

SPECIAL PAPER**Synthesizing Knowledge about Nursing Shift Handovers: Overview and Reflections from Evidence-Based Literature****Efstratios Athanasakis, BSc, RN**

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Abstract

Background: Nursing shift handovers consider to be a pattern of communication that is applied in everyday clinical nursing practice, in order to be fulfilled the goals of organization, continuity, consistency and safety of care that nurses provide to patients.

Aim: The aim of this review was the evaluation of the body of current research evidence examined issues concerning shift handovers in nursing.

Methodology: A combination of various search terms: nurses, nursing, shift handovers and bedside handovers were used to search the Pubmed database. Also, a manual search contributed to the detection of more articles. For the introduction of an article in the existing review, specific inclusion criteria were set.

Results: A total of 19 original research articles were included. A table of shift handover models and another one of the basic characteristics of the research articles are presented. Analysis of the research findings provided three major themes related to the aim of the review, as follows: 'handovers' components', 'change type of handover' and 'handovers' standardization'. A large part of the research literature looked at the exploration of the elements that handovers are composed of.

Conclusions: This review highlighted evidence-based literature of fundamental information for nursing shift handovers. Effective communication practices among nurses entail effective handovers, effective patient care quality and patient safety maintenance. Nursing shift handovers are a multifaceted activity, which needs deeply understanding. Further knowledge development of handovers is required.

Keywords: nurses, nursing, shift handovers, bedside handovers.

Introduction

The patients' care organization, continuity, consistency and safety are essential functions in the field of clinical nursing practice. The aspects of nursing care organization can be easily covered by information exchange among the nursing staff members between the nursing shifts (Kerr, 2002, McMurray et al, 2010). Also, except from the fact that information should be effectively transferred from the offgoing to the oncoming nurses, even the attention of them or the communication with other members of the multidisciplinary team, such as the doctors, is equally important (Chaboyer et al, 2009).

As the World Health Organization (WHO) contended, the factor of miscommunication may cause patient harm (WHO, 2007). Information

about patients' care officially occurs in written nursing records or in oral reports called (shift) handovers and unofficially with verbal way during the activities of the nursing routine (Payne et al, 2000, Meissner et al, 2007, Johnson et al, 2012a). In the context of delivery accuracy in patient care, documentation can be used as a way of communication. The message "Do it. Document it." was used by authors, for the encouragement of nurses to the direction of a change to written handovers (Tucker et al, 2009).

Nursing shift handovers are a regular feature of the everyday clinical nursing practice, a ritual for the nursing team which happens every time a shift change is performed (Evans et al, 2008, Scovell, 2010).

As Australian Medical Association (AMA) defined, the "clinical handover is the transfer of professional responsibility and accountability for some or all aspects of patient care or group of patients to another person or professional group on a temporary or permanent basis" (AMA, 2006).

The UK Nursing and Midwifery Council (NMC), states that nursing care record-keeping and information sharing by nurses in the duration of a shift are more integral parts of the practice rather than optional (NMC, 2009). In addition, the UK Royal College of Nurses (RCN), in a nine-part series described principles of nursing practice which entails a special reference in the effective communication (Casey & Wallis, 2011).

It cannot be neglected the fact that handovers in patient care are not part of the official education programs in nursing schools. So, nurses do not undergo any regular and particular training at undergraduate level and nurses learn the way of giving handovers within the wards' culture. Although the handovers' value for the nursing practice, as has been argued by another author, remain still "one of the most important rituals of the nursing shift" and sometimes probably not receive the proper attention from nurses (Scovell, 2010).

During shift handovers is discussed a set of tasks that should be carried out in the duration of the coming shift, like the collection of specimens, the record of observations, wound swabs and tasks from other health care professionals that nurses should be informed that had been done (Randell et al, 2011). For the description of nursing tasks, the documents that are usually conclude are admission, referral, discharge documents, progress notes, medication charts, observations charts, nursing care plans and documents between health disciplines (Sexton et al, 2004, Tucker et al, 2009).

Nursing shift handovers present variation from ward to ward and among hospital settings. Table 1, outlines a synthesis of general information of the handover models and their characteristics. Regarding their types, researchers reported that handovers can be verbal, tape recorded, at the bedside and written (Sexton et al, 2004). Nursing shift handovers almost always take

place in a room/office/nurses' station away from the bedside (Johnson et al, 2012a). However, in recent years in nursing literature are identified various studies that have focused on the exploration of bedside handovers' issues (Philpin, 2006, Chaboyer et al, 2009, Chaboyer et al, 2010, McMurray et al, 2010).

Aim

The aim of this review was the evaluation of the body of current research evidence examined issues concerning shift handovers in nursing.

Methodology

A search of the relevant literature has been conducted in Pubmed electronic database, using the following search terms: nurses, nursing, shift handovers and bedside handovers. Studies that were taken into account were having the following inclusion criteria: were original research articles (primary or secondary analysis research studies with qualitative or quantitative or mixed design), published in English, between January 2000 and December 2012, with free full text provision, clear methodological design, using in the study sample apart from nurses (working mainly in hospital wards/settings), patients or doctors. Besides the above search, another one (manual) took place. A total of 28 articles identified as potentially relevant, n=20 from the Pubmed search and n=5 from the manual search. After assessing of the retrieved titles and abstracts, were excluded: n=3 articles because they were irrelevant and n=3 articles with no full text provision.

