

# NURSING TRAINING IN THE PROCESSING OF PRODUCTS FOR EXPEDITIONS IN THE BRAZILIAN AMAZON

*Capacitação da enfermagem no processamento de produtos para atuação em expedições na amazônia brasileira*

*Capacitación de la enfermería en el procesamiento de productos para actuación en expediciones en la amazonia brasileña*

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**ABSTRACT: Introduction:** In Brazil, universal and equitable access to health care services for indigenous peoples remains a challenge, considering the difficulty in establishing primary health and multidisciplinary teams in indigenous lands. The Brazilian Health Expeditions – a civil society organization of public interest – carry out expeditions in the north of the country to promote the health of indigenous peoples. **Objective:** The present article described the training experience that enabled the nursing team to work in the Material and Sterilization Center during expeditions. **Method:** This is descriptive research, designed as an experience report, on the stages of training for nurses to work in the material center of a field hospital, during expeditions in the Amazon. **Results:** The proposed training was satisfactory, and the participants developed the desired skills through theoretical input and practical activities. **Conclusion:** The involvement of nurses in voluntary activities arouses interest in permanent training, as well as enhances their technical-scientific knowledge.

**Keywords:** Nurses. Sterilization. Health human resource training. Staff development.

**RESUMO: Introdução:** No Brasil, o acesso universal e equânime aos serviços de assistência à saúde dos povos indígenas ainda é um desafio, considerando, a dificuldade de inserção da saúde básica e das equipes multiprofissionais em terras indígenas. A organização da sociedade civil de interesse público Expedicionários da Saúde realiza expedições no Norte do país para promover a saúde dos povos indígenas. **Objetivo:** O presente artigo descreveu a experiência de capacitação que habilitou a equipe de enfermagem para atuar no Centro de Material Esterilização durante expedições. **Método:** Pesquisa descritiva, do tipo relato de experiência, que descreve as etapas de capacitação para enfermeiros atuarem no centro de material, em hospital de campanha, durante expedições na Amazônia. **Resultados:** A capacitação proposta foi satisfatória e os participantes desenvolveram as competências almejadas, por meio do aporte teórico e das atividades práticas. **Conclusão:** Observou-se que envolver enfermeiros em atividades voluntárias desperta o interesse na formação permanente, bem como aprimora seu conhecimento técnico-científico.

**Palavras-chave:** Enfermeiras e enfermeiros. Esterilização. Capacitação de recursos humanos em saúde. Desenvolvimento de pessoal.

**RESUMEN: Introducción:** En Brasil, el acceso universal y equânime a los servicios de asistencia a la salud de los pueblos indígenas aún es un desafío, considerando, la dificultad de inserción de la salud básica y de los equipos multiprofesionales en tierras indígenas. La organización de la sociedad civil de interés público Expedicionarios de la Salud realiza expediciones en el Norte del país para promover la salud de los pueblos indígenas. **Objetivo:** El presente artículo describió la experiencia de capacitación que habilitó el equipo de enfermería para actuar en el Centro de Material Esterilización durante expediciones. **Método:** Estudio descriptivo, del tipo relato de experiencia, que describe las etapas de capacitación para que enfermeros actúen en el centro de

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material, en hospital de campaña, durante expediciones en la Amazonia. **Resultados:** La capacitación propuesta fue satisfactoria y los participantes desarrollaron las competencias anheladas, por medio del aporte teórico y de las actividades prácticas. **Conclusión:** Se observó que involucrar enfermeros en actividades voluntarias despertó el interés en la formación permanente, así como perfecciona su conocimiento técnico-científico.

**Palabras clave:** Enfermeras y enfermeros. Esterilización. Capacitación de recursos humanos en salud. Desarrollo de personal.

## INTRODUCTION

In Brazil, universal and equitable access to health care services for indigenous peoples is still a challenge. However, the Federal Constitution of 1988, through articles 231 and 232, outlined political bases that effected relations between indigenous peoples and the Brazilian State, based on their valorization, social organization, customs, languages, beliefs, and traditions<sup>1</sup>. In this context, the Brazilian Health Expeditions (EDS – *Expedicionários da Saúde*), a Civil Society Organization of Public Interest (OSCIP – *Organização da Sociedade Civil de Interesse Público*), have carried out expeditions in the Legal Amazon for 14 years, promoting health to indigenous peoples in remote and difficult to reach areas.

