# Use of the ISBAR-reporting Method among Nurses for Patient Handovers in the Emergency Department – A Literature Review

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**Laurea University of Applied Sciences** **Abstract**

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During the patient handover, it is extremely important to provide accurate information about the patient and assign the accountability for maintaining care continuity in the emergency department setting, where various challenging factors arise. The handover can be assisted by using the SBAR/ISBAR-reporting method (I= Identify, S= Situation, B= Background, A= Assessment, and R= Recommendation).

The purpose of this thesis is to explore prior research and literature on nurses' usage of the ISBAR in the hectic emergency department setting for patient handovers. The thesis aims to describe how the structured reporting method is used and provide observations about its application. The research question for this thesis is "How ISBAR-reporting method is used in the emergency department for patient handovers among nurses?"

The research method used in this thesis is a descriptive literature review. Data were obtained from reliable databases including Finna.fi, ProQuest, EBSCOhost (CIHNAL) and Elsevier (Science Direct). Total of ten research articles were selected and reviewed in this thesis with the help of the chosen inclusion and exclusion criteria.

The findings in the reviewed articles were analyzed using the thematic method by categorizing the obtained material in three main themes which are 1. How structured reporting methods are used for patient handovers? 2. Cooperation in a multi-professional working group is affected by multiple factors and 3. Information consistency and clear transfer of the responsibility affects to the patient handover quality.

Limited only to the ten articles reviewed in this thesis, findings showed that ISBAR-reporting method use among nurses in the emergency department for patient handovers was basically non-existent and the implementation of the structured reporting method was affected by human factors and organizational differences for standardized procedures.

In future, the author advises researchers to adapt the ISBAR-reporting method for practical implementation in healthcare environments to study the real impact that structured reporting methods have for patient handover quality and safety.

**Keywords:** ISBAR, SBAR, emergency, emergency department, handover

Contents

1 Introduction ..... 5
2 Background ..... 6
2.1 The SBAR/ISBAR-Reporting Method ..... 6
2.2 Emergency Department ..... 8
2.3 Verbal Reporting ..... 9
2.4 Patient Handover ..... 10
2.5 Patient Safety ..... 11
3 Purpose, Aim and Research Question ..... 12
3.1 Purpose ..... 12
3.2 Aim ..... 12
3.3 Research Question ..... 12
4 Methodology ..... 13
4.1 Descriptive Literature Review ..... 13
4.2 Inclusion and Exclusion Criteria ..... 14
4.3 Data Collection ..... 14
4.4 Data Analysis ..... 16
5 Results ..... 21
5.1 How Structured Reporting Methods are Used for Patient Handovers? ..... 21
5.2 Cooperation in a Multi-professional Working Group is Affected by Multiple Factors ..... 22
5.3 Information Consistency and Clear Transfer of the Responsibility Affects to the Patient Handover Quality ..... 24
6 Discussion of the Results ..... 26
7 Limitation and Ethical Consideration ..... 28
8 Conclusion ..... 30
Tables ..... 37

# 1 Introduction

Emergency departments are known to be fast-paced environments, where the value of the communication during the patient handover is important. Proper verbal reporting serves to guarantee the transfer of care responsibility and patient safety, which can be achieved using structured reporting methods like SBAR or known as ISBAR-reporting method. (Koponen & Sillanpää 2005, 44; Alanen, Jormakka, Kosonen & Saikko 2017, 16)

Delivering accurate patient information and maintaining the responsibility for continuity of the care in the emergency department are critical components of effective communication (Müller et al. 2018, 7). Miscommunications and noisy surroundings have been identified one of the obstacles to proper handover communication (Alanen et al. 2017, 16; Valta & Väisänen 2021). Communication failures are identified as one of the top three causes of mortality or sentinel patient events (The Joint Commission 2022, 8). The SBAR or ISBAR (I= Identify, S= Situation, B= Background, A= Assessment, and R= Recommendation) is world widely well-researched communication mnemonic, which is used to unite the verbal reporting patterns (Riesenberg, Leitzsch & Little 2019, 196).

The purpose of this thesis is to explore prior studies and literature on nurses' use of the ISBAR-reporting method and how it is applicated for patient handovers in the emergency department setting. The thesis aims to provide an overview of the structured reporting method use and observations regarding its implementation among emergency department nurses. The theoretical framework of this thesis includes introduction of SBAR/ISBAR-reporting method and definition for the concepts of emergency department, verbal reporting, patient handover and patient safety. The thesis was conducted as a descriptive literature review and data collection was done systematically from reliable databases. The retrieved data for the literature review was analyzed with thematic method by categorizing in three main themes.

# 2 Background

The concepts of this thesis include the SBAR/ISBAR-reporting method with a structured example in table 1, emergency department, verbal reporting, patient handover and patient safety. The concepts are defined and explained in the following subsections of background.

## 2.1 The SBAR/ISBAR-Reporting Method

Internationally known SBAR is a world widely used communication checklist for prompt information delivery. It aims to pass along the fundamental information about the ongoing situation, to diminish the risks associated in the verbal reporting. (Rodgers 2007, 7)

Shahid and Thomas (2018, 2) reveal that the original use of SBAR was firstly for the US military to boost performance in duty handoff settings and later in the 21st century, SBAR methods were introduced and utilized for structuring the communication in emergency context between doctors and nurses. Therefore, SBAR has taken its position in health care field as a helpful tool between people who may encounter regularly or from time to time but might not interact verbally in the same structure (Vardaman et al. 2012, 89).

In Finland, SBAR is also known as ISBAR, where *Identify* stands as its own component (Tamminen & Metsävainio 2015, 340). According to Riesenber et al. (2019, 196) in healthcare publications regarding communication, SBAR is overall the more studied mnemonic.

Hunter New England Health (HNEH) (2009, 4) portrays acronym ISBAR to five components: *Identify*, *Situation*, *Background*, *Assessment* and *Recommendation*. In practice, person reporting firstly identifies themselves by telling their name, department, profession, and gives the patient identification. Secondly, short description of the concern regarding the patient's situation, relevant case history for ongoing status and the nurse's own observed assessment of the patient's situation and measured vital signs are reported. Finally, suggestions and future steps are indicated with the closing the report with mutual acceptance about the situation (HNEH 2009, 4;Tamminen & Metsävainio 2015, 340).

The steps of the ISBAR-reporting method are presented in table 1. ISBAR – structured communication, which illustrates the model according to Moi, Söderhamn, Marthinsen & Flateland (2019, 3).

