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NHS Highland

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Report of findings ~ *May 2009*

# **Infection Prevention and Control: Improving through Learning**

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# 1 Background

Over recent months, local surveillance systems within NHS Highland detected an apparent rise in the number of *Clostridium difficile* associated disease (CDAD) cases in Caithness General Hospital, Wick, compared with historical data. This prompted a review of cases.

NHS Highland has well-embedded arrangements regarding delegated authority for community health partnerships (CHPs). NHS Highland reported that appropriate action was taken in January 2009 by the CHP nurse lead and the necessary prevention arrangements were put in place. A review of the effectiveness of these arrangements was repeated in February and a more formal review was undertaken in March by the NHS Highland infection control team. In April 2009, the review report was sent to Health Protection Scotland (HPS), and to the Scottish Government Health Directorates (SGHD).

In May 2009, the Scottish Government requested that NHS Quality Improvement Scotland (NHS QIS) visit NHS Highland to:

- seek assurance regarding the management of the situation
- ensure that learning from experience is shared, and
- provide support (if required) from an improvement perspective.

This report summarises the findings of the supportive work undertaken by NHS QIS. There has also been collaboration with HPS.

## 2 Summary of learning points

A number of learning points, both local and national have been identified and will be shared across NHSScotland. These are described in detail in the report and summarised below.

### Local learning

#### Notification triggers

- Clarification and confirmation of the trigger points for HPS and the SGHD.
- Clarification of the trigger tools available and support to use them (eg Watt Risk Matrix).
- The HPS trigger tool will be tested with the support of HPS and NHS QIS.

#### Communication

- Formalise arrangements for communicating and reporting incidents to HPS and SGHD.
- Formalise the internal reporting mechanisms and communicate these to staff.
- Develop and communicate action plans with timelines to support implementation and completion of actions.
- Healthcare associated infection (HAI) risks need to be better identified and communicated in local and corporate risk registers.
- The communication mechanisms in place for reporting HAI incidents to the clinical governance committee and the Board need to be revised and formalised.

#### Clinical governance

- Improve operational and strategic relationships between the CHP and the Board.
- Review clinical governance and risk management structures and reporting arrangements to ensure clear links with HAI.
- Ensure all environmental audit action plans have timescales attached for implementation.

#### Deep cleaning

- NHS Highland needs to ensure adequate resources are available to maintain an enhanced deep clean programme.
- North Highland CHP to develop, as a priority, a business case for one deep clean assistant.

#### HAI data

- Streamline data collection, analysis, presentation and reports to ensure key messages are brought to the attention of relevant parties in line with national frameworks and guidance.

## **National learning**

### **Triggers**

- Clarity in relation to NHS boards' reporting practices and trigger points.
- Clarity in relation to the tools available and their status.
- Development of a national escalation policy.
- A need to work in conjunction with HPS to define the trigger point, ie the frequency of CDAD cases that would trigger the implementation of additional infection prevention and control measures.

### **Data**

- National alignment of clinical governance and patient safety agendas to support a standardised approach to quality and patient safety and enable sharing of good practice.

### **Communication**

- The volume of information and tools issued centrally to NHS boards added to the challenge of identifying and using the right tool. This highlighted the importance of consistency and clarity of message from SGHD and HPS.
- Use national forums such as the Infection Control Managers Network to share learning and promote an integrated approach across NHSScotland.
- All NHS board action plans should have timescales attributed to ensure implementation, monitoring and continuous quality improvement.

### 3 Summary of findings

NHS QIS aimed to provide support to NHS Highland following the recent *Clostridium difficile* incident in terms of identifying the facts, reviewing the action taken and giving consideration to the learning that can be shared at both a local and national level in order to support continuous quality improvement.

Three meetings have been held with NHS Highland in order to ascertain the facts, review the actions taken and assess the level of further support (if any) required.

#### Friday 1 May: Video-conference meeting

On Friday 1 May, a video-conference meeting was held with representatives from NHS QIS and NHS Highland. The meeting provided an opportunity for NHS Highland to present the facts and clarify the data, outline the action plans that had been developed, and update NHS QIS on progress. The main discussion points to note from the meeting are:

- NHS Highland provided clarification of the cases and deaths:
  - the total number of cases (9) and the number of hospital acquired cases (8), and
  - the deaths attributed to *Clostridium difficile* and whether primary or secondary cause of death.
- NHS Highland confirmed that an antimicrobial prescribing formulary is used within Caithness General Hospital. An education and update programme has been carried out to minimise the use of third generation cephalosporin (since February 2008).
- Action plans have been developed and the chief executive is receiving regular updates on progress.

