

# A national survey: transporting patients within Australian hospitals.

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## Abstract

*A telephone survey was conducted to describe current practices and policies of patient transport in Australian hospitals. The survey had a 94% response rate. Results showed considerable variability and ambiguity throughout the sample in both practice and policy. Findings also indicated that criteria used for transport practices were predominantly shaped by physiological and technological considerations. Factors related to human and financial resources, as well as psychological and emotional aspects of the patient's condition, received little attention.*

## Introduction

Patients are routinely transported around the hospital environment - to and from the operating rooms, the emergency department, medical imaging, pathology, and other departments and wards. They are transported on their beds, on trolleys, or in wheelchairs; they sometimes travel through public foyers, and often down long corridors where all they can see are the strip lights in the ceiling. They are taken to areas that are usually unfamiliar in order to undergo procedures that can be complex, frightening, and painful. Time spent being moved around the hospital can constitute a significant part of a patient's illness experience.

During these transport periods, patients are almost always conveyed by a wardsperson, porter, orderly, or ward assistant. Consideration of whether the patient is also accompanied by a nurse is usually related to that patient's need. The decision-making process to determine the extent and characteristics of that need is the subject of this study.

## Background

A review of the literature on escorting practices in intrahospital patient transport revealed a poor research base and lack of consensus on decision-making criteria.

Navarro (1992) examined the financial and staffing implications of nurse escorts, and found that time spent escorting patients imposed a considerable burden on both the hospital budget and available nursing hours. The study was primarily related to cost factors and therefore did not address other elements of escort activities. Two studies that described new methods of organising and staffing hospital-wide transportation systems concentrated on reduction of patient waiting times (Dershin & Schaik 1993) and increased bedside time for nurses (McGinty and Ghiz 1993). Although one study claimed an improvement in customer satisfaction, it provided no detail beyond the reduction in waiting times (Dershin & Schaik 1993).

Numerous articles offered straightforward guidelines to perceived best practice, and were concerned mostly with the preparation and utilisation of resources and equipment (eg. Howland 1995; Wilson 1998), or with the importance of communicating accurate information about the patient to the receiving nurse (eg. Stahl 1996). This literature was primarily opinion driven with little evidence of a research base to support the recommendations. Additionally, implicit in this literature was an assumption that the principal criterion for a patient to have a nurse escort was when there was a danger that the patient's physical care would be compromised if they were not escorted.

The literature dealing with transport of critical care patients was consistent with this theme, carrying the assumption that such patients would always have a nurse escort. Frost and Morgan (1991) advocated the standardisation and proper equipping of transport resources for critically ill adults to match those of specially designated transport teams working in the neonatal intensive care field. Kalisch and colleagues (1995) studied the characteristics of intrahospital transport of neurology ICU patients, and found that most of the problems associated with transport had to do with the excessive time and labour costs involved as well as with equipment difficulties and interruptions in monitoring. A more recent review of the critical care transport literature recommended that future research should focus on equipment and personnel needs, the characteristics of adverse physiological changes, and ways to minimise costs (Caruana & Culp 1998). All three studies (Frost & Morgan 1991; Kalisch et al. 1995; Caruana & Culp 1998) suggested that an optimal intrahospital transport process had yet to be designed.

Smith (1976) and Fought and Nemeth (1992) reported the only two studies that gave substantial consideration to the possible psychological and emotional aspects of patient transport. Smith (1976) dealt specifically with patient's experiences of intrahospital transport. Patients from all areas of a large US hospital were asked why they had been transported within the hospital and how they felt about it. The majority of patients had a neutral reaction to the transport episode, though the author questioned the capacity of the interview tool to account for tone of voice and non-verbal cues that might otherwise have presented a positive or negative component. The author suggested that the predominance of neutral or negative reactions, as well as the amount of incongruity between the official reason for transport and the reason as stated by the patient, were sufficient to justify further study into nurses' and patients' perceptions of the effect of transport on patients (Smith 1976, p 195). However, to date, no further work exploring this aspect of the topic has been reported in the literature.

Fought and Nemeth (1992) suggested that the use of a human responses framework to describe the patient transport episode was particularly useful in that it considered behavioural and experiential responses to an event to be as valid as physiological and pathophysiological responses. Behavioural and experiential responses, according to these authors, were "laden with cultural, personal, and social meaning" (Fought & Nemeth 1992, p.89) and therefore demanded a more complex interpretation. Such interpretation would provide a fuller picture of the transport event and therefore improve the management of human and other resources involved.

