



## Quality and Safety Impact of the RAAC Major Incident at Withybush Hospital (WGh)

# Reinforced Aerated Autoclave Concrete (RAAC)

RAAC is a material used in construction in many buildings generally between the 1960s and 1990s. Its presence has been confirmed in a range of National Health Service (NHS) properties across the United Kingdom (UK) and includes several properties in Wales.

Withybush General Hospital (WGH) was built during this time period and hence had RAAC as part of the build.

Research has shown that this material has a far lower structural loading capacity than other generic reinforced concrete products. Due to this fact, there is a risk of structural collapse should the product fail. The condition of RAAC planks has been shown to deteriorate if water is present due to roof leaks etc, which can compromise the reinforcement bars contained within these planks.



# Mitigation

Initial survey had raised serious concerns. In response to the findings it had resulted in the need for vacation of six inpatient areas (Wards 7,8/ Critical Care Unit,9,10,11 and 12). The findings had prevented reoccupation prior to completion of remedial works to planks categorised as Red (high or very high risk).

This total included the closure of 122 beds in WGH, with a 14 bedded elective surgical ward on Ward 9 along side the Health Boards cardiac and stroke units.

On the 15 August 2023, the Health Board declared an internal major incident at WGH which enabled the command and control structures to commence (Gold, Silver and Bronze), this aided the teams to be able to react quickly if substandard RAAC planks were discovered.

By declaring an internal Major Incident, the Health Board was also able to prioritise the work of the teams to deal with the emerging issue and draw upon support from partner agencies that are members of the Dyfed Powys Local Resilience Forum.

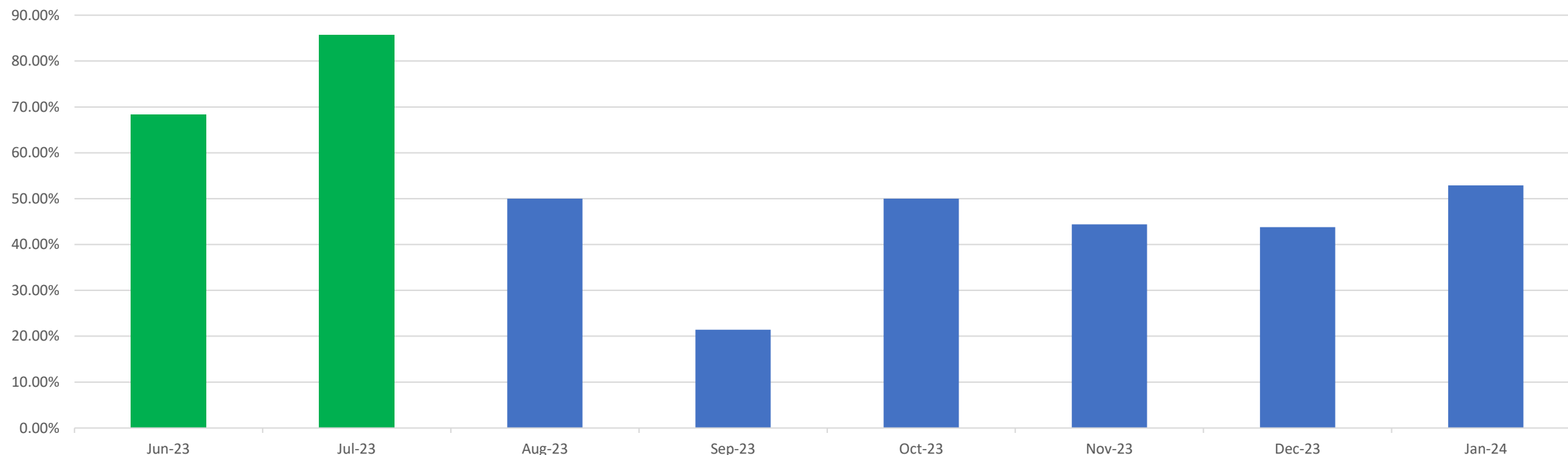
In part mitigated through the provision of an additional 40 beds in South Pembrokeshire Hospital (SPH) and further max surge of 12 medical beds in WGH, giving an overall reduction of 39 beds. It is however important to note that beds in SPH could only be occupied by those who no longer had an acute health need so did not serve an acute medical take in the same way that beds in WGH had. This adds additional pressure to the WGH site in managing emergency and urgent care pathways for those presenting with acute medical conditions.



