NHS Board Meeting
31 March 2021

Lanarkshire NHS Board
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SUBJECT: INFECTION PREVENTION AND CONTROL COVID-19 UPDATE REPORT

1. PURPOSE

The purpose of this paper is to provide Board Members with an update on the IPC response to COVID-19, and associated nosocomial transmission in NHS Lanarkshire and across Scotland.

For approval	☐	For Assurance	☒	For Information	☒

2. ROUTE TO THE BOARD

This paper has been prepared by Christina Coulombe, Head of IPC.

3. SUMMARY OF KEY ISSUES

NHS Lanarkshire, as well as the majority of central belt boards, experienced a considerable surge in suspected and confirmed cases of COVID-19 presenting to acute hospitals during the second and third wave of the pandemic. A significant number of wards across Lanarkshire were affected by outbreaks and clusters of infection which resulted in wards and bays being closed to admissions and transfers. This was increasingly demanding as services had remobilised and strains on capacity remained at their greatest. From March 2021, COVID-19 community prevalence began to reduce, in part due to government measures, and the vaccination programme provided gains in the reduction of hospital admissions due to severe infection.

4. STRATEGIC CONTEXT

This paper links to the following:

Corporate objectives	☒	AOP	☒	Government policy	☒
Government directive	☒	Statutory requirement	☒	AHF/local policy	☐
Urgent operational issue	☒	Other	☐		

5. CONTRIBUTION TO QUALITY

This paper aligns to the following elements of safety and quality improvement:

Three Quality Ambitions:

Safe	☒	Effective	☒	Person Centred	☒

Six Quality Outcomes:

Everyone has the best start in life and is able to live longer healthier lives; (Effective)	☐
People are able to live well at home or in the community; (Person Centred)	☐
Everyone has a positive experience of healthcare; (Person Centred)	☒
Staff feel supported and engaged; (Effective)	☐
Healthcare is safe for every person, every time; (Safe)	☒
Best use is made of available resources. (Effective)	☒

6. MEASURES FOR IMPROVEMENT

As detailed in the report.

7. FINANCIAL IMPLICATIONS

The organisation carries financial pressures as a direct result of Healthcare Associated Infection (HCAI). The severity of these pressures are dependent on a number of variables including length of stay, associated treatment required etc.

8. RISK ASSESSMENT/MANAGEMENT IMPLICATIONS

Not applicable

9. FIT WITH BEST VALUE CRITERIA

This paper aligns to the following best value criteria:

Vision and leadership	☒	Effective partnerships	☒	Governance and accountability	☒
Use of resources	☒	Performance Management	☐	Equality	☐
Sustainability Management	☒				

10. EQUALITY IMPACT ASSESSMENT / FAIRER SCOTLAND DUTY

Not Applicable.

11. CONSULTATION AND ENGAGEMENT

Not Applicable.

12. ACTIONS FOR THE BOARD

Approve	☐	Accept the assurance provided	☒	Note the information provided	☒

The Board is asked to note this report and highlight any areas where further clarification or assurance is required.

The NHS Board is also asked to confirm whether the report provides sufficient assurance around NHSL performance on COVID-19, and the arrangements in place for managing and monitoring COVID-19.

13. FURTHER INFORMATION

For further information about any aspect of this paper, please contact:

- Eddie Docherty, Executive Director of Nursing, Midwifery and Allied Health Professionals (NMAHPs) (Telephone number: 01698 858089)
- Christina Coulombe, Head of Infection Prevention and Control (Telephone number: 01698 366309)

Situation

The purpose of this paper is to provide the Board with an up to date report on COVID-19 and associated nosocomial transmission in NHS Lanarkshire and across Scotland.