Through articulation and technical cooperation between public institutions, such as ministries and the National Indian Foundation (FUNAI – *Fundação Nacional do Índio*), and private ones, clinical, surgical, and dental care were established with a field hospital on indigenous lands in the north of Brazil<sup>2</sup>. The EDS hospital consists of humanitarian aid field hospitals and has a modular mobile structure, with equipment that guarantees logistic autonomy in health, such as generators, lighting, thermal insulation, water purification, air-conditioned units, fuel, among others. Such characteristics allow the provision of health care and small and intermediate surgical procedures, such as hernia repair and cataract removal, typical in the indigenous population<sup>2</sup>.

However, the recruitment of volunteer nurses to work in the Surgical Center (SC) and the Material and Sterilization Center (CME – *Centro de Material e Esterilização*) of this hospital is a challenge and, at the same time, an opportunity to develop human and technical-scientific skills and abilities<sup>3</sup>. The possibility of offering training for nurses involved in CME activities allows the field hospital to provide the same type of competence to the practice of these professionals, when compared to conventional hospitals, reducing risks and promoting positive outcomes for nursing care and the population treated in the expeditions.

Essential precautions to inhibit surgical site contamination require measures to prevent infection not only in locals

but also in the surgical team. In this scenario, CME takes great responsibility in managing risk factors that could lead to adverse events related to community surgical care<sup>4</sup>.

However, if CME volunteers do not have the necessary skills to handle equipment, in addition to attention in processing materials – cleaning, preparation, and sterilization of surgical instruments in specific areas –, they might create risks to the care provided to the indigenous community and their own health.

In this sense, theoretical and practical training has become an important tool for the education of new volunteer nurses, as a viable alternative for safe practice in the CME. Authors report that training encourages active learning, recycles current information, and stimulates critical and reflective thinking, increasing the expertise of these professionals for competent and highly qualified professional practice<sup>5</sup>. This experience report provides knowledge based on the training of nurses to work in the CME of a field hospital.

## OBJECTIVE

To report the stages of the training process that enabled the volunteer nursing team to work at the CME of a field hospital in the Brazilian Amazon.

## METHOD

This is descriptive research, designed as an experience report, that can be defined as a methodology of systematic observation of reality, seeking to establish correlations between findings of this reality and relevant theoretical principles<sup>6</sup>.

The study scenario was the EDS field hospital, which has a mobile structure for SC and CME, composed of six surgical tents, with the purpose of providing care in different specialties, such as ophthalmology, gynecology, pediatrics, and dentistry.

The hospital complex was set up in the community of Assunção do Içana, in the city of São Gabriel da Cachoeira, state of Amazonas, Brazil. The location chosen for the SC and CME was a shed previously built by the indigenous

community. The CME structure was divided into a dirty and a clean area to maintain the independence between them and guarantee the unidirectional flow, as recommended by the Resolution of the Collegiate Board of Directors (RDC – *Resolução da Diretoria Colegiada*) no. 15/2012<sup>7</sup>.

With regard to human resources, the training stages started after the registration of the nurse in the EDS website, followed by a curriculum evaluation, which required at least one year of experience in care, and personal interview. Participating in nursing meetings and theoretical-practical training in the EDS Distribution Center (DC) is a prerequisite.

The training program began after the selection of the nurse who would coordinate the CME, aiming at recycling the technical-scientific knowledge and care practices. The coordinator was in charge of training the support team from the local Special Indigenous Health District (DSEI – *Distrito Sanitário Especial de Saúde Indígena*). The training was offered to the DSEI team during the finalization of the CME. Next, there was a demonstration and supervision of the functions delegated to each member of the team.

The training process was followed by a tutor, nurse, and EDS volunteer; specialist in SC, Anesthesia Recovery (AR), and CME; with professional experience in the CME field; and responsible for preparing the CME/EDS guideline. The training began with the suggestion to read the article on the logistics of setting up the SC and the CME/EDS, authored by EDS volunteer nurses<sup>2</sup>, followed by the CME/EDS guideline, and equipment manuals located in the CME/EDS.

The theory allowed reviewing concepts related to the processing of surgical materials, as well as aspects associated with cleaning, disinfection, and sterilization of health products. At the laboratory stage, the nurse volunteer learned how to assemble surgical boxes, prepare supplies, ventilation support kits, operate equipment (ultrasonic washing machine, water distiller, and incubator), and, finally, perform the test in loaded autoclaves and the biological test. The volunteer needed to participate in the 10 meetings during the load assembly, totaling 50 hours.

