



## EDUCATIONAL VIDEO ON ONCOLOGICAL CHEMOTHERAPY: TECHNOLOGY IN HEALTH EDUCATION

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### ABSTRACT

**Objective:** to describe the stages of creating an educational video for patients undergoing chemotherapy. **Method:** a study of the development of educational technology carried out in an oncology service of a teaching hospital in the south of Rio Grande Sul. The creation of the material took place from March 2016 to April 2017, with the help of specialized professionals from the oncology service considered in the study as expert judges. It was created through four stages: literature review, analysis of the data collected and creation of the script, validation of the script by expert judges and audiovisual editing. **Results:** they comprise the description of the script and the content of the video as a proposal for health education for patients undergoing chemotherapy. **Conclusion:** the Educational Video is an important health education tool for people undergoing chemotherapy, and it can be used especially in nursing consultations, a moment in which embracement must be prioritized to minimize side effects and favor treatment adherence.

**Keywords:** Nursing. Chronic disease. Neoplasms. Audiovisual aids. Health education.

### INTRODUCTION

Cancer is a chronic non-communicable disease (CNCD) that, in the last decades, has considerably grown, becoming a worldwide public health problem<sup>(1)</sup>. According to the estimate of the World Cancer Organization cancer report of 2020, the number of new cases of neoplasms may increase from 18.1 million in 2018 to 29.4 million in 2040<sup>(2)</sup>.

Among the treatments available for the disease, chemotherapy is one of the most used types, being a systemic therapy that can cure some tumors. For patients, it can be good therapy for health recovery. On the other hand, it is also considered a tough treatment due to the side effects that can interfere with daily life<sup>(3)</sup>.

The side effects of chemotherapy represent meanings, fears, and stigmas, as they are directly associated with pain and suffering<sup>(4)</sup>. These effects result in changes in the person's life and,

many times, they are unaware of the purposes of the treatment and how much it impacts the physical, psychological, and social dimensions, and what you could do to lessen them. In this sense, knowing what may happen can be an ally in minimizing adversity, fear, and frustration concerning therapy<sup>(5)</sup>.

Clarification about diagnostic, preventive and therapeutic procedures is the person's right, as well as being informed about the type, treatment time, its benefits and side effects, as well as possible physical, psychological, economic, and social changes. The nursing consultation is helpful for health education and the establishment of guidelines, which should include actions for prevention and lessening of side effects due to cancer treatment, besides, it is possible to share knowledge about the disease and general care<sup>(6)</sup>.

The educational function stands out among the facets of nursing care, through the promotion

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of guidelines and assistance in overcoming the obstacles faced by the person undergoing treatment, aiming at their value, their individuality, their beliefs, and their way of being and relating to the world<sup>(7)</sup>. The relevance of being aware to preserving health education practices is emphasized, which also include preventive actions, not only curative and focused on acute cases<sup>(8)</sup>.

Health education is supported by actions or resources of information, education, and communication, and may involve the creation of materials intended to assist in the understanding of guidelines related to the therapeutic process, the care provided by professionals and, especially, self-care. Among the instruments used, Educational Video (EV) stands out as a didactic, technological resource and disseminator of knowledge, which can be used as a strategy for the formation of critical thinking and as a way of promoting health.<sup>9</sup> The means of communication, mainly audiovisual, develop sophisticated and multidimensional forms of sensorial, emotional, and rational communication, overlapping languages and messages that enable interaction with the audience<sup>(10)</sup>.

Thus, it is understood that the EV provides the person with the ability to understand the information that comes from this educational technology<sup>(9)</sup>. It is believed that the use of such materials as strategies and instruments of therapeutic support can provide knowledge about the disease, the treatment, its adverse effects and how to minimize them, thus improving the quality of life and self-care of patients undergoing chemotherapy<sup>(10)</sup>.

Given the above, considering the relevance of the theme on the use of information as a tool for the promotion of self-care of people with cancer in chemotherapy, the guiding question for carrying out this study was: How to create an educational video with information for patients in chemotherapy treatment? Thus, this study aims to describe the stages of creating an educational video for patients undergoing chemotherapy.

