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Ana-Maria Seifert and Karen Messing

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1. Introduction

- 1 During the 1990's, important and rapid changes were taking place in the Québec health network : a new health and welfare policy ; a reduction in the number of health care institutions ; and permanent, temporary, total or partial closings of some wards in the remaining institutions. This process reflected a desire to question the intervention strategies and the use of resources. This change occurred at the same time as major government budgetary restrictions aimed at achieving a *zero deficit*, a policy oriented toward the highest efficiency at the lowest cost. The *shift to ambulatory care* significantly

reduced the rate and length of hospitalizations, with hospital backup to be provided by primary care services or by the patients' home setting.

- 2 As a result, the employment situation in the health sector changed. Between 1993-1994 and 1997-1998, the percentage of casual employment increased from 8.5 % to 15.9 %, and more than 50 % of the staff worked part-time or on-call (Ordre des infirmières et infirmiers du Québec, 1997, 1998). The report of the Forum national sur la planification de la main-d'œuvre infirmière (2001, p.19) shows that the management model was characterized by a variable geometry of teams and a variation in the number of working hours. Usually, a minimal basic team was assigned and a large number of part-time jobs were added to it. Also, in some institutions, the presence of permanent personnel without a fixed assignment and a policy favouring temporary assignments made human resources management more complicated. Since that time, several aspects of the situation may have changed, but the approach that we propose could be applied to the analysis of other situations since the impact of a discontinuous schedule on the work of nurses is very important in professions with a large human relations content.

1.1 Nursing personnel and the relational aspects of care

- 3 Recent conceptual and theoretical models of nursing work are based for the most part on a concept of care that considers the complementarity between the technical character and the relational (*caring*) character of care. According to Couturier and Daviau (2003), there is a continuum between the model of Orem (1987), where the relational aspect is instrumentalized to achieve biomedical results, and other more recent models such as that of Watson (1998), followed by that of Mill et al. (2001), where the caring aspect in itself constitutes the specific nature of nursing.
- 4 Francine Saillant (1991) described the importance of *caring* in nurses' work. In fact, nursing care is primarily relational, and as such, requires time as well as a certain continuous presence. The relational aspects of care can be an integral part of basic care, such as the bath (Armstrong et al., 1994), and are achieved through verbal and nonverbal communication.

1.2 Communications in nursing work

- 5 Communications of all types are an important aspect of the work on hospital wards and can serve on the one hand in coordinating the work of several caregivers, and on the other hand, in transmitting information to the patient as well as in developing a connection with the patient.
- 6 During the last dozen years, several researchers have focused on communications and have demonstrated their importance in information transmission, modes of knowledge sharing, coordination of activities (Grosjean and Lacoste, 1999), and the development of cooperation in the work of nursing personnel (Theureau, 1993). In fact, due to its evolving and relatively unpredictable nature, illness requires the constant gathering of new information and its transmission to various interested people or departments. Also, when a staff member comes back to work, the situation has evolved, the condition of the patients has changed, and other patients have arrived. The work resumes at a different point from when it was left, and the nurse has to learn about the changes that have taken place (Gadbois and Sabine, 1972).

- 7 Research on communication between nursing personnel and patients (Kattam-Farhat, 1993 ; Gallier, 2002) has identified two types of communications : 1) short, frequent and reduced to a utilitarian function because they are oriented towards the care to be given (Gallier, 2002), and 2) long, less frequent, occurring primarily at the time the patients arrive or leave. Personal interactions depend on the initiative and availability of the nurses and patients (Kattam-Farhat, 1993).
- 8 We wondered to what extent the management logic of that time affected the schedules of nursing personnel (nurses and nursing assistants), and what effect these changes had on the work activity and on communications with patients. The present study was conducted from the standpoint of work analysis (Laville 1976 ; Guérin et al., 1997). First, we examine the structure of the work schedules of nursing personnel during a particularly unstable period, that of 1997-1998. Second, we describe the effect of these schedules on the verbal communication of the assistant head nurse (AHN) and other members of the nursing staff.