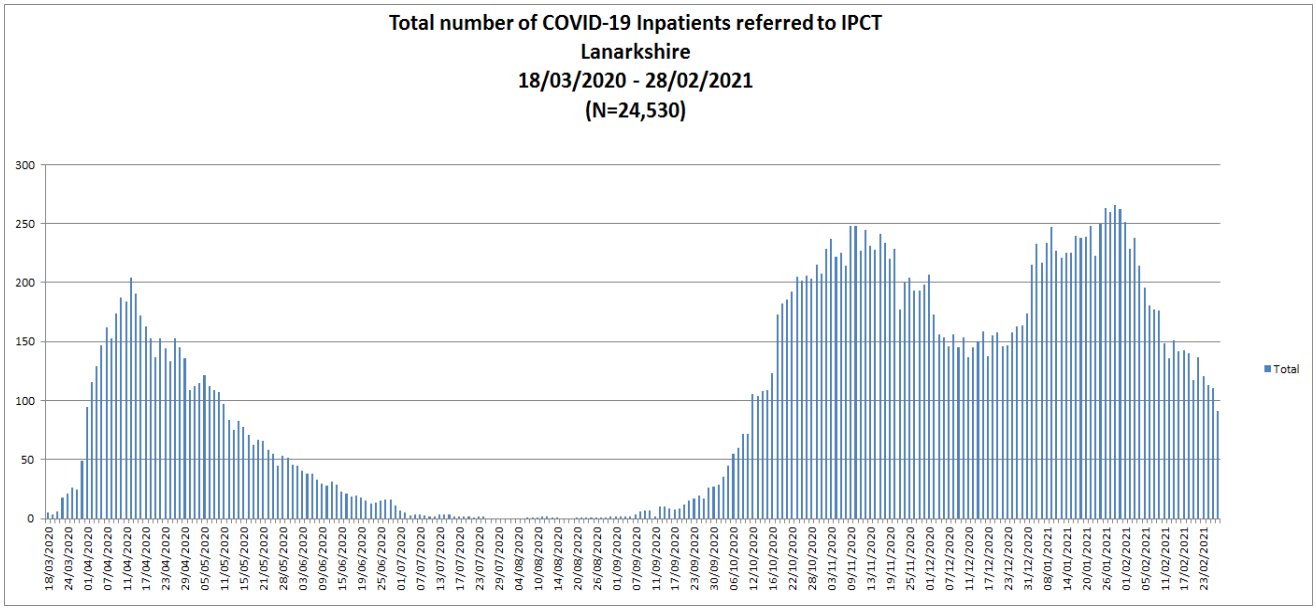
Background

The Board currently receives SARS-CoV2 and COVID-19 infection data from a number sources. IPC also collect, analyse and distribute data daily/weekly/monthly to key partners across the organisation. The purpose of this report is to provide a further update following on from the last board submission in September 2020.

Assessment

The greatest demands on the IPC service during the pandemic continue to be patient contact tracing, outbreak and cluster management and education and staff support. Following the first wave, the number of COVID-19 patient referrals to IPC increased steadily from October 2020 through to February 2021. In total, IPC have managed 24,530 (cumulative) patient referrals for COVID-19 from mid-March 2020 to end of February 2021.

Figure 1: Total number of cumulative COVID-19 in-patient referrals and case-load 18 March 2020 to 28 February 2021 (n=24,530)

