SMER
SOCIETY OF MEDICAL EDUCATION & RESEARCH
Society of Medical Education & Research

2023, Volume 3, Page No: 299-309
ISSN: 3108-5059

Asian Journal of Ethics in Health and Medicine

Perceptions of Assisted Dying Among Scottish Medical Students: Insights from a National Survey

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Abstract

The controversy around legalizing assisted dying remains highly intricate and involves many different layers, provoking passionate and contrasting views from everyone concerned. Recently, the Scottish Parliament held an early vote on this topic and decided to move forward with the proposed law. Capturing the opinions of medical students – who will soon become practicing doctors – is vital when assessing fresh medico-legal proposals related to assisted dying in Scotland. The purpose of this study was to investigate and evaluate medical students' attitudes towards assisted dying in Scotland, as well as the detailed elements of the proposed Scottish legislation. An online questionnaire was sent to students enrolled at all Scottish medical schools from October 2023 to January 2024. Respondents were asked to complete closed-ended quantitative questions that measured their specific views on the proposed legislation. These were followed by optional open-text boxes where participants could explain their choices in their own words. The open-text comments were later examined through thematic analysis. 295 students participated in the survey. Most respondents supported the legalization of assisted dying in Scotland (72.4%). However, only 48.5% agreed that assisted dying should be introduced into Scottish law exactly as outlined in the current bill. Furthermore, 23.4% of respondents said they would exercise conscientious objection and refuse to take part in the process. A large number of participants (n = 135) expressed concerns that the proposed safeguards were either unsuitable or insufficient. The ethical principle most commonly referenced was autonomy, with non-maleficence coming a close second. Although the majority of respondents favored assisted dying in principle, a noticeably smaller group supported implementing the bill in its current form. This difference stemmed mainly from varying assessments of whether the proposed safeguards were adequate. Many students based their opinions on knowledge gained from earlier medical training and direct healthcare experience. Other responses echoed the general views held by the wider public on end-of-life issues and assisted dying. While most medical students in the study support legalizing assisted dying in Scotland, important reservations remain about the exact wording and protections in the proposed legislation. This underlines the deeply complex and ethically demanding nature of the topic. Policymakers and key stakeholders should make a concerted effort to include medical students – as the doctors of tomorrow – in ongoing discussions to better inform future legislation and related research.

Keywords: Ethics, Medical, Bioethics, Personal autonomy, Suicide, Assisted

Introduction

Assisted dying is the practice in which physicians provide terminally ill adults who retain full mental capacity with prescriptions for medications that patients themselves take to end their lives, but only after all specified legal protections are met [1]. Over the last several years, the rollout of fresh laws in different nations has elevated assisted dying to a prominent position in public discourse, frequently stirring up heated and sharply divided reactions [2].

Conversations about assisted dying prove highly layered, drawing together issues from healthcare regulations, moral standards in medicine, and spiritual convictions [2-

Access this article online https://smerpub.com/

Received: 14 April 2023; **Accepted:** 15 August 2023

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How to cite this article: Geddes D, Knox J, Obree D, Harden J. Perceptions of Assisted Dying Among Scottish Medical Students: Insights from a National Survey. Asian J Ethics Health Med. 2023;3:299-309. https://doi.org/10.51847/A6Mjlbv3qH

4]. Backers of making it lawful tend to stress two connected concepts: the right of individuals to direct their own lives and the need to ease extreme distress. They maintain that adults of sound mind who face a fatal condition deserve the freedom to choose both the moment and the manner of their death, seeing this as a vital demonstration of personal independence. Supporters explain that lawful assisted dying delivers more than mere pain relief; it grants people confronting persistent disease and overwhelming discomfort the power to reach a truly self-directed decision. Supporters note that superior palliative support, though valuable, cannot always eliminate every trace of torment for certain patients, so assisted dying must stay open as one possible path forward.

Those who resist legal changes, however, caution that such measures risk producing multiple negative outcomes. These include reducing society's regard for the value of life itself, undermining faith in doctors and nurses, and exposing vulnerable populations to additional threats. The idea of life's inherent sacredness often surfaces in these critiques, as both non-religious and faith-oriented voices argue that purposefully causing death crosses a basic ethical boundary [5]. A further frequent objection centers on the risk of a "slippery slope," in which initially tight rules gradually expand to cover far broader situations than originally intended [6]. Significant unease also exists about how any new rules might unfairly influence groups already at risk, such as lower-income individuals, people with physical or cognitive impairments, and anyone unable to decide matters independently [5].

Scotland's ongoing discussions about end-of-life choices have kept pace with developments worldwide. Nations including Australia, Belgium, Canada, and the Netherlands have taken leading roles in reshaping their statutes [7, 8]. During March 2024, lawmakers in Scotland put forward a fresh proposal to allow assisted dying for adults with terminal conditions. This followed two earlier failed bids in 2010 and 2013 [9]. The wording used to describe assisted dying in the Scottish measure lines up closely with wording found in comparable laws elsewhere, notably the English "Terminally Ill Adults (End of Life) Bill" [10]. Common requirements across these systems include confirming a terminal diagnosis and ensuring the person can still think clearly and make their own decisions. A concise overview of the key features of the Scottish measure is provided in **Table 1**.

