Restoring Structured Communication in Digital Handovers

Improving SBAR Quality on a Clinical Messaging Platform

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Scan for Feedback

Background

Clear, structured communication during clinical handover is essential for patient safety. Communication failure is a well-recognised, preventable contributor to adverse events in healthcare.

Many hospitals now use secure messaging platforms (e.g. **Alertive**) alongside, or instead of, the traditional bleep/pager system to route clinical tasks. This has led to a deterioration in SBAR quality, directly impacting patient safety.

Bleep / Pager

- Reliable signal
- One task at a time
- Real-time SBAR clarification possible
- Time-inefficient (find phone, call, write down)
- Scans/results not available

Alertive (App)

- Messages prioritised in real time
- Information stored for later review
- Images/results can be attached
- Requires sender to consciously apply SBAR
- Wifi can be unreliable; variable response rate

The Problem

1 Safety

Clear and structured information is essential for patient safety.

2 Communication

Failures in communication are a well-recognised contributor to adverse effects in healthcare.

3 Delays

Incomplete handovers or missing patient information result in delays to patient care.

4 Feedback

Anecdotal evidence from colleagues suggested that handover quality was a limitation of Alertive.

A Real Handover

WITHOUT SBAR

"VBG shows Hb 70.
Can you kindly review A.S.? A bay.
Thanks."

No name/MRN, no severity, no clear action requested.

WITH SBAR

S: A. Smith, Bay A. Hb fallen 95→70 post-transfusion, now hypotensive.
B: PR bleed, on apixaban, myeloma.
A: BP 95/72, NEWS rising, no visible bleeding.
R: Please review urgently – consider repeat transfusion.

Aim

To improve the quality and structure of clinical handovers sent via Alertive by embedding the SBAR framework, using a closed-loop quality improvement (PDSA) methodology.

Methods

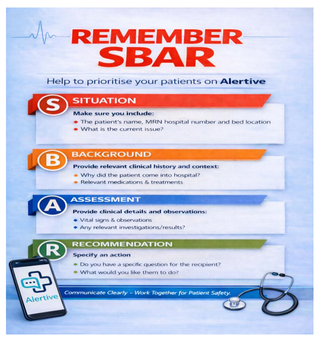
1. Alertive messages sent to the 'Winter OOH Medical On-Call' role were retrospectively collected over a 2-week baseline period (Cycle 1).
2. Two resident doctors independently screened each handover against the SBAR framework and assigned a structured score.
3. 3 targeted SBAR interventions were delivered
4. Alertive messages were re-collected and re-scored over a further 2-week period post-intervention (Cycle 2).

SBAR Scoring Framework (Total /4)

S — Situation	B — Background	A — Assessment	R — Recommendation
Name [0.25] MRN [0.25] Location/Bed [0.25] What is the problem? [0.25]	Presenting complaint? Relevant PMH (e.g. AF)? Recent procedures/surgery?	NEWS/observations (HR, BP, Temp, BMs)? Imaging? Catheters/drains?	What would you like done? Review in person? Prescribe medication? Specific question asked?

Interventions

Three complementary interventions were designed to address both knowledge gaps and behavioural habits:





- **Ward poster —** displayed in prominent locations as a continuous visual reminder
- **Lanyard cue card —** portable SBAR reference distributed to all staff

Teaching Session: Content & Feedback

A 15-minute ward based structured session was delivered to clinical ward staff, covering:

- Rationale and evidence base for using SBAR in handover communication
- Structure of an ideal SBAR handover, working through each domain (S/B/A/R)
- Worked examples contrasting effective vs ineffective real handovers (including the case opposite)
- Open discussion and distribution of lanyard cue cards

Pre- & Post-Session Feedback

71.4% → 100%	3.71/5 → 4.83 /5	100%
Used SBAR only 'sometimes' (now 100% 'always' post)	Confidence applying SBAR (+30.2%)	Aware of SBAR pre- & post-teaching

Reported barriers to SBAR use included time constraints and lack of confidence – both recognised limitations to structured communication in clinical practice.

