

## **THE ACTIVITY OF STRETCH CARRIERS IN THE TRANSPORTATION AND TRANSFER OF PATIENTS IN A HIGH COMPLEXITY SCHOOL MATERNITY AND ITS RELATIONSHIP WITH ADVERSE EVENTS AND PATIENT SAFETY**

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### **Summary**

*Stretcher bearers are a professional category that has been little studied in the scientific world, although they play an important role in patient safety, as they are in direct contact with them. This work's central objective is to analyze the activity of stretcher bearers at a Maternity School at a public university, aiming to identify the determinants of this work activity that impact patient safety, indicating measures to improve the activity that minimize the possibilities of adverse events occurring and increase patient safety through the Ergonomic Work Analysis method. Thus, an action structure of a participatory, technical and managerial nature was created involving stretcher bearers, managers and patients. Through field research, it was observed the lack of a routine for cleaning equipment, the lack of regularity in changing sheets used in transport and/or transfer services, as well as the common use of the elevator for any and all activities, including waste. common and/or hospital ones, physical constraints were also observed, such as lack of accessibility and problems with the layout, so stretcher bearers use strategies such as asking for help from third parties or use more risky maneuvers when passing with the stretcher, such strategies can increase the chance of an AE occurring, which can directly affect patient safety. Another observation was regarding some patients and transport requiring assistance from nurses and/or nursing technicians, other stretcher bearers, or even the patient's companion, although none of this is prescribed for these cases.*

*Keywords: Ergonomics, Patient Safety, Stretcher Bearers, Patient Transport.*

## 1. INTRODUCTION

Although organizations that take care of patients' health (maternity hospitals, hospitals, etc.) are dedicated to their cure, many adverse events occur without their cause originating from the direct treatment adopted to properly cure the patient. Only since the 2000s has patient safety become part of international (World Health Organization - WHO) and national (Ministry of Health - MS) health care strategies in public and private health organizations. Therefore, these health organizations have increasingly become concerned with controlling adverse events with a view to patient safety during care.

In July 2011, VEJA magazine published the following headline: "WHO – going to the hospital is more risky than flying" (VEJA, 2011). According to this article, data from the World Health Organization (WHO) shows that millions of people die every year due to medical errors and hospital-acquired infections. Tribuna do Norte (2017) reported that hospital failures kill more than accidents and cancer, also highlighting adverse events as the 2nd biggest cause of death in Brazil. Leape, Brennan, Laird, Lawthers, Localio, Barnes et al. (1991) defined Adverse Events (AEs) as all incidents that result in harm to the patient's health. For Vincent (2009, p. 51), adverse events are understood as "an unintentional injury caused by medical treatment, and not by the progress of the disease" (VINCENT, 2009, p. 51). According to Padilha, Barbosa, Oliveira, Andolhe, Janzante and Secoli (2015), adverse events (AEs) are those not related to the natural evolution of the underlying disease, which can lead to increased hospitalization time and cost, disability and up to patient mortality

Health care in organizations that provide highly complex services requires special attention, as they involve patients who require complex care, a series of aspects of which must be taken into account to promote patient safety and ensure the minimization of events related adverse events (AEs).

The World Alliance for Patient Safety (2004) was created in 2004, through the World Health Organization (WHO), with the purpose of disseminating knowledge about patient safety throughout the world, by providing alerts on systemic and technical aspects involved and promoting international campaigns on the subject, in an attempt to minimize adverse events and, consequently, the number of victims of preventable adverse events (WORLD ALLIANCE FOR PATIENT SAFETY , 2004).

According to the World Alliance for Patient Safety (2004), the main cause of AEs is related to deficiencies in the design, organization and operation of the hospital system. Therefore, the majority of adverse events (AEs) occur due to latent causes within the systems, and not due to negligence or lack of training by professionals (WORLD ALLIANCE FOR PATIENT SAFETY, 2004).