The literature on intrahospital patient transport has two clear emphases: using nurses as escorts is costly in terms of time and money, and the primary role of a nurse escort is to reduce the physiological risks associated with patient transport through adequate preparation of equipment and resources. Most of this literature describes the North American situation with very little reference to the conditions in Australian hospitals. Furthermore, there is no indication in this literature that a standardised model for intrahospital patient transport is available. There is therefore a need to determine the policies and practices of intrahospital patient transport in the Australian context.

## Methods

A national survey was conducted to investigate the conditions of patient transport within Australian hospitals. The survey gathered information regarding the transport practices and policies of all Australian hospitals of 400 beds or more. The survey was conducted by telephone, and one research assistant surveyed all hospitals in the sample.

## Sample

All hospitals in Australia of 400 beds or more were approached as potential respondents (N=35). Relevant hospitals were identified from the Australian Hospitals Directory (Marketing Pty Ltd 1999). The hospitals were located in 7 of the 8 states and territories in Australia; Northern Territory hospitals were not approached as none had the requisite number of beds.

## Data collection

An eight-item questionnaire was developed to collect data on patient transport practices across the nation. After requesting details of hospital characteristics, the remainder of the survey was concerned with conditions of patient transport and asked the following questions:

Does a nurse accompany patients between wards and departments all of the time, some of the time, or none of the time?

If some of the time, what are the criteria for deciding that a nurse should accompany a patient in transit?

Do you have a written policy on personnel involved in intrahospital patient transport?

If yes, does the policy include specific criteria for when a clinician is needed to accompany a patient in transit?

If yes, what are those criteria?

The survey tool was piloted and approved by the appropriate local committee. The survey was conducted over 11 non-consecutive days in a two-month period. Initial contact with each hospital was made by telephone using a standard preamble. If a suitable informant was available and willing, then the survey was conducted at that time. If a suitable informant was unavailable, arrangements were made for either the informant or the researcher to call back at a later time.

In practice, finding the right person to survey often involved various calls to the same institution or calls being forwarded a number of times. In addition, three informants requested the survey tool to be faxed to them for completion and return by the relevant person. Data from completed survey sheets were entered into an Access database and then analysed using SPSS (SPSS 1999). All informants were offered a summary of the findings.

## Results

Potential informants at two of the hospitals declined to participate, on the grounds that the specialist nature of their institutions did not lend themselves to the aims of the survey. A total of thirty-three hospitals were surveyed.

## Informants

Informants were mainly Nurse Managers (36%) or Directors and Assistant Directors of Nursing (33%). The remaining 31% of informants consisted of a mixture of hospital officials (eg. Bed Manager, Allocations Officer, District Nurse Researcher).

## Hospital characteristics

Median number of beds per hospital was 488 (range 350 - 900). Most hospitals had emergency and X-ray departments (see Table 1). Hospitals were staffed with a median of 1062 (range 320 - 3000) FTE nurses (RNs and ENs) and a median of 43.5 (range 1 - 300) FTE porters/wardspersons (including personal care assistants). Informants at two hospitals were unsure regarding the question of porter/wardsperson management.

**Table 1: Hospital Characteristics**

Departments	Frequency (n=33)	%
Paediatric Dept	22	66.7
Emergency Dept	31	93.9
X-ray Dept	32	97.0
<b>Porter / wardsperson management</b>		
Centralised	13	39.4
Unit-based	11	33.3
Both	7	21.2

## Escort practices and policies

The nurse always escorted the patient between wards and departments in 3 hospitals (9.1%). One of these was a specialist psychiatric hospital, while the other two were general public hospitals. In the remaining 30 hospitals (90.9%), the nurse sometimes escorted the patient depending on certain criteria.

Twenty-three hospitals (69.7%) stated that they had written policies on personnel involved in transporting patients. Thirteen of these hospitals (56.5%) stated that the policy included specific criteria for when a clinician was needed to accompany a patient in transit. Two of these thirteen, however, were hospitals in which the nurse always accompanied the patient; for these hospitals, the 'specific criteria' were simply that there was always a nurse escort.

The 30 hospitals that used criteria to decide when a nurse escort was needed therefore fell into three groups. Group 1 had policies that included specific patient escort criteria (n=11). Group 2 had policies that did not include specific patient escort criteria (n=10). Group 3 had no patient escort policies (n=9).

