BMJ Open

Emotional impact on healthcare providers involved in medical assistance in dying (MAiD): a systematic review and qualitative meta-synthesis

Saumil Yogendra Dholakia ,[1] Alireza Bagheri,[2] Alexander Simpson[3]

To cite: Dholakia SY, Bagheri A, Simpson A. Emotional impact on healthcare providers involved in medical assistance in dying (MAiD): a systematic review and qualitative meta-synthesis. *BMJ Open* 2022;**12**:e058523. doi:10.1136/bmjopen-2021-058523

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2021-058523).

Received 12 November 2021
Accepted 24 June 2022

[1]Department of Mental Health, The Ottawa Hospital, University of Ottawa, Ottawa, Ontario, Canada
[2]Research affiliate Center for Healthcare Ethics, Lakehead University, Thunder Bay, Ontario, Canada
[3]Forensic Psychiatry, Centre for Addiction and Mental Health, Toronto, Ontario, Canada

Correspondence to
Dr Saumil Yogendra Dholakia; saumil.dholakia@mail.utoronto.ca

ABSTRACT

Background Medical assistance in dying (MAiD) traverses challenging and emotionally overwhelming territories: healthcare providers (HCPs) across jurisdictions experience myriad of affective responses secondary to possible tensions between normative and interwoven values, such as sanctity of life, dignity in death and dying and duty to care.

Objective To determine the emotional impact on HCPs involved in MAiD.

Methods Inclusion restricted to English language qualitative research studies from four databases (OVID Medline, EMBASE, CINAHL and Scopus), from beginning until 30 April 2021, and grey literature up to August 2021 were searched. Key author, citation and reference searches were undertaken. We excluded studies without rigorous qualitative research methodology. Included studies were critically appraised using the Joanna Briggs Institute's critical appraisal tool. Analysis was conducted using thematic meta-synthesis. The cumulative evidence was assessed for confidence using the Confidence in the Evidence from Reviews of Qualitative Research approach.

Results The search identified 4522 papers. Data from 35 studies (393 physicians, 169 nurses, 53 social workers, 22 allied healthcare professionals) employing diverse qualitative research methodologies from five countries were coded and analysed. The thematic meta-synthesis showed three descriptive emotional themes: (1) polarised emotions including moral distress (n=153), (2) reflective emotions with MAiD as a 'sense-making process' (n=251), and (3) professional value-driven emotions (n=352).

Discussion This research attempts to answer the question, 'what it means at an emotional level', for a MAiD practitioner. Legislation allowing MAiD for terminal illness only influences the emotional impact: MAiD practitioners under this essential criterion experience more polarised emotions, whereas those practising in jurisdictions with greater emphasis on allaying intolerable suffering experience more reflective emotions. MAiD practitioner's professional values and their degree of engagement influence the emotional impact, which may help structure future support networks. English language literature restriction and absence of subgroup analyses limit the generalisability of results.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ An eligibility criteria and subsequent search strategy that focuses on emotional impact of medical assistance in dying (MAiD) on healthcare providers (HCPs) with qualitative research methodology.
- ⇒ Use of Joanna Briggs Institute's critical appraisal tool for assessment of risk of bias and use of the Confidence in the Evidence from Reviews of Qualitative Research approach for assessing the methodological limitations, relevance, coherence and adequacy of the evidence after completion of meta-synthesis.
- ⇒ Qualitative signals of absence of subgroup analysis, eligibility criteria limited to published English language literature and fast-moving pace of research on emotional impact of MAiD on HCPs likely contribute to significant publication bias.
- ⇒ Generalisability of evidence limited by presence of selection bias in included studies.

INTRODUCTION

Medical assistance in dying (MAiD) poses ethically complex challenges that can be a major source of distress to participating healthcare providers (HCPs)—especially since MAiD may involve navigating conflicting personal and professional values. These values are contextual, dynamic and often not in alignment with each other; for example, professional values of duty to care and reducing suffering in case of terminal illness through MAiD may conflict with the moral value of preserving sanctity of human life, as the later may involve forbidding any action that hastens a patient's death in the dying process.[1 2] In the context of assisted death, an HCP often has to navigate value conflicts between respect for autonomy and patient's right to self-determination versus respect for individual human life, and human life in general. Except for Switzerland, all other countries require HCPs to be at the forefront in discussing and executing eligible requests for assisted death within their defined jurisdictions.[3]

Assisted death in selected jurisdictions: overview and current status

The number of jurisdictions across the world with medically assisted death legislation continues to grow. Switzerland, Netherlands, Belgium, Luxembourg, Canada, besides jurisdictions in the USA (Oregon, Vermont, California, Washington State, Colorado, the District of Columbia, Hawaii, Maine and New Jersey) alongside the states of Victoria, Tasmania and South Australia in Australia and Columbia in South America, and most recently Spain and New Zealand, have legalised medically assisted death in some form.[3 4] Assisted death legislations in Canada, the State of Victoria in Australia and the Benelux countries include both assisted suicide and euthanasia. Jurisdictions in the USA and Switzerland allow only assisted suicide.

Broadly speaking, the 'Benelux' countries (Belgium, Netherlands and Luxembourg) have less restrictive rules in place for MAiD than the American jurisdictions that permit this practice. For example, Benelux countries allow advanced directives, and terminal of illness is not a requirement for MAiD eligibility in Belgium and Netherlands. Jurisdictions in the USA, on the other end, have strict eligibility criteria that the illness must be terminal and there must be some timeline to foreseeability of natural death—commonly 6 months in most jurisdictions.

