

THE INFORMATION NEEDS AND INFORMATION SEEKING BEHAVIOUR  
OF PAEDIATRIC NURSES OF CHRISTCHURCH HOSPITAL

BY

KIM NICOLA ROWE

Submitted to the Department of Library and Information Studies,  
Victoria University of Wellington  
in partial fulfilment of the requirements for the degree of  
Master of Library and Information Studies

7 June 1996

VICTORIA  
UNIVERSITY OF  
WELLINGTON

*Te Whare Wananga  
o te Upoko o te Ika a Maui*



LIBRARY

h  
AS741  
VUW  
A55  
R878  
I

**Victoria University of Wellington  
Department of Library and Information Studies**

**Master of Library & Information Studies**

**IMPORTANT DISCLAIMER**

with respect to a MLIS Research Project (LIBR 550)

**The Information Needs And Information Seeking Behaviour of Paediatric Nurses of  
Christchurch Hospital  
(hereafter referred to as "The MLIS Research Project")**

being undertaken by

**KIM NICOLA ROWE**

in partial fulfilment of the requirements of the  
Master of Library & Information Studies,  
Department of Library & Information Studies, Victoria University of Wellington

Topic Commencement: **29 March 1996**

1. Victoria University of Wellington, and its Council, its members, staff, employees, students and agents undertake no duty of care in contract, tort, or otherwise, to users (whether direct or indirect) of the MLIS Research Project and make no warranties or representations of any kind whatsoever in relation to any of its contents.
2. The MLIS research project is only made available on the basis that all users of it, whether direct or indirect, must take appropriate legal or other expert advice in relation to their own circumstances and must rely solely on their own judgement and such legal or other expert advice.
3. Under no circumstances will Victoria University of Wellington and its Council, its members, staff, employees, students or agents be liable in any way whatsoever, whether in contract, tort (including negligence), for breach of any statutory or regulatory duty (to the fullness extent permissible by law), or otherwise, to any user (whether direct or indirect) of the MLIS Research Project for any loss or damage whatsoever arising directly or indirectly as a result of the use in any way of the MLIS project.
4. Each exclusion in the clauses of this disclaimer and each protection given by it is to be construed as a separate exclusion applying and surviving even if for any reason any of the exclusions or protections are held inapplicable in any circumstance.

### **ACKNOWLEDGEMENTS**

I would like to acknowledge the supervision of this project by Rowena Cullen.  
I further wish to express my gratitude to the paediatric nurses of Christchurch Hospital, who  
have willingly given their time and expertise.

## ABSTRACT

The professional information needs of nurses, and the situations which cause nurses to seek information have not been widely studied. A small scale study involving questionnaire based interviews of paediatric nurses at Christchurch Hospital showed paediatric nurses viewed access to professional information as vital to the performance of their work. Work situations which required these nurses to seek additional information included the admission of patients with unknown or rare conditions, patient education, questions from other staff, and the development of ward protocols or standards.

The most frequently consulted sources were patient records, nursing colleagues, and ward texts. These provided the bulk of nursing information, but the Nursing Library and nurses' private libraries were also used. Given the dependence on other nursing staff displayed here, it is vital that nurses keep up to date with their practice. There was a strong trend to passing information on to other nurses once it had been accessed.



## **INTRODUCTION**

The information needs of physicians and other health professionals such as physiotherapists and occupational therapists have been the subject of a variety of studies. The information needs of nurses as a profession have, by comparison, been far less frequently recognised. As nursing becomes a profession more heavily based upon research than ritual and practice, it is important that nurses' needs for information are recognised and clarified. Nurses are required to provide professional care for an extremely wide range of acute conditions, and in a hospital setting, (such as the one examined below), require accurate information quickly.

Neither paediatric nurses nor New Zealand nurses are well represented in the limited number of studies conducted upon the information behaviour of nurses. The study attempted to address this knowledge gap.

## **PROBLEM STATEMENT**

Current literature, outlined below, reveals some general trends, but no prior research has fully answered the following broad questions:

- Which work related situations cause paediatric nurses to seek additional information?
- If paediatric nurses require more information, from where do they obtain it?

## **OBJECTIVES**

The study examined what prompts paediatric nurses to seek additional information, and what sort of activities a nurse undertakes to satisfy information needs. These terms are defined below. The project had the following objectives:

1. To identify the information needs of a group of paediatric nurses
2. To determine situations within need creating environments which lead to information needs
3. To determine how individual nurses currently meet their information needs, and which information activities they employ to meet them.

4. Subsidiary objective: to identify which methods of information storage and retrieval are used by paediatric nurses once information has been gathered and processed.

The use of internal resources, involving information stored in the memory and able to be recalled, was beyond the bounds of the study.

## DEFINITIONS

There are few precise definitions of the term "information needs" in the literature. A number of studies of the information needs or seeking behaviour of health professionals are based on the implicit assumption that external information is required for professional practice. Taylor provides a useful starting point when he suggests that "information behaviour here is briefly defined as the sum of activities through which information becomes useful"..  
[whereby].."activities imply active search resulting from an area of doubt, or more specifically a recognised problem".. [and].."useful implies ways of resolving a problem through clarification, alteration or actual solution as a result of information gained".<sup>1</sup> Krikelas' model suggests that information gathering occurs when an individual is subject to a need creating event or in a need creating environment. The information needs created by this may be either deferred or immediate, which influence the source of information chosen. In either instance, information sources will be either internal, involving memory or direct observation, or external, comprising of direct interpersonal contact or recorded literature.<sup>2</sup> Krikelas' model provides a useful model to assist in identifying which situations are need creating environments for this group of paediatric nurses. When the paediatric nurse is placed in this model, the need creating environment is either work or professional study.

---

<sup>1</sup> Taylor, Robert S. "Information Use Environments" in *Progress in Communication Sciences* Volume X, ed. Brenda Dervin and Melvin J. Voight. Norwood, New Jersey: Ablex Publishing Corporation, 1991: p. 221

<sup>2</sup> Krikelas, J. "Information-seeking behaviour: patterns and concepts" *Drexel library quarterly* 19 no. 2 (1983): 5-20

In the context of the above model and definition, the term information need is used here to indicate any information, data or knowledge required by a nurse as a result of a need-creating event. In the need creating environment of the ward, this might be for patient care or education, or it might be in the wider environment of the nursing profession, and be necessary for a nurse's professional knowledge. It should also be noted that for the purposes of the study "nurse" refers to both registered and enrolled nurses working in Ward 21 of Christchurch Hospital. It is used in the wider sense of a nursing professional when discussing the secondary literature.