## METHOD

This is an educational technology development study<sup>11</sup>, in which an EV was

developed to be a tool to assist in educational actions on chemotherapy treatment. The study was conducted at the Oncology Service of a teaching hospital at a federal university located in the extreme south of Rio Grande do Sul, which serves cancer patients undergoing chemotherapy exclusively through the Unified Health System (SUS). The creation of the EV took place from March 2016 to April 2017 and had the participation of professionals from this service, considered in the study as expert judges. Its creation took place through four stages: literature review, analysis of the data collected and creation of the script, validation of the script by expert judges and audiovisual editing.<sup>10</sup>

First, a review of the literature was carried out to explore studies that addressed the theme of antineoplastic chemotherapy and audiovisual resources as a facilitating tool for health education. The data search was carried out on the Ministry of Health and the National Cancer Institute José Alencar Gomes da Silva (INCA) websites, and in the databases Medical Publications (PubMed) and Latin American and Caribbean Literature in Health Sciences (Lilacs). The keywords used were chemotherapy and health care and audiovisual resources. And the inclusion criteria were full articles and books available in English, Portuguese and Spanish and published in the last 10 years, addressing the antineoplastic chemotherapy theme and audiovisual resources as a health education tool, with a focus on patient care and treatment cancer chemotherapy. The exclusion criteria were articles on educational technologies that addressed cancer diagnosis, radiotherapy treatment and other cancer treatments and a technical approach to chemotherapy.

First, 19 articles were selected and, after reading them, we kept four articles, according to the inclusion and exclusion criteria. Of these, three important themes emerged for the creation of the educational video script. The first is related to the technical and empirical information that would be part of the video, focused on chemotherapy treatment and care related to treatment; the second concerns the script validation process; and the third is the video development process.

Publications from the Ministry of Health and the National Cancer Institute José Alencar Gomes da Silva (INCA) were used to create the

script's content. After its development, the script was validated by an oncologist, a general practitioner, three nurses, a nutritionist, a psychologist, a social worker, a dentist and an audiovisual professional. These professionals were considered expert judges, as they meet at least one of the following criteria: having expertise and practice in cancer care; specialization in this field; minimum professional experience of one year in the field; monograph, dissertation, thesis, or articles published in the last five years on the theme.

The specialists were personally invited to participate in the study, and the objective and the importance of their contribution were explained. After accepting to participate in the research, the date and place for validating the script were arranged. The validation process was carried out in a reserved room in the oncology service of that hospital and, after everyone was at the place, they were comfortably seated, with chairs and tables available. Subsequently, the script, the validation instrument and pens were handed out. The validation lasted for a minimum of 30 minutes and a maximum of two hours.

The instrument used was a questionnaire, organized according to the Likert scale, divided into three sections: a) objectives (with purposes, goals, and objectives; b) structure and presentation (concerning the presentation of the guidelines); c) relevance (referred to the characteristics that assessed the level of importance the technology). The expert judges answered the questionnaire, considering the scores adopted for ranking the script (1, 2, 3, or 4), and followed a scale with four degrees of scoring: totally adequate (TA), adequate (A), partially adequate (PA), inadequate<sup>(10)</sup>. For the quantitative analysis of the judges' validation, the adequacy of the behavioral representation of the items was calculated. In the analysis of the responses of the expert judges, it was verified the scores that obtained most of the answers. The analysis was performed first with the total responses to the three stages, then the total responses' analysis of each stage was made, emphasizing the respective highlights. As for the evaluation of the judges, it was found an agreement value greater than 70% of the adequacy of the Script<sup>(10)</sup>.

Achieving a positive validation of the script, it was possible to improve it and create the

educational video with the support of a specialized studio that accepted the proposal to assist in the production, recording and editing process of EV, comprising the fourth and last stage of this search. The project was submitted to Plataforma Brasil and forwarded to a Research Ethics Committee, with approval Opinion number 1,891,285, under Resolution 466/12.

## RESULTS

Two stages are presented, namely: description of the Educational Video script; and developing the video in practice: health education proposal for patients undergoing chemotherapy.

### Description of the Educational Video script

At First, the patient's possible itinerary was presented on the day of chemotherapy application: at this moment, the EV nurse welcomes the patient and family and presents the environment and the service, from the reception to the infusion unit of chemotherapy, as well as the professionals who work in the service, and what routine he/she will follow on the day of treatment. Also, the importance of carrying out consultations and examinations necessary to assess the health condition is emphasized. Next, chemotherapy and its side effects, the different forms of presentation and routes of administration and the infusion time of antineoplastic drugs were addressed, and it was clarified that chemotherapeutic medications infused intravenously have different colors, and that this characteristic does not define the treatment effectiveness. It also points out the possible occurrence of adverse effects, such as nausea and vomiting, dysgeusia, lack of appetite, mucositis and the risk of infection resulting from neutropenia.

Moreover, it was explained about the care to be taken to manage side effects, explaining the need for an adequate diet and water intake. Regarding physical and work activities, it is mentioned that there is no indication for them to be interrupted, only if the patient does not have the physical conditions to keep them. Oral hygiene care guides were also given.

Alopecia was also addressed, as an event that may occur, but that is transitory, and what can be done to reduce changes in self-image, such as the use of scarves, hats, and wigs. Issues related to sexual and reproductive life were also referred to in the EV, clarifying the need and reasons for using contraceptive methods.