For Belela, Peterlini and Pedreira (2010), the causes of AEs and their consequences, in hospital environments, are also due to the precariousness of the services provided, the lack of adequate staffing, excessive working hours and poor pay. of professionals. It can be inferred from this statement that the organizational aspects of work are related to adverse events and, therefore, to patient safety, as also pointed out by the World Alliance for Patient Safety.

Patient safety involves a wide range of aspects, which are listed in Ordinances No. 1377/2013 (BRASIL, 2013) and No. 2095/2013 (BRASIL, 2013) in the basic patient safety protocols. The aspects mentioned in these ordinances are: surgery

safety, patient identification, hand hygiene, fall prevention, safe use of medications, and safe care environment.

It is worth highlighting that not only healthcare professionals are responsible for patient safety, but also all professionals involved in their care and treatment, companions and even the patients themselves (MINISTÉRIO DA SAÚDE, 2016).

Collection at the point of origin, transport by stretcher or wheelchair and delivery of patients to a destination point is an activity that has risks and is subject to accidental events, which can result in the patient falling, shocks from part of the patient's body against surfaces, disconnection of treatment devices injected into the body, collection, transportation and delivery of the wrong patient to the destination point, delivery of the patient to the wrong destination, etc.

The present study is ongoing and focuses on the thematic area of patient safety, having as its unit of analysis the activity of transporting and transferring patients carried out by stretcher bearers in a federal public health organization – maternity school providing high complexity care . This article seeks to show the relationships between the stretcher bearer's activity and patient safety, through understanding the strategies and actions used by stretcher bearers to manage variability and constraints (restrictions, constraints) (DE MONTMOLLIN, 1995; GUÉRIN, KERGUELEN and LAVILLE, 2001; ROCHA, 2017) of the activity.

## **2. OBJECTIVS**

The general objective of the research, to which this article is linked, is to propose a set of measures to improve the transport and transfer activity of patients carried out by stretcher bearers, aiming to improve patient safety in the school maternity hospital. The objectives of this article are to present results of the global analysis of maternity and the research sector, as well as to define the pre-diagnosis of the activity studied.

## **3. METHOD**

### **3.1 Type of study**

The scientific method to be adopted in this research is Ergonomic Work Analysis (AET) (WISNER, 2004; GUÉRIN, KERGUELEN and LAVILLE, 2001; VIDAL, 2008). To the authors AET comprises demand analysis, technical process and task analysis, activity analysis, formulation and dissemination of diagnosis and ergonomic recommendations. Thus, the following structure adapted from Vidal (2008) will be adopted: demand instruction; global analysis; targeting and pre-diagnosis; focused analysis; validation and refund; and ergonomic specifications.

### **3.2 Population**

The research population comprises all 10 stretcher bearers of the Maternity School (ME) studied, therefore being considered a census study. These stretcher bearers are distributed between the 3 daily work shifts (morning, afternoon and night) and observations took place in the 3 shifts, in order to check if there are variations between them.

### **3.3 Data collection**

AET begins with the emergence of demand, which can originate from the company's management, from the workers themselves (GUÉRIN, KERGUELEN and LAVILLE, 2001), or even be a provoked demand, that is, when researchers interested in a theme seeks an organization proposing to help it understand and solve possible existing problems, within the scope of Ergonomics (Carvalho and Saldanha, 2001). The present research was a provoked demand, since the researcher approached ME and proposed a study, which aroused the interest of the sector responsible for patient safety in the aforementioned maternity ward, because this sector highlighted problems with this activity.

Thus, for the development of demand analysis, Vidal (2008) recommends that there should be a global analysis, in the sense of knowing the location, gathering information that helps in the analysis and clarification of demand, through which the ergonomic demand will be established. negotiated (VIDAL, 2008). For the author, the global analysis serves to expand the initial scope, adjust the focuses and themes, and refine the demand, consisting of recognizing the place where the ergonomic action should produce its effects.