When using common structured reporting method such as SBAR, it brings mutual recognizable manner also in nursing communication and serves as a component to promote nurses critical thinking skills and reasoning. The person starting the conversation is aware of the needed assessment beforehand and can determine what is their theory and propose a suitable solution for the patient's situation. (Leonard, Graham & Bonacum 2004, 86)

Table 1. ISBAR - Structured Communication (Moi et al. 2019, 3)

| ISBAR | Example |
|---|---|
| **Identify** | - Who are you? Profession and unit<br>- Patients identification (name, age, gender) |
| **Situation** | **What is the reason for contact?**<br>- I am calling because… (describe)<br>- I have observed changes…<br>- Measured vital signs are… |
| **Background** | **Case history. If its urgent - speak up**<br>- Admission diagnosis and date<br>- Previous illnesses of significance<br>- Relevant problems and treatment/interventions to date<br>- Allergies |
| **Assessment** | - I think the problem/reason for the patients' condition is related to…<br>- I don't know what the problem is, but the patients' condition is…<br>- The patient is unstable, we need to do something<br>- I am concerned about… |
| **Recommendation** | **Suggest**<br>- Immediate intervention<br>- Treatment/investigation<br>**Make sure**<br>- How long...? How often…?<br>- When I should make next contact?<br>- Any questions?<br>- Do we agree?<br>**Confirm the report with a closed loop** |

## 2.2 Emergency Department

The definition of the emergency department (ED) is according to Reissel et al. (2012, 25) a 24-hour open unit providing emergency care services. The basic task of the ED is to provide urgent, preventive care for patients, whose health and life are threatened by sudden illness and characteristics of the disease are so severe, that the treatment cannot be reassigned without the patients' symptoms getting worse. Patients who need urgent care usually arrive to ED by ambulance (Alanen et al. 2017, 12;Ganley & Gloster 2011, 52;Kuisma, Holmström, Nurmi, Porthan & Taskinen 2017, 101-103).

Ganley and Gloster (2011) marks patients, who typically do not have a pre-existing medical diagnosis are given limited information and so, the nature of making decisions about priority is an intricate process in a time-sensitive manner. The authors also point out that the health care professionals, in this case nurses, must have both specialized knowledge and expertise with a variety of illnesses and injuries (Ganley & Gloster 2011, 52).

The ED as a healthcare environment is ruthless, fast paced and continuously changing (Potter 2006, 58). Reissel et al. (2012) claim that the number of patients being admitted to specialized medical care units through ED is increasing in Finland; however, they also note that this trend is observed throughout Europe (Reissel et al. 2012, 18). This same growing pattern in Finland is still seen in more recent study by Rissanen et al. (2020, 18) and study done in USA by Cairns & Kang (2022) which summarizes walk-in patient to ED statistics.

Thakore & Morrison (2001, 294) reveal pre-hospital providers' perceptions that ED healthcare professionals are not mentally present during handover reports because they have already started to assess arrived patients or being distracted otherwise. ED is known to be a busy environment where juggling between multiple duties within limited time can impact significantly in nurses' ability to be present. These aspects in turn lead to feelings of irritation and need to get by each day, which is seen as lack of commitment into teamwork (Grover, Porter & Morphet 2017, 96).

Needed nursing skills in ED environment include comprehensive theoretical knowledge, which is put in practice as nurses' independent decision making, critical thinking and having the experience of observing the needs of the patient for providing the best care possible. In the core of providing immediate care lies co-operation skills, level of professionalism, nurses' strong ethics and values. (Koponen & Sillanpää 2005, 21, 23, 28)

Undoubtedly, these circumstances create diverse and demanding dilemmas in front of the nurses, who work in multi-professional teams while handling the stress from quickly adapting to new patient cases, performing problem solving, prioritizing the care, and continuously observing and re-evaluating the patient's needs. (Koponen & Sillanpää 2005, 29)

## 2.3 Verbal Reporting

Nursing practice continues to revolve around healthcare communication, which serves as a foundation for relationships with patients, team members as well as a means of instruction and caregiving (McDonald 2006, 242).

Professionals in healthcare use verbal reporting in transmitting information about the patient care. Verbal reporting can be used in e.g., face-to-face situation or on the telephone. When reporting face-to-face, the one providing the report has the advantage of using non-verbal communication ways such as gestures, facial expressions, and body language. Whilst reporting through telephone, these advantages are lost (Riley 2012, 3).

According to Finnish Nurses Association (2022, 3) about 70% of patient related adverse events are linked with communication problems between healthcare professionals. The Joint Commission (2022, 8) sentinel data review supports this statement, as the review shows that failures in communication were in the top three leading causes of death or sentinel patient events.

Poor communication can lead to several issues, such as the administration of the wrong medication or non-administration correct medication, needles repeating, delays in treatment and avoidable readmissions (Jorm, White & Kaneen 2009, 108). Unclear or incomplete information of the care, misunderstandings, workplace culture, hierarchy and noisy environment are the stumbling blocks to adequate patient reporting (Alanen et al. 2017, 14-16;Valta & Väisänen 2021).

In Grover et al. (2017) study, ED nurses believed that verbal communication was impacted by a lower educational level, which made it take longer to obtain information regarding complicated patient cases. However, the authors point out that work experience is a product of time (Grover et al. 2017, 96).

To provide uninterrupted information flow, using systematic reporting such as ISBAR is recommended as it assembles the essential knowledge of patient care in compact form ensuring “closed-loop” principle where message is repeated aloud (Kuisma et al. 2017, 201; Kinnunen & Helovuo 2019). ISBAR-method amplifies clear communication between health care workers and enhances patient safety (Alanen et al. 2017, 16).

The World Health Organization (WHO) advise already in 2007, that learning how to use the SBAR mnemonic to better communication within a multi-professional healthcare team would increase patient safety. This is one of the methods that should be taken into consideration for successful verbal reporting. (WHO 2007, 2)

## 2.4 Patient Handover

In hospitals patient handover (or hand-off) refers to the practice of transferring individual patients' information from healthcare professional to another for safeguard the patient safety and continuity of the care (Burgess, Diggele, Roberts & Mellis 2020, 1;Cohen & Hilligoss 2010, 493). In nursing, patient handover is seen one of the most crucial components of everyday nursing responsibilities (Thakore & Morrison 2001, 294).