#### Learning

- A need to work in conjunction with HPS to define the trigger point, ie the frequency of CDAD cases that would trigger the implementation of additional infection prevention and control measures.
- Formal reporting of the incidents within the CHP worked well but this had not been escalated to the Board; the CHP and the Board are now working collaboratively at both an operational and strategic level to address this.
- The communication mechanisms in place for reporting HAI incidents to the clinical governance committee and the Board need to be revised and formalised.

## Thursday 7 May: Teleconference

In line with NHS Highland policy, a formal incident management team meeting was convened on Thursday 7 May. This meeting was attended by HPS and NHS QIS via teleconferencing. The aim was to confirm the number of *Clostridium difficile* cases, the ongoing management of the situation, lessons learned to prevent a re-occurrence and identify any additional support that could be provided from an improvement perspective. The main points to note from this meeting are:

- **Incident documentation** - NHS Highland produced the incident documentation and timelines to support their actions - both NHS QIS and HPS were satisfied that the actions taken by the Board appeared to be adequate in response to the increase in *Clostridium difficile* cases at Caithness General Hospital over the given time period.
- **Infection prevention and control strategy** - It was discussed and agreed that NHS Highland should complete the Checklist for Preventing and Controlling CDAD for discussion with NHS QIS on 12 May.
- **Reporting/Communicating incidents** - Completion of the Watt Risk Matrix for communicating with both HPS and the SGHD was discussed and future reporting agreed by the Board.
- **Setting CDAD triggers** - NHS Highland asked for assistance with setting CDAD triggers. HPS agreed to discuss this with their infection control nurse consultant.
- **Draft trigger tool (HPS)** is being readied for consultation. In view of recent events in NHSScotland this process is being accelerated. NHS Highland will be given an advance copy of the tool.

## Tuesday 12 May: Shared learning meeting

On 12 May, NHS QIS, at the request of SGHD, was asked to visit Caithness General Hospital in support of the improvement work already underway and to provide formal assurance on the concerns raised regarding the recent increase in the number of cases of *Clostridium difficile*.

NHS QIS noted that once the incident had been identified, NHS Highland managed the situation well, with action plans developed and good progress made against implementing these. NHS QIS was assured that all actions will be completed as detailed in the plan within the given deadlines. A summary will be presented at the next NHS Highland Board meeting.

The discussions highlighted a number of areas of good practice and learning points, some of which are specific to NHS Highland, and some which are transferable across NHSScotland.

## Trigger point discussion

NHS Highland stated that there was confusion in relation to the process for reporting nationally, the use of the Watt Risk Matrix and the new replacement matrix. It was agreed that simple trigger levels would be useful and work now needs to be undertaken with HPS to support NHS Highland to clarify what the trigger points are, who should be informed and the associated timescales. It was noted that while NHS Highland was unclear of the reporting practice in terms of trigger levels, this did not impinge on the management of the situation, and action was taken in a timely and appropriate manner.

### Local learning/action:

- The HPS trigger tool will be tested in NHS Highland with the support of HPS and NHS QIS with immediate effect.

### National learning/action:

- Clarity and confirmation is required nationally in terms of reporting practices and trigger points; there is a need to clearly define what the trigger criteria are for alerting SGHD and HPS.

## Support tools discussion

It was noted that NHS Highland found it challenging to identify and select the most appropriate tools to support the incident review and management process for a number of reasons:

- the Board had used its own local tools to support the management of this incident; however, it was suggested that it would be helpful to seek clarification on the mandatory use of tools issued by SGHD to manage HAI incidents at a local level.
- the Board sought clarity on when recently issued tools should be implemented and when they are for comment ie should the CDAD Severe Case Investigation Tool and the WATT Risk Replacement Tool be implemented with immediate effect as well as having the opportunity to provide comments on them?

This highlighted the importance of having consistency and clarity in central correspondence, and the responsibility of the Board to seek clarity on such matters as required. In particular, the Watt Matrix and the new Watt Matrix were discussed and there was confusion about the status of these tools (eg for consultation, implementation etc) and their links with the Scottish Patient Safety Programme (SPSP). It was suggested that the new Watt Matrix should be used by NHS boards, but that feedback on its implementation and usability should be provided to the SGHD, as requested.