2. Contexte of the research

- 9 The study was conducted in an acute-care hospital with a capacity of approximately 250 beds. In 1997, this institution had 250 nurses and nursing assistants, 101 of which were full-time, 76 were part-time working 7 days out of 14, and approximately 60 were on-call. Several positions had been eliminated and 50 nurses and nursing assistants with permanent status (full-time or part-time) were used as replacements from one department to another.
- 10 The observations were made during the day shift on the general surgical ward. On this ward, replacement personnel could be nurses or nursing assistants who had had only one day of training to become familiar with the work, in contrast to other more specialized units that required a training period of several days for their replacements.
- 11 The ward's personnel during the day shift included :
- head nurse, responsible for the ward's organization and management ;
 - one assistant head nurse (AHN) responsible for assigning the tasks and patients as well as for liaison among the people working on the ward : physicians, health care workers, and also the patients ;
 - two other nurses and two nursing assistants ;
 - one orderly, basically responsible for baths and patient handling ;
 - one receptionist whose tasks included personnel management aspects (preparing attendance, replacement and absence lists), preparing patient admissions, transfers and discharges ; and finally, recording changes in prescriptions in the *Cardex* and filing test results.
- 12 During the evening and night shifts, there was fewer staff. The evening team consisted of one nurse, two nursing assistants and one orderly, while during the night there was only one assistant head nurse and one nursing assistant.
- 13 According to the head nurse, the nursing staff officially assigned to this ward included 10 full-time staff (working 20 shifts in 28 days) : one assistant head nurse, 4 nurses and 5 nursing assistants, as well as 8 part-time people (working 8 shifts in 28 days), including one assistant head nurse, 4 nurses and 3 nursing assistants. Thus, 18 people were to fill

the equivalent of 13.2 full-time jobs (264 shifts worked during the 84 shifts, for an average of slightly more than 3 people per shift).

3. The request

- 14 The initial request for the study was formulated by the person in charge of the CNTU's Committee on the Status of Women. Its aim was to document the impact of on-call work on work and on work-family balancing by nurses and nursing assistants. The first meetings with the executives of the union local in question revealed that the presence of on-call nursing personnel had decreased considerably because replacement workers were now recruited from part-time personnel. The union executives pointed out the difficulties raised by assignment to many wards and expressed their interest in documenting the impact of this type of work organization.

4. Methods

- 15 We examined and analyzed various records, observed the work, and conducted interviews.

4.1 Analysis of the ward's records

- 16 The data from the admission, transfer and discharge record of each patient in the care unit were analyzed for a 30-day period. The length of stay was defined as the number of days between the patient's admission and discharge dates.
- 17 The presence of nursing staff on the ward as well as the stability of the teams (nurse-nursing assistant) were established from a « Task assignment list ». The data on this list were analyzed for a period of 28 days in order to characterize each healthcare worker's work periods. We noted the number of shifts worked per person, the number of consecutive workdays, the number of days absent between work periods (unforeseen absences such as sick leaves, and planned days off such as legal holidays and weekends), as well as team composition.

4.2 Observation of the work activity

- 18 The purpose of observing the work activity was to document the effect of discontinuity of schedules. Discontinuity of schedules may increase the amount of information gathering necessary, particularly on the first workday after an absence. We assumed that the influence of this discontinuity could be best documented at the start and during the first half of the work shift, two periods when information gathering is particularly important for planning and performing the work activity.
- 19 We asked ourselves the following questions : What sources of information are used by the nursing staff? What type of information is collected from these sources? Are the information-gathering strategies during the first workday after an absence different from those that are used on subsequent days? What are these differences and how do they affect the work activity?

- 20 We observed the work of the assistant head nurse, nurses and nursing assistants during the first four hours of the work shift. These observations were intended to allow us to compare the information-gathering strategies at the start of the first workday (after an absence) with those on subsequent days. We noted the sources of information and the types of information collected or transmitted to coworkers and patients.
- 21 The work of the assistant head nurse (AHN) was chosen for observation because she plays a central role in the transmission of information to the nursing staff about the patients and their treatments. In fact, the AHN's essential activity with the patients is to meet with them to assess and ensure follow-up of their condition ; she is often the only one to accompany the physicians on their rounds.

4.3 Interviews

- 22 Interviews were conducted with all the people whose work was observed. During these interviews, we addressed the following topics : sources of information used, types of information collected, perceptions of the reliability of this information, as well as the people's perceptions of the differences between the first and second workdays after an absence. We also interviewed the head nurse and one person from the human resources department.

5. Results

5.1 Assigned tasks of nurses and nursing assistants

- 23 The work is organized around nurse-nursing assistant teams. The purpose of this organization is to create a work partnership around the person to be cared for (Estryn-Behar, 2002). The tasks that these healthcare workers perform with the patients can be divided into two categories : technical care and patient assistance care. Technical care mainly includes preparing medication ; taking samples of blood, urine and secretions ; taking vital signs ; dressings ; installation of IVs ; monitoring drains, monitors and other equipment ; as well as monitoring the patient's general condition and changes in surgical incision sites. The second category includes assisting the patient so that he can feed himself, wash himself, get up, walk and go to the toilet, as well as responding to the needs expressed by the patient, such as providing him with water, ice, or blankets. However, the same operation can correspond to both categories. Thus, the nurses and nursing assistants evaluate the patient's evolution when they help him to get up or to walk.
- 24 The team takes care of thirteen patients. The nurse is responsible for the so-called « technical » care of all of these patients as well assistance care for six patients, while the nursing assistant is responsible for assistance care for seven patients.
- 25 To plan and carry out their work, the nurses and nursing assistants must find and gather oral and written information, mainly on medical aspects, on the patient's degree of autonomy (ability to feed, wash and dress himself, go to the toilet alone), on his permitted activities taking into account his condition or the operation he underwent, as well as on his habits. They have to know the patient's history (which includes medical and personal aspects : behaviour, habits, etc.) and constantly update the data in order to provide the required care appropriately, to identify signs of deterioration, to prevent

complications, accidents or crisis situations (falls, infection, confusion, constipation, etc.) and to anticipate the future (complications, conditions for discharge, and transfer to other departments).