Table 1. A summary of the key aspects of the proposed "Assisted Dying for Terminally Ill Adults (Scotland)' Bill. From: Exploring perspectives of Scottish medical students on the proposed 'Assisted Dying for Terminally Ill Adults (Scotland)' Bill

Category	Paraphrased description
1. Eligibility requirements	The proposed law stipulates that an individual must be a resident of Scotland, at least 16 years old, diagnosed with a terminal condition, and possess the capacity to make informed decisions.
2. Request and evaluation procedure	The legislation mandates two formal declarations from the patient, along with confirmation from two independent physicians that all eligibility conditions and protective measures have been met.
3. Core safeguards	The bill establishes a 14-day reflection period, guarantees the individual's right to withdraw at any stage, and classifies coercion as a criminal offense.
4. Mode of assistance	The legislation restricts assistance to the self-administration of an authorized substance, supplied by a healthcare professional who must be present during the process.
5. Conscientious objection	The bill explicitly permits any individual to decline to participate, thereby eliminating any legal or professional obligation to participate.

Students working toward medical qualifications (MBChB or equivalent) in Scotland are actively preparing to join the ranks of licensed physicians. Should the law ultimately pass, these future doctors would occupy central positions in carrying out assisted dying procedures. Their outlooks, therefore, matter greatly whenever new rules blending medicine and law come under review. Major medical associations, among them BMA Scotland and the Royal College of Physicians of Edinburgh, have already received requests for feedback on the draft law. Yet Scottish lawmakers have so far made no structured outreach to groups that speak for medical students as part of the formal process of creating the statute.

The present work aims to close that void. It represents the initial effort to document the thinking of medical students from all five Scottish universities that run MBChB or similar courses. The research looks at how these students feel about assisted dying in general, along with how they respond to the precise details written into the latest

version of the bill. By gathering collective insights from those who will soon practice medicine, the study also offers practical guidance for those drafting laws and those working on the clinical front lines.

Materials and Methods

Survey design

Researchers built an internet-based questionnaire on the Jisc OnlineSurveys V2.0 platform. The instrument blended fixed-response items with space for participants to type their own reasoning for each answer. Beyond gathering straightforward background details, the questions probed students' thinking about assisted dying overall and about targeted parts of the proposed "Assisted Dying for Terminally Ill Adults (Scotland) Bill" – from this point onward called simply the "proposed bill" **(Table 2).** Subject areas included broad feelings toward assisted dying, opinions on whether the bill should become law in its current form, willingness to claim conscientious objection, judgments about the robustness of planned protections, and expectations regarding the effects on people in vulnerable positions. Whenever a question called for knowledge of the Scottish rules, the survey supplied the needed background directly.

Table 2. The questions included in the survey. From: Exploring perspectives of Scottish medical students on the proposed 'Assisted Dying for Terminally Ill Adults (Scotland)' Bill

No.	Paraphrased survey question
1	What is your position on permitting assisted dying as a lawful option for adults with terminal illness in Scotland?
2	Do you believe the 'Assisted Dying for Terminally Ill Adults (Scotland) Bill' should be enacted in its current form?
3	If the bill were enacted into law, would you, as a future healthcare professional, choose to exercise conscientious objection?
4	If the bill were implemented as proposed, which option most accurately reflects your opinion regarding the outlined safeguards?
5	In your view, how might this bill affect vulnerable individuals, such as those at risk of abuse or neglect due to another person's actions or inaction?
6	Please provide any additional comments you may have regarding the bill or the broader issue of assisted dying in Scotland.

1. This does not include the basic demographic questions

Survey distribution

The questionnaire was circulated among students at the five Scottish universities that deliver an MBChB program or equivalent training pathway. These institutions included the University of Aberdeen, the University of Dundee, the University of Edinburgh, the University of Glasgow, and the University of St Andrews.

The survey stayed active and available for completion from October 2023 through January 2024. It was promoted exclusively through each university's internal systems, such as mass emails to year groups, announcements during teaching sessions, and physical notices posted around the medical school buildings. Because of this internal-only approach, it was not possible to calculate the exact number of students who actually received an invitation. In the 2023/2024 academic year, the five Scottish medical schools together enrolled 7,135 students in their programs [11]. Among the total population, the 295 completed replies in the present study equate to an approximate response rate of 4.1%.

Data analysis

All fixed-response quantitative results were downloaded and processed in Microsoft Excel. Any repeated submissions or completely blank open-text entries were removed before analysis. Respondents could move forward through the survey even if they chose not to write any explanatory comments.

