Blackpool Teaching Hospitals
NHS Foundation Trust

Improving the detection and management of Delirium

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Introduction

Delirium is a common clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which has an acute onset and fluctuating course. Early recognition of Delirium is essential for initiating management and reducing the risk of complications including a longer stay in hospital, an increased incidence of dementia, and an increase in hospital-acquired complications. People with delirium have a threefold mortality increase, highlighting the need for early recognition[2].

In Blackpool, during our most recent Delirium audit, we identified 25 patients per month admitted to Acute Medical Unit or Frailty Assessment Area with Delirium as their primary diagnosis. However, it is widely recognised that Delirium is under-reported[3], with 50% of cases being undetected in hospitalised patients. This fits with our data on screening, which shows that 65 people per month screen positive for the condition via the mandatory 4AT done at time of clerking, but this is often not acted on. This highlights the need for the project at Blackpool

Aim

To reduce the time to diagnosis of delirium by 50% from baseline by July 2023

Initial Assessment

Baseline data was collected over seven weeks which showed a median time to diagnosis of 25.9 hours. This was the time between triage in the Emergency Department (ED) and coded diagnosis in the notes.

We did a baseline audit of current management with the results (Figure 1) showing sub-standard practice across most domains and highlighted the knowledge gap within the trust between best practice and reality.

Fig 1: Results from baseline delirium audit (September 2022)

No.	Standard	N 2022	Compliance 2022
1.	*All patients should receive a comprehensive assessment for delirium as per the trust policy*	35	0%
2.	*All patients should have appropriate care as defined by the trust policy*	35	0%
All patients should have the following investigations		**N 2022**	**Compliance 2022**
3.	*Neurological Examination*	35	41%
4.	*4AT*	35	35%
5.	*Blood tests*	35	100%
6.	*ECG*	35	82%
7.	*MSU*	35	59%
8.	*Chest X-Ray*	35	82%
9.	*Rectal Examination*	35	9%
10.	*Collateral History*	35	62%
All patients should have the following standards of care provided.		**N 2022**	**Compliance 2022**
11.	*Delirium documented in the notes*	35	41%
12.	*Medication review performed*	35	35%
13.	*Minimal bed moves (<2)*	35	9%
14.	*A visit from the next of kin*	35	68%
15.	*A capacity assessment performed*	35	44%

Change Ideas

Our change ideas were linked to our original driver diagram. We also did a stakeholder analysis (Figure 2) to identify the key individuals that might benefit from educational interventions. Following limited improvement in January we focused our attention to the triage process in ED for patients with confusion. We did a process map of the triage process in ED to explore this in more detail. (Figure 3)

Change Ideas			
#	**PDSA Cycles**	**Improvement**	**Sustainable**
1	Delirium awareness posters		
2	ED Team Teaching		
3	Focused ED Teaching to clinicians		
4	Frailty champion in ED		
5	Direct stakeholder engagement		
6	SQuiD Tool at Triage		
7	Dementia Awareness morning		
8	AMU Team teaching		
	Other PDSAs not attempted	**Reason for delay**	
1	Standardised documentation	Effected by development of EPR	
2	Delirium Stickers	Resource limitations	
3	Clinical decision aid on NEXUS	Still in development at time of presentation	