Disruption in communication has been noted for one of the main causes leading to incorrect treatment, possible patient injury, and discontinuity of patient care (WHO 2007, 1). Along with, misunderstandings during report, interruption of information flow and missing critical information about the care are significant root of adverse events and might cause severe harm to the patient (Suvanto, Tuomikoski, Juntunen & Heikkilä 2019, 1).

Cohen and Hilligoss (2010, 496) discover in their study four important topics about handovers in hospitals which have yet to be answered: What constitutes as a handover, how standardization should be understood and implemented, how handover quality can be improved by other actions apart from patient safety and how much of an increase in patient safety can be consistently anticipated from handover improvement. Burgess et al. (2020) state by providing healthcare professionals education and practice rehearsal for structured reporting methods like ISBAR is optimal for ensuring development of the handover practices (Burgess et al. 2020, 7).

Study done in United States in 2004 found that SBAR enhances patient safety and narrows the communication gap and unites verbalization style between nurses and other healthcare professionals (Leonard et al. 2004, 90). This is in line with more recent research done in Australia 2020, where was found that using a standardized approach such ISBAR provides systematic guideline for handover and is suitable in most circumstances. Handover is more effective, clear, and focused (Burgess et al. 2020, 7).

To be able to facilitate the accurate and consistent exchange of patient care-related information amongst healthcare professionals, such as during nurse shift changes, medical emergency situations and patient transportations, among others, SBAR establishes a common standard by leveling the hierarchy and therefore erasing hierarchy that could obstruct the flow of information. (HNEH 2009, 6)

In conclusion, SBAR has more far-reaching impact than reducing inaccurate communication and capsulize the extensive amount of recorded nursing documentations needed in handovers: it makes it easier to establish strategies, constructs social capital, gives freshly graduated nurses' legitimacy, and supports their transfer into the nursing career. (Vardaman et al. 2012, 95-96)

## 2.5 Patient Safety

According to WHO (2023) patient safety is defined as “the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with health care to an acceptable minimum”. Patient safety also refers to the practices and the values of social and healthcare environment and its professionals, and organizations that guarantee the security of the care and safeguards patients from harm (WHO 2023). WHO (2021, 7) state that one in ten patients suffer from adverse event during hospitalization.

WHO (2023) points out, that complex medical interference, poor protocols in operation, delays in care arrangement and smoothness in performance, without forgetting resource shortages, insufficient personnel, and developing healthcare professionals’ expertise are some of the organizational problems.

As patient-related aspects WHO (2023) also mention healthcare professionals’ poor knowledge of health literature, lacking commitment, system errors in health technology and health professionals’ incompetence using such technology. WHO (2023) gives reminder that human variables must be considered such as fatigue, burnout, cognitive bias, and issues with communication between healthcare individuals, teams, but also patients and their families. Adverse occurrences typically originate from human variables in the routine work environment (Kinnunen & Helovuo 2019).

Encouraging the removal of hierarchical structures, mindset, and practice by expanding speak-up culture is included in the WHO (2021, 26) patient safety action plan, and for a reason. There is evidence in the literature that by intervening in these manners with structured reporting method like SBAR, hierarchical barrier fades. Increasing communication in multi-professional team improves culture of safety. (Stewart 2016, 17)

Stewart (2016) points out as the smooth flowing communication improves safety culture, this correlates with a greater eagerness among nurses to use tools like SBAR as it brings more confidence, thus there is an improvement in patient safety. (Stewart 2016, 10,11)

Kinnunen and Helovuo (2019) instruct for safeguarding the patient safety culture in workplace, nurses must advocate for clear verbal reporting, secure peace and interrupted time for patient information sharing during reports, be up to date with patients’ identification, treatment plan and status. Using checklists reduce human variable errors and unify operating methods between healthcare providers and ensures flowing continuity of the patient care. (Kinnunen & Helovuo 2019)

# 3 Purpose, Aim and Research Question

In the following subsections are introduced the purpose, the aim and the research question guiding this thesis.

## 3.1 Purpose

The purpose of this thesis is to explore previous literature and research surrounding the structured reporting method ISBAR use among nurses for patient handovers in the emergency department environment.

## 3.2 Aim

The thesis aims to describe ISBAR-reporting method usage among nurses and analyze found observations about its application for patient handovers in emergency department.

## 3.3 Research Question

The question guiding the literature review is: How ISBAR-reporting method is used in the emergency department for patient handovers among nurses?

# 4 Methodology

The author has composed this thesis using a descriptive literature review methodology. A descriptive literature review method is described in the following subsection. This is followed by the selected criteria for the literature search which are presented in table 2. The data gathering phase and number of selected articles for this thesis are presented in table 3. After description of data analysis, table 4 organizes and illustrates the chosen articles for the literature review together with details about the articles author, study purpose and methodology, number of participants, and number of the main themes discovered within the article. For this thesis the author has provided details in table 5 to summarize a more thorough data analysis of the main themes.

## 4.1 Descriptive Literature Review

For this thesis a descriptive literature review method was chosen which means that the study approaches the topic on wider scale and targets to summarize findings from previously researched data guided by the research question (Salminen 2011, 6). Descriptive literature review is extensively used in nursing science when gathering and analyzing research information and so, it is suitable, structured method for summarizing clinical material for practice (Kangasniemi et al. 2013, 292-293).

A literature review's goal is to develop a broad perspective on a previously researched subject. It gives the understanding of the selected topic area and possible need for further investigation or acts as a tool for composing knowledge from multiple research (Stolt, Axelin & Suhonen 2015, 6-7). Forming literature review includes four stages: 1. Forming the research question 2. Data selection 3. Forming the description and 4. Analyzing the findings (Kangasniemi et al. 2013, 292).

Developing the research question in the first stage navigates the process and data selection and so, is the central factor in literature review (Kangasniemi et al. 2013, 294). A good research question is focused on the topic, and it is answered by used literature. Problems might occur when the question in hand is too wide or too narrow. Without a doubt, too wide research question does not allow to go through all the found material in hand and again limited research question does not allow enough space or material at all. (Stolt et al. 2015, 24)

Method choosing the literature can be implicit or explicit. Implicit method does not require offering names of databases or use of inclusion and exclusion criteria. Explicit method offers direct inclusion and exclusion criteria’s such as year of publication and language. It also tells the databases used. It should be noted that research question leads the material search, so

differing from the method is allowed if it is significant for answering the research question. (Kangasniemi et al. 2013, 294-296)

Building up the description starts when forming the research question. The goal is to give justified answer by utilizing the collected relevant, evidence-based publications. To form a trustworthy description of the subject, oneself must have in-depth knowledge of the literature review writing process (Kangasniemi et al. 2013, 294, 298).