# RAAC Impact on Stroke Patients at Withybush Hospital

Withybush Hospital has constantly achieved a C SNNAP Score – Higher than the majority of hospital in Wales. Since the RAAC issue no Scores have been put against Withybush.

Admitted to Stroke Unit within 4 hours of arrival to hospital



The only acute measure that has been affected throughout the RAAC issue is admissions to the Stroke Unit, where rates deteriorated from 86% to just 20% in September 2023, and have remained below previous levels since.

September 2023 saw the biggest impacts on the Stroke Service for Pembrokeshire residents.

Between mid-August 2023 and early January 2024, the hospital experienced the effects of RAAC. The most significant impact was felt in September 2023, when changes to patient pathways were introduced. However, staff quickly adapted to the changes, and key performance indicators (KPI's) soon returned to their previous levels, if not improved.

	Average over 3 months prior to RAAC	Average over RAAC Period	Sep-23
% of all stroke patients to received thrombolysis	15.8%	22.2%	11.8%
Door to needle thrombolysis - 45 mins	22.2%	18.8%	0.0%
CT Scans within 1 hour	71.9%	73.6%	47.1%
Admitted to Stroke Unit within 4 hours of arrival to hospital	56.1%	31.1%	20.0%
Stroke consultant review within 24hrs	100.0%	95.8%	94.1%
Formal Swallow screen assessment <=72 hrs	82.4%	82.6%	71.4%

# Therapies

Compliance rates for stroke pathway therapies dropped over a 4-month period during RAAC. Measuring therapies on a rolling 3-month basis made it difficult to observe the impact of a single month or an issue across the period.

	Average over 3 months Prior to RAAC	Average over RAAC Period
Compliance with patients receiving the required minutes for Occupational Therapy	113.20%	65.90%
Compliance with patients receiving the required minutes for Physiotherapy	112.20%	94%
Compliance with patients receiving the required minutes for Speech and Language Therapy	24.30%	21.70%

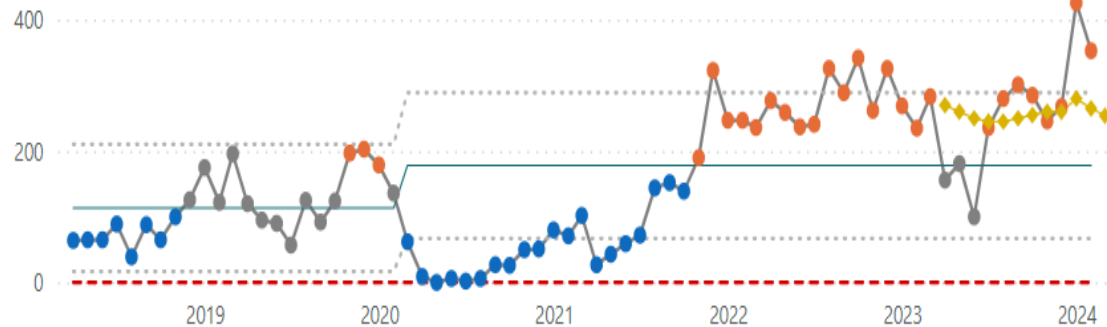
# Emergency Department (ED)



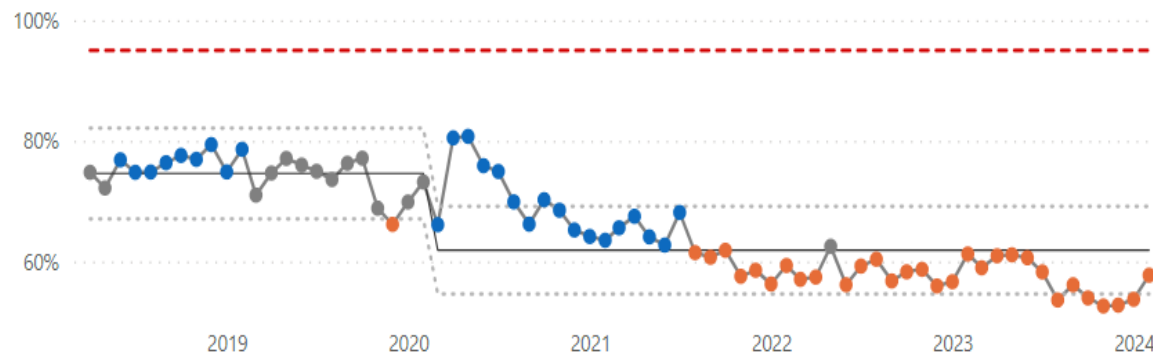
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## Ambulance handovers taking over 1 hour