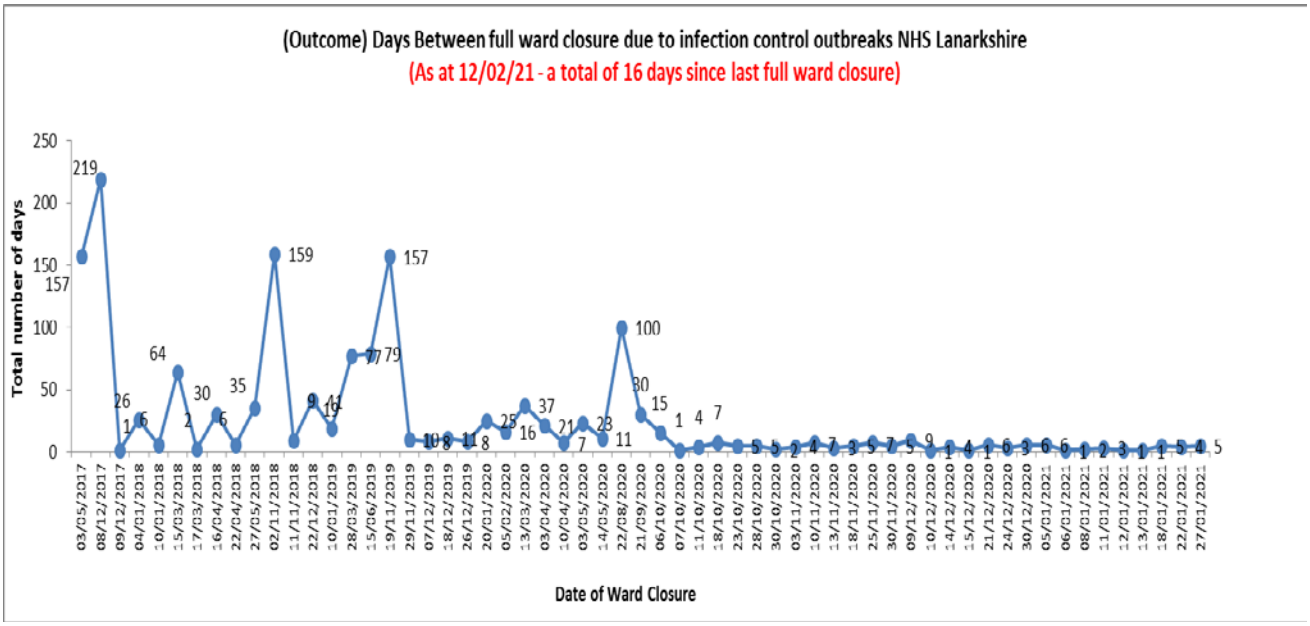


The data in *Figure 1* clearly identifies the pressures on the team throughout the first, second and third wave of the pandemic. Throughout March 2021 referrals have decreased significantly allowing IPC to recover and remobilise key priorities within the IPC Work Programme.

Outbreaks and Clusters of Infection

As demonstrate in *Figure 2* below, NHS Lanarkshire experienced ongoing outbreaks during the first wave during April to June 2020 and then again from October through to January 2021. Evidently, there were less ward closures during the first wave. This may be due to the lack of a national testing strategy in hospitals and in the community resulting in lower rates of case ascertainment as well as lower hospital occupancy rates.

Figure 2: Outcome data on the Days between Full Ward Closure due to outbreaks of COVID-19



Ramped up COVID-19 testing and the introduction of Test and Protect accelerated the ability to identify cases quickly and put control measures in place to minimise spread by placing restrictions on bays and wards were cases and contacts were identified. As demonstrated in *Figures 3 & 4,* the impact of ward and bay closures was significant and far reaching. As the number of restrictions increased so did the number of bed days lost which placed further pressure on capacity across the board. Incident Management Team meetings were held for every ward closure with representation from the multi-disciplinary teams. These meetings placed greatest importance on managing the risks of transmission i.e. patient and staff safety with the risk of restricted capacity.