5.2 Sources of information within the care unit

- 26 The main sources of information are the *Cardex*, the report of the team from the previous shift, and coworkers, mainly the assistant head nurse.
- 27 **The *Cardex*** is a card that contains, for each patient, information on the schedules for monitoring vital signs and administering medication, completed and upcoming examinations, etc. This document is constantly updated from the patient's file : data that are no longer current are erased from the *Cardex* as prescriptions are changed.
- 28 **The *change-of-shift report*** is concise. The information is transmitted by the night shift AHN, from information collected from her staff. The report provides information on the medication given, the patient's reactions, changes in his condition, aspects to be monitored, as well as upcoming examinations. The nurses and nursing assistants also pass on their observations and impressions on the patients' evolution.
- 29 **Coworkers**, and sometimes **the patient** himself, can provide information on the medication as well as on the patient's habits, his degree of autonomy and his previous condition. The former can also provide information on the location of instruments and equipment.
- 30 As the day progresses, this acquired knowledge is updated, either by observing the patients and taking vital signs, or from information provided by the patient and by coworkers. Much of the information is collected from teammates, but the **assistant head nurse** (AHN) working full time is the most common data source, particularly at the start of the day. In fact, when she is familiar with the files, changes and the patients, she can rapidly provide information and orient the « new » nurses and nursing assistants on the most important aspects (changes in the patient's condition, new prescriptions, prescribed examinations, results of the examinations, etc.).

5.3 Complementarity and limitations of these sources of information

- 31 The information originating from these various sources is complementary. The *Cardex*, which is always used at the start of the work shift, is considered as a reliable source of information on medication. However, the *Cardex* data concerning the degree of assistance required by the patients are updated less frequently, and are therefore considered as unreliable. To obtain this information, the nurses and nursing assistants resort to other sources, namely their coworkers, the assistant head nurse or the patient. The information from the patient is not always considered as being very reliable, as we will see below. The coworkers' contribution is limited by the instability of the teams. We in fact observed that in half of the cases, the coworker was unable to provide an answer to a question. For example, seeing that the patient did not respond in a coherent way, the nurse asked her coworker whether the situation was « normal ». Since the coworker did not know the patient, she was unable to answer and the nurse had to call on the AHN.

5.4 The length of patients' hospital stays

- 32 The length of patients' hospital stays was estimated over a period of one month (Table 1). In total, there were 92 admissions to the ward. For 11 patients, there was no information on their discharge date : 8 had been discharged on an unknown date ; and 3 had not yet been discharged after 8, 20 and 26 days, respectively. The average hospital stay of 4.29 days was calculated from the files of 81 patients. The median stay of three days could be calculated from records on 84 patients. Consequently, there were often new patients among the six or seven that the staff on the ward were responsible for.

Table 1. Patients' hospital stays, October 1997

Length of hospital stay (days)	Number of patients	%
Less than one day to 3 days	42	50,0
4 to 7 days	28	33,3
8 days or more	14	16,7
Total	84	100,0

6. The structure of work schedules

6.1 The number of work shifts worked per person

- 33 The data in the *Task assignment list* for the nursing staff (where the effective attendance is noted) were analyzed over 28 days by considering all the work shifts (Table 2).
- 34 During these 28 days (84 shifts), 53 nurses and nursing assistants worked on ward A for a total of 221 work shifts (4.2 shifts per month per person, on average) even though, according to the predicted number of assignments, 18 people were to cover all the shifts, and more than 75 % of the work shifts were to be filled by full-time personnel.

Table 2. Number and percentage of shifts worked per person on ward A by the 53 nurses and nursing assistants, October 1997

Number of shifts	Number of AHN	%	Number of N	%	Number of NA	%	Total	%
1 or 2	6	46	7	35	11	55	24	45 %
3 to 5	1	8	6	30	1	5	8	15 %
6 to 10	4	31	4	20	3	15	11	21 %
11 to 15	1	8	1	5	5	25	7	13 %

16 to 20	1	8	2	10	-	-	3	19 %
Total	13	100	20	100	20	100	53	100 %

- 35 Of the 53 nurses and nursing assistants who worked during this month, 45 % were present for only one or two of the 84 shifts. If the 15 % who worked between three and five shifts are added, 60 % worked five or fewer shifts in 28 days. Only three healthcare workers, or 19 %, approached full-time assignments, working 16 to 20 of the 84 shifts.