Open-text answers were first exported into Microsoft Excel and later imported into NVIVO (Lumivero) to enable a detailed qualitative review. Each open-text question was initially examined inductively. Researchers allowed themes and codes to emerge naturally from the data in a bottom-up process [12]. Individual comments could receive more than one code when they expressed several separate ideas. Once this stage was complete, a deductive analysis was performed across the entire set of open-text replies. All comments were reviewed together using the established four-principle framework of medical ethics: autonomy, non-maleficence,

beneficence, and justice. The frequency of each identified theme was then calculated to compare the relative strength of different opinions across the 771 coded responses [13].

Ethical considerations

Because assisted dying is a particularly delicate subject, heightened attention was paid to every aspect of the study's planning, delivery, and data management. The entire project received a thorough ethical review and was formally approved by the University of Edinburgh Medical Education Research Ethics Committee. When designing the questions, the team deliberately kept the wording neutral and reduced the risk of emotional discomfort. All participants were clearly advised that they could withdraw at any time and were given straightforward instructions on how to raise concerns directly with the researchers.

Results and Discussion

Demographics

A total of 296 submissions arrived. After removing one duplicate record from both datasets and the counts, the final analyzed sample consisted of 295 responses. Key demographic characteristics are presented in **Table 3.**

Table 3. Summary data of all respondents, n = 295. Percentages may not sum to 100 due to rounding. From: Exploring perspectives of Scottish medical students on the proposed 'Assisted Dying for Terminally Ill Adults (Scotland)' Bill.

Demographic		**% of respondents**	**Number of respondents**
University	University of Aberdeen	164	55.6
	University of Edinburgh	62	21.0
	University of Dundee	41	13.9
	University of Glasgow	20	6.8
	University of St. Andrews	8	2.7
	Total	**295**	**100.0**
Year group	First Year	101	34.4
	Second Year	44	15.0
	Third Year	59	20.1
	Fourth Year	50	17.0
	Fifth Year	35	11.9
	Sixth Year	5	1.7
	Total	**294**	**100.0**
Age (years)	Under 18	8	2.7
	18–21	163	55.3
	22–25	79	26.8
	Above 25	45	15.3
	Total	**295**	**100.0**

Assisted dying in Scotland

Students were asked whether assisted dying should be made legally available for adults in Scotland who are living with a terminal illness. Of the participants, 213 (72.4%) supported the idea, 59 (20.1%) opposed it, and 22 (7.5%) said they were undecided or had no particular view **(Table 4).**

Table 4. Summarises respondents' views on assisted dying in Scotland. A. Highlights views on legalizing assisted dying in principle. B. shows views on implementing the bill in its current form. From: Exploring perspectives of Scottish medical students on the proposed 'Assisted Dying for Terminally Ill Adults (Scotland)' Bill

A. What is your stance on having assisted dying as a legal option for terminally ill adults in Scotland?		
Response	**%**	**N. of respondents (n = 294)**
Yes	72.4	213
No	20.1	59
Unsure/No Opinion	7.5	22
B. Should the 'Assisted Dying for Terminally Ill Adults (Scotland) bill' be implemented as it currently stands?		
Response	**%**	**N. of respondents (n = 295)**
Yes	48.5	143
No	32.5	96
Unsure/No Opinion	19.0	56

Among those who favored legalization, the most frequently given explanation was the importance of respecting and advancing patient autonomy (n = 97, 63.8%). The next most common reason was the need to avoid or relieve unnecessary pain and suffering (n = 92, 60.5%). Other factors mentioned included preserving personal dignity (n = 38, 25.0%), enhancing day-to-day quality of life (n = 13, 8.5%), and protecting family members from emotional burden (n = 9, 5.9%).

Among students who disagreed with legalization, the leading issues were the ethical obligation to avoid causing harm (non-maleficence) (n = 21, 43.8%) and the potential for patients to be influenced or pressured (n = 21, 43.8%). Additional reasons included personal religious convictions (n = 19, 39.6%), worries that suicide might become more socially accepted (n = 11, 22.9%), concerns that efforts to develop curative treatments could be undermined (n = 6, 12.5%), and the possibility that financial pressures might affect decisions (n = 3, 6.25%).

"Anyone facing a terminal condition should have the personal freedom to decide exactly when and how their life ends, ideally in peaceful surroundings with family nearby, rather than enduring a prolonged period of intense physical and emotional torment." Response 109, University of Aberdeen, Year 5, Above 25y.

"Healthcare professionals ought to devote their energy to treatments that aim at recovery and improvement instead of offering death as a quick and convenient answer." Response 81, University of Dundee, Year 3, Above 25y.

When participants were asked whether the proposed legislation should be passed exactly as it stands, 143 respondents (48.5%) answered yes, 96 (32.5%) answered no, and 56 (19.0%) remained uncertain or neutral **(Table 4).**

Of the written comments that supported keeping the bill unchanged (n = 36), the two most frequent justifications were again respect for personal autonomy (n = 13, 36.1%) and the reduction of suffering (n = 13, 36.1%). However, the larger share of open-text replies opposed the bill in its present shape (n = 65) and highlighted problems with several of its clauses. The issue mentioned most often was the suggested minimum age of 16 (n = 21, 32.3%), followed by fears of possible misapplication of the rules (n = 15, 23.1%), the decision to limit the law only to terminal cases (n = 11, 17.0%), and the specific wording chosen to define what counts as a "terminal illness" (n = 9, 13.8%).

