End of Life: Telemedicine applied to end-of-life care, its ethical implications, and its benefits in addressing patients undergoing palliative care

André Santos (Student of Master in Medicine – Faculdade de Ciências da Saúde, Universidade da Beira Interior)
Orientation by: Abel Abejas (Master in Palliative Care and Bioethics) and Henrique Martins (PhD in Management Studies)

BACKGROUND

Telemedicine or telehealth are similar concepts that define a wide range of technologies applied to specialized medical services, provided at distance, therefore having enormous potential to increase healthcare accessibility and improve patient follow-up by healthcare professionals. [1,2]

In palliative care setting, telemedicine allow the remotely assistance to end-of-life patients, their families, and caregivers without the need for them to physical travel, and be submitted to the distressing hospital setting environment. [3,4]

The rapid development of technology and a population that is more fluent in utilizing novel technologies, promotes exponentially telemedicine implementation. This may transform and shape the way that medical care is provided. [4] The roles and context of care may become more complex and permeable to ethical dilemmas. [5]

The major ethical concerns regarding telehealth in end-of-life context are associated with risks of neglecting privacy and patient confidentiality, as well as concerns related with the shifting in the model of care, from a holistic patient cantered paradigm to a more physical and data assessment paradigm. [4,6]

RESEARCH AIM

Evaluate the benefits and ethical implications of telemedicine applied to end-of-life care

METHODOLOGY

Study Design:

Systematic integrative review following the Preferred Reporting Items for Systematic Review and Meta-Analise (PRISMA) recommendations as reporting guideline.

Search strategy:

Review conducted in October 2021, in databases: PubMed, EBSCO, Cochrane Library and Clarivate Web of Science.

Exclusion criteria:

Scoping reviews, grey literature, theses/dissertations.
Protocols of non-published studies.
Studies with children or in pediatric care.
Articles focusing exclusively on euthanasia, physician-assisted suicide, assisted suicide and/or voluntary stop of eating/hydration will be excluded.

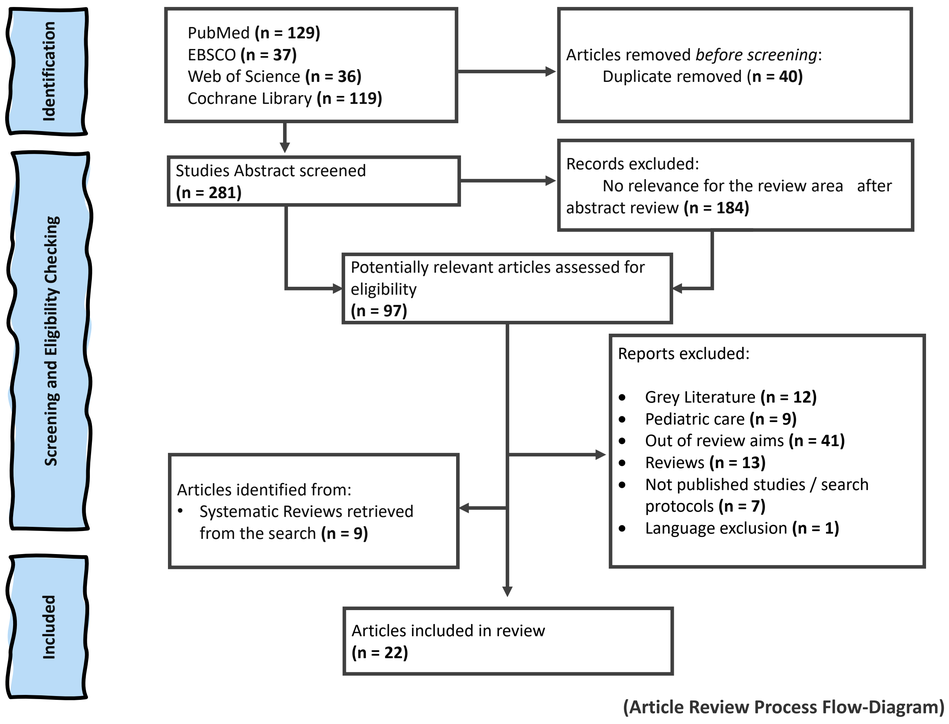
Inclusion criteria:

Peer-reviewed studies on ethical decisions at end-of-life.
Language: English, French, Italian, Portuguese, Spanish.
Study designs including quantitative, qualitative, mixed-methods, case reports, case series.
Human adults (aged above 18 years)

Quality Appraisal:

Overview of the included articles applying Clarivate Journal Citation Report online tool to access the journal and article impact factor and the Quality Appraisal Assessment Criteria tool from Hawker et al. ‘s.