Findings

Nineteen research studies were found to meet the inclusion criteria. A summary of the basic characteristics of the research articles is shown in

Table 2. The studies originated from Australia (n=10), UK (n=5), Sweden (n=1), Switzerland (n=1), Mauritius (n=1) and one conducted in 10 European countries. Elements of the nursing handovers subthemes were investigated and findings are presented according to their relevancy. Analysis of the studies' findings provided three major themes related to the aim of the review, as follows: 'handovers' components', 'change type of handover' and 'handovers' standardization'.

Theme 1: Handovers' components

A number of studies were mentioned to one or more handovers' components. This theme is divided into six subcategories: location, participation, patterns/structure, content, temporal characteristics and ancillary documents-nursing records. Nursing shift handovers' characteristics and their morphology across the countries are key factors for the enhancing of a wider comprehension around fundamental handovers' points.

Location

Location of handovers varied depending on the needs of each specialty and impacted on what information was transferred. Namely, in a medical/surgical unit, handovers were at the bedside; avoid discussing patient diagnosis that moment. Contrarily, in mental health specialties, handovers were given in a room where access to patients was not allowed (Johnson et al, 2012a). Interruptions during handovers play important role in the handovers' performance. Meeting spaces properly designated for the interruptions' reduction during handovers.

When patients were transferred across different wards, it was more likely that handovers were impaired, on account of communication failure between bedside nurses. Handover process happened in two stages: firstly in a closed room (private space) and then at the bedside, the corridor or the staff station (public space). Handovers in private spaces prioritise organizational and biomedical discourses (lacking nurses' perspectives on care). Besides, handovers in public space facilitate a partnership model in medication communication (Liu et al, 2012).

When handovers took place in the charge nurses' office, the possibility of any interruption occurrence was low. Bedside handovers are more prone to any type of interruptions. Aiming at nurses' conscientious attendance during handovers, it is necessary that interruptions should be lacked (Evans et al, 2008). To this direction, before handovers start, nurses asked the patients if their needs were covered, along with the explaining that handovers will start

soon, so that to limit interruptions (Chaboyer et al, 2010).

As it is documented, bedside handovers have multifaceted benefits. They bring nursing team together, promote patients' safety scan (call bell in reach, suction or oxygen working properly, etc) and medication review, promote a patient-centred dimension of handovers, patients gave key essential information to nurses and provide to them the opportunity to participate actively in the process of their care or to their relatives the possibility to clarify aspects of patients' care (Chaboyer et al, 2009, Chaboyer et al, 2010, Randell et al, 2011).

Bedside handovers offer directness. That is, when a theme or a statement of patient care was unclear to the oncoming nurse, they could ask their offgoing colleagues to clarify or fix this matter immediately. In the same study a major disadvantage identified: patients perhaps hesitate to participate in handovers and this is due to the use of medical jargon or the presence of many nurses around the bed (Chaboyer et al, 2009).

Participation

Traditionally, only nurses participate in handovers (Johnson et al, 2012a). Especially, for the bedside handovers, the team leader of the outgoing shift and all three team members of the oncoming shift were present (Chaboyer et al, 2010). The contribution of nurse coordinator had been emphasized in a recent paper. In handovers participated all oncoming nurses and the offgoing nurse coordinator. The nurse coordinator had a role of mediator communication with a special focus on patients' needs (Liu et al, 2012).

In intensive therapy unit (ITU), when patients were awake and conscious, nurses tended to implicate the patient to the bedside handover process on purpose, usually when a positive statement for the patient progress was expected to heard by nurse (Philpin, 2006). In a study conducted in multiple open wards, family members were permitted to stay in and go out in accordance to patients' decision, prior handover process. The patients and their family members were encouraged to ask any questions at the end of handover (Chaboyer et al, 2010).

Table 1. Synthesis of evidence about handovers' models and characteristics.

Models of handover	Characteristics	
	Content	Location
<i>Verbal (face-to-face)</i>	Use of jargon and biomedical vocabulary to discuss patients' issues and plan the activities of nursing care. Give the chance for nurses' query expression about patients' situation. Can concern handovers between a team or can be nurse-to-nurse.	Usually takes place in a designated location (meeting room, nurses' station).
<i>Non-verbal</i>	Contains movements like the raised eyebrows and head shaking.	Usually takes place in the patient bedside.
<i>Verbal (face-to-face)</i>	Use of jargon and biomedical vocabulary to discuss patients' issues and plan the activities of nursing care. Give the chance for nurses' query expression about patients' situation. Can concern handovers between a team or can be nurse-to-nurse.	Usually takes place in a designated location (meeting room, nurses' station).
<i>Tape recorded</i>	Are less time consuming with limited interruptions. It is possible that nurses' queries about the patients' information will remain unanswered. The tape can be stopped at anytime the nurse wants and starts again at a later time.	No information found.
<i>Written (note-taking style)</i>	Use of various textual materials to describe patient progress, conditions and the serious events of the shift that passed. The oncoming nurse access existing documentation to ascertain essential information.	No information found.
<i>Bedside</i>	Gives opportunity to nursing students for teaching and to patients for discussion care issues. Can be used either verbal or non-verbal communication ways. Needs attention: a) when jargon is used by caregivers, the patients probably feel anxiety and b) when the staff has little awareness.	Takes place in the patient bedside.

