants, multitask attendants and cleaning staff was reviewed and responsibilities were assigned to each group. Additional cleaning hours were allocated to the external cleaning company to facilitate the cleaning of equipment such as bed frames. Deep cleaning of the patient toilets and bathrooms was carried out on Surgical 2 and the cleaning of suction apparatus was added to the multi-task attendants daily tasks. The cleaning of waste bins has been added to the daily cleaning schedule. Equipment on both wards has been labelled and coded. The labels are colour coded to denote which ward the equipment is from and enables the correct documentation and monitoring of the cleaning and maintenance of equipment.

On Surgical 1, the Authority was informed that a 'walk-around' was done immediately after the 2014 inspection and a list of hygiene and maintenance issues that required attention was prepared. A sub-committee was set up to review the

issues and these were addressed immediately where possible. Commodes and some bedside tables were replaced on Surgical 1 and the ward also got four new electrically operated beds. Environmental audits are completed every two months.

The inspection team reviewed the progress made on the QIPs submitted by the hospital to the Authority in response to the high risk identified relating the hospital's rate of *Clostridium difficile* infection during the course of the 2014 inspection. Documentation provided to the Authority following the 2014 inspection indicated that the incidence of *C. difficile* infection had been significantly above both the national average and Health Service Executive (HSE) target rates for both 2013 and 2014. The QIPs submitted by the hospital focussed on antimicrobial consumption and hand hygiene as contributory factors for the reported high incidence of *C. difficile*. Deficiencies in resourcing the Infection and Prevention and Control Team was also addressed in the QIP and were resolved. Documentation seen by inspectors during the 2015 inspection indicates that there has been little improvement to date in the incidence of *C. difficile* rates in Cavan General Hospital since the October 2014 inspection.

The Authority was informed that progress had been made in further developing the hospital's antimicrobial stewardship programme. Antimicrobial stewardship ward rounds now take place on wards on Mondays and Tuesdays. Antimicrobial prescribing guidelines have been developed and agreed upon, but at the time of the inspection they had not been introduced into clinical practice. A new system designed to restrict the prescribing of antimicrobial agents which have a potential to significantly increase the risk of *C. difficile* infections when used is currently under development. It is intended that this system will require prior approval for use by a specialist such as a Consultant Microbiologist in advance of non-infection specialist staff prescribing such an antibiotic. While each of these measures are a positive development and have been shown to improve the quality of antimicrobial prescribing in other hospitals, their implementation remains at an early stages at Cavan General Hospital.

3.2 Key findings of the unannounced inspection on 3 March 2015

Unsafe injection practices

During inspection of the anaesthetic room in Theatre 2, the Authority observed a number of syringes containing reconstituted intravenous medication that were insufficiently labelled and stored in uncovered disposable kidney trays in a refrigerator. One syringe that had been drawn up was dated 27 February 2015, four days prior to the inspection. Another syringe, dated 2 days prior to the inspection, had been inserted into a container of medication and a small amount had been drawn up. Intravenous medications should be prepared in a clean environment using

aseptic techniques, and should be administered immediately following reconstitution. A delay in doing so increases the risk of microbiological contamination and therefore transmission of infection to patients. The hospital was unable to clarify at the time of the inspection if the medication was prepared in advance or why it had not been disposed of after use in line with best practice. Therefore, assurances could not be provided that the integrity and sterility of these medications were maintained from compounding to administration. The Authority recommends that the hospital reviews the practice relating to the preparation and administration of intravenous medication, particularly relating to anaesthetic medication, to assure itself that the potential risks to patients in this regard are fully mitigated.

Patient equipment

Patient equipment in the three areas inspected was generally clean and well maintained. However, red staining was observed on the attachment for a warming blanket in the recovery area in theatre. Red staining was also observed on some sharps bins and on one sharps bin frame situated adjacent to patient bays in the Renal Dialysis Unit.

Hand Hygiene

The Authority was informed that hospital wide hand hygiene audits, which are based on 10 opportunities, are carried out on a weekly basis. However, the documentation seen by inspectors and the discussion on Surgical 1 and Surgical 2 Wards indicated that not all clinical areas were returning or completing audits every week. Resource issues and ward activity were reasons given at ward level for failure to complete the audits in line with hospital policy. The hand hygiene audit weekly league table from week ending 11 January to 15 February 2015 (a total of six weeks) was viewed and showed that a minimum of five areas to a maximum of 11 out of 30 areas per week had failed to return audit results during that period. Overall weekly compliance varied from 76.5% to 90%. The week ending 18 January was the only week in which 90% compliance was achieved on all wards that submitted results. It was of concern to the Authority that a significant number of wards did not return audits on a weekly basis in line with hospital policy and there appeared to be a lack of oversight or follow up by line managers particularly for the wards that failed to complete or return audits for consecutive weeks. This finding was discussed with senior management at the close out meeting and assurances were given that this issue would be addressed. The Authority notes that the hospital is working towards improving hand hygiene practices in the hospital and has increased the number of hand hygiene champions and hand hygiene auditors since the 2014 inspection. It is important that the hospital continues to develop or expand the auditing system in place to ensure that the correct steps are taken following the audits in order to increase overall hand hygiene compliance.