It was noted that NHS Highland's CDAD integrated care pathway tool and enhanced surveillance document have both worked well in supporting the management of the situation. However, as requested by HPS on 7 May, NHS Highland had also satisfactorily completed the Checklist for Preventing and

## Controlling CDAD.

### **Local learning/action:**

- NHS Highland will provide comments to SGHD on the use of the new Watt Matrix and clarify its processes for reporting and escalating incidents in the future.

### **National learning/action:**

- Clarity is required nationally in relation to the tools that have been issued, their status (eg mandatory/recommended/for consultation), and the autonomy NHS boards have to use their own local tools as a substitute.
- A more consistent approach to incident review and management and the tools that are used will enable a central comparison of like with like, and in turn result in better sharing of learning. The development of a national escalation policy will help to support NHS boards develop a more standardised and coherent approach to reporting.
- National clarification and consistency in the use of tools will also support the Healthcare Environment Inspectorate Scotland in their role in inspecting NHS boards.

### **Data discussion**

At the meeting on 7 May, it was noted that clarity was required from NHS Highland in terms of the data collection, interpretation and presentation. NHS Highland reported that consideration needs to be given to the sources of data, and how and when information is presented. Currently there are a number of different reporting routes:

- weekly management reports are based on provisional data
- the Board receives a 2-monthly report based on provisional data, and
- national reporting is on a quarterly basis with verified data.

NHS Highland noted that it can be challenging to identify when the best point in time is to report and how to ensure these data are as accurate as possible. It was suggested that it would be worth exploring how links could be made with the laboratory that currently provided data to HPS via the ECOSS system on a monthly basis in relation to CDAD cases.

It was also suggested that linking and aligning this work with the SPSP would be beneficial. NHS Highland noted that the infrastructure is established to collect data at ward level and the infection control team could work over the coming months to look at how the SPSP techniques could be used to collect and present these data.

**Local learning/action:**

- NHS Highland need to streamline data collection, analysis, presentation and reports to ensure key messages are brought to the attention of relevant parties in line with national frameworks and guidance. SPSP methodologies should be used to support this.

**National learning/action:**

- Aligning patient safety and clinical governance nationally, and incorporating the SPSP methodologies into the clinical governance framework will support a standardised approach for quality and patient safety, and help to support sharing of good practice through the clinical governance structures. Such alignment will also help to broaden the skill base of staff, moving away from individual dependence and increasing sustainability for the future.

**Hospital environment discussion**

The deteriorated state of the commodes, cord strings and window sills had occurred over a period of time and discussions were held on how this situation transpired. NHS Highland explained that environmental audits are undertaken on a regular basis and this area was audited in January 2009. The improvements required had been identified and were in the rolling maintenance programme; however, no timelines were set against the actions. Three wards had already replaced their commodes and the Queen Elizabeth Ward was next. As soon as the *Clostridium difficile* situation was confirmed, a further environmental audit was undertaken and replacement commodes were ordered. It was noted that whilst NHS Highland is compliant with both cleaning and deep cleaning requirements, enhanced deep cleaning is a challenge within the given resources; however, a process is in place. The North Highland CHP is proposing to seek funding from recent Government monies for domestic services to recruit a dedicated assistant for a rolling programme of deep cleaning radiators, fans, air vents, etc. This should be seen as a high priority.

**Local learning/action:**

- NHS Highland needs to ensure an enhanced proactive programme of deep cleaning is maintained across the Board. As a priority, the North Highland CHP should develop a business case for the employment of one dedicated deep clean assistant.
- NHS Highland needs to ensure that action plans developed have associated timelines for implementation and monitoring.

**National learning/action:**

- Funding and resources are challenges that contribute to NHS boards' ability to deliver on deep cleaning requirements.
- NHS boards across Scotland should ensure timelines are attached to action plans to ensure implementation, monitoring and continuous improvement.

**Antimicrobial prescribing discussions**

NHS Highland reported that the antimicrobial management team (AMT), which has been established for 1 year, has good multidisciplinary representation and functions well. The AMT monitors implementation of the policy through gathering and evaluating the data. Two antimicrobial pharmacists are in post and the intention is to employ a data collection officer (possibly a surveillance nurse) to further assist with this work. Discussions are taking place with the clinical governance team to ensure a consistent approach to implementing antimicrobial prescribing requirements. The AMT is part of the area drug and therapeutics committee and appropriate links are also made with the clinical governance committee.

