Hanging children out to dry

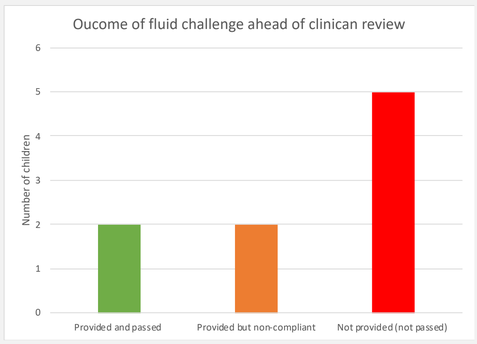
Managing diarrhoea and vomiting in the Children's Emergency Department

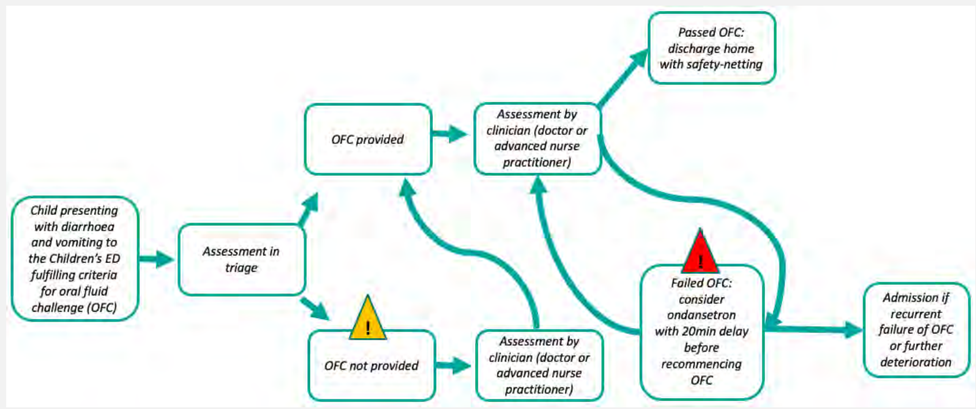
Dr Rebecca Oram, Chelsea and Westminster Hospital
Dr Jane Runnacles, QIC learn

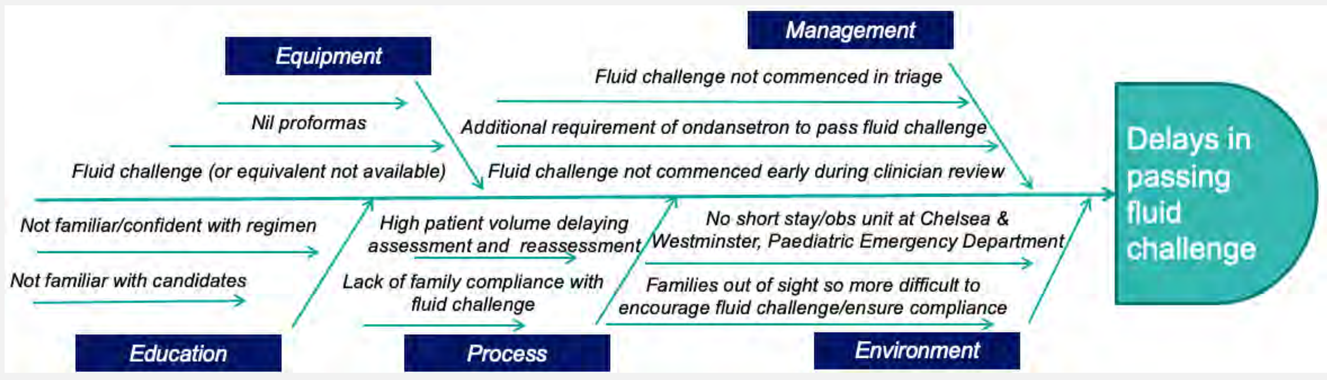
PROBLEM

Fluid challenge is pivotal in the assessment and management of children coming to our Emergency Department with diarrhoea and vomiting. Delays increase dehydration and prolong their hospital visit; this frustrates families and increases clinical workload.

DIAGNOSTICS









AIM *To reduce the number of failed/missed fluid challenges for children presenting to the Emergency Department with diarrhoea and vomiting by the end of August 2023.*

MEASUREMENT The number of failed or missed fluid challenges between triage and clinician review .