3.3 Key findings relating to hand hygiene

3.3.1 System change⁴: *ensuring that the necessary infrastructure is in place to allow healthcare workers to practice hand hygiene.*

- The design of some clinical hand wash sinks on the Renal Dialysis and Physiotherapy Units did not conform to Health Building Note 00-10 Part C: Sanitary assemblies.⁵

3.3.2 Training/education⁴: *providing regular training on the importance of hand hygiene, based on the 'My 5 Moments for Hand Hygiene' approach, and the correct procedures for handrubbing and handwashing, to all healthcare workers.*

- Cavan General Hospital and Monaghan Hospital are 45km apart and they operate as a single hospital, with an integrated managerial and clinical governance system, care pathways and support functions. Hand hygiene training levels are recorded as a single hospital. Overall, 85.4% of staff in Cavan and Monaghan General Hospital attended hand hygiene training in the last two years. All nursing and auxiliary staff in theatre completed hand hygiene training in 2014 and 81% of staff in the Physiotherapy Department attended hand hygiene training in 2014. All members of staff on the Renal Dialysis Unit were trained in hand hygiene to date.

3.3.3 Evaluation and feedback⁴: *monitoring hand hygiene practices and infrastructure, along with related perceptions and knowledge among health-care workers, while providing performance and results feedback to staff.*

National hand hygiene audit results

- Cavan General Hospital participates in the national hand hygiene audits which are published twice a year.⁶ The hospital has failed to achieve the HSE's target compliance of 90% in 2014⁷ and 2015.⁸ The results below demonstrate a significant drop in compliance achieved in October/November 2014 which was 11.9% lower than May/June 2014 and well below the HSE's target of 90%

Period 1-8	Result
Period 1 March/April 2011	69.5%
Period 2 October/November 2011	80%
Period 3 May/June 2012	74.3%
Period 4 October/November 2012	No data
Period 5 May/June 2013	63.8%
Period 6 October/November 2013	80.5%
Period 7 May/June 2014	81.9%
Period 8 October/November 2014	70%

Source: Health Protection Surveillance Centre – national hand hygiene audit results.⁶

Local hand hygiene audit results

- In Theatre, feedback is immediately given to staff following local audits, the results of which are posted on a notice board
- The most recent results for 2015 according to the hospital's league table indicate that Theatre achieved 90% for the week ending 25 January, 67% for the week ending 8 February and 60% for the week ending 15 February. Documentation observed in Theatre showed that audits conducted on 17 and 22 February resulted in compliances of 90 and 80% respectively.
- Renal Dialysis achieved 90% in 2015 hand hygiene audits for the week ending 1 February, 89% for the week ending 8 February and 100% for the week ending 15 February.
- Physiotherapy achieved 100% in 2015 hand hygiene audits for the week ending 18 January.

Observation of hand hygiene opportunities

Authorised Persons observed hand hygiene opportunities using a small sample of staff in the inspected areas. This is intended to replicate the experience at the individual patient level over a short period of time. It is important to note that the results of the small sample observed is not statistically significant and therefore results on hand hygiene compliance do not represent all groups of staff across the hospital as a whole. In addition results derived should not be used for the purpose of external benchmarking.

The underlying principles of observation during inspections are based on guidelines promoted by the WHO⁹ and the HSE.¹⁰ In addition, Authorised Persons may observe other important components of hand hygiene practices which are not reported in national hand hygiene audits but may be recorded as optional data. These include the duration, technique^γ and recognised barriers to good hand hygiene practice. These components of hand hygiene are only documented when they are clearly observed (uninterrupted and unobstructed) during an inspection. Such an approach aims to highlight areas where practice could be further enhanced beyond the dataset reported nationally.

The Authority observed 20 hand hygiene opportunities in total during the inspection. Hand hygiene opportunities observed comprised the following:

- two before touching a patient
 - seven before clean/aseptic procedure
 - six after body fluid exposure risk
 - five after touching patient surroundings.
- Fourteen of the 20 hand hygiene opportunities were taken. The six opportunities which were not taken comprised the following:
- four before clean/aseptic procedure
 - one after body fluid exposure risk
 - one after touching patient surroundings.
- Of the 14 opportunities which were taken, the hand hygiene technique was observed (uninterrupted and unobstructed) by the Authorised Persons for 14 opportunities and the correct technique was observed in 13 of the hand hygiene actions.