## Patients waiting less than 4 hours in A&E



Pre RAAC there had been a real positive change in the system. There was reduction in ambulance handover delays over an hour. The 4hs target for patients waits in Emergency Department was still problematic.

Overall performance has deteriorated over this time period, however in stating this fact WGH has been able to hold its own without really putting any further pressure on other sites (barring pathway patients).

This in part been the result of better collaborative work in the Pembrokeshire system as a whole.

Local Authority – Operation Nightingale was launched pre RAAC.

Pembrokeshire County Council delivered a variety of measures to help increase the flow of patients out of hospital including:

The short-term redeployment of staff into community support roles.

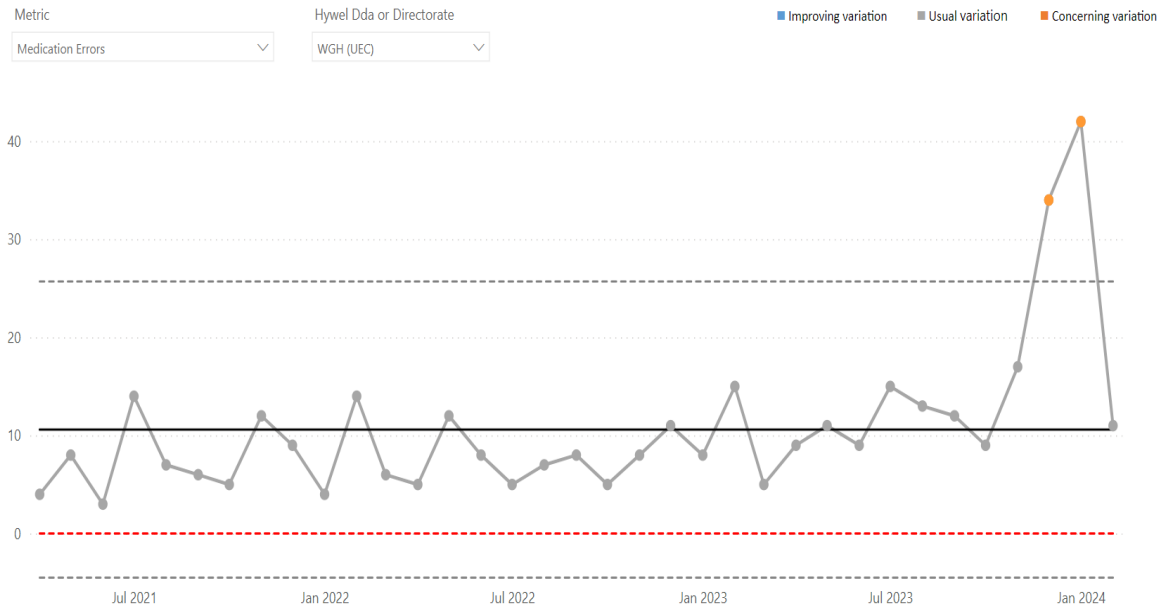
Additional social work capacity.

The redeployment of existing social care capacity into the hospital teams to prioritise patient care assessment and care package allocation.

This also included the engagement of community groups and volunteers to allow people to safely leave hospital and return home.

