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Implementing a Forensic Educational Package for Registered Nurses in Two
Emergency Departments in Western Australia

Christine M. Michel
University of Notre Dame Australia

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CHAPTER 3

METHODOLOGY

Thomas had heard the same devastating story before. He knew what to expect or so he thought. He had seen the shattered lives, lost youth and the trail of broken dreams that had divided families and friends. Often it was the innocent bystanders most affected by such behaviour. The collateral damage was often so costly. But it was Thomas who would end up as Daniel's target that day.

Introduction

All researchers have different beliefs and ways of viewing and interacting within their surroundings. As a result, the way in which research studies are conducted vary. However, there are certain standards and rules that guide a researcher's actions and beliefs. Such standards or principles can be referred to as a paradigm. To gain a better understanding of why and how the researcher chose the methodological approach in this study, an initial discussion will be completed about the paradigm that best fits the focus of this study.

Following a discussion about the research paradigm, the aim of this chapter is to discuss the research design and methodology utilised in this study. In order to describe the variety of research activities undertaken during this study, the data collection activities and associated analysis methods will be systematically discussed under four phases. For ease of discussion, the study activities will be described in the order in which the researcher completed them. The order of the study activities have been outlined in Figure 3.

Research Paradigm

According to Taylor, Kermode, and Roberts (2007, p. 5), a paradigm is "a broad view or perspective of something". Additionally, Weaver and Olson's (2006, p. 460) definition of paradigm reveals how research could be affected and guided by a certain paradigm by stating, "paradigms are patterns of beliefs and practices that regulate inquiry within a discipline by providing lenses, frames and processes through which investigation is accomplished". Therefore, to clarify the researcher's structure of inquiry and methodological choices, an exploration of the paradigm adopted for this study will be discussed prior to any discussion about the specific methodologies utilized in this study.

This study utilised a triangulation approach to explore and guide the development and evaluation of a clinical forensic nursing educational package. The use of both the qualitative and quantitative methodologies was necessary to encompass the different aspects of forensic science and nursing's holistic approach to patient care. According to Lynch (2006), providing forensic patient care requires objectivity and neutrality while attending to the various human dimensions of health and well-being. To address the diversity and complexity of such nursing and forensic issues, a mixed methodology was necessary.

According to Weaver and Olson (2006), the paradigms most commonly utilised in nursing research are positivist, postpositivist, interpretive, and critical social theory. The quantitative methodology shares its philosophical foundation with the positivist paradigm (Weaver and Olson). The positivist paradigm arose from the philosophy identified as logical positivism and is based on rigid rules of logic and measurement, truth, absolute principles and prediction (Halcomb and Andrew, 2005; Cole, 2006; Weaver and Olson). The positivist philosophy argues that there is one objective reality. Therefore, as a consequence, valid research is demonstrated only by the degree of proof that can be corresponded to the phenomena that study results stand for (Hope and Waterman, 2003).

In this study, such rigid principles lend themselves more to the scientific forensic aspects such as scientific knowledge, logic and measurement incorporated into this study (Weaver and Olson, 2006; Lynch, 2006). However, such inflexible beliefs did not have the capacity to accommodate the investigatory aspects of this study that dealt with the social and human experiences. As a result, qualitative methodologies were also incorporated into the research design (see Table 3.1).

The qualitative methodology shares its philosophical foundation with the interpretive paradigm which supports the view that there are many truths and multiple realities. This type of paradigm focuses the holistic perspective of the person and environment which is more congruent with the nursing discipline (Weaver and Olson, 2006). Additionally, the interpretive paradigm is associated more with methodological approaches that provide an opportunity for the voice, concerns and practices of research participants to be heard (Cole, 2006; Weaver and Olson). Cole further

argues that qualitative researchers are “more concerned about uncovering knowledge about how people feel and think in the circumstances in which they find themselves, than making judgements about whether those thoughts and feelings are valid” (p. 26).

Table 3.1: Summary of the Research Paradigms

Characteristic	Positivist View	Interpretive View
Purpose	The researcher will predict and explain changes in forensic knowledge of HospC participants	The researcher will interview the stakeholders and recognise the value and depth of the individual content
Beliefs	<ul style="list-style-type: none"> • One truth exists • Must be objective 	<ul style="list-style-type: none"> • Many truths and realities • Different people have different perceptions, needs and experiences
Research Methods	Quantitative	Qualitative
What Study Data is Based Upon	Measurable outcomes from questionnaire data	Descriptive, explanatory and contextual words of interview data
Study Sample	Clear and precise inclusion and exclusion data	Representatives who are able to provide expertise from different points of view.

Due to the complex nature of the research study, there was no single paradigm that could satisfactorily deal with all of the required methodological aspects. Therefore, the researcher found it necessary to combine the quantitative/positivist paradigm with the qualitative/interpretive paradigm. The blending of both paradigms provided the researcher with the ability to statistically analyse the scientific data whilst also recognizing the complex psychosocial and emotional factors that influence patient care issues. The discussion that follows will further elaborate and describe in detail how each paradigm and methodological approach was implemented in this study.

Research Design

In this descriptive study, qualitative and quantitative data collection techniques were used including; semi-structured interviews, chart audits, pre and post-test questionnaires, focus group interviews, and the researcher’s field notes of personal observations and conversations. Additionally, to provide a more complete and

Figure 3: Methodology Flow Chart

Phase I	Phase II	Phase III	Phase IV
<p>Questionnaire development</p> <ul style="list-style-type: none"> • Validity testing • Reliability testing (HospA) <p><u>HospA</u></p> <ul style="list-style-type: none"> • Replication Pasqualone’s study 	<p>Stakeholder interviews</p> <p><u>HospB</u></p> <ul style="list-style-type: none"> • Policy & procedure manual review • Pre- and post-questionnaire • Pre- and post-chart check audits <p><u>HospC</u></p> <ul style="list-style-type: none"> • Policy & procedure manual review • Pre-test questionnaire 	<p><u>HospC</u></p> <ul style="list-style-type: none"> • Forensic workshop • Forensic kit • Information sheets & posters • Pocket prompt cards • Forensic resource file • Journal • Phone log • Locked cabinet 	<p><u>HospC</u></p> <ul style="list-style-type: none"> • Post-test questionnaire • Pre-, 2 month post & 4 month post-chart check audits • Forensic kit audit • Journal collection • Phone log audit • Focus group interviews • Follow-up interviews

multidimensional understanding of the issues, a triangulation methodology design was employed (Taylor, Kermode, and Roberts, 2007). In the section below, the discussion will be divided into two main headings; that of descriptive research and triangulation.

Descriptive Research

In order for the researcher to gain different perspectives and draw attention to different factors that affect forensic practice in Western Australia, descriptive research methods were employed in this study. According to Polit, Beck, and Hungler (2001, p. 180), descriptive methods are used when the researcher seeks to “describe, observe, and document a naturally occurring phenomenon which cannot readily be ascribed an objective value”. In other words, descriptive research deals with questions that look to explain what things are like and describe relationships but do not predict relationships between variables or the direction of the relationship. Depending on what is to be described, descriptive research can be very concrete or more abstract (DeVaus, 2002). At a concrete level, data collected is often strongly quantitative in nature (Polit, Beck, and Hungler, 2001). In this study, data will be collected in the form of participant demographics, chart audit data, monitoring of implementation tools, and data collected from the pre and post-test questionnaires. In addition, more abstract descriptive research, in the form of stakeholder interviews, was also included. According to Morse and Richards (2002), qualitative descriptive approaches are extremely helpful because evidence of experience and knowledge can be easily missed when quantitative methods are used.

In this study, semi-structured interviews were incorporated into the study design because the researcher believed that open ended questions would be the most efficient way to collect data from stakeholder participants. Open ended questions are thought to allow an individual time and scope to discuss their perception and knowledge (Morse and Richards, 2002). DeVaus (2002) believes that descriptive research can play a key role in highlighting the existence and extent of problems which can stimulate interventions and actions that lead to policy change.

The intent of stakeholder interviews was to investigate and describe current forensic practices occurring in Western Australia. According to Taylor, Kermode and

Roberts (2007), qualitative interviews attempt to “make meanings” from individual accounts and experiences. Forensic patients are usually treated in partnership by medical and legal professionals (Lynch, 2006). Therefore forensic and healthcare stakeholders who work in the field have the best ability to contribute, enhance links and increase the successful integration of services (Haddow, O’Donnell, and Heaney, 2007). The incorporation of stakeholders in this study was to enhance the understanding of the current issues and experiences confronting forensic and healthcare professionals working with and providing care to forensic patients.

Triangulation

Multiple triangulation methods were utilised in this descriptive study. Triangulation involves the application and combination of several research methodologies in one study (Schneider, Elliott, Lo-Biondo-Wood, and Haber, 2003; Taylor, Kermode, and Roberts, 2007). There are four common types of triangulation discussed within the literature including: data triangulation that involves time, space, and persons; investigator triangulation which uses multiple observers; theory triangulation that uses more than one theoretical perspective to interpret the study phenomenon; and methodological triangulation that involves using more than one methodological strategy during data collection. According to Halcomb and Andrew (2005), the use of multiple data sources and methods to cross-check and validate findings increase the depth and quality of the results and also provides valuable guidance to nursing practice.

Triangulation provides in-depth data, increases the confidence in the research results as well as enables different dimensions of the problem to be considered (Barbour, 2001; Jones and Bugge, 2006). A combination of methods is thought by some to improve the consistency and accuracy of data by providing a more complete picture of the phenomenon (Roberts and Taylor, 2002; Halcomb and Andrew, 2005; Williams, Rittman, Boylstein, Faircloth, and Haijing, 2005; Jones and Bugge, 2006). Morse (1991) cited in Minichiello, Sullivan, Greenwood, and Axford, (1999, p. 258) believes that triangulation is a means by which the researcher is able to “capture a more complete and holistic portrait of the phenomena under study”.

In this study, the researcher employed methodological, data, and unit of analysis triangulation. Each of these aspects of triangulation will be discussed individually below and study examples provided to help illustrate the concepts. Firstly, methodological triangulation will be explored which can be sub-divided into within and across-method triangulation (Schneider, et al., 2003; Halcomb and Andrew, 2005).

Methodological triangulation

Methodological triangulation, according to Taylor, Kermode, and Roberts (2007), involves using two or more research methods in one study at the level of data collection or design. Across-method triangulation involves combining research strategies usually qualitative and quantitative methods. Such an approach is common in nursing studies (Jones and Bugge, 2006; Halcomb and Andrew, 2005). In this study, for example, data from stakeholders interviews were utilised to reinforce and complement the data from quantitative chart audits because concepts mentioned by the stakeholders were checked during the chart audits. Complementary findings in a study make a more valid contribution to theory and knowledge development, enhance diversity, and enrich the understanding surrounding the study's objectives and goals (Schneider, et al., 2003; Macnee and McCabe, 2008).

Data triangulation

Data triangulation can be described as the use of multiple sources of data to obtain differing views about a situation in a single study (Roberts and Taylor, 2002). For example, in this study, data was collected from various interviews, pre and post-test questionnaires and by reviewing nurse participant's documentation within patient medical records. Multiple data sources help validate the findings by exploring different views of the situation under investigation (Taylor, Kermode, and Roberts, 2007). Data triangulation can be divided into categories of time, space, and person (Roberts and Taylor).

Time triangulation involves researchers collecting data at different points in time such as time of day; at different days of the week, or at different months of the year (Rinaldi, Carpenter, and Speziale, 2006). In this study, however, the goal was not to compare participant knowledge between shifts or from one month to the next.

Instead, the researcher was interested in evaluating an educational intervention over time. Therefore, for this study, only two types of data triangulation were utilised: space and person.

Space triangulation involves the collection of data from multiple sites (Roberts and Taylor, 2002). In this study, for example, data was collected from two hospitals emergency departments. Analysis from both sites helped evaluate the effectiveness of Phase III activities of this research and also increased the validity and strengthened the study (Begley, 1996; Halcomb and Andrew, 2005).

Person triangulation implies that data was collected from more than one category of person (Roberts and Taylor, 2002; Taylor, Kermode, and Roberts, 2007). For example, in this study, participants included ED nurses as well as key forensic and healthcare stakeholders. The use of various legal and healthcare professionals provided greater insight into a variety of issues including: hospital administration, staffing, costing concerns; medical practices; Western Australian legal requirements and governmental policies; current evidentiary processes; as well as existing investigatory practices. Such data was utilised to support, supplement, and validate the information gained from published forensic material as well as the research data.

Unit of analysis triangulation

The unit of analysis triangulation as described in Begley (1996) is the use of two or more analysis approaches to validate the same set of data. In other words, the use of differing qualitative techniques or different families of statistical tests helps verify results. The researcher rarely found this type of triangulation discussed in current literature; however, there was some dated literature that described this topic (Kimchi, Polivka, and Stevenson, 1991; Begley, 1996; Bergen and While, 2000). In this study, to evaluate the effectiveness of the forensic education package, several levels of analyses were conducted. For example, by comparing pre and post questionnaire responses and then interviewing and analysing the interviews the effectiveness of the educational package was assessed at a participant level. In addition, data from the chart audits and focus group interviews also provided qualitative and quantitative data which assisted towards the analysis and evaluation of the package effectiveness.

Methodology

Due to the complexity of this research project, a true experimental design was not able to be conducted. However, a quasi-experimental design is similar to that of a true experimental design except that the participants are not randomly assigned to the control and treatment groups (Schneider, et al., 2003; Taylor, Kermode, and Roberts, 2007). It was therefore decided to employ a descriptive a pre-test, post-test type of design. Details of how this was utilised in this study is explained below.

This descriptive research study employed a multiple triangulation methodology design in order to develop and evaluate the effectiveness of a forensic educational package (see Figure 4). Theoretical guidance was sought from Bandura's (1977) Social Cognitive Theory, Malcolm Knowles (1980) Adult Learning Principles and Lynch's (1990) forensic nursing integrated practice model. Participants included 49 treatment and control group nursing participants from two metropolitan West Australian hospitals. In addition, 22 forensic and hospital stakeholders from 10 forensic specialty areas were also involved. Qualitative and quantitative data was collected across four phases from semi-structured interviews, policy manual reviews, audits of nursing documentation, pre and post-test questionnaires, focus group interviews, and the researcher's observations. The following sections will describe the research sites, the sampling and the data collection tools.

