

Characterization of videos on youtube about the aeromedical transport of multiple trauma patients

RESUMO | Objetivo: caracterizar os vídeos do YouTube sobre o transporte aeromédico do politraumatizado. Método: estudo descritivo e quantitativo, realizado mediante acesso à plataforma de vídeos YouTube, entre julho e setembro de 2021, com utilização de instrumento composto por 13 variáveis que foram tabuladas e analisadas de maneira descritiva por software. Resultados: foram encontrados quatro vídeos, postados entre 2018 e 2021, dos quais a maioria foi postada em canais pessoais, em sua maior parte destinados aos profissionais da saúde, com predominância de médicos na narração. Os vídeos com mais inscritos nos canais e aqueles mais curtos obtiveram maior número de visualizações. Conclusão: os vídeos da plataforma YouTube sobre o transporte aeromédico do politraumatizado foram voltados aos profissionais da saúde, no entanto, há carência de citação de portarias, conselhos profissionais, legislações, além de atribuições dos profissionais que atuam no cuidado de saúde ao paciente com múltiplos traumas nesse tipo de transporte.

Descritores: Assistência pré-hospitalar; Resgate aéreo; Traumatismo múltiplo.

ABSTRACT | Objective: to characterize YouTube videos about the aeromedical transport of polytraumatized patients. Method: descriptive and quantitative study, carried out through access to the YouTube video platform, between July and September 2021, using an instrument composed of 13 variables that were tabulated and analyzed in a descriptive way by software. Results: four videos were found, posted between 2018 and 2021, most of which were posted on personal channels, mostly aimed at health professionals, with a predominance of doctors in the narration. The videos with the most subscribers on the channels and the shortest ones got the most views. Conclusion: the videos on the YouTube platform about the aeromedical transport of polytraumatized patients were aimed at health professionals, however, there is a lack of citation of ordinances, professional advice, legislation, in addition to the attributions of professionals who work in health care for patients with multiple trauma in this type of transport.

Keywords: Pre-hospital care; Air rescue; Multiple trauma.

RESUMEN | Objetivo: caracterizar videos de YouTube sobre el transporte aeromédico de pacientes politraumatizados. Método: estudio descriptivo y cuantitativo, realizado a través del acceso a la plataforma de videos YouTube, entre julio y septiembre de 2021, utilizando un instrumento compuesto por 13 variables que fueron tabuladas y analizadas de forma descriptiva por software. Resultados: se encontraron cuatro videos, publicados entre 2018 y 2021, la mayoría de los cuales fueron publicados en canales personales, en su mayoría dirigidos a profesionales de la salud, con predominio de médicos en la narración. Los videos con más suscriptores en los canales y los que eran más cortos tenían la mayor cantidad de vistas. Conclusión: los videos en la plataforma de YouTube sobre el transporte aeromédico de pacientes politraumatizados fueron dirigidos a los profesionales de la salud, sin embargo, falta la citación de ordenanzas, consejos profesionales, legislación, además de las atribuciones de los profesionales que actúan en la atención de la salud para pacientes politraumatizados en este tipo de transporte.

Palabras claves: Atención prehospitalaria; salvamento aéreo; Trauma múltiple.

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INTRODUCTION

Polytrauma comes from an event generated by high kinetic energy, which causes serious injury to the individual, such as traffic accidents, falls, being run over and injuries by firearms. ⁽¹⁾ It is referred to as an injury that involves multiple organs and systems. ⁽²⁾ In Brazil, car accidents are a potential event that results in multiple trauma. These remained in eighth place, among the deaths that occurred on public roads between 2009 and 2019. ^(3,4) This fact has repercussions on the profile of high-complexity services, such as the Intensive Care Unit (ICU). ⁽⁴⁾

The polytraumatized victim, after evaluation by the team in the first consultation, according to the clinical severity, should be referred to the hospital to be submitted to procedures that aim to solve the case, such as a more detailed and specialized evaluation, examinations or surgical intervention. The most common means of transport is by land, however, some cases will have an indication for the use of air transport, to reduce the response time and provide a quick approach in the tertiary service. Thus, it is pointed out that aeromedical transport is a resource used for severe cases, among which, routinely, are polytraumatized patients.