# Quality and Safety Metrics

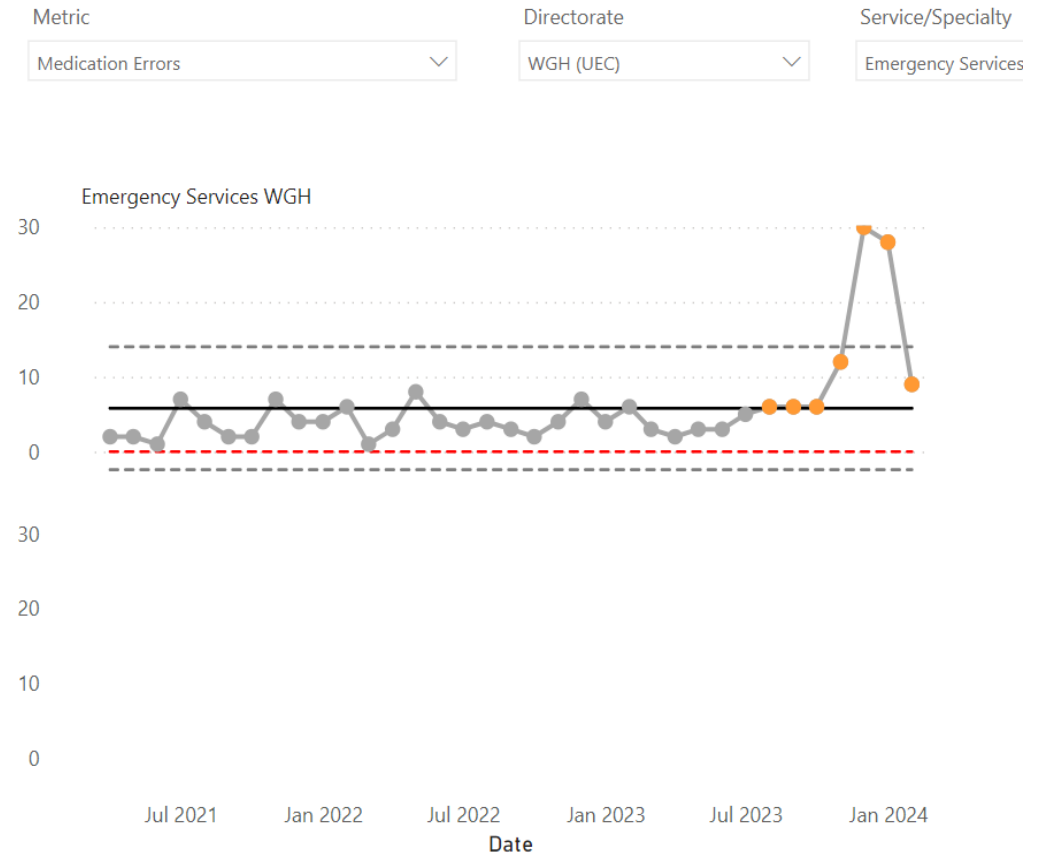
## Medication Errors – In-Patient Wards



This matrix demonstrates a substantial spike in medication errors at WGH. The main department that has recorded such incidences is in the Emergency Department.

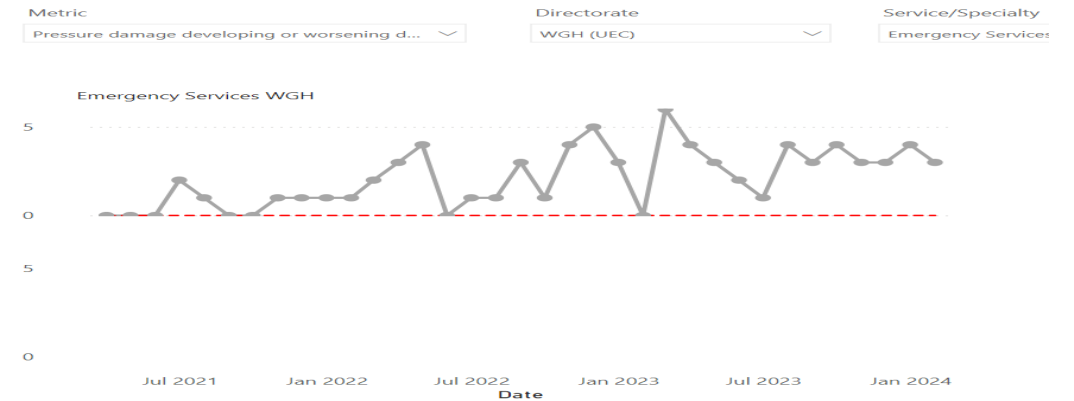
There are two main drivers that may have triggered such a spike, **1**. Due to an increased number of medical patients waiting for in-patient beds (30-35 on average) and or **2** – the cessation of “blocked booking of agency nurses”.