## LITERATURE REVIEW

There have been a number of studies conducted on the information seeking of physicians, but rather fewer on nurses. There are a finite number of information sources available to both groups: colleagues, printed sources, online sources, society meetings and patient records appear to be the most commonly cited. While all of these sources are utilised by both professions, there have been some differences in their predominant use. Research shows that while both professions require information to conduct their work, their information needs are different.

The value of information to physicians has been demonstrated in the following two pieces of research. The first was the Rochester study, conducted by Joanne Marshall in 1990-91.<sup>3</sup> 80% of responding physicians stated they had probably or definitely changed some aspect of patient care as a result of obtaining additional information, in this instance, from a library. The physicians rated library information more highly than other sources such as laboratory tests, diagnostic imaging and interestingly, discussion with colleagues. More used the library as an information source than any of the above.

---

<sup>3</sup> Marshall, Joanne G

"The impact of the hospital library on clinical decision making: the Rochester study"  
*Bulletin of the Medical Library Association* 80, no. 2 (1992): 169-178

Burton's 1994 study<sup>4</sup> of the impact of medical libraries and literature on patient care in New Zealand confirmed the importance of the medical library as an information source to physicians. All respondents in her study of 253 physicians claimed to have used the library at some point. Burton found such use affected patient care primarily by causing physicians to change their diagnosis, or changing the advice they gave to patients. The most popular sources of information for physicians were respectively colleagues, textbooks and journals, personal libraries and the librarian. The study was conducted by questionnaire, but involved only half the numbers of the Rochester study. Both combine, however to demonstrate the importance of information to physicians, especially with regard to decision making. Both studies used similar methods and revealed patterns in the way physicians obtain information.

Verhoeven's 1995 literature survey<sup>5</sup> of the use of information sources by family physicians goes a step further than the Rochester study: she suggests there are a number of factors influencing the information sources utilised by family physicians. These factors include the physical and intellectual accessibility of the source, age and practice characteristics of the physician, and his/her participation in research or education. Such factors were seen to be crucial determinants in which sources were utilised: for example, those physicians working in rural practices relied less on colleagues as an information source than did those who worked in hospitals or larger urban practices. However, again the preferred order of colleagues, journals and books, and libraries was emphasised.

Dee and Blazek's<sup>6</sup> 1992 interviews with, and observations of rural

---

<sup>4</sup> Burton, Judith

"The impact of medical libraries and literature on patient care in New Zealand"  
*Bulletin of the Medical Library Association* 83, no. 4 (Oct 1995): 425-430

<sup>5</sup> Verhoeven, Anita, Boerma, Edzard and Meyboom-De Jong, Betty

"Use of information sources by family physicians: a literature survey"  
*Bulletin of the Medical Library Association* 83, no. 1 (Jan 1995): 85-90

<sup>6</sup> Dee, Cheryl, and Blazek, Ron

"Information needs of the rural physician: a descriptive study"  
*Bulletin of the Medical Library Association* 81, no. 3 (Jul 1993): 259-264

physicians revealed their preferred information sources to be much the same, with the addition of society meetings being popular: these were seen as an effective way to combat the isolation of rural practice.

In the main, physicians have been studied using interviews, questionnaires and observations. Their most preferred sources are generally colleagues, journal literature, textbooks, libraries and indexes. There is also repeated mention in each of the studies of the strength of physicians' private libraries: these appear to be significant information sources.

Stinson and Mueller, however, obtained different findings in their 1980 study of health professionals information needs.<sup>7</sup> Medical literature was the most frequently consulted source, with professional colleagues the most preferred alternative. While nurses comprised some 19% of these interviews, it is difficult to confirm any trends discovered, as all results were divided between the physicians and health professionals group. This survey, and those previously mentioned all begin with the premise that information is essential to physicians' care of patients.

There have, however, also been some significant studies into the information seeking behaviour of nurses. Wakeham, Houghton and Beards' 1991 U.K. study involved questioning some 500 nurses by mail questionnaire<sup>8</sup>. Here, some 68% often asked colleagues questions relating to patient care, with a further 44% asking other health professionals sometimes. The nurses' own journals were also a frequent choice. One of the sources of patient care information least likely to be consulted was the library. Those respondents undertaking further study, however, "often" used a library in 59% of instances, with a popular second choice subscriptions to nurses own journals. The source least likely to be used by those studying were other colleagues, so this is a significant change from those seeking

---

<sup>7</sup> Stinson, E. Ray and Mueller, Dorothy A.  
 "Survey of health professionals' information habits and needs"  
*Journal of the American Medical Association* 243, no. 2 (11 Jan 1980): 140-143

<sup>8</sup> Wakeham, Maurice, Houghton, Judith and Beard, Simon  
 "The information needs and information seeking behaviour of nurses"  
*British Library R&D Report* 6078 (1992)

information for patient care. Information for personal interest was most frequently sought from private journals, libraries or nursing colleagues. There was, however, a recognised overwhelming need for information: over 90% of correspondents often or sometimes required information for patient care, while 42% said they required information for coursework. Wakeham suggests that..."the reliance on colleagues emphasises the need for a well informed workforce; any nurse is another's colleague. We have looked at nurses as information seekers, but they are also key information givers, not only for colleagues, but also for patients, carers and fellow health professionals."<sup>9</sup>

The value of Wakeham's study was not only in demonstrating from where nurses obtain their information, but also that they require it for both their professional duties and study. The studies of nurses information seeking behaviour outlined below all begin with a basic premise: that nurses require additional information to that already held or known in order to do their work. Outside Burton and Marshall's studies, none of the studies mentioned here have specifically asked respondents whether they require additional information in order to perform their work.

Wakeham's explanation for nurses' preference for colleagues as an information source centres around access: even if they are on the same site, libraries do not offer the immediacy of a colleague on the ward. Wakeham's findings support the theory that nurses view themselves as practitioners, not theorists, and do not read widely. He suggests the nature of their job leaves nurses with insufficient time, energy, or inclination for accessing supplementary information.

Wakeham's findings that British nurses primarily rely on their colleagues for information differs from the American experience. Skinner and Miller's 1988 study of 507 full time registered nurses in the southern U.S. found 93% of respondents felt journal information helped them in practice, and 88% agreed they needed to read journals in order to keep up-to-date with professional

---

<sup>9</sup> IBID., p. 36

developments.<sup>10</sup> While it might have been more useful to quantify the data, this finding indicates a general trend. Some 68% of this questionnaire's respondents subscribe personally to professional nursing journals. In common with their U.K. counterparts, the most frequent reason given for not reading was lack of time.

Blythe's Canadian study (1993)<sup>11</sup> found few nurses subscribed to journals, but there were similarities to some of the other studies. The main information sources consulted were colleagues, and the majority of nurses did not consult the professional or research literature, as they felt there was little opportunity for it, or encouragement to do so on the job.