Intact decision-making capacity translating to ability to give informed consent for MAiD, voluntariness of request and suffering from a terminal illness are the mainstay of the eligibility criteria for MAiD, with each criterion receiving variable emphasis, depending on the legislative jurisdiction. For example, 'reasonable foreseeability of natural death' criterion was removed from Canada's MAiD eligibility criteria following recent changes in the legislation.[5–8]

HCPs and MAiD: current knowledge and knowledge gaps

From an ethics perspective, among the HCPs, the physician's role in providing MAiD is perhaps the most ambiguous. Historically, medicine as a profession is rooted in the ethical principle of 'first, do no harm' while providing care. While this is true, medical futility and the sense of powerlessness and loss of control at end of life are a reality in modern medical practice, which is often reflected as physician ambivalence to participate in MAiD.[9–11]

While this sense of moral ambiguity may distance physicians from the practice of MAiD, nurses also share the complex attitudes and polarised feelings towards MAiD.[12] This complexity is often due to the dual role that nurses play in most healthcare systems around the world: on one end, they act as a strong advocate for patient's wishes, whereas on the other end, they only have a supportive role in medical decision-making process. A recent synthesis of qualitative studies describing registered nurses' experiences with MAiD from Belgium, Netherlands and Canada showed that while the nurses played a central role in providing important 'wrap-around' care for patients and family, their participation in MAiD required significant moral work.[13]

A recent scoping review exploring the challenges faced by HCPs while handling MAiD requests found lack of clear guidelines/protocols, role ambiguity, difficulties in evaluating capacity/consent, conscientious objection, lack of interprofessional collaboration and difficulties in assessing nature and severity of suffering as major barriers in developing comprehensive care models for implementation of MAiD.[14] Furthermore, the scoping review also pointed out that HCPs need substantial degree of time and emotional commitment to participate in a MAiD request. A scoping review and thematic meta-synthesis of qualitative studies exploring HCPs' attitudes towards assisted death practices in Belgium, Netherlands, Israel, Australia, Germany and the USA showed that their attitudes were shaped by a deep sense of moral responsibility and contextual care relationships.[15]

This empirical evidence provides valuable insights on experiences and attitudes of HCPs towards MAiD; however, the nature and extent of emotional impact remains unexplored. Preliminary evidence suggests that the shift away from the medicine's fundamental values of cure/control of disease to hastening death with the aim of alleviating intolerable suffering can have significant emotional effects on participating HCPs. These can range from feeling overwhelmed with a sense of powerlessness on one end, to a rewarding and a positive experience on the other.[16 17]

Objectives

To determine the emotional impact on HCPs involved in MAiD.

METHODS

Search strategy, screening and eligibility criteria

The inclusion and exclusion criteria were developed in line with the Sample, Phenomenon of Interest, Design, Evaluation, Research type.[18] In order to ensure qualitative richness of themes, we included all qualitative research studies and excluded surveys, personal anecdotes, attitudes and experiences without in-depth qualitative analysis published on this topic.

Relevant definitions

For the sake of this review, we define an HCP as a person 'lawfully entitled under the law of a province to provide health services in the place in which the services are provided by that person'.[19] This definition includes pharmacists, nurses, nurse practitioners, social workers, spiritual health practitioners, psychotherapists and clinical psychologists who are legally authorised to practise within their respective scope of practice. We included 'Assisted suicide assistant' and provider in 'Right to die' societies in Switzerland as unique MAiD care providers who contact the eligible participant and liaise with the physician and pharmacist in the conduct of MAiD.

For the sake of this review, the term 'MAiD' refers to[20]:

1. The administering by a physician or nurse practitioner of a substance to a person, at their request, that causes their death (euthanasia).
2. The prescribing or providing by a physician or nurse practitioner of a substance to a person at their request, so that they may self-administer the substance and, in doing so, cause their own death (assisted suicide).

Eligibility criteria

1. Includes worldwide published literature on the research question in English language, inclusive of all age groups; articles published up to 30 April 2021.
2. Includes all qualitative studies evaluating the emotional impact through qualitative research methodologies like grounded theory, semistructure interviews, narrative inquiry or others, and describes/mentions:
   a. 'HCPs' and 'MAiD' as defined above.
   b. The emotional impact on HCPs in terms of emotions/affective responses experienced or expressed while accessing, discussing, participating or caring for the patient who has made a valid MAiD request.
3. Excludes case studies, anecdotes or studies without a description or mention of a rigorous qualitative research methodology.

Search strategy

An iteratively developed search strategy was developed and piloted with the help of three librarians with expertise in systematic review search strategies. Considering the interdisciplinary nature of the objective, the search strategy was conducted on OVID Medline, CINAHL, EMBASE and Scopus databases. The search terms included three main domains—MAiD, HCPs and qualitative research methodology and their synonyms. Full search strategy on the four databases is available in online supplemental appendix 1.

In addition to database searches, the study team conducted a grey literature search[21] which was informed by search methods outlined by Godin *et al*,[22] using the same search terms and their synonyms. Grey literature was retrieved between 10 December 2018 and 1 March 2019, and updated on 10 August 2020, and 10 August 2021, from:

1. Databases including Google Scholar, the Canadian Electronic Library and the Canadian Institute for Health Information.
2. OpenGrey, Bielefeld Academic Search Engine and the OAIster catalogue of open access resources that includes digital thesis sources like the WorldCat.

The grey literature search strategy and results are included in online supplemental appendix 1. For the purpose of feasibility, reports from the year 2000 and beyond were retrieved. In addition, backward citation tracking was conducted by hand searching the reference lists of all included papers.

Study selection process

All identified records were imported into the reference management software, Zotero, and duplicates removed by the lead researcher (SYD). Twenty per cent of the titles and abstracts of peer-reviewed records were independently screened by two reviewers (AS and AB) based on the eligibility criteria; SYD screened the remaining 80% for eligibility and reviewed the results with AS and AB in regular team meetings. Given that a substantial portion of grey literature did not include abstracts, the grey literature screening process was initiated at the full-text phase. SYD consulted the keywords of yielded academic records if the title and abstract lacked clarity in relation to core concepts and reviewers AB and AS independently assessed any records for any discrepancy and/or uncertainty regarding their inclusion. The researchers met at the beginning, middle and end of the screening process to ensure consistency. SYD, AS and AB independently screened the full texts of the academic and grey literature, applying the same inclusion and exclusion criteria in successive team meetings to resolve any discrepancies.

Patient and public involvement

No patients were involved.

