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Completeness of SBAR (Situation, Background, Assessment, Recommendation) Documentation in Pre and Post Anesthesia Patients: A Cross-Sectional Study at the Central Surgical Installation of Hospital X

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Abstract. Effective handover communication is essential to continuity of perioperative care because anesthesia services depend on accurate transfer of rapidly changing clinical information. This study described the completeness of Situation, Background, Assessment, Recommendation (SBAR) documentation in pre- and post-anesthesia handovers at Hospital X. A quantitative descriptive cross-sectional design was used. Eighty eligible medical-record documents were reviewed using a 50-item SBAR checklist covering Situation (19 items), Background (16), Assessment (7), and Recommendation (8). Overall completeness was 88.34% in the pre-anesthesia phase and 91.67% in the post-anesthesia phase. In pre-anesthesia documentation, completeness was highest for Situation (90.4%) and lowest for Recommendation (85.7%). In post-anesthesia documentation, Situation was highest (92.7%), while Background was lowest (89.9%). The findings indicate a high level of SBAR completion, but residual gaps remain in clinically meaningful information, particularly background information before anesthesia and continuity-oriented recommendations after anesthesia. Rather than treating SBAR as a documentation form alone, perioperative services can use the findings to prioritize targeted audits, brief refresher training, and electronic mandatory fields or reminders. These measures may strengthen handover reliability and support safer perioperative continuity of care.

Keywords: anesthesia, documentation, handover, patient safety, SBAR

1. INTRODUCTION

Effective communication is a global patient safety priority and a determinant of care quality in hospitals. In anesthesia services, communication failures during handover are consistently identified as a leading cause of preventable adverse events, delayed treatment, and information loss between perioperative team members [1].

The SBAR (Situation, Background, Assessment, Recommendation) framework structures clinical communication so that essential patient information is transferred completely and unambiguously. Beyond its verbal use, SBAR also functions as a documentation standard that anchors accountability across shifts and professions [2], [3]. A 2026 systematic review of intraoperative handover among anesthesia providers reinforced that structured tools such as SBAR reduce omission of critical safety information and strengthen team situational awareness during transitions of anesthesia care [4]. A 2025 scoping review of nursing handover likewise concluded that SBAR consistently improves communication quality, reduces handover-related errors, and builds nurses' confidence across diverse clinical settings [5], while an ICU-based implementation study reported that a point-of-care SBAR checklist nearly halved missed handover items and reduced nursing risk incidents by two-thirds [6].

Despite wide endorsement, incomplete SBAR documentation remains common in practice. Incomplete records have been linked to adverse events and near misses, particularly in high-risk units such as the Central Surgical Installation (CSI) [7]. This concern is echoed by a related audit conducted within the same research group, which examined compliance with the Surgical Safety Checklist (SSC) another structured, WHO derived patient safety documentation tool at a Central Surgical Installation and found substantial non-compliance in specific sign-in,

time-out, and sign-out items, particularly around risk-factor identification and instrument-count verification [8], suggesting that incomplete structured documentation is not confined to SBAR alone but reflects a broader pattern in perioperative safety practice. Recent multicenter evidence from anesthesia and pain management units corroborates this pattern: a 2025 cross-sectional study of 400 postoperative handovers reported checklist-based compliance ranging from about 90% to 95% across SBAR components, with Recommendation and Assessment lagging behind Situation [9]. An earlier audit in a post-anesthesia care unit similarly found the American Society of Anesthesiologists (ASA) grade and follow-up items among the weakest-documented elements before a targeted educational intervention [10]. These findings suggest that the Assessment snf Recommendation gap identified in Indonesian settings mirrors an international pattern worth investigating locally.

A preliminary study at Hospital X, a type-B referral hospital with a high surgical volume, found that several SBAR components, particularly Assessment and Recommendation, were still incompletely documented despite the format having been formally adopted. This gap motivated the present study, which aims to describe the completeness of SBAR documentation in pre- and post-anesthesia patients at the CSI of Hospital X, and to identify which components most need strengthening to support continuity of care and patient safety.

