NHS Ayrshire & Arran

Meeting: **Ayrshire and Arran NHS Board**

Meeting date: **Monday 25 May 2020**

Title: **Healthcare Associated Infection Report**

Responsible Director: **Hazel Borland, Nurse Director**

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1. Purpose

This is presented to the Board for: Discussion

This paper relates to:
- Annual Operational Plan
- Emerging issue

This aligns to the following NHSScotland quality ambition(s): Safe

2. Report summary

2.1 Situation

The paper provides a summary of the impact of the COVID-19 pandemic on the Infection Prevention and Control Team (IPCT) core activity (Appendix 1) and the achievement of the national HAI Standards detailed below.

This paper provides Board members with the current position against the national Healthcare Associated Infection (HCAI) Standards and the national meticillin resistant *Staphylococcus aureus* (MRSA) admission clinical risk assessment (CRA) key performance indicator (KPI).

2.2 Background

The Scottish Government has established national HCAI Standards for:

- *Clostridium difficile* infection (CDI) - a reduction of 10% in the national rate of healthcare associated (HCA) CDI for the year ending March 2022, with 2018-19 used as the baseline.
- *Staphylococcus aureus* bacteraemias (SABs) - a reduction of 10% in the national rate of HCA SAB by year end March 2022, with 2018-19 used as the baseline.
- *Escherichia coli* bacteraemias (ECBs) - a 50% reduction in HCA ECBs by 2023-24, with an initial reduction of 25% by 2021-22. The baseline is the 2018-19 rate.

Each Board is required to contribute its own proportionate reduction to achieve the national standard

2.3 Assessment

The Board's current verified position against each HCAI standard for the year ending December 2019 is:

Infection	NHS A&A Annual Rate Year Ending December 2019	2021-22 Target	2023-24 Target
Clostridium difficile Infection	16.7	13.0	
Staphylococcus aureus Bacteraemia	15.1	12.4	
Escherichia coli Bacteraemia	43.7	34.4	22.8

Due to the impact of COVID -19 on total occupied bed days it is not possible to give a projection as the year end rates for March 2020. These will be published in July 2020.

2.3.1 Quality/patient care

Attainment of the national HCAI standards will result in fewer infections in patients and improve patient outcome.

2.3.2 Workforce

Reductions in HCAI will reduce the exposure risk to staff from harmful infections

2.3.3 Financial

Reductions in HCAI will lead to reduced inpatient lengths of stay and associated treatment costs

2.3.4 Risk assessment/management

The Infection Prevention Control Team (IPCT) provide clinical teams and managers with risk assessed advice and guidance based on national policy and best practice.

Current activity required in order to respond to COVID-19 has significantly impacted on the capacity of the IPCT to continue with routine IPC activity.

2.3.5 Equality and diversity, including health inequalities

An impact assessment has not been completed because this is an update report to Committee members.

2.3.6 Other impacts

Nil to Note

2.3.7 Communication, involvement, engagement and consultation

These topics are discussed regularly at the Prevention and Control of Infection Committee which has public representatives as members.

2.3.8 Route to the meeting

This report is a standing report to the Board as required by the national Healthcare Associated Infections Standards 2015. These topics are standing agenda items at the

Prevention and Control of Infection Committee. A version of this paper is being presented at the Prevention and Control of Infection Committee on 22 May 2020.

2.4 Recommendation

This paper is presented for discussion and to provide assurance for Board members on the Board's current performance against the national HCAI standards.

3. List of appendices

The following appendices are included with this report:

Appendix 1 – Impact of COVID-19 on IPCT Core Activity

Appendix 1

COVID-19 – Impact on the Infection Prevention Control Core Activity

The COVID-19 pandemic has caused significant disruption to the Infection Prevention and Control Team (IPCT) routine activity. The announcement in January 2020 that a novel coronavirus identified in Wuhan, China was capable of human to human transmission began to impact on the work of the IPCT and very quickly dominated the team's activity to the exclusion of almost all other core business.

There have been a number of phases of activity for the IPCT in managing the emerging pandemic. These can be described as:

- Awareness Raising
- Review of Pandemic Plans
- Admission of Suspected Cases for Testing
- Emergence of Confirmed Cases
- Peak Pandemic Activity
- Increasing Green Pathway Activity

These phases are not strictly marked in time and overlapped however they do describe the pandemic progress.

Awareness Raising

This period commenced in mid to late January as evidence of human to human transmission and increasing numbers of cases of the novel coronavirus emerged from China. The disease was categorised as a High Consequence Infectious Disease (HCID) and as such Airborne Precautions were required for all suspected and confirmed cases. The IPCT liaised with teams in those priority areas most likely to receive a suspected case, e.g., Emergency Departments, Combined Assessment Units, Intensive Care Units (ICUs) Paediatrics and Ward 2D, University Hospital Crosshouse (UHC) to ensure they were aware of the national case definition; had access to the national infection control guidance for emerging novel respiratory pathogens and had sufficient supplies of personal protective Equipment (PPE). Teams were also advised to ensure that they had sufficient staff fit tested for FFP3 respirators.