Assessment of risk of bias

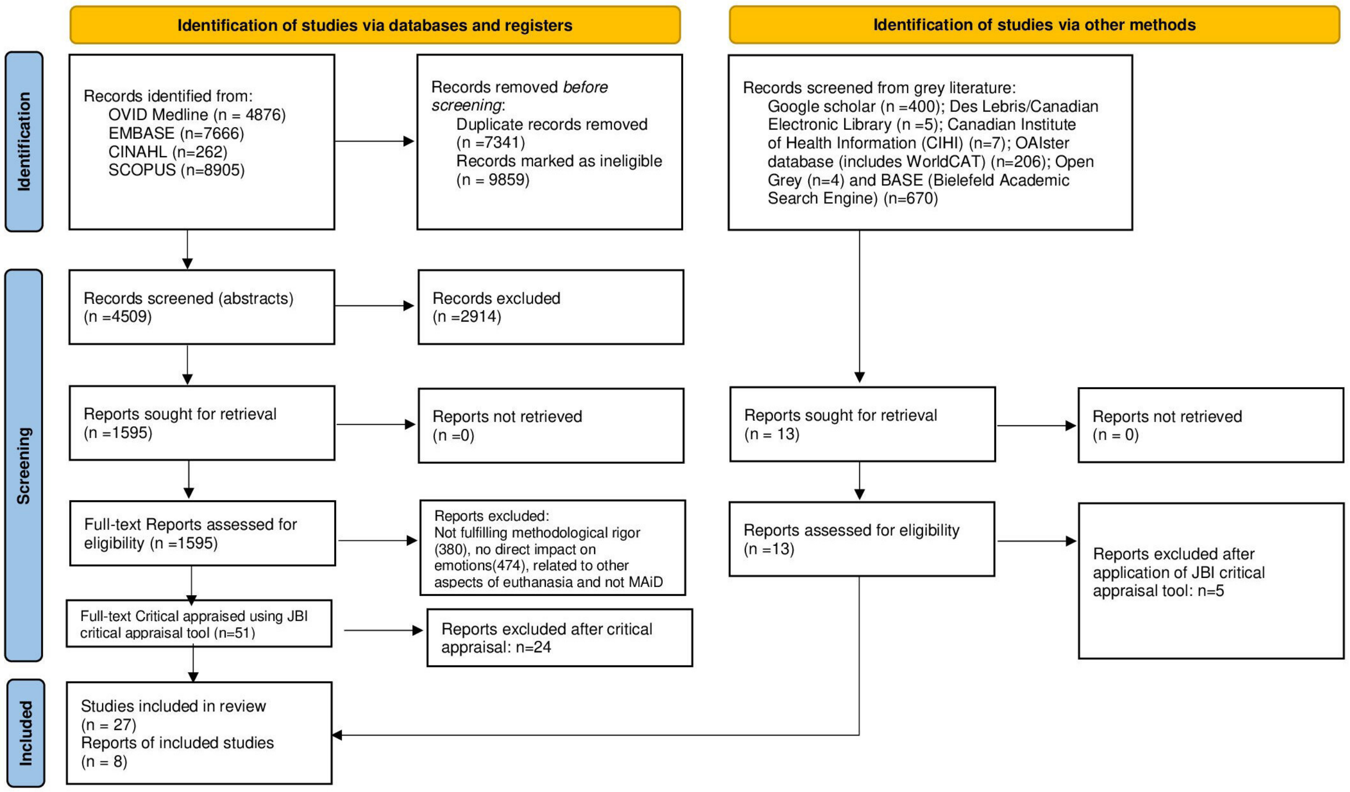
We used the Joanna Briggs Institute's critical appraisal tool for use in systematic reviews: checklist for qualitative research to critically appraise the included studies over 10 constructs. These constructs range from congruency to philosophical construct to theoretical and cultural location of the researcher.[23] The results of the assessment of risk of bias were independently reviewed by AB and AS and are presented in detail in online supplemental appendix 2.

The search results and reasons for exclusion at each stage of screening were recorded and represented in the adapted Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram in figure 1.

Data analysis

Data extraction and data analysis

We adopted a thematic synthesis approach to analyse and synthesise data. Thematic synthesis is an adaptation of thematic analysis and provides a set of established methods and techniques that help synthesise qualitative research outcomes, especially when there is heterogeneity in the outcome variables.[24] This approach is especially useful in our case since it enables us to examine the meaning, significance and social constructions around the emotional experience of an HCP involved in MAiD. SYD independently coded each line of text according to its meaning and content. Codes were listed as 'free' codes, without any hierarchical structure. AB and AS cross-checked the coded data for any discrepancy. Subsequent thematic synthesis was done by SYD, AB and AS in the following two stages:



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: http://www.prisma-statement.org/

Figure 1 PRISMA flow diagram: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram details our search and selection process applied during the review. JBI, Joanna Briggs Institute; MAiD, medical assistance in dying.

Stage 1: identifying the similarities between the codes

All relevant qualitative data from the selected studies were extracted manually from the Results, Discussion and Conclusion sections and are represented in online supplemental appendix 3, table 2. The codes were inductively grouped into descriptive themes so that patterns could be identified. The use of line-by-line coding enabled us to undertake translation of concepts from one study to another. Based on the similarities and differences of emerging codes, descriptive themes were generated, and each theme was entered as boxes and codes from each study illustrated in those boxes, so that constant comparison analysis process could be done (see online supplemental appendix 3, table 3).

Stage 2: development of analytical themes

In this last stage, the descriptive themes were further interpreted using reciprocal translation and constant comparison methods to develop analytical themes. At this stage, the meaning of the patterns of the descriptive themes was analysed against the research question so that a narrative component could be developed.

Once thematic synthesis was completed, each researcher independently evaluated the cumulative evidence from individual studies for methodological limitations, relevance, coherence and adequacy using the Confidence in the Evidence from Reviews of Qualitative Research (CERQual) approach (see table 1).[25]

All researchers met during regular research review meetings to resolve any discrepancies and achieve consensus over the assessment.

This systematic review was a part of an academic capstone project and was not registered with any international database. The review protocol is available from the research team on request.

In addition to employing the PRISMA checklist for systematic reviews, we used the Enhancing Transparency in Reporting the Synthesis of Qualitative Research checklist to improve the reporting of our meta-synthesis (see online supplemental appendix 4).