6.2 The number of consecutive workdays

- 36 Besides the number of shifts worked during the given period, we calculated the number of consecutive workdays (Table 3).

Table 3. Number of consecutive days worked by the nursing personnel on ward A, October 1997

Number of shifts worked before interruption (A)	Number of uninterrupted periods of this length* (B)	Total number of work shifts	% of total work shifts analyzed
1	62	62	28 %
2	24	48	22 %
3	20	60	27 %
4	7	28	13 %
5	2	10	4 %
6	1	6	3 %
7	1	7	3 %
Total	117	221	100 %

* From this analysis, we eliminated the periods for which the start date could not be determined. We did extend the analysis beyond 30 days so that we could precisely compile the length of the periods by including the end date.

- 37 If all of the work shifts had been assigned to full-time staff, by alternating five workdays and two days off (a work organization that would have been impossible, in fact), only 14 % of the shifts would have been preceded by a period of absence, and in no case would this absence have lasted more than two days. However, during 53 % of the shifts worked (117/221), the healthcare workers (nurses or nursing assistants) were on their first workday after a period of absence. In 28 % of the cases (62/221), they worked only one day ; in 22 % of the cases, they worked two consecutive days, and in 27 % of the cases, they worked three consecutive days. In this situation the patient and his family had one chance in two of seeing a new healthcare worker come in the following day. This estimate

is minimal and does not include the effects of patient transfers to other beds or personnel re-assignment within the same ward.

6.3 The number of days absent between work periods

- 38 The length of the absences preceding the worked shift was calculated for healthcare workers who worked two shifts or more during the month (Table 4).

Table 4. Duration of absence preceding the first day of a work period for nursing staff on ward A during the month of October 1997

Length of absence (days)	Number of periods (N)	Number of periods (NA)	Total number of periods	% of periods
1	11	9	20	21 %
2	11	15	26	27 %
3	10	13	23	24 %
4	4	3	7	7 %
5	3	2	5	5 %
6	1	2	3	3 %
7 or more	5	7	12	13 %
Total	45	51	96	100 %

N= nurse, NA= nursing assistant

- 39 This table shows that 52 % of the discontinuous periods were three days or more, or longer than the patients' median stay. More often than not, nurses and nursing assistants would therefore not know most of the patients when they returned to the ward. For 21 % of them, the absence lasted five days or more, in which case they would not know 74 % of the patients. This is an underestimation of the discontinuity since, after an absence of more than one day, the healthcare worker is not necessarily assigned to the same rooms as before, and 20 % of the patients would have been transferred, during their stay, from one room to another within the ward.

6.4 Team instability

- 40 The discontinuity in schedules of nursing staff also results in a constant rearrangement of the work teams as shown in Table 5.

Table 5. Instability of work teams during the month of October 1997

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7

N	NA	N	NA	N	NA	N	NA	N	NA	N	NA	N	NA
A	B	E	F	E	H	E	J	K	F	K	B	K	B
C	D	C	G	C	I	C	I	C	D	L	I	L	M

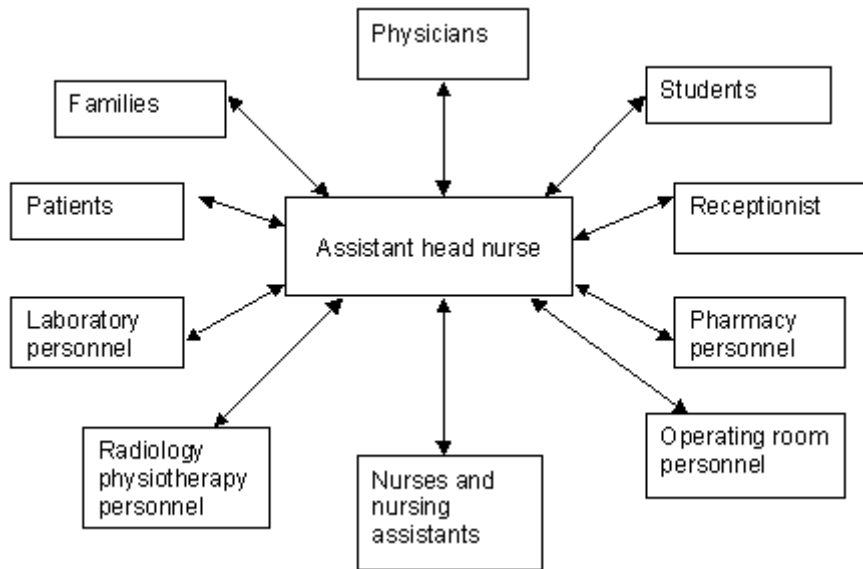
The black letters correspond to people who were present the previous day.