"This legislation would return to patients a sense of control that their disease may otherwise remove, letting them steer their own care and choose whether they wish to continue fighting or to stop." Response 288, University of St. Andrews, Year 1 18y.

"Because medicine involves so many variables and because no doctor can predict the future with complete certainty, I would feel deeply uncomfortable as a clinician having to state that a particular illness will definitely result in death within a defined period." Response 41, University of Aberdeen, Year 3, 25y.

Conscientious objection

When asked whether they would personally refuse to take part as a future doctor if the proposed legislation were passed, 69 respondents (23.4%) indicated they would conscientiously object, 182 (61.7%) said they would not object, and 44 (14.9%) chose unsure or had no firm opinion **(Table 5).**

Table 5. Summarises respondents' views on conscientious objection to assisted dying in Scotland. From: Exploring perspectives of Scottish medical students on the proposed 'Assisted Dying for Terminally Ill Adults (Scotland)' Bill

If the bill were to become legislation, would you (as a future practitioner) conscientiously object?		
Response	**%**	**N. of Respondents (*n* = 295)**
Would	23.4	69
Would Not	61.7	182
Unsure	14.9	44

Among the free-text comments provided by those who would object (n = 38), the most common explanation was a clash with their own moral or personal values. Some linked this to religious convictions (n = 14, 36.8%) and others to the belief that taking any role in the process would mean actively causing harm (n = 15, 39.5%).

Among the written responses from students who would not object (n = 63), a large proportion explained their willingness by emphasizing support for patient autonomy (n = 28, 44.4%) and the goal of reducing pain and distress for people with terminal conditions (n = 23, 36.5%). Some others saw involvement as simply part of their professional responsibilities or "what the role requires" (n = 12, 19.0%).

"I hope more families can share a calm and dignified farewell with their loved ones, remembering them as they would wish, and I would gladly help make that possible

for patients who want it." Response 26, University of Aberdeen, Year 3, 20y.
"As a doctor, my core responsibility is to improve patients' lives and support their well-being, not to end them." Response 40, University of Aberdeen, Year 1, 20y.

Safeguards
Students held varied and thoughtful views about the safeguards included in the bill. While a clear majority (84.3%) considered them suitable in theory, opinions were split on whether they were strong enough in practice. When asked which description best matched their assessment of the proposed safeguards, 145 respondents (49.5%) selected "appropriate and sufficient", 102 (34.8%) selected "appropriate but insufficient", 33 (11.3%) selected "inappropriate and insufficient", and 13 (4.4%) selected "Other" **(Table 6).**

Table 6. Highlights respondents' responses on the appropriateness/sufficiency of the bill's proposed safeguards. From: Exploring perspectives of Scottish medical students on the proposed 'Assisted Dying for Terminally Ill Adults (Scotland)' Bill

If the bill were to be implemented as it stands, which of the following options best characterizes your viewpoint on the proposed safeguards?		
Response category	**Percentage (%)**	**Number of participants (n = 293)**
Adequate and sufficient	49.5	145
Suitable but lacking in sufficiency	34.8	102
Inadequate and insufficient	11.3	33
Other responses	4.4	13

Of the 113 written comments received, a range of worries appeared across all groups. Some felt the rules were overly restrictive, while others thought they were too relaxed. The most widespread concern centered on the rule requiring patients to self-administer the life-ending medication, as this could unfairly exclude people who lack the physical strength or ability to do so (n = 25, 22.1%). Another frequent issue was the question of which healthcare professionals should be involved, with calls for specialist assisted-dying teams, psychiatrists, or support staff such as social workers (n = 22, 19.5%).
Among respondents who viewed the safeguards as either "appropriate but insufficient" or "inappropriate and insufficient" (n = 58), two main problems stood out. First, 18 students (31.0%) argued that the protections did not go far enough to shield vulnerable individuals from pressure or coercion, noting that people might feel pushed toward assisted dying for the wrong reasons, such as money or family expectations. Second, opinions diverged on the bill's 14-day reflection period (the minimum waiting time after a patient signs the written request before medication can be provided). Ten respondents (17.2%) felt 14 days was not long enough for such a serious decision, while three (5.2%) believed it was too long and could disadvantage patients with a life expectancy of less than two weeks.
Additional worries from this group included allowing assisted dying for people who lack decision-making capacity (n = 4, 6.9%), such as those with cognitive problems or severe emotional distress, and the general risk of mistakes occurring at any stage of the process (n = 3, 5.2%).