## 4.2 Inclusion and Exclusion Criteria

For the inclusion criteria the author selected evidence-based studies and dissertations between 2013-2023 that are in English language. The studies had to be available for free use and full-text, to help the workload. Considering the subject and degree of the thesis, articles had to include emergency department environment and nursing perspective. Thesis level studies, publications in other languages, studies where full-text were not available, and studies related to other healthcare facilities were excluded.

Table 2. Inclusion and Exclusion Criteria

| **Inclusion criteria** | **Exclusion criteria** |
|---|---|
| Evidence-based studies, dissertation | Not evidence-based studies, bachelor theses |
| Publications between 2013-2023 | Publications before 2013 |
| Full-text available, free use | Full-text not available |
| English language | Publications in other languages |
| Emergency department, nurse | Other healthcare facilities |

## 4.3 Data Collection

The author used search terms of “SBAR”, “ISBAR”, “emergency”, “emergency department” and “handover” combined and entered in advanced search of electronical databases Finna.fi, Medic, ProQuest, EBSCOhost (CIHNAL) and Elsevier (ScienceDirect) which were provided by Laurea University of Applied Sciences. The aim was to find articles in English language between 2013 – 2023. In some databases additional search limitations were included to help limit the number of results. The other limitations are introduced in table 3. Database Search Results and Number of Selected Articles. The articles had to include nursing point of view and

emergency department environment. After limitation total of found articles was 439. From total 16 articles were selected for further analysis based on title, abstract and full-text availability. Finally, total ten articles were selected and used in this study after considering the inclusion and exclusion criteria determined.

Table 3. Database Search Results and Number of Selected Articles

| **Database** | **Inclusion criteria search terms** | **Limitation** | **Results** | **Accepted based on title, abstract, full text, criteria** |
|---|---|---|---|---|
| Finna.fi | ISBAR* OR SBAR* OR emergency* OR handover* | 2013-2023<br>Full text<br>Book, article, journal | 38 | 3 |
| Medic | OR ISBAR* SBAR* OR emergency OR handover | 2013-2023<br>Full text | 69 | 0 |
| ProQuest | emergency department AND ISBAR* OR SBAR* AND handover* | 2013-2023<br>Full text<br>Scholarly journals<br>Communication<br>English | 183 | 3 |
| EBSCOhost (CIHNAL) | emergency department AND ISBAR OR SBAR AND handover | 2013-2023<br>Full text<br>English<br>Academic journals | 50 | 1 |
| Elsevier (ScienceDirect) | emergency department AND ISBAR OR SBAR AND handover | 2013-2023<br>Full text<br>Research articles<br>English<br>Nursing and Health Professions | 99 | 3 |
| **TOTAL ARTICLES SELECTED** | | | **439** | **10** |

## 4.4 Data Analysis

The acquired articles from the data search for this thesis were analyzed by categorizing common themes found in the articles. The following research question led the review of the ten selected research articles: “How ISBAR-reporting method is used in the emergency department for patient handovers among nurses?”

In thematic analysis, themes or central topics are often formed by searching from mass of text connecting or separating factors between the material for researcher to form systematic scheme from generous amount of data (Braun & Clarke 2006, 79). When the material is sorted according to themes, similar findings from each article are gathered under each theme (Saaranen-Kauppinen & Puusniekka 2009, 105-106). Finding every theme in the analyzed text is not required. The key is to collaborate on fundamental findings pertaining to research questions. (Braun & Clarke 2006, 82)

The theme analysis the process is guided by the requirement that researchers familiarize themselves with the collected data through reading, rereading, and taking notes. Coding the intriguing characteristics found in the data and combining the information into possible subthemes. The researcher refines in on the details of each subtheme before classifying them into primary themes so that the findings may be discussed. (Braun & Clarke 2006, 87)

During the data analyzing process, the author has reviewed and re-read the articles multiple times in intention to find uniting aspects within the text and gathered findings in the table 5. Summary of Themes and Subthemes.

In this thesis only three main themes are presented in the results:

1. How structured reporting methods are used for patient handovers?

2. Cooperation in a multi-professional working group is affected by multiple factors

3. Information consistency and clear transfer of the responsibility affects to the patient handover quality

Table 4. The Selected Articles for Review

| no. | Author(s), year and country | Title | Purpose, aim and method | Participants | Main theme |
|---|---|---|---|---|---|
| 1. | Bornemann-Shepherd et al. 2015. USA. | Caring for Inpatient Boarders in the Emergency Department: Improving Safety and Patient and Staff Satisfaction | Quality improvement project for 8 months. PICO(T) method.<br>Pre- and post-questionnaire. PICK-chart for categorize action items. Increase inpatient well-being in ED and improve work habits of the nurses.<br>SBAR was used to pinpoint specifics. | Wide range of nursing professionals.<br><br>Pre-questionnaire to 114 nurses (49 responded)<br><br>post-questionnaire to 204 nurses after 3 months from implementation (104 responded) | 1 & 2 |
| 2. | Campbell, D. & Dontje, K. 2019. USA. | Implementing Bedside Handoff in the Emergency Department: A Practice Improvement Project | Performance improvement project. Pre- and post-questionnaire. Find out changes required in the nurse shift change handover in ED. Implementing bedside handover with SBAR. | All 230 nurses participated in the education rollout. Pre-questionnaire response rate 63%, post-questionnaire response rate 70% | 1, 2 & 3 |
| 3. | Cheetham, A., Frey, M., Harun, N., Kerrey, B. & Riney, L. 2023. USA. | A Video-Based Study of Emergency Medical Services Handoffs to a Pediatric Emergency Department | Observational video study to assess completeness, length, and communication of ambulance to resuscitation suite of pediatric ED during handover.<br>January to June 2022. | 156 of 164 eligible patient handovers observed (patients under 25 years old) | 1, 2 & 3 |