Corcoran-Perry and Graves' 1990 survey of cardiovascular nurses revealed the majority of nurses had few problems obtaining the supplementary information they needed.<sup>12</sup> Information was most often required about medications, medical equipment and other aspects of immediate patient care. Verbal contact with other nurses was only marginally more frequent than the consultation of written sources, although these written sources tended to be patient specific.

Therefore, the majority of studies involving nursing information patterns show nurses rate their preferred information sources, (in order of preference), as colleagues, journals they subscribe to themselves, ward material including textbooks, and libraries. This pattern parallels that of research into physician information seeking.

## CONTEXT

The study involved participants working as paediatric nurses in

---

<sup>10</sup> Skinner, Kathryn and Miller, Beverley  
"Journal reading habits of registered nurses"  
*Journal of continuing education in nursing* 20, no. 4 (1989): 22

<sup>11</sup> Blythe, Jennifer and Royle, Joan A.  
"Assessing nurses' information needs in the work environment"  
*Bulletin of the Medical Library Association* 81, no. 4 (Oct 1993)

<sup>12</sup> Corcoran-Perry, Sheila and Graves, Judith  
"Supplemental-information-seeking behavior of cardiovascular nurses"  
*Research in nursing and health* 13, no. 2 (1990): 119-127



Christchurch Hospital, a general teaching hospital employing some 600 nurses. This hospital services a wider community of some 400 000 people. In late 1995, a major reform of the nursing structure took place at Christchurch Hospital. Prior to this, each ward had been administered by a unit nurse manager. The new structure saw most of the everyday administration needs of nursing staff falling to a Nurse Specialist, with a Patient Care manager responsible for all the paediatric wards. For the majority of respondents, their Nurse Specialist had only been in the position for a few months at the time of the survey.

The nurses of Christchurch Hospital, amongst others, are serviced by a staffed, specialist Nursing Library. The library provides an information service for those able to visit in person, and those accessing services by phone or mail. Staff also provide a current awareness service centring around Articles of Interest lists, and Contents Pages distributed to Nurse Specialists and Patient Care Managers. The library is on site, but requires a 5 minute walk outside to be reached from the hospital.

## **SAMPLE**

15 nurses responded to the questionnaires and subsequent interviews. Only one enrolled nurse responded: the remaining 14 had completed 3 years registration training, and completed state examinations to become registered nurses. While a better response might have been hoped for, (35 questionnaires were distributed), there were several factors affecting the response rate, and these are outlined below.

## **SELECTION OF METHODS**

There were several methods of data collection used by the researchers whose projects were summarised in the literature review above. Previous studies have used semi-focused interviews and observation. While observation has the advantage of a better knowledge of the nurses workplace, there was at least the possibility of the Hawthorne effect, whereby participants alter their behaviour as they know they are being watched. The observation method was useful to outline



basic trends, but did not allow for indepth analysis as to the motivations behind that behaviour.

The remainder of the studies examined above used the mail questionnaire method. A large number of individuals can be included comparatively easily by this method, and there are few restrictions as to the location of the participants. These features were useful in both the Rochester and Wakeham studies, where participants were geographically distant. Questionnaires are an efficient method of obtaining factual information, but it is not possible to explain questions to participants, or obtain background information or further comments easily.

The method chosen for the study was the semi-focused interview. The population was relatively small, and in the same area, so interviewing was a practical survey method. The information required to meet the study's objectives required detailed questions, and further comments, and interviewing was an appropriate medium for obtaining it. Questions can be explained or expanded on in an interview in a way that questionnaires by mail cannot, and therefore the advantages of both methods were utilised. The observation method does not have these advantages.

There are some inherent biases in interviewing, and steps to lessen these are dealt with below.

All participants were given individual one to one interviews. In the interview, participants answered a questionnaire which they had already seen prior to the interview. The attached questionnaire (Appendix 1), consisted of a number of questions with coded answers, with a final section of open ended questions. The researcher attended nursing shift handovers on several days in the week preceding the commencement of interviews, and explained the purpose of the study. Staff were introduced to the project, asked to read and think about the questionnaire, and then send back their consent forms. The interviewer then contacted participants about arranging an interview. The intention was to reach as many staff as possible in this manner, and explain the objectives of, and background to the study. The questionnaire and advantages of participation were outlined, and an explanation of the safeguards given.

The safeguards included the fact that the names of those nurses participating would be confidential, and individuals would not be able to be identified in the final report. After completion of the report, all primary source documentation would be destroyed. Reports outlining the study's findings would be distributed to the Patient Care Manager, Nurse Specialist and Ward Clerk, and several circulated around the ward. The intended date of completion was stated, so all participants knew when and from whom they could access a copy of the final report.

Covering letters and ethics permission forms were attached to each questionnaire, and these were distributed at the handover sessions or upon request. These could be returned there and then, or sent later: this allowed for confidential distribution. Those who did not indicate willingness to participate in this manner were contacted by phone and offered the opportunity to participate. Interviews were arranged and executed. Information was transcribed onto the survey forms by the interviewer.

There were several reasons for allowing nurses access to the questionnaire before the interview. Nurses are extremely busy people. It was believed they were more likely to respond to a short interview prior to which they had a chance to reflect upon their answers than a longer interview which required them to think on their feet. This feature also allowed nurses to reflect on the survey questions. It was also believed by the researcher that nurses were more likely to present thoughts from the initial viewing, and those which occurred to them on the day. There would then be a possibility this mix would help reduce bias.

There was the probability that the presence of a librarian as the interviewer could lead some respondents to be more inhibited by politeness, or at least be less frank in their answers than would be the case if a "neutral" party were asking the questions. This was particularly true of questions about library use or sources. Careful wording of the questions, and a disclaimer at the handover sessions went some way to alleviate this bias, but did not remove it. Nor did it change the bias which always accompanies self report surveys. It is important that all these biases are recognised.

It is not intended that the results obtained here can be generalised to all nurses, or even all New Zealand nurses. Rather, it is hoped the findings might demonstrate useful trends to those providing information services to paediatric nurses.

The group chosen for the study was the paediatric nurses of Wards 21, and Children's Acute Assessment, of Christchurch Hospital. This involved some thirty possible subjects, with a range of ages and with a variety of nursing experience. It included both registered and enrolled nurses, and intended to cover nurses from all shifts. All participants worked full time.

