Clinical Handover Project

Training Manual

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Clinical Handover is one of ACSQHC's priority programs with the aim to identify, develop and improve clinical handover communication through developing and implementing more consistent and reliable approaches to clinical handover.

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Introduction

Clinical handover has become increasingly important due to changes in healthcare services and increasing complexity of patient care. These changes have significant implications for the current model of delivery of care. Some of these factors include:

- Increasing acknowledgement that safety and quality of healthcare services is of paramount importance.
- Increasing recognition of the impact of fatigue among healthcare professionals. This has led to shorter working hours and an increase in the number of shifts over a 24 hour period.
- Increasing recognition that discontinuity of patient care leads to adverse patient outcomes.
- Increasing understanding of the handover process and potential improvement strategies.
- Increasing understanding of the importance of education and training in fostering a safe healthcare culture.
- Increasing complexity of patient care, necessitating increasing number of healthcare professionals to assist in the care of patients.
- Increasing acuity of patients being looked after on general wards.

This Education and Training Manual is designed to deliver education and training regarding clinical handovers among healthcare professionals. Local protocols and minimum data sets have been included in this training manual. This forms part of the bigger project funded by the ACSQHC which aims to develop standardised operating protocols to improve clinical handover.

Objectives

This Education and Training Manual aims to achieve the following objectives:

- Provide an understanding of patient safety with a focus on clinical handover.
- Provide an understanding of the importance of systems and human performance in patient safety with a focus on clinical handover.
- Provide an understanding of clinical handover problems through case study examples.
- Provide a dynamic discussion of strategies for clinical handover improvement
- Provide an understanding of international and national clinical handover initiatives and the role of local improvement programs in informing national and international initiatives.
- Provide an understanding of the rationale and the current clinical handover standardised operating protocol, both at the conceptual and local level.
- Provide an understanding of the rationale and the current clinical handover minimum data set, both at the conceptual level and local level.
- Provide an overview of local implementation and local support for clinical handover improvement.
- Provide up to date literature to support current practice

This Education and Training Manual should be used together with systemic interventions in order to improve clinical handover practices. These training activities should be carried out on a regular basis to ensure all staff members are familiar and understand the importance of clinical handover. This training manual should be updated on a regular basis to ensure best practice according to current literature.

HANDOVER AND PATIENT SAFETY

Handover and Patient Safety

Introduction to Patient Safety

- Medical errors and adverse events are common
- How safe do you think healthcare systems are?
- What would you estimate the adverse event rates to be?

US Statistics

- Avoidable deaths in hospitals from medical errors are estimated to be between 44,000 and 98,000 per year and to cost around $29 billion
- This is equivalent to 2 full Boeing-747 planes crashing every two weeks
- Fifth leading cause of death in the USA

[Kohn et al 1999]

UK Statistics

- Estimated that 10% of admissions are associated with adverse events

[Department of Health (2001)]

Australia Statistics

- The Quality in Australia Healthcare study indicated that 16.6% of hospital admissions are related to adverse events and medical errors
- 50,000 led to permanent disabilities and 18,000 resulted in deaths
- About half of these cases are thought to be preventable

[Wilson et al (1995), Armstrong (2004)]

Error causation

- Communication is the main problem (> 50% of adverse events) (Wilson et al, 1999)
- Other causations include:
  - Technology
  - Work environment and institution
  - Staff individuals
- Handover is considered an important and common communication problem

[Wilson et al (1999)]

Error causation cont'd

- Prevention strategies identified in the Quality in Australian Health Care Study include:
  - New, or better implementation policies or protocols (23.7%)
  - More or better formal quality monitoring or assurance processes (21.2%)
  - Better education and training (19.2%)

[Wilson et al (1999)]

Approach to patient safety

- The personal perfectionalism approach
- Assumption
  - Bad things only happen to bad people
  - "Blame, shame and train"
  - Errors are deliberate and should be condemned
- Comments
  - Still common and well and truly alive
  - Satisfaction of "problem solved"
- Errors recur frequently, often with different operators

[Reason (2000), Yee et al (2006)]

The system error theory

- The systems view originates from aviation and the nuclear power plant
- Assumption
  - Humans are fallible and errors will always happen when humans are involved.
  - Errors are consequences, rather than causes, which includes recurrent error traps and organisational processes
  - Systems need to be robust
- Solutions should aim to build a more robust system
- Systems need to be able to prevent errors from causing adverse events

[Reason (2000)]

Swiss Cheese Model

- Active errors (unsafe act due to slips, lapses etc)
- Latent conditions (error provoking conditions such as staffing, time pressure etc, and weakness in defences, such as alarms/alerts which do not work)
- We cannot change the human condition, but we can change the conditions under which humans work

[Reason (2000)]

A different view: Resilience

- Systems are intrinsically unsafe
- Safety and efficiency trade-offs
- Safety involves all level of the organisation

[Dekker (2006)]

Resilient systems

- A safe and resilient system will require a combination of both factors
- System intervention is required, especially for routine work, i.e. doing the routine right everyday, every time.
- Socio-cultural intervention is required to create safety within an unknown environment (i.e, I want to do it right.)

[Dekker (2006), Wong et al (2006)]

Handover safety

- Handover can be safer, by combining systemic and socio-cultural interventions
- Systemic intervention(s) might include standardisation, information tools etc
- Socio-cultural intervention(s) depends on you and me, i.e. everyone within an organisation

[Yee et al (2006)]

Systemic intervention(s) in handover

- Systemic intervention(s) requires standardisation so that everyone knows what to expect
- Standardisation provides guidance and reduces slips/misses
- Standardisation, needs to consider individual localised factors and therefore needs to incorporate flexibility (i.e. take into account local considerations)

[Wong et al (2007)]

Socio-cultural intervention

- The culture is dependent on us!
- It is us that create a safe culture and us that create a safe healthcare system!
- We need to believe in it, learn how to do it, promote it and practise it.
- We need to make safety a routine practice.
- It depends on us to make it sustainable and to teach and engage future practitioners!

[Wong et al (2008), Wong et al (2007)]

Support / Tools

- Both systemic and socio-cultural interventions require tools to assist in its utilisation
- Both require support for sustainability
- Policies/guidelines are important but the practice of it depends on us!

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PROBLEMS WITH HANDOVER: CASE STUDIES

EIMS HANDOVER DATA

Genuine incident reports

ED TO THE WARD

Ward aware of patient being transferred from ED. ED contacted ward at 1715 to give handover of same patient to come to ward directly. Ward nursing staff requested that they wait until after dinner as skeleton nursing staff on ward due to staffing sick leave. Requested that patient arrive at 1830. ED staff disappointed as they were swamped – 3 ambulances in waiting bay. Due to safety reasons ward still requested later admission to ward, ED staff agreed and stated that they would handover on the patient when they bring them up at 1830. Patient arrived on the ward at 1945 with nurse but when asked about handing over she stated that she did not know the patient, that she was working in the corridor and was asked to bring the patient to us on the ward, no information was given other then the notes for the ward staff to read.

ED TO THE WARD

Patient arrived from DEM with no handover from DEM nursing staff. Escort nurse did not give handover as said she was just the gopher and would only tell us what the notes said. Consequently, no nursing handover received on patient transfer.

WARD TO THEARE

Patient arrived in the waiting bay operating theatre without staff handing over that patient positive for VRE. The patient was transferred to a common access area which is shared by other immunocompromised patients.

WARD TO WARD

Patient transferred from surgical ward on 5/10 and noted on the 8/10 that patient had been ordered cholrhexidine packing to wound TDS and there was no documentation by nursing staff as to what the specific orders were and was verbally handed over that the dressings were being attended BD and saline packing was being used. Notifies DR, ordered to continue using chlorhexidine as was ordered by the plastics team.

ED TO WARD

Patient was transferred from DEM to 2DS with admission diagnosis of Bacterial Meningitis. There had been two over the phone handovers to ward staff from DEM staff with no indication of Meningococcal. When pt arrived the verbal handover to Nursing staff was potential diagnosis of Meningococcal and awaiting Infectious Disease review. Admission to Surgical ward into a 4 bed room was inappropriate for risk of Meningococcal transfer to Surgical pts and staff. inappropriate bed allocation, full assessment in DEM not complete. Infectious Disease review on ward -Pt needed 24hr Respiratory Isolation. Staff workload affected, patients in Stepdown unit left unattended for 1.5 hrs while appropriate medical staff and infection control staff notified, and pt relocated to a single room.