| | | | | | |
|---|---|---|---|---|---|
| 4. | Di Delupis, F., Mancini, N., Di Nota, T. & Pisanelli, P. 2015. Italy. | Pre-hospital/emergency department handover in Italy | Evaluate communication during handover between pre-hospital and ED nurses. Triage nurse evaluated communication using ISBAR. Pre ED patient flow study 2012-2014. Current study observation for 21 days | Observation during nine shifts including 240 handovers performed by pre-hospital staff | 1, 2 & 3 |
| 5. | Dúason, S., Gunnarsson, B. & Svavarsdóttir, M. 2021. Iceland. | Patient handover between ambulance crew and healthcare professionals in Icelandic emergency departments: a qualitative study | The Vancouver School's method and semi-structured interviews. Describe patient handover experiences between ambulance and ED nurses to identify factors affecting to handover quality. | 23 participants: 17 emergency medical technicians, nurses, and physicians. Participants had experience in patient handovers. | 1, 2 & 3 |
| 6. | Ehlers et al. 2021. USA. | Prospective Observational Multiside Study of Handover in the Emergency Department: Theory versus Practice | Observational study for 8 months. Using a specifically developed checklist (including ISBAR) to examine ambulance to ED handover including content, structure, and scope. | 721 handovers were documented and evaluated based on the checklist | 1, 2 & 3 |
| 7. | Martin, H. & Ciurzynski S. 2015. USA. | Situation, Background, Assessment, and Recommendation – Guided Huddles Improve Communication and Teamwork in the Emergency Department | Performance improvement project. Joint Evaluation and Huddle, SBAR & Communication Observational Tool. Improve communication among nurse practitioners and registered nurses in pediatric ED. | 32 registered nurses 2 nurse practitioners | 1 & 2 |

| | | | | | |
|---|---|---|---|---|---|
| 8. | O'Connor D., Rawson, H. & Redley, B. 2020. Australia. | Nurse-to-nurse communication about multidisciplinary care delivered in the emergency department: An observation study of nurse-to-nurse handover to transfer patient care to general medical wards. | Naturalistic mixed methods design.<br><br>To explore interprofessional communication and multi-professional practice between ED and medical ward. | 38 nurses during 19 patient handovers<br><br>19 clinicians from multiple disciplines for explanations for findings and future recommendations | 1, 2 & 3 |
| 9. | Redley B., Botti, M., Wood, B. & Bucknall, T. 2017. Australia. | Interprofessional communication supporting clinical handover in emergency departments: A observation study. | Observational study.<br>66 change-of-shift handovers in ED to describe processes of communication impacting in the shift change. | 34 nurses | 1, 2 & 3 |
| 10. | Yegane, S., Shahrami, A., Hatamabadi, H. & Hossein-Zijoud, S-M. 2017. Iran. | Clinical Information Transfer between EMS Staff and Emergency Medicine Assistants during Handover of Trauma Patients | Audit the current clinical handover of patients to ED between pre-hospital and ED nurses according to ISBAR - method in three stages. ISBAR was taught. | In first phase 178 trauma patient handovers were recorded<br><br>In third phase 168 trauma patient handovers were recorded | 1 & 2 |

Table 5. Summary of Themes and Subthemes

| **Main theme** | **Subtheme** | **Content including paper number where data were retrieved** |
|---|---|---|
| How structured reporting methods are used for patient handovers? | Other methods | Sharing patient information did not follow clear structured protocol (2-6, 8-10)<br>Other checklists, other papers (8, 9) |
| | SBAR/ISBAR | ISBAR identified concerns in other services (1)<br>ISBAR improved safety culture and communication (2, 7, 10)<br>ISBAR was utilized (2, 7, 10) |
| Cooperation in a multi-professional working group is affected by multiple factors | Understanding multi-professional work | Unfamiliarity with professionals included in care (8, 9)<br>Lower education of health professional might drive down communication ability (4, 5)<br>need to be part of the team and receive feedback (5) |
| | Human variables | Accountability, situational awareness (2)<br>Interruptions, performing other tasks, repeating (3, 5-9)<br>Holding grudge/hierarchy/disrespect (4, 5, 8, 9)<br>Eye-contact, respect (5) |
| | Environmental factors | Lack of supportive services and familiarity of ED physical layout (1, 8, 9)<br>quiet environment (5) |
| Information consistency and clear transfer of the responsibility affects to the patient handover quality | Responsibility | Unclear transfer of responsibility (4-6, 8, 9) |
| | Handover quality | Increased handover time (2, 3, 8, 9)<br>Priority of care impacts in handover (3, 6) |
| | Patient information accuracy | Lack of consistent patient information (3-6, 8, 9) |

# 5 Results

After the authors examination of the chosen articles, the research question “How ISBAR-reporting method is used in the emergency department for patient handovers among nurses?” guided the organization of the data into subthemes and from there to the three main themes which are: 1. How structured reporting methods are used for patient handovers? 2. Cooperation in a multi-professional working group is affected by multiple factors and 3. Information consistency and clear transfer of the responsibility affects to the patient handover quality

## 5.1 How Structured Reporting Methods are Used for Patient Handovers?

The first theme is divided into two subthemes, which have been used to categorize findings from the reviewed articles. The subthemes are “*Other methods*” and *“SBAR/ISBAR”*.

Eight of the ten reviewed articles focused on patient handover communication. All eight articles showed that sharing patient information between healthcare providers during handover did not follow clear structured protocol (Campbell & Dontje 2019, 152; Cheetham et al. 2023, 106-107; Di Delupis et al. 2015, 69; Dúason et al. 2021, 10; Ehlers et al. 2021, 408; O’Connor et al. 2020, 45; Redley et al. 2017, 129 & Yegane et al. 2017, 546).

In two studies instead of using SBAR/ISBAR, ED nurses used their own developed checklists and papers for communicating specific patient information during handover reporting or using several care records, each specific to a discipline (O’Connor et al. 2020, 44; Redley et al. 2017, 124). O’Connor et al. (2020, 43) notice that rather than using the organization's advised SBAR protocol for telephone reporting, ED nurses preferred customized patient information reports and face-to-face interactions for advocating the perfect patient care management. In their findings the researchers state the other methods ED nurses used resulted into a poor communication patterns and inconsistent local work routines (O’Connor et al. 2020, 44).

Redley et al. (2017, 128) reveal in their study that ED nurses communicating ways during change-of-shift reporting were not planned and instead seemed spontaneous. ED nurses use of SBAR reporting method was low due to lack of educating about protocol usage and SBAR methods dissimilarities with the documentation process in the observed organization (Redley et al. 2017, 127).