Research sites

"Forensic patients", as defined by the research protocol, were identified according to their medical complaint and/or medical history and not by their age, sex, race, religion or cultural background. Therefore, it was crucial that research sites sought for this study provided emergency medical treatment to both adult and paediatric patients. There were three Metropolitan hospitals that provided emergency medical treatment to both adult and paediatric patients who also provided similar medical treatment facilities (see Table 3.2).

All three participating hospitals had many similar characteristics which was important because the researcher believed that having dissimilar sites may affect participant characteristics. In other words, the researcher wanted the hospital sites

Figure 4: Schematic Review of the Research Design

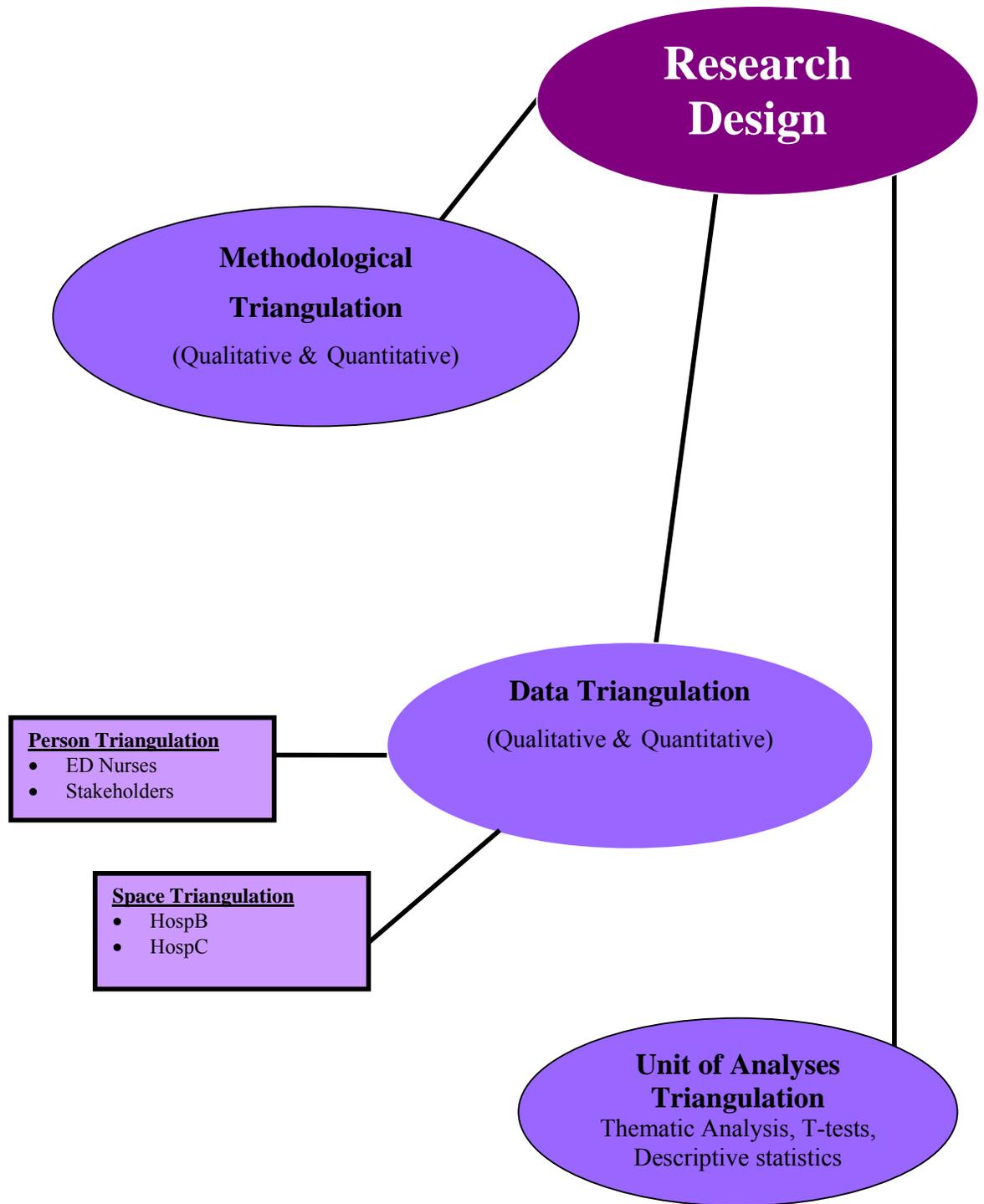


Table 3.2: Characteristics of the Research Sites

Hospital Characteristics of the Three Research Sites			
Characteristic	HospA	HospB	HospC
Geological Location	Peripheral Southwest Metropolitan	Southwest Metropolitan	Northwest Metropolitan
Hospital Classification	Public Teaching	Public Teaching	Public & Private Teaching
Community Catchment Size	123,337	175,734	252,734
Average Number of ED Patient Presentations Per Year	28,000	40,000	41,5000
Bed Capacity	82	450	235
Type of Medical Services Available	<ul style="list-style-type: none"> • Adult & Paediatric ED • Acute Trauma Services • Paediatric Ward 	<ul style="list-style-type: none"> • Adult & Paediatric ED • Acute Trauma Services • Paediatric Ward • In-patient Psychiatric Services • Day Procedure Unit • Adult Intensive Care Unit • Adult Cardiac Care Unit • After hours GP Clinic 	<ul style="list-style-type: none"> • Adult & Paediatric ED • Acute Trauma Services • Paediatric Ward • In-patient Psychiatric Services • Day Procedure Unit • Adult Intensive Care Unit • Adult Cardiac Care Unit • After hours GP Clinic

and the participants' to start with similar characteristics and features so that any differences discovered in post intervention findings could more likely be linked with the intervention and not environmental factors. Some of the similarities in hospital characteristics included that all three hospitals transferred paediatric patients who require intensive care unit (ICU) services to the metropolitan paediatric hospital. In addition, the treatment and control sites had in-patient mental health facilities as well as adult intensive care and coronary care units, paediatric units and day procedure units. Two metropolitan hospitals were excluded as potential research sites because the researcher had worked in the emergency departments before and any existing bias could not be ruled out. No attempt was made to include the only paediatric hospital in the State because of confidentiality and anonymity issues as well as the exclusion of adults from this hospital.

Overall, the three participating hospitals (HospA, HospB, and HospC) provided a wide range of characteristics and similar medical services that offered the greatest opportunity for this study to encounter numerous forensic issues. Some of the features of these hospitals included; a large size facility, a large number of patients seen in the ED per year, a reasonable proximity to the researcher which enabled the researcher to travel to all facilities without undue hardship (the longest travel time was two hours round trip), and a willingness by the hospitals to participate in the research project. For example, the two peripheral hospitals serve as a catchment area for large outlying northern and southern communities. Both of these hospitals had limited resources and often transfer critical patients to a larger tertiary metropolitan hospital. Therefore, forensic issues such as evidence collection, documentation, chain of custody and inter-facility communication, which are central themes within this study, had a significant relevance within each of the facilities. The following discussion will outline the demographics, why, and how each site was chosen for specific study activities.

Hospital A

HospA is a southwest peripheral metropolitan public teaching hospital that served a community catchment site of approximately 127,337 people. The hospital ED treated approximately 28,000 patients in the ED per year (Australasian Society of Emergency Medicine, 2003). After stabilization, all serious trauma and psychiatric

patients are transferred to nearby larger tertiary hospitals for ongoing care. HospA does not have any acute psychiatric services or intensive care facilities on the premises.

HospA was used to replicate Pasqualone's (1998), *27 Forensic Patient Categories*, and conduct initial investigations into the reliability and validity of the pre and post-test questionnaire tool (a thorough discussion of the replication study is provided in Chapter 4). HospA allowed Pasqualone's study to be replicated with data obtained from a hospital that most closely mimicked the original research parameters. All study activities conducted at this hospital site were conducted during Phase I (see Figure 3).

Hospital B

HospB is a southwest metropolitan teaching hospital that served as a trauma receiving centre for the Southern Region and outlying peripheral hospitals. HospB provides acute and in-patient psychiatric services, acute trauma services, ICU and CCU facilities and has a 30 bed paediatric ward. This hospital treated approximately 40,000 patients in the ED per year (Australasian Society of Emergency Medicine, 2003) and served a community catchment area of approximately 175,734 people. Nurses working in this hospital ED served as control group participants.

The allocation of treatment and control group sites was based on the number and type of healthcare services each hospital provided. For example, the ED staff at HospC treated the second largest number of patients per year in the State (Australasian Society of Emergency Medicine, 2003). Therefore, the researcher believed that the larger volume of patient presentations provided the best opportunity to encounter diverse forensic issues. In addition, large patient volumes provided the best opportunity for participants to trial all aspects of the forensic educational package.

Hospital C

HospC is a northwest metropolitan hospital that caters to both private and public patients in the northern region. In this hospital, therefore, all individuals who had private health insurance and those who did not were all treated equally in the same

ED. However, if patients required hospital admission, individuals could then choose whether they wanted to be admitted as a private or public patient. HospC served a community catchment area of approximately 252,734 people. This site was chosen because it was the second largest ED receiving centre in the metropolitan area and the largest ED that catered for adult and paediatric patients. HospC treated approximately 41,500 patients in the ED per year (Australasian Society of Emergency Medicine, 2003). HospC provides acute and in-patient psychiatric services, acute trauma services, ICU and CCU facilities and has a 24 bed paediatric ward. Nurses working in this hospital ED served as treatment group participants.

Overall, the researcher believed HospB and HospC provided the greatest opportunity of acquiring participants that were as representative as possible to ED nurses throughout Western Australia. In addition, both hospitals had the greatest variety of patient services for adult and paediatric patients. Furthermore, HospB and HospC had similar demographics in reference to the community populations they serve, types of medical services they offer, nursing staff numbers, and number of ED patients treated per year. Finally, HospB and HospC were both accredited with the Australian Council on Healthcare Standards which is an independent, not-for-profit organisation responsible for conducting organisational assessments to ensure healthcare organisations meet quality and safety practice standards (Australian Council, 2007).

Sampling

To obtain participants for this study, the researcher used purposive sampling because random sampling was not possible due to the study design. Purposive sampling involved the researcher making a conscious decision about which individuals and which hospital sites would best provide the desired information (DeVaus, 2002; Burns and Grove, 2007). This type of non-probability sampling was chosen in order to provide the researcher with the most useful data upon which to develop, implement and evaluate the forensic educational package.

Such a sampling technique was appropriate and advantageous for this study because; (1) the researcher required specific forensic experts and healthcare leaders who practiced in specific fields and had speciality knowledge, (2) there were limited

hospital sites where the nurses were confronted with forensic patients across the life span, and (3) it was not practicable or economical for the researcher to include larger forensic and nursing populations throughout Australia (DeVaus, 2002; Burns and Grove, 2007). In total, there were two groups of research participants recruited. These included; (1) forensic and healthcare stakeholders, and (2) Registered Nurses working the ED. The recruitment process for each group will be discussed below.

Stakeholders

Individuals included as potential stakeholders were those professionals who provided forensic patients with medical care, biological and scientific professionals involved with processing, documenting and reporting of forensic evidence collected, and legal experts involved with any legal proceedings. Stakeholders considered essential for inclusion into the study were those identified in forensic literature as being involved with forensic patient cases and the researcher’s personal experience of professionals who have contact with forensic patients either through the healthcare, scientific or legal profession (Lynch, 2006). Consequently, a list was compiled of all healthcare and forensic stakeholders who by virtue of their professional responsibilities have some type of connection to forensic patients (see Table 3.3).

Table 3.3: Key Stakeholders

Forensic and Healthcare Stakeholders
<ul style="list-style-type: none"> ▪ Nurse Manager of ED ▪ Clinical Nurse Specialist for ED ▪ ED After Hours Hospital Duty Manager ▪ ED Medical Directors/Consultants ▪ Department of Health Representative ▪ Forensic Police (one interviewee from each specialty unit) <ul style="list-style-type: none"> ○ Child abuse unit ○ Forensic detectives ○ Domestic violence unit ▪ Forensic Scientist ▪ Coroner ▪ Forensic Pathologist ▪ Defence Attorney (2) <ul style="list-style-type: none"> ○ Solicitor ○ Queens Counsel

After identifying the desired stakeholders, the researcher called each stakeholder at their place of employment to investigate whether they would be interested in

participating in this study. During the phone conversation, each stakeholder was provided with information about the researcher, the research project, and the level of commitment their acceptance of participation in the research project would entail. Once the stakeholders agreed to participate, a time and place for an interview was arranged at the participant's convenience.

In total there were 10 healthcare and 11 forensic stakeholder interviews conducted. All but two of the 21 semi-structured interviews took place during a three month period. The interviews took place at a location within the work place of the participants and lasted between 45 and 90 minutes. All but one of the interviews was tape recorded with the participant's approval. One participant felt uncomfortable talking whilst being recorded so the researcher respected the participant's wishes and took copious shorthand notes instead. Occasionally the researcher was required to ask the participant to repeat some information as the researcher did not want to write down information erroneously.

None of the contacted stakeholders declined to participate. However, the researcher was unable to include a representative from the Western Australia State Department of Public Prosecutors (DPP). The DPP's office requested a written abstract and a list of interview questions to be sent to their office. As requested, this information was provided along with a copy of the participant consent form. After two weeks, the researcher contacted the DPP office but was unable to speak with any department manager. Instead, a message was taken by the secretary and the researcher was informed that a DPP representative would return the phone call within two weeks. After two weeks without a response from the DPPs office, the researcher contacted the DPPs office again to enquire about the progress of the previous phone message. Another message was taken and again the researcher was informed that she would be notified as to any decision about this matter within two weeks. No contact from the DPP office was forthcoming and a final attempt to gain consent on this matter never eventuated.

However, two independent private defence attorneys did agree to participate and represented the legal profession for this study. Both defence attorneys had extensive experience working with forensic clients. One attorney had 10 years prior experience

working as an ED nurse, while the other defence attorney was a very experienced Queens Counsel (QC) barrister. A QC is “a mark and recognition by the Sovereign of the professional eminences of the counsel upon whom it is conferred” (Nygh and Butt, 1998, p. 361).