WARD TO WARD TO WARD

Mrs xxxxx was transferred from ORU on 31/01/08 following a hip arthroplasty on 23/01/08. The patient was moved from ED to theatre to GSU to ORU and then 2BS. On arrival from ORU, there was no verbal handover and no transfer documentation which resulted in the staples being left in for an extra 8 days causing a significant wound infection requiring IV antibiotics, delaying her transfer to Rehab/TCU and causing pain, fever, extra confusion on top of her dementia and some aggression

Handover is high risk

Case Study 1

Presentation

Normally fit and healthy elderly patient presents to the emergency department post fall at home in the garden

- Attended by ED staff and history taken, nil significant past medical history.
- PAIN – Left hip
- X-RAY – fracture
- Surgery that day

Post operative

- Post op documentation prepared by surgeon – placed into notes (Clearly documented)
- Patient stays on surgical ward for 24-48 hours then transferred to ortho.
- Patient showing signs of post op delirium, confused, unexplained febrile episodes

Day 2-9

- Difficult to manage
- Unable to manage behavior on surgical ward
- Plans to transfer patient to medical ward under medical team due to behavioral issues
- Medical ward contacted to receive patient due to behavioral changes and difficulty managing patient
- Abnormal blood results – WCC >20

Day 9 onwards

- Transferred to medical ward.
- Handover via phone.
- Handed over to staff member NOT looking after patient due to ward acuity.
- Patient transferred by staff member "I have not really looked after the patient, just helping out" – unable to give any handover to afternoon shift regarding patient.
- Continues to spike temperatures
- Remains confused and now aggressive
- Difficult to manage patient
- Patient transferred from ortho/surg team to medical team

Day 15

- Wound dressing removed (documentation that wound redressed or reinforced no documentation of staples or wound state)
- Staples remain insitu
- Wound red
- Pain at wound site
- Pus

What happened

- Review of notes - No Documentation regarding wound care for several days.
- Ortho team contacted – unhappy with patient condition
- Medical team notified and reviewed wound site.
- Notes reviewed - Post op surgical instructions – removal of staples day 6/7 found on post op instruction sheet (no other documentation in notes)

Nursing Interventions

- Removed staples
- Pathology
- Observation
- Documentation
- Incident reporting
- Nursed on High Low bed due to risks

Costs for MINOR incident

- **Pathology requirements**
  - Swab $48.45
  - Bloods $78.60
- **Extended hospital stay**
  - $800 night X 3 nights total $2400approx
- **Pharmacological treatment**
  - IV Antibiotics ?$$ 36.44 Daily ceftriaxone, plus ben pen 6/24 at $32.05 day.
- **Nursing workload**
  - One on one nursing initally ($240 for eight hours)
  - Danger to staff ?at what cost??
- **Total : 4892.37 for additional 3 days**

OUTCOME?

- If this was to be the outcome for one patient/week the total cost for the hospital in a year would be nearly **$250,000** based on the patient being cared for on a general medical ward with no further complications based on a minor incident!
- ($4892.37x52 =$254403.24)

Think…

- ED to theatre
- Theatre to Recovery
- Recovery to the Ward
- Ward to Ward
- Ward to Ward
- Telephone handover
- Staff not knowing patient
- Assessment of patients

HANDOVER

- Not handed over between wards
- Not handed over at the ward level
- ❖ Why was it not handed over?
- ❖ How did it not get documented on the handover sheet?

References

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- Clinical intranet for costing of pathology
- Mims online for costing of medications

Deterioration of a patient post Percutanious Transluminal Coronary Angioplasty (PTCA)

Case Study 2

Presented by: Pieter Van Dam

History

- 73 year old patient admitted to ward with angina
- Past Medical History included:
- ↑cholesterol
- ↑arterial blood pressure
- Rheumatoid arthritis
- A Diagnostic Coronary angiogram showed good myocardial function, a diffusely diseased (not stenosed) right coronary artery (RCA) and an 85% occlusion of the left proximal coronary artery (LAD)

Medications

- Isosorbide Mononitrate 60mg daily
- Glyceryl Trinitrate Sublingual PRN
- Aspirin 300mg Daily
- Clexane®80mg BD
- Simvistatin 40mg Nocte
- Clopidogrel 75mg Daily
- Naproxen 500mg BD

Procedure

- Transported to Cardiac Cath Lab mid morning to undergo PTCA.
- Two stents inserted into LAD
- Procedure completed without any complications

Post Procedure

- RETURN TO ANGIOPLASTY ROOM ON CARDIOLOGY WARD
- ECG performed – normal sinus rhythm
- Telemetry connected
- Patient started to complain about sever chest pain and in distress
- Telemetry showed no changes
- ECG performed again – no changed
- Observations within normal limits except for HR, 120 BPM

Post Procedure

- Patient vomited large volume frank blood
- Patient continues to deteriorate
- ? restenosis
- RMO NOTIFIED (was junior doctor)
- Fluid bolus given to compensate lost blood

Post Procedure

- Patient continues to deteriorate
- HR 145
- BP 95/50
- Respiratory Rate 30 with Oxygen saturations 92% on 15l NRB
- MET CALL

MET CALL

- Further loss of Blood
- Patient anxious and restless
- Hypovolaemic shock
- Fluid resuscitation (Hartmans)
- IV maxalon
- Patient in sinus tachycardia without ST segment and T wave changes
- TRANSFERRED TO ICU

Review

- Patient found to be suffering from bleeding gastric ulcer
- Patient history reviewed
- Patient on NSAID Naproxen 500mg BD
- Clexane 80mg BD
- Clopidrogrel 75mg daily
- Aspirin 300mg Daily
- + patient received 10,000 units heparin during procedure!!

What went wrong??

- Combination of errors.
- Junior doctor admitting the patient
- Nurse admitting the patient not able to recognise drug interactions, also gave medications prior to the procedure
- Handover to the cath lab ?did it include the medications that had been given that morning?
- Was it handed over to the ward staff?
- Swizz cheese model

DISCUSSION

Case Review: Missed communication between units

Introduction

The nursing and medical management of patients is becoming more complex, therefore ward staff are likely to see more acutely ill patients on the general ward. Patient survival often depends on recognizing patients' deterioration, and the nurses' confidence to make the decision to call for emergency assistance. In this case review I intend to discuss the deterioration of a cardiac patient after undergoing a Percutaneous Transluminal Coronary Angioplasty (PTCA). The reason for choosing this particular patient is that a complication free procedure ended into a preventable Intensive Care Unit (ICU) admission. I will describe the patient's health problems including medication history, and the care provided. Furthermore, I will discuss the causes leading to the deterioration, and I will also discuss methods to overcome these causes leading to recommendations for clinical practice. Finally, I will use clinical examples from my own practice to illustrate my discussion.

Summary of health problems and acute care management provided

A 73 year-old female patient was admitted to the cardiology ward with angina pectoris or chest pain, caused by a blockage or spasm of a coronary artery, leading to diminished myocardial blood supply (Urden, Stacey & Lough, 2004). She also suffered from hypercholesterolemia, an excess of cholesterol in the blood (Gould, 2002) and arterial hypertension, which is the elevation of either systolic or diastolic blood pressure above 140/90 millimetres of mercury (mm Hg) (Urden, Stacey & Lough, 2004). These conditions resulted in single vessel coronary artery disease. The diagnostic coronary angiogram showed good myocardial function, a diffusely diseased, but not stenosed right coronary artery (RCA), and an 85 percent occlusion of the proximal left coronary artery (LAD).
For a good heart function, the cardiac muscle requires a constant supply of oxygen and nutrients, carried in the blood, to conduct impulses, and contract efficiently (Gould, 2002). Blood supply to the myocardium is derived from the two main coronary arteries, the left and the right. The left main coronary artery has two major branches known as the LAD, and the left circumflex artery (LCA). The LAD passes down the anterior (front) wall of the left ventricle toward the apex (bottom) of the myocardium, and many other small branches extend inward from these large arteries to supply the myocardium and endocardium (Morton, Fontaine, Hudak & Gallo, 2005) An 85 percent occlusion in the LAD results in a large depletion of oxygen and nutrients to the anterior left ventricle and apex, resulting in angina (Morton, Fontaine, Hudak & Gallo, 2005). The interventional cardiologist decided to perform a PTCA after reviewing the results from the coronary angiogram to treat this occlusion.

The patient's medical history also included rheumatoid arthritis, an autoimmune disease which causes chronic inflammation of the joints, the tissue around the joints, as well as other organs in the body (Gould, 2002). The patient's medication profile included the following medications:

- Isosorbide mononitrate 60 mg daily;
- Glyceryl Trinitrate spray as needed;
- Aspirin 300mg once a day;
- Enoxaparin sodium 80mg twice a day;
- Simvastin 40mg nocte;
- Clopidogrel 75 mg daily, and
- Naproxen 500mg twice a day.

The PTCA procedure also required the following medications: Morphine 10mg as needed, Atropine as needed and Oxazepam 10mg as needed.