Thus, to immerse ourselves in the topic of patient safety, adverse events and the activity of stretcher bearers, with regard to the survey of associated concepts, related research and statistical data, bibliographic and documentary research was carried out in academic databases, such as scopus, science direct and pubmed and government bodies. The demand instruction in ME was conducted through a process of social construction, as proposed by Vidal (2008), using interaction techniques such as conversational action and spontaneous verbalizations, in addition to questionnaires, observational techniques and bibliographical research. .

To analyze the task, an interview was carried out with the head of the patient transport and transfer sector, to identify the tasks planned for the stretcher bearers and describe them. Also, with the same purpose, a meeting (focus group) was held with the stretcher bearers. The results of the interactions with the head of the sector and the stretcher bearers will complement and validate the analysis of the stretcher bearers' task.

To analyze the activity, a plan was made for the observation and audiovisual recording of the stretcher bearers' activities, using cameras, verifying the observables of the activity (VIDAL, 2008), both elementary, such as postures, movements and communications, such as compounds (sequences of actions, checking the status of equipment and installations) and verbalizations.

Wisner (2004) states that the analysis of activity is not limited to the study of the course of action, and the layer underlying cognition, representation, which can differ from one operator to another, must be explored. Therefore, semi-structured interviews and conversations were also carried out with the stretcher bearers, in order to understand the determinants of the stretcher bearers' activities that affect patient safety. With this, it was possible to formulate the pre-diagnosis and, later, based on the recording and systematic analysis of the observables, the diagnosis of the activity will be formulated, aiming at the elaboration of the Descriptive Memorial of Transformations (GUÉRIN, KERGUELEN and LAVILLE, 2001).

All data collected, the ergonomic demand, the diagnosis formulated, and indications for improving the activity will be returned to the respective research participants and validated during its course. It is worth highlighting that this article deals with the results of the initial stages of AET, ending with the aforementioned focusing and pre-diagnosis stage.

### **3.4 Ethical aspects of research**

A research project involving human beings has ethical aspects, and it is necessary to discuss them to comply with the ethical determinations provided for in Resolution No. 466/2012. Thus, a project was submitted to the Ethics Committee of Plataforma Brasil, on 04/08/2019 for approval and approved on 05/03/2019, with Certificate of Presentation for Ethical Appreciation (CAAE) number: 08910118.0.0000.5292.

#### **4. RESULTS OF THE GLOBAL ANALYSIS OF MATERNITY AND THE GARDEN HOLDER SECTOR**

To carry out the global analysis, on-site observations and semi-structured interviews and conversations (VIDAL, 2008) were carried out with the hospital managers responsible for the Patient Safety Center-NSP and the stretcher bearers' activity sector, respectively.

##### **4.1 Description and overall functioning of the Maternity School**

###### *4.1.1 History of the Maternity School*

The construction of the ME began in 1932 and was completed in the early 1940s. However, it was only in 1950 that the Natal Maternity Hospital was actually inaugurated, as this building was transferred between 1941 and 1947, to the Ministry of War, through an agreement with the Hospital Assistance Society, becoming quite deteriorated, requiring three years of restoration work on the building. According to Trindade (2015), when it was founded in 1950, the maternity hospital had 130 beds, with the most modern hospital equipment available at the time.

###### *4.1.2 Structure of the Maternity School*

The ME has a building in an eclectic neocolonial style, predominantly, which has a structure composed of 141 beds, 26 of which are Intensive Care Unit beds, 16 gynecology surgical beds and 72 clinical and surgical obstetrics beds; 22 outpatient offices; 01 Amphitheater and 01 Study Center, distributed over a total area equivalent to 7,787 m<sup>2</sup>.

ME also provides outpatient clinics for high-risk pregnancy, family planning, perinatology, fetal medicine, general and specialized gynecology and prevention of diseases of the lower genital tract, in addition to multidisciplinary outpatient clinics (psychologist, nurse, social worker, nutritionist) and Center for Assisted Reproduction. It has a 24-hour urgent and emergency service with an Obstetric Center, Neonatal ICU, Maternal ICU, Human Milk Bank, Mammography, Ultrasonography, as well as Clinical Analysis, Microbiology and Cytopathology laboratory services.