In three of the ten articles SBAR/ISBAR reporting method was taught and taken into use for enhancing the communication during patient handovers in interprofessional aspect between

Registered Nurses (RN) and/or Nurse Practitioners (NP) (Campbell & Dontje 2019, 149; Martin & Ciurzynski 2015, 484) and between Emergency Medical Services (EMS) and Emergency Medical Assistants (EMA) working in ED (Yegane et al. 2017, 541). In all three studies the researchers noted SBAR/ISBAR improving the safety culture and communication between healthcare professionals (Campbell & Dontje. 2019, 152; Martin & Ciurzynki 2015, 487; Yegane et al. 2017, 543) and all studies showed real impact of SBAR/ISBAR mnemonic by decreasing poor patient outcomes (Campbell & Dontje 2019, 152), improved teamwork between RN and NP (Martin & Ciurzynki 2015, 487) and boosted verbalizing significant patient information between EMS and EMA (Yegane et al. 2017, 543).

From ten reviewed articles, only one by Bornemann-Shepherd et al. (2015) adapt SBAR for spot quality improvements in their project. With help of SBAR, the researchers found out lack of supportive services in the ED, which then helped to create easier access for environmental factors such as ease locating care supplies and better cooperation with patient transfer staff (Bornemann-Shepherd et al. 2015, 24).

Eight studies of ten that focused on patient handover communication called for standardizing the communication protocols between healthcare workers (Campbell & Dontje 2019, 154; Cheetham et al. 2023, 108; Di Delupis et al. 2015, 69; Dúason et al. 2021, 10; Ehlers et al. 2021, 408; O'Connor et al. 2020, 45; Redley et al. 2017, 129; Yegane et al. 2017, 545-546).

### 5.2 Cooperation in a Multi-professional Working Group is Affected by Multiple Factors

The second theme is divided into three subthemes, which have been used to categorize findings from the reviewed articles. The subthemes are "*Understanding multi-professional work*", "*Human variables*" and "*Environmental factors*".

O'Connor et al. (2020) observe in their study multi-professional practices between ED and Medical Ward (MD). They found out, that nurses do not often know who professionals are included in transferring patient to follow-up care. The researchers state that on average, nurses from both fields could name only one multi-professional team member from every patient's path of care. According to the study, this could be due to poor delegation practices where ED nurses often gave report over the telephone to another nurse, than the nurse taking responsibility of the patients care and so they needed to repeat themselves (O'Connor et al. 2020, 39, 44).

Redley et al. (2017, 124) study interprofessional communication in ED and observed that nurses occasionally skip direct communication with doctors rather than addressing needed

further assessment for patient. For reasoning to the observed behavior, the nurses in focus group 2 of Redley et al. (2017, 124-125) study reflect doctors supposedly thinking to be higher up in hierarchy stairs and them believing nurses aren't worthy to respond. In same focus group nurses also told that each patient had different doctor in charge. According to the study this dismissive behavior, nurses multitasking less urgent tasks to avoid interruptions during handover had unfavorable impact on communication during reports. (Redley et al. 2017, 127)

In other three studies by Cheetham et al. (2023, 107), Ehlers et al. (2021, 405) and Martin & Ciurzynki (2015, 487) can find similarities that when nurses perform other tasks during report and interrupting the report giver increased need for additional information and repeating which led to weak communication. O'Connor et al. (2020, 45) and Redley et al. (2017, 129) state that nurses who might be uncertain who are included in multi-professional team which might set a base for possible harm to patients. O'Connor et al (2020, 44) also argues that uncertainty of multi-professional team adds more tension between ED nurses and MD nurses.

Two of five studies focusing on prehospital and ED handover communication highlighted impact of healthcare professionals' education in their ability to communicate properly the patient information (Di Delupis et al. 2015, 67; Dúason et al. 2021, 8-9).

Di Delupis et al. (2015, 67) evaluate handover process in ED triage using ISBAR as a tool. Findings in the study showed that emergency rescuers had lower verbalization skills than ED nurse which was due to educational differences. In the same study was also recorded emergency rescuers opinions where they thought ED nurses keeping a grudge against them as the nurses did not pay adequate attention when receiving handover report (Di Delupis et al. 2015, 67-68).

Dúason et al. (2021) aim to identify elements influencing in handover quality between Emergency Medical Technicians (EMT) and ED. In the study, it was observed that higher level of education added professional competence. In the study, several EMT participants announced handover being less formal and ED nurses often focused on something else which was seen disrespectful. A few of the EMT participants in the study told that using common protocols, being seen as a team member, and receiving feedback gained them professional competence. These aspects were enhanced by ED nurse making eye-contact during handover reporting and ensuring undivided attention in a still environment. (Dúason et al. 2021, 5, 7-8)

Campbell & Dontje (2019) utilize bedside handover with SBAR in ED resulting in nurses being accountable for each other along with the capability to promote situational awareness while discussing about the patients care. The SBAR was found to be user friendly and provided time

during reporting for clarification which prevented losing critical patient related information (Campbell & Dontje 2019, 152).

What comes to the environmental factors influencing co-operation, Redley et al. (2017, 124) find that patient records, electronic and paper, were stored in multiple locations in their observed ED environment. Studies done by Bornemann-Shepherd et al. (2015, 25) and O'Connor et al. (2020, 44) find both environmental restrictions like missing equipment and nurses being unfamiliar with actual design of ED.

### 5.3 Information Consistency and Clear Transfer of the Responsibility Affects to the Patient Handover Quality

Third and final theme is divided into three subthemes, which have been used to categorize findings from the reviewed articles. The subthemes are "*Responsibility*", "*Handover quality*" and "*Patient information accuracy*".

Di Delupis et al. (2015, 67) acknowledge the patient handover being weak when measured with the researchers adapted ISBAR protocol in their studied environment. One of the main findings in this study was that in *Identify* phase of the ISBAR protocol, ED nurses and emergency rescuer's self-introduction was missing completely and overall, about 48% of the cases ED nurses provided the identification of the patient. Emergency rescuers usually gave a written patient report to the ED nurse without any verbalization. ED nurses transferred *Situation* information including call's reason in about 94% of the cases. (Di Delupis et al. 2015, 66)

Other notable findings in the Di Delupis et al. (2015) study regarding the completeness of patient information measured with ISBAR was that patient's history or allergies were not reported during handover by emergency rescuers. Whereas ED nurses expressed *Background* in about 60% of the cases and *Assessment* for patients' basic function parameters about 79% and treatment plan in about 61% of the handovers. Only 2,5% of the observed handovers in the study were wholly conducted by ISBAR. (Di Delupis et al. 2015, 66, 68)

Di Delupis et al. (2015) show in their study that *Recommendation* part of ISBAR for checking the mutual understanding with "closed-loop" was used in 5,4% of handovers in which ED nurses' percentage was as low as 1,5% . The authors concluded that the step was mostly ignored. In total percentages of using ISBAR, the ED nurses were higher than the emergency rescuers. (Di Delupis et al. 2015, 66, 68)

The silent mutual understanding for transfer of responsibility regarding patient care during handover was usually when a patient is moved from ambulance stretchers to the hospital bed.