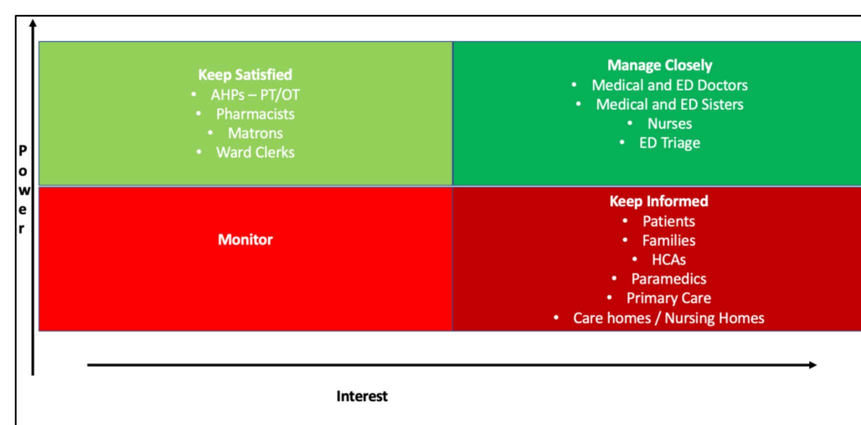


Fig 2: Stakeholder engagement map

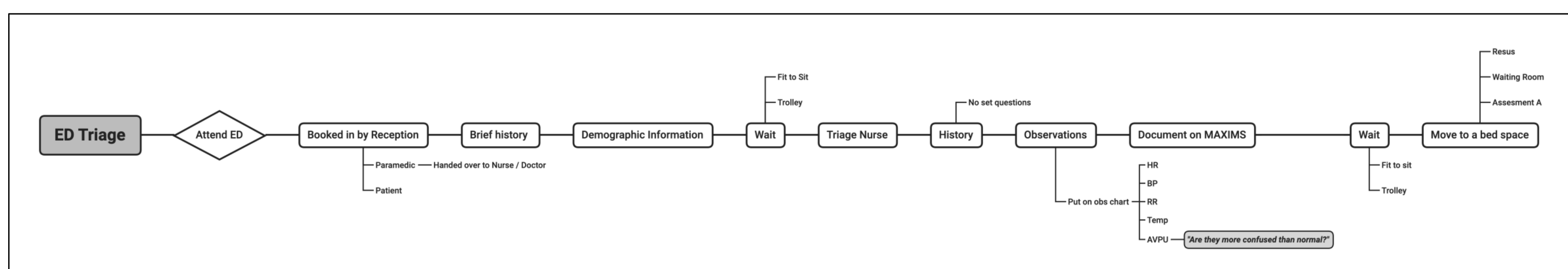