Registered Nurses

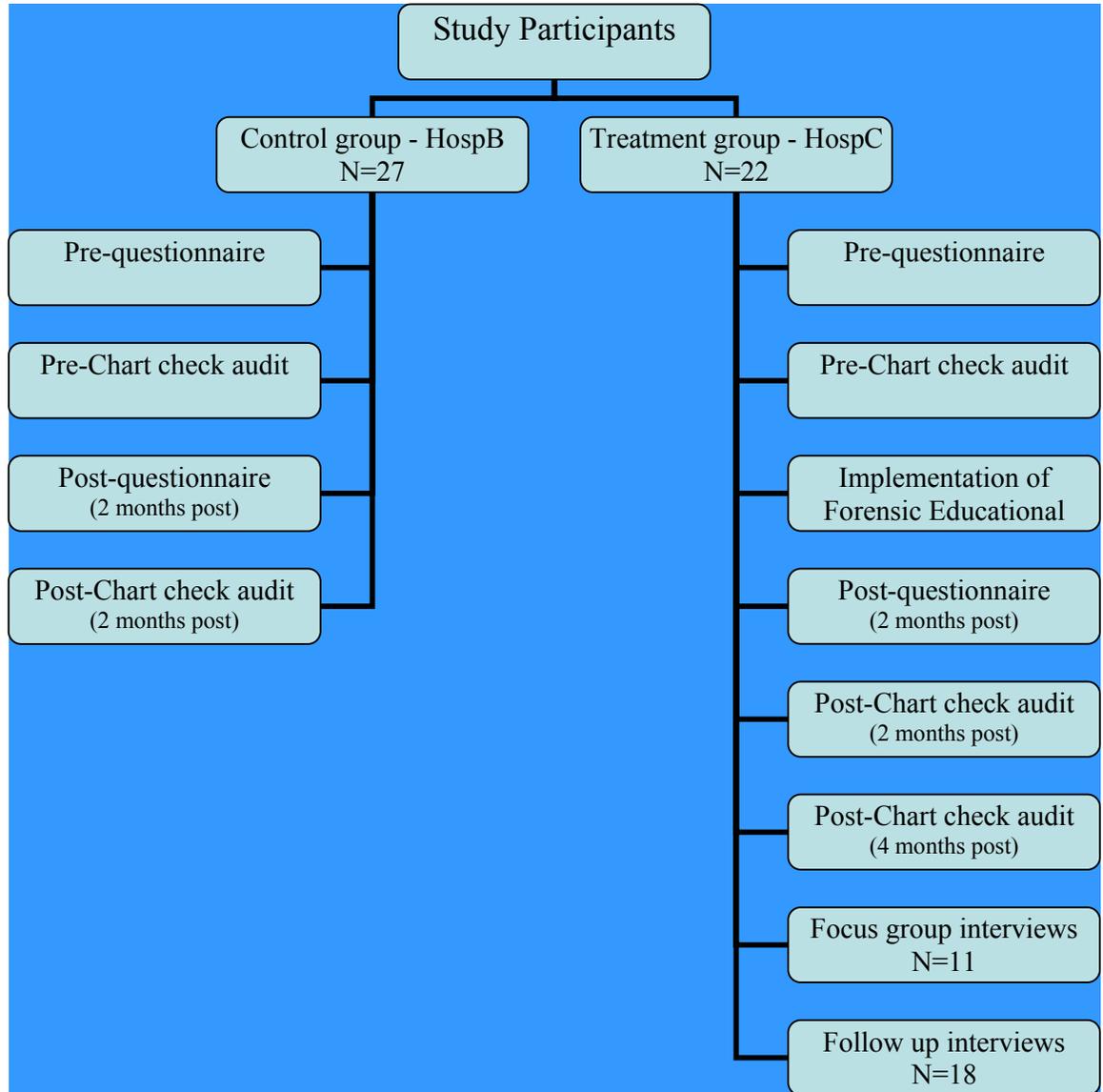
There were two groups of nurses that participated in this research project. Nurses recruited from HospB were classified as control group participants and nurses recruited from HospC were classified as treatment group participants. The target number of nursing participants desired from each hospital was 30. This number of participants was thought to be a realistic expectation as this number represented over 60% of the total number of nurses employed in each of the hospital EDs. A description of how the two participant groups were recruited will be described below.

Study mortality is the dropout rate of participants that occurs between the pre and post-test data collection (Schneider, et al., 2003). To enable the researcher to compare the control and treatment group’s data, the researcher needed a low dropout rate across both research sites. However, this factor was difficult to prepare for and anticipate. There were several activities the treatment group participants were asked to complete over an extended period of time. If a majority of participants dropped out from a particular group, then the comparison of data between groups would be less effective or deemed impossible.

Another strategy employed by the researcher was to utilise a suitable comparison group. A control group was to provide a comparison against the treatment group. The activities specific to each participant group is outlined in Figure 5. The researcher considered recruiting both the control and treatment group participants from the same hospital and randomly allocating participants into the two groups, however, the potential for contamination was thought to be high. Firstly, hospital nursing staff work in close proximity within the ED setting often due to physical space restrictions. In addition, ED nurses frequently work in teams, especially when patient acuity demands it. Therefore, contamination of data could be a problem between members of the control and treatment groups if both types of participants were working side by side in the same hospital ED setting. Furthermore, nurses observe

each others work practices, listen, watch and are exposed to “talk” within the work environment.

Figure 5: Control and Treatment Group Activities



According to Bandura (1977), most human behaviour is learned from observing others and such information serves as a guide which individuals will act upon. Therefore, even if the researcher stressed the importance of participants not discussing the forensic workshop contents and their role within the study, the researcher believed that significant contamination could not be prevented. After considering all of these factors, the researcher believed that the most practical and

methodologically sound option was to have the control and treatment group participants come from different ED environments. Consequently, control group participants were recruited from Hospital B and treatment group participants from Hospital C.

To minimise participant differences, the researcher chose a non-equivalent control group design. Such a design involves the study participants (control and treatment group participants) to be recruited from two different hospital EDs who have similar characteristics. Schneider, et al. (2003) believed that such a design is commonly used in nursing research and is relatively robust. Minichiello, et al. (1999, p. 116) argued that a non-equivalent control group design, “can provide quite good control for history, maturation, testing, and instrumentation”.

The recruitment process was identical for both treatment and control group participants. The recruitment process and all data collection for control group participants (HospB) occurred first during Phase II. Upon completion of study activities at HospB, the researcher pursued the recruitment of treatment group participants at HospC. This approach was necessary in order to reduce delays. Due to a change in hospital ownership and administrative changes, the ethics application from HospC was delayed by six months. The ethics approval from HospC was obtained six months after that of HospB (see Appendix 1). Therefore, permission to approach HospC nurses for participation interest was postponed until after the new management had settled into their new roles.

Initially, fliers (see Appendix 2) and a corresponding information letter (see Appendix 3 and 4) about the research project were posted in the nurses’ staff room. The information letter outlined the purpose of the study and described the type and number of activities in which the treatment and control group participants would be asked to complete should they volunteer to participate in the research project.

Once the research flier and information letter had been posted, recruitment lectures were arranged with the assistance of the ED nurse manager and staff development nurse. The allocated time for the research recruitment presentations was 45 minutes

at each hospital. These sessions were arranged and conducted as any other regular educational activities that occurred for ED nurses.

To maintain consistency, all of the recruitment lectures were presented by the researcher. In addition, the same outline was used for each session and was based on the information contained within the control group information letter. Once nurses volunteered to participate, a consent form was obtained, and each participant was provided with a pre-test questionnaire. Every participant was given a copy of their signed consent form to keep in their records.

The inclusion criteria (see Table 3.4) were established to increase the chances of obtaining enough data for each participant and to minimise the extent of variation between participant populations. For example, inclusion criteria two stated that nurses needed to be regular hospital employees and work at least two shifts per week in the ED. The researcher believed that unless the employee worked a minimum amount of shifts that the chances of collecting enough charts to audit during the two audits would be severely compromised. This reasoning extended to the situation of casual employees and the need for participants to have patient contact time and not have a predominate number of shifts allocated to coordinating nurse roles (inclusion criteria #3). The role of the coordinating nurse in the ED is the nurse leader who is responsible for managing nursing staff and interacting with other healthcare staff to ensure efficient and effective patient care. Since casual employees do not have regular rostered shifts and nurse coordinators do not have set patients allocations, there was doubt as to how much data would be available during data collection.

Inclusion criteria four stated that only nurses who worked in the ED for greater than three months and who were not a first year graduate nurse could be included in this study. The researcher believed that the pressures that accompany being a new employee were not an ideal or stable background in which to commence this research project. Furthermore, graduate nurses working at HospB and HospC have an established work schedule that dictates each nurse will rotate through specific hospital departments on a four monthly roster. Therefore, involvement in this study would not be appropriate nor likely to produce sufficient data.

Lastly, inclusion criteria five stated that only nurses who have not had any previous formal forensic education could be included in this study. For this study, formal education was considered any structured forensic workshop or University course containing forensic information that a participant attended in the last three years. The researcher believed that if participants had any type of formal forensic training, such knowledge may bias the data. Previous forensic knowledge could alter questionnaire scores and influence nursing practices. Therefore, such bias would not provide a true reflection of the educational package's effectiveness.

Table 3.4: Inclusion Criteria for Registered Nurse Participants

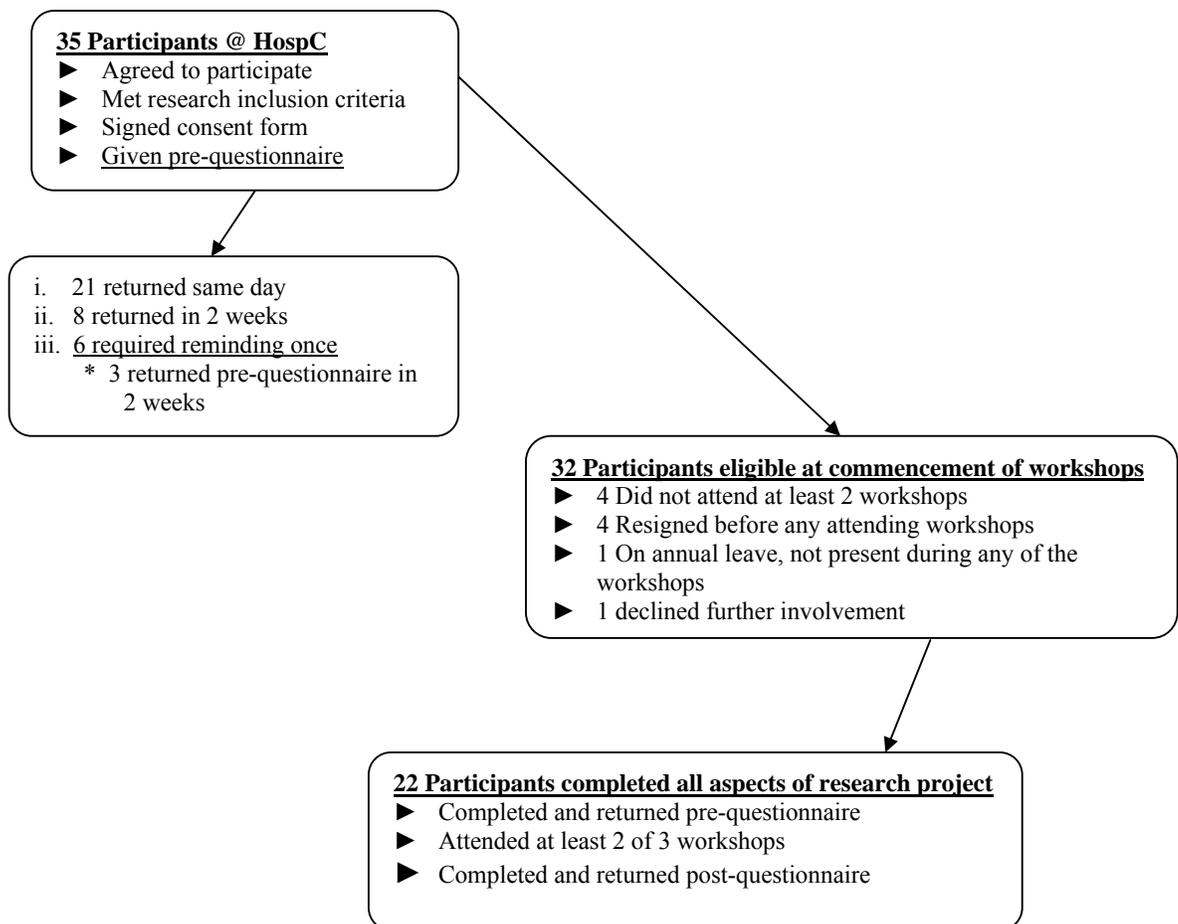
Nursing Participant Inclusion Criteria
1. Registered Nurses holding a current licence with the Nurses Board of Western Australia (NBWA).
2. Nurses working full or part time (at least two shifts per week) in the emergency department (casual employees did not meet this requirement).
3. Nurses who work two shifts per week which must include patient contact time (Coordinating nurse roles did not meet this requirement).
4. Nurses who have worked in the ED for greater than 3 months (first year nursing graduates were not included in this study).
5. Nurses who have not had any previous formal forensic education.

There were five recruitment sessions that took place over a four week period at HospB. Two of the recruitment presentations were conducted during the day/evening shift overlap timeslot (1400 hours) and three were conducted at 0500 hours to allow any permanent night duty nurses to attend. Therefore, the recruitment sessions provided an equal opportunity for all ED nurses to attend during their normal rostered shifts. Out of the 31 nurses who originally volunteered to participate and signed a consent form, 27 nurses (87.1%) met the inclusion criteria.

There were nine recruitment sessions that took place over a four week period at HospC. Six of the recruitment presentations were conducted during the day/evening shift overlap timeslot (1400 hours) and three were conducted at 0400 hours to allow any permanent night duty nurses to attend. Therefore, the recruitment sessions provided an equal opportunity for all ED nurses to attend during their normal rostered shifts.