However, there was no mutual, official clarity between EMT and ED on when the responsibility really shifts. ED nurses expressed opinions about lack of important patient information in the ambulance written patient reports and wished they would be more precise. (Dúason et al. 2021, 5–6)

Cheetham et al. (2023) notice similar findings in their study where ambulance handover reports were missing patient information, leading ED to request current patient information in 76 % of the cases. Most of the handovers took longer than expected. (Cheetham et al. 2023, 106)

Ehlers et al. (2021, 405) discover that both the absence of the ISBAR method during handover and patients' priority of care, had an impact on communication and the transfer of care responsibilities. In the study observing handover process between ED and MD, O'Connor et al. (2020, 39, 44) show that in 42% of the handover cases receiver expressed the acceptance of responsibility. Factor that added delays in handover according to O'Connor et al. (2020) were ED nurses' preparations before transfer and multiple unsuccessful attempts to call the MD nurse for patient report which led ED nurses focusing on patient care documents during the transfer (O'Connor et al. 2020, 40).

Redley et al. (2017) observers discover concerns about not ensuring to get the message across of needed treatment for the patient by verbalizing or documenting the requests. The observers also noted that adding irrelevant information regarding patient care makes handover lengthy and detaches focus from the significant information needed. (Redley et al. 2017, 125-126) After implementing bedside handover for ED nurses change-of-shift, nurses shared their opinions to the researchers in unofficial conversation. One of the reasons for long reporting time was that not all aspects in patient care could not be shared in presence of patient and these parts nurses shared at their workstation. (Campbell & Dontje 2019, 153)

Five of ten studies showed that transfer part of patient care responsibility is usually unclear for healthcare providers and reported the received patient information to be inconsistent during handovers (Di Delupis et al. 2015, 67-68; Dúason et al. 2021, 9; Ehlers et al. 2021, 406; O'Connor et al. 2020, 45; Redley et al. 2017, 128-129). Two studies also highlighted the priority of patient care affecting to the handover quality (Cheetham et al. 2023, 107; Ehlers et al. 2021, 405).

Cheetham et al. (2023, 106) also state sharing of patient information was inconsistent which added time used in handover. Lengthy handover time was also in studies by Campbell & Dontje (2019, 153), O'Connor et al. (2020, 44) and Redley et al. (2017, 126).

# 6 Discussion of the Results

Even though SBAR/ISBAR mnemonic is recommended in literature for enhancing communication in healthcare and therefore improving patient safety (WHO 2007, 2), based on findings in this narrow literature review the lack of using structured reporting methods among ED nurses is evident.

In this study, eight of ten reviewed articles focused on patient handover communication and found absence of structured reporting method for sharing patient information during handover. All the eight articles were found to advocate for standardizing communication protocols between different healthcare providers. Within six from these eight articles were found mention for lack of significant patient information during handover. From five out of ten articles reviewed, it was found that the transfer of patient care responsibility is usually unclear for nurses and other healthcare providers. In one reviewed article that focused more on ISBAR, one mention worthy finding was that the "closed-loop" communication part of ISBAR-reporting method was ignored.

In the previous paragraph mentioned article findings in this study are not in line with the principles of quality handover process by Australian Commission on Safety and Quality in Healthcare (ACSQHC) (2010, 17-19). The findings highlight the importance of bringing standardized tools into practice, which include using structured reporting methods for patient handover for providing needed patient information recorded and verbalized, and healthcare professionals' duty to assure the transfer and continuity of the patient care (ACSQHC 2010, 29). Standardizing the practices between healthcare providers can have enhanced effect on patient safety as it is known that inadequate communication comes from lack of united reporting protocols and can lead to vague acceptance of responsibility of the patient care (The Joint Commission 2021, 12).

While structured reporting methods like SBAR/ISBAR have been proven effective in theory (Rodgers 2007, 7), findings in this review revealed that due to lack of training of structured reporting methods, ED nurses' communication during handover reporting were spontaneous and of low quality. The review found that ED nurses' preferred face-to-face interaction during handover and used customized charts for better patient care practices. There can be found some support for the nurse's using other methods behavior in previous literature by Riley (2012) where the author mention that reporter giver loses face-to-face communication advantages on the telephone such as non-verbal communication gestures and other body and facial expressions (Riley 2012, 3).

Even though the finding for face-to-face communication preferred is in line with the official handover recommendations of ACSQHC (2010), the quality of ED nurses' communication was driven down because handover missed the structure and ED nurses were not provided the

organizational education for the structured reporting methods. However, in one of the reviewed articles was stated improvements when ED nurses provided eye-contact and full attention in calm environment during handover (ACSQHC 2010, 29, 42).

Nurses work in multidisciplinary teams and require co-operation skills in regular interaction with other healthcare professionals (Vardaman et al. 2012, 89; Koponen & Sillanpää 2005, 28-29). Issues in multi-professional communication can rise, for example, from human variables in familiar work environment (WHO 2023; Kinnunen & Helovuo 2019). In this review was found that ED nurses and other healthcare professionals sometimes lacked knowledge about the multi-professional work, their job description and uncertainty regarding involved members in the patient care transfers. This was found to lead to poor delegation practices, tension between healthcare professionals and multitasking of less critical duties to prevent disruptions during handovers. The handover quality decreased because of repeating, interrupting, and performing other things while reporting was also found in other articles in this review. When the nurses must perform various tasks and at the same time adapt themselves for receiving new patients in a stressful environment of the ED it could lead to disorganized communication patterns inside the organization and between other healthcare professionals (Koponen & Sillanpää 2005, 29;WHO 2007, 7).

This review found that ED nurses sometimes avoided direct communication with doctors because of hierarchy, resulting in dismissive behavior, not documenting patient records and a lack of focus on patient care. The findings in this review emphasizes the importance of considering human variables affecting healthcare workers such as burnout and cognitive bias (WHO 2023). Missing critical information and interruptions are found to lead in adverse patient events (Suvanto et al. 2019, 1). The results are in line with study by Wood, Crouch, Rowland & Pope (2015, 6), where researchers found cognitive bias to be affecting in quality of communication. Broken communication, lack of commitment and missing patient information are known to be some of the leading causes of patient adverse events (WHO 2023;The Joint Commission 2022, 8).