15 Paediatric nurses responded to the survey. There were several factors affecting the rate of participation. In practice, the process of questionnaire/interview worked less well than anticipated. About half of those interviewed had thought about their responses to the questions asked, and their interviews took between 20-30 minutes. The other half, who looked at their forms for the first time at the interview, gave generally shorter and less considered answers, and their interviews averaged 15 minutes. While it is impossible to force respondents to prepare for interviews, other researchers using this method are advised to do their utmost to encourage participants to consider their answers beforehand. The extra data obtained in this manner is most valuable.

The time of year in which the survey was undertaken was not favourable. Demands on the staff of paediatric wards often increase in winter, particularly in Christchurch. This is due largely to seasonal increases in respiratory complaints such as asthma and bronchitis. This is especially true of Christchurch, with its smog problems. Over the length of the 4 weeks in April-May 1996 it took to administer the survey, as the number of such cases grew, it became increasingly difficult for staff to find the time or energy to participate in the study. Nurses themselves, in several instances, rescheduled interviews due to illness. The time of year and seasonal illnesses of both patients and staff must be seen as significant factors in a fairly low rate of participation.

Final results were analysed using the Filemaker Pro database system for the coded answers, and manual collation for the open ended questions. Data was

recorded as soon as possible after collection. The questionnaire was been tested on a small sample of nurses prior to distribution.

## FINDINGS

Ward 21 deals with nine specialist paediatric areas: neurology, plastics, ear/nose/throat, orthopaedics, dental treatment, urology, cystic fibrosis, respiratory and general medicine. The ward also takes medical overflow patients. A common thread throughout the interviews was the belief that no individual could be expert in all the above areas. Staff do ward teachings, which involve informal lectures by nurses outlining a particular condition and its treatment, or new developments in patient care. There is a cooperative learning approach to the ward. Comments were made on several occasions that nurses were expected to ask other nurses for information they do not have: this was especially the case when dealing with patients whose complaints were outside an individual's areas of expertise.

Only one enrolled nurse responded to the survey: all other respondents were registered nurses. Of the registered nurses, half trained in hospitals and half at a Polytechnic. There were fourteen female respondents and one male.

There were the following levels of experience reported:<sup>13</sup>

LENGTH OF TIME SINCE TRAINING	NUMBER OF RESPONDENTS	PERCENTAGE OF TOTAL
LESS THAN 5 YEARS	1	7%
BETWEEN 5 AND 10 YEARS	4	27%
BETWEEN 11 AND 15 YEARS	2	13%
16 OR MORE YEARS	8	53%

Even allowing for career breaks, the above figures would indicate a fairly experienced workforce. The depth of experience of these nurses might be a factor in how much additional information they require to do their jobs.

---

<sup>13</sup> It should be noted here that all percentages given here have been rounded up to the nearest decimal point. These self reported findings are approximate: respondents tried to average their requirements. The nature of nursing means that situations change with every patient.

40% (6) of those interviewed were studying work related courses. 4 nurses were studying for either their Bachelor of Nursing degree, or the bridging course for this. The remaining two were doing Masters of Nursing courses.

Information required for study was most likely to come from the Nursing Library: this was the preferred information source for 5 respondents, often in conjunction with the Polytechnic Library. The other student favoured source was her/his own textbooks and journals. This reflects Wakeham's findings, which found libraries to be the frequently used source for study information: 58.9% of registered nurse respondents in his study "often" use a library for their coursework.<sup>14</sup>

Also as was the case with Wakeham's study, all respondents agreed they required additional information they did not have to perform their job. The interviewer explained that information, in this context, referred to information or knowledge that the participant had never known. This ensured that there was a fairly equal understanding of the term "information", as it was applied in this context. Discussion at the end of the interviews found all participants regarded access to information vital to the performance of their job. Almost without exception, the comment was made that it was impossible for nurses to do their jobs without it.

The frequency with which respondents required additional information to do their jobs varied, as is shown in the following table:

FREQUENCY WITH WHICH ADDITIONAL JOB RELATED INFORMATION IS SOUGHT	NUMBER OF RESPONDENTS	PERCENTAGE OF RESPONDENTS
EVERY DAY	1	6%
ABOUT ONCE PER WEEK	2	13%
ABOUT ONCE PER FORTNIGHT	5	34%
ABOUT ONCE PER MONTH	5	34%
LESS THAN ONCE EACH MONTH	2	13%

81% of nurses stated they require additional information to perform their work once per fortnight or less. The fact that such a high number of nurses only require additional information infrequently might well be a reflection of the high level of experienced nurses participating in the survey.

Nurses place high priority on accessing information quickly. 27% (4) needed their information immediately, with a further 13% (2) wanting it within the hour. A further 27% (4) needed it the day the need creating situation arose, with 20% (3) settling for within the week. The remaining 13% (2) are unconcerned, as

---

<sup>14</sup> Wakeham [et al] *Information needs and information seeking behaviour of nurses*, p. 22

long as the information is available eventually. These findings suggest that speed of access is an important factor considered by nurses when seeking information.

When asked which job related situations would require nurses to seek more information, respondents were able to nominate more than one. There were 59 responses to this question, the results of which are summarised on the next page as Graph 1. The graph figures came from Question 10 of the questionnaire. 13 respondents required it for patient education, with the same number suggesting they would be prompted to seek it upon admission of a patient with a condition unknown to them. 11 respondents required more information to answer questions from other staff. This indicates nurses are a significant source of information for other nurses.

11 respondents also required more information for the development of ward protocols or standards. These are ward guidelines constructed by staff for routine tasks, such as oral care. Because of the number and range of specialities dealt with by the ward, there is a corresponding range of expertise, which is being captured in the form of ward protocols. Some have been completed and are in use, others are still evolving. These were a significant sources of information for nurses. 10 nurses were likely to require additional information for new equipment or unknown medication requirements. This situation was less common than had been the case with Corcoran and Perry's study quoted above. This might reflect the scope of paediatric nursing. 1 further respondent frequently required information for personnel management. The latter, however, was an exception: two thirds or more of participants frequently required additional information in situations where equipment, conditions, or medications were new to them.

The paediatric nurses interviewed here were frequently in situations where parents or patients required additional information about medical conditions or procedures. Other nurses often ask colleagues for work related information also. Excepting the instance of management information, there was no significant difference in the frequency of each situation: all were comparatively common when the survey size is considered. It should be noted that this question allowed respondents to indicate more than one situation in which they were likely to require further information.