Patterns/Structure

Research's findings as described in the study of Kerr (2002), four types of handover are summarized according to the function's main attributes (informational, social, organizational, educational) and are distinguished in three phases (prehandover, intershift meeting phase, posthandover). Further, Bruce & Suserud (2005) explored the experiences of six emergency nurses relevant with the handover process.

Analysis of the study's results showed four handovers types: the pre-hospital reporting

(usually through telephone, critical patient condition, structured information-brief communication), the symbolic handover (the emergency nurse forms an impression of patients' care needs), the ideal handover (make a holistic picture of the patient to inform his/her triage function) and the non-ideal handover (difficulties in forming holistic picture of patient). In some handovers' cases observed, it seemed that confusion were predominant when a specific structure for handovers was missing (Sexton et al, 2004).

Table 2. Summary of the basic characteristics of the research articles.

Author & country	Objective	Method, data collection & analysis	Sample & setting	Major findings
<i>Payne et al. (2000)</i> UK	The exploration of the role of nursing interaction within the context of handovers and the identification of clinical discourses by staff for the determination of the care delivery.	Qualitative design Grounded theory analysis Ethnographic approach for data collection: non-participant observation, semi-structured interviews, audio-taped of handovers and documentary data	23 handovers 34 RN Informal interactions between nurses (146 hours) 5 wards of an acute elderly care unit of a district general hospital	Handovers were formulaic, partial, cryptic, given at high speed, used abbreviations and jargon, required socialized knowledge to interpret, prioritized biomedical accounts and emphasized physical aspects of care.
<i>Kerr (2002)</i> UK	The description of practices and activities of handover, classification and characterization of functions of handover and identification of some effectiveness and problems criteria.	Mixed-method: Interviews Cross-sectional, comparative and case study design Semi-structured observation	20 handovers from pediatric wards from 12 in-patient wards of a pediatric hospital	Handovers practices are distributed over a variety of factors and their effectiveness is depending on demands and tensions.
<i>Sexton et al. (2004)</i> Australia	The address of the content of nursing handover when compared with formal documentation sources.	Use of qualitative data analysis programme	23 handovers from a general medical ward of a hospital	Almost 85% of the information discussed could be located within existing ward documentation structures, 9.5% discussed was not relevant to ongoing patient care and 5.9% the inverse.
<i>Bruce & Suserud (2005)</i> Sweden	The exploration of nurses' experiences receiving patients who were brought into hospital.	Qualitative descriptive design Interviews	6 nurses working in ambulatory and emergency hospital services	The handover process could be many sided, more dependent on patients' problems and there were difficulties to place patient groups at the correct care level.
<i>Kassean & Jagoo (2005)</i> Mauritius	The address of the implement of a new system of bedside handover.	Case study Adaption of planned change model Semi-structured interviews	10 non-participant observation handovers 40 patients from a gynecological ward	The new system evaluation was positive concerning patient and staff satisfaction.
<i>Philpin (2006)</i> UK	The illustration of ways in which insights from anthropology may be used to explore information transmission.	Qualitative design Participant observation Ethnographic design Interviews	15 nurses from ITU and documentary material	Both verbal and written handover reports are visual and/or audible symbolic representation, confirmations and validations of nursing care provided.
<i>Jenkin et al. (2007)</i> UK	The identification of the current process of information transfer between the staff during patient handover.	Quantitative design Descriptive and non-experimental cross-sectional survey Questionnaires	21 nurses, 42 paramedics and 17 doctors from 4 ambulance and 1 emergency service	Emergency staff needs to appreciate that a lack of active listening skills can lead to frustration for ambulance. Handovers for