RESULTS



(Article Review Process Flow-Diagram)

Quality Appraisal Assessment Criteria tool from Hawker et al. ‘s

Authors / Publication Year	Abstract & Title	Introduction & Aims	Method & Data	Sampling	Data Analysis	Ethics & Bias	Results	Transferability or Generalizability	Implications & Usefulness	Total	Grade
Cox A *et al.* 2011	3	3	3	4	4	3	3	4	2	29	B
Bakitas MA *et al.* 2015	3	4	4	4	4	4	4	4	3	34	A
Bakitas MA *et al.* 2017	3	4	4	3	4	4	3	3	3	31	A
Bonsignore L *et al.* 2018	3	4	3	3	3	2	3	4	3	28	B
Elk R *et al.* 2020	4	3	4	4	4	4	4	4	3	34	A
Funderskov KF *et al.* 2019	4	3	4	3	3	3	4	3	3	30	A
Funderskov KF *et al.* 2019	3	2	3	2	3	4	3	2	3	25	B
Johnston B et al. 2012	2	4	3	2	2	2	3	2	3	23	C
Kuntz JG *et al.* 2020	3	2	3	2	4	3	4	2	3	26	B
Lai L *et al.* 2020	3	2	3	4	3	4	4	3	2	28	B
Mc Veigh C *et al.* 2019	4	3	4	3	3	3	3	3	3	29	B
Moore SL *et al.* 2020	3	3	4	2	3	4	3	2	2	26	B
Neergaard MA et al. 2014	3	3	4	3	4	3	4	3	4	31	A
Perumalswami CR *et al.* 2021	4	3	4	2	3	4	3	2	3	28	B
Rainsford S *et al.* 2020	3	4	2	3	3	3	3	3	3	27	B
Slev VN *et al.* 2017	4	4	4	3	3	3	4	3	2	30	A
Tieman JJ *et al.* 2016	4	3	4	3	3	4	3	3	3	30	A
van Gurp J *et al.* 2013	4	4	4	3	3	3	3	3	4	31	A
van Gurp J *et al.* 2015	4	4	3	4	4	4	4	4	3	34	A
van Gurp J *et al.* 2015	4	4	4	3	3	3	3	3	4	31	A
van Gurp J *et al.* 2016	4	4	3	4	3	3	4	4	4	33	A
Wu YR *et al.* 2020	4	3	4	2	4	4	3	2	3	29	B

DISCUSSION

Quality of life and humanization of care

Overall, patients and informal caregivers report positive experiences with the telemedicine.

Remote access to healthcare via telehealth technologies improve quality of life and quality of care. This is especially important in vulnerable patients in end-of-life conditions.

Healthcare professionals acknowledged the potential benefits of telehealth and considered it a vehicle able to provide efficient holistic care to areas with limited specialized palliative services.

Ethical risks and obstacles

Telehealth interventions reveal a more permanent focus on the patients’ physical problems, leaving out other dimensions of care.

Ethical issues when patient’s death is imminent,

Healthcare professionals report concerns with the lack of that in-person contact and its impact in dehumanization of care, especially when patient’s death is imminent. Privacy and security are also ethical concerns with telemedicine.

Aspect of quality of care

Improved communication between elements involved in the care process due to telemedicine.

Telehealth technology allow more systematic follow-up to recognize physical and mental changes over time and adapting faster to the patients needs.

Types of telemedicine and usage circumstances

Telehealth is primarily utilized in community-based interventions or home-based interventions, primarily by telephone and videoconference.

LIMITATIONS

Search was thorough but may have been affected by the variety of terms used in the literature for both end-of-life care, telemedicine and ethical decision making. Studies were heterogeneous in nature, complexifying the process of synthesis of the findings

CONCLUSIONS

Humanization/dehumanization of care is approached superficially in most studies, and not correlated with patient/caregiver satisfaction and quality of care.

The most ethical implications reported involve privacy and security risks of technology, acknowledged both by patients and healthcare providers.

Telemedicine as a great potential to improve the quality of care, have a clearer insight of patient true necessities, hand promote holistic care.

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