RESULTS

Characteristics of included studies

Thirty-five qualitative research studies were included in the review. The included literature was based in five countries: the USA (7), Netherlands (9), Canada (14), Belgium (1), Switzerland (3), and one study was an international study with participants from the USA and Netherlands. The data included 393 physicians, 169 nurses, 53 social workers in hospice care, 11 allied healthcare professionals (7 personal support workers, 1 pharmacist, 1

Table 1 Descriptive themes and illustrative quotes

Descriptive theme		Illustrative quotes	Country/reference
Strong, internalised and polarised emotional theme	Positive emotions	'I think when you see the patients that we see, it's very clear that you're doing an incredible service. And that's wonderful. There isn't a single moment when I see these patients that I don't think, "Oh my God, I'm so happy to be here to help you." So that's tremendously reinforcing…'	Canada/Shaw *et al*[32], p e397
	Negative emotions	'It was terribly creepy, I never went anywhere with as much lead in my shoes as that morning when I took my bag with the medication in it.' (T, male)	Netherlands/van Marwijk *et al*[27], p 611
	Moral distress	'There is just a standard that I have. I could not live with myself if I knew that I broke one of the Ten Commandments. I don't feel that I have the right to do that. I will say that there have been times when I would have liked to do that… And there have been times when I've thought about it, and maybe I got right up to the edge. But I wouldn't—I couldn't go over the line…'	USA/Schwarz[55], p 229
Reflective emotional theme		'I shy away from saying suicide or euthanasia. The act of it, however we name it, calls for the most profound respect as the consequence is that a heart stop beating, lungs stop breathing, forever. I am working and sense making as I go along, being sure that I keep breathing.'	Canada/Beuthin[41], p 1684
Professional value-driven emotional theme		'Patients have the right to make as many decisions as they are able to make for themselves, and we respect those even though they may not be the same decisions that we might make … and we will advocate for the patients … to get them whatever they want … I believe in self-determination, but I think it's (PAS) a sad commentary on our society.' (Social worker)	USA/Norton[47], p.58

HCP, healthcare provider; MAiD, medical assistance in dying.

genetic technologist and 2 psychologists) and 8 directors of sociomedical institutions and 3 sociocultural animators (applied sociologists who work alongside communities at grass roots to develop and facilitate programmes that support action for local and social changes). A detailed description of the included studies is included in online supplemental appendix 3, table 2.

Thematic synthesis

Stage 1: descriptive themes

Three descriptive emotional themes were derived from the thematic synthesis:

Dimension 1: Strong, internalised and polarised emotions (*studies referenced 26–36*). These included three subordinate categories/genres:

- Positive emotions of 'reward', 'relief', 'active openness' and 'overwhelming but uplifting' feelings.
- Negative emotions of 'powerlessness', 'guilt', 'emotional exhaustion', 'vicarious suffering' and fear of a slippery slope and losing control.
- Individual conscience-based emotions of 'moral shudder' and moral distress. This emotional dimension was strongly embedded in the cultural and political milieus and the interpersonal communication strategies used by the HCPs.

Dimension 2: Reflective, discourse-based emotions (*studies referenced 26 30 36–46*)

These included emotions of 'growing with the patient's experience', MAiD as a 'sense-making process', 'de-tabooing the philosophical meaning of death through MAiD' and various degrees of 'dynamic conflict' secondary to a reflective sense of insecurity. These emotions were descriptively laid on a platform of 'interpretative therapeutic engagement', where they seemed to aid in the larger philosophical and societal discourse around MAiD.[46]

Dimension 3: Emotions that resonate with professional values (*studies referenced 28 30 34 39 47–61*)

These included emotions that resonated with professional values like 'competency and perfection', 'intimate care', '*colloque singulier*' (singular language of trust and conscience in context of therapeutic relationship) and various degrees of commitment ranging from 'contractual' to 'sacrificial'.

Table 1 illustrates some of the quotes demonstrating the descriptive emotional themes.

Stage 2: analytical themes

Analytical themes in thematic synthesis typically 'go beyond' the findings of the primary studies and generate additional concepts, understandings or hypothesis. At this stage, we used the descriptive themes to answer the review question as to how and why did the HCPs participating in MAiD experience such complex emotions. Each reviewer, initially independent and then as a group, inferred the factors that likely influence the experience of the descriptive themes by questioning how HCPs participating in MAiD represent themselves, or their emotions in the context of their larger healthcare environment. This process was repeated until the new themes were sufficiently abstract to explain all our initial descriptive themes. Altogether, this process resulted in generation of two analytical themes:

1. Legislative emphasis on terminal illness as a necessary inclusion criterion for MAiD influences the emotional impact. In jurisdictions that legislate MAiD with the

central aim to alleviate intolerable suffering in context of terminally ill medical conditions (eg, the USA), the HCPs experience strong polarised emotions that are modulated by their individual cultural/religious background. The extent of emotional impact ranges from positive emotions of reward/relief on one end, to negative (burden, emotional exhaustion) and conscientious-based moral distress on the other. This is in sharp contrast to the emotional impact on HCPs in jurisdictions that legislate MAiD with an emphasis on alleviating intolerable suffering without terminal illness being a necessary requirement (eg, Benelux countries, Switzerland and, more recently, Canada). The HCPs in these jurisdictions experience the emotional impact of MAiD as a 'sense-making' process—this allows them to reflect on the emotional dissonance between basic emotions and emotions that conform to legislative rules.

2. Values associated with the HCPs' profession and their degree of engagement in the MAiD process are strong influential factors that shape the emotional impact of MAiD. For example, because of their everyday involvement with patients and emphasis on professional values of helping others, compassion and patient advocacy, the emotional impact on nurses involved in MAiD (studies referenced 28 30 34–36 39 41 42 45 53 55 57 60 61) demonstrated strong and polarised positive as well as negative emotions. As one nursing participant noted:

> … it's the hardest nursing. I've worked [in the emergency department], I've worked medicine floor, this is the hardest nursing there is, having somebody pass away, you actually feel something pulled out of you when that person passes. There's something missing. … If you take care of somebody for an extended time and they pass away, you just feel, I just feel coldness, or whatever. You just feel drained….[36] (p 57)

Appraising the quality of evidence: the Grading of Recommendations Assessment, Development and Evaluation CERQual approach

Evidence from qualitative evidence syntheses is increasingly incorporated into decision-making processes and the Grading of Recommendations Assessment, Development and Evaluation (GRADE) CERQual approach allows the user to make a transparent assessment of how much confidence decision-makers and other users can place in individual review findings from syntheses of qualitative evidence. In order to ascertain the degree of confidence, we graded the evidence in terms of adequacy, relevance, coherence as well as methodological limitations using the GRADE CERQual approach.[25] Table 2 illustrates a summary of the findings and the GRADE CERQual profile.