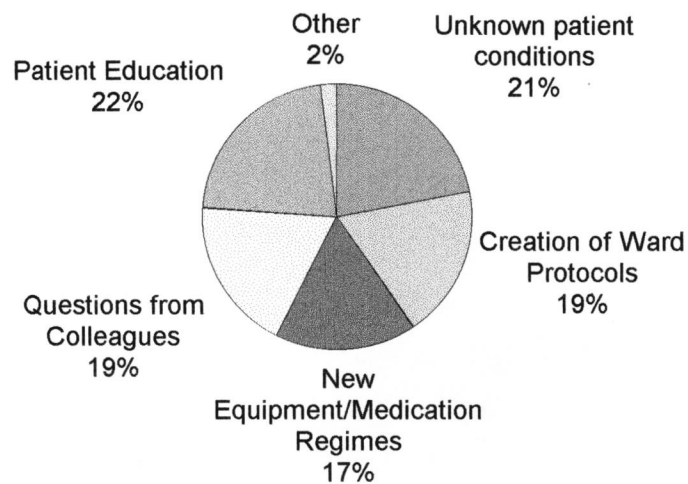
When asked in which areas paediatric nurses are most likely to require information, the pattern is very similar, and illustrated in the table on page 15. Several participants emphasised the complicated nature of patient education in the paediatric setting. Information and methods of presenting it suitable for children is required. In addition to this, information to further the understanding of the children's family is often required: the material must be suitable, or able to be modified for both groups.

Discussion with participants revealed that the most frequent information need creating situation was the admission of a patient with a rare or unknown condition. These children are often admitted to the wards with no prior warning for staff, who then require information very quickly. Paediatric nurses, the majority of whom have had experience in other specialties, were at pains to point out they do not only require information to perform their work, they also require it for patients and patients' parents.



Unknown patient conditions	Creation of Ward Protocol	New Equipment/Medication Regime	Questions from Colleagues	Patient Education	Other
13	11	10	11	13	1

**GRAPH 1: INFORMATION NEED CREATING SITUATIONS**



AREAS IN WHICH ADDITIONAL INFORMATION IS FREQUENTLY SOUGHT	NUMBER OF RESPONDENTS	PERCENTAGE OF RESPONDENTS
PATIENT EDUCATION	12	25%
UNKNOWN CLINICAL CONDITIONS	11	23%
MEDICATIONS	8	17%
CONTINUING EDUCATION	8	17%
PROFESSIONAL DEVELOPMENT	7	15%
OTHER (MANAGEMENT)	2	3%

The nurses' preferred sources of information were varied, although some trends did emerge. These findings are also shown as Graph 2, on the following page. All except one of the respondents consulted patients' charts daily, with the remaining participant looking at them for information every second day. This is obviously a vital source of primary information for nurses. It should be noted at this point what patients records often contain. They are not simply documents listing conditions, diagnosis and treatment: in instances of an unusual condition or medication, information pertaining to the condition, rather than simply the patient, are frequently attached. This might take the form of additional notes, articles, or sections of articles.

The second most frequently consulted source was colleagues. 60% (9) respondents used this source daily, 7% (1) every two days, and 33% (5) every week. The importance of this source was outlined at the interviews of several respondents.

Ward 21 has a modest collection of paediatric journals and ward texts concerning paediatric conditions and treatment. This source was the next most frequently consulted. 33% (5) use this collection every two days, 27% (4) once per week, 13% (2) about once each fortnight and 27% (4) once each month. This resource is obviously a significant information source for nurses.

Use of the ward resources can be contrasted with the nurses use of their personal texts and journals. Only 7% (1) used them every two days and 20% (3) once each week. 7% (1) used them once each fortnight, with the remaining 67% (10) using them once each month or less. The probable reason for this difference is that there are a reasonable number of books and journals on the ward. This source is immediately available to nurses, and they do not need to wait until they return home to access it. This is an important point, given the timeframe outlined above in which nurses believe they need the information. As only 26% (4) of respondents subscribe to a journal apart from *Kai tiaki*<sup>15</sup>, greater use would

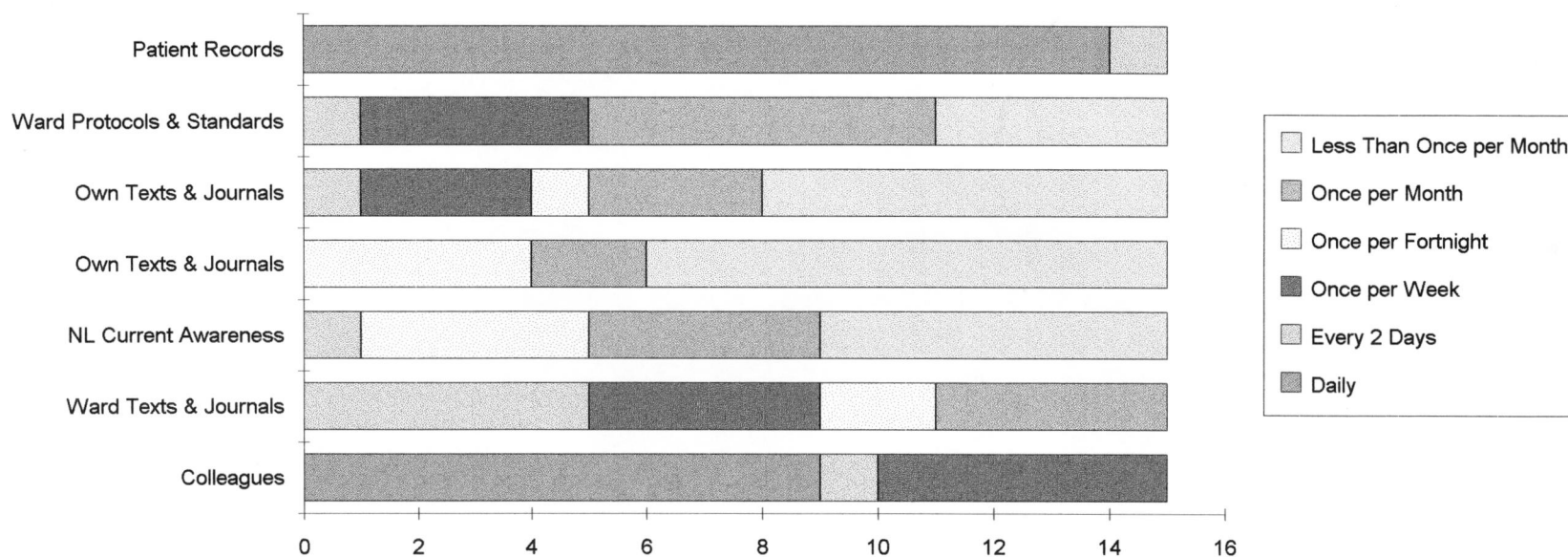
---

<sup>15</sup> *Kai tiaki* is the monthly magazine of the New Zealand Nurses Organisation, sent free to all members. The articles are largely professional, rather than clinical in content.