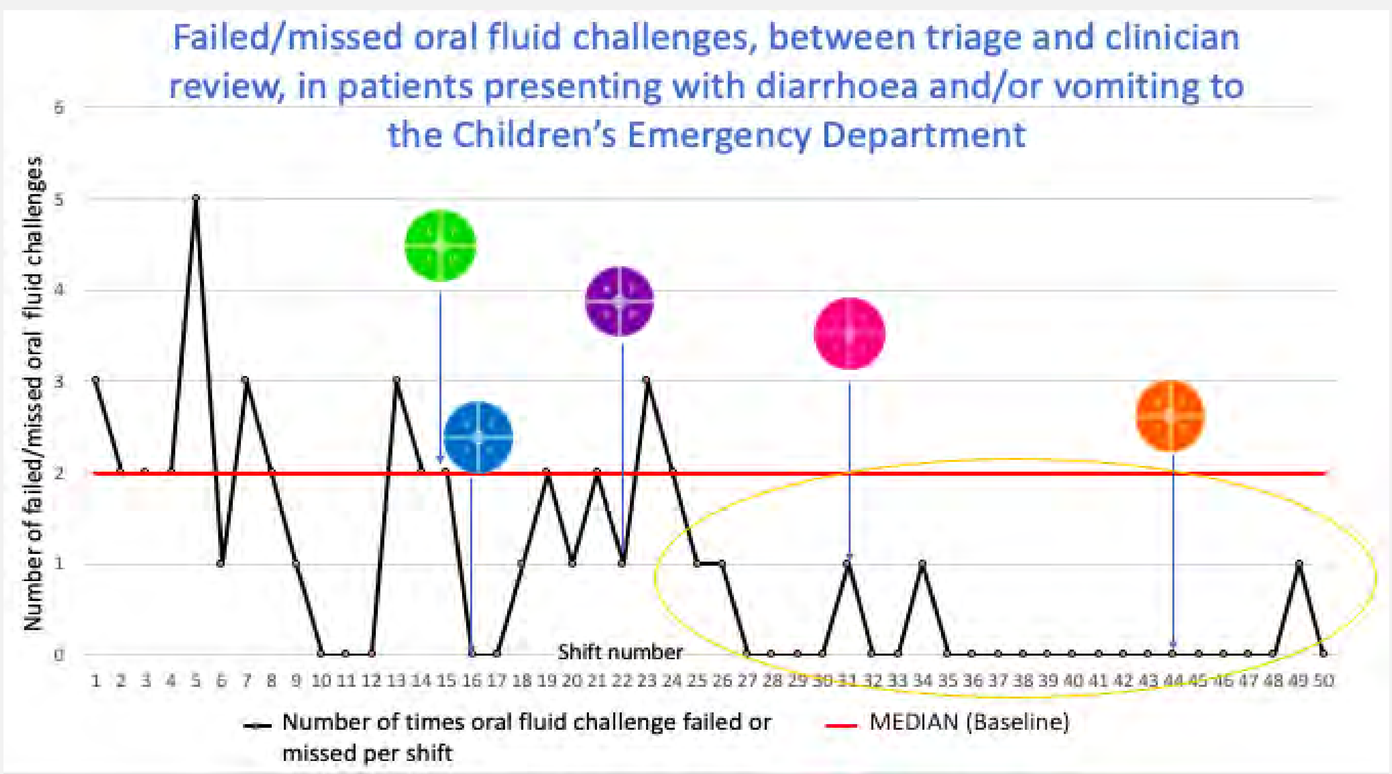
CHANGE IDEAS

- **Engagement:** staff, families, key stakeholders
- **Proforma**
- **Education**: guidelines, use of proforma, teaching, journal club
- **Equipment:** syringe, fluid challenge box

PDSA cycles

PDSA Test #	PLAN	DO	STUDY	ACT
1	Discussion with families	2 opportunities missed on shift; families felt: "time wasted"; "need further support"	Prompt starting of fluid challenge and information/support in administering this would provide a better patient experience - especially during nightshifts	Remind MDT to promptly start fluid challenge Patient fluid challenge information leaflet/recording sheet
2.	Discussion with staff	Opportunities missed: 0, 0 and 1 during 3 consecutive nights. Agree project worthwhile but disagreed on when best to start	During triage it is difficult to (1) rapidly assess how unwell and clinically dehydrated a child is– safest to start fluid challenge (2) provide lengthy explanation to families re: rationale for starting challenge and how to administer	Engage MDT and educate re: use of fluid challenge Consider high clinical pressures of triage nurses with any intervention Patient fluid challenge information leaflet/recording sheet
3	Proforma	Opportunities missed following introduction of proforma: 1, 3, 2, 1, 1, 0, 0, 0, 0	Teething issues in use of proforma as not all staff familiar with it Pens potential infection control issue	Adopt proforma and encourage it's use – recruit nurse in charge to help Box of pens in triage
4	Teaching	Opportunities missed following teaching: 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0 Doctors weren't aware of proforma or that apple juice is equally effective	Knowledge of proforma can help doctors be proactive and support its distribution. Understanding 50% apple juice equally efficacious as dioralyte resolves difficulties in sourcing oral rehydration solution	Offer families a choice of oral rehydration solution vs 50% apple juice (include this in proforma detail). Store proforma in doctors office as well as triage
5	Mass email	Opportunities missed after email to all Paediatric Emergency Staff (included newly rotated junior doctors): 0, 0, 0, 0, 0, 1, 0.	Even on the occasion where the form was missed in triage, the clinician introduced the proforma at initial review and found it useful (quicker review patient once started)	MDT in Paediatric Emergency Dept (including rotated doctors) now aware of fluid challenge proforma and are using readily.

RUN CHART



CONCLUSIONS

- Use of fluid challenge proformas are favoured by both staff and families but should contain information on indications and instructions for use.
- Implementation of such a hybrid fluid challenge proforma/leaflet, subsequent teaching and written reminders regarding use led to a sustained improvement in children passing fluid challenge ahead of clinician review.

REFLECTIONS

- Considered planning of QI projects using the Model for Improvement improves success.
- Here, it facilitated flexibility within the project as fixed beliefs were abandoned, multiple small scale changes tested and their relative impact on the problem evaluated.
- Choosing a simple measurement and a rapid method for data collection was also key – especially in a busy Emergency Department.
- Finally, engaging the MDT is also beneficial in QI; they can provide new ideas, help collect data and create self-sustainability in the project. The 3minute QI pitch is key here.

Acknowledgements:
- Jane Runnacles
- Nicola Davey
- Jaspreet Sokhi