The Influence of Organizational Factors on the Processes of Returning and Remaining at Work in the ICU: Contributions of activity ergonomics

Selma Lancman\textsuperscript{a}, Claudio Brunoro\textsuperscript{b}, Juliana Barros\textsuperscript{a}, Tatiana Jardim\textsuperscript{a}, Mariana Silva\textsuperscript{a}, Aline Pereira\textsuperscript{a}, Laerte Sznelwar\textsuperscript{b}.

\textsuperscript{a}School of Medicine, University of São Paulo, São Paulo, BRAZIL; \textsuperscript{b}Department of Production Engineering of the Polytechnic School, University of São Paulo, São Paulo, BRAZIL

1. Introduction

Work-related illness and absences have increased significantly in recent years due to new organizational processes and conditions at work. Workers often return to work with restrictions on performing certain tasks, and they encounter various difficulties in returning to and remaining on the job, contributing to repeat leave and even to termination and early retirement. Moreover, for diverse reasons (economic, bureaucratic, etc.) companies work with lean teams and do not schedule replacements for those absent on sick leave, organizational changes to prevent absences, or to facilitate the process of remaining on the job for those with work restrictions. This situation can also impact other workers who have to take on a greater number of tasks, usually those that provoke greater overload. Generally, leave is granted for physical reasons (muscular-skeletal problems), psychiatric disorders, and accidents on the jobs.

2. Objectives

In specific work situations, to identify organizational aspects related to leaves of absence and illness from work and understand how these factors intervene and make it difficult for workers to return and remain on the job after leaves of absence and/or have job restrictions.

3. Method

3.1. Context

The study took place in 2014 at the University of São Paulo Hospital. This is a mid-size teaching hospital, with 258 beds and 1,818 works divided in 81 sectors. Initially, work situations with the highest rates of leave were identified, i.e. those with absences and short and longer medical leave (over 15 days) from 2011 to 2014. The Intensive Care and Semi-intensive care units (ICU and SEMI) were identified as one of the most vulnerable units. In this hospital, these units are considered as a single sector, and thus have the same team of workers. Based on this finding, an Ergonomic Work Analysis (EWA) was carried out in this sector.

The EWA was done with the nursing team, which includes two job categories: nursing technicians (professionals without higher education and who work primarily in patient care) and nurses (professionals with higher education who are responsible mainly for supervising the care given by technicians and others of greater complexity).

3.2. Ergonomic Work Analysis (EWA)

The EWA was based on activity ergonomics. In this study, the EWA had two phases: assessment and diagnosis, since the purpose was to identify the organizational aspects that influenced return to work and remaining on the job.
In the assessment phase, data was collected using semi-structured interviews, analysis of documents related to: the workers population; productivity data, job descriptions, technical and administrative procedures, the manuals for training guidelines and qualifications and work schedules. After establishing the initial hypothesis, in-depth interviews were done along with free and systematic observations. At the end of this process, the information was validated with the head of the sector.

4. Results

Because it is a public, institution with permanent civil service job positions and consequently, workers stay at the hospital for many years. The nursing teams for the ICU and SEMI (12 + 8 beds respectively) are divided into two six-hour shifts - mornings (9 technicians and 6 nurses), and afternoons – (9 technicians and 7 nurses) – and in another two shifts of 12 hours each – nights of even days and nights of odd days. Technicians work in pairs and each technician is responsible for 2 ICU patients (or 4 SEMI patients). One nurse supervises each pair, that is, each nurse is responsible for 4 ICU patients (or 8 SEMI patients). The technicians make weekly rotation between ICU and SEMI assistance.

Among the most important results, we highlight:

1) In addition to the small number of necessary workers, the complexity and volume of work in the sector, and workers with restrictions on performing some care tasks, make organizing the nursing teams’ work schedules difficult; 2) The reduced size of the team and the restrictions on workers’ tasks also has an impact on the division of labor. Sometimes technicians end up responsible for caring for more patients than planned. This can be further aggravated when the technicians have to accompany patients for examinations in other sectors, thus reducing even further the team that divides up tasks inside the ICU. In this context nurses are responsible for supervising a greater number of patients and in emergency situations have to substitute for technicians and take on the less complex tasks associated with direct patient care; 3) Despite explicit directives from supervisors that workers respect their own work restrictions or those of colleagues, work reality imposed by the work pace, demands, and severity of the cases (including some at risk of death), lead them to ignore the restrictions. Even when the staff level is considered adequate to reduce the require physical efforts of the nursing technicians,(e.g., transfers to bed and for hygiene), time pressures, the number of unforeseen events caused by the high number and complexity of tasks that must to be done during the workday, make it difficult to use these resources; 4) Even though all the care cases are considered highly complex and serious, there is a wide variability in diagnoses, incidents are numerous and despite being contemplated in the work routine, their frequency is unpredictable; 5) Despite planning of routine tasks, due to the serious health status of the patients, simultaneous events can aggravate the clinical picture and demand decision making and prioritization of cases. Incidents also interrupt routine activities, which are essential to identifying in advance a change in patient health status.

5. Discussion:

In situations where the team size is limited, those already on duty and those returning to work both encounter difficulties. Although professionals are proscribed actions that could injure them, there is a simultaneous pressure to assure continuity of care. From this perspective many do end up performing patient care tasks to collaborate with the team, even at the cost of their own health. Team members also try to comprehend the restrictions of other members, often subjecting themselves to overloads in order to minimize the workload on their restricted colleagues.

Another issue is the impossibility of performing series of tasks according to plan in the course of the workday. Despite the professionals being available for six hours in their respective shifts, rarely is it possible to standardize the tasks to be done over time. Although there is a sequence of procedures to be performed,
scheduled for specific times of the day, staff is constantly behind due to incidents related primarily to patient health status. The variability of these incidents is enormous and their frequency unpredictable.

All these factors have an impact on workers who return to work with duty restrictions, as well as on other team members, their team partners, and patient care supervisors, and administrators. Thus the size of the team should be determined by taking into account absences, returns, restrictions, and certainly the day-to-day work dynamic, which is more complicated in this sector of care for patients in highly complex, high-risk situations.

Acknowledgements

The Brazilian National Council for Scientific and Technological Development (CNPq –BR)

References