Initially, there were 35 nurses from HospC who met the research inclusion criteria and agreed to participate. This accounted for 66% of the total ED nursing staff who were working in the ED at the time the research project commenced. During the course of Phase III, 13 nurses did not complete all of the required participant activities for the following reasons: four nurses resigned; three nurses declined to participate after receiving their pre-test questionnaire; one nurse declined further involvement after completing their pre- test questionnaire; four nurses did not attend at least two workshops; and one nurse went on unpaid leave after completing the pre-implementation questionnaire and did not return to work during the research data collection period. Therefore, of the 35 nurses who originally entered into the study, 22 nurses (62.8%) completed both questionnaires and attended all three workshops (see Figure 6).

Figure 6: Flow Chart of Treatment Group Participants



Data collection tools

In this study, data was collected from a variety of sources. However, there were four activities that provided the majority of data analysed in this study. The four primary data sources included the pre and post-test questionnaires, the chart checks audits, policy and procedure manual reviews, and interviews. Each of these activities occurred at different times across the four phases depicted in Figure 3. The tool development and the general methodological process for each activity will be discussed under the specific headings below while the more specific methodological processes of each activity will be explored under the phase in which the activity was conducted.

Questionnaire development

No previously tested questionnaire was available for this research study; therefore, the researcher was required to develop and validate the pre and post-test questionnaires before their use. The questionnaires were to be used to evaluate the effectiveness of the implementation activities (workshops A, B, and C). The research instruments were constructed after a thorough review of the available published literature, consultation with local and international forensic professionals and reflection upon the researcher's knowledge and professional experience.

The researcher was confronted with two major issues when developing the pre and post-test questionnaires. Firstly, the researcher needed to develop a tool that would accurately assess whether there was any difference in forensic knowledge amongst the treatment group participants after attending the three intervention workshops. Secondly, the researcher needed the tool to be consistent when used on multiple occasions with different groups of participants. These two important and fundamental characteristics of a measurement tool (validity and reliability) need to be proven before its use (DeVaus, 2002; Schneider, et al., 2003). How the researcher addressed the issues of validity and reliability during the questionnaire development will be explored below.

Validity

Validity is the most fundamental consideration in instrument development and refers to the degree that the instrument measures what it claims to measure (DeVaus, 2002).

There are three basic ways in which to assess the validity of an instrument; criterion, content and construct validity. The criterion validity approach compares the new tool to an existing well-accepted instrument that measures the same concept (DeVaus; Schneider, et al., 2003). Since no other instrument could be found in the published literature, this approach could not be used to test the rigor of this instrument. Therefore, the following discussion will focus on the issue of content and construct validity.

Content validity refers to the ability of the instrument's items to represent the content of the given construct (DeVaus, 2002; Schneider, et al., 2003). When the researcher was developing the instrument, the concern was whether the measurement tool and the items it contained were representative of general forensic knowledge which was what the researcher intended to measure. To tackle the issues of content validity, the researcher approached forensic and forensic nursing experts to examine the questionnaire's content. The researcher wanted to ensure that the tool focused on fundamental and essential forensic nursing concepts (DeVaus; Schneider, et al.).

Forensic nurse specialists living in the US and all of the legal and forensic stakeholders interviewed for this study were asked to review and examine the pre and post-implementation questionnaires for accuracy and content. The experts in the US were all e-mailed copies of the questionnaires and an information sheet explaining the purpose of the study. All of the Western Australia legal and forensic stakeholders were provided a research information sheet and the questionnaires in person. The information sheet discussed the objectives of the study and of the questionnaire. Comments on items and their relevance were clarified and modified according to the comments from the reviewers. Minor modifications to the layout and wording were made prior to its use in the study.

For example, a clinical forensic nurse specialist working in the US made suggestions about the wording of some of the questions. The US expert commented about sentence structure and the presence of language inconsistencies. For example, a suggestion to include the statement "Please tick all that apply" at the end of some questions and to have other sentences begin with "How many of the choices listed below". Therefore, the language and sentence structure of every question was

examined carefully so that the participants would not be confused by the content of the questions.

In total, two West Australian lawyers, five US forensic nurse specialists, and 10 forensic specialists agreed to review the questionnaire for content and to provide answers to questions specific to their forensic specialty. For example, the Forensic Biologist, Forensic Scientist and Forensic Pathologist reviewed and answered questions 10 and 12 which dealt with specimen collection. Such professional feedback allowed the researcher to develop a more accurate marking key and subjected the questionnaire to further scrutiny prior to its distribution and use in the research study.

The last type of validity that required discussions is construct validity. Construct validity refers to the extent in which the instrument measures a theoretical trait (DeVaus, 2002; Schneider, et al., 2003). This type of validity is difficult to achieve and was not used in this study as there was no single, well established theory associated with forensic nursing suitable for this study. Therefore, the researcher utilised three different theoretical models to deal with the complexity of the study. The establishment of construct validity can be a complex process that often involves many studies and several different approaches (DeVaus). Furthermore, DeVaus believes that there is no ideal way of determining validity and that the researcher must choose the method best suited for the situation.

Reliability

As well as the issue of validity, it was essential to consider the reliability of the pre and post-test questionnaires. Reliability addresses the ability of a measuring tool to provide the same result on repeated occasions (DeVaus, 2002; Schneider, et al., 2003). The method of test-retest reliability addresses the question of consistent answers from multiple occasions of use. Depending on the text, the suggested interval at which the retest should be administered varied from two to six weeks (DeVaus; Golan, and Weizman, 1998; Zwart, Frings-Dresen, and vanDuivenbooden, 2002; Taylor, et al., 2001). DeVaus suggested that a trial of the instrument be undertaken on a smaller but similar practice sample to that being used in the study.

To address the issue of questionnaire reliability in this study, the test re-test method of reliability testing was used. Twelve experienced Clinical Nurses were asked to complete the questionnaire twice. None of these nurses came from HospB or HospC. Eight weeks after completing the questionnaire, the 12 Clinical Nurses were asked to complete the same questionnaire again. During the eight-week time period, the nurses were asked not to research information about any of the questions or talk to anyone about the contents. After the eight week time period, 10 of the 12 nurses completed and submitted the second questionnaire. There were two nurses who declined further involvement in the reliability testing.

The scores from both questionnaires were evaluated and the tool assessed for consistency and reliability of answers. A comparison of test scores was expressed by a Pearson correlation coefficient, r . The magnitude of the coefficient ($r = 0.85$) provided support regarding the tool's stability. An r equal or greater than 0.7 is considered an acceptable value for a tool to be viewed as reliable (Burns and Grove, 2007). Therefore, this result indicated that the questionnaire was a reliable tool.

The final contents of both the pre and post-test questionnaires included short answer and tick box response questions as well as a demographic cover sheet on the pre-test questionnaire (see Appendix 5 and 6). The researcher developed the questionnaire by modifying and selecting information that was considered fundamental forensic knowledge. All of the information was derived from published literature (Wick, 2000; Meserve, 1992; Easter and Muro, 1995; Pavlik, 2004), Western Australia legal codes (*Western Australia Coroner's Act; Privacy Act of 1988; Western Australia Criminal Code*), and real life patient scenarios experienced by the researcher and other forensic experts. The questions were designed to target and explore forensic issues that related to patient assessment, law and ethics, and nursing practice.

In total, the pre-test questionnaire contained 25 questions including five demographic questions that were not repeated on the second questionnaire. To minimise any confusion between the two instruments during analysis, the first pre-test questionnaire was printed on white paper and the second post-test questionnaire on orange paper. Participants were given the pre-test questionnaire only after the researcher received a signed consent form.

Participants were identified only by a code number located in the top right hand corner of the questionnaire. Each code began with a capital “H” for hospital, then a capital “B” or “C” to identify which hospital data was collected from, and finally a number (1-27 for HospB participants and 1-22 for HospC participants). The number at the end of each participant’s code was assigned according to when the participant agreed to participate. Participants could only be associated with their code through their consent form which had their personal code, their name and signature on the single document. Only the researcher had access to such information.

In addition to the questionnaire data, the researcher reviewed all of the policy and procedure manuals located at Hospital B, and C. Such information was used to assist the researcher during the scoring of the questionnaire. Details of the methods used during this study activity will be outlined below.

Policy and procedure manual review

There were two types of policy and procedure manuals that were reviewed at HospB and HospC; the main hospital policy and procedure manual and the ED nursing policy and procedure manual. It was necessary for the researcher to review both sets of manuals because nurses must follow, and are accountable for, practicing under all items discussed within individual area policy and procedure manuals as well as the more general hospital wide policies.

The focus of each review was to evaluate the policy and procedure manuals for any forensic related issues. Each forensic related policy was examined for the inclusion of treatment guidelines, clinical pathways, legal implications of guidelines, and suggested referral agencies. During each hospital’s policy and procedure manual review the researcher noted if the above items were included in the policies (see Appendix 7). Any conflict between research protocols and hospital policy and procedure information needed to be considered before finalising workshop content, marking participant questionnaires, and analysing final data.

Listed below are some forensic topics that served as a guide during the policy and procedure review at each hospital:

- Mandatory Reporting Laws
- Abuse and Neglect of the Child and Elderly
- Coroner investigations
- Domestic Violence
- Sexual Assault
- Drug facilitated sexual assault
- Death by assault/trauma
- Forensic evidence collection
- Managing the psychological patient
- Evidence storage and the chain of custody
- The emancipated minor
- Documentation guidelines: statements, body maps, legal implications
- Photography – Photodocumentation guidelines
- Courtroom testimony – What you should know

The list of forensic policy topics mentioned above were cited in Benak (2001) as, “guidelines that should be considered for your emergency department involving forensic related healthcare and intervention” (p. 21). The rationale behind this review was to assess the areas of forensic patient care that had already been addressed by hospital policy.

In addition to the paper copies of the hospital manuals, HospB and HospC had policies and procedures available on the hospital intranet computer system. Therefore, to ensure that no policies were overlooked and that every current policy was included in this review, the researcher audited all policies ED nurses were responsible to know about and the associated guidelines that affected their practice.

In addition, the researcher wanted to ensure that there were no hospital policies that provided conflicting information to that of the study protocols and might influence any of the answers participants may provide on their questionnaire. Consider, for example, if any of the participant hospitals had a policy that stated all patient property, including clothes, were to be put in plastic bags. Under such circumstances, there could have been some participants that believed that this was proper forensic protocol. Therefore answers to question 12 (see Appendix 5), which asked participants to identify how to package general patient items during forensic collection would have reflected such policy information and affected the way the researcher scored the questionnaire responses. In addition to the questionnaires and

the policy and procedure manual reviews, the researcher collected a substantial amount of data from participant interviews. Details of such interviews will be described below.

Interview guides

Overall, there were three types of interviews completed during this study which involved 21 stakeholders and 20 treatment group participants. To maintain consistency, all of the interviews were conducted by the researcher. To interview the stakeholders, the researcher developed two sets of interview questions; one for healthcare stakeholders and one for forensic stakeholders (see Appendix 8 and 9). This approach was adopted because there were some issues that directly affected each group. For example, healthcare stakeholders were asked if they felt they had contact with forensic patients. Such a question was not relevant to forensic stakeholders. Furthermore, ED managers were not able to comment on the condition of evidence forensic specialists received from hospital staff. The open-ended questions used during the interview process were based on recommendations from existing literature, anecdotal information, and conversations with the researcher's expert forensic nursing colleagues (DeVaus, 2002; Schneider, et al., 2003). The use of the same questions for each group and the use of a single interviewer was thought to increase the reliability of the data collected (Fazzone, Barloon, McConnell, and Chitty, 2000).

There were two different types of interviews that involved the treatment group participants: focus group interviews and follow-up interviews. Additional participant feedback and evaluation regarding the research design, forensic materials and implementation activities were gathered during focus group interviews. Literature indicates that focus groups help assess needs, generate information, develop plans, test new program ideas and evaluate outcomes (Krueger and Casey, 2000; Fowler, 1995). In addition, Fazzone, et al. (2000) found that the multiple perspectives gathered during focus groups provided insight into the consistency and accuracy of data. Therefore the reason for the inclusion of the focus group interviews in Phase IV was to enable further evaluation of the educational package.

Eleven of the 22 treatment group participants chose to participate in the focus group interviews. The open ended questions utilised during the focus group discussions centred on discovering what the nurses' perceptions were regarding the effect the educational package had on their daily nursing practices (see Appendix 10). In addition, the researcher was also interested in discovering if participants' believed they gained any benefit or practical assistance from the research tools.

Focus group discussions allowed the participants an opportunity to evaluate the study's content and effectiveness. Nursing input was essential to help ascertain whether any changes in protocols, procedures, policies, forensic materials, or nursing education would benefit future care provided to ED forensic patients. In addition, valuable insight could be gained as to how ED nurses feel they can contribute to maximising healthcare provided to forensic patients.

In addition to the focus group interviews, follow-up interviews were conducted with 18 of the 22 treatment group participants. After all of the chart check data was collected and analysed, the researcher noted that there was some disparity between some of the chart audit data, information collected from auditing the forensic kit supplies and the qualitative data that was documented in the researcher's field notes. For example, no evidence was located during the chart audits that supported the participants' reports (documented in the researcher's field notes) that they had used the paper evidence bags and chain of custody forms. In order to gain a better understanding about how and why the disparity existed, the researcher decided to conduct follow-up interviews with available research participants.

There were six questions that could be asked during the follow-up interview (see Appendix 11). The interviews focused on whether or not participants recalled having used any of the forensic kit documentation sheets developed for this study, the types of sheets utilised and the placement of the sheets once the participant had completed the form. Further details about the interviews will be discussed under Phase II for the stakeholder interviews and under Phase IV for the nursing participant interviews.

Thematic Analysis

For this study, thematic analysis allowed the researcher to report the experiences of the study participants which were captured during the interview process. Thematic analysis is a method for “identifying, analysing and reporting patterns (themes) within data” (Braun and Clarke, 2006, p. 79). Thematic analysis is thought by many to be a useful method to analyse qualitative data and provide rich, detailed, and complex accounts of data (Cassell, Buehring, Symon, Johnson, and Bishop, 2005; Fereday and Muir-Cochrane, 2006; Braun and Clarke, 2006). Thematic analysis has been shown to be flexible and an effective analysis method for interview data as it does not ascribe to any pre-existing theoretical framework (Attride-Stirling, 2001; Tuckett, 2005; Braun and Clarke, 2006). Therefore, the researcher believed that its use in this study would be suitable and beneficial. A detailed discussion in Chapter 5 will describe how the researcher applied this analysis process to the study data.