## Medication Errors – WGH (Emergency Department)

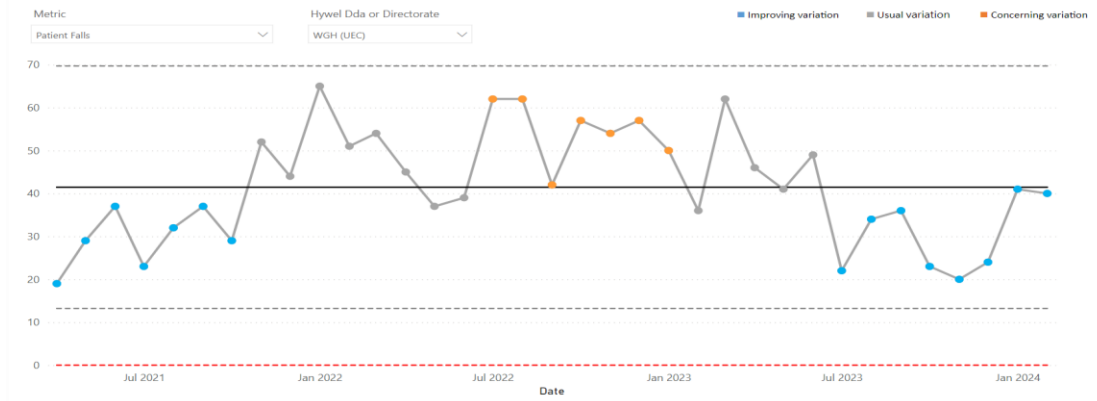




## Pressure damage occurring or worsening during care - ED



## Falls -In-Patient Wards

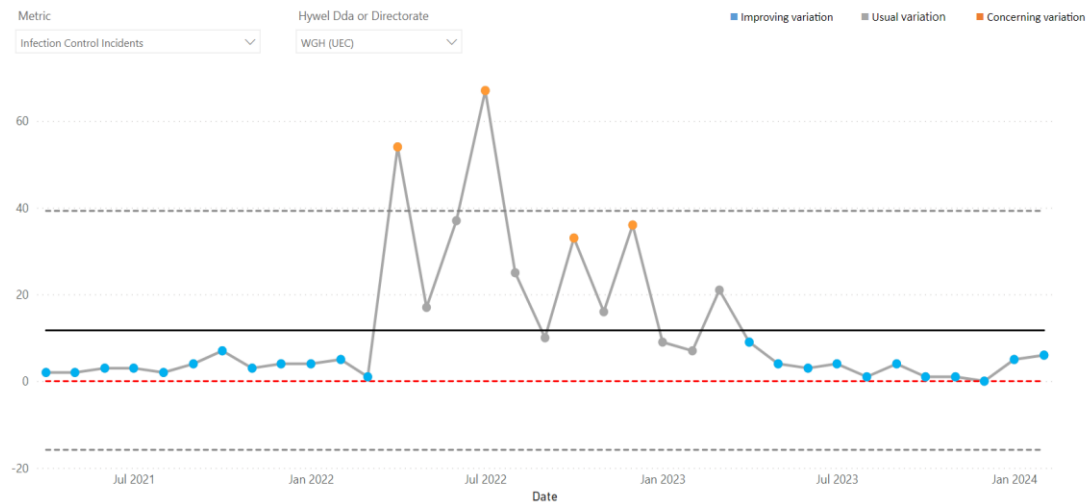


There has been a downward trend in two quality and safety metrics, falls in-patient wards and pressure damage in ED.