	Colleagues	Ward Texts & Journals	NL Current Awareness	Own Texts & Journals	Own Texts & Journals	Ward Protocols & Standards	Patient Records
Daily	9	0	0	0	0	0	14
Every 2 Days	1	5	1	0	1	1	1
Once per Week	5	4	0	0	3	4	0
Once per Fortnight	0	2	4	4	1	0	0
Once per Month	0	4	4	2	3	6	0
Less Than Once per Month	0	0	6	9	7	4	0

**GRAPH 2:FREQUENCY WITH WHICH INFORMATION SOURCES ARE CONSULTED**



probably be made of ward journals than those belonging to an individual. This did not reflect Stinson's findings that a substantial proportion of her American study subscribed to one or more journals personally.<sup>16</sup> Several staff mentioned not having bought texts since the completion of their training, so it is therefore important that any ward collection be maintained and developed. This was completely at odds with Wakeham's study, where the participants' own resources were the second most popular choice after colleagues.<sup>17</sup>

Ward protocol and standard use falls somewhere between ward resources and the nurses' own individual resources. 33% (5) use protocols between every 2 days and weekly, while the remaining 67% (10) use them once per month or less. It should be noted, however, that a number of standards and protocols are currently being updated.

Neither the Nursing Library or its services would appear to play an integral role in providing information for paediatric nurses. 7% (1) of respondents used the Nursing Library once every 2 days, with 27% (4) using it once per fortnight, and the same number once each month. 40% (6) use it less than once each month. Bearing in mind that Articles of Interest lists are distributed by the Nursing Library once each fortnight, it is unsurprising that they are most frequently used fortnightly or less frequently. 40% (6) participants use the Nursing Library current awareness services either once each fortnight or monthly. The remaining 60% (9) of participants use these services less than once each month.

There appear to be problems with the distribution of Articles of Interest and Contents Pages lists sent out by the Library. Both the lists and any articles requested via these services have gone astray in the past, with several respondents suspecting this information has fallen victim to the constant paper war. This is an area which could be examined and improved.

Further discussion with respondents about this revealed three major barriers to more frequent use of the Nursing Library and its services. The first was the time frame: over half of participants commented that they required the information faster than the Library could provide it. Two thirds of nurses here also found the walk to the Library a barrier: most greeted the news of a probable move for the Library into the Hospital with enthusiasm, and plan to use Library services more frequently. Most respondents were aware of library services, and use the Library occasionally. A further suggestion to improve Library use was visits by library staff to demonstrate new Library material of interest to paediatric nurses.

It can therefore be stated that the information sources most frequently consulted by nurses are patient records, colleagues, and ward texts or journals. This would generally reflect Wakeham's findings, although that study did not examine the use of patient records. Ward protocols, individual collections of

---

<sup>16</sup> Skinner, Kathryn and Miller, Beverley "Journal reading habits of registered nurses" *Journal of continuing education in nursing* 20, no. 4 (1989): 22

<sup>17</sup> Wakeham [et al] *Information needs and information seeking behaviour of nurses*, p. 22

books and journals, and the Nursing Library and its services are not used as frequently. Only two respondents said they found nursing administrators, which includes their Patient Care Managers and Nurse educators, to be a major source of information. It was felt, however, that the Patient Care Manager was a good source of information once more immediate sources had been exhausted.

There are a number of reasons for the nurses' preferences of information sources. These findings are shown in Graph 3 on the following page. These figures were obtained from Question 15 of the questionnaire. Of the 49 responses to this question, 27% (13) suggested they preferred information close to where it is to be used. 24% (12) regarded ease of access, (i.e proximity to the workplace and accessible with relatively little effort) important. A further 11 (20%) believed an important factor to be the speed with which information could be obtained. 14% (7) stated it was important that the source could be asked further questions, while only 8% (4) thought the thoroughness was important. Two other reasons for the choice of information source were given: one preferred the information to be relevant to the situation at hand, and another believed the information needed to be up to date.

The questionnaire originally asked respondents which factors were important for each of their three most favoured information sources. However, the factors respondents regarded as important were the same for each source in the first five interviews undertaken. Therefore, the question was broadened to ask which factors were generally important in the choice of information sources.

11 (73%) respondents share their nursing knowledge with others every day. The remaining 27% (4) vary between every second day and about once per week. It also follows that of those colleagues asked for information, 87% (13) would usually ask other nurses, with 13% (2) asking her/his Nurse Specialist or Patient Care Manager. It should be noted that other choices which became apparent in the course of interviews were physicians and the pharmacist.

Once nurses had obtained the information they need, there are a variety of destinations for it. Nobody stated they threw written information out, but it was often passed on to nurses in written or verbal form, as demonstrated in the table below. A further option was adding it to a pocket notebook carried by several of the nursing staff. The notebook contains frequently required information, in particular medication information. This source was mentioned by two nurses.

FINAL DESTINATION OF INFORMATION	NUMBER OF RESPONDENTS	PERCENTAGE OF RESPONDENTS
ADD TO PERSONAL FILE	10	33%
ADD TO UNIT FILE	11	37%
USED FOR WARD TEACHING	4	14%
CIRCULATE IT AROUND THE WARD	5	16%



## CONCLUSIONS

It would therefore appear that the paediatric nurses of Christchurch Hospital interviewed here follow similar trends to those surveyed by Wakeham in the U.K. However, their comparative lack of reliance on personal libraries and health libraries would indicate that their information seeking behaviour is quite different to the studies of physicians outlined above.

These nurses have a strong depth of experience in their field, although there were few prevalent trends which emerged in the more experienced nurses which were not apparent in less experienced staff. Whether nurses trained in hospitals or the Polytechnic appeared to play little part in the trends of preferred information sources or information use.

The paediatric nurses of Ward 21 of Christchurch Hospital fit part of Krikelas' model outlined above.<sup>18</sup> The course of their work creates situations where they require additional information, and they then undertake to meet this information need. Krikelas' model suggests that if the behaviour undertaken to find information is successful, the need will be met. If the need is not met, the behaviour is repeated or modified until the subject meets his/her need, or gives up.

The situations which are most likely to cause these nurses to seek information are unknown clinical conditions, patient education, new medications or equipment, or questions from other staff. Other staff and patient records are the most frequently consulted sources. It is therefore most important that written sources are accurate, and nurses are well informed. The frequency with which ward texts are used would indicate that it is very important this collection is maintained and developed. These sources are favoured by nurses due to their proximity to where nurses are working, and because they are quick and easy to access.

While the Nursing Library is not currently viewed as an important source of information for the work performance of paediatric nurses of Christchurch Hospital, it is a significant information source for study: it might prove more useful as a source of work related information when the location changes.