The last data collection activity that requires discussion is that of the chart check audits. The researcher collected a large amount of data from chart check audits carried out on medical records from HospB and HospC. The details of the process involved in this activity will be discussed below.

Chart check audits

In addition to completing the questionnaire, control and treatment group participants had their documentation monitored during multiple chart check audits. The researcher examined the documentation of all nursing participants at in the same manner at both HospB and HospC. This activity had a dual purpose which was to establish a baseline standard of nursing documentation in each group and allow for comparisons between and within participant groups. For example, control group participants’ documentation could be compared to establish whether (1) the control group had a much different standard of documentation than the treatment group before the study began and (2) whether completing the pre-questionnaire had any affect on the standard of nursing documentation. In addition, data collected from the treatment group participants could provide insight into whether the information provided during the forensic workshops was absorbed, retained and utilised by treatment group participants.

The Emergency Department Information System (EDIS) is a computer system that HospB and HospC both utilize to keep track of all patients who visit the ED. Some of the information that can be extracted from the EDIS computer program includes; treating doctor, primary care nurse, triage information, medical diagnosis, triage score, time of arrival, patient's date of birth, and medical record number. Before nurses at HospB and HospC begin to provide patient care, nurses log into EDIS. Each log-in records the nurse assigned to individual patients. Therefore, if used correctly and consistently, reports can be generated (using Excel spreadsheets) about the type of medical complaints patients had, the time arrived in the ED, and the nurses who provided care at any specific time on any specified day.

There were five chart check audits completed for this study: two at HospB and three at HospC. All of the pre and post- chart check audits were completed in succession as requested by the medical record supervisor at each hospital. The researcher believed the EDIS computer program would provide the most thorough and systematic way to generate reports for forensic patients seen in the two EDs during times specified by the researcher. As the researcher did not have access to the EDIS software program, a representative from the Emergency Medicine Clinical Practice Improvement Unit at HospB and the Staff Development ED Nurse from HospC were responsible for providing the researcher with the EDIS report data. The researcher provided the hospital staff with the necessary parameters so that the reports generated would provide details about specific patient populations of interest to this study.

The same patient reference parameters were utilised at both HospB and HospC to generate lists of potential forensic patients. The reference parameters included: participant nurse's name, patient's medical record number, date of patient's visit to ED, time patient arrived to ED, patient's date of birth, triage information, and the discharge medical diagnosis. The date of treatment specified in the parameters changed according to the focus of the researcher's chart check audit (pre or post intervention). In other words, all patients that visited the ED during timeframes set by the researcher and cared for by study participants (according to EDIS) were included to generate the initial patient reports.

The initial patient data reports were formatted using Excel software with the assistance of the hospital's staff development nurse. Each initial report consisted of 4000 to 6000 patient files. To have the medical records staff remove 4000 files for examination proved to be an impractical expectation. In addition, HospB's hospital policy outlined that only 20 patient files could be requested during any one week. Therefore, due to workload and time restraints, the initial data lists needed to be reduced. Furthermore, the initial data lists contained many patients that did not have forensically related medical complaints.

Therefore, to reduce the number of patient records to be reviewed, the researcher personally filtered out patient charts that did not contain forensic related material. Such a culling process was possible because the initial Excel patient reports contained the patient's triage information and final medical diagnosis. Therefore, the researcher read every triage section as well as corresponding medical diagnosis for every patient file listed on the initial patient data lists. Only the patients who had triage information or a medical diagnosis that was forensically based were placed on the list to be manually reviewed. If there was any uncertainty as to why a patient sought medical treatment, any unidentified mechanism of injury, or a possibility that a forensic related issue existed, the patient's chart was flagged for manual review.

This initial review reduced the number of patient files that the researcher would have had to manually review from approximately 6000 to 600 patient files per chart audit. For example, if a patient's triage and medical diagnosis indicated that the patient's ED visit was due to cardiac complaints such as chest pain or acute myocardial infarction, their chart was not short listed for review. However, if the patient's triage information and/or medical diagnosis indicated the reason for the patient's visit was due to an injury or assault, and therefore a possible forensic related complaint, the patient's medical record number was noted and the chart was manually reviewed by the researcher for possible inclusion into the study.

Ideally, the researcher sought to review five forensically related patient charts for each of the nursing participants at each chart check audit. The patient data reports generated for the first chart check audit had a six month timeframe. All patients treated by control group participants six months prior to the distribution of the first

pre-questionnaire were to be considered. Initially, a much smaller time frame (three months) was utilised but the researcher was unable to collect enough data. Therefore, a six month time frame was required to provide the researcher with the best opportunity to review five forensically related patient charts for the majority of study participants.

Nurses often work in teams and cover each other for meal breaks. For example, two nurses could be assigned to work in the “monitor” area of an ED. The cardiac monitor area usually consists of four to five beds. The two nurses work as a team to admit, assess, and monitor all patients assigned to that area. Both nurses are then responsible to ensure they each cover and care for the patients in that area while each nurse takes his/her meal break. Such cooperative work practices frequently result in a patient’s chart containing nursing documentation belonging to multiple nursing staff. Therefore, in this study, extra diligence was required by the researcher to include only patient charts where the triage or initial patient’s primary physical assessment was completed by the participant nurses. Therefore, to ensure only consenting participant nursing documentation was included during data collection, several cross checks were performed. When nurses document the type of care a patient receives, ideally, the documentation should include; a description of the care provided, the time and date the care was provided, the nurse’s printed name, signature, and professional designation (Nursing Board, 2002: HospB and HospC policy and procedure manual, 2006). If such information was absent or could not be positively identified as being information documented by participant nurses, the patients chart information was not included in the study data. To further verify a participant’s identity, participant signatures were compared with signatures on the research consent forms. Such cross checks were vital to obtain accurate data.

There was a standard list of 14 patient variables and nursing documentation items that were monitored during all of the chart checks (see Table 3.5). The 14 variables were chosen by the researcher because it was thought that such parameters provided the most comprehensive and accurate way to assess and evaluate the educational package and whether change was noted to nursing documentation or practice behaviours. The researcher methodically examined and recorded whether or not each variable was addressed by the study participant in the nursing notes. Variables 1-7

outlined in Table 3.5 were recorded as a specific time or number, whereas variables 8-14 were recorded as a “yes” or “no” response. All of these variables will be discussed in dept later in Chapter 5.

Table 3.5: Chart Check Variables

Chart Audit Variables
1. Category of forensic patient
2. Triage category
3. Time of presentation to ED
4. Time seen by nursing staff
5. Time left ED
6. Discharge from ED
7. Total time spent in ED
8. Injuries described/measured
9. Patient history in quotes
10. Authorities notified- documented attempted or patient declined (Police or Coroner)
11. Evidence collected
12. Chain of Custody maintained with form
13. Patient given referral numbers on discharge
14. Outcomes documented

The researcher continued to examine available patient files until there were five charts for every participant or until there were no further forensic related charts available for a particular participant. Patient files were examined in the order of which charts were listed in the reports. Charts closest to the date participants completed the pre-questionnaire were audited first and then working backwards in appearing order off the Excel report list. Once five forensically related files were examined for any participant, no further files were examined for that specific individual. This procedure was followed so that not any one type of diagnosis was chosen over another nor any favouritism could be implied regarding choosing “good” documentation over “bad”. The researcher believed that this procedure was the best way of collecting non-biased data.

In the following section, information that is specific to the four phases shown in Figure 3 will be described.

Phase I

Phase I was conducted at HospA. During this phase, the researcher conducted the replication study of Pasqualone's (1998) research which will be outlined below.

Replication of Pasqualone's study

To determine whether each of the 27 forensic patient categories identified by Pasqualone were applicable and appropriate within the Western Australian healthcare setting, a smaller scale replication study was conducted. Such an investigation would identify whether any similarities or differences could be found between Pasqualone's research and forensic patient categories within the healthcare setting. Information from this investigation allowed the researcher to identify the patient population that the educational material was to focus upon.

There are many differences that exist between the US and Australian healthcare systems. In addition to such differences, healthcare workers also have different legal requirements mandated by their professional licences as well as State and Federal law. Furthermore, there has not been any research published concerning the identification of forensic patient categories since Pasqualone's work. For these reasons the researcher was not confident to assume that Pasqualone's work would suit the needs of the Western Australia population. Therefore, the researcher felt it necessary to verify Pasqualone's work in a Western Australia study.

The data gathered in the Western Australia study served to replicate and corroborate the international application of Pasqualone's 27 forensic categories. HospA was chosen as the site to replicate Pasqualone's work due to the many similarities that existed between the hospital and community demographics. Hosp A was a small community hospital and the ED saw a similar number of patients (28,000 per year) to the hospital ED utilised in Pasqualone's (1998) research (22,500 per year). The hospital in Pasqualone's study had a catchment area that served a population of approximately 116,000 people. HospA had a catchment area that served approximately 127,337 people.

The total nursing staff numbers in each hospital ED were also similar. HospA had a total nursing staff number of 38 while the hospital ED used in Pasqualone's study had a total nursing staff number of 30. The average number of patients seen in the ED in Pasqualone's study was 59 while HospA saw an average of 95 patients per day. A major difference between the two hospitals was bed capacity. HospA had only an 82-bed capacity compared to 229-bed capacity stated in Pasqualone's study.

The Western Australia replication study was conducted over a 30-day period instead of the 60-day period outlined in Pasqualone's (1998) study. The researcher felt that representative data was collected during this time frame as no new data was collected and no new forensic patient categories emerged after 30 days. Pasqualone (1998) reviewed 3436 patient charts and during the replication study the researcher reviewed 2385 patient charts.

The researcher could not find any published literature that concluded whether any single calendar month was thought to represent a typical hospital year of an ED sample and the months utilised in Pasqualone's study were not specified. After speaking with many senior clinical nurses, the researcher excluded months that were anecdotally discussed as being particularly busy (June and July) or slow (January). Therefore, the month of August 2003 was used in the replication study to represent a typical ED sample.

The replication study included individuals who presented to HospA's ED for treatment during the month of August 2003. Each individual that registered as a patient had their ED patient notes reviewed by the researcher. Patient notes, in this study, referred to all documentation found in the triage notes, nursing notes and doctors notes. To generate an ED chart at HospA, individuals had to be assessed by the triage nurse and register with the ED clerk. Therefore, only patients who registered as ED patients from the period of August 1, 2003 commencing at 00:01 o'clock to August 31, 2003 at 23:59 o'clock were included in this chart review.

The researcher, for the purpose of consistency, reviewed each patient chart personally. The researcher reviewed each patient's triage information, nursing documentation, doctor's notes, and final medical diagnosis. In some situations, the

researcher was not required to review the entire patient record before a patient was classified as a forensic patient. For example, if the triage documentation stated that a patient had sustained a work related injury, which was clearly a forensic category identified in Pasqualone's (1998) research, no further review of the chart documentation occurred.

There were 2385 patient charts reviewed. After completing the chart reviews, the frequencies of each forensic category identified were calculated. The number and type of forensic categories identified were then compared with Pasqualone's (2003) 27 categories to look for similarities and any discrepancies. A detailed description of the verification study will be discussed in Chapter four.

Phase II

After completing Phase I, the pre-workshop activities outlined under Phase II in Figure 3 commenced. Activities occurring during this phase included; stakeholder interviews and the analysis of the resulting data, review of policy and procedure manuals, the distribution and collection of the pre and post questionnaire at HospB, and the pre and post-chart check audits at HospB, and lastly, participant recruitment and the distribution and collection of the pre-implementation questionnaire at HospC.

All of the stakeholder interviews were completed and research interventions involving HospB were completed prior to the researcher recruiting any treatment group participants. The delay in recruiting treatment group participants was necessary because of the length of time that was required to organise the stakeholder interviews as well as recruiting control group participants and collecting data. To simultaneously include another multifaceted research activity, that of treatment group recruitment and questionnaire distribution, proved impractical and impossible. In addition, there was a delay in receiving Ethics approval from HospC. Multiple study populations and research sites were involved in this phase. Each of the activities will be discussed below in the order the activities occurred.

Stakeholder interviews

In total there were 10 healthcare and 11 forensic stakeholder interviews conducted. Before interviews commenced, each stakeholder was provided with an information letter (see Appendix 12) and participant consent form (see Appendix 13). Each of the participant's questions and queries regarding the research project were addressed before the consent form was signed. Before any of the formal interviewing process was initiated, each of the participants received a signed duplicate copy of the consent form for their records.

All but two of the 21 semi-structured interviews took place during a three month period. Two interviews were delayed two months after completing the first 19 because two of the stakeholder participants were on holidays. All of the interviews were conducted in a private place at a time and place specified by the participant. (usually at their place of employment). This was to ensure that participants' felt comfortable and were inconvenienced as little as possible. A tape recorder was placed in clear sight of the participant on the table between the researcher and participant to maximise sound and clarity of voices. Before each interview, the participant's permission to record the interview was verified and the tape recorder was tested for sound to ensure no problems would occur during the interview. After each had been conducted, the researcher sat in her car and recorded her impressions and observations from the interview. The recording of such information directly after each interview allowed the researcher to recall information clearly and ensure accurate recollection.

All of the 21 interviews were conducted one-to-one with one exception. Upon request from two physicians (one Medical Director and one Medical Consultant from the same hospital) one interview was conducted with the two participants. The reasons from the participants for this arrangement were scheduling conflicts and time constraints. To ensure that one participant did not dominate the interview, the researcher made every attempt to obtain an answer to each question from both participants. However, there were times that the physician who did not answer the question first stated that they conferred with the first physician. Overall, however, for the majority of questions, each of the physicians did have a response to most of the questions. All of the interviews lasted between 45 and 90 minutes and all but one of

the interviews was tape recorded with the participant's approval. One participant requested their interview not be tape recorded. Therefore, the researcher took copious shorthand notes in order to capture as much verbatim conversation as possible.