				critically ill patients should be delivered with essential information given immediately and provision of further details when the initial treatment has been undertaken.
<i>Meissner et al. (2007)</i> <i>10 European countries</i>	The exploration of nurses' perceptions of the shift handovers and the possible reasons for reported dissatisfaction.	Quantitative design Cross-sectional design Questionnaires Secondary data analysis	22902 nurses from hospitals	The proportion of nurses dissatisfied with shift handovers varies considerably in Europe, attributing the reason of it, to work organizational aspects accounts.
<i>Evans et al. (2008)</i> <i>Australia</i>	The analysis of field notes taking during a series of nursing change-of-shift handovers.	Psychoanalytic case study	14 handovers from a medical ward of a metropolitan teaching hospital	The ritualized handover, as identified in the nurses' speech, becomes on way that anxiety shape, in a discursive way, the practice of the nurse. In this way the ritual handover is a discourse of anxiety.
<i>Chaboyer et al. (2009)</i> <i>Australia</i>	The description of the implementation of bedside handover in nursing.	Quality improvement project	27 nurses from 3 wards of a regional public hospital	Bedside handovers improve safety, efficiency, teamwork and the level of support from senior members.
<i>Yee et al. (2009)</i> <i>Australia</i>	The development of a standardized operating protocol and minimum dataset to improve shift-to-shift clinical handover.	Pilot study Triangulation of qualitative data sources (handover notes, field observations, focus groups)	120 observations sessions 112 interviews (60 nurses, 60 doctors) More than 1000 individual patient handovers (51 nurses, 61 doctors) from 6 wards	The standardized protocol: "HAND ME AN ISOBAR", supports flexible adaption to local circumstances.
<i>Chaboyer et al. (2010)</i> <i>Australia</i>	The description of the structures, processes and perceptions of outcomes of bedside handover in nursing.	Mixed-method: Descriptive case study Semi-structured observation and in-depth interviews Content analysis	532 handovers 34 nurses from 6 wards in 2 hospitals	At bedside handovers nurses receive report on only their assigned patients. Nurses pose positive thought for bedside handover, but this may not be accurate.
<i>McMurray et al. (2010)</i> <i>Australia</i>	The identification of factors influencing change in hospitals that moved from taped and verbal to bedside nursing handover.	Qualitative study Semi-structured observations In-depth interviews Thematic analysis	532 handovers 34 nurses from 6 wards in 2 hospitals	The change is more likely to be successful when it is part of a broader initiative such as quality improvement strategy.
<i>Randell et al. (2011)</i> <i>UK</i>	The description of current practices for the conduct of shift handovers and to use this as a basis for	Qualitative A multi-site case design Observations Interviews	15 medical and 33 nursing shift handovers across three case sites from wards of a general	Technology should focus on supporting rather than replacing the verbal shift handovers and allows the gathering of the required

	considering the role that technology could play in supporting handover.		hospital	information.
<i>Bradley & Mott (2012) Australia</i>	The introduction of bedside handovers.	Mixed-method: Quantitative (quasi-experimental) and qualitative (ethnographic) design Questionnaire and interviews	48 RN from 3 rural hospitals	Bedside handover approach is significantly less time consuming than the closed door approach. Reduction of frequency of incidents under the bedside handover process.
<i>Johnson et al. (2012a) Australia</i>	The development of a minimum data set for electronic nursing handover.	Qualitative study Observational design Content analysis	195 patient handovers from multiple hospital settings	The NH-MDS can be a guide for patients' condition, care and useful for clinical nurses and educators.
<i>Johnson et al. (2012b) Australia</i>	The exploration of clinical handovers in nursing and the provision of an appropriate structure to support an electronic tool.	Qualitative design Thematic and content analysis	81 transcripts of clinical handovers from mainly medical and surgical patients from multiple settings	ICCCO is a type of structure that covers the required patient information during the handovers.
<i>Liu et al. (2012) Australia</i>	The examination of forms communication and power relations surrounding medication communication during handover.	Qualitative Critical ethnographic design Participant observation, field interviews, video-recording and video reflexive focus groups	76 nurses and 27 patients from 2 medical wards of a teaching hospital	Handovers involving patients in the public spaces at bedside facilitated a partnership model in medication communication. Nurses avoid talking sensitive themes at the bedside.
<i>Mayor et al. (2012) Switzerland</i>	The exploration of variations in handover duration and communication in nursing units.	Mixed methods: Structured interviews Content analysis Quantitative analysis	Nurse unit managers of 80 care units in 18 hospitals	Unit type affected communication content, have higher duration of handover per patient and functions of handover.

NH-MDS: Nursing Handover-Minimum Data Set, ICCCO: Identification of the patient and clinical risks, Clinical history/presentation, Clinical status, Care plan and Outcomes/goals of care, RN: Registered Nurses, ITU: Intensive Therapy Unit.

In a quantitative study (cross-sectional) have been examined the transfer of information from ambulance staff to emergency department staff. The patient report form was a document type of written handovers, although study sample n=80 (nurses, paramedics, doctors), had both positive and negative views about its value and efficacy. Based on the findings of the study, a possible framework for patient handover in emergency department was developed by authors (Jenkin et al, 2007).

In the same study, nurses working in emergency department settings, thought that handovers for critically ill patients should be delivered firstly (important information) when the ambulance

arrived at the hospital and secondly (further information), after the initial treatment has been undertaken. Similarly, repetition of handovers happened: in category A patients (from triage), more commonly to doctors, at anytime of the day and more frequently in the resuscitation room. In a patient handover, the reason for attendance was considered as the most essential information by doctors and nurses (Jenkin et al, 2007).

Another patterns of nursing shift handovers in an emergency assessment unit and a pediatric surgical ward include the begin of handover with patient that outgoing nurse was with when the oncoming nurses were ready to receive handover or would be ordered by bed number and the

handed over for all patients (in staff room) from the outgoing to the oncoming nurse, since the second one was responsible for multiple patients (Randell et al, 2011).