- 41 Of the eleven teams created during the day shift, during the seven days of the week studied, eight teams worked together for one single day, two teams (CI and KB) worked together for two consecutive days, and another team (CD) worked together for two days separated by a three-day interval.
- 42 We cannot identify all of the consequences of work schedule and team organization on the work activity of nurses and nursing assistants as well as on contacts with patients. However, we were able to further document certain consequences by analyzing some of the communications of the assistant head nurse (AHN) as well as those of the nursing staff.

6.5 The information work of the assistant head nurse (AHN)

- 43 Five observations were made of the work activity of the AHN in the morning, including three with a full-time AHN under different circumstances : during her first, second or third workdays after a one-day absence. We also observed a part-time AHN once on her first workday after three days of absence and observed a replacement once on her first day on in ten months.
- 44 The assistant head nurse is responsible for the assigning of patients to the nurse-nursing assistant teams, for the systematic follow-up of patients, and for the coordination of care. She is thus the central convergence point for information from patients, from her own observations, and from ward personnel (nurses, nursing assistants, orderlies, receptionist), physicians and the other departments in the hospital. She receives and transmits the information to these different people.
- 45 More particularly, the AHN gives the nurses and nursing assistants who have been absent for several days detailed information on the patients' characteristics and on treatments. This transmission is in large part verbal, even if some of the information is entered in the files or Cardex. She does not provide technical care, except when there is too much work, when a nurse is in difficulty (for example, dealing with a more complex situation) or when the nurse needs to be taught a new technique. She plays a central role as a source of information and advice, both for the patients and for the various categories of personnel.
- 46 Figure 1 illustrates this role and the diversity of people with whom she comes.

Figure 1. Network of people interacting with the assistant head nurse for gathering and transmitting information on ward A



6.6 Different verbal exchanges

- 47 AHN spend approximately 51 % and 61 % of their work time doing some form of verbal exchange. During one of our 165-minute morning observation periods, the AHN received 11 telephone calls and made 12. She also had 47 verbal exchanges : 43 % with nursing personnel and 30 % with patients.

6.7 Patient rounds

- 48 During the morning, the AHN did rounds in order to assess their patients' condition (evolution, presence of pain, degree of autonomy), to find out their needs and to give them information. It is a favoured time for assessing the patients' evolution. Table 6 presents the type of questions asked by the three AHN observed during these rounds.

Table 6. Interactions between the assistant head nurses and patients, in relation to the status of the AHN, autumn of 1997

	Replacement, Day 1	Part-time, Day 1	Full time, Day 1	Full time, Day 2	Full time, Day 3
Total observation time	2 h 55	2 h 17	2 h 14	2 h 35	2 h 19
Time with patients	3 min	9 min 30 s	10 min 16 s	39 min 17 s	36 min 41 s
Number of patients visited	2	18	3	12	13

Mean time per patient	90 s	32 s	3 min 25 s	3 min 16 s	2 min 49 s
Type of questions					
General information	1	21		3	5
Questions about symptoms		5	2	13	17
Questions about autonomy		3		3	2
Informs the patient	2	1	1	5	13
Advises the patient				2	7
Total number of questions	3	30	3	26	44

- 49 The data in Table 6 and the interviews show differences between the three AHN observed, and also differences, for the same AHN, related to her presence or her absence the previous day. These differences have to do with the purpose of the rounds, the time devoted to visiting the patients, the number of patients visited, the time devoted to each patient, and the number and content of the questions asked.

6.7.1 The objective of the rounds

- 50 Depending on their employment status and the sequence of their days present on the ward, the AHN had different objectives during patient rounds. For the full-time AHN (AHN-FT), the purpose of the rounds was to collect information on the patient's condition, to inform patients of their condition, to listen to them and to calm their fears, and to speak with the families. These rounds allow her to assign the workload equitably as well as to describe properly the condition of the patients and their needs to the nurses and nursing assistants who do not know them, as well as to the physicians and departments that require this information.
- 51 Thus the AHN-FT devotes more time to each patient than the part-time AHN (AHN-PT) or replacement AHN (AHN-R). For example, she spent 8 min 53 s informing one patient who had had a breast removed of the existence of outpatient services and the possibility of a breast prosthesis. She showed her a prosthesis and discussed this subject with a family member.
- 52 The aim of the AHN-PT is to know all her patients minimally and, if need be, to inform them about their discharge. She quickly visits as many patients as possible to evaluate rapidly their condition and determine their degree of autonomy so that she can anticipate the work for the different categories of personnel. Being on the ward only two days a week, she cannot take on to such a great extent the role of advising, instructing and patient follow-up.