###### *4.1.3 Services offered by the Maternity School*

ME is a specialized hospital complex, of a public nature, that offers comprehensive care to users of the Brazilian Unified Health System (SUS), operating in the areas of women's health, high risk gestation and gynecological surgery. Also, at ME, teaching activities (training of undergraduate medical students) and research activities (Postgraduate, Medical Residency and Master's Programs) are carried out. In 2016, more than 3,800 births were performed in ME, 63% of which were cesarean sections and 37% were normal births. Of these, 91% were considered high risk and 9% normal risk. In the same year, more than 9,400 hospitalizations were carried out. Among them are the

gynecological surgeries and clinical treatments with a total of 1,500 surgeries performed and more than 2,600 clinical treatments.

The maternity ward also has the Patient Safety Center-NSP, which aims to promote a culture of patient safety in the hospital environment, with the planning, development, control and evaluation of care processes, with the aim of ensuring their quality. The members of this nucleus must represent different sectors of the hospital, in addition to counting on the participation of patients, family and/or caregivers whenever possible (EBSERH, 2019).

## 4.2 Description and overall functioning of the Stretcher Sector

### 4.2.1 Characterization of stretcher bearers

In total, there are 10 stretcher bearers who work in the maternity ward. The stretcher bearers are outsourced. In 2016, the company that outsourced this sector changed, however 80% of the stretcher bearers remained. Thus, ME has the support of nine outsourced stretcher bearers, one of which is not exclusive to ME, being assigned to different hospitals when there is a demand or lack of a professional, however it is more demanded by ME itself, they all alternate on a regular basis. on duty for 12 hours, taking 36 hours off, in addition to these there is a permanent stretcher bearer working 44 hours a week (administrative hours: from 7am to 5pm Monday to Friday), three or four of whom are present during the day shift and, always, two on the night shift. The day shift for stretcher bearers who work a 12-hour shift starts at 7am and ends at 7pm, while the night shift starts at 7pm and ends at 7am. They all have 1 hour lunch breaks.

#### a) Socio-demographic data

- Age: 50% are between 30 –| 40 years old and 50% are over 40 years old;
- Sex: 100% are male;
- Education level: 90% have completed secondary education and 10% have completed primary education;
- Profession salary: 100% receive 1 minimum wage and additional hazard pay, 13th salary and 30 days annual vacation;
- Length of service in the role: 60% have over 9 years, 10% 7 years, 20% have 5 years and only 10% 1 year of service in the role, regarding length of service in the outsourced company, 80% have been working since start of the company in ME, that is, 3 years, and 20% with 1 year or less.
- Length of service in the Maternity Hospital: 40% are over 19 years old, 40% between 5 and 7 years and 20% are less than 1 year old;
- Primary and outsourced workers: 100% outsourced.

#### b) Organization of work

- Weekly working hours: 90% work on-call, 12h/36h, and 10% work 44h per week;
- Work shift: 40% work at night and 60% work during the day;
- They work during their day off: 67% work and 33% do not work of the 9 people on duty, these extra jobs vary from car wash, football athlete, sales cart, furniture repair and general services;
- Turnover: Low

### 4.2.2 Installations and equipment of the Stretcher Sector

There is an administrative room, which is not exclusive to stretcher bearers, and is also used by other professionals, such as general service workers. The stretcher bearers on duty share this room with a professional who has a computer, through which calls requesting transport are received via telephone, which he then forwards to the stretcher bearers. The ME has 16 stretchers, 9 wheelchairs, 1 bath chair and 1 transport incubator.