**Clinical governance structures discussion**

Clinical governance structures and reporting frameworks within NHS Highland were discussed and it was questioned how risks identified in a ward setting are fed into clinical governance and risk management systems. Discussions were held around the structure and the arrangements for reporting, performance managing, decision making and implementing actions.

NHS Highland explained that every operational unit has a risk register which is populated by risks identified that impact on that unit's objectives. Risks are identified and dealt with locally; however, those that cannot be dealt with are then considered by the clinical governance risk management group and populate a central risk register. If a risk cannot be resolved by this group, it is then escalated to the risk management steering group for consideration. HAI forms part of the corporate risk register and is also identified in the North Highland CHP risk register. NHS Highland reported confidence that staff understand the incident reporting process and that this is working well.

It was noted that improvements are required to ensure issues raised are appropriately escalated and addressed. It was agreed that the ward environment issues should have been addressed, reported and managed by the appropriate committees. NHS Highland will consider its risk management and clinical governance structures to enhance links regarding HAI. NHS Highland welcomes feedback from NHS QIS in this matter.

NHS Highland reported that the North Highland CHP infection control group has recently been re-established (February 2009) following a 3-year absence. HAI is

now on all North Highland CHP agendas for example hospital managers meetings, charge nurse meetings, CHP management team meetings and CHP committee meetings, and work is progressing well. It was noted that had this group been in place earlier, the environmental audit action plans may have had timelines against them and been completed earlier. It was also noted that all CHPs have infection control groups and these link with infection control management structures.

NHS Highland utilises the clinical governance structures to share learning across the organisation, and individuals on the various committees and groups are aware of their responsibilities in terms of cascading information into and out of these groups to ensure lessons are learned. The reforming of the infection control group will help to further support sharing and learning.

**Local learning/action:**

- NHS Highland will consider its risk management and clinical governance structures to enhance links regarding HAI. NHS Highland welcomes feedback from NHS QIS in this matter.
- HAI risks need to be identified at ward level and where they cannot be resolved, incorporated in risk registers (local and corporate).

**National learning/action:**

- The development of a forum for shared learning through the HAI Collaborative will help to promote an integrated approach, and support NHS boards to identify strengths and weaknesses in their own systems and learn from experience.

## 4 Conclusions

NHS Highland has continued to progress with their management of *Clostridium difficile*, and has developed detailed local actions plans with implementation being closely monitored.

A key lesson has been in recognising the informality around triggers, and escalation processes now need to be revisited, formalised and clearly communicated. Communication and the relationship between the CHP and the Board at an operational and strategic level need to be enhanced. Streamlining of data collection, analysis and presentation will also ensure key messages are brought to the attention of relevant parties in line with national frameworks and guidance.

NHS Highland has taken appropriate action to ensure the lessons that can be learned from this incident are shared and has recognised how these lessons can be applied to strengthen current clinical governance systems across the organisation.

These lessons and good practice points will be shared across NHSScotland and SGHD.

NHS QIS concludes that once the incident had been identified, NHS Highland managed the situation well, with action plans developed and good progress made against implementing these. NHS QIS was assured that all actions will be completed as detailed in the plan within the given deadlines. A number of preventative measures have been identified that should assist in the prevention and control of future outbreaks / HAI incidents.

## **Appendix 1: Abbreviations**

|                |  |
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| <b>AMT</b>     | antimicrobial management team            |
| <b>CDAD</b>    | Clostridium difficile associated disease |
| <b>CHP</b>     | community health partnership             |
| <b>HAI</b>     | healthcare associated infection          |
| <b>HPS</b>     | Health Protection Scotland               |
| <b>NHS QIS</b> | NHS Quality Improvement Scotland         |
| <b>SGHD</b>    | Scottish Government Health Directorates  |
| <b>SPSP</b>    | Scottish Patient Safety Programme        |

## **Appendix 2: Details of shared learning meeting**

The shared learning meeting took place in NHS Highland on 12 May 2009.

### **NHS QIS representatives**

**Mrs Leanne Hamilton**

Support Officer, Clinical Governance Support and Development Unit

**Mrs Jackie Ley**

Nurse Consultant Healthcare Associated Infection

**Mr Kerry Walsh**

Head of Clinical Governance Support and Development Unit

NHS QIS met with strategic and operational staff.