- 53 The rounds of the AHN-R are to inform the patients about their discharge. Her work is focused on reading the files to ensure that all the examinations and evaluations have been done. Even if she is experienced, it takes her more time to perform most of the tasks than the AHN with experience on the specific ward. For example, when she has to make a call (which happens frequently, as we have seen), she does not know all the numbers, nor the names of the different people in the hospital who deal with ward A, which means that she has to find the number, ask other people for it, call several times, etc. Also, she takes more time giving information to physicians because she has to find it in the patients' files.

6.7.2 The visiting time and the number of patients visited

- 54 On average, the AHN-FT spends much more time with each of the patients and during the patient rounds than the AHN-PT. In turn, the latter spends more time than the replacement. However, the time that the AHN-FT devotes to the rounds seems to depend on her presence or absence on the days preceding the observation. In fact, it was noted that on her first workday, she spent 10 minutes on rounds, visiting only those patients that she believed needed it the most, while on the second and third days, she spent between 36 and 39 minutes on rounds. She reported that after a period of absence as well as on busier days, she must limit patient visits (sometimes the number, sometimes the time devoted to each patient) to get up to date in the administrative tasks.
- 55 In contrast, the number of patients visited by the AHN-PT is greater, but the time spent visiting each patient is shorter.

6.7.3 The number and types of questions asked

- 56 THE AHN-FT asks more questions and deals with three topics that are not addressed by the others: a) she gathers information about the symptoms that show whether the patient's functions are returning and whether his evolution is normal; b) she informs the patient about changes in medication or diet and about upcoming examinations; c) she advises him on the activities that he may undertake, the exercises that he must do, and the medication that he must take. With the AHN-PT, the questions on the patient's evolution are limited to pain, sleep and immediate needs. Her communications do not include either advice or information for the patient (except for announcing his discharge). For the AHN-R, communication is mainly to inform the patient about his discharge.
- 57 In conclusion, visiting patients is very important for observing the changes that may occur, for ensuring follow-up after an operation, and for compensating for the lack of stability of staff on the ward. Nevertheless, it seems to be one of the compressible aspects of the work of AHN. In fact, depending on the status of the AHN (full time, part-time or replacement), her presence or absence in the preceding days, the condition of certain patients, the experience of the nursing staff present, as well as contingencies that occur, this task can either be almost eliminated, or it can represent more than an hour of work by the AHN.

6.8 Nurses' communications

- 58 Based on the observations and interviews, the nurses and nursing assistants modify their task in relation to the number of days in their current stay on the ward and to the stability of their team. Thus, for information gathering, we compared the number of questions asked of different people by a nurse who was on her first workday after one month of absence to another who was on her second workday after two days of absence. The first had 62 communications, including 33 with the patient, 19 with the nursing assistant, and 10 with the assistant head nurse. The second nurse had 29 communications, including 9 with patients, 13 with the nursing assistant, and 7 with the AHN.
- 59 These results illustrate the increased time devoted to information gathering in the case of instability. In fact, the nurses who were present the day before knew the patients and only had to update their knowledge. Most of their questions had to do with the evolution and changes in the patients. However, the nurses who had not been present on the ward for some time asked more questions on the same subjects. So that they could provide care, they also sought information from the AHN (3 questions) and from their coworkers (3 questions), but as a last resort from the patient (7 questions) as well, all the while knowing that this information might not be very reliable, as this nurse stated :
- « You have some patients who try to do everything. 'I can get up by myself,' he says. When you help him get up, he falls to the floor with you ! [...] The girl who is there every day, he doesn't try it with her, but I come in, and he says : 'She is a new little one, she will get me up !' So you say 'Can you walk ?' He says 'Yes'. You sit him on the edge of the bed, he falls to the floor ! The other [nurse] says : 'He doesn't walk, they lift him with the lift...' »
- 60 Sometimes when one of the nurses present knows the patient, she can provide information :
- « (If) the nurse assigned to the patient (has been working for) two days, she will fill in more information. She will come to tell you : Is it normal for the patient ... to act this way [...] she will give you the reasons. Then you will check... »
- 61 Nurses on their second day on the ward try to reassure the patients by making them aware of their presence. For example, the two nurses who were observed on their second and third workdays entered a room for no specific reason twice each during the morning. In one case, the nurse asked the patient whether he wanted to get up, mentioning that it was not his habit to remain in bed. The patient in fact did not feel well. In the other cases, the nurse entered and left without talking. According to her, her presence reassured the patient, and since she had some time, she simply went to see him.
- 62 The nurses and nursing assistants who are not full-time expressed their need to provide human care.
- « I had him walk, I had him drink the right way, I rubbed cream from his knees to his toes because his skin is dry. Clearly, these are details, but comforting... »
- 63 But they point out, unfortunately, that they can rarely do this because, on the first workday, they « waste time » due to a lack of information about the patient and about his habits. As a result, the technical side of the work (reading files, giving medication, taking vital signs, etc.) wins out over the aspects related to personal contact and comforting.