2. METHODS

This study used a descriptive quantitative design with a cross-sectional observational approach. Data were collected through a single-point-in-time review of medical records and SBAR sheets during the pre- and post-anesthesia phases, without intervention, to assess documentation completeness against applicable standards. The study was conducted from March to April 2026 in the pre and post anesthesia sections of the CSI at Hospital X.

The population comprised pre and post anesthesia SBAR documents (September–November 2025 average). Using the Slovin formula, 80 documents were selected via purposive sampling, with inclusion criteria of legible, first review, recent records, and exclusion of local anesthesia and one day surgery (ODS) cases. Instrument and ethics. Completeness was assessed with a 50-item SBAR observation checklist (19 Situation, 16 Background, 7 Assessment, 8 Recommendation items). Ethical approval was granted by Bhakti Kencana University (No. 049/09.KEPK/UBK/IV/2026), consistent with WHO (2011) research standards.

3. RESULTS AND DISCUSSION

Eighty medical records handled by eight anesthesia providers were reviewed. Half of the providers were aged 19–40 years and half 41–60 years; most (75%) were male, and the majority (62.5%) had 11–20 years of service an experience profile broadly consistent with staffing patterns reported in comparable Southeast Asian perioperative units [9].

Across the 50-item instrument, overall SBAR documentation completeness rose from 88.34% in the pre-anesthesia phase to 91.67% in the post-anesthesia phase (Figure 1). Both results fall within the “very good/majority” category, indicating that anesthesia providers at Hospital X have broadly internalized structured handover communication. This upward trend mirrors findings by [11], who argued that complete clinical documentation is most achievable when the clinical picture, intraoperative course, therapy given, and patient response is already consolidated, as is naturally the case once anesthesia is completed. This higher post-anesthesia completeness is also clinically meaningful in light of a companion study from the same research team, which identified operative duration as a significant risk factor for post-spinal-anesthesia complications such as shivering and hemodynamic instability [12], more complete Assessment and Recommendation entries in the post anesthesia phase are precisely the documentation elements that would allow such complications to be flagged and communicated early.

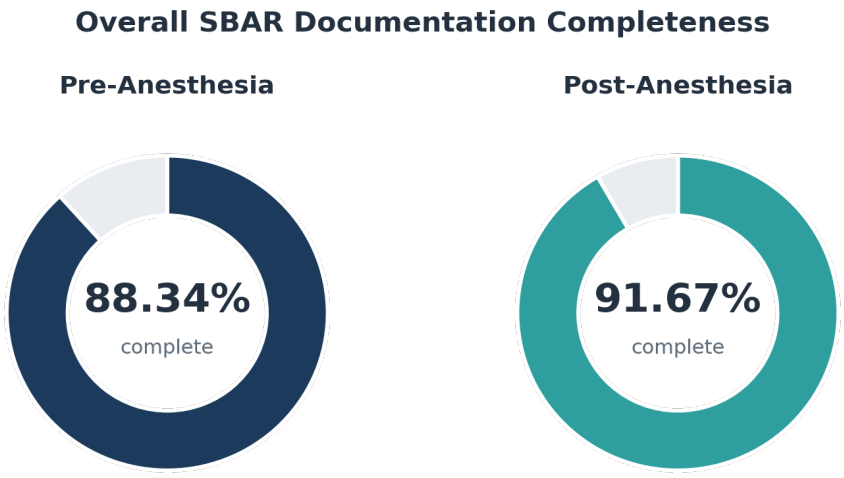


Figure 1. Overall completeness of SBAR documentation, pre and post anesthesia (n = 80 records)

At the component level (Figure 2), Situation was the most completely documented item set in both phases (90.4% pre; 92.7% post), likely because it captures patient identity and baseline condition, data usually recorded at the point of admission and least dependent on later clinical events. Background and Recommendation were comparatively weaker pre-anesthesia (86.8% and 85.7%), plausibly because history taking is time consuming and follow up instructions are often communicated verbally rather than transcribed [13]. Notably, Recommendation showed the largest gain of any component (+6.1 percentage points, from 85.7% to 91.8%), overtaking Assessment to become the second most complete component post-anesthesia a pattern consistent with heightened vigilance during the recovery phase, when explicit follow-up instructions and complication anticipation become clinically urgent [3], [14]. A semi experimental study among perianesthesia nurses similarly found that targeted SBAR training raised handover quality scores from 60.0 to over 92 out of 100, with the largest gains concentrated in the assessment and recommendation domains [15], while a quasi-experimental trial in an internal medicine unit linked structured SBAR use to measurable improvements in staff well-being alongside documentation quality [16].

