Gloucestershire Safety and Quality Improvement Academy 2024

Gloucestershire Hospitals NHS
NHS Foundation Trust

Safety for patients with Arterial Lines in situ in the Department of Critical Care

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BACKGROUND

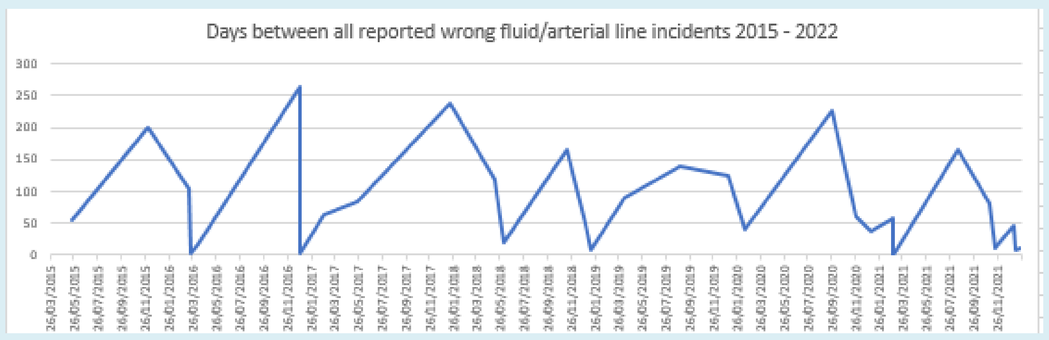
Arterial Lines are an invasive device used for patients requiring continuous Cardiovascular monitoring in the Department of Critical Care (DCC).
Through personal involvement in an adverse incident/ clinical scenario & review of Datix incidents , it was recognised that there was no standardised Trust document to record insertion and on going care of Arterial lines for patients in DCC.
Clinician records to detail line insertion were rarely observed & routine daily Nursing documentation of the patient's limb after insertion was not standard practice for DCC Nurses

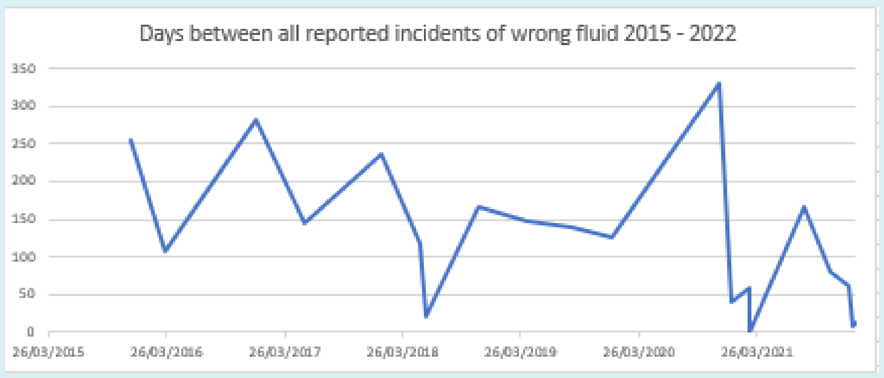
- National Patient Safety Alert in 2008 issued national guidance on the safe storage & administration of Flush Fluids in Arterial giving sets
- No national guidance followed on patient safety relating to insertion of Arterial lines & on going care
- Benchmarked against other DCC Nationally

Pilot Study 2019: DCC Nurse Survey
34% would document daily without highlighting any particular problem
56% would only document if there was a problem with the line, site or patient limb
80% felt more Education & Training was needed
100% stated Specific Arterial Care plan for insertion & daily care/ observation documentation was needed

AIM

- Create a multi disciplinary, trust wide document that encompasses all aspects of clinical care relating to Arterial insertion, on going nursing care/observations & line removal.
- 100% Compliance with Document Completion after 6 months
- Reduce the number of Datix/ adverse incidents relating to Arterial Lines in all departments within the Trust over a 12 month period after implementation.





Aim	Primary Drivers	Secondary Drivers	Change Ideas
Improve Safety for Patients with an Arterial Line & reduce related adverse Datix incidents	Medical & Nursing Staff Awareness of Safety Risk	Education about the problem & why change is necessary. Link with Education teams in 3 clinical areas.	Survey key Stakeholders: Anaesthetists, Theatre ODP & Nurses, Recovery Staff, ED Drs & Nurses, DCC Drs & Nurses
			Education & Training: Enlist Medical Support to target education, Drs who insert lines (DCC Dr)
			Involve Clinical Nurse Education team in DCC to assist with change
		Target risk areas: Theatres, DCC & ED	Attend New Starter Study days to communicate the change
			Band 5 & 6 Development Days to communicate change & Educate on need for change
			Meet with Matron for Theatres & ED to discuss Education opportunities
		Enlist medical trainee to Communicate Change to 3 areas	Dr Training: Link with Medical Help to Educate
			Drs Contacts (E mail) to aid communication
			'Message of the Month' In DCC to educate about Datix & safety risk of A Lines
	Lack of Specific Documentation for indwelling Arterial Lines	Create Trust wide Document to ensure procedures are followed	Data Search: other trusts' policies & Procedures
			Benchmark with South West Critical Care Network
			Survey Staff: Documents/ policies from other trusts
		Compliance with Documentation	Datix Investigation: What harm/Why did harm result?
			What procedural processes are lacking?
			What changes need to be made?
			Documentation Group in GRHFT: Templates and advice
	Communication	Staff Understanding of Safety Risk DCC, theatres & ED	E mail Distribution to staff of Change
			Liaise with Trainers/Education teams in all areas to communicate risk
			Clinical Governance Leads
		Improve Communication System	Change Handover process: Ensure A line Insertion procedure & on going condition of limb hand over to staff
			Eventual move to EPR
			Staff Awareness
		Documentation Changes	DCC Obs Charts: Space to Document Vascular Obs
			Draft Copy of Document for PDSA Review in 4 Months (March start)
	Standardise Trust Safety Procedure across stakeholder teams	Develop Robust Checking Procedure	Safety Risks Highlighted: Fluid used. Procedures followed
			Space for signing in Safety Document
		Education & Training	Creation of Arterial Teaching in DCC Nursing Standard Days
			QR codes for Arterial Set up in ED, DCC & Theatres
			Link with ED & maternity Teams

PDSA Cycle 1
2018: Involved in adverse incident relating to DCC Patient with in situ Arterial line & limb ischaemia
No standard process for Documentation of insertion or observations of associated limb
Enrolled in Silver Qi to improve Safety by observation recording, creating & standardising documentation
Pilot study Nov 2019 asking DCC Nursing staff their process for observation and how to document. Change ideas.

PDSA Cycle 2
March 2020 COVID pandemic halted progress. 2021 personal ill health halted further process change.
2022 Linked with Theatre QI Lead to reduce adverse Wrong Fluid Datix incidents in Theatres, DCC & ED
Collaborative work started to create a trust wide insertion, checking and on-going care document

PDSA Cycle 3
2023: Document ratified by all CG Process/stakeholders
Training resources developed. Checking process Video for Theatres & DCC .
Document launched Jan 2024 in Theatres & DCC
March 2024: Review of Document with stakeholders. Amend format
Audit compliance with the document across Theatres & DCC

Next Steps
- Review Paper Insertion Document Compliance Monthly from Jan 2024 Launch (Daily Audit)
- Widen Document use to Emergency & Maternity Departments
- Creation of Trust wide EPR Insertion/ On going care Document
- e-learning Package
- Present improvement work to South West Critical Care Network