All of the taped interviews, except three, were transcribed by a single, independent professional typist who was contracted under a confidentiality agreement. The typed transcripts ranged between five and 13 single spaced pages with the mean length of the transcripts being nine single spaced pages. When the typist was not available, the researcher transcribed the final three interviews. The information from the verbatim transcripts was manually analysed as the researcher encountered problems with software incompatibility when initial use of the qualitative analysis computer program (NUD*IST version 6) was attempted. The results of this analysis will be discussed in depth in Chapter Five. The main themes of the interviews were then used to help construct and support the content of the educational package and forensic workshops presented to treatment group participants.

All of the stakeholders interviewed provided important knowledge that was crucial to the success of this research study. Without input from key stakeholders, essential specialist information could have been overlooked or unintentionally left out. Any such oversight could lead to the dissemination of inaccurate, irrelevant, or out of date information. Therefore, the interviews were analysed before developing and establishing any forensic educational material, protocols or procedures for nursing standards of care (Caldwell, 1997; Ferguson and Jinks, 1994).

Hospital B

There were four study activities that took place at HospB during Phase II. Three of the activities that will be discussed below include; the policy and procedure manual review, the pre- and post-test questionnaire, and the pre- and post-chart check audits as the recruitment procedure for control group participants have already been discussed in this chapter.

Policy and procedure manual review

The methodology used to review the policy and procedure manuals at HospB have already been discussed previously in this chapter; therefore, no further elaboration is required.

Pre and post-test questionnaire

Control group participants were given the pre-questionnaire twice as they did not receive any intervention. Like the treatment group, the first questionnaire was copied on white paper while the second questionnaire was copied on orange. The researcher used different coloured paper to reduce any chance of confusing and mixing questionnaire data.

There were three questions (6, 14, and 22) on the post-test questionnaire that did not appear on the pre-test questionnaire. The three questions related specifically to treatment group participant experiences. For example, question six on the post-questionnaire asked treatment group participants if they gained useful forensic knowledge during their involvement in the study. Overall, there were 18 identical core questions that appeared on both the pre and post-test questionnaire that were utilised during data analysis.

Control group participants were asked to complete the second questionnaire eight weeks after the researcher received their first questionnaire. To maintain consistency the timeframe of eight weeks was set for both the control and treatment groups. The nurses were requested to complete and return their questionnaires within two weeks. Of the 30 participants who originally agreed to participate in the study, 22 returned their pre-test questionnaire the same day, five returned their pre-test questionnaire in two weeks, three participants required reminding once then returned their pre-test questionnaire in two weeks and three participants declined further involvement in the study when they were reminding about completing the questionnaire.

There were six nurses who decided to complete their pre-test questionnaires during their own time. The nurses that decided not to complete their pre-test questionnaires during the recruitment lecture were those working the night shift. The reason given by the participants was that they did not have time to complete the pre-test

questionnaire due to nursing staff shortages on the floor. Therefore, the researcher arranged a time with the participants when the researcher could collect the questionnaires. All of the participant pre-test questionnaires were returned during these arranged meeting times.

The second pre-test questionnaire was distributed to the control group participants eight weeks after they returned their first questionnaire. The eight week time frame was chosen because it correlated with the time period between the two questionnaires distributed to the treatment group participants. All of the second questionnaires distributed to HospB participants were hand delivered by the researcher. The face to face contact provided the researcher with the opportunity to answer any queries participants had and request that the questionnaires be returned within two weeks.

There were four participants who had questions as to why they were being asked to complete the same questionnaire twice. The researcher explained that to evaluate the educational intervention, the study design involved comparing data between study participants. The researcher further explained that completing two questionnaires would allow for complete data analysis to take place. After this information was shared with HospB participants all four participants agreed to complete the second questionnaire.

To encourage participants to return their questionnaire, the researcher stopped by the ED twice a week to collect any completed questionnaires. Out of the 28 post-questionnaires distributed only seven (25%) were returned. The researcher reminded each participant twice, at two week intervals, about the importance of completing and returning the questionnaire. Unfortunately, there was little success. When the participants were approached, they agreed to complete the questionnaires; however, after waiting and reminding participants during a six week period, only seven questionnaires could be collected.

Pre and post-test chart check audit

Out of the 27 participants involved in the first chart audit, the researcher only found five forensically-related charts for one (3.7%) participant. Unfortunately, with the majority of participants (20 or 80%), only between one and four forensically-related

charts could be found for each participant. There were six (22%) participants in which no forensically-related charts could be found.

The second chart check audit commenced eight weeks from the date the researcher received a participant's completed pre-questionnaire. Eight weeks was the same timeframe utilized for the second chart check audit involving treatment group participants (eight weeks after completing their intervention workshops). Therefore, to maintain consistency, the same time frame was used with control group participants. The same procedure was followed for the second audit as described for the first chart check audit.

Out of the 27 participants involved in the second chart audit, the researcher found five forensically-related charts for 12 (44%) participants. In addition, there were eight participants (30%) that between one and four forensically-related charts could be found. Lastly, there were seven (26%) participants in which no forensically-related charts could be found.

Hospital C

There were three study activities conducted during Phase II at HospC. These activities included the policy and procedure manual reviews, the recruitment of treatment group participants, and the distribution and collection of the pre-implementation questionnaire. Because the nurse recruitment procedures have already been explained in this chapter, the two remaining research activities will be described below.

Policy and procedure review

The methodology used to review the policy and procedure manuals at HospC were identical to how policies were reviewed at HospB. Additionally, the exact methodology followed during this study activity has already been discussed previously in this chapter; therefore, no further elaboration is required.

Pre-test questionnaire

Participants were given the pre-test questionnaire only after the researcher received a signed consent form. The pre- test questionnaires were distributed during two

recruitment periods. The first recruitment session lasted 11 days. There were 26 participants who completed the questionnaires. The second recruitment session lasted seven days and nine participants completed questionnaires. There were eight weeks between the two recruitment sessions. This was due to it being the researcher's final week of pregnancy and impending delivery. From the initial 35 who completed the pre-implementation questionnaires, only 27 participants completed all study activities.

The nurses were asked to complete and return their questionnaires within two weeks. Of the 35 participants who originally agreed to take part in the study, 21 returned their pre-test questionnaire the same day, eight returned it in two weeks, three participants required reminding once then returned their pre-test questionnaire in two weeks and three participants declined further involvement in the study when they were reminding about completing the questionnaire. The researcher visited the ED twice a week during various shifts that the study participants were assigned to work so that participant questionnaires could be collected.

The pre- implementation questionnaire was designed to evaluate the participants' baseline forensic knowledge and collect demographic information. Therefore, none of the intervention activities could begin for any participant until all of the pre-test questionnaires were collected. The researcher felt that having any forensic information material in the ED environment could prejudice participant answers.

In total, the pre- test questionnaire contained 25 questions and the post- test questionnaire 22 questions. The pre- test questionnaire contained five demographic questions that were not repeated on the post- test questionnaire. Additionally, there was one question on the post- test questionnaire (#16) that was mistakenly left in. This question asked if nurses were permitted to call the police if a patient admits to committing a crime. Due to the vagueness of the question the researcher decided to delete this question. Therefore, the response to question 16 on the post- implementation questionnaire was disregarded during data analysis.

In addition, there were two questions (1 and 10) that were included only in the pre-implementation questionnaire and three questions (6, 14, and 22) that were only

included on the post- implementation questionnaire. This was due to questions that focused on information specific to periods of time before and after the treatment participants were provided with the intervention workshops. To minimise any confusion between the two instruments during analysis, the pre- implementation questionnaire was printed on white paper and the post- implementation questionnaire on orange paper.

Overall, there were 18 identical core questions located within the pre and post- test questionnaires. Out of the 18 questions; four focused on legal and ethical issues, three on evidence collection, four on patient assessment, five on nursing practice, and two on participant attitude. To analyse the effectiveness of the research intervention (educational workshops) all pre and post- implementation questionnaire results were compared (Minicheillo, Sullivan, Greenwood and Axford, 1999, p238). The final results and all comparison outcomes will be discussed in Chapters 5.

Phase III

The implementation phase entailed the introduction of a multidimensional forensic educational package to treatment group participants and required six weeks to complete. The introduction and distribution of all tools occurred once all participants from HospC had been recruited, signed their consent forms and all pre- implementation questionnaires had been completed and returned to the researcher. All activities discussed in this phase involved only HospC participants.

In an effort to try and maximise workshop attendance, the researcher asked participants during the initial recruiting phase about days and times that would suit the majority of study participants. The most favoured option declared by the majority of participants was that the workshops take place during their normal working shifts. This option of allowing participants to attend the workshops while rostered on in the ED was discussed with ED management. Due to the managerial support for this study, all participants were allowed to attend the workshop during normal working hours.

Originally, the intervention workshop was designed as a single, three hour educational session. After consultation with participants, the staff development nurse and ED manager, the educational intervention was divided into three, one hour workshop sessions (A, B, and C – see Appendix 14). The reduction to one hour sessions meant that all participants needed other ED staff to cover extra patient responsibilities for a maximum time of one hour. The researcher discovered that such an arrangement was the most practical and most preferred option for all concerned. The researcher also believed that this schedule option provided the greatest flexibility to ED staff and reduced the amount of stress felt by other non-participant nursing staff. All three of the educational workshops will be described in detail later under the forensic workshop heading.

One of the inclusion criteria for nursing participants was that nurses had to have worked in the ED for greater than three months and could not be first year nursing graduates. Therefore, all of the nurses who were involved in this study were at least 21 years old. In Western Australia, any individual who is over 18 years old is classified as an adult (Nygh and Butt, 1998). In order to increase participation and facilitate learning, adult learners require their educational material to be developed differently than that for children (Merriam and Caffarella, 1999; Cross, 1981; Caffarella, 2002; Brookfield, 1986).

According to Knowles (1980), adult learners learn most effectively if: the new learning material is presented in the context of real-life situations, if the adult learners know why they need to learn something, if the adult learner has had some input into the planning of their education, and if the adult learner has strong internal motivations to learn. The adoption of such principles has proven successful with adult learners previously and is well documented in published literature (Lowry, 1993; Puliyeel and Puliyeel, 1999; Kaufman, 2003).

Knowles (1980) learning principles suggest that adults learn most effectively when all of their senses are stimulated (seeing, listening and doing). A multi-sensory learning framework was adopted in this study during the workshops. Participants were provided with flow diagrams and charts about evidence collecting and injury documentation. Detailed lecture information accompanied the information sheets and

was then reinforced during a practical based session. During the practical session, participants practiced collecting evidence and describing injuries from photographs displayed through a PowerPoint slide presentation. Group discussions and sharing of information provided feedback and support for participants. As a result, it was hoped that participants would be better able to retain, process and apply their new skills and the information. Knowles (1980) learning principles, and a variety of other learning strategies were implemented to increase the probability of providing a successful educational intervention. For example, in this study, participants were taught about the 27 different forensic patient categories, how to collect evidence and document patient history and physical injuries. Such information was presented in the context of real-life situations to show relevance to ED nursing practice. Furthermore, the complexity and diversity of forensic cases was further demonstrated through case study scenarios discussed during the workshops.

Initially, clinical forensic issues and principles can be daunting, confusing and are foreign to most people. Therefore, to address adult learner issues, individual learning styles, and new forensic concepts, a variety of learning tools were developed for this research project. The various learning tools provided to treatment participants included: a forensic kit, a pocket prompt card, forensic kit information sheets, a forensic resource file, a reflective journal, and access to 24 hour telephone support during the data collection period. The use of various teaching methods and learning tools was discussed by other published studies as a way to maximise the success and absorption of educational material (Kelly-Thomas, 1998; Ogunbodede, Rudolph, Tstsi, Lewis and Iloya, 1999; Hughes, Parker, Payne, Ingleton, and Noble, 2006; Kerrigan et al., 2006; Chan and Ko, 2006). In addition, forensic patient flow diagrams, labelled evidence bags hung on the wall, posters identifying 27 forensic patient categories hung on the walls, pocket prompt cards were given to each participant, and files full of forensic step-by-step instructions were placed in three convenient locations.

All of these tools that were associated with this study could be quickly identified by the colour orange which was chosen as the theme colour for this project. All posters, forms, and tools associated with this project were printed on bright orange paper. HospC and most other metropolitan ED's in Western Australia colour code related

items. For example, all items related to blood or blood collection supplies are kept in red plastic boxes in the resuscitation and storage rooms. Orange was chosen so that tools and resources associated with this research project could be easily identified and no other ED supplies at any of the participating hospitals utilised the colour orange for other coded ED items. Each of the implementation tools utilised during implementation activities at HospC will be further described below.

Forensic workshop

The content of the forensic educational package was divided into three workshops; an introduction into forensic patient categories (workshop A), a practical component (workshop B); and law and ethics (workshop C). Each participant was asked to attend all three workshops and were strongly encouraged to attend the workshops in order (A first, B second, C third). Each of the workshops was offered across night and day/afternoon shifts to accommodate all participants (including permanent night duty participants) and lasted one hour in duration.

The workshops scheduled for night duty participants were conducted at different times. Such flexibility was required to accommodate the fewer opportunities night shift staff had to provide coverage for staff removed from the floor. For example, some of the sessions were held at 0400 am, some began at 2300 pm and others at 0200am.

To arrange a night duty workshop, the researcher called the night duty nurse co-ordinator in the ED to confirm a time that participant nurses could be spared from the floor to attend the workshop. Attendance by night shift participants depended on how busy the ED was and if staff could be spared off the floor for one hour. Because of the unpredictability and the small number of nurses these sessions accommodated, night duty workshops were often attended by only one or two nurse participants. This did not create a problem, and in fact, the smaller group numbers meant that the majority of the workshop material was provided to participants, on average, within 40 to 45 minutes.

However, unlike the night duty sessions, the daytime sessions were always held during normal staff development education session times; 1400 – 1500 pm. This time

slot corresponded to the normal shift handover time when staff numbers were highest. This maximised the probability participants could be off the floor and covered by other ED staff. Daytime workshops were offered on different weekdays and over one weekend to allow nurses on all shifts the opportunity to attend workshops during their rostered work hours.