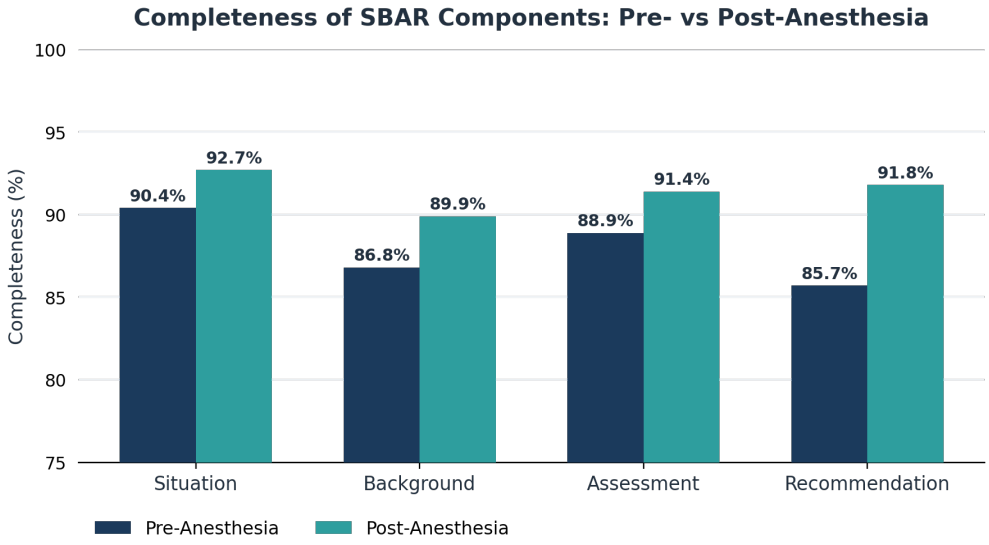


Figure 2. Completeness (%) of each SBAR component, pre and post anesthesia

This distribution is comparable to international audits: a 2024–2025 PACU audit reported baseline SBAR checklist compliance of only 48–89% across items before targeted staff education improved consistency [10], and

a Pakistani cross-sectional survey found that while most staff view SBAR favorably, a meaningful minority still perceive it as inconsistently applied in practice [17]. Together, these parallels suggest that the residual 8–14% incompleteness observed at Hospital X is not an isolated local shortfall but a recurring, addressable pattern across perioperative settings internationally. Comparable Indonesian evidence reinforces this reading: a facility-level analysis of SBAR implementation at a regional hospital similarly reported a majority but incomplete pattern concentrated in the assessment and recommendation items [18], and a large correlational study of 257 nurses found that adherence to each SBAR component was independently associated with better patient-safety outcomes, with the strongest effect for Recommendation (OR = 5.02, p = 0.001) [19]. An emergency department trial that compared SBAR with a modified handover model likewise found that structured tools outperform ad hoc reporting but still leave a measurable minority of encounters incompletely documented, underscoring that the gap identified here reflects a systemic implementation challenge rather than a site specific lapse [20].

These findings carry direct implications for perioperative safety practice. Because Recommendation and Background remain the most vulnerable components pre anesthesia, interventions should specifically target the timeliness of history documentation and the written capture of verbally issued follow-up plans, rather than treating SBAR compliance as a single undifferentiated metric. This is consistent with recommendations from the intraoperative handover systematic review, which emphasizes that structured checklists are most effective when paired with mandatory field prompts and real time reminders rather than free text narrative fields alone [4]. A dedicated preoperative anesthesia hand off project reached the same conclusion, reporting that a standardized SBAR tool measurably reduced missed patient information during transfer from the preoperative unit to the operating room [16], while a head to head comparison of paper versus electronic SBAR handover in a pediatric intensive care unit found that technology alone does not guarantee completeness unless paired with adequate staff training and a low distraction handover environment [21]. A caution worth heeding as Hospital X considers digitizing its own SBAR forms. Structured training itself also appears to have durable, short term effects: a shift-report training program for staff nurses produced significant gains in SBAR-based reporting quality within days of the intervention [22], and a recent narrative review concluded that sustained gains require pairing such training with routine audit and organizational commitment rather than one off workshops [23].