Two of the articles reviewed noted the same issue of low-quality communication regarding pre-hospital workers during ED handover. From these, the review found that pre-hospital workers usually gave a written patient report to the ED nurse without any verbalization and ED nurses did not give their full attention in the handover situation. This unclear communication pattern was found to cause the pre-hospital workers to feel dismissed and not trusted by the ED nurses during handovers. However, some of the articles indicated that pre-hospital workers verbalized higher priority patient information more often and ED nurses wishes for improvement in the pre-hospital workers patient records which could shorten handover time. Similarity can be found from the study by Wood et al. (2015, 2) where the authors state that ED healthcare workers indicate mistrust towards pre-hospital workers. The

mistrust raised from handover being inconsistent e.g., with lack of attention given, giving irrelevant patient information or poor documentation, lower education, and cognitive bias (Wood et al. 2015, 6).

Wood et al. (2015, 2) state the education level is impacting in communication. This is in line with this reviews' findings where two of the articles suggested that healthcare professionals' education significantly impacts their ability to communicate patient information well. These suggestions mainly concern pre-hospital workers, and results indicated they are having lower verbalization skills than ED nurses. The findings are aligned with the research done in Scotland, where healthcare professionals indicated the handover being very irregular within pre-hospital workers. The same research indicates that pre-hospital workers felt rejected during the handovers (Thakore & Morrison 2001, 293).

With the literature indicating that the SBAR/ISBAR-reporting method reduces verbal reporting risks and shields patients from harm (Rodgers 2007, 7;Leonard et al. 2004, 86, 90;Stewart 2016, 10-11;WHO 2007, 2) and SBAR found to be a beneficial strategy for avoiding inadequate communication (Müller et al. 2018, 7), it was surprising for the author to find that only three articles reviewed showed real impact of the SBAR/ISBAR mnemonic by improving patient outcomes, increasing teamwork and strengthen verbalization of significant patient information. One article found environmental upgrade needs with SBAR-tool. It should be noted that the results of this literature review are restricted to ten publications, and the author may not have shown the full picture of the ISBAR-reporting method with the findings.

# 7 Limitation and Ethical Consideration

The aim of this thesis is to describe ISBAR-reporting method usage among nurses and analyze found observations about its application for patient handovers in the emergency department. There were limitations that the author faced during the thesis writing process.

From retrieved data, some of the articles could not be used due to inclusion and exclusion criteria determined by the author. The data was limited to nursing perspectives and needed to include emergency department environment. Other hospital environments were excluded. Research done before 2013 could not be used, which excluded some good evidence-based articles from this literature review.

Including articles only in English language restricted research done in other languages. This restricted the author from finding and using studies done in Finland in Finnish language about the subject. The author did not have access to a part of the retrieved articles related to the subject, when using the Laurea University of Applied Sciences provided databases. The

authors retrieved research around ISBAR-reporting method was mostly integrated literature reviews regarding the subject in other healthcare environments and lacked research done in practice. Only ten articles were chosen for this review, which narrows the reliability of the study. The results may be biased due the authors interpretation of the findings with method of descriptive literature review.

According to the definition of Merriam-Webster dictionary (2023), ethics are moral principles that guide the individuals or groups for behaviors while engaging in any action and identify what is wrong and right.

The authors field of study is nursing, and this thesis is produced using qualitative research method, so it adapts qualitative research methods principles in analyzing the presented findings. The principles guiding this thesis are credibility, reflectivity, and reliability for to discover, characterize and explain associated phenomena studied in the nursing field. For credibility the researcher needs to plan and be able to develop the plan during the process without depending on approaches that raise prejudice. Reflectivity gives the researcher opportunity to develop themselves as they indicate proper analysis from chosen material. For reliability the data collection phase needs to be as much transparent as possible, and results should be documented. (Sanjari, Bahramnezhad, Fomani, Shoghi & Cheraghi 2014, 1-3)

This thesis was produced by only one author which lowers its credibility. The selected articles were carefully analyzed which strengthened the reflectivity, whereas the authors first time writing thesis decreased the reflectivity. Limited scale of used articles and differences between them also lowered the study's credibility.

In this thesis, ethical considerations were considered by sticking to evidence-based research, honoring copyright by properly citing the original authors, refraining from altering the text of the original sources, and not claiming the studies as authors own. References to the original authors are honest and respectful. The author of the thesis used public sources which are available for everybody. The thesis had to be transparent, and the results are reported as accurately as feasible while making the authors own assumptions as distinct as possible.

# 8 Conclusion

ISBAR-reporting method use among nurses in the ED environment for patient handovers is overall non-existent within the scope of this literature review.

The review found absence in use of structured reporting methods among ED nurses for patient handover communication and the understanding of transfer of patient care responsibility is unclear for ED nurses. The review highlights the importance of bringing the structured reporting methods into practice. Standard practices between the healthcare professionals for patient handover provide deliver of essential patient information recorded and verbalized and confirm the transfer of responsibility of patient care.

Due to lack of training regarding structured mnemonic usage, ED nurses' communication during the patient handovers was unplanned and low quality. ED nurses did not know multi-professional team members involved in patient handovers. This led to poor delegation practices and multitasking less critical assignments to prevent disruptions during the handovers. ED nurses' communication was disorganized with interprofessional workers, and pre-hospital workers.

ED nurses seemed to avoid straightforward communication with doctors due to hierarchy, resulting in unwilling behavior and taking their focus from the patient care away. This literature review emphasizes the importance for more research about human variables affecting ED nurses and therefore in the patient handover quality.

Despite that previous literature indicates ISBAR-reporting method reducing verbal reporting risks during the patient handover, this literature review found only limited support for the ISBAR-reporting method enhancing communication and for better patient outcomes. To achieve actual results on the understanding how structured reporting methods like ISBAR affect to the patient safety, the author of this literature review advises the future researchers to put ISBAR-reporting method in practice use in the healthcare environment.

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Tables

Table 1. ISBAR - Structured Communication (Moi et al. 2019, 3) .....7
Table 2. Inclusion and Exclusion Criteria ..... 14
Table 3. Database Search Results and Number of Selected Articles..... 15
Table 4. The Selected Articles for Review ..... 17
Table 5. Summary of Themes and Subthemes ..... 20