Review of Pandemic Plans

Although the infection emerging from China was not influenza the management principles contained in the Board's Pandemic Influenza Plan were applicable to this novel coronavirus. Support was provided at Board and departmental level to review the pandemic plans to help inform preparations for the potential emergence of the infection in the UK.

The IPCT continued to make regular visits to the priority areas for support and advice during this time.

Admission of Suspected Cases for Testing

As the novel coronavirus began to spread in countries out with China the IPCT worked with the priority areas to ensure they had clear pathways for admitting patients who met the UK case definition. The process ensured that where possible suspected cases were admitted directly to a lobby ventilated isolation room in Wards 2D or 1B, UHC. This included developing protocols for patients attending by car and by ambulance.
As it became evident that the virus was spreading in a number of countries, including Europe; there was a significant increase in preparations across the organisation for management of suspected and confirmed cases across the organisation. The demands for support from the IPCT escalated rapidly. As a result much of the routine IPCT activity which had been declining since the emergence of the novel coronavirus now ceased. This included

- Standard Infection Control Precautions (SICPs) and Environment Audit Programme
- All non-COVID education and training
- Support for HAI SCRIBE and Build Work
- Non-COVID committee and group work, e.g. Decontamination Committee
- Policy, guideline and SOP review programme
- General IPCT presence in clinical areas

Non-COVID activity was primarily restricted to:

- Alert organism surveillance
- Non-COVID outbreak and incident management
- Water safety – continue to assess high risk areas for signs of Pseudomonas infection with potential links to water system.

The Infection Control Manager and the Nurse Director were in regular communication on the IPCT activity to support the organisation's preparedness and the impact of on the wider IPCT programme. It was agreed that due to the current uncertainty at that time it was not possible to present an Annual Planned Work Programme for the Prevention and Control of Infection Committee's approval.

The Chief Executive was notified by the Nurse Director on 18 March 2020 of the impact on the IPCT activity and that the IPCT work was focussed on the three bullet points above in addition to COVID activity until further notice.

In order to supplement the IPCT the following measures were taken:

- Redeployment of 0.8 WTE Band 5 Nurse with previous experience in infection control
- Employed 0.4 WTE Independent Infection Control Nurse Consultant on 3 month contract
- Secured bank hours for Nurse who had recently left IPCT

Emergence of Confirmed Cases

The first confirmed inpatient case in Ayrshire and Arran was identified on 09/03/20. On 10/03/20 Health Protection Scotland (HPS) revised their guidance for the management of suspected and confirmed cases of COVID-19. It was determined that Droplet Precautions

were to be implemented except when Aerosol Generating Procedures (AGPs) were performed in which case Airborne Precautions were to be used.

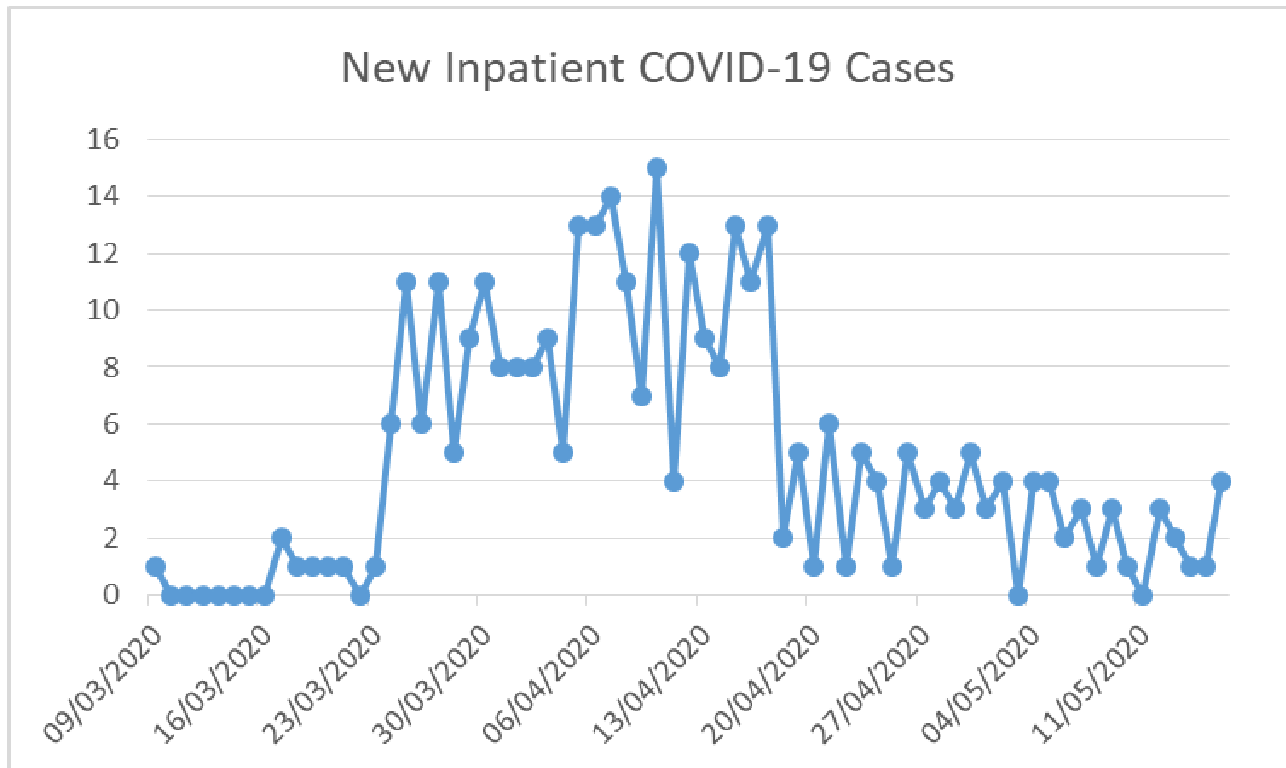
The change in guidance intensified the demands on the IPCT both in terms explaining the new guidance and providing re-assurance to staff that it was safe to manage suspected and confirmed cases.