An ethnographic study of the examination of transmission of information between nurses in an ITU concluded a variety of written methods to communicate during handovers, like the observation chart, the use of different colour pen in writing, paper towels and nursing notes. The combination of written methods with verbal and non-verbal methods represents a way of communication in the demanding environment of the ITU (Philpin, 2006).

Content

Verbal handovers were delivered in "passive voice", were partial, cryptic and characterized by use of medical jargon, abbreviations and initials, e.g. MI instead of myocardial infarction, when applied by nurses. But, it was not the same when handovers were attended by newly qualified nurses or nursing students (Payne et al, 2000). Concerning patient sensitive information management, this was discussed away from the bedside, e.g. outside the room, was written on the handover sheet or can be discussed between the staff members after the integration of the procedure (Kerr, 2002, Chaboyer et al, 2009, Chaboyer et al, 2010).

When nurses were handed over verbally, they used jargon or slang to describe events happened relevant with the patient situation. When non-verbal communication ways were used, they were concluded actions as raised eyebrows, head shaking and "clucks" of concern (Philpin, 2006). Another example of non-verbal communication contained non-verbal gestures by the offgoing nurse coordinator, targeting to tone down complaints from the medical staff (Liu et al, 2012).

Basically, information transmitted on handovers focused on what happened in the previous shift, the information nurses should know for the current shift and the information that needed to be transferred to the nurse of the next shift (Randell et al, 2011). Another central handovers' topic was the patients' medical state (Mayor et al, 2012). However, nurses had difficulties when patients had not been labeled with a "crash status" and feel uncertain on how to act when

resuscitation or not information were missing and the patient suddenly die (Payne et al, 2000). For this reason, handovers were a two-way communication process, where the oncoming nurses had the chance to search for further information and clarification for patients' issues, if information was interspersed or unspecific (Randell et al, 2011).

Nurses throughout the handover process used stereotyped comments for the description of patients' situation or general statements for summarizing handovers' information. Here are some examples of phrases: "He's been a very naughty boy. He's refused to eat and drink today.", "She's gorgeous.", "She doesn't look good this afternoon.". Authors pointed out that stereotyping in handovers offers to the nurses of the oncoming shift a "picture" of the patients in the ward, that nurse would take care of regardless if they have met the patients in a previous shift (Evans et al, 2008, Randell et al, 2011).

Sexton et al. coded handovers' themes into categories: charting, non-charting (relevant, irrelevant), bed and ward management. From the amount of information discussed at handovers, 84.6% of them could be incorporated in documents and the rest percentage could not. While, 9.5% of information characterized as irrelevant to ongoing patient and 5.9% of the handover content was related to ongoing patient care or ward management issues that could not be reported in ward documentation (Sexton et al, 2004).

In a major survey entitled Nurses' Early Exit Study (NEXT) are presented data pertaining nurses' perceptions of shift handovers. Research data were collected from a large sample of nurses coming from 10 European countries. The study's findings articulated that nurses (from 7 countries) considered the organizational nature factor: "too many disturbances", as the principal reason for nurses' dissatisfaction with handovers. The conclusions drawn by authors emphasized the lack of research evidence about handovers' central aspects (why, where, how, whom) (Meissner et al, 2007).

In a case study, used a psychoanalytic theory approach for the examination of how anxiety discourses might affect the organization of nursing practice and particularly the handovers.

The authors mentioned that a ritualized handover characterized by unwritten laws (prohibitions). These comprised no arguments permission, occasionally opinion contradiction or difference expression, avoidance to mention patients' name during their allocations, avoidance of any expression of pleasure or displeasure and of any preference to specific patient. The principal finding was that anxiety appears (in a discursive way), when a ritualized handover was performed by nurses. Thus, nurses to avoid overwhelming by anxiety tried to alleviate this feeling and met the needs of the clinical practice (Evans et al, 2008).

Ritualistic handovers' features were an inclusive prereport discussion, cross-sectional reports, stereotyping of patients, a strict numerical order to the report, which ended with a concluding remark, the handover never being cancelled, a conscientious approach to the handover and bans on both in-person interruptions and the presence of those not involved in the handover (Evans et al, 2008).

Handovers' content may be characterized of high levels of uncertainty. If this is the case, then the variety of topics discussed during handover was lessened (Mayor et al, 2012). However, handovers are a kind of problem solving function that help nurses focused on every particular factor around the patient state, like treatment modifications, falls, behavior, feeding and other (Randell et al, 2011).

Apart from having to perform a range of a variety of nursing interventions, handovers could be an opportunity for the nurses' emotional expression and socialization. Nurses in one study were expressing their emotional support to each other by sharing stories and experiences or consider themselves as "natural" when socializing (Kerr, 2002). Examples from the nurses' descriptions indicate that handovers could be a motivation for sharing experiences or complaints (Randell et al, 2011). Sharing emotions identified as the top function (64% of the units included), in a recent published study exploring uncertainty in nursing practice. Other functions have to do with team coordination (46%), group-sense making (31%) and educational (23%) (Mayor et al, 2012).