Health problem leading to clinical deterioration

The patient was transported to the Cardiac Catheterization laboratory mid-morning to undergo a PTCA; a procedure which uses a balloon-tipped catheter to improve blood flow to the myocardium by dilating coronary arteries (Cronin, Freeman, Ryan & Drake, 2000). Two stents; expandable tubes of various designs made of metal, metal alloy, or polymer (Schwertz & Vaitkus, 2003) were placed in the LAD. The reason for two stents was the long lesion the cardiologist found in the LAD. Long lesions and more than one stent increase the chance of restenosis (Stanik-Hutt, 2004). Restenosis is a re-narrowing of the artery injured in the process of the PTCA, which can happen acutely or over a period of 6 months (Schwertz & Vaitkus, 2003). The patient underwent the procedure without any complications.

The patient arrived on the 'angioplasty room' of the cardiology ward at one o'clock in the afternoon. The patient now came under my care and the PTCA clinical pathway was commenced as per hospital protocol. Clinical pathways describe the course of hospitalisation for patients with a specified illness, and encompass a predetermined plan of treatment (Dowsey, Kilgour, Santamaria & Choong, 1999). The nurse plays a significant role in observing and assessing angina that reoccurs soon after a PTCA procedure. Any chest pain demands immediate, and careful attention, because it may indicate either the start of vasospasm or impending occlusion (restenosis) (Morton, Fontaine, Hudak & Gallo, 2005).

An Electro Cardio Gram (ECG) was performed, which allows an initial cardiac assessment and establishes a baseline if the patient's condition should change suddenly (Morton, Fontaine, Hudak & Gallo, 2005), and the ECG showed normal sinus rhythm. A telemetry unit was connected to the patient and the patient's details were entered into the main computer. ECG changes reflect decreases in the oxygen supply to the myocardium. Changes in the ST segment and T wave are indicative of myocardial ischemia, injury, or infarction (McAvoy, 2001) and these changes occur in the case of a restenosis.

About 15 minutes after arrival the patient started to complain about severe chest pain and became distressed. The telemetry did not show any changes and another ECG was performed showing no significant change. The other observations were within normal limits, except the pulse rate which had increased to 120 beats per minute (BPM). The patient was so distressed that she was not able to answer any of my questions about the nature of her pain. The ECG and rhythm strips did not give evidence of a restenosis, because the ST-segment and T wave appeared to be normal.

The patient became more and more distressed, and started to vomit a large volume of frank blood. As many other experienced nurses, I recognized the patient's deterioration from feelings I had that something was wrong. However, I was not able 'to put my finger on it'. The obvious cause of the chest pain would be an acute restenosis, which occurs in approximately 3 percent of those undergoing PTCA (Drew & Krucoff, 1999). My past experiences helped me to recognize the deterioration of this patient (Cioffi, 2000).

Decision making in nursing practice is often a very complex process (Ellis, 1997), especially in complex situations where more unknowns and uncertainties are present, as in this patient's case (Cioffi, 1998). However, I was worried by this patient's condition and decided to call the Medical Officer in charge. The Medical Officer was a junior doctor, who was not able to make the necessary decisions. There was no senior medical backup available because the senior doctors were attending a cardiology seminar interstate.

Taking into consideration the large amount of blood the patient had lost I suggested and received an order from the Medical Officer to give the patient a bolus dose of 500 millilitres of normal saline solution to compensate for the blood lost. A normal saline solution is a crystalloid fluid; a balanced salt solution used in replacement therapy (Urden, Stacey & Lough, 2004). The discussion about using crystalloids or colloids; a solution containing active particles that are employed to expand intravascular volume is still current. However, the latest research results indicate that there is no difference between using colloid or crystalloid solutions in fluid resuscitation for hypovolaemia (Roberts, Alderson, Bunn, Chinnock, Ker & Schierhout, 2004; Bohan, 2004).

At this stage the patient's condition had deteriorated, and the patient's observations had worsened. She now had a pulse rate of 145 BPM, a blood pressure (BP) of 95/50, a respiratory rate of 30, and an Oxygen saturation of 92 precent on 15 litres of Oxygen by the non-rebreather mask. I decided to call the Medical Emergency Team (MET), which was established in the hospital 1 year prior to this incident. The aim of the MET is to promote early intervention to prevent the occurrence of cardiac arrest and its associated morbidity and mortality (Daffurn, Lee, Hillman, Bishop & Bauman 1994). The MET is modelled on the principles of early recognition and rapid response to manage severe trauma (Cioffi, 2000). The MET also empowers nursing staff and junior medical staff to call for immediate assistance in cases where they are seriously concerned about a patient, but may not have the experience, knowledge, confidence or skills necessary to manage them appropriately (Cretikos & Hillman, 2003); which was patently obvious with the Medical Officer.

At the time that the MET arrived the patient had lost about one litre of blood. The patient was very restless and anxious, and the clinical signs and observations indicated to me that this patient was suffering from hypovolaemic shock. A shock is a life threatening condition characterised by an inability of the circulatory system to supply adequate oxygen and nutrients to the tissues (Hand, 2001). Hypovolaemic shock is caused by a reduction in circulating volume and has been described as having an 'empty tank' (Hand, 2001).

The patient was now in the second or compensatory stage which occurs from a fluid volume loss of 750 to 1500 ml. and the Cardiac Output (CO) falls, resulting in the initiation of a variety of compensatory responses. The heart rate increases in response to increased sympathetic nervous system stimulation (Urden, Stacey & Lough, 2004).
The diastolic blood pressure increases because of vasoconstriction, although this was not observed in this patient, respiratory rate and depth increase in an attempt to improve oxygenation (Urden, Stacey & Lough, 2004).

The MET continued with the fluid resuscitation and ordered Hartmann's solution in attempt to replace the loss fluid. Intravenous metoclopramide; an anti-emetic was given in an attempt to stop the episodes of vomiting. The patient was still monitored in sinus tachycardia without any ST-segment and T wave changes. The MET found it hard to stabilise the patient on the cardiology ward, and therefore decided to transport the patient to the Intensive Care Unit (ICU).

What went wrong?

I would firstly like to mention that the patient survived the ordeal without any serious adverse effects. In the ICU the medical team discovered that the patient was suffering from a bleeding gastric ulcer. There are several causes why gastric ulcers occur in patients. During the aging process, mucin secretion from the mucus cell decreases, thereby altering the protective function of the gastric mucosal (bicarbonate) barrier, and this increases the incidence of gastric ulcerations (Urden, Stacey & Lough, 2004). Another cause is the bacteria Helicobacter pylori, which is a major factor in the development of peptic ulcers (Nissen, 2002). Non-steroidal anti-inflammatory drugs (NSAIDs) are another major contributing factor to ulcers. The New England

Journal of Medicine identified NSAIDs as the second leading cause of ulcers in the United States (Wolfe, 1999). One study reports that approximately 50 percent of patients who regularly take NSAIDs have some level of gastric erosion, and as much as 15-30 precent have ulcers (Laine, 2001).

We are now nearing the cause of the rapid deterioration of the patient in this case. As previously mentioned the medication profile included Naproxen; which is a NSAID, and aspirin; another stomach irritant. These medications in themselves, and the age of the patient, could lead to a bleeding gastric ulcer. Furthermore, Enoxaparin 80 mg, an anticoagulant and Clopidogrel 75 mg; a platelet inhibitor were administered to the patient prior to the procedure. These medications increase bleeding time (Wimberly & Wiggins, 2004). Enoxaparin; a low molecular heparin was given by mistake; (the Clinical Pathway for PTCA does not mention withholding the medication prior to the procedure). However, low molecular heparins can only partially reverse its anticoagulant effect by using Protamine (Bryant, Knights& Salerno, 2003). Prior to surgical procedures low molecular heparins should be stopped (Bryant, Knights & Salerno, 2003). In addition to these medications the patient also received intravenous 10,000 units of heparin in the catheterization laboratory.

The combination of drugs and the patient’s age led to a severe bleeding gastric ulcer, which could have been fatal. The patient was admitted by a junior overseas trained doctor, who lacked the necessary knowledge and skills to properly review the patient, including the medication given. The nurse caring for this patient prior to the incident was also not able to recognize the interactions of the ordered drugs and also made a drug error. According to Wimberly & Wiggins, (2004) drug knowledge and response monitoring proves crucial to treatment success, and it is inherent in the nursing role. Failure to adhere to protocols and properly monitor results may produce poor patient outcomes, increased lengths of stay, and unnecessary laboratory testing.

Recommendations

Pharmacological prophylaxis should have been suggested by the Medical Officer and the nurse caring for the patient prior to the procedure. The use of Proton Pump Inhibitors (PPIs) should have been initiated. Recent studies show (Azevedo, Soares, Silva & Palacio,1999; Jung & MacLaren, 2002)
that the administration of PPIs is an effective method of preventing ulcers in high risk patients. Because PPIs inhibit the final step in acid production, they provide long lasting suppression of acid secretion (Spirt & Stanley, 2006). Because the Medical Officer was lacking the necessary knowledge, the prescription for PPI’s was omitted.