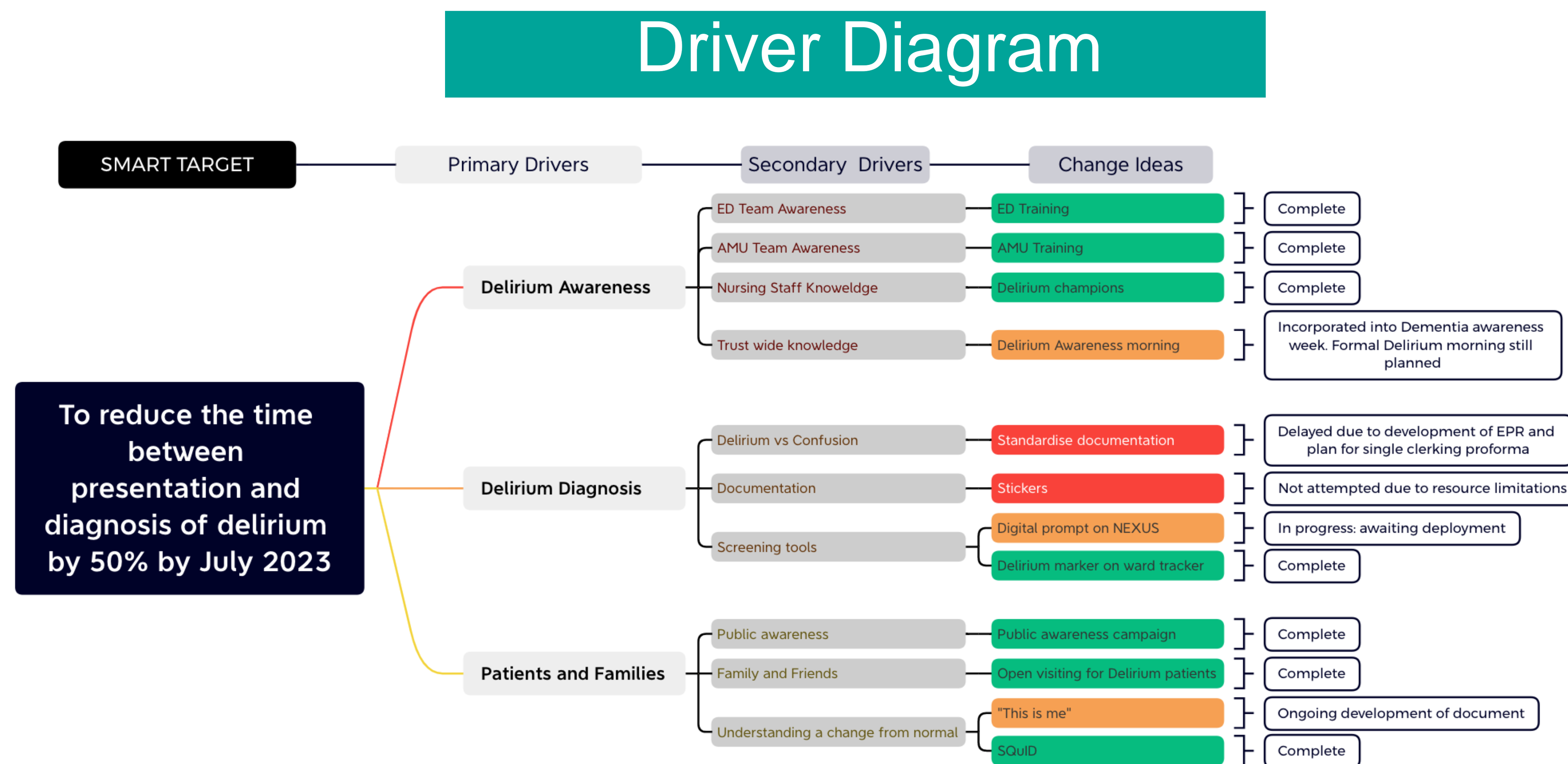
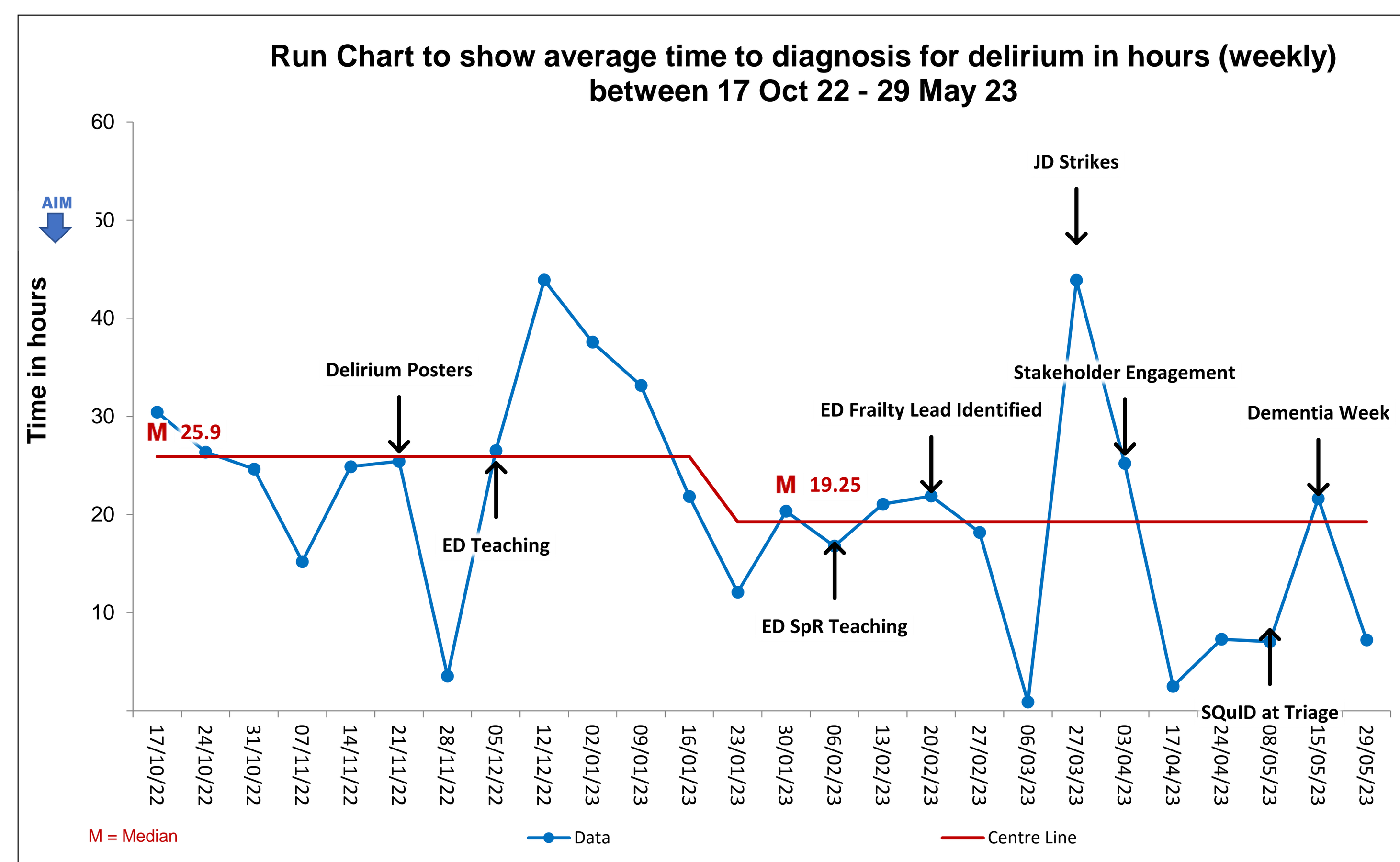