#### *4.2.3 Call process flow for patient transport*

A professional receives patient transport calls from different sectors of the Maternity Hospital via telephone and computer, and forwards them to the stretcher bearers, via radio or instantly in the room, so that they can carry out the requested service. This professional also controls the tasks of the stretcher bearers, using a call control spreadsheet, which contains the name of the stretcher bearer, the type of transport required (stretcher, wheelchair, etc.), the sector in which the patient was transported, the patient's destination sector, and the time of departure and arrival at the stretcher bearers' administrative room. This recording, however, only occurs during the day and, every Friday, the hotel manager, responsible for the stretcher bearers at ME, saves a call control spreadsheet and sends it to the outsourced company, where the stretcher bearers are employed.

#### *4.2.5 Prescribed work of stretcher bearers*

The prescribed work of stretcher bearers consists of: directing patients to requested areas; receive, check and transport exams, materials or equipment, such as oxygen, medical records, among others; control sterilized material; keep equipment clean and organized, such as stretchers and chairs; provide stretchers and wheelchairs to transport patients; assist victims and report on the answering and completion of calls for control purposes.

Telephone calls, requesting stretcher bearers to transport patients, must be made by nurses, who must identify themselves by informing the stretcher bearer of their name, the extension where they are, the patient's place of origin and destination, the type of transport required and whether oxygen is needed during transport, in order to correctly fill out the previously mentioned spreadsheet. However, during the interview with the stretcher bearers it was reported that this protocol is not followed correctly by the nurses.

#### *4.2.6 Aspects related to Occupational Health and Safety*

According to the company responsible for ME's stretcher bearers, these professionals are subject to occupational risks, such as risks due to physical agents (noise, vibrations, extreme temperatures), chemicals (dust, gases, vapors, absorbed by the human body through respiratory tract, through the skin), biological (bacteria, fungi, bacilli, parasites, protozoa, viruses, among others), ergonomic (working while standing, handling patients, etc.) and workplace accidents.

During 2018, there were two dismissals by the National Social Security Institute-INSS. Training sessions are held annually with these professionals.

In December 2018, training took place covering the following topics: work accidents; Regulatory Standard 32 (biological risk); basic principles in fire prevention and fighting and Regulatory Standard 17 (ergonomics). However, this training is not specific to the stretcher bearer role, drivers and professionals from the laundry sector are also present.

#### 4.2.7 Services provided by stretcher bearers

Until June 2019, the stretcher-bearing sector had, on average, 15,000 calls, of which around 70% were for handling, transport and/or transfer of patients, and 30% for other materials, among the 5 sectors that most requested calls are in first place the high-risk sector, secondly unit A, thirdly the ultrasound sector, fourthly unit B1, and fifthly the maternal ICU.

## 5. RESULTS OF FOCUSING AND PRE-DIAGNOSIS OF THE ACTIVITY OF GARDENERS

### 5.1 Patient Safety

When asked about what they understand by patient safety, 80% responded that it would be transporting with care, attention and/or calmly, 40% responded to provide safety to the patient, checking the equipment, 30% of this would involve transporting accompanied by technicians, nurses and/or doctors, 30% responded to detect the patient's illness and know whether it is urgent or not, 20% said they would be careful with the baby, only 10% cited the use of PPE.

As can be seen, the understanding of patient safety, for them, mainly involves transporting patients with care, attention and/or calmly. Let's look at some reports from the stretcher bearers:

"The patient feels confident in us and, also, in the equipment used, but, often, the equipment is not very good" (Maqueiro F. M. S.).

"You have to be careful when transporting the patient, right?! Pay attention, be careful with the baby too" (Maqueiro E.J.C.A)

"Transport them calmly, transfer the bed carefully, check the equipment, as there are stretchers with rails that have to be attached, otherwise the patient will fall" (Maqueiro D. S. S.).

"When transporting the patient, depending on the severity, be careful, always accompanied by a nurse or doctor. And be careful with ourselves too, you know, so as not to get blood, because we don't know what's in it" (Maqueiro C. R. A. P.).