Results

143 Cycle 1 128 Cycle 2	+39.5%	1.4% → 6.3%
Total handovers audited	Overall SBAR score (1.72→2.40)	Full SBAR compliance (4/4)
+141%	+54.5%	+26.7%
Background (B) score	Night handovers	Day handovers

Overall SBAR Scores by Domain

	Cycle 1	Cycle 2	Change
Total Handovers	143	128	—
Average SBAR Score (/4)	**1.72**	**2.40**	**+39.5%**
Average S Score	0.60	0.74	+23.3%
Average B Score	0.17	0.41	+141%
Average A Score	0.38	0.52	+36.8%
Average R Score	0.57	0.73	+28.1%
Full SBAR Compliance (4/4)	**1.4%**	**6.3%**	**+350%**

Background Score: Largest Gain (+141%)

Background captures PMH, medications and recent procedures. Omitting it risks inappropriate prescribing or missed anticoagulation/allergy status – this was the most-improved SBAR domain.

Hospital Number: 16.8% → 48.4% (+189%)

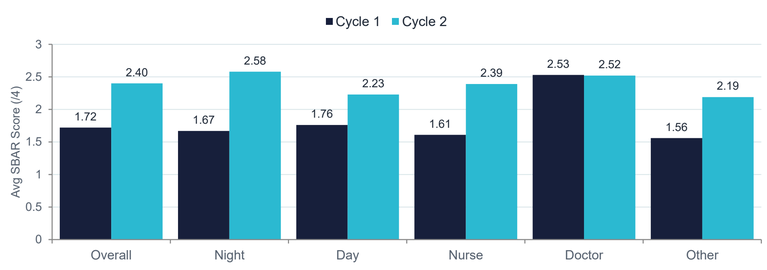
Hospital number was the most frequently missed identifier pre-intervention, yet it is the only truly unique patient identifier – names and locations can be duplicated or change. **12.3% of patient safety incidents are attributable to patient misidentification[1],** making this near-tripling directly safety-critical.

[1] *NHS England & NHS Improvement (2019) The NHS Patient Safety Strategy. england.nhs.uk/patient-safety/the-nhs-patient-safety-strategy*

Results by Shift & Role

	Cycle 1	Cycle 2	Change
Night Handovers	66	62	—
Avg. Night SBAR Score	**1.67**	**2.58**	**+54.5%**
Day Handovers	77	66	—
Avg. Day SBAR Score	**1.76**	**2.23**	**+26.7%**
Nurse Handovers	114	111	—
Avg. Nurse SBAR Score	**1.61**	**2.39**	**+48.4%**
Doctor Handovers	17	13	—
Avg. Doctor SBAR Score	**2.53**	**2.52**	**–0.4%**
Other Handovers	12	4	—
Avg. Other SBAR Score	**1.56**	**2.19**	**+40.4%**

Average SBAR Score: Cycle 1 vs Cycle 2



Limitations

- SBAR scoring is not a fully objective, quantitative measure – analysis relies on subjective judgement, with the potential for observer bias
- This was a small sample size from a single clinical role and single hospital setting
- There was no direct measurement of patient outcomes
- Simplified scoring means a brief entry (e.g. "Bg SOB") can score equivalently to a fully detailed history

PATIENT SAFETY IMPLICATIONS

- **Closing the loop on omissions:** Structured handovers reduce the risk that critical information – vital signs, escalation rationale, key history – is missed before a deteriorating patient is reviewed.
- **Background score – the biggest gain (+141%):** Background carries PMH, medications and recent procedures. Its near-tripling gives receiving clinicians the objective data needed to correctly prioritise sicker patients and avoid inappropriate prescribing.
- **Correct patient identification:** Hospital number documentation rose from 16.8% to 48.4% of handovers (+189%). It is the only truly unique patient identifier, and 12.3% of patient safety incidents are attributable to misidentification (NHS England & NHS Improvement, 2019) – making this gain directly safety-critical.
- **Out-of-hours safety net:** Night handovers improved more (+54.5%, 1.67→2.58) than day handovers (+26.7%, 1.76→2.23), suggesting greater responsiveness to the intervention when fewer senior staff are present on site.
- **System-level impact:** Supports national patient safety priorities around standardised, structured clinical communication and reducing avoidable harm from handover failure.

Conclusion & Recommendations

These low-cost, high-impact interventions significantly improved SBAR handover quality on Alertive. They are sustainable and easily scalable, and could be implemented across other wards and organisations to similar effect.

Digital platforms have improved the accessibility and time-efficiency of communication, but a casualty of this has been reduced communicative structure. Feedback suggests this stems from reliance on user behaviour coupled with time constraints – this project demonstrates that communication quality is vulnerable to deterioration following the introduction of a digital alternative.

Future work:

- Wider rollout across additional wards and organisations
- Analysis of direct patient safety outcomes
- Work underway with Alertive to develop an SBAR template to rollout across the trust

Princess Alexandra Hospital — The Princess Alexandra Hospital Trust

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