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Atti del convegno

**"Sicurezza del paziente in Europa:
Mobilità e Sostenibilità"**



Clima organizzativo e sicurezza del paziente: l'attività in team è garanzia di qualità e attenzione al malato

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Background

On top of a serious European nurse shortage, there is a growing concern that high levels of nurse burnout could adversely affect patient outcomes.

Research design/subjects:

A sample representing different kinds of health care institutions covering different regions in ten European countries (Next study) has been selected. In this paper, we focus upon two sub samples of 23,584 state-registered nurses, and 4,933 specialized nurses.

A quality of teamwork index was constructed based upon eight items: How pleased are you with: (1) psychological support at your workplace, (2) the way your abilities are used, (3) your opportunities to give your patients the care they need, (4) your work prospects? How often: (5) do you have to perform tasks for which you are not qualified enough, (6) do you receive information, which is relevant to your work, insufficiently or too late, (7) do you receive conflicting/contradictory orders concerning the performance of your work? (8) In your department, are there opportunities to discuss professional matters which you think are important? The reliability of the composed scale using Cronbach's alpha was.

Continuous ergonomic observations of nurses' activities were conducted in order to study the difficulties linked to interruptions, the time devoted to patient care, and the relationships between health ca-

Per far sì che il paziente diventi un partner servono numerose discussioni multidisciplinari che coinvolgono tutti gli addetti all'assistenza dello stesso paziente

re institution's architecture, teamwork characteristics, and quality of care.

Results

Epidemiological analysis

Nurses with low levels of teamwork quality were more than twice as likely as other nurses to report dissatisfaction with shift handover, worries about making mistakes, dissatisfaction with possibilities to give patients the care they need, uncertainty regarding patients' treatments, considerably disturbing interruptions, exposure to violent events, burnout, and intent to leave nursing (see Table 1).

Quality of teamwork appears to be the major factor linked with ITL. In a multivariate analysis, nurses who reported a lack of teamwork quality reported a six times higher ITL compared with nurses who reported good teamwork quality (see Table 2).

In this contribution six indicators of effective teamwork are distinguished: (1) situational awareness, (2) problem identification, (3) decision making, (4) workload distribution, (5) time management, and (6) conflict resolution. There is a necessity to create an environment in which individuals can speak up and express their concerns, and share a common 'critical language' to alert team members about unsafe situations. Generally stated, health care working teams need to develop high abilities in information exchange in order to ensure teamwork quality, and to enable high quality patient care. But is relevant to analyse who, when and where this coordination is possible?

Ergonomic analysis

Ergonomic observations show that a lack of collaboration and multidisciplinary teamwork are positively related to the amount of interruptions and insufficient quality of care, and that architectural design may facilitate or impair teamwork.

Simple observation of the lay-out of the observations' summary portrait reveals clear opportunities to reduce risks. In one specific case analysis in a French healthcare institution we observed, among others, insufficient space to prepare care, tiring postures, rewritings on paper and board, disturbed tasks due to colleagues preparing for other patients, noise of simultaneous conversations, and bad legibility of written data because of impaired lighting in the wardrobe.

In another French case analyses we



Table 1 - Safety aspects in relation to quality of teamwork among european registered and specialised nurses

(N = 28,517)	Total sample	Quality of teamwork score in tertiles			p
		High	Medium	Low	
Disatisfaction with shift handover	37,7%	18,0%	36,5%	56,2%	<.001
Worries about making mistakes	25,4%	16,0%	24,0%	35,5%	<.001
Disatisfaction with possibilities to give patients the care they need	41,6%	18,9%	40,0%	63,9%	<.001
Uncertainty regarding treatment	37,8%	17,2%	34,0%	59,7%	<.001
Considerably disturbing interruptions	25,0%	7,8%	20,1%	43,8%	<.001
Exposure to violent events	21,3%	10,9%	19,3%	32,7%	<.001
Burnout	26,1%	10,8%	22,6%	43,5%	<.001
Intent to leave nursing	14,5%	4,6%	10,8%	26,9%	<.001

Table 2 - Multivariate analysis of predictors for intent to leave nursing

Quality of teamwork		Numbers of nurses	Adjusted odds ratios * 95%	Confidence intervals	p
Medium		8,224	2,39	2,03-2,82	<.001
Low		6,087	6,32	5,36-7,46	<.001

* Odds ratios have been adjusted for age, gender, family situation, seniority, burn-out, mental disorders, musculoskeletal disorders, work/family conflicts, and possibilities for development.

found a lack of space and time for shift handover (three different teams conducted their handover concerning, in total, 48 patients in one room with inadequate furniture). Apparently, this leads to uncertainty, interruptions, and a bad atmosphere between colleagues due to irritability. On the contrary, in another French case study we observed the positive impact of adequate space, sufficient time, and the availability of chairs upon technical and emotional aspects of care.