Overarching pillars
Beyond the initial theme development, a separate deductive analysis was conducted to determine how frequently the core principles of medical ethics appeared in students' explanations. Even though the survey did not prompt them to do so, participants frequently drew on one or more of the four pillars of medical ethics when explaining their views [13]. In total, 771 applications of these principles were identified across all free-text answers. Each comment was coded according to the ethical pillar that best matched the reasoning expressed.
Autonomy was the most frequently mentioned principle (n = 283, 36.7%), especially among students who supported assisted dying. These respondents usually described autonomy as the right to remain in charge of decisions about end-of-life care. Non-maleficence came second (n = 259, 33.6%) and was more commonly raised by those against the idea, who believed the act itself would cause harm or that the proposed safeguards would not prevent it.

A notable observation was that the same ethical principles were sometimes used to defend positions that were opposite. Beneficence, for instance, appeared in 159 responses (20.6%). Supporters linked it to improving comfort, dignity, and quality of life rather than simply extending life. Opponents, however, used beneficence to argue that some patients might feel forced into assisted dying, which would not truly serve their best interests. This pattern suggests the debate is less about the principles themselves and more about how they are understood and applied.

Justice was also invoked by both sides (n = 70, 9.1%), particularly when discussing the safeguards in the bill. The most common justice-related concern involved the self-administration requirement, with students questioning whether it was fair to deny access to assisted dying for individuals who physically cannot take the medication themselves.

Assisted dying in Scotland

Most participants (72.4%) backed the legalization of assisted dying for adults living with a terminal illness. This figure closely matches earlier public opinion polls conducted in Scotland, which have consistently shown support between 70% and 75% [14, 15]. Written comments from supporters most often emphasized respect for personal autonomy and a desire to ease unbearable suffering. These arguments echo central bioethical principles and align with an emerging global legal framework grounded in human rights standards, including decisions of the European Court of Human Rights and the United Nations Human Rights Committee [16-20]. The frequent references to dignity, quality of life, and emotional distress further connect with well-established ideas in palliative medicine and clinical ethics [21].

"Why should people be free to decide how they live their lives but not be allowed to decide how they end them?" Response 34, University of Aberdeen, Year 1, Above 25y.

"Adults with terminal conditions endure prolonged pain and hardship only to die anyway. No one should have to face that kind of ordeal. Everyone deserves the right to choose whether or not to go through it." Response 19, University of Aberdeen, Year 3, 21y.

"Modern medicine has moved beyond simply letting people endure terrible hardship. Its purpose should include preventing unnecessary suffering at the end of life." Response 48, University of Aberdeen, Year 1, 22y.

Although a clear majority expressed support, 20.1% of respondents opposed the introduction of assisted dying. Their main concerns focused on the risk of causing direct harm, the potential to pressure patients, and conflicts with religious or moral values. These objections closely resemble wider arguments against assisted dying, especially fears that legalization could lead to harm and create opportunities for coercion [22]. The reasons given by students in this study appear closely linked to the medical education they have received so far and reflect ongoing discussions about the proper role of doctors in end-of-life situations and their ethical responsibilities [23, 24].

"Doctors exist to heal and care for patients, not to end their lives, no matter how the action is described. Have we grown so arrogant that we believe we should control who lives and who dies?" Response 44, University of Aberdeen, Year 4, 25y.

"I hold a deep belief in the sacred value of human life. As a future doctor, my duty will be to protect and preserve life, not to act as if I have the power to decide when it should end. I would rather leave medicine entirely than take any deliberate step to end another person's life." Response 172, University of Aberdeen, Year 5, 25y.

Support for the specific wording of the "Assisted Dying for Terminally Ill Adults (Scotland) Bill" was noticeably lower than general backing for the concept of legalization (48.5% compared with 72.4%). This gap points to differing opinions over the bill's details. The most frequently mentioned issue was the suggested minimum age of sixteen, with many students questioning whether someone at that age has the maturity and capacity to make such a weighty choice. This worry connects with larger medico-legal and ethical debates about the ability of younger individuals to decide matters concerning their own end-of-life care [25-27].

The bill includes several key measures intended to protect vulnerable people, such as a mandatory 14-day reflection period, a clear right to change one's mind at any stage, and making coercion a criminal offense. Nevertheless, many respondents expressed serious doubts about whether these measures would be strong enough in practice or could be open to misinterpretation and misuse. Broader opposition to assisted dying frequently draws attention to possible influences from family members, carers, financial difficulties, or pressures within the healthcare system itself [22].

The proportion of medical students who supported assisted dying in principle (72.4%) was considerably

higher than the level of support usually found among qualified doctors working in the UK, where recent major surveys have recorded figures closer to 40%–50% [28, 29]. In addition, this strong student support stands in contrast to the official neutral stance taken by important professional organizations such as the Royal College of Physicians of Edinburgh and BMA Scotland [30, 31]. The difference may signal a generational change driven by shifting public attitudes toward patient choice and variations in how medical ethics is taught today [17]. At the same time, it could simply highlight the contrast between the more theoretical perspective of students still in training and the practical realities faced by doctors already working in clinical settings [32].