4. CONCLUSIONS

SBAR communication documentation at the Central Surgical Installation of Hospital X falls within the very good category in both the pre-anesthesia (88.34%) and post-anesthesia (91.67%) phases. The Situation component was the strongest performer overall, while Recommendation showed the greatest improvement between phases. Nevertheless, the Background and Recommendation components in the pre-anesthesia phase remain the most in need of strengthening. Sustained improvement will likely depend on combining routine documentation audits, targeted staff training, and progressive adoption of electronic, prompt based SBAR documentation an approach increasingly supported by international perioperative handover research (2020–2026).

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REFERENCES

[1] L. V. Christina and A. P. Susilo, “Penggunaan Metode SBAR untuk Komunikasi Efektif antara Tenaga Kesehatan dalam Konteks Klinis,” *KELUWIH J. Kesehat. dan Kedokt.*, vol. 3, no. 1, pp. 57–63, 2021.

[2] R. A. Shafira and I. Dhamanti, “Studi Literatur : Penerapan Komunikasi SBAR dalam Pelaksanaan Keselamatan Pasien di Rumah Sakit (Studi di Indonesia) A Literature Review : Implementation of SBAR Communication in The Implementation of Patient Safety in Hospital in Indonesia (Study in I,” *Media Gizi Kesmas*, vol. 12, no. 1, pp. 441–452, 2023.

[3] E. E. Kurnia, Nursalam, and Junait, “Implementasi Ceklist Handover Untuk Meningkatkan Transfer Informasi Dalam Handover Intraoperatif : Literature Review,” *Care J. Ilm. Ilmu Kesehat.*, vol. 12, no. 1, pp. 35–51, 2024.

[4] M. Mehdi, A. Darbandi, M. Gholamzadeh, A. Mamizadeh, and B. S. Zilan, “Structured Intraoperative Patient