Sign up sheets were posted in the ED staff room so that participants could choose which educational sessions they preferred to attend. The participants were asked to keep workshop numbers to a maximum of 10 people. However, with staff shortages and nurses only electing to attend during their normal rostered shifts, the maximum number at any one workshop never exceeded five. All of the workshops were conducted using the same outline and always provided by the researcher for consistency.

The first educational workshop (A), focused on introducing and explaining the research project activities, introduced the tools participants would have access to, identified the storage location of all research materials, and discussed the concept of forensic nursing (the meaning of and explanation of the 27 categories of forensic patients). During workshop A, all participants were given an orange file. Each file contained copies of all the information sheets, a reflective journal, a pocket prompt card (see Appendix 15), and a copy of all the material located within the forensic reference file. At the end of every workshop, participants were given time to ask any questions and voice any concerns they had regarding their participation and the study.

Workshop B provided an opportunity for the participants to practice some of the practical skills associated with the research project. Clinical forensic nursing was a new concept to most of the participants. Therefore, the researcher felt it was important to provide time for participants to physically trial some of the documentation tools and evidence collection techniques discussed in the workshop. This practical session allowed participants time to practice working with the information sheets, forensic kit contents, and forensic evidence collection techniques. For example, articles of clothing were provided by the researcher and participants practiced bagging the articles as forensic samples. In addition, five to six slides

(depending on the time available) of various physical injuries were discussed and participants practiced their written documentation skills. Workshop B was designed to be interactive and provide an opportunity for participants to ask questions regarding evidence collection and practice their documentation skills.

The final workshop C, focused on legal and ethical issues. The material presented during this session centred predominately upon mandate reporting law in Western Australia, chain of custody procedures, patient consent forms, referral agencies, and associated ethical issues. At the end of each workshop, time was allocated to review issues that remained unclear or for any general queries that concerned participants. Most of the participant questions came in the form of “what if” and required legal clarification. Examples included:

1. What if I had a patient that came in to the ED with a query knife wound?
Do I have to call the police?
2. What if the doctor does not want to report a suspected child abuse case, can I do it by myself and do I have to?
3. What if I do collect evidence, will I have to go to court?

The content of the workshops incorporated all of the material that was included in the pre-implementation questionnaire. Therefore, upon completion of all three workshops, participants had been provided with all of the information required to score 100% on the post- implementation questionnaire. At the end of the third workshop, participants were asked to complete a short workshop evaluation (see Appendix 16). The evaluation form invited participants to comment about their satisfaction with the workshop content, educational material, and general experience during the workshops presentations. Such data provided the researcher with further opportunities to evaluate the educational package and its components.

Forensic kit

The forensic kit was designed specifically for this research project. The kit consisted of a black plastic fishing tackle box labelled with an orange laminated “forensic kit” sign attached to both sides (see Appendix 17), various sizes of brown paper bags, and chain of custody forms. There was one forensic kit supplied to the ED and all items were kept together in the locked cabinet located in the resuscitation area.

All items contained within the tackle box could be routinely found in the ED storeroom (see Appendix 18). To encourage and simplify the evidence collection process, all supplies required to collect, seal and label forensic specimens discussed during the workshops were included in the “forensic kit”. Therefore, wherever forensic patients needed to be treated, all of the required supplies were conveniently located in one mobile kit.

Chain of custody forms (see Appendix 19) were also designed specifically for this project. These forms were stored in the bottom compartment of the forensic kit and were also available in the three forensic files placed on the ward. Brown paper bags (large, medium, and small) were supplied by the researcher to HospC. This was a necessary practice because usual hospital practice saw staff using plastic bags to store all personal patient belongings. The use of plastic bags is a common practice noted by the researcher (HospB also used plastic bags) as most nurses and ED management felt that plastic bags were more appropriate and robust should any item be damp or soiled (multiple ED staff and ED manager, personal communication, April 24, 2005). Paper bags are essential to collect forensic items and are not usually found in Western Australia emergency departments (Pavlik, 2004). A sample of how a paper bag should look after it has been sealed and labelled correctly was attached to the outside of the locked cabinet where the paper bags were stored. This served to help guide the participants during evidence collection and to remind the nurses that the paper bags were there for their use.

Information sheets and posters

There were six orange laminated information sheets (see Appendix 20) attached to the forensic kit handle by a metal clip. The information sheets were designed to reinforce the forensic workshop material, support the participant’s decision making process and minimise anxiety participants may experience while working with forensic patients. The format of the information sheets was a combination of lists, flow diagrams, and clinical pathways. The information sheets included; a list of the 27 types of forensic patients, examples of common types of evidence the nurses may encounter and how best to preserve and label any evidence collected, guidelines on how to transfer collected evidence, a forensic patient clinical pathway, and a list of various forensic resource agencies and corresponding phone numbers.

The forensic patient clinical pathway was designed to help guide any nurse through a decision-making process should he/she need assistance with or have any concerns about forensic patient care issues. For example, the first question on the flow diagram asked the nurse to identify whether his//her patient fell into one of the 27 forensic patient categories. If so, the step by step, yes/no flow diagram would alert the nurse as to the necessary activities that may require action; such as the need for collecting, documentation and preserving existing forensic evidence.

To assist with discharge information, one of the information sheets contained common referral agencies and phone numbers applicable to the local community surrounding HospC. The agency list was made specific for HospC and contained as many after hours numbers as possible. The contents of all the information sheets were explained to the participants throughout the three forensic workshops.

In addition to the information sheets, there were three large orange posters displayed throughout the emergency department. The three posters consisted of; a list of the 27 forensic patient categories, a chain of custody poster displayed on the outside of the locked cabinet, and a paper not plastic sign to encourage the use of paper bags. Again these items served to remind the participants to assess and address the needs of forensic patients.

Pocket prompt card

The pocket prompt card (see Appendix 15) was a small (12 x 9 cm), two-sided, orange laminated card with an attached 15cm clear plastic ruler. Both items were attached to a plastic clip-on device so that participants could easily carry the tools on a belt loop. There was a list of the 27 forensic patient categories on one side of the card and guidelines about evidence collection on the other side. In addition, the researcher's mobile phone number was placed on both the prompt card and ruler should any participant need assistance, support or clarification. Once again, in keeping with Knowles (1980) adult learning principles, these items served to remind and reinforce workshop material and assist participants to care more easily for forensic patients.

Forensic resource file

There were three forensic resource files that were strategically located within the ED; one in the resuscitation area, one at the triage desk, and one at the central nursing station. These files were black with an orange “Forensics” sign inserted into the front and back plastic covering panels. The contents of each file were identical and provided copies of all the research paperwork discussed within the workshops as well as forensic reference material (see Appendix 21).

At the request of the ED manager, there were two forensic articles placed at the back of each file (Lynch, 1993; Benak, 2001). These articles were classic introductory articles that the manager felt would help explain the field of forensics to the ED nurses. The ED manager thought this type of material would also provide interesting reading material. The presence of the files at all of the major nursing work stations provided the participants’ with a constant reminder about the importance to assess and treat forensic patients, an opportunity to refresh their forensic knowledge, and to provide easy access reference material.

One of most important documents contained within the resource file was the orange patient consent form (see Appendix 22). Before any evidence could be collected from a patient, participants’ were required to complete a patient consent form. There were specific guidelines (see Appendix 23) created for this project that outlined the types of patients and associated conditions from whom nurses could collect forensic evidence. Such patient inclusion protocols were developed in consultation with ED management, reviewed by the University’s Human Research Ethics Committee and HospC’s Ethics committee, and guided by regulations outlined in the Western Australia *Privacy Act of 1988*. Before any patient’s personal property was collected and given to the police (or other authorities) a consent form had to be completed by the nurse and signed by the patient or their legal guardian. The original form nurses were required to add to a patient’s ED file notes and a copy given to the receiving agency professionals.

Journal

Each participant was given a small 30-page workbook. All participants were asked to keep a reflective journal throughout the study. Ralph (2001) believed that journal

writing can help individuals heighten their awareness, reduce stress, and increase professional development. The use of reflective journals is widely documented throughout educational literature as a positive and relevant approach for assessing and encouraging learning (Wong, Kember, Chung, and Yan, 1995; McAllister, Lincoln, McLeod, and Maloney, 1997; Riley-Doucet and Wilson, 1997; Ralph).

Participants were asked to keep a record of any key events or other significant issues that occurred during the data collection period and how they dealt with such events. In addition, the ED staff development nurse was also requested to keep a similar journal as she served as the main educational support person in the ED for nurses. The researcher thought that the ED staff development may receive queries or comments from participants that the researcher could use to provide additional information about the study content and its effectiveness. Such data could prove invaluable when interpreting the effectiveness of the educational package (McAllister, et. al., 1997).

Phone log

All nursing participants were provided with the researcher's mobile phone number. Participants were encouraged to use the phone number as an avenue of support for any clinical forensic questions that may arise during data collection. The researcher explained that no names of any caller would be recorded however; topics of their conversation and consequential plans of action would be documented and discussed in the final research report. The researcher's mobile number was also posted at the bottom of all information sheets, on the pocket prompt cards, and on the plastic rulers. The details of how often and under what circumstances the participants utilised this means of support will be discussed in detail in Chapter 5.

Locked cabinet

One of the essential items required for this research was that HospC have a lockable cabinet within the ED. The researcher negotiated with the ED manager to have exclusive access to an existing lockable cabinet. The cabinet was essential in order to provide a location for the participants to secure any collected evidence in case law enforcement (or other receiving agency professionals) could not immediately take custody of such items (Pavilik, 2004).

There were two sets of keys to the locked cabinet. One set of cabinet keys was kept on the ED nurse coordinator's key ring and a spare set was left with the ED staff development nurse. It was vital to have exclusive use and limited access to the locked cabinet. By limiting access, the chance of any unauthorized person interfering with sealed evidence is minimised and the ability to account for anybody who may have access to the forensic articles at any time is maximised (Lynch, 2006, p.132).

Phase IV

All of the activities described during this phase pertain only to the treatment group participants who worked at HospC. The activities that took place during the post intervention phase included; distribution and collection of the post-implementation questionnaire, three chart check audits, forensic kit audits, journal collection, audit of the researcher's phone log, focus group interviews, and follow-up interviews. All of these activities will be discussed in detail below.

Post-test questionnaire

The post-test questionnaire (see Appendix 6) was administered to treatment group participants eight weeks after the date each participant completed all three forensic workshops. The researcher found several published studies that discussed different time frames in which the post-test questionnaire was administered to a treatment group); however, none of the studies explained why such time frames were chosen (Hughes et al., 2006; Lovell et al., 2003; Rezaei, Seydi, and Alizadeh, 2004; Wang, H., Fennie, K., He, G., Burgess, J., & Williams, 2003; Chan and Ko, 2006). The researcher was not able to find any literature that discussed a definitive or optimal time frame. Therefore, eight weeks was chosen after consultation with a research consultant who suggested that eight weeks was an acceptable time frame to administer the post-test questionnaire. The post- implementation questionnaires were hand delivered to each participant by the researcher. Like the pre- implementation questionnaire, participants were given the option of returning the questionnaire the same day or placing the completed form in the office door mail slot of the ED staff development nurse. As the questionnaires only had the participant's research code in the top right corner of the questionnaire, each participant's identity remained

unknown. The participants were asked to complete and return the post-implementation questionnaire to the researcher within two weeks.

Of the 22 participants eligible to complete the post- implementation questionnaire, 13 were handed back within two weeks and nine were reminded once and then returned (see Figure 3.3). All of the nurses were asked to complete the post-implementation questionnaire without consulting other participants, using forensic reference material located within the ED, or re-reading any notes they may have taken during the workshops.

Eighteen of the questions within the post- implementation questionnaire were identical to that of the pre-implementation questionnaire (core questions). The core questions were used to compare the pre and post implementation questionnaire scores. Such a comparison provided the researcher one way in which to evaluate the effectiveness of the educational package (Minichiello, et al., 1999; DeVaus, 2002). Such results will be discussed in Chapter 5.

There were three additional questions in the post- implementation questionnaire that did not appear in the pre- implementation questionnaire (questions 6, 14 and 22). The three differing questions focused on opinions specific to the workshop evaluation. For example, question 14 asked participants to identify the areas of knowledge that they felt were increased due to their involvement in the study. It would have been inappropriate to include this within the pre-implementation questionnaire.

Chart check audit

There were three chart check audits completed at HospC; a pre-test, two month post, and a four month post audit (see Figure 3). By request of the medical records manager at HospC, all three chart check audits were completed at the same time to minimise any inconvenience or disruption to staff assisting with the chart check audits. Therefore, discussion of the pre, two month post and four month post intervention chart check audits occur under Phase IV. The chart audits were essential to assist the researcher evaluate the study intervention. Program evaluation is vital in order to determine its effectiveness and benefits (Burns and Grove, 2007).

For treatment group participants, comparing their nursing documentation before and after the workshop interventions would indicate whether the participants absorbed the educational material and changed their practice behaviour. The third chart audit allowed the researcher to identify whether the intervention promoted long term changes in nursing documentation amongst treatment group participants. For example, during the workshops, participants were taught the importance of thorough recording regarding injury characteristics; such as size, shape, location, and colour. Therefore, during chart audits, the researcher recorded whether the nursing notes contained detailed descriptions about the existence and extent of injuries patients possessed when they presented to the ED for treatment.

Pre-implementation

The first chart check audit involved patient charts that were associated with participants who had provided care to forensic patients prior to completing their pre-test questionnaire. The researcher then worked backwards for up to six months. The researcher found it necessary to utilize charts up to six months prior to the initiation of the study in order to gain enough data for the majority of participants. Out of the 22 participants involved in this audit, there were 17 (77%) in which five forensically-related charts could be found while with four (18%) of participants, the researcher found between one and four forensically-related charts. Lastly, there was only one incidence where the researcher could not find a single forensically-related chart for a participant.

Two months post intervention

The commencement time stipulated for the two month post-intervention chart check audit began two months after a participant completed their third educational workshop. Due to the study design, there was only two months worth of patient charts available to the researcher during this chart check audit. Therefore, there was much less data available to the researcher than was available at the pre and four month post intervention chart check audits. During the planning of the research, it was originally thought that two months would be a long enough time period in which to collect five forensic related patient charts for each participant.