DISCUSSION

Difference in MAiD legislation in Benelux and non-Benelux countries: key features

The substantive and procedural requirements for MAiD across global jurisdictions rest on three main pillars: patients' right for self-determination expressed through voluntariness of request and a valid informed consent process, foreseeability of natural death due to terminal medical illness and subjective nature of individual suffering.[62 63] The key difference between the legislations for MAiD in Benelux countries and countries like the USA is the differential emphasis on eminent or foreseeability of death. The MAiD legislations in Belgium, Netherlands, Switzerland and, more recently, Canada have a more permissive legal framework that allows people to access MAiD as a service to end their intolerable suffering that has no prospect of improvement but is not necessarily terminal.

MAiD legislation and its shaping effect on the emotions of the involved HCP

An important take-home message from this evidence synthesis is how legislations have a shaping effect on emotional responses. The HCPs who practise in the Benelux countries and Switzerland seem to experience more reflective emotions over strong polarising emotions expressed by HCPs who practise in non-Benelux countries like the USA. Canada seems to have a unique transitional position—with the emphasis of the legislation going the Benelux countries' way, the HCPs' emotional experiences show a mixture of emotions driven by their professional values as well as the ongoing societal discourse on MAiD. This observation conforms to Michel Foucault's position on how law acts as an element in the expansion of power(s)[64]; legislatures along with other platforms of knowledge expression modulate every fibre of human society. Our thematic synthesis points out that the law that limits application of MAiD to terminal illnesses provides for a broader range of emotional expression. Thus, legislation on MAiD across the globe provides the HCP with a locus of administrative control which then decides how the emotional discourse around MAiD is shaped; the question is—*how* do we want the *emotional discourse* around MAiD to be shaped?

MAiD legislation, societal values and emotional impact on the involved HCP: a complex relationship

On one end, attitudes of physicians towards MAiD have shown reflective trends to legislative standards; countries like Belgium and Netherlands find much stronger physician support than their USA counterparts.[65] On the other end, public support towards MAiD has been reflective of the prevailing societal cultural and religious practices; central and eastern European countries have shown a decline in support with corresponding increase in religiosity as opposed to western European countries.[66 67] While an assisted-death legislation with its rules and safeguards provides an obligatory 'top-down' framework to embed

Table 2 Grading of Recommendations Assessment, Development and Evaluation (GRADE) Confidence in the Evidence from Reviews of Qualitative Research (CERQual) evidence profile

Summary finding	Studies contributing substantially to the summary theme (studies numbered as per online supplemental appendix 3, table 2)	Methodological limitations	Coherence	Adequacy	Relevance	CERQual GRADE evidence	Explanation of CERQual assessment
HCPs experienced strong, internalised, often polarised and deeply personal basic emotions that were modulated by the HCP's cultural and/or religious background. Level embedded: cultural/religious	1, 2, 3, 5, 13, 18, 19, 21, 24, 26, 28	Minor methodological limitations concerning location of the researcher theoretically/culturally, and influence of the researcher on the research and vice versa.	Moderate concerns regarding coherence.	Minor concerns regarding adequacy.	No or very minor concerns regarding relevance.	High	Variability in experiences of participants posed a challenge with respect to coherence; however, this also added to the richness of results. Hence, we have graded the confidence in quality of findings as high.
Influenced by the sociopolitical environment as well as the social discourse on suffering and death, HCPs' shared emotions of personal growth/sense-making and relational experiences of deeper compassion and sympathy. HCPs also experienced emotional dissonance over personal emotions and emotions expressed to conform to legislative rules. Level embedded: Sociopolitical	2, 5, 6, 8, 11, 14, 23, 25, 28, 30, 32, 34	Moderate/minor methodological limitations concerning location of the researcher theoretically/culturally, and influence of the researcher on the research and vice versa.	No or very minor concerns regarding coherence.	No or very minor concerns regarding adequacy.	No or very minor concerns regarding relevance.	High	Paper 6 did not approach the ethics committee and hence does not have ethics committee approval. Apart from this study, all studies in this group contributed to the summary findings in terms of coherence, adequacy and relevance. Hence, we have graded the confidence in the quality of the findings to be high.
HCPs expressed emotions aligned with their individual professional values and belief systems and, most of the time, attempted to align their values associated with the MAiD ideology; at other times, legislation of respective jurisdictions helped shape emotional experiences. Level embedded: Professional/legal	3, 4, 5, 7, 9, 10, 12,15, 16, 17, 20, 22, 24, 27, 29, 31, 33, 35	Moderate methodological limitations concerning location of the researcher theoretically/culturally, and influence of the researcher on the research and vice versa. Also, selection of participants. Paper 16, one single hospital.	Minor concerns regarding coherence.	No or very minor concerns regarding adequacy.	No or very minor concerns regarding relevance.	Moderate	Most of the studies in this group had methodological problems of selection bias and lack of generalisability. For example, paper 16 selected participants from a single hospital-based setting. The findings are limited in terms of generalisability to similar groups in different settings. Hence, we have graded down our confidence in the quality of findings to moderate.

MAiD within healthcare, it does not necessary reflect the integration of MAiD within the value-based relationships that have traditionally defined an individual's healthcare.[68] Hence, although a MAiD legislation to integrate MAiD into healthcare is a likely reflection of a consensus position of a society, it does challenge the moral environments within which HCPs practise medicine, thereby influencing the emotional impact on HCP. HCPs' subsequent attempt to align themselves with their own professional values, legislative standards and public perceptions can lead to intense emotional responses, both within their internal, personal and external professional spaces.

Emotional discourse among HCPs involved in MAiD: HCP role and ethics of care

The right to choose when and how to die has always been a contentious issue across various societies.[69–71] Public discourse on MAiD is shaped through societal emphasis on individual as well as contextual factors associated with assisted death—these often range from religious beliefs regarding sanctity of human life and personal meaning of death to loss of autonomy associated with illness-related intolerable suffering. With advancing medical technologies, the potential to prolong life has increased significantly,[72 73] and the HCPs assume a central position to shape the discourse around assisted death.