The study reflects Taylor's view<sup>19</sup> that one of the primary reason's physicians seek information is to identify and treat a patient's condition. The majority of information needs outlined here are similarly motivated, but also involve explaining such information about conditions to patients. Taylor does not mention this as a primary information use.

However, Taylor suggests patients are a primary information source for physicians. This was not the case for nurses, although this might be because nurses were asked from where they obtained additional information, and patients might well have been considered a primary source. This study of a group of nurses does,

---

<sup>18</sup> Krikelas, J. "Information-seeking behaviour: patterns and concepts" *Drexel library quarterly* 19 no. 2 (1983): 5-20

<sup>19</sup> Taylor, Robert S. "Information Use Environments" in *Progress in Communication Sciences* Volume X, ed. Brenda Dervin and Melvin J. Voight. Norwood, New Jersey: Ablex Publishing Corporation, 1991: p.248

however, support Taylor's assertion that colleagues are a major information source. Physicians' other information sources, according to Taylor, are personal experience and external sources. While nurses external sources of information have been examined here, there is room for further examination of their use of personal experience.

Although further study would be required to ascertain what effect information has on nurses' practice, the nurses interviewed here were unanimous that access to professional information is vital to the performance of their work. Access to this information must be maintained, and is better facilitated by the passing on of information between nurses. Once located, material is often passed either verbally or physically between nurses. It is usually stored in the unindexed, but alphabetically ordered ward vertical file for later access.

One area not covered by the study concerns satisfaction. Further research could be carried out on the degree to which the information nurses access for their work satisfies their information needs. A further study could centre on exactly how nurses exchange information between each other: informal discussion in this project suggests some nurses are more likely to share written information, while others usually do it in verbal form. Again, this is probably situation dependent.

The nurses interviewed here demonstrated that paediatric nurses have specialised information needs: whether these are different from other nursing specialities would require further investigation.

[6936 words]



## REFERENCES

- \* Blythe, Jennifer and Royle, Joan  
 "Assessing nurses' information needs in the work environment"  
*Bulletin of the Medical Library Association* 81, no. 4 (Oct 1993)
- \* Burton, Judith  
 "The impact of medical libraries and literature on patient care in New Zealand"  
*Bulletin of the Medical Library Association* 83, no. 4 (Oct 1995): 425-430
- \* Corcoran-Perry, Sheila and Graves, Judith  
 "Supplemental-information-seeking behavior of cardiovascular nurses"  
*Research in nursing and health* 13, no. 2 (1990): 119-127
- \* Dee, Cheryl and Blazek, Ron  
 "Information needs of the rural physician: a descriptive study"  
*Bulletin of the Medical Library Association* 81, no. 3 (Jul 1993): 259-264
- \* Krikelas, J  
 "Information seeking behaviour: patterns and concepts"  
*Drexel library quarterly* 19, no. 2 (1983): 5-20
- \* Marshall, Joanne G.  
 "The impact of the hospital library on clinical decision making: the Rochester study"  
*Bulletin of the Medical Library Association* 80, no. 2 (1992): 169-178
- \* Skinner, Kathryn and Miller, Beverley  
 "Journal reading habits of registered nurses"  
*Journal of continuing education in nursing* 20, no. 4 (1989): 22-26
- \* Stinson, E. Ray and Mueller, Dorothy A.  
 "Survey of health professionals' information habits and needs"  
*Journal of the American Medical Association* 243, no. 2 (11 Jan 1980): 140-143
- \* Taylor, Robert S.  
 "Information use environments" in  
*Progress in communication sciences volume X*,  
 ed. Brenda Dervin and Melvin J. Voight, 217-255.  
 Norwood, New Jersey: Ablex Publishing Co., 1991
- \* Vaz, Dolores  
 "An investigation of the usage of the periodical literature of nursing by staff nurses and nursing administrators"  
*Journal of continuing education in nursing* 17, no. 1 (Jan/Feb 1986): 22-26

\* Verhoeven, Anita, Boerma, Edzard, and Meyboom-De Jong, Betty  
"Use of information sources by family physicians: a literature survey"  
*Bulletin of the Medical Library Association* 83, no. 1 (Jan 1995): 85-90

\* Wakeham, Maurice, Houghton, Judith and Beard, Simon  
"The information needs and information seeking behaviour of nurses"  
*British Library R&D report* 6078 (1992)



## APPENDIX 1: PAEDIATRIC NURSES INFORMATION NEEDS SURVEY

Please READ OVER these questions and think about your responses. I will ask you about them at the interview. There is no need to write anything down prior to the interview, unless you wish to. You are welcome to raise questions at the interview.

Again, many thanks for your time and input.

	NUMBER OF RESPONDENTS	PERCENTAGE OF RESPONDENTS
	(These figures do not always reach 100%)	
1. WHAT IS YOUR AGE RANGE?		
A <input type="checkbox"/> 18-21	0	
B <input type="checkbox"/> 22-30	2	13%
C <input type="checkbox"/> 31-40	8	53%
D <input type="checkbox"/> 41-50	5	33%
E <input type="checkbox"/> 51 and above	0	
2. ARE YOU		
A <input type="checkbox"/> Registered - Please answer the next question 14		93%
B <input type="checkbox"/> Enrolled - Please go to question 4	1	7%
C <input type="checkbox"/> Other: Please specify _____		Please go to question 5
3. IF YOU ARE A REGISTERED NURSE, DID YOU DO YOUR TRAINING		
A <input type="checkbox"/> In the hospitals	7	50%
B <input type="checkbox"/> At Polytechnic	7	50%
C <input type="checkbox"/> Other: Please specify _____		
4. HOW LONG AGO DID YOU DO YOUR NURSING TRAINING?		
A <input type="checkbox"/> Less than 5 years ago	1	7%
B <input type="checkbox"/> Between 5 and 10 years ago	4	27%
C <input type="checkbox"/> Between 11 and 15 years ago	2	13%
D <input type="checkbox"/> 16 years ago or more	8	53%
5. ARE YOU CURRENTLY STUDYING?		
A <input type="checkbox"/> Yes. Please answer the following questions	6	40%
B <input type="checkbox"/> No. Please go to question 8	9	60%
6. WHAT IS YOUR CURRENT COURSE OF STUDY?		
A <input type="checkbox"/> Bachelor of Nursing course	3	50%
B <input type="checkbox"/> Bridging course for the Bachelor of Nursing	1	17%
C <input type="checkbox"/> Master of Health Sciences (Nursing)	0	
D <input type="checkbox"/> Other: Please specify ( <u>Masters of Nursing</u> )	2	33%
7. ARE YOU MOST LIKELY TO OBTAIN INFORMATION YOU NEED FOR YOUR STUDY FROM		
A <input type="checkbox"/> Colleagues	0	
B <input type="checkbox"/> Own textbooks and journal subscriptions	1	17%
C <input type="checkbox"/> Nursing Library	5	83%
D <input type="checkbox"/> Polytechnic Library	0	
E <input type="checkbox"/> Ward textbooks and journals	0	
F <input type="checkbox"/> Nursing Library current awareness services	0	
G <input type="checkbox"/> Other: Please specify _____	0	