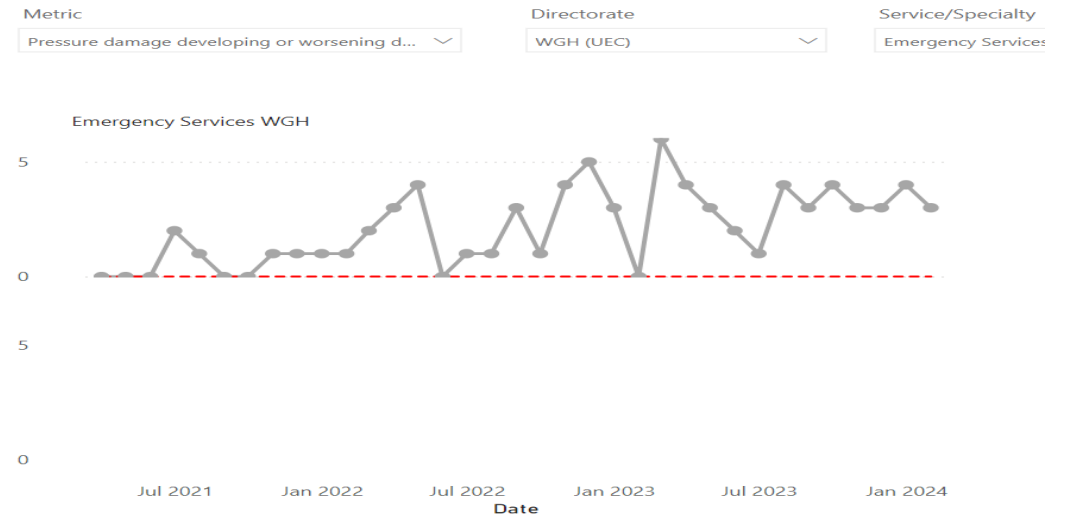
- During scrutiny it was ascertained that the falls increase was due to patient group ( 2 patients having numerous falls). There was a positive note, when wards introduced robust laying and standing blood pressure monitoring, in patients fall incidents reduced. On the balance of probability the RAAC issue had not affected this metric.
- The increase of pressure damage noted in ED maybe two fold. 1- due to an increased number of medical patients waiting for in-patient beds (30-35 on average), ED environment is not designed to hold so many patients waiting for beds for the number of hours we have seen in WGH. Also noted the acuity of the patients being admitted has also increased. On balance of probability ED has absorbed the pressure from the reduction of acute medical beds due to RAAC.

For assurance and mitigation, the Quality Improvement Team, Practice and Professional Team and the Tissue Viability team have all been into ED to help and support the patients and staff.

## Infection Control Incidents – WGH (UEC)



## Infection Control Incidents – WGH (Emergency Services)



Having reviewed the data with the IPC team, the infections for WGH since the commencement of the RAAC work I cannot see that there has been a significant increase to indicate that the effects of this work and with patients being in closer proximity has impacted on their infection status. We have managed to sustain improvement in reducing our C.diff rates in WGH during this time, which further confirms that the measures that have been instigated from the onset of the RAAC work have been successful in minimising the risk of transmission. There has been a slight increase in seasonal respiratory cases that have come into ED but no evidence of transmission.

# Pembrokeshire System (includes Pembrokeshire County and Withybush Hospital)







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## Headline performance target improvement reduced 4-hour ambulance handover delays at WGH (Dec 22=121, Dec 23=58).

### Some of the other key improvements made in 2023 during RAAC

	Reduced sickness levels for nurses and midwives (12month rolling period)	Dec 22 7.4%	Dec 23 6.3%
	Reduction in C.difficile cases (year to date total)	Dec 22 32	Dec 23 22
	Reduced the average number of days incidents are open	Dec 22 363	Dec 23 243
	Reduced the average number of days complaints are open	Dec 22 378	Dec 23 202
	Ceased the use of off contract (high cost) agency nurses	Dec 22 168 shifts	Dec 23 0

### Some of the key actions achieved in 2023 during RAAC

- Successful management of RAAC incident across the system.
- Orthogeriatric speciality doctor commenced post in Withybush.
- New governance post created to support timely and effective investigation of Duty of Candour, incidents and complaints. Also includes identification and sharing of learning.
- Support provided from the Workforce Stabilisation Team to reduce the number of nursing vacancies at WGH (Dec 22=89, Dec 23=50).



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