In a study carried out in Pernambuco in 2021, which evaluated the attendance of the aeromedical service, showed that this service was called 276 times, of which 75 (27%) were to attend to events caused by collision, 31 (11%) by being run over and, of the 11 triggering reasons identified in the study, eight are potential mechanisms to cause multiple traumas. ⁽⁵⁾ This finding corroborates the aerial consultations performed, which totaled 529 in 10 years, of which 49.5% were for trauma care and 10.2% for surgical patients. ⁽⁶⁾ When considering that acting in the aeromedical service demands specific knowledge and training ⁽⁷⁾, the importance of multiplying information on the subject is highlighted. Among the possibilities of information source, the internet is promising for the

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A Brazilian study pointed out that, in 2018, nine out of 10 people used this platform for study, in Brazil and 87% of the population evaluated stated that they seek videos with an interest in professional improvement and updating. ⁽¹¹⁾ Thus, it is pointed out that YouTube has been widely used for health education, increasingly evident in the pandemic.

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health area, given the possibility of quickly obtaining information. ⁽⁸⁾

In the scenario of virtual communication, YouTube stands out, which was created in June 2005 to share videos on the internet. ⁽⁹⁾ The use of this site attracts attention by using sound and image that arouse the interest of learners. ⁽¹⁰⁾ A Brazilian study pointed out that, in 2018, nine out of 10 people used this platform for study, in Brazil and 87% of the population evaluated stated that they seek videos with an interest in professional improvement and updating. ⁽¹¹⁾ Thus, it is pointed out that YouTube has been widely used for health education, increasingly evident in the pandemic. ⁽¹²⁾

Thus, when considering that YouTube is a source of information for health professionals, it is important to verify the content published on the aeromedical transport of polytraumatized patients, in order to point out an information gap that is rarely addressed in such videos, so that sub-themes involving the aeromedical transport of this specific audience can be directed to the production of future videos to be posted on the web site. In addition, it becomes possible to know what content is available on the topic, what kind of target audience the videos are intended for and what aspects of the topic are explained in the videos. Thus, this study aimed to characterize the videos on YouTube about the aeromedical transport of the polytraumatized.

METHOD

This was a descriptive and quantitative study, carried out through access to the YouTube video platform (<http://www.youtube.com>), between July and September 2021. The sample consisted of the videos available on the aforementioned platform. It was established as inclusion criteria to address the aeromedical transport and to have content about the polytraumatized person who uses this transport. The exclusion criteria adopted were repeated videos and advertising/advertising

and marketing of airlines.

For data collection, an instrument adapted from previous research, created by the Interdisciplinary Nursing Research Group of the Federal Institute of Education, Science and Technology of Pernambuco (IFPE) was used.⁽¹²⁾ The instrument had 13 variables, three of them about the characteristics of the publisher's page responsible for posting the video on the platform: the type of channel, personal or institutional, number of subscribers and institution responsible for publishing the video. It should be noted that the institutions were characterized according to the names used on YouTube, such as public or private education, culture, hospital, news agency, Non-Governmental Organization (NGO) or health organization. The ten remaining variables contemplated the following video characteristics: year of posting, duration, categorization in terms of time (occurred in accordance with YouTube criteria, so that videos were categorized as "short" when they lasted less than four minutes, "intermediate" when the duration was from four to 20 minutes and "long" when the duration was greater than 20 minutes), number of views, of "liked" and "disliked" tags, target audience, category of professional who narrated the content in the video, source/reference of information reported in the video and type of fixed or rotary wing aircraft covered by the content. The collection took place through access to the YouTube platform, using the search terms "Aeromedical Polytraumatism", "Aeromedical Polytraumatized", "Aeromedical Polytrauma" and "Aeromedical Polytraumatized", separately, to search for the videos. The filters available on the platform were not used for searches (upload date, type, duration, characteristics and order by relevance, for example) so as not to limit the findings. All videos obtained in the searches were watched. The aforementioned searches were performed by one researcher and triangulated with the findings of the second researcher, who repeated the same search strategies.

After the end of data collection on the YouTube platform, a small number of videos found was observed. Thus, to expand the possibility of obtaining videos, the same search terms mentioned above were searched on the Google search site (www.google.com), in the "videos" tab. With the search term "Aeromedical Polytraumatism (Politraumatismo Aeromédico)" 373 results were found, with the term "Aeromedical Polytraumatized (Politraumatizado Aeromédico)" 257 results were found, with the search term "Aeromedical Polytraumatism (Politrauma Transporte Aéreo)", 3,560 results were found. Finally, with the search term "Polytraumatized Air Transport (Politraumatizado Transporte Aéreo)", 2,460 results were found. Thus, more than 6650 videos were

analyzed and all of them showed an escape from the theme or were the same four videos found in the searches carried out on YouTube.