According to Walpole (2004) in an ABC news article, two-thirds of overseas trained doctors (OTDs) working in Tasmania are not fully accredited for Australian practice. Former Health Minister David Llewellyn has said that without these doctors the state would be worse off. I would argue this statement, because without any form of assessment, we have no idea about the knowledge and clinical skills of these OTDs. This can lead to similar situations as described here. Assessment for safe practice, conforming to Australian standards, should be put in place (McGrath, 2004).

The Medical Training Review Panel Overseas Trained Doctors Subcommittee (McGrath, 2004) recommends that to ensure that all OTDs meet safe practice standards, a standardised, comprehensive pre-employment assessment, followed by a year of supervision and mentorship should be implemented. The following question arises: “Why would the medical profession be different to the nursing profession?” All overseas trained nurses are assessed by the Australian Nurse Midwifery Council (ANMC), using the ANMC competency standards. To have safe and competent OTDs, Australia needs the establishment of a national body to address licensure and minimum standard issues (Mc Grath, 2004).

Poorly performing staff are not only a risk to patients, but also to colleagues and the organisation in which they work (Braine, 2006). By not receiving adequate orders I was left to my own devices, and as a result of this I called the MET. Clinical governance advocates a clear mechanism for identifying, reporting and dealing with poor performance (Braine, 2006). Knowing this I decided to lodge an incident report describing the incident with the aim of improving the quality of patient care (Kalisch & Aebersold, 2006). As a result of my incident report and other reports, the Medical Officer was placed under strict supervision and teaching strategies were put in place to upgrade his skills.

The other contributing factor; the Clinical Pathway for the PTCA procedure, needs to be changed to ensure that Enoxaparin should be withheld 24 hours prior to the procedure. This will enable inexperienced nurses, and nurses new to the area, to make the right decisions. Education sessions should be commenced to teach the nurses working on the ward about the interactions of Enoxaparin (Kalisch & Aebersold, 2006).

Conclusion

The deterioration of the patient in this case review was not straight forward. The patient developed severe chest pain after the PTCA procedure, and the most obvious cause would have been a restenosis of the coronary artery. However, this was not the case. A bleeding gastric ulcer led to the deterioration of the patient, which could have been fatal. My advanced clinical experience as a nurse, and the MET played a vital role in the survival of the patient.

Several preventable causes led to the deterioration, the lack of medication knowledge of the Medical Officer and the nurse involved, the lack of general knowledge and skills of the Medical Officer, and an unclear clinical pathway. Recommendations to improve the quality of care for the patient includes having a national body to better assess Medical Officers, and changing the Clinical Pathway to ensure that Enoxaparin is withheld 24 hours before a PTCA. Finally education sessions should be held to increase the knowledge of staff working on the cardiology ward.

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Clinical Handover ACSQHC RHH-UTAS 2007-2008

Problems with Handover

Case Study 3

Emergency Department

Name: (withheld)
Age: 20 year old
Sex: Male

Presenting History:
BIBA following collision with wall whilst playing indoor tennis. Complaining of severe leg pain, with obvious deformity to mid-shaft of femur
Patient's mother arrived in ED shortly after TAS arrival.

Emergency Department

Past Medical History:

Previous fractures of (l) and (r) tibia, (l) radius, pelvis and Multiple fractures involving the small bones in (l) foot. (All of these necessitated hospital treatment including at the RHH)

Pyknodysostosis: diagnosed when patient 4 to 5 years old (rare skeletal disorder resulting in shortness of stature, unfused fontanelles, bone brittleness and a structural upper airways obstruction)

Sleep apnoea

Emergency Department

Medical history from the patient revealed that he suffered from pyknodysostosis; was susceptible to bone fractures, and had in the past consulted a private orthopaedic surgeon for management of his condition and treatment of previous fractures.

The option of referring the patient to be admitted to a privatehospital under the care of his specialist was discussed. The patient declined the offer saying that he preferred to stay *"here"* and be treated by RHH surgeons.

Emergency Department

On examination:
The patient had slight swelling over his (r) thigh, which was raised and tender to palpation

On X-ray:
Closed fracture mid-shaft (r) femur

Medications:
IV morphine for pain

At 15:25 pm the patient was transferred to the ward (when a bed became available)

Emergency Department

Pre-op anaesthetic assessment:

Hx of pyknodysostosis was gathered, the patient told the anaesthetist that he didn't have any problems with his breathing although he had narrow nasal passages and preferred to sleep on his side.

The patient records referred to his pyknodysostosis and sleep apnoea. They did not indicate any previous Anaesthetic difficulties.

Theatre

Open reduction and internal fixation of the femoral shaft Commenced at 19:55 hrs, proceeded uneventfully and concluded at 21:15 hrs

Patient transferred to recovery at 21:30 hrs

The patient remained in the recovery room until about 22:10 hrs. His observations remained stable and within normal limits.

The recovery nurse handed over the patient's care to a Registered Nurse from the ward at 2220 hrs.

Anaesthetist Handover shift-to-shift (Medical)

Anaesthetic commenced at about 19:30 hrs – uneventful.

At 20:00hrs, the patient was handed over to the night Registrar, who was advised of the patient's craniofacial Abnormalities and his preference to sleep on his side because of his narrow nasal passages. When the surgery was complete the anaesthetist extubated the patient while he was positioned on his side.

Handover from OT to Recovery (Medical to Nursing)

At 21:30 hrs, the patient was transferred to recovery, mildly sedated but conscious.
Handover was given by the anaesthetist to an RN. It was explained that the patient suffered from a congenital condition affecting his mouth and airway system. The nurse did not record being informed of the patient's sleep apnoea.
In the recovery room the patient c/o moderate pain and was administered morphine. He did not complain of nausea and was not given any anti-emetics.

Handover from Recovery to Ward Nurse

At 22:20 pm the recovery nurse handed over the patient's to an RN from the ward.

Post-anaesthetic obs were recorded as *"satisfactory."* No reference in the nursing records of the RN being informed at handover of the patient's upper airway abnormality or his sleep apnoea.

The late shift nurse transferred the patient back to the ward.

Handover Shift-to-Shift on the Ward

A baseline set of post-operative observations were done, and care was handed over to the night shift.

The handover included:

- the surgical procedure
- that his recovery in the Recovery Room had been uneventful
- that he required hourly neurovascular observations of his right leg

Handover Shift-to-Shift on the Ward

It was mentioned that the patient had a genetic condition, but the night shift nurse did not recorded being informed its effect on the patient's upper airway.

The patient's hospital records were not on the ward at this Time, save for that day's admission notes.

The nursing staff on night shift comprised of two RNS and an Enrolled Nurse.

He was placed in a single-bed ward.

On the Ward

After the handover the night shift nurse introduced herself to the patient, describing him as alert, responsive and oriented.

The patient had a "PCAM", but to this point had not needed to use it. The nurse did not have any concerns at this time about the patient's condition.

She left the enrolled nurse to carry out his regular obs while she attended to other duties.

On the Ward

Post-operative obs were carried out by the EN every 15 minutes for the first hour, then half hourly. They continued to be within normal limits.

At 12.30 am the EN noticed that the patient's IVC had disconnected, leaving a wet patch on his bed. Together the RN and EN changed the patient's linen

On the Ward

It was at this time that the patient started to c/o feeling unwell and wanted to be sick. No post-op anti-emetic was ordered.

The RN telephoned the anaesthetist, and gained a verbal order for Ondansetron.

The IV was reconnected and ondansetron administered.

The patient c/o pain in his leg and was uncomfortable.

On the Ward

The nursing staff assisted him onto his side and used two pillows to support his right leg and a pillow behind his back.

The nurse call bell and PCAM button were placed within reach of the patient. Observations were undertaken (approx 0130) before staff left the room. The patient requested to have his door closed.

On the Ward

The third nurse also visited his room (approx 01:00hrs) stating that the patient “appeared bright and alert”. He told her that he felt better now that he had vomited.

Approx 01:45 hrs, one of the nurses noted the patient’s door was closed, opened it and looked into the room.

She could see the patient still lying in the same position as previously.

On the Ward

About 10 to 15 minutes later she returned to the room to do the 02.00 observations.

The patient was still lying on his side but his face was tilted downwards, with vomit on his pillow.

Approximately 3 hrs from arriving on the ward this patient was found unresponsive, in cardiac arrest.

A Code Blue was called and CPR immediately Commenced.

Ward to ICU

Medical staff arrived and took over the resuscitation attempt. After about 5 minutes a pulse was detected and the patient transferred to ICU.

He did not regain consciousness. His condition deteriorated significantly two days later and after consultation with family members, active treatment was withdrawn.

The patient died at 3.00 am the next morning.

DISCUSSION

What went wrong?

CORONERS FINDINGS

MAGISTRATES COURT OF TASMANIA

RECORD OF INVESTIGATION INTO DEATH
Coroners Act 1995
Coroners Regulations 1996
CORONER'S FINDINGS, COMMENT AND RECOMMENDATIONS:

(NAME) died on (DATE) … 2006, at the Royal Hobart Hospital (*"RHH"*) in Hobart.

