Next Steps for Reducing Nosocomial Transmission of COVID-19 Infection in Welsh Hospitals and Care Homes - briefing paper

15th November 2020

The current situation

Hospitals

Hospital transmission rates in Wales have increased over the last few weeks, as community transmission has increased. The rate has been highest for the CTM population, where the community transmission rate is also highest and a recent outbreak has re-emerged, but all health Boards have experienced problems, usually in the form of small clusters often on several different sites and areas.

During the last week until 08/11/20, there were 210 cases of probable or definite hospital acquired COVID-19 infections. These represent 3% of all cases diagnosed during the same week, but 50% of all cases diagnosed in hospitals.

The highest number of hospital transmissions occurred in CTM health board, where the community transmission rates are highest and the number of people admitted to hospital with COVID is highest.

Probable or definite hospital acquired COVID-19 infections week ending 08/11/2020:

Cwm Taf Morgannwg	66	4% (of all diagnosed in HB)
Aneurin Bevan	19	2%
Betsi Cadwaladr	31	5%
Cardiff and Vale	15	2%
Hywel Dda	29	7%
Swansea Bay	46	4%
Powys	4	2%
Velindre	0	0%

PHW data, issued Thursday 12/11/20, indicates that, on 10/11/20, 1150 patients were in Welsh hospitals with a positive COVID-19 test result during the preceding 28 days. 5944 beds were occupied by patients with problem other than COVID-19 on 14/11/20, so around 3.5% are being infected each week by COVID-19 within the hospital environment. Every case is a cause of individual concern, as patients are vulnerable, but also contributes to bed occupancy and hospital workload.

The evidence suggests that properly used PPW limits transmission between staff and patients but that transmission is occurring between patients and between staff.

Transmission between staff is often being seen as a result of a lack of social distancing in non-clinical areas. Although staff should test positive at a similar rate to their local community, one Health Board recently found 24% staff were positive despite an approximately 1% community prevalence. The continued evidence of such transmission suggests that staff behaviours are deeply ingrained and cultural particularly when work is pressured and mutual support required.

3.0 Options going forward

Hospitals

Asymptomatic NHS staff testing

We propose the routine regular testing of NHS staff. The purpose would be to identify healthcare workers who are COVID-19 test positive and pose a risk of infection to the vulnerable patents they care for.

NHS England last week announced the national rollout of twice weekly self-administered saliva swab testing of all patient facing NHS staff using lateral flow devices.

Until now, testing capacity and turnaround has been limiting but both are improving with new technologies, enabling a strategic approach. Wales now has access to 94k lateral flow tests daily. Replicating the NHSE approach across Wales would likely consume 10-15k daily tests from this allocation (40k staff testing twice weekly), so would appear to be manageable and is recommended.

At present staff testing is undertaken in Wales to aid outbreak control and in some clinical areas with vulnerable hospital patients. It is not applied routinely across high prevalence areas, but will be undertaken more in such areas due to outbreaks.

Routine asymptomatic testing will also increase the number of staff requiring to self-isolate. While this is in large part positive, wider harm may occur when services cannot be provided, but this effect will rapidly diminish as infected staff are identified.

Routine testing is more likely to be useful when community prevalence is relatively high i.e. around 1%, as it is at present across Wales.

To identify infectious staff, a lower sensitivity test, such as lateral flow which has a sensitivity of around 50% will lead to false negatives, but these will decrease with repeated tests. False positive results will still occur, particularly as testing progresses, so positive results will require confirmation by laboratory PCR.

Hospital in-patient testing

The Welsh COVID-19 testing strategy states that all patients admitted to hospital via emergency departments and assessment units will be tested. Patients should ideally not move further into the hospital until the result of the test is known.

As the current testing turnaround time for results is 24-72 hours this has the effect of severely slowing the speed of admission and flow through the hospital rate of admission to hospital.

There is potential for using tests with a much quicker turnaround time although lower sensitivity such as the lateral flow tests to screen patients entering the hospital at a much quicker rate. Positive results could then be confirmed using the RT-PCR test.

It is also proposed that we require all initially negative in-patients to be rested by at 5 days to identify those that become positive while asymptomatic.

performed, nuanced interpretation, along the lines suggested by TTAG would facilitate discharge.

Physical environment

Bed capacity

A substantial and frequently cited risk for nosocomial spread of COVID-19 has been the inability to achieve adequate isolation for patients with confirmed or suspected infection due to a lack of single occupancy rooms.

'Pop up' isolation cubicles have featured in media reports recently. Six NHS Trusts in England have been reported to have purchased up to 25 for use in medical admissions units. The temporary rooms, known as 'Redirooms', which are stored in a compact wheeled cart, can be erected in around five minutes to provide an individual room to isolate patients.

Shared Services Partnership have contacted suppliers and established these cost £20K with a five day order turnaround. This information has been shared with CEOs.

https://www.bbc.co.uk/news/av/health-54910619

The implementation of field hospital beds is also to be encouraged as increasing bed capacity will allow greater flexibility in the separate placement of patients in red, amber and green pathways. The Grange UH also has isolation facilities that will support outbreak prevention and management in AB UHB.

Bed spacing

The letter issued by from Director General of Health and Social Services/Chief Executive NHS Wales 'COVID-19 guidance for bed-spacing in healthcare settings' (26th June 2020) gives direction on bed-spacing, social/physical distancing in hospital settings, use of screens, environmental decontamination and the use of fans. The required 3.6m between beds has not been fully implemented across Wales, due to the consequence required of removing significant bed numbers (98 beds would have had to be removed at RGH and 110 at POW). The risk is mitigated by the use of Perspex screens between beds but this is an incomplete replacement for social distancing between patients.

We propose to revisit the issue of bed spacing in hospitals in conjunction with the increasing availability of field hospital capacity.

Dedicated low risk/green sites

We are working with LHBs to seek to identify opportunities to put in place further green pathways and to create protected green capacity, but there are challenges both in terms of finding space and staffing given COVID-19 pressures and impact.

Cleaning standards