Figure 3: Number of Bay closures up to December 2020

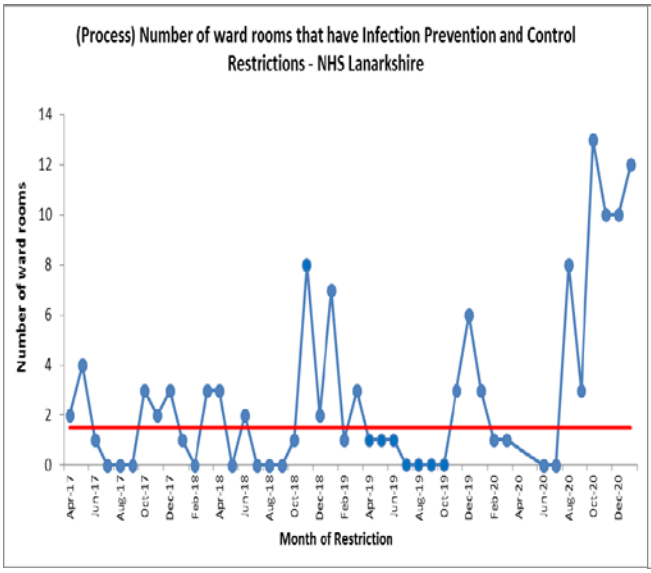
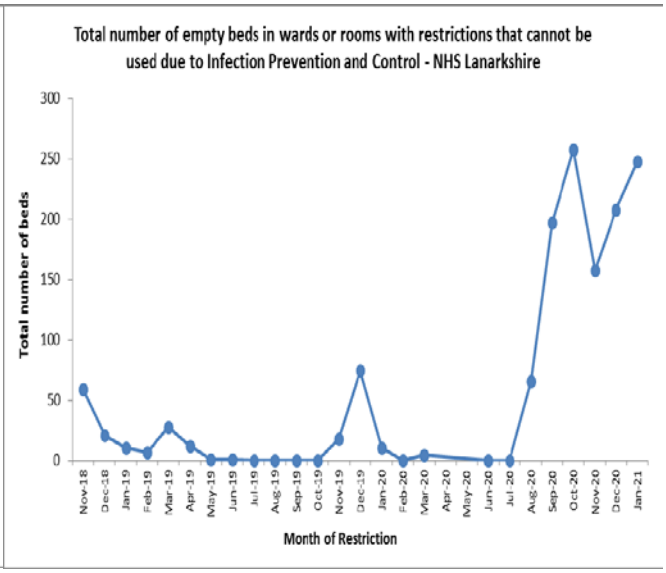


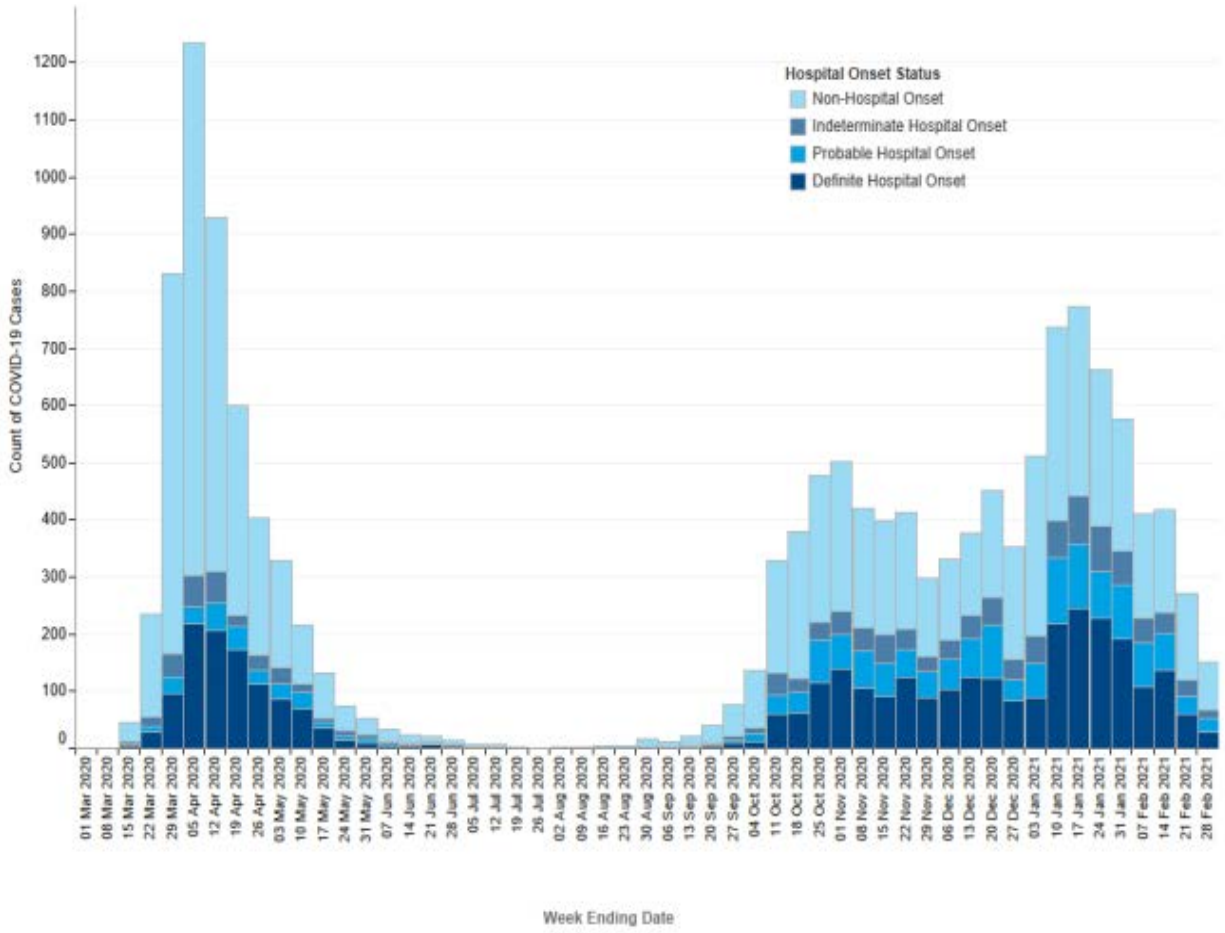
Figure 4: Number of empty beds due to ward/ bay closures up to Jan 2021