In countries where MAiD is legalised but is restricted to terminal illnesses with imminent chance of death, the position of an HCP continues to be one that of a provider of 'Care'. Here, the moral dimension of 'Care' continues to be defined as 'everything we do to maintain, continue or repair our world so that we can live in it as well as possible'.[74] The value of care in healthcare systems has been traditionally associated with attentiveness, responsibility, nurturance, compassion and meeting others' needs.[75] While emotional responses to legal requests of hastening death are affected by policies, professional identity, commitment to patient autonomy, personal values and beliefs, the patient–clinician relationship and will vary on a case-by-case basis,[76] this systematic review raises an important question—how does legalising MAiD with emphasis on alleviating intolerable suffering without the context of a terminal illness change the moral dimensions of care?

CONCLUSION

HCPs involved in MAiD experience a myriad of emotions that include positive/negative emotions; reflective, 'sense-making' emotions; and/or professional value-driven emotions. Emphasis on terminal illness only as an essential criterion, MAiD practitioner's individual professional values and their degree of engagement influence this rich and diverse emotional discourse.

Limitations of the review

This review is limited by its focus of emotional impact on HCPs only and the obvious selection bias in the included studies—those who could and volunteered to express their emotions are represented in the review. The review is also limited with absence of subgroup analysis with respect to HCPs' age, years of experience and the influence of gender on the results. Restriction to English language studies likely carries a high risk of publication bias.

There are several gaps in our understanding of the emotional impact on HCPs involved in MAiD that would benefit from further research. Intolerable suffering is a common eligibility requirement for assisted death, although HCPs often struggle to understand and assess the nature and normative function of suffering. Is it the very nature of the emotional tone of suffering which is overwhelming or is it more to do with what lies underneath that makes suffering 'intolerable'? Is there room for humanistic narratives around meaning behind and endurance of one's suffering? Such questions confront MAiD practitioners and an in-depth exploration of this nebulous concept of intolerable suffering in context of assisted death may help HCPs navigate their emotional experience while providing MAiD.

Twitter Saumil Yogendra Dholakia @saumil1980 and Alexander Simpson @DrSandySimpson

Acknowledgements The authors acknowledge the valuable contribution of Erica Lenton, Heather Cunningham (library services, Gerstein Library, University of Toronto) and Fiona Inglis (library services, Centre for Addiction and Mental Health, University of Toronto) to consultations and assistance with devising the search strategy.

Contributors Study conception and design: SYD, AB, AS. Development of eligibility criteria: SYD, AB, AS. Search strategy developed by Erica Lenton, Heather Cunningham (library services, Gerstein Library, University of Toronto) and Fiona Inglis (library services, Centre for Addiction and Mental Health, University of Toronto) in close consultation with Dr Saumil Dholakia and reviewed by AB and AS. Study selection and data extraction process by Dr Saumil Dholakia and independently reviewed by AB and AS. SYD performed the assessment of risk of bias, which was independently reviewed by AB and AS. Guarantor: SYD. All three authors were involved equally in performing the qualitative meta-synthesis and CERQual assessment. Draft manuscript preparation: SYD with multiple reviews, feedback and edits in form as well as content by AB and AS. All authors reviewed the results and approved the final version of the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This is a systematic review and meta-synthesis of already published and accessible research data and does not require ethics committee or institutional board approval.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as supplementary information. Data set 'Codes and themes-qualitative analysis_MAiD_HCP_emotional impact' submitted and published at ZENODO and is available at DOI: 10.5281/zenodo.6778236. No unpublished data.