(NAME) was born in Australia on (DOB) and was aged 20 years. He was single and a university student. He resided with his family.

I find that (NAME) died from hypoxic brain damage due to aspiration pneumonia. At the time of his death (name) was in the care of medical practitioners at the RHH.

MAGISTRATES COURT OF TASMANIA

"RHH medical staff was aware … the patient had a … rare congenital Bone Disease … and that, as a result, he suffered from an obstructed upper airway and from sleep apnoea. These conditions made the patient particularly vulnerable to choking in the event of him vomiting."

"It is common knowledge that nausea and vomiting are a common consequence of general anaesthesia. Given these circumstances **it was not, in my view, appropriate for the patient to be placed in a single room in the general ward** where he was observed initially each 5 minutes then only at half-hour intervals".

MAGISTRATES COURT OF TASMANIA

"Rather, in my opinion, the patient's situation necessitated him being closely monitored for a 12 hour period post-surgery, preferably in a High Dependency Unit".

"The circumstances leading to the patient's death reveal several further matters which require comment. The first concerns patient Handovers…"

MAGISTRATES COURT OF TASMANIA

"It is apparent, upon the evidence, that when anaesthetist handed over the patient's care to the nurse in the Recovery Room, she was informed of his upper airway obstruction but **not of his sleep apnoea.**

Later, when the patient was conveyed to the … ward via handovers made to the late shift RN and then to the Night Shift RN, **the information** upon his relevant medical history **had been diluted** so that … the night RN was aware only that the patient had a genetic condition … she was not aware of the patient's sleep apnoea."

MAGISTRATES COURT OF TASMANIA

"Because **the nursing staff on the … ward** had a less than complete knowledge of Andrew's medical background they **were not in a position to provide the particular care that his condition required.** These circumstances lead me to **recommend that RHH carry out a review of its handover procedures …"**

"I conclude by extending my sincere condolences to … the family".

HANDOVER AS A HIGH PRIORITY AREA

Handover as a priority area

World Health Organisation High-5s Initiative

- Collaboration of various organisations: Commonwealth Fund, the WHO World Alliance for Patient Safety and the WHO Collaborating Centre for Patient Safety.
- The WHO High-5 initiative aims to implement innovative, standardised operating protocols for five patient safety solutions over 5 years.
- It aims to prevent avoidable adverse events in hospitals.

World Health Organisation High-5s Initiative (cont'd)

- High-five initiatives:
  - Prevention of patient care hand-over errors
  - Prevention of wrong site / wrong procedure / wrong person surgical errors
  - Prevention of continuity of medication errors
  - Prevention of high concentration drug errors
  - Promotion of effective hand hygiene practices
- Share experience to provide solutions internationally.

Australia's initiative

- Australian Commission on Quality and Safety in Health Care is the leading technical agency for WHO handover initiative
- The Commission has a working plan and has funded 7 phase 1 projects

Australia's initiative

- Commission aims to improve handover through:
  - SOP
  - Electronic tools
  - Education and training
  - Monitoring and evaluation

Current funding (the 7 projects)

- Bedside handover and whiteboard communication ➔ QLD
- Clinical handover for critically ill patients requiring air transportation ➔ WA
- Hospital to nursing home envelope ➔ VIC GP Division.
- SOP for nursing and medical shift to shift handover ➔ TAS

Handover as a priority area

Current funding (the 7 projects)

- Developing of E-learning strategies → QLD
- TeamSTEPPS communication training → SA
- Reflective video observation tools → NSW

Further tenders

- Private sector handover
- Literature review
- National learning from coroner's cases.

Clinical Handover Initiative

- This is the first phase, i.e. the beginning of projects to address the issue of clinical handover (2007-2008)
- Expected further projects in these areas in 2008-2009 and beyond.
- Likely to be in future accreditation of hospital etc.

Local support

- Strong steering committee, consists of Chief Executive Officer, academics, DHHS representatives, Director of Medical Services and Executive Director of nursing
- Strong local departmental and ward support
- Need strong support from staff members

For more information…..

- http://www.who.int/patientsafety/solutions/high5s/en/index.html
- http://www.safetyandquality.gov.au/internet/safety/publishing.nsf/Content/PriorityProgram-05

STANDARDISED OPERATING PROTOCOL

Clinical Handover ACSQHC RHH-UTAS 2007-2008

Standardised Operating Protocol

Overarching SOP

- **Preparation phase**
  - Understand the local context from user's perspective
  - Understand the rationale for change
  - Understand the motivators and barriers for change, through risk assessment
  - Identify stakeholders and change champions
  - Identify socio-technical issues for handover improvement
  - Identify resource requirements
  - Prioritise the clinical handover improvement initiative

Overarching SOP

- **Design phase**
  - Engage end-users in the design of a standardised handover process, which retains flexibility in adapting standardised practice guides
  - Engage end-users in the design of a standardised content transfer, which retains flexibility in adapting available minimum data sets
  - Engage end-users in the design of process tools to assist in the implementation of standardised content transfer

Overarching SOP

- **Design phase cont'd**
  - Engage end-users in the design of information tools to assist in the implementation of standardised content transfer.
  - Engage end-users in the design of an education and training program to implement the standardised process and content of handovers.

Overarching SOP

- **Implementation phase**
  - Establish a project implementation team which consists of all necessary members
  - Establish a project implementation work plan so that the implementation process is coordinated
  - Establish a risk management strategy for the project to ensure smooth implementation
  - Pilot the standardised handover process and contents

Overarching SOP

- **Implementation phase cont'd**
  - Establish an inter-disciplinary, inter-departmental continual learning strategy
  - Establish a communication and engagement strategic plan
  - Establish a spread methodology once the standardised process and contents have been revised based on initial feedback

Overarching SOP

- **Evaluation phase**
  - Strategies to disseminate evaluation data locally, nationally and beyond
  - Development tools to assist the evaluation of the implementation of standardised solutions
  - Development of an evaluation framework and evaluation plan for the implementation of standardised solutions

Overarching SOP

- **Maintenance phase**
  - Maintenance phase is time and resource intensive
  - Identification of "drifting" and "deviations" early
  - Identification of potential unintended consequences
  - Continual education and training of staff
  - Continual iterations to achieve current best practice

Our definition of handover?

- "verbal discussion of what's wrong with the patient"
- "Passing on the information about the patients in a clear and concise manner referring only to nursing related duties… preferably brief…"
- "Discussing the relevant details of a patients care"
- "The transferring of information from your shift to the next shift"
- "Clinical handover is handing over what ever knowledge you have of the patients under your care"

Quotable quotes

- In any narrative there is a hero and a villain. The same can be said in a nursing handover. Depending on the likes and dislikes, nature, mood of the nurse many patients are both seen as heroes or villianised. This can and does at times give the next shift of nurses preconceived ideas about a patient they haven't even met. *John Beechey 27.11.07*

What is Handover

- *"the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis."*

AMA guidelines

ACCOUNTABILITY

- The State of being answerable for ones decisions or actions. It cannot be delegated"

(ANRAC 1990)

RESPONSIBILITY

- "The obligation that an individual assumes when undertaking to carry out planned/ delegated functions. The individual who authorises the delegated function retains accountability" (ANRAC 1990)

Clinical handover Project... *Why?*

- Clinical handovers have become increasingly recognised as playing a vital role in the delivery of safe and high quality patient care

  One of the high risk areas where improved clinical handover solutions are urgently required is in shift-to-shift medical and nursing handover (WHO,2007)

  A major factor inhibiting improvements are… lack of basic understanding of the clinical handover process, and the lack of common structure for clinical handover (WHO, 2007)

Learning Handover

- "umm… just from experience.. Learn from what others do… picking up bad habits from others"
- "We have been taught the basics on paper… like a basic format to use… SOAPIE… subjective data, objective data, projective assessment plan, implementation and evaluation….."

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- "We have been taught the basics on paper… like a basic format to use… SOAPIE… subjective data, objective data, projective assessment plan, implementation and evaluation....."

So Far…

- Observations
- Interviews
- Data analysis
- Completion of SOP

Interviews – *the negatives*

- Not all information being handed over
- Deviation from the topic
- Interruptions
- Too long
- Not in suitable location
- Handover sheet not updated/irrelevant information
- Personal opinions
- Chinese whispers
- Intimidating for new staff/students

Interviews – *the positives*

- NOT TAPED!
- Opportunity to ask questions
- Bonus of double checking (ie. Charts and handover)
- Education

Guide junior staff and enable feedback

- Time to de-stress
- Handover sheet from computer
- Charts normally checked in timely manner

Interview Suggestions

- Produce a set of guidelines
- Ensure quiet location
- Ensure handover patient specific (short and to the point)
- Given opportunity to read notes prior to handover
- If logistically possible two staff to give handover (one member of staff to remain on ward)
- option to check charts post handover
- Handover between multi D team

What has been said

- Location of handover
- Length of handover
- Interruptions
- What information is wanted in handover
- Guidelines for handover

What Should We Do?