Hospital onset Infections

The epidemiological review and validation exercise for all positive COVID-19 cases continues to determine the number of hospital onset cases in relation to the total number reported overall. *Figure 5* highlights the epidemic curve for all COVID-19 inpatient cases in NHS Scotland from March 2020 to end of February 2021. The greatest number of hospital onset infections occurred during the first wave in the month of April and began to decrease thereafter and then increased again in the second wave in October through into February 2021.

Figure 5: Epidemic curve of COVID-19 cases with first positive specimen taken during an inpatient stay, by onset status: week-ending 1 March 2020 to week-ending 28 February 2021 (n=14,761)



Of note, NHS Lanarkshire continues to demonstrate lower levels of probable and definite hospital onset infections than a number of other boards in Scotland as detailed in *Table 1* below.

Table 1: Number of COVID-19 cases, by onset status and NHS board: specimen dates up to 28 February 2021

NHS board	Total COVID-19 cases (n)	Non-hospital onset (n)	Indeterminate hospital onset cases (n)	Probable hospital onset cases (n)	Definite hospital onset cases (n)	Non-hospital onset (%)	Indeterminate hospital onset cases (%)	Probable hospital onset cases (%)	Definite hospital onset cases (%)
Ayrshire & Arran	15,341	739	113	222	373	4.8%	0.7%	1.4%	2.4%
Borders	2,791	134	12	17	50	4.8%	0.4%	0.6%	1.8%
Dumfries & Galloway	4,031	191	16	6	7	4.7%	0.4%	0.1%	0.2%
Fife	9,828	437	31	33	246	4.4%	0.3%	0.3%	2.5%
Forth Valley	10,783	468	75	76	169	4.3%	0.7%	0.7%	1.6%
Golden Jubilee	21	11	5	2	3	-	-	-	-
Grampian	13,497	364	47	55	179	2.7%	0.3%	0.4%	1.3%
Greater Glasgow & Clyde	63,632	2,864	455	548	1,293	4.5%	0.7%	0.9%	2.0%
Highland	4,539	133	12	7	24	2.9%	0.3%	0.2%	0.5%
Lanarkshire	36,637	1,180	196	263	480	3.2%	0.5%	0.7%	1.3%
Lothian	27,963	1,117	159	272	554	4.0%	0.6%	1.0%	2.0%
Orkney	67	4	0	0	0	6.0%	0.0%	0.0%	0.0%
Shetland	211	12	0	0	0	5.7%	0.0%	0.0%	0.0%
Tayside	13,262	591	108	128	262	4.5%	0.8%	1.0%	2.0%
Western Isles	269	12	1	2	3	4.5%	0.4%	0.7%	1.1%
Scotland	202,872	8,257	1,230	1,631	3,643	4.1%	0.6%	0.8%	1.8%

NHS Lanarkshire has reported a rate of 0.7% probable hospital onset cases and 1.3% definite hospital onset cases up to the end of February 2021. During higher levels of community prevalence the acute division also witnessed an increase in hospital cases and nosocomial transmission. A clear correlation between both community and hospital prevalence has been firmly established by ARHAI Scotland through board submission of data and community epidemiological data. This pattern was evident in the increased number of outbreaks and clusters reported in University Hospital Wishaw during December 2020 through to January 2021.