Another study conducted by the same authors and published the same year, explored clinical

handovers' structure in various settings. Authors found five major categories of information discussed at its duration. These include identification of the patient, clinical history, clinical status (signs, symptoms), care plan (tests or diagnostic procedures, self-caring themes) and outcomes of care (goals of care for that shift passed, discharge planning). All the above factors are represented with the acronym ICCCO (Johnson et al, 2012b). Categories of content handovers' features may not be mentioned in every handover, but the majority of them were discussed at every handover (Evans et al, 2008, Johnson et al, 2012a).

Temporal characteristics

Over the years, handovers have received many characterizations concerning their duration. Some authors characterized handovers as "high speed" (when handovers for 20-30 patients described in 20 minutes), "less time consuming" (when took place in the bedside than the closed door approach) and "thorough procedure" lasting 15 minutes (Payne et al, 2000, Philpin, 2006, Bradley & Mott, 2012).

In other studies, handovers' duration was detected at 10-15 minutes spent for the group handover or at 15-60 minutes (Payne et al, 2000, Liu et al, 2012). In an emergency assessment unit nursing handovers had overall duration of 30 minutes, with approximately 2 minutes discussion/patient (Randell et al, 2011). In other settings (medical, surgical, medical-surgical, rehabilitation) each bedside handover took (on average) just over a minute (Chaboyer et al, 2010).

Researchers observed 23 handovers by time of the day in one general medical ward. Handovers frequency was 3 times/24 hours (07:00 am, 14:30 pm, 22:45 pm). For example, at 07:00 am there were observed 7 handovers, with mean length of 18 minutes and their range between 15-22 minutes. However, the other handovers (afternoon and night) had more mean length (39 and 33 minutes respectively) (Sexton et al, 2004). Other studies advocated that handovers' frequency was 3 times/24 hours (07:00 am, 13:30 pm, 21:00 pm) or usually one time in the morning and one in the afternoon (Payne et al, 2000, Randell et al, 2011).

Variations in nursing handovers' duration and communication had been examined in a recently published study. The handovers topics and their duration per patient were related to task-contingent factors. Specifically, when the factor of uncertainty was evident in unit types where care was continuous or intensive, the mean handover duration per patient was increased (3.7 and 4.4 seconds respectively) than other unit types (non-acute and standard care, <1.5 seconds/patient) (Mayor et al, 2012).

Decreased length of bedside handovers (in relation with the office handovers), offered to nurses more satisfaction. Researchers observed that in the pre-implementation phase (office handovers) the mean total time taken to handover per patient across all sites was 0.44 hours. On the other hand, after the implementation of bedside handovers, it was evident that the average time was 0.22 hours (Bradley & Mott, 2012).

Ancillary documents-nursing records

It was more likely that nurses kept records before handover or after the end of the shift (Kerr, 2002). But nurses from ITU were taking nursing notes at the end of each shift, when "there was a lull in the unit's activity". Although notes were taken in the observation chart, more notes by nurses completed the care that they previously provided (Philpin, 2006). Moreover, nurses used three levels' of nursing records, two formal (Kardex, computerized care plans) and one semi-formal document (ward diary).

In order to maintain every patient detail, every nurse used to keep additionally personal nursing records or combined them with electronic handover sheets (during the bedside round) (Payne et al, 2000, McMurray et al, 2010). A pre-printed sheet developed from spreadsheets or work processing documents was use in verbal face to face communication (Johnson et al, 2012a). Personal notes taken by nurses during handover process are more likely to have a role of a "safety device" for them (Kerr, 2002). However, the fact of having to do a lot of actions described in their personal records (in an informal way), correlated with the feeling of fear of penalties (Payne et al, 2000).

In another study, bed list, patient name and diagnosis were used to make notes during the handovers, whereas no formal sources of patient

information were used. Keeping up to date every detail of the organization of patient care is a challenge. As it is known, nursing shifts are characterized by heavy workload and plus the nursing staff shortage, there is minimum time for updating care plans' information (Sexton et al, 2004). Fixed items that were frequently included in handover process are the bed number, care plan, clinical alerts, clinical history, clinical status, current observations, fluid input and output, outcome of care, patient identification, procedures undertaken, reason for admission and tasks to be completed (Johnson et al, 2012a).

Nurses had an individual coding system using nursing records known as "scarps", which were kept in nurses' pockets contained valuable information for the organization of nursing care (Payne et al, 2000). Paper towels were used to take notes briefly in themes like points to raise on the ward or the order of medications. Author attached the reason of the paper towels use in the differentiation of the important from the permanent information (Philpin, 2006). Moreover, during bedside handovers, a computer-generated handover sheet which included patients' name on the ward. Nearby the bedside components of health record (observation record, medication record, fluid balance sheet and risk assessment forms) were available (Chaboyer et al, 2010). Verbal face to face communication using a pre-printed sheet developed from spreadsheets or work processing documents (Johnson et al, 2012a).