- Set aside a time and place for handover.
- Limit interruptions
- Ensure handover is up-to-date

Standard Operating Protocol

DISCUSSION

References

- Australian Medical Association. (2006). Safe Handover, Safe Patients. Guidance on Clinical Handover for clinicians and managers. [Available online http://www.ama.com.au/web.nsf/doc/WEEN-6XFDKN]
- Australian Nurse Registering Authorities Conference (ANRAC), (now ceased) 1990, Report to the Australian Nurse Registering Authorities Conference, Vol.1., pp91-94, Australian Nursing Council Incorporated.
- World Health Organisation (2007)

MINIMAL DATA SET

Clinical Handover ACSQHC RHH-UTAS 2007-2008

Minimum Data Sets

Overarching Minimal Data Set

Step 1: Environmental awareness

- Alerts and safety
- Advanced notice (especially high risk patient movement)
- Attention (to sick/deteriorating patients)

Overarching Minimal Data Set

Step 2: Patient identification

- Textual identification (at least surname)
- Numerical identification (hospital unique identifier or date of birth)
- Wrist band check or other demographic data

Overarching Minimal Data Set

Step 3: History, evaluation and management

- History (presenting problem, relevant past history and current issues)
- Evaluation (physical examination findings, investigation findings and current diagnosis)
- Management to date

Overarching Minimal Data Set

Step 4: Responsibility, risk management and action plan

- Tasks to be completed (include the tasks as well as recommendations)
- Outstanding or abnormal results and observations (include a list, as well as actions and recommendations)
- Risk management

Overarching Minimal Data Set

Step 5: Accountability

- Patient (code status, MET status, other relevant information)
- Organisation (discharge planning)
- Profession and colleagues (treating and responsible doctors, charts and clarifications)

Minimum Data Set (Observations)

- Name
- Age
- Unit
- Diagnosis
- Code/Met status
- Past medical history
- Social background
- Discharge planning
- Risk management
- mobility
- BSL & Medication
- Diet and assistance required
- IV Management
- O2 therapy
- Follow up required for next shift
- Continence management
- Behavior
- Medical Imaging/ procedures
- Medications
- Wound management
- Pain management
- Bowels
- Allied health
- Fasting/ nil orally
- Staff risk management
- Fluid balance/ daily wt
- Specimens required

Minimum Data Set (Interviews)

- Name
- Age
- Unit
- Code/Met status
- Diagnosis
- Relevant past history
- ADL's
- Abnormal observations
- RISK MANAGEMENT
- BSL's (as required)
- Allergies
- Specific obs. required
- Mobility
- Diet (if not FWD)/feeding
- Procedures
- Medication/transfusion/infusion specifics
- IV therapy inc. antibiotics
- IDC
- O2 therapy
- Discharge planning
- Patient specific issues
- Mood
- Wound Management
- Bowels
- Fluid balance
- Behavior
- Relevant family dynamics
- Abnormal blood results

What's different?

Observations

- Follow up required for the next shift (mainly night to am)
- Pain management

Interviews

- Allergies
- Specific observations required
- Abnormal bloods

The information?

- Placed into the SOP
- Developed guidelines for handover on the ward
- Developed template for telephone handover, utilising the MDS

NAME	MED TEAM/CONSULTANT		
Presenting COMPLAINT	DIAGNOSIS AND HISTORY		
CODE/MET STATUS	**ALLERGY**		
CURRENT STATUS and TREATMENT PLAN	**IV ACCESS** **INPUT** FLUID ORAL/NPO INFUSIONS RESTRICTIONS	**ABNORMAL BLOODS** Hb Na K+ Urea Creat INR APTT	MEDICATION DUE/GIVEN
	OBSERVATIONS		
PROCEDURE ATTENDED/PENDING	**OUTPUT** IDC Ostomy		
RISK MANAGEMENT(Mobility, behaviour, continence, skin integrity, wound, bowels, falls)	**ABNORMAL FINDINGS**		
SPECIFIC REQUIREMENTS: Daily weight, BSL, specimens, pain, fluid balance, allied health inputs	**Notification for medical team**		
SOCIAL			

Reference: Wilson, M. A., 2007

Clinical Handover

Minimal Data Set for all staff

- Handover times are from 0730 – 0800; 1415-1445; 2200-2230
- Prior to the commencement of handover all inpatients charts are to be checked, identifying the following:
- Medications due during the shift that are not given during the regular medication rounds, including IV antibiotics, IV medications
- Any observations that may be required during the shift that are not taken during the regular QID observation round, or any abnormal observations that could identify patients at risk of deterioration.
- Any blood products/infusions that are to be administered
- Fluid Balance Charts

Clinical Handover

Minimal Data Set for all staff

- IV fluid infusions and if there is sufficient orders for continuity of patient care
- Any medication doses that are required to be charted (i.e. warfarin therapy)
- Diabetic Management (For patients requiring blood sugar monitoring/insulin therapy/ oral hypoglycaemic management)
- Renal Management (For patients requiring Peritoneal Dialysis)
- Any other interventions that may be required for continuity of patient care throughout the shift that do not fall under the routine management of shift requirements
- Nutritional Requirements for patients.

Clinical Handover

Minimal Data Set for all staff

- All nursing staff to attend handover prior to patient contact, to ensure patient information is transferred in a safe and timely manner, and for the transfer of responsibility and accountability onto the oncoming shift.
- Printed Patient Reference (Handover Sheet) to be updated prior to handover unless under exceptional circumstances.
- Handover to be conducted in an area that is free from distraction and interruption.
- Where applicable and staffing allows, two staff from outgoing shift may attend handover, this however is only possible when there are three or more staff working in any particular section.
- The MDS is to be utilised for handover (APPENDIX ONE).

Clinical Handover

Minimum Data Set – In-charge

- The person in-charge for the shift is to receive handover from previous in-charge person or delegate, focussing on the situational awareness of the ward:
- **Alert and safety** – i.e. patients that may be at risk to themselves, staff or others. It is also important to be informed of equipment/device failures that affect safety on the ward. Staffing issues also play a role with in the alert and safety banner.
- **Advanced Notice** – Any discharges pending and potential transfers from other wards such as Intensive Care Unit or the Department of Emergency Medicine.
- **Attention** – This refers to all patients who have potential to deteriorate, or patients that are deemed “unwell” and require closer monitoring.

Clinical Handover

Minimum Data Set

- The shift-to-shift minimum data set for clinical handover amongst nurses, working on 2B South follow these headings:
  - Situational awareness
  - Patient identification and demographic details
  - History, evaluation and management
  - Responsibility, action and recommendation
  - Accountability to ensure patient safety

DISCUSSION

Situational Awareness

DISCUSSION

Patient identification and demographic details

DISCUSSION

History, evaluation and management

Clinical Handover

DISCUSSION

Responsibility, action and recommendation

Clinical Handover

DISCUSSION

Accountability to ensure patient safety

Clinical Handover

Decide on a “Go Live” DATE

HOW TO IMPLEMENT

Handover reference sheet documentation.

How to set it up?

WHAT IS REQUIRED?

References

- Wilson, M. A Template for Safe and Concise Handovers. MEDSURG Nursing, June 2007, Vol. 16 No.3., 2007

IMPROVING COMMUNICATION

IMPROVING HANDOVER COMMUNICATION

Printed Patient Reference

Advantages

- Information readily available in printed form
- Has most information regarding procedures/ requirements

RISKS

- Information is not updated
- ALL patient details are sometimes not deleted on D/C (patient BLS's taken QID + 0300 when patient not a diabetic or on steriods)
- Information is not always correct.
- Who is accountable

Personal Experience

"…sometimes it is not updated and that can be really frustrating… and often there is a lot of stuff on there that doesn't need to be on there…. Umm… it just confuses the whole thing and makes it [when you say there are o a lot of things on there that don't need to be on there what sort of things are you talking about?] well things like ummm.. Like they live alone.. And all this other crap like they're on this this and this analgesia type thing and and all you need to have on there is analgesia…. You don't even need to write that on there because it's on the like the drug chart and it's bits of information that aren't really relevant. Like writing MSU done you can just hand that over it doesn't need to be type on there because it then it just stays on there for days and days and days… and doesn't get updated. ..."