ORCID iD

Saumil Yogendra Dholakia http://orcid.org/0000-0003-2445-1466

REFERENCES

1. Simpson AIF. Medical assistance in dying and mental health: a legal, ethical, and clinical analysis. *Can J Psychiatry* 2018;63:80–4.
2. Incardona N, Bean S, Reel K. *An ethics-based analysis and recommendations for implementing physician assisted dying in Canada*. Toronto: Joint Centre for Bioethics, University of Toronto, 2016. http://jcb.utoronto.ca/news/documents/JCB-PAD-Discussion-Paper-2016.pdf
3. Nicol J. *Medical assistance in dying. the law in selected Jurisdictions outside Canada*. Ottawa, ON, CA: Library of Parliament Research Publications, 2020. https://www.deslibris.ca/ID/10103256
4. Rada AG. Spain will become the sixth country worldwide to allow euthanasia and assisted suicide. *BMJ* 2021;372:n147.
5. Parliament of Canada. C-14 (42-1) - Royal Assent - An Act to amend the Criminal Code and to make related amendments to other Acts (medical assistance in dying) -, 2016. Available: http://www.parl.ca/DocumentViewer/en/42-1/bill/C-14/royal-assent [Accessed 23 Jan 2021].
6. Health Canada. *First annual report on medical assistance in dying, 2019*. Ottawa, 2020. https://www.canada.ca/en/health-canada/services/medical-assistance-dying-annual-report-2019.html
7. Department of Justice. Proposed changes to Canada's medical assistance in dying legislation. Available: https://www.justice.gc.ca/eng/csj-sjc/pl/ad-am/index.html
8. Health Canada. *Second annual report on medical assistance in dying in Canada 2020*. Ottawa, 2021. https://www.canada.ca/en/health-canada/services/medical-assistance-dying/annual-report-2020.html
9. Hurley R. A doctor who chose an assisted death. *BMJ* 2015;351:h4385.
10. Varelius J. Voluntary euthanasia, physician-assisted suicide, and the goals of medicine. *J Med Philos* 2006;31:121–37.
11. Eggertson L. Most palliative physicians want no role in assisted death. *CMAJ* 2015;187:E177.
12. Berghs M, Dierckx de Casterlé B, Gastmans C. The complexity of nurses' attitudes toward euthanasia: a review of the literature. *J Med Ethics* 2005;31:441–6.
13. Pesut B, Thorne S, Greig M, *et al*. Ethical, Policy, and Practice Implications of Nurses' Experiences With Assisted Death. *Adv Nurs Sci* 2019;42:216–30.
14. Fujioka JK, Mirza RM, McDonald PL, *et al*. Implementation of medical assistance in dying: a scoping review of health care providers' perspectives. *J Pain Symptom Manage* 2018;55:1564–76.
15. Brooks L. Health care provider experiences of and perspectives on medical assistance in dying: a scoping review of qualitative studies. *Can J Aging* 2019;38:1–13.
16. Stevens KR. Emotional and psychological effects of physician-assisted suicide and euthanasia on participating physicians. *Linacre Q* 2006;73:203–16.
17. Haverkate I, van der Heide A, Onwuteaka-Philipsen BD, *et al*. The emotional impact on physicians of hastening the death of a patient. *Med J Aust* 2001;175:519–22.
18. Cooke A, Smith D, Booth A. Beyond PICO: the spider tool for qualitative evidence synthesis. *Qual Health Res* 2012;22:1435–43.
19. Government of Canada. Canada health act (R.S.C.,1985, C. C-6). justice law website, 2017. Available: https://laws-lois.justice.gc.ca/eng/acts/c-6/page-1.html
20. Government of Ontario Ministry of Health and Ministry of Long Term Care Medical Assistance in Dying [Internet]. Available: http://health.gov.on.ca/en/pro/programs/maid/#maid [Accessed 06 Aug 2019].
21. Paez A. Gray literature: an important resource in systematic reviews. *J Evid Based Med* 2017;10:233–40.
22. Godin K, Stapleton J, Kirkpatrick SI, *et al*. Applying systematic review search methods to the grey literature: a case study examining guidelines for school-based breakfast programs in Canada. *Syst Rev* 2015;4:138.
23. Joanna Briggs Critical Appraisal Tools. Critical appraisal checklist for qualitative research, 2017. Available: https://joannabriggs.org/critical-appraisal-tools
24. Lockwood C, Munn Z, Porritt K. Qualitative research synthesis: methodological guidance for systematic reviewers utilizing meta-aggregation. *Int J Evid Based Healthc* 2015;13:179–87.
25. Lewin S, Booth A, Glenton C, *et al*. Applying GRADE-CERQual to qualitative evidence synthesis findings: introduction to the series. *Implement Sci* 2018;13:2.
26. Voorhees JR, Rietjens JAC, van der Heide A, *et al*. Discussing physician-assisted dying: physicians' experiences in the United States and the Netherlands. *Gerontologist* 2014;54:808–17.
27. van Marwijk H, Haverkate I, van Royen P, *et al*. Impact of euthanasia on primary care physicians in the Netherlands. *Palliat Med* 2007;21:609–14.
28. Denier Y, Dierckx de Casterlé B, De Bal N, *et al*. "It's intense, you know." Nurses' experiences in caring for patients requesting euthanasia. *Med Health Care Philos* 2010;13:41–8.
29. Georges J-J, The AM, Onwuteaka-Philipsen BD, *et al*. Dealing with requests for euthanasia: a qualitative study investigating the experience of general practitioners. *J Med Ethics* 2008;34:150–5.
30. Castelli Dransart DA, Scozzari E, Voélin S. Stances on assisted suicide by health and social care professionals working with older persons in Switzerland. *Ethics Behav* 2017;27:599–614.
31. Otte IC, Jung C, Elger B, *et al*. "We need to talk!" Barriers to GPs' communication about the option of physician-assisted suicide and their ethical implications: results from a qualitative study. *Med Health Care Philos* 2017;20:249–56.
32. Shaw J, Wiebe E, Nuhn A, *et al*. Providing medical assistance in dying: practice perspectives. *Can Fam Physician* 2018;64:e394–9.
33. Bouthillier M-E, Opatrny L. A qualitative study of physicians' conscientious objections to medical aid in dying. *Palliat Med* 2019;33:1212–20.
34. Bruce A, Beuthin R. Medically Assisted Dying in Canada: "Beautiful Death" Is Transforming Nurses' Experiences of Suffering. *Can J Nurs Res* 2020;52:844562119856234.
35. Buchbinder M, Brassfield ER, Mishra M. Health care providers' experiences with implementing medical Aid-in-Dying in Vermont: a qualitative study. *J Gen Intern Med* 2019;34:636–41.
36. Sheridan L. "When Patients Ask to Die: The Role of Nurses in Medical Assistance in Dying" (2017). Electronic Thesis and Dissertation Repository. Available: https://ir.lib.uwo.ca/etd/5041
37. Snijdewind MC, van Tol DG, Onwuteaka-Philipsen BD, *et al*. Complexities in euthanasia or physician-assisted suicide as perceived by Dutch physicians and patients' relatives. *J Pain Symptom Manage* 2014;48:1125–34.
38. van Tol DG, Rietjens JAC, van der Heide A. Empathy and the application of the 'unbearable suffering' criterion in Dutch euthanasia practice. *Health Policy* 2012;105:296–302.
39. Beuthin R, Bruce A, Scaia M. Medical assistance in dying (MAID): Canadian nurses' experiences. *Nurs Forum* 2018;53:511–20.
40. Dees MK, Vernooij-Dassen MJ, Dekkers WJ, *et al*. Perspectives of decision-making in requests for euthanasia: a qualitative research among patients, relatives and treating physicians in the Netherlands. *Palliat Med* 2013;27:27–37.
41. Beuthin R. Cultivating compassion: the practice experience of a medical assistance in dying coordinator in Canada. *Qual Health Res* 2018;28:1679–91.
42. Townsley AA. *Putting a Bow on Death and Dying-Health Care Professionals' Experiences with Medical Assistance in Dying (MAiD): A Foucauldian Discourse Analysis with Agambian Insights. [Practice Based Research Paper on the Internet*. York University School of Social Work, 2018. https://yorkspace.library.yorku.ca/xmlui/bitstream/handle/10315/35613/Alison_Townsley_PRP_2018.pdf?sequence=1
43. Beuthin R, Bruce A, Hopwood M-C, *et al*. Rediscovering the art of medicine, rewards, and risks: physicians' experience of providing medical assistance in dying in Canada. *SAGE Open Med* 2020;8:2050312120913452.
44. Snijdewind MC, van Tol DG, Onwuteaka-Philipsen BD, *et al*. Developments in the practice of physician-assisted dying: perceptions of physicians who had experience with complex cases. *J Med Ethics* 2018;44:292–6.
45. Volker DL. Oncology nurses' experiences with requests for assisted dying from terminally ill patients with cancer. *Oncol Nurs Forum* 2001;28:39–49.
46. Wright DK, Chirchikova M, Daniel V, *et al*. Engaging with patients who desire death: interpretation, presence, and constraint. *Can Oncol Nurs J* 2017;27:56–64.