Conscientious objection

A clear gap emerged between overall support for legalizing assisted dying (72.4%) and the share of respondents who said they would personally be willing to take part in the process (61.7%). This difference may indicate that backing the idea in theory does not always translate into readiness to be directly involved. However, the 14.9% who remained unsure about conscientious objection adds some uncertainty to this reading. The right to conscientious objection in end-of-life matters is important because it allows doctors to exercise their moral judgment. Examination of the written comments showed that the main drivers for objection were religious faith or deeply held personal values, a pattern consistent with earlier research findings [33-35]. Should the law be introduced, it will be essential to include clear provisions protecting those who wish to opt out, while ensuring that patients can obtain fair and timely access to the service.

"I would never assist a patient who wanted to drive a blade further into their own body, and in the same way, I could never supply drugs intended to bring about death." Response 44, University of Aberdeen, Year 4, 25y.

Safeguards

Although most respondents (84.3%) viewed the proposed safeguards as 'appropriate' to some extent (either 'appropriate and sufficient' or 'appropriate but insufficient'), only 49.5% judged them to be completely 'sufficient'. This suggests that while the existing protections hold value, further strengthening will be required before any rollout. The two main issues raised by those who considered the safeguards appropriate yet inadequate concerned the rule requiring self-administration of the life-ending drugs and the range of healthcare professionals authorized to participate. Similar worries about self-administration have surfaced in other places where assisted dying has been legalized, leading some countries to permit clinicians to directly administer the medication [36-38].

"I worry this rule unfairly excludes people with physical disabilities who cannot self-administer the medication… extra steps are needed so that disabled patients can receive the same level of care available to others." Response 57, University of Aberdeen, Year 1, Above 25y.

In addition, many students believed a broader mix of healthcare staff — including psychiatrists, nurses, and social workers — should participate in the process. Earlier studies have pointed out that the roles of these professionals are often poorly defined in assisted dying frameworks [38-40]. To avoid ambiguity, the Scottish bill would benefit from clearly spelling out the responsibilities and involvement of other healthcare workers.

The additional worries expressed about the safeguards echo wider public discussions on the dangers of coercion in assisted dying. Investigations in other countries have examined how family members can shape conversations around the topic, sometimes creating emotionally charged or pressurized settings for decision-making. However, existing evidence has not demonstrated a clear rise in coercion affecting vulnerable populations [22, 41-43]. Some researchers have developed structured tools to evaluate coercion risks, which could help reinforce the protections outlined in the Scottish proposal [44].

The issues highlighted by medical students in this research closely align with the standards set by international human rights organizations. These bodies have stated that assisted dying can be consistent with human rights law if strong legal and procedural protections — what the UN Human Rights Committee describes as 'robust legal and institutional safeguards' — are established [18-20]. Such measures must demonstrably shield vulnerable individuals, uphold genuine autonomy and voluntary choice, and include independent oversight [18-20].

Limitations and next steps

Although this study provides useful insights into medical students' attitudes, several limitations should be noted. First, the sample represents only a modest fraction (4.1%) of the total Scottish medical student population and may over-represent individuals with a strong interest in the

subject. Because the survey was circulated solely through internal university channels, the precise number of students who received the invitation remains unknown. Future work should aim for broader coverage across universities and year groups to yield more representative findings.

Second, the survey did not collect details about the specific teaching respondents had received on end-of-life care or assisted dying before completing the questionnaire. Given that curricula likely differ across the five Scottish medical schools, this variation in prior education could confound the analysis. Subsequent studies would therefore benefit from examining how participants' ethical positions relate to the depth and nature of their training on this issue.

Differences in response rates between institutions may stem from two main causes. One is the variation in how actively each university promoted and distributed the survey. The other is possible differences in how much emphasis each medical school places on medical ethics topics, including assisted dying. Future investigations could examine whether variations in teaching methods or curriculum content affect students' views.

The largest group of respondents was in their first year (n = 101, 34.2%), with fewer responses from more senior students. This pattern might reflect differing levels of engagement with online surveys or the heavier workload students face in later years. Because senior students typically have more hands-on clinical experience, their opinions may evolve as they advance through training. Longitudinal research would help determine whether attitudes toward assisted dying change over the course of medical education.

An unexpected but noteworthy finding was the frequent, unprompted use of the four pillars of medical ethics by respondents, even though this was not a planned focus of the study. This suggests that these core ethical principles already form a central part of how medical students reason about assisted dying. Future studies could deliberately investigate how these principles shape students' thinking, providing a richer understanding of the ethical foundations that will guide tomorrow's doctors.

Conclusion

Assisted dying continues to be a deeply intricate and ethically sensitive subject that provokes a wide spectrum of opinions rooted in medical ethics. The views of Scottish medical students are particularly important because these individuals will be the practitioners directly involved if assisted dying is introduced.