Theme 2: Change type of handover

Four studies analyzed the change process, from a handover type to another one. In two studies was applied the Lewin's 3-stage model for the change of handovers' type (Kassean & Jagoo, 2005, Chaboyer et al, 2009). The first one is a case study from Mauritius which mentioned to the change from traditional to bedside handover. The model of change comprised from 3 planned steps: unfreezing, moving and refreezing. The change evaluation showed that the new method of handovers was working, but authors mentioned that monitoring will be ongoing with evaluation of a larger sample of patients (Kassean & Jagoo, 2005).

The second study discussed a quality improvement activity named as "Transform Care

at the Bedside", organized by Chaboyer et al. (2009) in Australia, giving special attention to patient-centered aspect. A change from verbal reporting in a room to bedside applied and for this reason practice guidelines and a competency standard were developed for the new handover method. Six months after the implementation of the change, patients' and nurses' perceptions about the bedside handovers' process were positive (Chaboyer et al, 2009). Moving from office to bedside handover the benefit was double: reduction of handover's time, as well as reduction of incidents' number frequency from 18 to 7 (Bradley & Mott, 2012).

A model for successful change from taped and verbal to bedside handovers is proposed by McMurray and colleagues (2010) in their qualitative research paper, which was carried out in two Australian regional hospitals. In this model, the authors examined every one of the 8 steps of the change management process. As it was emerged from the findings, five themes were important for the change: being part of the big picture, linking the project to standardization initiatives, providing reassurance on safety and quality, smoothing out logistical difficulties and learning to listen. Moving from the office to the bedside, patients receive greater transparency, accuracy accountability and communication content appropriateness for their care plan (McMurray et al, 2010).

To achieve the handovers' change the support of nursing administrators to the clinical nurses is imperative. In a handovers' improvement project, almost half of the nurses' population (60%) considered support facilitation for the change (Chaboyer et al, 2009).

Theme 3: Handovers' standardization

Six studies were involved in handovers' standardization process. To improve shift-to-shift clinical handovers, a standardized operating protocol (SOP) and minimum dataset (MDS), given the acronym "HAND ME AN ISOBAR" was developed. Each of the letters' acronym symbolized an action that guided the nurse for the handovers' performance. This was a four step evidence-based focused approach and a standardization solution, which adaptation's to local circumstances/clinical areas (general

medicine, general surgery, emergency medicine) was flexible (Yee et al, 2009).

An observation of 532 handovers had been done by Chaboyer et al. (2010). Handover content was formalized by SBAR (situation, background, assessment, recommendations), which comprises a standardized format. Nurses believed that bedside handovers offered promotion of patient-centered care, accuracy and service delivery improvement.

Another qualitative research paper conducted in multiple specialty settings (general medical/surgical, mental health, emergency, aged care, critical care, maternity) highlighted the specificity of every ward. The authors designed a minimum data set for electronic nursing handovers. The location and the content of handovers were mentioned above. The Nursing Handover Minimum Data Set (NH-MDS) is a structured electronic tool and can guide nurses to the direction of a comprehensive account of patients' condition and care in written pre-printed summary format to complement verbal handovers. The NH-MDS can be used in practice and education by managers, clinicians and educators, too (Johnson et al, 2012a).

Another study conducted by the same authors and published the same year (Johnson et al, 2012b), examined factors (ICCCO) for the purpose of support an electronic tool (digital recorded handover data) and covers the range of the critical patient information. Alongside, every patient detail can be recalled from the staff at any time, guidance to nurses and prioritization of care are also available (Johnson et al, 2012b).

It is useful to remember that planning to implement changes in a basic function of clinical practice like handovers; a fundamental activity is to provide feedback to nurses about its outcomes (Chaboyer et al, 2009). Equally important is to overcome standardizations' barriers like the difference in communication needs across the wards that probably arise (Mayor et al, 2012).

Discussion

The nature of handovers is a direct reflection of the nature of nursing shift and the value of nursing interventions. Documentation of the nursing process is a fundamental function of the clinical practice (Ammenwerth et al, 2001).

Handovers have a role of code, a channel of communication among nurses, no matter the type of clinic they are working in. The principal function of handovers is the documentation of information around the nursing care (interventions and therapy steps) that has been applied to the previous shift, the organization and the preparation of the care that will be delivered to the patients in the oncoming shift.

The well-structured handovers are reflecting a fairly satisfactory level of the health services offered by nurses. The quality and the accuracy of the information that nurses handed over protect and foster patient safety. However, in a busy nursing shift nurses rarely engaged with the documentation of patients' care, especially when nursing shortage is dominant. For this reason, the contribution of a senior nurse practitioner to ensure patient care quality by updating every detail for patients' progress in the available documents is unique (Sexton et al, 2004).

The "perfect" or "good" or "successful" handover is deemed the one without conflicting aims, which is stating clearly the values that are intended to be achieved by nurses (Meissner et al, 2007). It should not be forgotten that there is lack of guidelines on how to perform a nursing shift handover.