47 Norton EM, Miller PJ. What their terms of living and dying might be: hospice social workers discuss Oregon's death with dignity act. *J Soc Work End Life Palliat Care* 2012;8:249–64.
48 Ten Cate K, van Tol DG, van de Vathorst S. Considerations on requests for euthanasia or assisted suicide; a qualitative study with Dutch general practitioners. *Fam Pract* 2017;34:723–9.
49 Melchor F, Lorraine V. "HOSPICE SOCIAL WORKERS' ATTITUDE ON PHYSICIAN-ASSISTED SUICIDE AND PRACTICE UNDER CALIFORNIA'S END OF LIFE OPTION ACT" (2018). Electronic Theses, Projects, and Disser tations. 632. Available: https://scholarworks.lib.csusb.edu/etd/632
50 Miller PJ, Mesler MA, Eggman ST. Take some time to look inside their hearts: hospice social workers contemplate physician assisted suicide. *Soc Work Health Care* 2002;35:53–64.
51 Bolt EE, Flens EQ, Pasman HRW, *et al*. Physician-Assisted dying for children is conceivable for most Dutch paediatricians, irrespective of the patient's age or competence to decide. *Acta Paediatr* 2017;106:668–75.
52 Harvath TA, Miller LL, Smith KA, *et al*. Dilemmas encountered by hospice workers when patients wish to hasten death. *Journal of Hospice & Palliative Nursing* 2006;8:200–9.
53 van de Scheur A, van der Arend A. The role of nurses in euthanasia: a Dutch study. *Nurs Ethics* 1998;5:497–508.
54 Bélanger E, Towers A, Wright DK, *et al*. Of dilemmas and tensions: a qualitative study of palliative care physicians' positions regarding voluntary active euthanasia in Quebec, Canada. *J Med Ethics* 2019;45:48–53.
55 Schwarz JK. Responding to persistent requests for assistance in dying: a phenomenological inquiry. *Int J Palliat Nurs* 2004;10:225–35. discussion 235.
56 Gamondi C, Borasio GD, Oliver P, *et al*. Responses to assisted suicide requests: an interview study with Swiss palliative care physicians. *BMJ Support Palliat Care* 2019;9:e7.
57 Oliphant A. *"If Not Me, Then Who?" The Narratives of Medical Aid in Dying (MAiD) Providers and Supporters Around Their Professional Identity and Role in MAiD [Thesis on the Internet*. MacMaster University, 2017. http://hdl.handle.net/11375/22146
58 Khoshnood N, Hopwood M-C, Lokuge B, *et al*. Exploring Canadian physicians' experiences providing medical assistance in dying: a qualitative study. *J Pain Symptom Manage* 2018;56:222–9.
59 Durant K-L, Kortes-Miller K. Physician snapshot: the forming landscape of MAID in northwestern Ontario. *Palliat Care Soc Pract* 2020;14:2632352420932927.
60 Pesut B, Thorne S, Schiller CJ, *et al*. The ROCKs and hard places of MAID: a qualitative study of nursing practice in the context of legislated assisted death. *BMC Nurs* 2020;19:12.
61 Mathews JJ, Hausner D, Avery J, *et al*. Impact of medical assistance in dying on palliative care: a qualitative study. *Palliat Med* 2021;35:447–54.
62 Shariff MJ. Assisted death and the slippery slope-finding clarity amid advocacy, convergence, and complexity. *Curr Oncol* 2012;19:143–54.
63 The Council of Canadian Acadamies. *State of Knowledge on Medical Assistance in Dying for Mature Minors, Advance Requests, and Where a Mental Disorder Is the Sole Underlying Medical Condition: Summary of Reports. [Internet*. Ottawa, Canada, 2018. https://cca-reports.ca/reports/medical-assistance-in-dying/
64 Turkel G. Michel Foucault: law, power, and knowledge. *J Law Soc* 1990;17:170–93.
65 Emanuel EJ, Onwuteaka-Philipsen BD, Urwin JW, *et al*. Attitudes and practices of euthanasia and physician-assisted suicide in the United States, Canada, and Europe. *JAMA* 2016;316:79–90.
66 Cohen J, Van Landeghem P, Carpentier N, *et al*. Different trends in euthanasia acceptance across Europe. A study of 13 Western and 10 central and eastern European countries, 1981-2008. *Eur J Public Health* 2013;23:378–80.
67 Cohen J, Van Landeghem P, Carpentier N, *et al*. Public acceptance of euthanasia in Europe: a survey study in 47 countries. *Int J Public Health* 2014;59:143–56.
68 Schiller CJ, Pesut B, Roussel J, *et al*. But it's legal, isn't it? Law and ethics in nursing practice related to medical assistance in dying. *Nurs Philos* 2019;20:e12277.
69 Gómez-Vírseda C, Keown: J. Euthanasia, ethics and public policy: an argument against legalisation. In: *Theor Med Bioeth*. . 2nd edition, 2020: 41. 61–6.
70 Shimoda M. "Death with dignity" in the Japanese context. *J Int Bioethique* 2005;16:125–34.
71 Street AF, Kissane DW. Discourses of the body in euthanasia: symptomatic, dependent, shameful and temporal. *Nurs Inq* 2001;8:162–72.
72 Tang PK. The future of medicine: a 30-year perspective. *Lancet Respir Med* 2017;5:855–6.
73 The Lancet Respiratory Medicine. Prolonging life at all costs: quantity versus quality. *Lancet Respir Med* 2016;4:165.
74 Tronto J. Care as the Work of Citizens: A Modest Proposal. In: Friedman M, ed. *Women and citizenship*. Oup Usa, 2005: 130–45.
75 Tronto JC. *Moral boundaries: a political argument for an ethic of care*. New York: Routledge, 1993.
76 Patel T, Christy K, Grierson L, *et al*. Clinician responses to legal requests for hastened death: a systematic review and meta-synthesis of qualitative research. *BMJ Support Palliat Care* 2021;11:59–67.