Fig 3: Process map for confusion assessment at ED triage

Driver Diagram



Results



- We reduced our median time to diagnosis of delirium from 25.9 hours to 19.25 hours. A reduction of 25%. This was an improvement but below the target set therefore more improvement work is needed.
- We used our stakeholder map to highlighted targeted education sessions to the most significant teams that would benefit from awareness around delirium.
- Following a significant spike in time to diagnosis associated with industrial action. We focused on engaging stakeholders, such as nurses and consultants, that would still be able to focus on diagnosis despite the effects of industrial action. This allowed us to not return to the previous baseline and sustain improvement.

Lessons Learned

- We needed to engage a wide range of stakeholders earlier on. The focus in the early PDSA cycles was on the medical teams, and it was engagement with other stakeholders that in the end proved crucial for sustainability.
- Our process mapping needed to go into more detail, to identify the key points for intervention. We thought too high level at the initial stages of the project, and we needed to focus on the practicalities of presentation to ED and the triage process.
- We did not create a team with a broad range of skill sets and clear goals early on. This led to the team not working as effectively together as it could have done later in the project. We didn't allocate enough team time together and this made team work hard.

Sustainability & Spread

- We plan to hand over the project to the new SpR staring on the Frailty Assessment Area in August to continue the Delirium improvement journey.
- We plan to link in with the ED Team and the national Royal College of Emergency Medicine QI project (QIP) around identifying delirium in ED[4]. This is part of a national QIP on improving care of older persons in ED which directly relates to this improvement work.
- We did a sustainability analysis (Figure 4) of the project which showed engagement from clinical leaders and senior leaders was the biggest risk to sustainability. This will help to focus stakeholder engagement going forward.

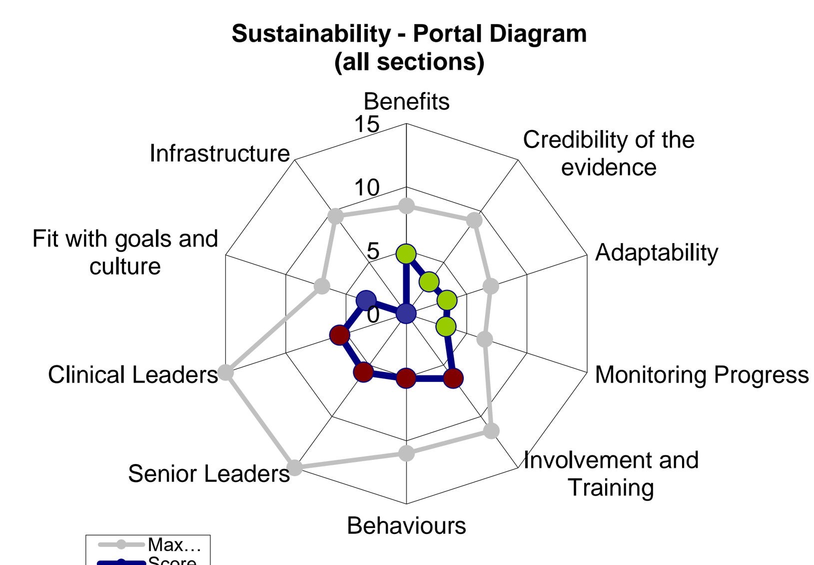


Fig 4: Sustainability risk assessment for Delirium QIP

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References
1. Wilson JE, Mart MF, Cunningham C, Shehabi Y, Girard TD, MacLullich AM, Slooter AJ, Ely E. Delirium. Nature Reviews Disease Primers. 2020 Nov 12;6(1):1-26.
2. Atul Anand and others, Positive scores on the 4AT delirium assessment tool at hospital admission are linked to mortality, length of stay and home time: two-centre study of 82,770 emergency admissions, *Age and Ageing*, Volume 51, Issue 3, March 2022, afac051,
3. Delirium is prevalent in older hospital inpatients and associated with adverse outcomes: results of a prospective multi-centre study on World Delirium Awareness Day." *BMC medicine* 17 (2019): 1-11.
4. Royal College of Emergency Medicine, Care of Older People in the Emergency Department: National Quality Improvement Project. RCEM 2023
5. NICE Guideline CG103. May 2019. Delirium diagnosis, prevention and management.
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