The variables were tabulated in Microsoft Excel 2007 software, and descriptively analyzed using R software version 4.1.0. Approval by the Research Ethics Committee (REC) was not required, as the contents used were in the public domain.

RESULTS

Regarding the characteristics of the account profiles in which the videos were published, the four videos were posted by four different authors, with the following descriptions of the type of channel: clarification on the treatment of patients with

A seleção dos vídeos encontra-se detalhada na Figura 1.

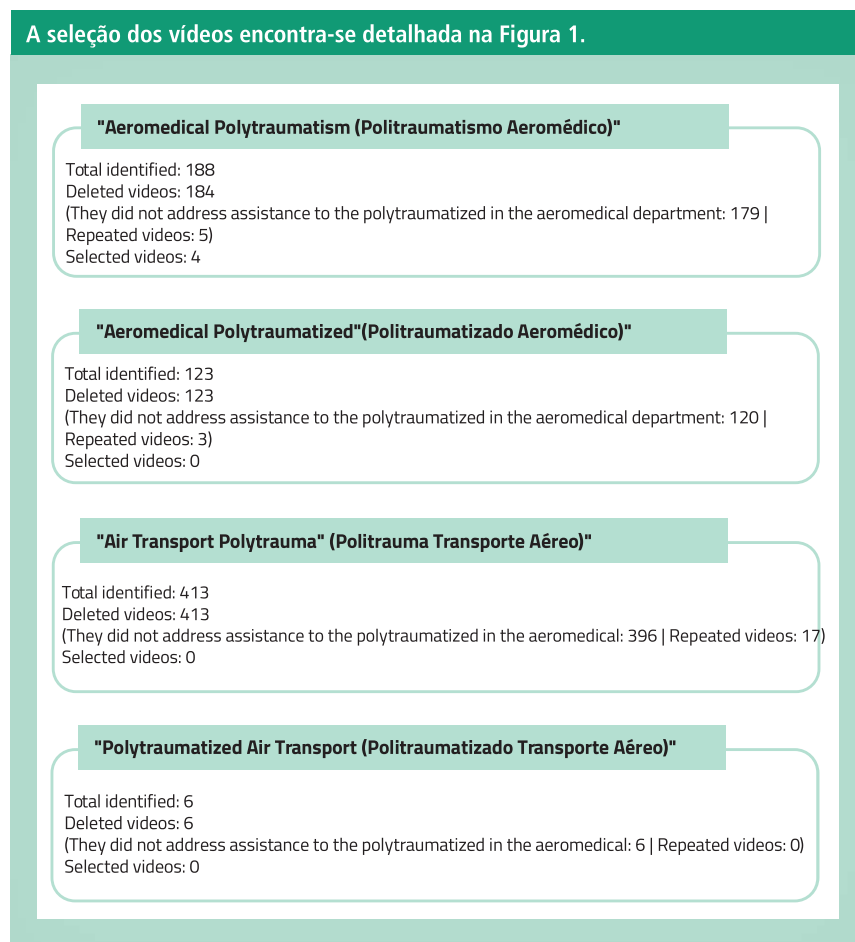


Figura 1: Seleção dos vídeos do YouTube sobre transporte aeromédico de pacientes politraumatizados. São Paulo, São Paulo, Brasil, 2021. Fonte: os autores (2021).

obesity and diseases of the digestive system; medical occurrences; conversations with professionals and educational videos. As for the type of channel on which the videos were posted, three (75%) were personal accounts and one (25%) was an NGO. As for the year of posts, one (25%) video was published in 2018, one (25%) in 2020 and two (50%) in 2021.

Regarding the number of subscribers to the channels, 80 were observed in the first channel, 26,800 in the second, 1,1000 in the third and 497 in the fourth, so that the average number of subscribers was 7,119. In terms of the duration of the videos, three were classified as long, the first being a class in a congress with 24 minutes and 25 seconds; the second, discussion between professionals, lasting one hour, 34 minutes and 22 seconds; and the third consisted of an online event lecture, lasting one hour, 04 minutes and 57 seconds, while the fourth video, classified as intermediate, lasting 13 minutes and 24 seconds, it was a medical lecture on pre-hospital trauma care and pre-embarkation assessment focused on pediatrics.

It was observed that videos posted on channels with more subscribers had more views and a greater amount of "liked" tags. In addition, the findings make it possible to infer that the videos with the shortest duration were the most viewed, as detailed in table 1.

Regarding the target audience for which the videos were intended, three (75%) videos were intended for health professionals, and one (25%) video did not specify such information.