7. Discussion

- 64 The type of work organization that we have described may have consequences not only for the caregivers, but also for the patients.
- 65 In fact, in the context of a shortened hospital stay (in addition to ambulatory and home services), close family will often have to take over from the hospital. It is also particularly important that nurses and AHN play an advisory and information role, not only with the patient but also with close family. We saw that this role is taken on by the AHN, particularly when she is on her second workday. The AHNs who were observed during their first workday after an absence were unable to advise or inform the patient.
- 66 For nursing personnel, noticing problems in time and reassuring patients are non-negligible aspects of the work but they depend on the nurses' availability. We saw that nurses and nursing assistants who were on their second workday could have some availability, allowing them to make their presence felt, sometimes with a question, sometimes only with their physical presence, while those who were on their first day had to concentrate even more on technical aspects and basic care, to the detriment of relational care. These results agree with those of Gallier (2002) who showed that the time spent creating a special relationship, listening to and accompanying a person being cared for, is time that can be drawn on and used for all sorts of other purposes, leading this author to say that it is treated as second-rate time.
- 67 In addition, the operational articulation of the work of nursing staff in care units takes place through the transmission and sharing of information, which therefore takes up a large part of their time (Lacoste, 2000). Our results show that this information gathering increases when the nurses and nursing assistants are not regularly present on the ward, in part because they do not get answers from coworkers and sometimes even from the AHN. It can be argued that the information is in written form in the Cardex and the patient's file. However, finding information in documentation takes longer and the documentation does not contain all the necessary information.
- 68 Grosjean and Lacoste (1998) in fact showed that the written information in the protocols of care units was insufficient regarding both the conditions for their application and ease with which their content could be understood. They point out that this situation produces in nursing personnel an additional workload that is not taken into consideration. As well, the many interruptions required to gather information reduce the time available for patients and may contribute to the healthcare worker's increasing dissatisfaction and discomfort (Estryn-Behar and Fouillot, 1990).
- 69 The discontinuous presence of nursing personnel on the ward produces certain consequences on the work activity, namely the requirement of having constantly to learn about new patients, the difficulty in following their evolution, and the time required to master new practices or new material. The strategies used, as we noted in the case of the AHN in particular, are to carry out the prescribed task by acting on « compressible » aspects such as relational time.
- 70 This strategy for carrying out the task places the nurses in a paradoxical situation since they get their job satisfaction from their relationship with the patient (Carpentier-Roy, 1991). The loss of meaning in the work once this source of satisfaction disappears may have an impact on the perceived level of fatigue and frustration.

- 71 Teamwork (work in pairs, work in coordination) including the work with the AHN, is important to alleviate a certain number of these problems. If the nursing personnel work as a team, patient information can be shared. This saves time and allows problems to be anticipated or better managed. However, if nurses and nursing assistants have no knowledge or insufficient knowledge about the patients, work articulation and coordination becomes more difficult and some of the advantages of teamwork are lost.

7.1 Why is there such a discontinuity in assignments ?

- 72 According to the head nurse, a major cause of the discontinuity seems to be the high absenteeism rate. In fact, the personnel in the human resources department estimated that there were one hundred calls per week for last minute replacements. In the United States, Leveck and Jones (1996) showed in a study involving fifty acute care wards that experience on the ward was a predictive factor for retaining nursing personnel. We possibly have a vicious circle : The nurse lacks contact time with the patients and continuity. Because she has to gather information, her workload increases, and she therefore loses the meaning of her work. She gets tired and is unable to report for work, which makes the situation worse.

7.2 What could the effects on nursing personnel be ?

- 73 The reduction in the availability of nursing personnel for relational care during the first workday could explain why nurses are happier working for longer periods (Carpentier-Roy, 1991).
- 74 The increase in information gathering and the difficulty anticipating problems due to a lack of follow-up may overload the nursing personnel and increase the time constraints. The results of studies carried out in Québec hospitals indicate that sick leave (Bourbonnais and Mondor, 2001) as well as psychological distress and burnout in nurses (Bourbonnais et al., 1998) are associated with stresses in the work (decision latitude and psychological demands, including the amount of work and time constraints).
- 75 Also, Bourbonnais and Mondor (2001) showed that a lack of social support in work is significantly associated with sick leave. In addition to its articulation and coordination function, teamwork may play a role in the development and maintenance of social support. In a context in which nursing personnel lack continuity on the wards, teamwork decreases, probably weakening the social support system.

8. Conclusion

- 76 According to Wistow and Hardy (1999), the quality of care is intimately related to the quality of the job. We have suggested elsewhere that the current attempt to achieve efficiency in Québec and Canadian companies introduces particular challenges for women's work, due to its invisible components (Balka et al., (submitted) ; Seifert et al., 1999 ; Messing, 1999). If the work activity has aspects that are not visible to the people in charge of planning, these aspects will not be considered in the allocation of resources, particularly in the services sector, which has many aspects of caring necessary for quality of care, patient well-being, and even, in some cases, patient safety.