Out of the 22 participants involved in this audit, the researcher only found five forensically-related charts for two (9%) participants. Unfortunately, with the majority of participants (17 or 77%), only between one and four forensically-related charts could be found for each participant. There were three participants (14%) for whom no forensically-related charts could be found.

Four months post intervention

The commencement time stipulated for HospC's four month post-intervention chart check audit began 16 weeks after a participant completed their third educational workshop. Similar to the pre-implementation chart check, a period of up to six months was utilized during this chart check audit. As with the control group, a six month time period allowed the researcher the best opportunity to gain five forensically related charts for participants. Out of the 22 participants involved in this audit, 13 (59%) participants had between one and four charts audited. In addition, the researcher only found five forensically-related charts for three (14%) participants. Lastly, there were six (27%) participants for whom no forensically-related charts could be found.

Forensic kit audit

The contents of the forensic kit were monitored at two and four month intervals during the data collection period. This process provided the researcher with information as to the type and frequency of materials most commonly used by participating nurses. The forensic kit was kept in the locked cabinet to minimise the use of kit items by non-participating ED staff.

If participants ran low or out of any forensic kit items the researcher could be contacted to replace any of the items (all of which were readily found within the ED storeroom). However, if participants restocked the forensic kit item themselves, the participants were asked to document in their reflective journals or contact the researcher. Such communication was important to monitor what materials were added to the forensic kit and used more frequently.

Journal

Each participant was given a small 30-page workbook. The only identifying information on the book was the participant's code number on the cover. All participants were asked to keep a reflective journal throughout the study that would be turned in at the end of the data collection period.

Disappointingly, no journals were completed. The three reasons participants' cited for not writing in their journal were: (1) forgot all about it (2) being too busy and (3) lost the journal. As with participants, the staff development nurse did not record any information in her journal. However, many participants as well as the staff development nurse spoke with the researcher during her visits to the ED. All topics of conversations were recorded in the researcher's field notes and will be discussed in Chapter 5.

Phone log

During the data collection period the researcher kept a personal journal of all conversations (personal or telephone) with research participants. For example, one participant called to request more body diagram so that injuries could be documented on a domestic violence victim. Another phone call involved providing advice and support to a participant who was requested to collect a mouth swab from an assault patient. All documentation made by the researcher identified participant's only by their code number and not their name.

Focus group interviews

In total, there were three focus group discussions conducted. These interviews occurred four months after participants attended their workshops. The focus group discussions were not compulsory; however, all participants were encouraged to contribute. In total, 11 of the final 22 (50%) treatment group participants agreed to participate.

Two focus group sessions took place during the day and one was arranged for the permanent night duty nurses. There was one session conducted during the week (Tuesday) and one on the weekend (Sunday) where three and four nurses attended respectively. There were four nurses that attended the Monday night session.

Multiple focus group sessions were required to limit the number of participants and to accommodate the nurses across all shifts (Morse and Richards, 2002; Bloor, Frankland, Thomas, and Robson, 2001).

The semi-structured interviews were all conducted by the researcher and lasted approximately 25 minutes. Some of the nursing participants did not want the researcher to record the focus group discussion; therefore, the researcher took copious shorthand notes in order to record as many verbatim responses as possible. In order to ensure participant ideas and thoughts were correct, the researcher did verify statements with participants if the researcher was unable to write fast enough. The content of all interviews was analysed using the same analysis process utilised to evaluate the stakeholder interview data. All of the main themes and final outcomes will be detailed in Chapter 5.

Follow-up interviews

There were 18 of the original 22 (82%) treatment group participants still working in the ED and available for comment when the follow-up interviews were conducted. Each of the 18 nurses were approached by the researcher and asked if they would participate. All 18 nurse participants agreed to participate in the follow-up interviews.

The interviews were all conducted over a four day period during each of the participant's normal rostered shift. Four of the 18 participants were rostered on night duty during the interview period. Due to time constraints and availability, the researcher conducted the night duty participant's follow-up interviews over the phone. The other 14 follow-up interviews were conducted by the researcher in person during day and afternoon shifts.

The interviews were all conducted by the researcher and lasted approximately five to 10 minutes. As a result of the limited dialogue involved in the follow-up interviews and previous objections by some nursing participants to have their conversations tape recorded, the researcher took copious shorthand notes in order to record as many verbatim responses as possible. In order to ensure participant ideas and thoughts were correct, the researcher did verify statements with participants if the researcher

was unable to write fast enough. The content of all interviews was analysed. All of the final outcomes will be detailed in Chapter 5.

Ethics Approval

One of the most important aspects of research is to protect participants from harm. The type of ethical issues encountered in qualitative and quantitative research may differ slightly. Therefore, a variety of ethical and legal issues must be considered before commencing research which includes human subjects (Schneider, et al., 2003; DeVaus, 2002; NHMRC, 2006).

Across Australia, the National Health and Medical Research Council (NHMRC) is the national organisation that provides support, advice, and develops regulations about health and human research ethics in Australia (NHMRC, 2006). The NHMRC developed the Statement on Human Experimentation (NHMRC, 2001) which has since been updated into a more general statement that applies to any research involving humans. Australian Health Ethics Committee is now the principal committee of the NHMRC which was established under the *NHMRC Act 1992*. The *Act* sets out functions of the Ethics committee to advise the NHMRC on ethical issues relating to health and research conduct involving humans (NHMRC, 2006). For this study, the researcher used such guidelines as a primary source for highlighting issues in this study. The specific ethical issues relevant to protecting research participants throughout this research project included; voluntary participation, informed consent, beneficence of participants, confidentiality, and privacy. All of these topics will be discussed below.

Approval from the Ethics committee

This research study was examined by members of the Research Committee of the University of Notre Dame Australia and Ethics approval was granted on 2 December 2003 (see Appendix 1). In addition to the research proposal being accepted by the Research Committee of the University of Notre Dame Australia, an Ethics application was submitted to each of the hospitals' Ethics Committee involved in the study before any recruitment of participants occurred. Hospital A and C shared the same Ethics Committee. Therefore, one application was submitted for activities

proposed at both sites. In addition, the researcher was requested to appear at an Ethics Committee meeting to field any questions members may have had.

There was one concern raised by Ethics Committee members who represented Hospital A and C. Their concern surrounded the issue of patient confidentiality in relation to the researcher conducting chart audits. In response to patient confidentiality, the researcher was able to reiterate that only nursing documentation was to be examined and that no patient details were to be recorded. The Ethics Committee members were satisfied with all aspects of this proposal and approval was granted to include HospA and HospC in the study (see Appendix 1).

A written application was also sent to the Ethics Committee at Hospital B. The researcher was not required to appear in person. The Ethics Committee members were satisfied with all aspects of this proposal and approval was granted to include Hospital B in the study (see Appendix 1).

Voluntary participation and consent

In order for participants to make a true choice of whether to participate in any study, individuals require accurate information (DeVaus, 2002). In other words, individuals must be informed about the range of matters relating to the research study they are considering to be involved with. Only after hearing information related to all research facts can an individual volunteer to participate and give full consent (Schneider, et al., 2003; DeVaus).

To provide potential participants with accurate information about the study, two information sheets were developed; one that addressed control group participant issues and one that addressed treatment group participants (see Appendix 3 and 4 respectively). The information sheets were devised to provide participants with written documentation that would help guide their decision to participate. No coercion or persuasion was used to recruit participants. Each participant was informed that their involvement or decision not to be involved with the research study in no way would affect their nursing role, job security or treatment at work. For example, if an individual decided not to participate, issues such as shift allocation

and holiday requests were not jeopardized or compromised because such decisions were kept confidential and not reported to hospital management.

Before the commencement of any research activities, the researcher received a signed consent form from each participant. In addition, each participant was given a duplicate copy of their signed consent form. The written consent forms contained information consistent with the guidelines of the University of Notre Dame Australia, the three hospitals, and the National Health and Medical Research Council Ethical guidelines (NHMRC, 2006).

Risk

According to Minichiello, et al. (1999), risk is considered to be something that may pose as a potential harm to participants. Such harm may include injury, emotional distress, loss of self-esteem, or embarrassment. It is essential to ensure that the risk research participants take when agreeing to partake in a research study never exceeds the potential of humanitarian benefits of the knowledge to be gained (Polit, Beck, and Hungler, 2001). In this study there were three main types of data collected that included personal details about the research participants; personal interview responses, nursing documentation from medical records, and participant responses from pre and post-test questionnaires. Although some demographic data was collected from all participants, none of the participants could be identified from such information. The data reviewed and collected was directly controlled by the participant or provided during their normal nursing duties outlined under their employment contract. Therefore data collected in this manner was seen as having a minimal risk (Polit, Beck, and Hungler; Taylor, Kermode, and Roberts, 2007).

Another potential risk to treatment group participants was the possibility of participants becoming stressed and upset related to caring for forensic patients and completing new forms. The researcher did not want the participants to feel isolated or insecure about any of the research details. Therefore, the researcher provided an avenue to support all participants in case they wanted to discuss any concerns or uncertainties they had. The researcher provided her contact phone number that all participants could access 24 hour/7day a week if they required.

Additionally, the ethical issue regarding whether, when and if a researcher should intervene in the research process was also considered by the researcher. As long as an action taken by a participant did not compromise professional nursing standards outlined by the Nurses Board of Western Australia (2002), could not be deemed illegal, could be considered of a reasonable standard for a nurse with similar experience, and could not result in a serious injury, the researcher would not interfere. Any intervention by the researcher would be based on the Nursing Code of Ethics and Australian law (NHMRC, 2006; Nursing Board, 2003). If a legal requirement and an ethical guideline apply, the legal requirement takes precedence. The NHMRC (2006) recommends that if an ethical guideline prescribes a higher standard than is required by the law, then the higher standard will be followed.

The final area of risk to participants, the researcher was compelled to address was the risks associated with reporting the results. It was possible that potential harm could occur to participants if the findings could be linked to their hospital or towards any particular individual. The researcher took every precaution to only have code numbers on all research documents. In addition, none of the names of the participant hospitals will be used during the result discussions. Overall, the researcher felt confident that all of the risks posed to any research participant was addressed and posed a minimal threat throughout all stages of this project.

Benefits

The researcher explained to all interested individuals that there would be no incentives or monetary benefit if they voluntarily agreed to participate in the study. All participants were supplied with ink pens to complete their questionnaires. In addition, each control and treatment group participant that completed and returned both questionnaires received a thank you note accompanied by a chocolate. This gesture was the researcher's way of expressing her gratitude for participating. The idea of giving participants a thank you note and chocolate was not disclosed to participants before data collection in case such actions were seen as a bribe.

Aside from the ink pens and chocolates, treatment group participants had the benefit of receiving up-to-date forensic educational material. The exposure to such material was a unique opportunity for the participants as similar information was not available

locally. In addition, both the control and treatment participants had the opportunity of providing feedback about educational material that might assist them in their future professional growth.

Privacy and confidentiality

Every attempt was made to keep all research data private and confidential. Due to the size of the city and the limited number of specialists in the forensic fields, anonymity could not be guaranteed to participants. No nurse participant names were documented on the questionnaires. Nurse participants were identified only by a code number. For example, nurses who work at hospital A will be assigned “HospA” #1, 2, or 3. Only the researcher was able to match the code numbers with participant names. The code list was maintained by the researcher and kept securely stored in accordance with University of Notre Dame Australia policy.

According to the policy “Code of Conduct for Research” the University of Notre Dame Australia have specific guidelines that address issues such as; data storage and retention, authorship, publications, conflict of interest, ethics clearance, and research misconduct. In the University’s policy under the heading of data storage and retention, for example, the policy specifies the minimum period of time the researcher must retain data, persons who should have access to confidential data, and where, how, and by whom confidential data must be stored.

Pseudonyms were used to identify hospitals and interviewed stakeholders. Such a strategy was used by the researcher to distance the ability to identify participants and hospitals with research the findings. Any reference to people during the taped interviews was not transcribed from the audiotapes nor used in the final data analysis.

Contained within the consent form was the name and contact number of the researcher’s supervisor. Such a contact was provided in case any participant felt the need to contact a third party for clarification or report any concerns they had regarding any aspect of the researcher’s conduct or progress of the research study.

Security of data

All of the written data will be kept for a period of five years and then destroyed in accordance with University of Notre Dame Australia requirements. The audio-taped interviews were erased once data analysis was completed and the associated chapter was finalised. The only persons who had access to the research data was the researcher and her research supervisor. Some of the interview data was handled by a commercial transcriber who had signed a confidentiality agreement. No copies of the audio tapes or corresponding transcripts were made.

Conclusion

This chapter began with a description of the research paradigms which guided the study methodology. A summary of the characteristics associated with the two research paradigms used in this study are described in Table 3.1. Following the discussion about the research paradigms, a detailed description of the research design and methodology was shown to support the researcher's choice of sampling, data collection and analysis. To minimise confusion, the methodology was organised and described under four phases. Lastly, ethical issues such as voluntary participation, consent, risk, privacy and confidentiality, and security of data were addressed in detail.

However, before the forensic educational package could be developed, the researcher firstly needed to establish the patient population to whom the information could be applied. There was only one published study that could be found that clearly identified forensic patient categories (Pasqualone, 2003). Additionally, the limited reference material surrounding this topic required the researcher to develop most of the policies, procedures, and educational materials for this study. Therefore, evaluation of all materials was imperative. To assist this process both qualitative and quantitative data were collected. The researcher's use of multiple evaluation procedures hoped to provide extensive feedback upon which to judge the educational package's effectiveness.

There will be an in-depth discussion in Chapter 4 regarding the replication of Pasqualone's (1998) study which identified 27 forensic patient categories. This

research provided the foundation for which the target patient population of this research study was based. A thorough investigation of such research was vital so that the researcher could develop a forensic nursing educational package specific to the existing forensic patient populations who seek medical care within Western Australia healthcare setting.

Thomas was just in the wrong place at the wrong time. In an instant, Daniel flew off the bed and was running after Thomas who fled down the hallway. No one saw this coming. The other nurses were still at Daniel's bedside looking on in disbelief. Thomas could not out run Daniel. As Thomas looked over his shoulder he felt the impact of the first punch to his face, then the vice grip around his neck. They fell to the floor and Thomas counted one, two, three as his head was thrown into the concrete floor. So quick and with no recourse. Not even time to yell out for help.