### 5.2 Incidents and accidents

When asked about having experienced some type of incident (near-accident) and/or accident while transporting patients, 60% said no and 40% answered yes; being them:

- 1- Elevator was broken, they had to climb the stairs and the patient fell (Stretcher bearer I. D. T. O.)
- 2- He passed the stretcher over the foot of the nursing technician he was accompanying, she took leave (Stretcher E. J.C.A.)
- 3- Patient faints during transfer to unit B, as there is no elevator and she has to climb the stairs when she has just given birth (Maqueiro D. N. S.).
- 4- Some fainting and falling of patients (Maqueiro F. M. S.).

### 5.3 Training

Regarding having already undergone some type of specific training to perform their role, 10% responded that they had never received any training and 90% had already received it, but 30% had only 1 training, 40% 2 trainings and 20% had 4 trainings and



only 10% more than 15, such training lasted, on average, 2 to 4 hours, covering topics on safe patient handling, correct form of transfer, posture, humanization, use of PPE, use of equipment (brakes, etc.) , and all of them have already had more than 1 and a half years without receiving training.

#### **5.4 Positive and negative points of the role**

As positive points regarding their role, 80% reported a good relationship with the team and managers, 30% good equipment and new stretchers, 10% cited it as an essential role, as it has the first contact with the patient and 10% reported that It's important to enjoy what you do. Some of the reports they made were: "I think a positive point is enjoying what you do, right, if I didn't like it, I wouldn't have worked with this for over 30 years, it's good to help others, we have to understand patients, because everyone has their own problems, and we don't know what they are going through, we have to respect it" and "The stretcher bearers are the first to receive patients, so we are, let's say, their entrance, right, it's an essential function , and the team too, we are friends."

As for the negative points, 70% cited the lack of ramp or elevator and the broken transport platform in Unit B1, 40% cited the low salary, 40% lack of radio in some wards, this being a specific problem on the night shift, due to not having the employee responsible for receiving calls in the room, 30% cited the uneven elevator and old wheelchairs, without brakes and without support, and 10% the call telephone was not just for calls and also rings for random things and be responsible for also picking up equipment, exams, or anything they ask for.

#### **5.5 Suggestions for improving the activity highlighted by the stretcher bearers themselves**

Suggestions for improvements were mentioned:

- Have an exclusive room and improve the resting place;
- Have radio in all sectors;
- The telephone number is exclusive for calls;
- Elevator or ramp in unit B;
- Walkway to unit B;
- Wheelchairs with support.

Among the improvement suggestions mentioned above, the stretcher bearers pointed out the need to install an access ramp in a certain location of Unit B1 (see Figure 1), as the automatic platform responsible for lifting the patient into the wheelchair, in this stretch, it doesn't work, meaning that patients less than 24 hours after surgery or giving birth have to climb the stairs alone or with the help of stretcher bearers. They also reported that, for certain types of patients and transportation, there is a need for assistance from nurses and/or nursing technicians, other stretcher bearers, or even the patient's companion.

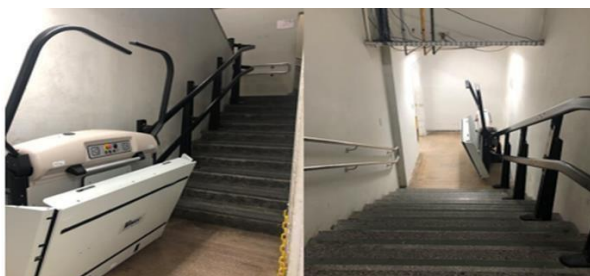


Figure 1. Access to unit B1 (Authors, 2019)

Another frequently cited suggestion was the improvement of the sector room, which, as can be seen in Figure 2, is a small environment, with low ceilings for the anthropometry of the occupants, with infiltrations in one of the walls, as well as in the resting place, seen in Figure 2, which is under a staircase, whose ceiling is inclined and very low, in addition to the place being extremely small, in view of this, it has been reported that there have been accidents of head hitting the ceiling when getting up from the mattress, or the door because she is shorter than the height of most of them.