8. DO YOU EVER REQUIRE INFORMATION YOU DO NOT HAVE TO PERFORM YOUR JOB?

A□	Yes	15	15%
B□	No. Please go to the free questions	0	

9. HOW OFTEN DO YOU REQUIRE ADDITIONAL INFORMATION FOR PATIENT CARE?

A□	Every day	1	7%
B□	Every second day	0	
C□	About once per week	2	13%
D□	About once per fortnight	5	33%
E□	About once per month	5	33%
F□	Less than once per month	2	13%

10. WHAT EVENTS IN THE COURSE OF YOUR WORK WOULD MOST FREQUENTLY CAUSE YOU TO SEEK ADDITIONAL INFORMATION?  
(You may indicate one or more)

A□	Admission of a patient with a condition unknown to you	3	21%
B□	Development of ward protocols or standards	11	19%
C□	Lack of knowledge of medication or equipment	10	17%
D□	Questions from other staff	11	19%
E□	Patient education	13	22%
F□	Other: Please specify_____	1	2%

11. IN INSTANCES WHEN YOU REQUIRE INFORMATION FOR YOUR JOB, HOW SOON DO YOU NEED IT ?

A□	Immediately	4	27%
B□	Within the hour	2	13%
C□	Within the day	4	27%
D□	Within the week	3	20%
E□	Unconcerned as long as information is available eventually	2	13%

12. IN WHICH OF THE FOLLOWING AREAS WOULD YOU MOST LIKELY REQUIRE MORE INFORMATION? [Indicate more than one answer if necessary]

A□	Patient education	12	25%
B□	Medications	8	17%
C□	Unknown clinical conditions	11	23%
D□	Continuing education	8	17%
E□	Professional development	7	15%
F□	Other. Please specify_____	2	3%

13. PLEASE INDICATE HOW OFTEN YOU WOULD CONSULT THE FOLLOWING SOURCES FOR INFORMATION NEEDED FOR YOUR JOB

	DAILY	EVER Y 2 DAYS	ABOUT ONCE EACH WEEK	ABOUT ONCE EACH FORTNIGHT	ABOUT ONCE EACH MONTH	LESS THAN ONCE EACH MONTH
COLLEAGUES	9(60%)	1(7%)	5(33%)			
WARD TEXTS OR JOURNALS		5(33%)	4(27%)	2(13%)	4(27%)	
NURSING LIBRARY		1(7%)		4(27%)	4(27%)	6(40%)
NL CURRENT AWARENESS SERVICE				4(27%)	2(13%)	9(60%)
OWN TEXTS OR JOURNALS		1(7%)	3(20%)	1(7%)	3(20%)	7(46%)
WARD PROTOCOLS OR STANDARDS		1(7%)	4(27%)		6(40%)	3(20%)
PATIENT RECORDS	14(93%)	1(7%)				

14. PLEASE GIVE ONE OR MORE REASONS FOR CHOOSING YOUR THREE PREFERRED INFORMATION SOURCES

	SOURCE 1:	SOURCE 2:	SOURCE 3:
CLOSE TO WHERE YOU WILL USE THE INFORMATION	13(27%)		
QUICK TO ACCESS	11(22%)		
EASY TO ACCESS	12(24%)		
ALLOWS YOU TO ASK FURTHER QUESTIONS	7(14%)		
IS A THOROUGH SOURCE, & PROVIDES THE INFORMATION YOU NEED	4(8%)		
OTHER: PLEASE SPECIFY	2(5%)		

15. DO YOU SHARE YOUR NURSING KNOWLEDGE WITH OTHERS ON AVERAGE
- |    |                          |    |     |
|----|--------------------------|----|-----|
| A□ | Every day                | 11 | 73% |
| B□ | Every second day         | 2  | 13% |
| C□ | About once per week      | 2  | 13% |
| D□ | About once per fortnight | 0  |     |
| E□ | About once per month     | 0  |     |
| F□ | Less than once per month | 0  |     |
16. DO YOU SUBSCRIBE TO ONE OR MORE NURSING JOURNALS?
- |    |      |    |     |
|----|------|----|-----|
| A□ | Yes. | 4  | 27% |
| B□ | No.  | 11 | 73% |
17. IF YOU ASK COLLEAGUES FOR INFORMATION TO DO YOUR JOB ARE YOU MOST LIKELY TO ASK
- |    |                                       |    |     |
|----|---------------------------------------|----|-----|
| A□ | Other nurses                          | 13 | 87% |
| B□ | Nurse Specialist/Patient Care Manager | 2  | 13% |
| C□ | Physicians                            | 0  |     |
| D□ | Other. Please specify_____            | 0  |     |
18. ONCE YOU HAVE THE INFORMATION YOU NEED, IF IT IS IN WRITTEN FORM, WHAT DO YOU MOST OFTEN DO WITH IT?  
(You may indicate one or more)
- |    |                                  |    |     |
|----|----------------------------------|----|-----|
| A□ | Add it to your file, or store it | 10 | 33% |
| B□ | Add it to the unit file          | 11 | 37% |
| C□ | Use it for ward teaching         | 4  | 13% |
| D□ | Circulate it to other nurses     | 5  | 17% |
| E□ | Throw it out                     | 0  |     |

#### ADDITIONAL FREE QUESTIONS

19. WHAT DIFFERENT INFORMATION NEEDS, IF ANY, DO YOU BELIEVE PAEDIATRIC NURSES HAVE WHICH ARE DIFFERENT TO OTHER SPECIALIST NURSING AREAS?
20. IN WHAT PROFESSIONAL SITUATIONS ARE YOU MOST LIKELY TO NEED INFORMATION?
21. HOW IMPORTANT TO YOU IS ACCESS TO PROFESSIONAL INFORMATION NECESSARY TO DO YOUR JOB?
22. DO YOU FIND NURSING ADMINISTRATORS A MAJOR INFORMATION SOURCE?
23. IS THE NURSING LIBRARY A MAJOR SOURCE OF INFORMATION?
24. WHAT STEPS COULD THE LIBRARY TAKE TO ENCOURAGE YOUR USE?

Many thanks for your help.