DISCUSSION

Printed Patient Reference

Location of Handover

Currently
- Whereever room is free
- Interruptions are frequent
- In corridors
- Noisy

RISKS
- Distraction
- Lack of interest
- Information not transferred

DISCUSSION

Location of Handover

Interruptions/Content

Currently

- No guidelines for handover
- No guidelines for content
- Patients transferred from other locations at handover times
- Staff members from ward interrupt for “catch up”

RISKS

- No specific format
- Risk of information missed
- Information overload/missed with patients transferred from other departments
- Staff distracted and information missed

Personal Experience

“Definitely when you get interrupted when you’re trying to handover and you get interrupted and people are asking silly questions that you’ve actually already said and they’ll say like you know has this happened and you’ll be like yes I’ve already said that ummmm… I find that really frustrating umm… I suppose that is because people don’t really listen to you… clearly… ummm… talking about things that aren’t relevant…. Like what you did on the weekend.. I mean I do it but…. It depends.. Depends whos there. {laughs} ummm… sometimes they’re not as detailed as they could be… which makes it a bit tricky when you haven’t actually me the group of patients before and you don’t know fully what is going on….”

http://www.healthprofessionals.com/images/series/handover.gif

DISCUSSION

Interruptions/content during handover

Attendance at handover

Currently

- Not all staff attend handover
- Staff arrive early and commence medication rounds
- Staff only have brief handover after quick shift

Risks

- Blurring of the lines of accountability/responsibility
- Medications may be given to patient where medications are to be withheld
- Important information is not transferred prior to patient contact

The Personal Experience

- "Some people don't find them um… er… ahhh…. A good clinical… don't think it's a good thing… {incomprehensible} …treat it like a load of crap and don't give you the extensive handover that you need. Umm… a lot of the time you don't really have time to read the handover sheet thoroughly as you get to a patient you have a quick look at it but so if you haven't had a handover you don't have that time to sit down and learn about a patient {incomprehensible} get a lot of consistency.. Its hard when you have team members that don't feel that handover is a ummm.. Is a good tool to use to learn about patients."

DISCUSSION

Attendance at handover

Figure 3. Transfer of Accountability Standards Template, 2002

Hamilton Health Sciences

(UNIT) Nursing Standards for Patient Safety During Transfer of Accountability

- This information must be communicated when transferring care of the patient
- Each nurse is responsible for documenting that the process of **Transfer of Accountability** and **Patient Safety Checklist** is complete
- Patient's name, age and diagnosis should be stated first

Plan of Care

- Code status
- Past medical history relevant to current situation
- Complications
- Patient/family goals for next 12 hours
- Shift orders and future one-time orders
- Consults
- Infection control
- Medication administration issues

Patient Status Review

Vital Signs	
Pain	
Neurological	
Cardiovascular	
Respiratory	
Gastrointestinal	
Genitourinary	
Musculoskeletal	
Integumentary	
Reproductive	
Discharge Planning	
Family, psycho-social, spiritual, cultural/ linguistic issues	
Lab Work & Diagnostic Tests	
Intravenous & Invasive Lines/Drains	

Bedside Patient Safety Checklist

- Armband on patient (or photo)
- IV solutions & infusions; matches MAR
- Allergies & alerts reviewed
- Monitor alarms on
- Risk concerns (e.g. restraint use)

Approval Date: ____ Director: ____

Chief of Nursing Practice: ____ Manager: ____

IMPROVING COMMUNICATION AT HANDOVER

Acknowledgements

- Special thanks to all staff that participated in the handover project and interviews.

Why improve communication during handover on 2BSouth?

Handovers have the potential to cause harm when information is not relayed, and has recently been demonstrated in a coronial investigation. The coroner recently released recommendations from a Tasmanian coronial investigation: "the information upon his relevant medical history had been diluted so that it seems 'the nurse'[1] was only aware that 'the patient'[1] had a genetic condition without any of the detail..." "...these circumstances lead me to recommend that RHH carry out a review of its handover procedures" (Coroner Rod Chandler, 19th February 2008). This finding demonstrates there is a need to review and improve the handover standards within the hospital, due to the potential dilution of information transferred at handover (Coroner Rod Chandler).

The Australian Nursing and Midwifery Council (ANMC), Code of Ethics for Nurses in Australia, particularly V*alue Statement 5:* "Nurses fulfil the accountability and responsibility inherent in their roles"[2] highlights the importance of the responsibility and accountability that is inherent in the role of nurses under Nursing Registration Requirements. This accountability and responsibility not only refers to the day to day practice of nurses, but also extends to nursing handover. Medical errors cost around 4500 lives in Australian hospitals every year! (Australian Nursing Journal. 2004; 11: 18-21)

A literature search has also suggested that there is a strong need to improve the efficiency and quality of handover within the clinical settings (Wilson, 2007; Currie, 2002; Sexton et al, 2004) Bhabra et al (2007), looked at the variations in handover methods in junior doctors in the NHS. They stated that there is "no published method that forms the gold standard of handover and there are large variations in place". Throughout the Royal Hobart Hospital there are different methods of handover that are conducted. The method utilised on 2BSouth (verbal with a printed patient reference) was demonstrated that 99% of the information transferred would be retained. The content of this information however has been shown through the interviews conducted to not be of benefit to the handover or the patient care requirements and has lead to the development of the minimal data sets.

Nursing staff on the ward play a vital role in the transfer of information from one shift to the next. It occurs on the ward daily and information transferred is essential to the continuity of care for patients. Literature demonstrated that there are many forms of handover that occur and there is no gold standard (Bharbra et.al. 2007). The information that is transferred utilises a printed patient reference "handover sheet" as well as face to face transfer of information.

The ward PPR has only, within the last five years been transferred onto the computer based system, where previously it was a hand written document that followed the same format. The hand written form had the potential for information loss, but also could have had the benefit of selective information, where information that is only of importance for

[1] Anonymity applied as coronial investigation as directly related to RHH.

that patient is documented. Interviews highlighted that there are currently issues with the PPR:

"... it um.. once again it depends on who is doing it some people spend a lot of time on it and other people don't get to update it.. if you're busy you don't get to update it but I think you just need and that's why I think it would work if you are only having current relevant information on there because then you don't take so long to update umm.. you know and just get rid of stuff that you now some one who had had a CT five days ago does that really matter now? Unless it's impacting on their current care so... [how could you get around that?] as in [like things not being updated] I suppose you just have to set aside time make sure that it's i mean you can usually.. I mean it should take no longet then five minutes ten minutes at the most to update it.. ummm.. because if it's kept updated and current it's a matter of deleting whats not and adding what is and keeping it short simple and not going on for words and words that don't mean anything..."

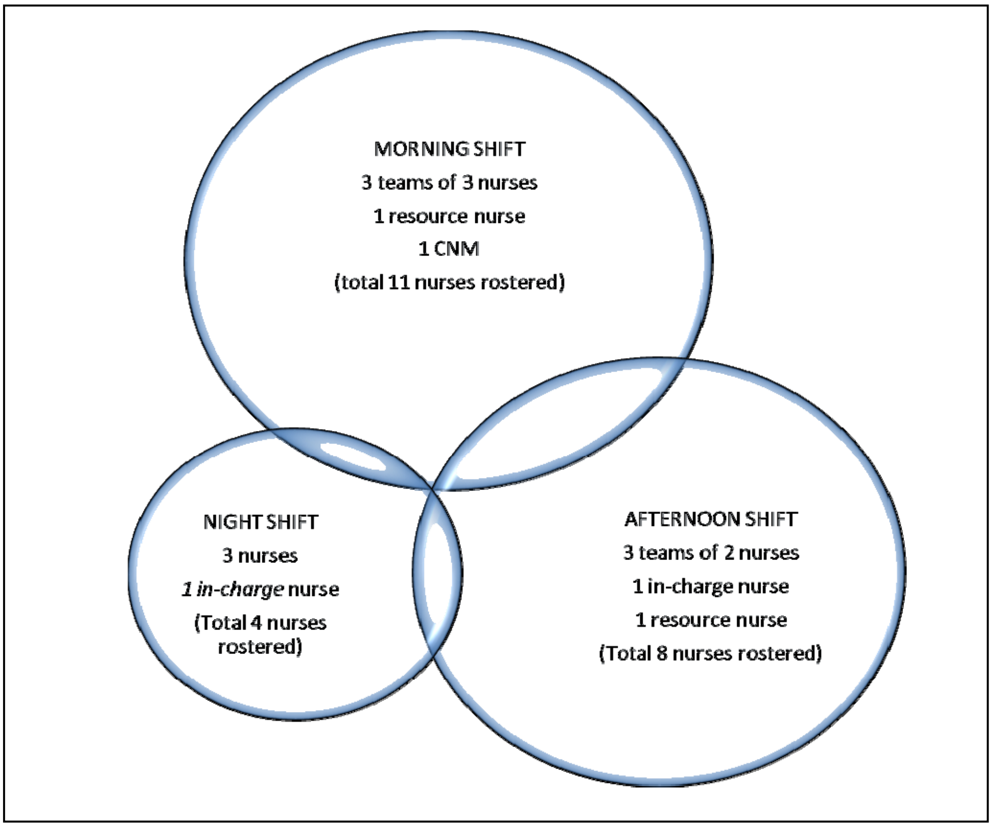
A variant of nursing staff members were identified to participate in interviews and a number of handover observations were attended, looking at staff participation/ distraction/ content and context of handover. The staff varied from those with extensive experience to new graduate nurses, enrolled nurses and two student nurses who were new to the clinical scene and had very minimal handover experience. These interviews were conducted by the project officer for the ward. Observations were conducted primarily between the morning and afternoon shift with fewer observations between the night shift and the morning shift.