The care to be taken on the days of chemotherapy application was addressed, for example, how the patient should proceed at the time of infusion and the need to communicate to the nursing team if he/she saw changes at the site of the chemotherapy infusion, as edema or pain. Furthermore, specific care for the day of chemotherapy application, such as making a light meal and plenty water intake, besides the immobility of the limb in which the venous access is installed during the infusion of chemotherapeutic medication.

Finally, the symptoms that deserve urgent care were highlighted, such as hyperthermia, dyspnea, urinary incontinence, visual changes, pain or abnormal intensity and hemorrhages. It was pointed out about the possibility of seeking the health team in case the patient and family

feel the need to clarify doubts. The script proposed for the EV followed a language of easy understanding for the target audience.

### The process of creating the video: health education proposal for patients undergoing chemotherapy

After the script was validated, the EV edition started. To this end, there was a meeting with the studio's professionals, to discuss the video presentation. Thus, the audio recording step was carried out in the recording studio, the voice used in the recordings was from the author of the study. Also, she took photographs of the oncology service, such as the waiting room, reception, doctor's offices, chemotherapy application rooms, outpatient clinics, pharmacy, and nursing station; and photographs of the chemotherapeutic drugs, with their particularities (colors and forms of administration), and representations of the side effects and the care needed to control them. With that, it was possible to create the therapeutic itinerary for chemotherapy.



**Figure 1:** An illustrative example of the educational video on chemotherapy treatment

**Source:** Mortola LA, Reult Art Produções

This material was sent to the studio that created the computer graphics for the composition and final editing. The digital media was created using Adobe Premiere. Thus, the EV was presented, consisting of images, subtitles, audios, and computer graphics that presented the content to patients undergoing chemotherapy.

### DISCUSSION

The cancer diagnosis has an important impact on the lives of people affected by the disease, associated with the adversities that can occur due to chemotherapy, a context that triggers negative feelings, because, despite being one of the ways

for the cure of the disease and/or increase the survival, there is the chance of fears due to side effects<sup>(12)</sup>. Corroborating, in research developed in two oncology centers in São Paulo, it was evidenced that the majority of cancer patients (76.97%) mentioned physical side effects such as nausea, vomiting, pain, fatigue, among others, besides irritability and anxiety<sup>(13)</sup>, which may be related to the diagnosis of oncological disease, but also antineoplastic therapy.

In this perspective, it is necessary to discuss important aspects about chemotherapy and, since there are myths and fears about the treatment and, when guided, these fears that worry people unfamiliar with the subject can be undone. Therefore, it is a basic requirement that the person receives guidelines that address chemotherapy as a systemic treatment, which uses drugs that work on cellular metabolism and commonly has unwanted side effects, but that there are advances and research in the area to lessen them<sup>(14)</sup>.

The patient has the right to have information about the oncological disease and antineoplastic therapy, including physical and psychological effects, adverse reactions, risks, and benefits. Also, it is understood that attention must be given to the content provided, and how this knowledge is passed on<sup>(15)</sup>. Furthermore, it is essential to encourage the self-care of cancer patients undergoing chemotherapy, with involvement in decisions about their health/disease condition, through active participation in terms of therapeutic choices, way of living and daily habits, so that they can manage their lives, with support from health professionals, especially nurses<sup>(16)</sup>.

Regarding the care of cancer patients, holistic care stands out, based on the creation of a bond between the professional who provides care and the patient and his family, in which it is possible to expose feelings and expectations, besides physical issues, to minimize biopsychosocial suffering<sup>(17)</sup>.

The guidelines given before the first chemotherapy applications are more effective in lessening side effects. Thinking about this aspect, health education can be an ally in these actions, using audiovisual information resources such as EV, an important didactic and technological resource, disseminating

knowledge, which can be used as a strategy for health promotion as a tool in this process<sup>(9)</sup>.

Health professionals are investing more and more in the creation of technologies supported by the theory of self-efficacy, which is the belief that the necessary behavior can be successfully performed to produce the desired result. Educational interventions promote the breaking of the vertical relationship that traditionally exists between professionals and patients<sup>(18)</sup>.

We cannot deny the relevance of pedagogical and, therefore, humanized work, carried out also in the hospital environment. Educational activities with interdisciplinary pedagogical practices, which use different means and resources, are a rich and challenging experience in this field, requiring professionals to have a human and aware training of the social role they play<sup>(19)</sup>.

Audiovisual strategies, such as videos, can create perceptive attitudes and enable the construction of knowledge, above all, because it is an educational material with visual and audio resources, which continuously stimulate creativity and work as a learning mediator<sup>(20)</sup>.