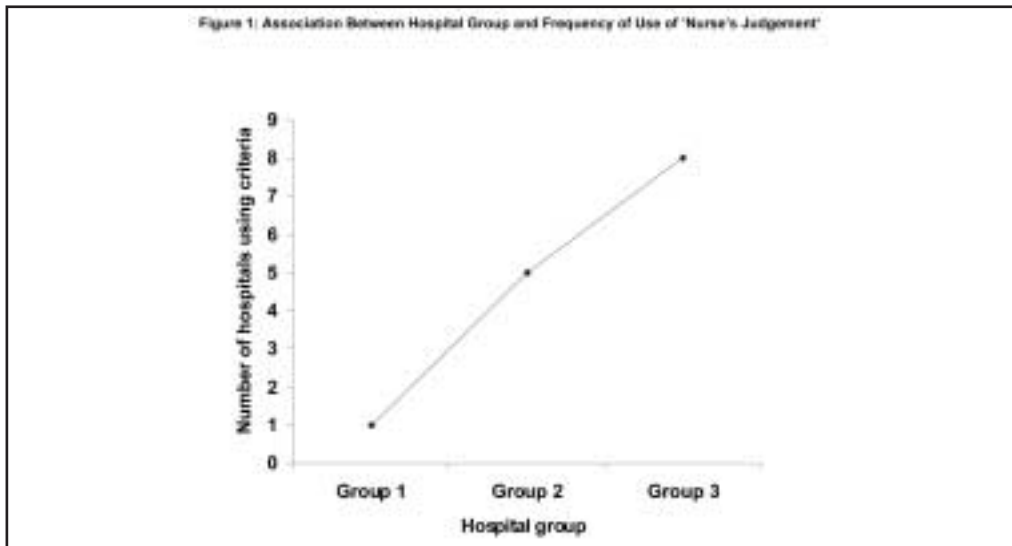
Thus, hospitals in Group 1 followed official institutional protocols; those in Group 2 used undocumented but generally accepted criteria; and those in Group 3 used criteria that were incorporated into accepted practice rather than established or supported by policy.

All criteria, that is both policy driven and informal, were analysed for common thematic content and sorted into categories. For example, the category 'patient's physical condition' included such criteria as patient acuity, airway management, and whether or not the patient had received a premedication prior to surgery. Table 2 shows the frequency of use for categories in each Group. It should be noted that the category 'patient's mental state' refers to the patient's level of aggressiveness or confusion, or whether they were scheduled under the Mental Health Act, rather than to more subjective psychological or emotional issues such as anxiety (which constitute separate categories).

**Table 2: Categories of Criteria and Frequency of Use:**

Categories of criteria	Number of hospitals using category			Totals
	Group 1	Group 2	Group 3	
Patient's physical condition	9	10	7	26
Technology/equipment	8	6	5	19
Destination	6	1	6	15
Nurse's judgement	1	5	8	14
Patient's mental state	3	0	1	4
Children	1	1	1	3
Communication difficulty	0	1	0	1
Anxiety	0	0	1	1

As the frequencies attest, use of the 'nurse's judgement' criteria increased markedly as other criteria became less structured by hospital policy. A Chi-Square test to investigate this apparent association showed three cells having an expected count of less than 5, and was therefore inadmissible. A Goodman and Kruskal tau test was used as an alternative and showed a significant association between Group and the frequency of use of 'nurse's judgement' ( $\tau=0.25$ ,  $p=0.025$ ; see Figure 1). The Goodman and Kruskal tau test can be used to assess the ability of one variable to predict the classification of members of the population with respect to a second variable (SPSS 1999).



## Discussion

Despite the emphasis of much of the literature on human resource and cost factors in intrahospital patient transport, the results of this survey found that these factors were not an overt influence on the criteria used for patient transport in Australian hospitals.

The stated criteria from the four main categories - that is, 'patient's physical condition', 'technology/equipment', 'destination', and 'nurse's judgement' - afforded considerable variation and flexibility for deciding whether or not a nurse should escort a patient. In other words, despite a general consensus on types of criteria, there were not on the whole any hard and fast rules common to all hospitals. While 'destination' criteria often had a certain prescriptive quality in their specifications of what areas did and did not require a patient to be escorted, the details varied from hospital to hospital and sometimes even within a hospital. Some of the 'technology/equipment' criteria could also be said to be reasonably prescriptive, eg. if the patient had an intravenous infusion they were always escorted. Again, however, the wide variation in usage between and within hospitals, for instance depending on whether or not the infusion had a narcotic additive, tended to negate the commonality of usage. The most notably consistent trend was that the least-used criteria related to the patient's psychological and emotional needs such as 'anxiety' and 'communication difficulty'.