This research found that the majority of participating medical students favored legalizing assisted dying for terminally ill adults in Scotland. While broad support existed for the concept, fewer students endorsed implementing the proposed 'Assisted Dying for Terminally Ill Adults (Scotland)' bill in its current form. A considerable number expressed reservations about key elements of the bill, especially the eligibility rules, the proposed protections, and the need for strong measures to prevent misuse or exploitation.

Looking ahead, we offer the following recommendations to ensure medical students' voices are properly included in the legislative process:

1. Professional medical bodies such as BMA Scotland and the Royal Colleges should establish structured ways to gather and incorporate the collective perspectives of medical students when engaging with policymakers and other stakeholders during the creation and rollout of new legislation.
2. Medical schools and student organizations should encourage active student involvement by providing platforms for open discussion and participation in debates on end-of-life care and assisted dying as part of their training.
3. Additional studies, particularly longitudinal ones, should examine medical students' input into the assisted dying conversation to help ensure their contributions meaningfully shape future laws and professional guidance.

We present the first report of Scottish medical students' views on assisted dying and the proposed bill. We strongly encourage policymakers and other key stakeholders to actively consult medical students in all current and upcoming discussions on this issue.

Acknowledgments: None

Conflict of Interest: None

Financial Support: DG and JK have previously received funding from the Institute of Medical Ethics to present this work.

Ethics Statement: The study was reviewed and fully approved by the University of Edinburgh Medical Education Research Ethics Committee (Ref 2023/22).

The research was conducted in compliance with the Helsinki Declaration
Informed consent to participate was obtained from all participants before the study began.

References

1. British Medical Journal (BMJ). Assisted dying. BMJ. Available from: https://www.bmj.com/assisted-dying
2. Picón-Jaimes YA, Lozada-Martinez ID, Orozco-Chinome JE, Montaña-Gómez LM, Bolaño-Romero MP, Moscote-Salazar LR, et al. Euthanasia and assisted suicide: an in-depth review of relevant historical aspects. Ann Med Surg. 2022;75:1-6.
3. Cholbi M, Varelius J. New directions in the ethics of assisted suicide and euthanasia. Cham: Springer; 2023.
4. Den Hartogh G. What kind of death: the ethics of determining one's own death. Routledge Res Appl Ethics. 2022.
5. Fontalis A, Prousali E, Kulkarni K. Euthanasia and assisted dying: what is the current position and what are the key arguments informing the debate? J R Soc Med. 2018;111(11):407-13.
6. Shariff MJ. Assisted death and the slippery slope—finding clarity amid advocacy, convergence, and complexity. Curr Oncol. 2012;19(3):143-54. doi:10.3747/co.19.1095
7. Mroz S, Dierickx S, Deliens L, Cohen J, Chambaere K. Assisted dying around the world: a status quaestionis. Ann Palliat Med. 2021;9(6):57-7.
8. Bulck LV, Quenot JP, Seronde MF, Ecarnot F. Medically assisted dying in Western Europe: legislation review – what has changed in 5 years? BMJ Support Palliat Care. 2022;13(3):305-8. doi:10.1136/spcare-2022-003768
9. Scottish Parliament. Assisted Dying for Terminally Ill Adults Scotland Bill. 2024. Available from: https://www.parliament.scot/bills-and-laws/bills/s6/assisted-dying-for-terminally-ill-adults-scotland-bill
10. The Authority of the House of Lords. Terminally Ill Adults (End of Life) Bill. 2025 Jun 23. Available from: https://bills.parliament.uk/publications/61635/documents/6735
11. Higher Education Statistics Agency. HE student enrolments by HE provider and subject of study. 2025. Available from: https://www.hesa.ac.uk/data-and-analysis/students/table-49
12. Naeem M, Ozuem W, Howell KE, Ranfagni S. A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. Int J Qual Methods. 2023;22(1):1-18.
13. Beauchamp TL, Childress JF. Principles of biomedical ethics. 8th ed. New York: Oxford University Press; 2019.
14. Dignity in Dying Scotland. Public opinion on assisted dying. 2025. Available from: https://www.dignityindyingscotland.org.uk/assisted-dying/public-opinion-on-assisted-dying/
15. Health SC, Committee S. Assisted Dying for Terminally Ill Adults (Scotland) Bill – summary of responses to the short call for views. 2024 Nov. Available from: https://www.parliament.scot/-/media/files/committees/health-social-care-and-sport-committee/assisted-dying-for-terminally-ill-adults/ad-bill-short-cfv-evidence-summary.pdf
16. Kresin T, Hawgood J, De Leo D, Varghese F. Attitudes and arguments in the voluntary assisted dying debate in Australia: what are they and how have they evolved over time? Int J Environ Res Public Health. 2021;18(23):12327.
17. Kouwenhoven PSC, van Thiel GJMW, van der Heide A, Rietjens JAC, van Delden JJM. Developments in euthanasia practice in the Netherlands: balancing professional responsibility and the patient's autonomy. Eur J Gen Pract. 2019;25(1):44-8.
18. European Court of Human Rights. Mortier v Belgium Application No. 78017/17. 2023.
19. Loos S. Assisted dying before the ECTHR: general rules for national regulations. Med Law Int. 2022;22(2):096853322210784.
20. United Nations International Covenant on Civil and Political Rights. General comment No. 36. Article 6: right to life. Paragraph 9. 2019.
21. Akdeniz M, Yardımcı B, Kavukcu E. Ethical considerations at the end-of-life care. SAGE Open Med. 2021;9.
22. Buchbinder M, Berens N. Beyond coercion: reframing the influencing other in medically assisted death. J Med Ethics. 2024;50(12):jme-109554.
23. Vizcarrondo FE. Euthanasia and assisted suicide: the physician's role. Linacre Q. 2013;80(2):99-102.
24. Geddes D. Redefining non-maleficence: what is the role of harm in end-of-life choices? BMJ. 2025.