Ongoing ergonomic observations of a nurse working in the morning shift in the orthopaedic department of a general hospital in 2000, from 6:30 am to 2:15 pm pointed out 36 interruptions, lasting one hour and 2 minutes, which is 11% of the total working time (7 hours and 45 minutes) (see Figure 1).

In this particular situation, the nurse was able to spend only 27,2% of her working time in patients' rooms, with 46 entrances, making it impossible to fulfil requirements

as regards washing hands before and after. Figure 1 shows the huge amount of interruptions at the bottom line, and all changes of work locations at the top line implying a serious lack of consecutive time in each patient's room.

Another case concerns the continuous ergonomic observation of a nurse working in a morning shift in the oncology department of a general hospital in 2004, from 6:40 am to 2:30 pm wherein we observed 62 interruptions lasting 2 hours and 31 minutes out of a total working time of 7 hours and 50 minutes (32% of working time). In this particular case, the nurse was able to spend only 24,9% of working time in patient rooms, with 49 entrances.

Discussion

Teamwork appears to be a major factor in the light of patient safety and has been found to reduce uncertainty, interruptions, and to improve the quality of care, and to

increase the amount of time devoted to each patient, and thus to reduce the amount of violent events. In order to enable that a patient becomes a partner, frequent multidisciplinary discussions are needed involving all those who care for these patients. Attention must be paid to where, when and who can participate. However, for new health care institutions under construction their owners failed to emphasize these specifications when delivering their requirements to architects. A number of institutions represented at the conference "Hospital of the third millennium" held in Alba, Italy, May 2006, have not built but one nurse station (care preparation 16 m²; administrative part 24 m² open on the corridor) for 28 beds. Ergonomic observations of the real-life work situation, and participatory methods involving the nursing teams, help to find practical solutions to design wards more suited to the real needs of the workers in order to favour safer care delivery

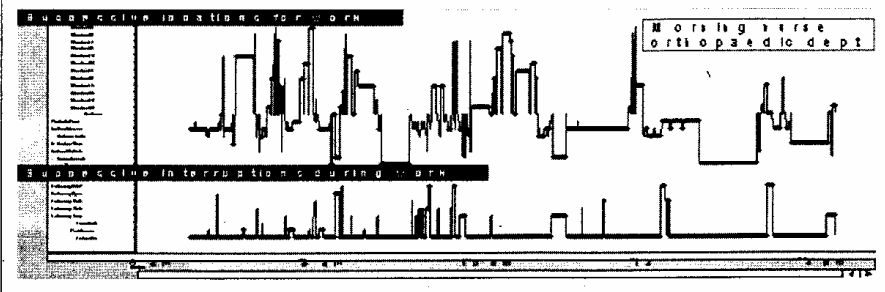


Sicurezza del paziente in Europa

Mobilità e sostenibilità

ARGOMENTI

Ergonomic observation of a nurse working in a morning shift in the oncology department (2004)



and job satisfaction.

A high amount of "floating" nurses appears to be a response to inadequate staffing. The latter leads to a vicious circle with even more dissatisfaction, and turnover. Continuity in nursing care depends on an effective transfer of information between nursing shifts. It also provides an

opportunity for social interaction, emotional support, and for education. Teambuilding strategies, a supportive working environment, collaboration between nurses and housing staff, and tutorial of newly graduate nurses must be developed in order to guarantee patient safety. Yet, good communication needs ti-

me (particularly for shift handover) and an architecture which favours team discussions and reduces time lost in continuous walking. This has the potential to simultaneously reduce nurses' high levels of job burnout and risk of turnover and to increase patients' satisfaction with their care and patient safety. ●

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