The physiological, technological, and organisational considerations exemplified by the three principal categories of criteria appear to work to objectify the patient: as disease to be observed, as focus of (or appendage to) technology that must be monitored, and as commodity to be delivered to a specified location. This raises questions about the comparative quality of nursing care depending on location, and is reflected in Howland's contention that "... patient transfer can be forgotten time. Thinking that your patient is now somebody else's concern - if only for a short time - is easy once the stretcher leaves your area" (Howland 1995, p 55).

Given this apparent ambiguity about the actual focus of the transport activity, it could also be argued that formulation of nurse escort criteria has more to do with meeting - and limiting - the hospital's need to escort the patient, rather than providing for the patient's need for a nurse escort. If this is the case, then the association found between degree of official structure and use of 'nurse's judgement' as a criterion might suggest that hospitals with less official structure to their patient escort practices may employ a more patient-centred approach than hospitals using specific written criteria. However, this does, in turn, depend on what criteria are being used by the individual nurses making the judgements.

These ambiguities are reflected in much of the literature. Navarro (1992) concluded that "... escorting duties were redirecting nursing hours away from direct client care" (Navarro 1992, p 82). The somewhat profound implication of this statement is that when a nurse is with a patient as they move between hospital departments, they are not involved in 'direct' patient care. Commenting on the transport of critical care patients, Fought and Nemeth (1992) proposed that "... 'when the patient being transported is potentially unstable, intrahospital transport is not merely conveyance or transfer' (Fought & Nemeth 1992, p 87). The corollary of this, however, is that intrahospital transport of a stable or non-critical patient can be thought of as 'merely conveyance or transfer,' and that the 'ordinary' patient on a routine transport does not require the presence of a skilled carer. As more acute and sub-acute health care takes place in community settings, the level of patient acuity in public hospitals will continue to rise, and consideration of the psychological and emotional aspects of the patient's experience is likely to become ever more marginalised.

That patient escort practices and policies are characterised by variability and ambiguity, as suggested by the literature review and clarified by these findings, was further confirmed in conversation with informants during the course of this survey indicating that patient escorts were frequently an area of contention and ambiguity in many hospitals. A third of the hospitals did not have a written patient escort policy, and of those that did only half had specific criteria for escort included in the policy. Many of the respondents requested a summary of the survey's findings to inform their own debates on the issue.

Patricia Benner and Judith Wrubel (1989) argue that a primary role for nurses is to "act as cultural mediators and serve as coaches for patients, making that which is strange and foreign approachable and interpretable" (Benner & Wrubel 1989, p 62). Transport of patients within and around the hospital environment is something that happens many times every day in most large hospitals. There may be many patients for whom such routine transportation neither needs nor prompts a second thought. However, there may be those for whom the prospect of removal from the safety of their ward bedspace to a place of potential pain, discomfort, embarrassment, or emotional trauma, is a source of considerable anxiety and uncertainty. These feelings may occur regardless of technical considerations - that their condition may be stable, that the time away may only be short, or that the medical and nursing staff consider the reason for transfer to be fairly minor. These are the patients most likely to need nurse escorts to act as 'cultural mediators,' and not merely as conveyers of patient, equipment and information, during the transport period. As Smith's (1976) study indicated, there is an amount of inconsistency between the formal need for the transport and the perceived need as stated by the patient.

## Conclusion

This study indicates that in the Australian context, patient escort practices and policies are responsive to a range of considerations. Furthermore, in most large Australian hospitals, the need for a nurse escort is measured primarily in terms of the presence or absence of technology and the characteristics of the destination. Consideration of patient need was almost exclusively related to physiological risk with scant attention being paid to the emotional and psychological dimensions of patient need. Accordingly, there is no indication from these findings that the event of being transported has an impact upon the decision of a nursing presence. Notions of the transport period as a journey for the patient, often one of great import, or of the transport as a significant episode in the patient's illness experience, are not overt factors influencing decisions or policy. These findings raise important questions about the basis of decisions that influence the practices and policies of patient transport and provide impetus for further research in the area.

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