In total, from September 2020 until March 2021, IPC have responded to 303 instances where IPC restrictions have been instituted as a result of identification of COVID-19 contacts within wards. Contacts were monitored until the patients were either isolated, discharged or until 14 day incubation period lapsed. See *Charts 1 & 2* below.

Chart 1: COVID-19 Contacts/Cluster restrictions 2nd wave

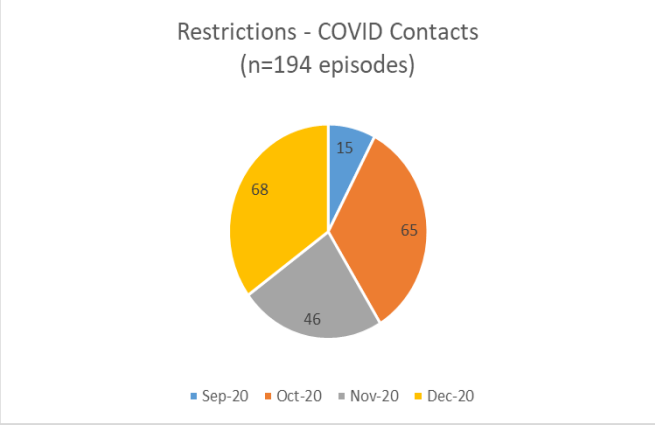
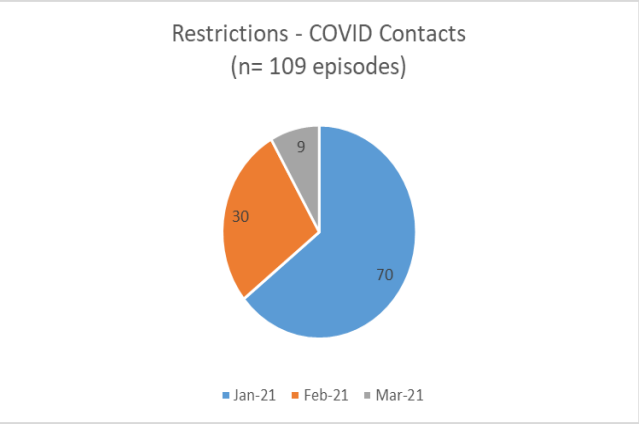


Chart 2: COVID-19 Contacts/Cluster restrictions 3rd wave



Ongoing nosocomial transmission within wards and amongst staff was the major confounding factor in the disruption of service provision. IPC capacity and capability was stretched due to the demands on the service, bed days were lost and the balance of risk between providing capacity and the risk of ongoing transmission was both strategically and operationally challenging for a number of services.

Recommendations

1. IPC will commission a De-Brief and lessons learned exercise for both acute and HSCPs in the next few months. This learning, together with national learning, will support preparedness for winter 2021-2022.

2. IPC will continue to work closely with clinical and national teams to support and advise, while providing education and advice. Learning will be reported through Hygiene Groups, ICC and HQAIC.

3. A Quality Improvement Project has been established in Critical Care across the board focusing on hand hygiene, use of Personal Protective Equipment, aseptic procedures etc. to achieve a reduction in SAB and gram negative bacteraemia as a result of key learning from COVID-19 management in critical care. This will be reported and monitored through ICC and progress reported to HQAIC.

4. IPC will continue to contribute to the national data sets and guidance groups to ensure any new learning is shared locally.

5. Monitoring of compliance with key prevention measures will continue via the COVID-19 IPC Assurance Sub Group, Site Hygiene Groups, the ICC and HQAIC.

IPC Outbreak and Clusters Dashboard available for further analysis of the data.