Figure 2. Stretcher bearer sector room and resting place for stretcher bearers (The authors, 2019).

Furthermore, with open observations it was found that equipment is only cleaned when it is visibly dirty (with stains), and the cloth on the wheelchair is also only changed when it is very dirty with dark stains or when there is blood from the patient. , the condition of the wheelchairs was also observed, which are rusty, dirty and have broken footrests, and none of them have support for IVs or other medicines, as shown in Figure 3.



Figure 3. Wheelchairs in the sector. (Authors, 2019)

The hand hygiene protocol, previously mentioned in Ordinances nº 1377/2013 (BRASIL, 2013) and nº 2095/2013 (BRASIL, 2013), with the basic patient safety protocols, was passed on to all employees in the sector, in However, it was observed that they do not always wash their hands before and after care. Furthermore, there was difficulty in passing the stretcher into the maternal ICU (which is among the 5 sectors with the most calls), as there is a chair on one side of the corridor and two fire extinguishers on the other side, leaving little space for passage. of the stretcher, which can be seen in Figure 4, in addition to the problem of unit B1, already mentioned, another point observed was a small unevenness in the elevator (highlighted in red in Figure 4), and in addition to that there is no exclusive elevator for common waste and/or hospitals, so all elevators transport patients, companions, employees, and also waste.



Figure 4. Access to Maternity Unit A and elevator elevation. (Authors, 2019)

Based on the reports and observations, the following pre-diagnoses were reached:

The lack of a routine for cleaning equipment, the lack of regularity in changing the cloths used in transport and/or transfer services, as well as the common use of the elevator for any and all activities, including common and/or hospital waste and, Also, the transport of patients can increase the risk of hospital infections, considered a common AE in Brazil. According to Oliveira and Maruyama (2008), the main causes of hospital infections are: inadequate sterilization and disinfection of articles and equipment, disruption of hospital cleaning routines, disruption of routine nursing and medical procedures. In other words, such procedures can increase the risk of an AE for BD patients.

The observed physical contrasts, which involve the lack of accessibility in Unit B1, problems with the layout in Unit A, mean that stretcher bearers have to use strategies such as asking for help from third parties during transport to or from Unit B1, or using maneuvers riskier when passing with the stretcher in Unit A, as well as lifting the stretcher during entry and exit from the elevator due to the unevenness encountered. Such strategies can increase the chance of an AE occurring, such as falls and/or fainting, which can directly affect the safety of the BD patient.

For certain types of patients and transport, there is a need for assistance from nurses and/or nursing technicians, other stretcher bearers, or even the patient's companion, although none of this is prescribed for these cases.

## 5. CONCLUSION

The article presented the initial stages of the construction of the AET with stretcher bearers from a maternity school in the city of Natal-RN. It was found that the collection of global data from the company and the sector, as ingredients of the Global Analysis, are important to know the global functioning of the company, which is of great importance to better define demand, understand how aspects of dimension organizational or macro ergonomics relate to the problems that concern the negotiated ergonomic demand.

The article also demonstrated that stretcher bearers, when carrying out their activities, are faced with physical counterparts – due to the characteristics of the physical facilities (degradation of equipment, inadequate layout, absence of elevator access to unit B2, etc.) of the ME and of the equipment used - and with time constraints - due to the urgency of transport, high demand, etc. - and that, to achieve their objective - of transporting and moving the patient safely - they carry out regulations that consist of developing strategies and actions, such as relying on the collaboration of third parties to carry out certain transfers and make advances, such as making forecasts

patient demand when faced with intense flows at certain periods and days of the week. The aim of this study was to draw attention to the relationship between the activity of

stretcher bearers and the occurrence of possible adverse events with transported and transferred patients and to contribute to the adoption of improvements in the activity of stretcher bearers and the safety of Maternity patients, minimizing the occurrence of adverse events

## 6. DISCLAIMER

The authors are solely responsible for the information included in this work and authorize the publication of this work on the ABERGO 2020 scientific dissemination channels.

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