Regarding the category of professional who narrated the content in the video, there was a predominance of doctors, present in three (75%) videos, followed by nurses, found in one (25%) video.

Regarding the source/reference of the information presented, only one (25%) video presented such information, which was the Aerospace Nursing Association (ABRAERO) and the American Heart Association (AHA).

Table 1: Description of the videos regarding the number of subscribers to the channel in which they were posted, number of views, likes (likes), disliked (dislikes) and target audience. São Paulo, São Paulo, Brazil, 2021

Number of subscribers	Duration, in minutes	Views	Likes	Dislikes	Target Audience
80	24:25	1807	40	0	Professional
497	64:57	51	3	0	Professional
1100	94:22	389	51	0	Professional
26800	13:24	5753	643	3	Not specified

Fonte: os autores (2021).

Regarding the type of aircraft, the four (100%) videos presented information about the rotary wing and one (25%) of them also included the fixed wing in its content.

DISCUSSION

Most of the published videos related to the topic were posted on personal channels and the greater the number of views, the greater the "liked" and "disliked" reactions. A similar finding was found in a study that analyzed YouTube videos about COVID-19 for the deaf. (14) The publication that took place on personal channels allows us to infer that investments from teaching and research institutions and private companies are necessary for the production of videos that contribute to the multiplication of the theme. Regarding views and reactions to videos, a directly proportional relationship between the two variables is expected, since the most viewed content is more likely to be the target of "likes" and "dislikes" reactions. The duration of half of the analyzed videos was longer than 60 minutes, different from the findings of a survey carried out in Spain, whose results show Youtube videos lasting three hours. (15) The difference between the studies may be due to the fact that, in the Spanish study, the number of videos analyzed was higher, in addition to the fact that the videos were focused on popular themes (travels and events).

Regarding the year, it was observed that most of the videos were posted in 2021,

which is in line with the analysis of Brazilian research on anti-vaccination videos on Youtube, which showed a gradual growth of posts over the years. (13) It is expected that topics that gain scope of dissemination and have an increase in the number of hits will have a growing production and posting on Youtube, however, it is noteworthy that the context of the COVID-19 pandemic, in which, given the health recommendations of social distancing, participation in face-to-face events became unfeasible, may have favored the incentive to record content for dissemination through digital means.

The narrators of the videos were health professionals, similar to what was found in a study on the videos about the nursing process. (14) Such findings can be justified since the content of the videos had a scope aimed at a specific and specialized audience and, therefore, there is pertinence for the narration of the content to be carried out by a professional in the area.

Although most of the videos are intended for health professionals, only one video presented the references used as a source of information. This finding is similar to the research that evaluated the videos on female urinary incontinence, in which 78.57% of the videos had a lack of references. (16) These data suggest that the authors do not pay attention to the need to present scientific evidence on the topics covered in the videos, which potentially reduces the possibility of the listener/viewer looking for the source of the information. Thus, it is important that

people involved in the production of posting videos with technical content, aimed at professionals, take care to cite/present the source of the information that is presented.

Regarding the types of aircraft mentioned, there was a predominance of the rotary wing. This fact can be justified because there is greater use of this type of wing, which requires specific logistics for use, which culminates in a greater chance of producing videos that include it. However, there is a need for relevance in the production and posting of videos that contain information about the use of fixed wing in the transport of polytraumatized patients.

Study limitation

The limitations of this study were that the search was based on terms in Portuguese, which may present a divergence from the results obtained in other languages.

CONCLUSION

The videos posted on the YouTube platform about the aeromedical transport of polytraumatized patients were directed to health professionals, most on personal channels and posted in the year 2021.

There is a lack of citation of ordinances, professional advice, legislation, in addition to the attributions of professionals working in this area and health care for



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multiple trauma patients in aeromedical transport.

In the literature, there are few references and sources of information on the subject, especially with regard to the use of the video platform to assist polytraumatized patients in aeromedical transport. The findings of the present study point to the need for the production and posting of more content, with scientific support, mainly that include more details about the procedures performed, health care during this type of transport, according to the profile of airborne patients, related to the initial pathology, in addition to a better description of the attributions of each member of the health team.

This study showed that YouTube, despite being one of the easily accessible means of learning, which allows quick access to the content sought, presents a lag of videos about the aeromedical transport of polytraumatized patients and the few videos available do not present scientific references for later consultation, nor were they posted by channels of any educational, research or specialized service institution. Thus, there is a margin that compromises the credibility of the available content and it is recommended that further studies build and validate informative videos on the subject, with content aimed at professionals and also videos accessible to the general population.

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