The practical activity was crucial to demonstrate the logistics of preparing supplies, the assembly of materials and equipment, and the nurse's role in the CME. This role consists of being able to fill indicators in the shift report, predict the need for and provide materials, equipment, and supplies – according to the daily surgical schedule –, verify the proper working of the equipment, and request the support of clinical engineering, when necessary, in addition to instructing and supervising the DSEI team during the expedition.

The validation of autoclaves and other equipment had a satisfactory result (before the expedition period) and started

the documentary records of quality and quantity indicators. We emphasize that indicators are important tools in improving processes, including logistic ones.

## RESULTS

The experience report refers to the Surgery in the Amazon Program, which, in its 36th expedition, met the surgical demands of the indigenous population, estimated at 12 thousand inhabitants, in the community of Assunção do Içana, from November 18 to 26, 2016. Initially, registered volunteer professionals are digitally notified about the expeditions. Next, they attend bi-weekly meetings at the EDS headquarters.

When the team is complete, the professionals are distributed in the following sectors: screening, reception, preoperative, postoperative, offices, SC, and CME. Although five nurses volunteered to work in the EDS, only one was trained during the three-month period in 2016.

At the end of the theoretical-practical training, it was possible for the tutor nurse to assign the volunteer nurse to work in the CME, due to her attendance and technical performance during the simulation of assembling and operating the CME, in the DC of the EDS. With respect to the DSEI team, their training was carried out *in loco*, in the expedition, during the assembly of the CME, and they were actively evaluated according to their resourcefulness and technical ability. The EDS volunteer nurse trained the DSEI team, consisting of a nurse, three nursing technicians, and an Indigenous Health Agent (AIS – *Agente Indígena de Saúde*), to support the CME, and assigned them as follows: nurse and a technician to the clean area, two technicians to the dirty area, and an AIS to transportation.

The demand for surgical instruments used in the expedition comprised: 20 cataract surgical boxes, seven pterygium surgical boxes, nine general surgical boxes (medium size), five small surgical boxes, and two orthopedic boxes. For seven days, the CME team worked 105 hours and operated 312 indigenous patients, of whom 185 underwent general surgeries; 125, ophthalmic surgeries; and two, gynecological surgeries. The training of the EDS nurse and the DSEI team was fundamental for the proper operation of the sector and process optimization.

## DISCUSSION

According to the Association of periOperative Registered Nurses (AORN)<sup>8</sup>, nurses who work in the perioperative

period should keep up to date in nursing care practice to follow the nursing trends in the perioperative setting. This perspective is reiterated by the Brazilian Association of Surgical Center, Anesthesia Recovery, and Material and Sterilization Center Nurses (SOBECC – *Associação Brasileira de Enfermeiros de Centro Cirúrgico, Recuperação Anestésica e Centro de Material e Esterilização*)<sup>9</sup>, which recommends that nurses working at the CME keep abreast of the technical and scientific trends related to hospital infection control and the use of advanced technologies.

Increasingly, the labor market has required professionals qualified to diagnose and solve problems. Therefore, innovating training models for nursing professionals is necessary, so as to improve teaching-learning processes and make them more attractive. Newly graduated nurses, at first, have no initiative in seeking the knowledge to work in the CME, despite being aware of the importance of the sector and the maintenance of care in health units<sup>10</sup>.

In this regard, this experience report shows the desire and willingness of a nurse, specialist in another area, to migrate to an unusual type of care, through voluntary work in indigenous health, and thereby acquire up-to-date knowledge, backed

by CME experts. Health education dynamically transforms the collective knowledge of the actors involved in the health work process. Thus, nursing education assumes the responsibility of training the whole team in the improvement of techniques and new technologies<sup>11</sup>.

## CONCLUSION

The result of the experiment was considered effective for the training of the volunteer nurse who coordinated the CME of the field hospital. The deadlines were sufficient, and the necessary skills, achieved by the EDS volunteer nurse and the DSEI team, who were trained and supported the activities developed in the expedition.

Training volunteer nursing professionals who work in a field hospital on EDS expeditions in the northern Brazilian Amazon has become a differentiated strategy in the teaching-learning context and perioperative care. We expect that this report will awaken not only the motivation for voluntary work in indigenous health but also the responsibility of adopting good practices in nursing care, especially in the CME.

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