Handover among Anesthesia Providers and Its Role in Patient Safety and Team Communication: A Systematic Review," *Arch. Anesthesiol. Crit. Care*, vol. 12, no. 3, pp. 299–309, 2026, doi: 10.18502/aacc.v12i3.21318.
[5] N. Soed, S. M. Ludin, S. Nurulakla, S. Abdullah, and R. Al-zahrawi, "Exploring the Impact of the SBAR on Nursing Handover : A Scoping Review," *MALAYSIAN J. Nurs.*, vol. 17, no. July, pp. 233–245, 2025, doi: 10.31674/mjn.2025.v17i01.024.
[6] L. Wang, Y. Ma, X. Chen, J. Zhang, and T. Liu, "The design and application of an intensive care unit point-of-care nursing handover checklist based on the situation , background , assessment , and recommendation technique," *Public Health*, no. 5, 2022.
[7] W. Safitri, G. Suparmanto, A. Istiningtyas, and Kusuma, "Analisis Metode Komunikasi Sbar (Situation, Background, Assesment, Recomendation) Di Instalasi Gawat Darurat," *J. Kesehat. Kusuma Husada*, vol. 13, no. 2, pp. 167–174, 2022.
[8] R. Noprianty, R. A. Putri, and H. Manuopo, "Compliance in Filling Surgical Safety Checklist at The Central Surgical Installation," *JAI (Jurnal Anestesiol. Indones.*, vol. 16, no. 3, pp. 208–217, 2024, doi: DOI: https://doi.org/10.14710/jai.v0i0.61515.
[9] N. Van Linh *et al.*, "Current Status Of Postoperative Patient Handover Compliance Using The Sbar Model By Nurses At The Department Of Anesthesia And Pain Management , Vinmec Times City International General Hospital In 2025 Phẫu Thuật Theo Mô Hình Sbar Của Điều Dưỡng Tại Khoa," *Vietnam J. Community Med.*, vol. 66, no. 9, pp. 213–218, 2025.
[10] M. Safullah, I. Sayedahmed, M. Mohammed, and M. Elkhalifa, "AB238 . SOH25 _ AB _ 208 . Audit on patient handover in post anesthesia care unit using standardized checklist," *Mesentery and Peritoneum*, p. 21037, 2025, doi: 10.21037/map-25-ab238.
[11] R. Noprianty, *Buku Ajar Manajemen dan Kepemimpinan dikembangkan Berdasarkan Teori Keperawatan dan Dilengkapi Dengan Studi Kasus, Daftar Tilik Dan Soal-Soal*, 1st ed. Sleman: Deepublish, 2023.
[12] R. Indriani, R. Noprianty, A. Suryanah, F. P. Alya, and Y. Putri, "Durasi operasi sebagai faktor risiko kejadian komplikasi pasca anestesi spinal," *Holistik J. Kesehat.*, vol. 19, no. 11, pp. 3462–3470, 2026.
[13] R. Noprianty, "Patient Readiness on the Edge : How Age , Gender , and Surgical Experience Shape Preoperative Understanding and Surgical Safety Preparación del Paciente al Límite : Cómo la Edad , el Género y la Experiencia Quirúrgica Moldean la Comprensión Preoperatoria y la Seguridad Quirúrgica," 2026, doi: 10.56294/saludcyt20262467.
[14] R. Noprianty, F. M. Wahyudi, C. Valiani, M. Munawaroh, and W. Wahdana, "Pemberdayaan masyarakat melalui edukasi manajemen anestesi pra-operasi (PRIMA BEDAH)," *SELAPARANG J. Pengabdi. Masy. Berkemajuan*, vol. 10, no. 4, pp. 3905–3913, 2026.
[15] B. Pazar, O. Kavakli, E. N. Ak, and E. E. Erten, "Implementation and Evaluation of the SBAR Communication Model in Nursing Handover by Pediatric Surgery Nurses," *J. PeriAnesthesia Nurs.*, no. xxxx, pp. 1–6, 2024, doi: 10.1016/j.jopan.2023.12.021.
[16] N. R. Martinez, M. Watson, and K. Rawlett, "Anesthesia Hand-off Tool during the Preoperative Phase," *Anesth. HANDOFF TOOL*, no. May, 2023.
[17] S. Jan and A. Aftab, "Assessment of staff regarding SBAR as a structured communication tool : bridge or barrier for patient care," *Rawal Med. J.*, vol. 27, pp. 5–9, 2025.
[18] T. Mawarni and Yuhansyah, "Analisis penerapan komunikasi sbar oleh perawat di rumah sakit x banjarmasin," *J. Rev. Pendidik. dan Pengajaran*, vol. 7, no. 1, pp. 898–907, 2024.
[19] Y. K. G. Nurti, R. S. Simamora, L. Indrawati, A. Pranata, and L. Nuryanti, "Strengthening Nursing SBAR Communication Compliance to Improve Patient Safety," *Malaysian J. Nurs.*, vol. 17, no. July, pp. 84–93, 2025, doi: 10.31674/mjn.2025.v17i01.009.
[20] A. Alizadeh-risani, F. Mohammadkhah, A. Pourhabib, Z. Fotokian, and M. Khatooni, "Comparison of the SBAR method and modified handover model on handover quality and nurse perception in the emergency department : a quasi-experimental study," *BMC Nurs.*, vol. 23, no. 585, pp. 1–10, 2024.
[21] C. Rehm *et al.*, "Evaluation of a Paper-Based Checklist versus an Electronic Handover Tool Based on the Situation Background Assessment Recommendation (SBAR) Concept in Patients after Surgery for Congenital Heart Disease," *J. Clin. Med. Artic.*, vol. 10, pp. 1–17, 2021.
[22] M. M. Bakr, H. Samir, and A. E. Elsaiad, "Effectiveness of SBAR Daily Shift Report Training Program on Quality of Care among Staff Nurses," *MNJ Menoufia Nurs. J.*, vol. 8, no. 3, pp. 45–64, 2023.
[23] N. D. Shinta and A. L. Bunga, "The implementation of SBAR communication method for patient safety: A literature review," *Malahayati Int. J. Nurs. Heal. Sci.*, vol. 07, no. 5, pp. 537–553, 2024.