- 77 The present study revealed that the management logic of that period favoured the assignment of nursing personnel to different wards. It was based on perceived needs, without taking into account the discontinuous presence on a given ward. This had an impact on two essential aspects of the task : teamwork and *caring*. We therefore believe it is important to consider a management method whose direction is away from « efficiency » logic, taking into account indicators that include the relational aspects and continuity of the work ; this would help strengthen team stability and patient well-being.
- 78 Also, a question that could be asked is whether *caring* is a luxury or an essential part of the organization of care. We cannot answer this question without some information on the number of forgotten or neglected interventions. A study by the Ordre des infirmières and infirmiers du Québec (2001) of the nurses responsible for care mentions an increase in patient falls and in errors in medication in institutions. We have only hints of this situation in some interviews with the nurses. They pointed out that the risk of accidents would be reduced by giving them information on patients' degree of autonomy. They also mentioned that when they lack time, they cannot get the patient up and walking as they should do, and this may have a negative impact on the patient's rehabilitation.
- 79 We wonder whether there is a need to build on this analysis of nurses' experience but including the viewpoint of other players, when it comes to jobs with a large relational component in the service sector. Shouldn't the perspective of patients and their families be added to those of the managers and employees ? In an analysis of the relationships between caregivers and patients, Falzon and Lapeyrière (1998) suggested integrating the service user (the patient) as a « partner in a cooperative work situation », an expression that well describes certain interactions that we have observed. We suggest that the concept of the work *perceived* or *lived* by the patients and clients be added to the study of the *prescribed* and *real* work. In a study of hospital housekeeping carried out from this perspective, we integrated the viewpoint of the visitors to the rooms, which provided us with a better understanding of certain strategies of the cleaners (Messing et al., 1995 ; Messing et al., 1998).

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ABSTRACTS

The structure of work schedules and its effects on the work activity of health care workers in a short-term care facility were analyzed in a context of changes to the Québec health care system. The analysis revealed short patient stays and a great discontinuity in work periods for nursing personnel : 60 % of health care workers in one department worked for fewer than five shifts per month in this department. Thus, the workers often have little information on patients, and the constant changes in the work teams can affect the strategies that they use to remedy the situation. Since the "technical" aspects of the work cannot be reduced, the more "human" aspects can be compressed. Could this type of work organization diminish caring, thus depriving patients of important human contact and health care workers of their sense of the meaning of their work. Could this loss of meaning affect the absenteeism rate, which is known to be high among nurses ?

La structure des horaires et ses effets sur le travail des infirmières et infirmières auxiliaires d'un hôpital de soins de courte durée ont été analysés dans un contexte de modifications du réseau québécois de la santé. L'analyse montre de courts séjours chez les patients et une très grande discontinuité des périodes de travail chez le personnel infirmier : 60 % de celles qui travaillaient dans un département cumulent moins de cinq quarts par mois dans ce département. Ainsi, elles ont souvent peu d'information sur les patients et la constante recomposition des équipes peut affecter leurs stratégies pour pallier cette situation. Les aspects « techniques » du travail ne pouvant être escamotés, les aspects « humains » deviennent compressibles. Cette organisation du travail peut-elle diminuer le caring, privant d'une part les patients de contacts importants et entraînant d'autre part, chez les soignantes, une perte du sens de leur travail ? Est-ce que cette perte de sens aurait un effet sur le taux d'absence, très élevé dans cette population ?

La estructura de los horarios y sus efectos sobre el trabajo de las enfermeras y enfermeras auxiliares en un hospital de atención a corto plazo fueron analizados en un contexto de modificaciones de la red quebequense de la salud. El análisis enseña estancias cortas de los pacientes y una discontinuidad muy grande de los periodos de trabajo del personal enfermero : 60 % de las que trabajaban en un departamento acumulaban menos de cinco turnos por más en este departamento. Así, a menudo tenían poca información sobre los pacientes y la constante recomposición de los equipos puede afectar las estrategias para paliar la situación. Como no se puede minimizar los aspectos « técnicos » del trabajo, se comprime los aspectos « humanos ». ¿ Puede esta organización de trabajo disminuir la atención, privando por una parte los pacientes de contactos importantes, y llevando por otra parte, una pérdida del sentido del trabajo para el personal sanitario ? ¿ Tendría esta pérdida un efecto sobre la tasa de ausencia, muy elevada en esta población ?

INDEX

Mots-clés: activité de travail, communications, horaire de travail, soignants, infirmières, ergonomie

Palabras claves: actividad de trabajo, comunicaciones, horario de trabajo, personal sanitario, enfermeras, ergonomía

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