3.3.4 Reminders in the workplace⁴: *prompting and reminding healthcare workers about the importance of hand hygiene and about the appropriate indications and procedures for performing it.*

- Hand hygiene advisory posters were available, up-to-date, clean and appropriately displayed in the areas inspected at Cavan General Hospital.
- Since the 2014 inspection, posters are displayed at the entrance to each ward showing hand hygiene compliance for the ward in the previous week.
- There was a poster at the entrance to Surgical 1 reminding staff to roll up their sleeves.

^γ The inspectors observe if all areas of hands are washed or alcohol hand rub applied to cover all areas of hands.

3.3.5 Institutional safety climate⁴: creating an environment and the perceptions that facilitate awareness-raising about patient safety issues while guaranteeing consideration of hand hygiene improvement as a high priority at all levels.

- Since the 2014 inspection, the hospital has trained approximately 60 hand hygiene champions as local auditors. The frequency of hand hygiene audits has increased. Weekly audits based on 10 hand hygiene opportunities are completed. The Authority was informed on Surgical 2 Ward that staff who failed to attend mandatory hand hygiene training in 2014 have been sent a letter from senior management informing them of the next hand hygiene training dates.
- Evidence seen at the time of the inspection shows that the hospital is working towards improving hand hygiene compliance within the hospital. T-shirts with 'Hand Hygiene Champion' on the front and hand prints on the back have been obtained.
- Local hand hygiene auditing is carried out in the hospital on a regular basis, however not all areas are completing audits on a weekly basis in line with the hospital policy. Compliance achieved in the national hand hygiene audit at the end of 2014 showed a significant decrease of 11.9% from May/June 2014 to 70% in October/November 2014. Frequent auditing of hand hygiene practices is recognised as an important measure in improving hand hygiene compliance in order to produce sustainable levels of compliance. The Authority recommends that the hospital continues to improve and expand its auditing system and build awareness of good hygiene practices in order to increase overall hand hygiene compliance and reduce the risk of patients acquiring a healthcare associated infection.

4. Summary

Overall, the three areas inspected during the 2015 unannounced inspection were clean and well maintained. However, opportunities for improvement relating to medication management and unsafe injection practices were identified during the inspection. The Authority recommends that the hospital reviews the practice relating to the preparation and administration of intravenous medication to assure itself that the potential risks to patients in this regard are fully mitigated. Progress has also been made on Surgical 1 and 2 Wards compared to previous findings identified by the Authority during the unannounced inspection in 2014.

The Authority reviewed *C. difficile* infection rates since the 2014 inspection and found that there has been no significant improvement in the rates recorded to date. The Authority notes that the hospital is working toward addressing this issue through enhancement of its antimicrobial stewardship programme, improvements in environmental hygiene and hand hygiene compliance. While improvements have

been seen in environmental hygiene, there is considerable room for improvement in hand hygiene compliance and a need to further progress the implementation of the antimicrobial stewardship programme in order to mitigate the risk posed by *C. difficile*. The Authority acknowledges that it will take a period of time for any hospital to safely and effectively design and implement new antimicrobial guidelines which are tailored towards the needs of the hospital's patient population. Likewise, the safe implementation of a system of restrictive prescribing of antibiotics to exclusive use following infection specialist prior approval needs to be carefully designed, with effective clinical governance oversight and support, and full cooperation from all relevant prescribers. It is imperative that Cavan General Hospital acts to both fully implement new antimicrobial prescribing guidelines, and to introduce the plan to establish restrictive prescribing in the short term to mitigate the risk of the emergency of multidrug resistant organisms and *Clostridium difficile* as a result of antimicrobial prescribing.

Evidence provided and viewed at the time of the inspection indicates that the hospital is working towards improving hand hygiene compliance at all levels. However, compliance in national audits, local internal audits and practices observed by the Authority during the inspection remain below the HSE national target of 90%. The hospital needs to continue to build on hand hygiene compliances achieved to date to ensure that hand hygiene practice is improved and maintained in all areas.

5. Next steps

Cavan General Hospital must now revise and amend its QIP that prioritises the improvements necessary to fully comply with the Standards. This QIP must be approved by the service provider's identified individual who has overall executive accountability, responsibility and authority for the delivery of high quality, safe and reliable services. The QIP must be published by the hospital on its website within six weeks of the date of publication of this report and at that time, provide the Authority with details of the web link to the QIP.

It is the responsibility of Cavan General Hospital to formulate, resource and execute its QIP to completion. The Authority will continue to monitor the hospital's progress in implementing its QIP, as well as relevant outcome measurements and key performance indicators. Such an approach intends to assure the public that the hospital is implementing and meeting the Standards, and is making quality and safety improvements that safeguard patients.

6. References[‡]

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