The content of information transferred was also highlighted as an area that required development:

"Ummm.. Like too much talking can go on and I think that they take too long sometimes… I think people just sometimes need to get in there and if they're receiving handover they should just sit there and listen and ask questions when needed but they don't need to….. Go on about a patient when they looked after a patient so many days ago and they were doing this an this and this because that might have happened last week and what is really relevant is what's happened in the last couple or days or just that last eight hour shift not what happened a week ago. And stuff so… that can be frustrating especially if the wards busy and some thies you just cant waste time in handover what should be quite quick and concise can sometimes drag out to be too long and just frustrating"

Strategies need to be developed in order to keep handover content relevant. By reducing the number of interruptions and distractions and improving the content of handover staff may be more willing to listen and participate actively which may improve the communication between staff during handover.

Shift patterns on Ward 2B South



Current handover times are as follows:
Night Duty to Morning shift 0730-0800 (allocated time 30 minutes)
Morning Shift to Afternoon Shift 1415-1500 (allocated time 45 minutes but average time around 25-30 minutes)
Afternoon Shift to Night Shift 2200 – 2245 (allocated 45 minutes but average around 20 – 25 minutes)

Total of 23 Nurses required for safe staffing model at present due to patient acuity.

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LOCAL IMPLEMENTATION PLAN

SUPPORTING LITERATURE

Benson E, Rippin-Sisler C, Jabusch K, Keast S. (2007) Improving Nursing Shift-to-Shift Report. *J Nurs Care Qual; 22(1): 80-4.*

Objectives	Looking at the development of standardized nursing shift to shift report and the implementation of such standardization.
Design	A literature review was conducted, and surveys and discussion forums were performed across Canada. Staff identified for the survey and discussions were mainly front line staff, and to a lesser extent nurse managers, students, resource nurses and aides. Allied health staffs were able to participate but this was rare.
Main results	The researchers developed a set of 11 principles that would be applicable to all nursing shift to shift reports. From this a set of six guidelines were developed for nursing handover. The principles and guidelines broadly cover a range of areas including legal requirements, organization statements, practice standards, confidentiality, and timeliness and verification as well as safety and key patient concerns. Guidelines were able to provide focus for the staff at shift to shift report and were broad enough to cover all different types of shift to shift handover technique, such as verbal, taped written or bedside.
Conclusion	Evaluations are expected to occur semiannually looking at the style of report for each individual area, to ensure teams are able to follow the principles and guidelines.

Bhabra G, Mackeith S, Monteiro P, Pothier DD. (2007) An experimental handover methods. *Ann R Coll Surg Engl*; 89(3): 298-300.

Objectives	To identify the reliability of three different handover methods. This study was based in the UK, looking at junior doctors in the NHS.
Design	12 simulated patient scenarios were observed over five consecutive handover session to identify information loss per handover cycle.
Main results	The results demonstrated a wide variant of information transfer when observing the three handover methods. The study found that only 2.5% of information was retained using a verbal only handover method, 85.5% of information was retained using verbal and note taking method and 99% of information was retained using a printed handout containing all patient information. Utilizing the printed handout 99% of information is retained, however it relies on accurate updating of the information documented.
Conclusion	The study found that the use of a pre printed sheet containing all important patient details almost entirely eliminated data loss during handover, provided that patient details are regularly updated on the handover sheet.

Clemow R. (2006) Care plans as the main focus of nursing handover: information exchange model. *J Clin Nurs*; 15(11): 1463-5.

Objectives	To obtain information on nurses' experience and develop practice guides for care plan and related documentation and the main information exchange model. The project plan was to reduce the negative impact of handover on the continuity of patient care during handover times.
Design	A series of audits were conducted over a period of 6 months through questionnaires looking at staff perceptions of the new handover experience. All data was randomly audited and further data was obtained through structured questionnaires. All data was cross checked to avoid bias.
Main results	There were advantages and disadvantages in the new handover process. The advantages were reported as a reduction in office dwelling, and a challenge to own practice, as well as increased nurse/patient contact time. The disadvantages of the new system were that there was an uncertainty of the new role as perceived by health care assistants and it did not cover all the functions of handover, especially those relating to socialisation.
Conclusion	The results showed that the change from office based handovers to bedside handovers significantly improved accessibility of patients to nurses, but also nurses satisfaction and improvement in documentation.

Currie J. (2002) Improving the efficiency of patient handover. *Emerg Nurse*; 10(3): 24-7.

Objectives	The project aim was to identify which topics of handover should receive the highest priority when working in the A&E department. It found through a literature search that 'modern nursing is extremely fluid, there is a high turnover of both staff and patients so the accuracy of handover becomes even more important".
Design	Due to timeframe, Curie decided on a questionnaire design based on a 'content checklist' would be utilised, which was used in a previous audit of handover that she had completed in 2000.
Main results	The study found that there were six main topics that received a handover priority, These included the reason for admission, treatment patient had received, name and age, restrictions on the patient , plan of care for the patient and the relevant medical history. It also found that there were many frustrations were handover and that the handover should follow the CUBAN principle. (**C**onfidential, **U**ninterrupted, **B**rief, **A**ccurate, **N**amed Nurse)
Conclusion	The report found that priority topics should be assigned to nurses as a priority for handover in the A&E department.

Manias E, Aitken R, Dunning T. (2004) Graduate Nurses' Communication with health professionals when managing patients medications. *J Clin Nurse*; 14: 354-362.

Objectives	The aim was to identify how graduate nurses communicated with other health staff about medication management and the communication processes used during interactions with other nurses, doctors and pharmacists.
Design	A qualitative exploratory research design was used for this study.
Main results	From the handover perspective the study found that graduate nurses were unwilling to always accept the information contained and where inconsistencies were found clarified with staff giving handover. It also found that handover at times did not contain information about whether a new medication had had an effect on patient outcome. The study also identifies graduate communications with the medical staff and pharmacist.
Conclusion	The study found that graduate nurses interactions are shaped by anxiety, lack of confidence and fear of tension and experienced nurses should provide support and role modeling to allow for graduate nurses to make clinically reasoned decisions.

Sexton A, Chan C, Elliott M, Stuart J, Jayasuriya R, Crookes P. (2004) Nursing handovers: do we really need them? *J Nurs Manag*; 12(1): 37-42.

Objectives	The aim of the study was to address the content of nursing handover when compared with formal documentation processes. The study identified that handover attracted criticism in the literature in particular it's time expenditure, content, accuracy and the ways in which patients were sometimes being discussed.
Design	The study recorded 23 handovers on a general medical ward covering all shifts. The information was then analyzed and classified as to where the information was documented within the existing ward documentation systems.
Main results	The results showed that nearly 85% of information could be located within the existing ward documentation; nearly 10% of information was not relevant to ongoing patient care and only around 6% of the handover content related to ongoing management issues that could not be recorded in an existing documentation source. Examples of handover demonstrated the vague and ambiguous nature of information transfer.
Conclusion	Streamlining the nursing handover could improve the quality of the information presented and reduce the amount of time that is spent in handover.

Shaw S. (2006) How to hit the right notes. *Nursing Standards*; 20(29): 28-29.

Objectives	A reflective article, looking at own practice, designed to identify a way to improve communication at handover for a typical night shift.
Design	Reflectively identifies issues surrounding handover with in work area and attempts to find solutions based on own practice.
Main results	Identifies areas for improvement and attempts to justify order for files and notes. Suggests a trial on a pilot ward of ideas to identify if changes can be made to system Information is missed during handover, wasting both time and demonstrates a risk to patient safety using real scenarios from the local setting.
Conclusion	Handover needs to be improved to prevent potential errors form occurring within the local setting.

Wilson MJ. (2007) A template for safe and concise handovers. *Medsurg Nurs*; 16(3): 201-6, 200.

Objectives	Development of a safe way to transfer handover information by minimizing duplication, but continues to offer concise handover reporting,
Design	A template was introduced to five units within a US hospital to identify if handovers could be improved utilizing a minimal data set developed into a template form.
Main results	Using a handover tool was able to assist most staff in handovers with the exception of some staff who found it difficult to break old routines, or staff that "fall into old patterns when rushed". Found that it was also under utilized by agency staff who were unfamiliar with the format That utilizing a template for handover reduced time and improved information transfer. It is also identified that it is important that the template will vary depending on institution, unit and type of patient. It also suggests that each report group identifies a format that ensures timeliness and simplify the communication report process
Conclusion	The evaluation of the template found that it was a useful tool for junior staff and improved information transfer. The template was generally well accepted however it found that some staff however found it difficult to change their routine

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