Available from: https://blogs.bmj.com/medical-ethics/2025/02/25/redefining-non-maleficence-what-is-the-role-of-harm-in-end-of-life-choices/
25. Dorscheidt J. The legal relevance of a minor patient's wish to die: a temporality-related exploration of end-of-life decisions in pediatric care. Hist Philos Life Sci. 2023. doi:10.1007/s40656-022-00554-3
26. Campbell S, Cernat A, Denburg A, Moola F, Petch J, Gibson J. Exploring assisted dying policies for mature minors: a cross jurisdiction comparison of the Netherlands, Belgium & Canada. Health Policy. 2024;149:105172.
27. Van Assche K, Raus K, Vanderhaegen B, Sterckx S. Capacity for discernment and euthanasia on minors in Belgium. Med Law Rev. 2018;27(2):242-66.
28. British Medical Association. BMA Survey on Physician-Assisted Dying. Available from: https://www.bma.org.uk/media/3367/bma-physician-assisted-dying-survey-report-oct-2020.pdf
29. Royal College of Physicians. 2019 Assisted Dying Survey Results. 2019. Available from: https://www.rcp.ac.uk/news-and-media/news-and-opinion/2019-assisted-dying-survey-results-no-majority-view-moves-rcp-position-to-neutral/
30. RCPE. Inquiry into assisted dying/assisted suicide. 2023. Available from: https://www.rcpe.ac.uk/college/consultation-response/inquiry-assisted-dyingassisted-suicide
31. British Medical Association. Physician assisted dying. 2021. Available from: https://www.bma.org.uk/advice-and-support/ethics/end-of-life/physician-assisted-dying
32. Hafferty FW. Beyond curriculum reform: confronting medicine's hidden curriculum. Acad Med. 1998;73(4):403-7.
33. Martins-Vale M, Pereira HP, Marina S, Ricou M. Conscientious objection and other motivations for refusal to treat in hastened death: a systematic review. Healthcare. 2023;11(15):2127.
34. Curlin FA, Nwodim C, Vance JL, Chin MH, Lantos JD. To die, to sleep: US physicians' religious and other objections to physician-assisted suicide, terminal sedation, and withdrawal of life support. Am J Hosp Palliat Med. 2008;25(2):112-20.
35. Bouthillier ME, Opatrny L. A qualitative study of physicians' conscientious objections to medical aid in dying. Palliat Med. 2019;33(9):1212-20.
36. Wenger N. The importance of self-administration of aid-in-dying medication. Am J Bioeth. 2023;23(9):18-20.
37. Zworth M, Saleh C, Ball I, Kalles G, Chkaroubo A, Kekewich M, et al. Provision of medical assistance in dying: a scoping review. BMJ Open. 2020;10(7):e036054.
38. Bellon F, Mateos JT, Pastells-Peiró R, Espigares-Tribó G, Gea-Sánchez M, Rubinat-Arnaldo E. The role of nurses in euthanasia: a scoping review. Int J Nurs Stud. 2022;134:104286.
39. Bilsen JJR, Vander Stichele RH, Mortier F, Deliens L. Involvement of nurses in physician-assisted dying. J Adv Nurs. 2004;47(6):583–91.
40. Antifaeff K. Social Work Practice with Medical Assistance in Dying: A Case Study. Health Soc Work. 2019;44(3).
41. Attia JR, Jorm C, Kelly B. Medical assistance in dying: the downside. BMJ Support Palliat Care. 2020;10(3):259–61.
42. Battin MP, van der Heide A, Ganzini L, van der Wal G, Onwuteaka-Philipsen BD. Legal physician-assisted dying in Oregon and the Netherlands: evidence concerning the impact on patients in vulnerable groups. J Med Ethics. 2007;33(10):591–7.
43. Deliens L. Assisted dying and the slippery slope Argument—No empirical evidence. JAMA Netw Open. 2025;8(4):e256849.
44. Casey J, Macleod S. The assessment of competency and coercion in the End of Life Choice Act 2019. N Z Med J. 2021;134(1547):114–20.