EVs transform ubiquitous, universal, and multipurpose information, because they cause curiosity in audiences of different social classes or educational levels, belonging to urban or rural communities. Still, they teach, discuss, spread information, influence, impact, transform realities, since the words written in books, pamphlets and manuals remain partially in the memory, however an image can remain intact almost forever<sup>(21)</sup>.

Although EV is an important health promotion strategy, used mainly in developed countries, there are still few studies that show its development and use by health professionals. In this perspective, there is a need to standardize and disseminate educational materials on chemotherapy, and the EV is a relevant support tool for this health education action<sup>(22)</sup>.

## CONCLUSION

Health education is involved in the nurse's work as well as health professionals and can provide the assisted person with protection and improvement in the quality of life. Thus, it is necessary to promote the creation and use of educational materials that address the guidelines

before and throughout chemotherapy applications. These actions can be effective in reducing side effects and adhering to treatment. When properly elaborated and grounded, the EV can become an important health education tool, for use, mainly, in the nursing consultation, a moment in which user embracement must also be prioritized.

Furthermore, the EV aimed at the guidance on chemotherapy may increase the understanding of people with cancer, helping them to identify practices that prevent or minimize side effects and reduce anxiety in the face of the unknown that involves the process of becoming ill and depending on chemotherapy treatment. Also, this resource has the potential to

encourage autonomy and self-care, as well as to bring the patient closer to the health team in an interactive way.

However, the lack of studies that address chemotherapy and ways of preventing its side effects is highlighted, which hinders the possibility of developing standardized educational materials, which corroborates the mitigation of cancer and its therapeutic process. It is expected that with this study, new initiatives to implement health technologies, with emphasis on EV, will be used in the care practices of nurses and other health professionals, favoring communication with patients for the use of care practices from the guidelines provided.

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## VÍDEO EDUCATIVO SOBRE A QUIMIOTERAPIA ONCOLÓGICA: TECNOLOGIA NA EDUCAÇÃO EM SAÚDE

### RESUMO

**Objetivo:** Descrever as etapas de construção de um vídeo educativo para pacientes em tratamento quimioterápico. **Método:** Estudo do tipo desenvolvimento de tecnologia educativa realizado em um serviço de oncologia de um hospital de ensino no sul do Rio Grande Sul. A construção do material ocorreu no período de março de 2016 a abril de 2017, e contou com a participação de profissionais especializados do serviço de oncologia considerados no estudo como juízes especialistas. Foi desenvolvido por meio de quatro etapas: revisão da literatura, análise dos dados coletados e construção do roteiro, avaliação do roteiro pelos juízes e edição audiovisual. **Resultados:** Os resultados compreendem a descrição do roteiro e o conteúdo do vídeo como uma proposta de educação em saúde para os pacientes em tratamento quimioterápico. **Conclusão:** O Vídeo Educativo constitui-se em uma importante ferramenta de educação em saúde para as pessoas em quimioterapia, podendo ser utilizado principalmente na consulta de enfermagem, momento no qual se deve priorizar o acolhimento com intuito de minimizar os efeitos colaterais e favorecer a adesão ao tratamento.

**Palavras-chave:** Enfermagem. Doença crônica. Neoplasias. Recursos audiovisuais. Educação em saúde.

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## VÍDEO EDUCATIVO SOBRE LA QUIMIOTERAPIA ONCOLÓGICA: TECNOLOGÍA EN LA EDUCACIÓN EN SALUD

### RESUMEN

**Objetivo:** describir las etapas de construcción de un vídeo educativo para pacientes en tratamiento quimioterapéutico. **Método:** estudio del tipo desarrollo de tecnología educativa realizado en un servicio de oncología de un hospital escuela en el sur de Rio Grande Sul-Brasil. La construcción del material ocurrió en el período de marzo de 2016 a abril de 2017, en el que participaron profesionales especialistas del servicio de oncología considerados en el estudio como jueces especialistas. Fue desarrollado por medio de cuatro etapas: revisión de la literatura, análisis de los datos recolectados y construcción del guion, evaluación del guion por los jueces y edición audiovisual. **Resultados:** comprenden la descripción del guion y el contenido del vídeo como una propuesta de educación en salud para los pacientes en tratamiento quimioterapéutico. **Conclusión:** el Vídeo Educativo se constituye en una importante herramienta de educación en salud para las personas en quimioterapia, por lo que pueden utilizar principalmente en la consulta de enfermería, momento al cual se debe primar la acogida a fin de minimizar los efectos colaterales y favorecer la adhesión al tratamiento.

**Palabras clave:** Enfermería. Enfermedad crónica. Neoplasias. Recursos audiovisuales. Educación en salud.

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