The Princess Alexandra Hospital NHS Trust

Audit of an in Situ Digital Clinical Innovation

Evaluation of Paediatric department uptake of a novel digital solution to routine and emergency clinical communications.

Dr. Maximilian Carstensen

Background

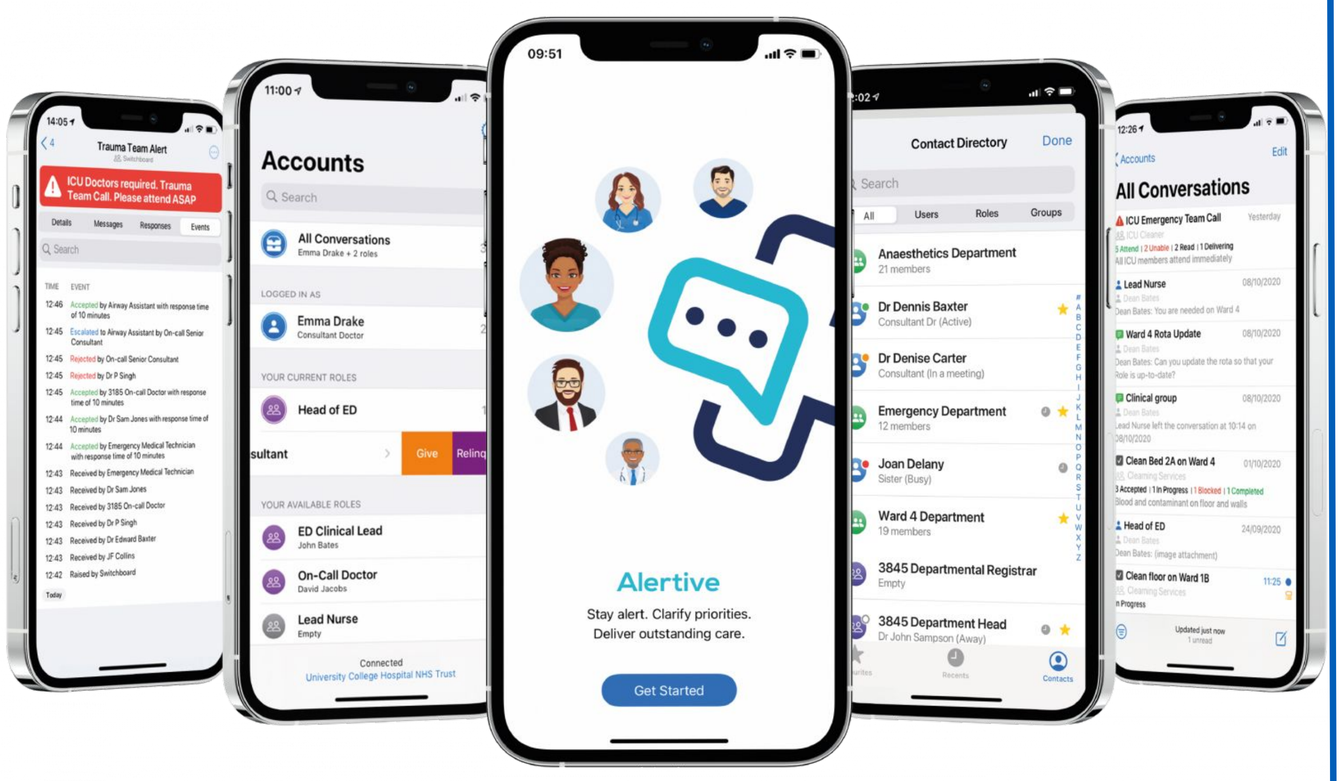
In November 2021, Princess Alexandra Hospital Trust (PAHT) adopted a novel approach to routine clinical communication: Alertive. In June 2023, following successful trial periods, Alertive became the default mechanism of routine *and* emergency clinical communications (replacing bleeps) for all departments at PAHT. This audit evaluates one month of data for the paediatric department to understand the benefits and opportunities for improvement that come with this transition in practice.

Acknowledgements

1. **Miss Helen Pardoe:** for endorsing the project, proofreading my drafts, and leading by example with digital innovation in healthcare at PAHT.
2. **Dr Shubhangi Fraser-Govil:** for encouraging me to pursue the project, and accessing the key data from Alertive - many thanks.

Objectives

1. To identify and mitigate the potential for missed clinical communications by assessing role adoption data throughout the considered timeframe.
2. To understand if factors like subspecialty, grade or shift-type affect role adoption behaviours within the paediatric team at PAHT.
3. To leverage any insight for delivery of standard operating procedures regarding Alertive usage, and to make refinement proposals to Alertive.



Methods

- ➔ Alertive provided backdoor data of all ‘events’ associated with the 13 roles that encompass the paediatric department.
- ➔ Roles spanned three clinical areas (Paeds ED, Neonatal, and Paediatric Ward), ranging from FY1 to Consultant grade doctors.
- ➔ ‘Events’ referred to the acquisition, relinquishment or handover of a given role.
- ➔ Event log was cross compared to an anonymous rota for context accuracy so that absence, rota gaps and shift patterns are accounted for.
- ➔ Two determinant metrics calculated for each role:
  1. ***Average Occupancy*** **- mean attainment of expected occupancy, expressed as a percentage.**
  2. ***Frequency*** **- the number of days that observed occupancy was within 10% of expected occupancy.**
- ➔ The two determinant scores were then multiplied to make a single ***‘Alertive Role Occupancy Score’ (AROS)***, by which roles were finally ranked and assessed.

Discussion & Conclusion

A perfect AROS is 2800 (where av. occupancy = 100% for the 28 observed days). The postnatal SHO exceeded this score, indicating the shift routinely overruns and a clear commitment to consistent, reliable communication. The AROS of the neonatal SHO on call was within 13% of the perfect score, which is even more impressive in view of the fact that this is a role with 24 hour expected occupancy.

Conversely, the ward consultant and SpR roles are underutilised and, given they form part of the emergency alert network, pose a possible risk to patient outcomes. Recommendations to the department and the developers were made to address these opportunities for improvement.

In conclusion, Alertive has modernised our clinical communications and has generally entered workflows intuitively. However, as this audit shows, it’s critical that the efficacy and configuration of these solutions are routinely scrutinised and calibrated according to the feedback that is observed.

Results

Role	Average Occupancy (%)	Frequency (days)	Alertive Role Occupancy Score
Neonatal FY1	87	1	87
Neonatal SHO on call	97	25	2425
Neonatal SHO postnatal	122	24	2928
Neonatal SpR	86	18	1548
Neonatal Consultant	44	10	440
Paediatric SHO on call	73	10	730
Paediatric SpR on call	67	5	335
Paediatric SpR ED	40	2	80
Consulant on call	19	3	57
Ward Doctor	93	20	1960
Ward SHO on call	39	3	117
Ward SpR	23	0	0
Ward Consultant	0	0	0