This period was also characterised by emerging issues with supply of personal protective equipment including FFP3 masks, full face visors and gowns. In order to ensure continued provision of full face visors for ICU staff the IPCT had to risk assess and sanction the re-use of single use face visors and provide a protocol for their decontamination. For a period of time the supply from national procurement was supplemented by visors made by local businesses and our maxillary facial laboratory. The supply of visors from national procurement has now improved significantly and instruction has now been issued to staff that single use visors are no longer to be decontaminated and re-used. The IPCT were required to review and asses a range of other supplies sourced out with the national supply chain including gowns and supplies of alcohol hand rub.

During this time a Bronze PPE Team was established to model and understand our PPE usage and demand, map out daily stock requirements and develop an escalation plan for any PPE shortages. An increase in Fit Testers was also undertaken at this time to increase testing capacity. This Bronze Team reports into the Emergency Management Team.

Peak Pandemic Activity

After a fortnight the daily number of new inpatient cases increased significantly peaking at 15 on the 10/04/20.



On 02/04/20 the HPS guidance was subsumed into a wider Four Nations UK guidance which introduced sessional use of PPE, patient use of PPE and the use of PPE when deemed to be in sustained transmission, The guidance was accompanied by four Tables

which were to assist staff in determining the correct level of PPE based on clinical setting and activity. As this was the third set of national infection control guidance since the emergence of the virus, and the most complex significant IPCT resource was needed to support staff in transitioning to the new guidance. A task that was made more challenging by the lack of advance notice to IPCTs of the content of the changes or the rationale for them.

The first outbreak in an inpatient ward was declared on the 30/03/20 in Lindsay Ward, Biggart Hospital. Since then there have been a further 12 outbreaks requiring IPCT Management (Table 1). The affected patients and their families were informed. The status of these outbreaks was reported to the Emergency Management Team (EMT) and HPS on a daily basis.

Hospital	Number of Outbreaks
Ailsa Hospital	2
Biggart Hospital	2
University Hospital Ayr	4
University Hospital Crosshouse	4
Woodland View	1

Table 1 – Number of Outbreaks as off 18/05/20

Due to the prolonged incubation period, patients not initially suspected as having COVID-19 may go on to develop symptoms post admission. During their stay they may have shared a room with other patients and as such those patients are considered to be exposed contacts that require to be nursed in single rooms or in a cohort with the other exposed patient's until 14 days after their last exposure to a case.

Discharged exposed contacts require to self isolate at home. The need to cohort exposed contacts results in the multi-bedded room being closed to admissions and transfers during the follow up period or until all contacts are placed in single rooms or discharged. This has resulted in a number of ward rooms being closed during this time.

In April a UK position of sustained transmission was taken by Public Health England; at that time there was no guidance with regard to an NHSScotland position. On April 2020 based on our local data the Nurse Director and Medical Director recommended to EMT that the Board consider itself to be in period of sustained transmission of COVID-19. This was accepted.

As a result Table 4 in the national infection control guidance was triggered which required staff to wear PPE for all close direct contact with all patients regardless of their COVID status. This further change to the PPE guidance created yet another increase in demand for support and guidance from the IPCT across the health and social care system and demand on our PPE stock which was modelled carefully to ensure that staff have always had access to the PPE they require.

Increasing Green Pathway Activity

We have now entered a period where the number of new hospital admissions with COVID is decreasing - with a corresponding increase non-COVID (green pathway) activity in the hospitals. As a result work is in the early stages across all parts of the organisation to

consider non-COVID care pathways and recovery of previous services. The IPCT will need to be closely involved in this work to advise and inform on appropriate IPC requirements.

The IPCT has initiated the process of restarting its own core activity with the initial focus on a small number of focussed audits; however this is fragile and is dependent on the community trajectory of COVID-19. The risk of outbreaks is likely to remain significant for many months to come as will the need to manage the exposed contacts of cases who are identified post admission.

The above is not intended to be an exhaustive description of the impact of COVID -19 on the IPCT nor a full description of all the activity. However it is important that Board are notified of the significant impact the team’s core activity, the lack of annual planned programme to date and the fragility of any recovery programme for normal IPCT activity.