The choice of the proper place (bedside or office) and the way of handovers depends on a plenty of factors. Every choice has its advantages and disadvantages and some of them are documented in the nursing literature. Taking for example the ward environment, which is usually busy and high demanding, is a factor that affects significant components of handovers. A positive correlation between handovers smoothness and interruptions is mentioned in few studies (Meissner et al, 2007, Evans et al, 2008, Liu et al, 2012). Interruptions during handover process disrupt its course and this factor may be responsible for nurses' dissatisfaction with handovers.

Across the countries, handovers' categorization and content presents variation. It is noteworthy that nearly all studies mentioned in the subcategory 'patterns/structure' of the theme 1, originated partly from emergency area settings (Bruce & Suserud, 2005, Jenkin et al, 2007,

Randell et al, 2011). Handovers' content has to do with the use of jargon, stereotyped phrases, the communication of information of care or sensitive information, non-verbal communication ways and psychosocial subjects.

In the period 2005-2012, there have been published many research papers examined steps to the change of handovers' type or their standardization (Kassean & Jagoo, 2005, Chaboyer et al, 2009, Yee et al, 2009, Chaboyer et al, 2010, McMurray et al, 2010, Mayor et al, 2012, Johnson et al, 2012a, Johnson et al, 2012b). The process of change or standardization of a handover needs to be done in a thoughtful and well designed context. Results of the above studies indicated positive evidence with valuable data. But, it is fruitful to know the applicability of them in different hospital settings.

Methodological issues of studies

Purely qualitative design (grounded theory or ethnography) and methods (interviews or observation or content/thematic analysis) were the most predominant choices in many studies (Payne et al, 2000, Sexton et al, 2004, Bruce & Suserud, 2005, Philpin, 2006, McMurray et al, 2010, Johnson et al, 2012a, Randell et al, 2011, Johnson et al, 2012b, Liu et al, 2012), as well as mixed-method approach (Kerr, 2002, Yee et al, 2009, Chaboyer et al, 2010, Bradley & Mott, 2012, Mayor et al, 2012).

Researchers used as sample for their studies the observation of handovers conducted in wards (Kerr, 2002, Sexton et al, 2004, Evans et al, 2008, Randell et al, 2011, Johnson et al, 2012a, Johnson et al, 2012b), staff members/patients (Bruce & Suserud 2005, Jenkin et al, 2007, Meissner et al, 2007, Chaboyer et al, 2009, Bradley & Mott, 2012, Liu et al, 2012) or both (Payne et al, 2000, Kassean & Jagoo, 2005, Yee et al, 2009, McMurray et al, 2010, Chaboyer et al, 2010). In one study, there were used documents plus the sample of nurses (Philpin, 2006). The sample size or the observation of handovers derived from multiple hospital wards (Payne et al, 2000, Kerr, 2002, Meissner et al, 2007, Chaboyer et al, 2009, Yee et al, 2009, Chaboyer et al, 2010, McMurray et al, 2010, Randell et al, 2011, Bradley & Mott, 2012, Johnson et al, 2012a, Johnson et al, 2012b).

Limitations

There are several limitations to this study that have to be mentioned. Firstly, there were methodological limitations. The search has been done in only one database and conclude papers in english, published after 2000 with free provision of full text. The last two factors may set out of the search several studies. Then, the analysis of the evidence found, was done by one author. Secondly, there were studies like this of Yee et al. (2009), whose transferability and generalisability of their outcomes need further consideration.

Relevance to nursing education, clinical practice and implications for further research

Benefits of this review concern nursing education, research and clinical practice. In the first level, strengthening the basic nursing knowledge by the incorporation of the required knowledge for standard practices like handovers, in nursing education programs remains a challenge. Nursing students need to be informed about, to comprehend and able to apply this communication process, when they will work in the ward environment as qualified registered nurses.

Concerning the clinical nursing practice, handovers help nurses to shape professional identity (Payne et al, 2000). The development of concise guidelines is beneficial for the standardization to devote more time to direct patient care (Sexton et al, 2004). Also, suitable leader nurses had a substantial role in the handovers' quality improvement (Meissner et al, 2007).

Since nursing shift handovers represent a pivotal function which is implemented by nurses in everyday practice, important dimensions for further research and debate could be the:

- theme of structured or not handovers (Sexton et al, 2004)
- assessment of the multidisciplinary team contribution in the handovers' function (Kassean & Jagoo, 2005)
- development of guidelines or a formal handover sheet would be useful to guide for nurses to carrying out the handover process (Pothier et al, 2005, Jenkin et al, 2007)

- integration and teaching of handovers in nursing education (Jenkin et al, 2007)
- patients' interaction during handovers (Johnson et al, 2012b).

In line with the above goals, when studying nursing handovers issues or when handovers are under redesign or reassessment, it is useful to evaluate further the factor of uncertainty (Mayor et al, 2012).

Conclusion

This review paper provided some insights into the research evidence of approximately the last decade, examining fundamental issues concerning handovers in nursing, a considerable topic of communication. Nursing handovers are an integral function of the clinical nursing practice and all nurses should have detailed knowledge about the piece of information which synthesizes this procedure. By improving handover practices, patient safety is enhancing as well. Finally, nursing shift handovers and their constant improvement should be high priority issues for clinical nurses.

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