Society of Medical Education & Research

2025, Volume 5, Issue 1, Page No: 121-133
ISSN: 3108-5059

Asian Journal of Ethics in Health and Medicine

Assessment of a Bioethics Unit in a Cancer Research Hospital: Focus on Research, Education, and Ethics Consultation

Abdul Rahman[1], Noor Aini[1]*, Zulkifli Hassan[2]

[1]Department of Medical Ethics, Faculty of Medicine, Universiti Malaysia Sarawak, Kota Samarahan, Malaysia.
[2]Department of Health Policy and Ethics, Faculty of Medicine, Universiti Sultan Zainal Abidin, Kuala Terengganu, Malaysia.

***E-mail** ✉ noor.aini@outlook.com

Abstract

This study examines the functioning of a Bioethics Unit (BU) five years after its launch (2016–2020), combining quantitative metrics with qualitative insights. The BU operates as a dedicated research center, investigating ethical challenges in clinical practice, offering ethics consultations, and delivering training programs for health care professionals (HPs). We employed a sequential mixed-methods design, starting with quantitative analysis followed by qualitative exploration to contextualize the findings. Quantitative information was extracted from the BU's internal records and summarized descriptively. For qualitative insights, semi-structured interviews were conducted with 18 HPs who had varying interactions with the BU, and responses were interpreted using a framework analysis approach. Data indicated a steady growth in the BU's research portfolio and increasing collaboration with other hospital units. Four overarching themes emerged from the interviews: (1) the motivations behind HPs reaching out to the BU and the forms of collaboration; (2) the perceived role of the bioethicist; (3) the influence of BU activities on HPs' reflective thinking and ethical reasoning; and (4) the demand for expanding ethics support to broader hospital settings. Overall, the combination of empirical research with conventional ethics support within a single unit appeared to foster collaboration and promote a culture of ethical awareness among HPs. These findings contribute to international discourse on clinical ethics support models, highlighting the value of empirical bioethics research in enhancing practical ethics services. They also provide a foundation for establishing a multidisciplinary Clinical Ethics Committee (CEC) to augment the BU's consultation activities locally.

Keywords: Bioethics, Cancer, Hospital, Education

Introduction

Healthcare decisions often involve conflicting values, and it is common for patients and their families to turn to clinicians for guidance on ethical dilemmas [1]. Clinicians, in turn, strive to provide well-reasoned and context-sensitive advice.

To better support patients and HPs, structured ethical assistance has become increasingly important [2]. Over recent decades, clinical ethics support services (CESSs) have emerged to promote the ethical dimension of care, guiding both practical decisions and professional reflection [3, 4].

Alongside the expansion of CESSs, empirical research in bioethics has gained prominence. Such research allows for the integration of ethics expertise into clinical practice by translating abstract moral principles into actionable guidance informed by real-world experiences [5, 6].

In Italy, no national legislation currently defines the roles and responsibilities of CESSs, though local initiatives have developed organically, particularly in northern regions [7–13]. The National Committee for Bioethics (CNB) emphasized the importance of establishing clinical ethics committees in 2017 [14], and in 2021 issued guidance clarifying the roles of bioethics experts

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

Received: 12 January 2025; **Accepted:** 07 April 2025

Copyright CC BY-NC-SA 4.0

How to cite this article: Rahman A, Aini N, Hassan Z. Assessment of a Bioethics Unit in a Cancer Research Hospital: Focus on Research, Education, and Ethics Consultation. Asian J Ethics Health Med. 2025;5(1):121-33. https://doi.org/10.51847/plCZ530gDa

[15]. Ethical debates, such as those surrounding medical assistance in dying, have further highlighted the need for robust clinical ethics structures [16].

The BU under study was initiated in 2016 by the Scientific Directorate of the Local Health Authority AUSL-IRCCS of Reggio Emilia, which oversees six hospitals and six districts across 42 municipalities. Located within the 900-bed Oncological Research Hospital (ORH), accredited as a Comprehensive Clinical Cancer Institute (OECI), the BU was designed to integrate empirical research, ethics consultation, and training initiatives. Its mission centers on "bedside ethics," where ethical reflection is grounded in the realities of clinical care to enhance both care quality and HPs' ethical competencies [17].

Guided by the empirical bioethics framework, the BU combines qualitative and quantitative research with ethical analysis to produce practical, morally sound guidelines applicable in clinical settings [6, 18, 19]. Its core activities include: (1) research on clinical ethics topics; (2) individual ethics consultations; (3) team-based ethics supervision; and (4) educational programs for HPs. While these areas may operate independently, they often overlap. **Table 1** provides a detailed overview of the BU's activities.

Table 1. Description of the bioethics unit's activities and objectives

Activity	Led by	Target audience	Activity overview	Objective
Research	All BU members or collaborating hospital units	Other hospital units and wards	Design, conduct, and assess research projects addressing ethical challenges in clinical practice using both qualitative and quantitative approaches	To foster ethical awareness and understanding among HPs, focusing on topics such as patient involvement in care decisions, advance care planning (ACP), Advance Directives (AD), end-of-life and palliative care, pediatric palliative care, and resource allocation ethics
Ethics Consultation	Head of the BU	Individual HPs or care teams, particularly in urgent or complex cases	Delivery of one-on-one or team-based consultations, either prospectively or retrospectively, through face-to-face engagement	To assist HPs in navigating ethical dilemmas and supporting complex decision-making processes
Ethics Supervision	Head of the BU	Clinical care teams during their routine meetings	Structured ethical guidance provided during team discussions; the BU Head engages when ethical issues arise	To help HPs address ethical aspects in patient care, reflect on moral challenges, and manage ethically complex situations
Education and Training	All BU members	Individual wards upon request or all HPs	Organization and facilitation of interactive, experiential, and in-person training sessions on ethics	To enhance ethical reasoning and knowledge among HPs, emphasizing patient engagement, ACP, AD, end-of-life care, pediatric palliative care, and ethical management of limited resources

The BU's research initiatives aim to create, implement, and evaluate tools and services that address ethical challenges in everyday clinical practice. These projects integrate both qualitative and quantitative approaches. Notable examples include studies on advance care planning instruments, the practical application of Advance Directives, assessments of ethics training programs, and initiatives designed to enhance the ethical competencies of health care professionals.

Ethics consultation is provided on a flexible, on-demand basis and is primarily directed at individual clinicians or care teams, with particular attention to urgent or ethically complex situations.

Monthly ethics supervision sessions are organized for clinical teams. During these meetings, the bioethicist observes ongoing discussions and, when ethical concerns arise, the BU Head actively participates to guide reflection and support decision-making processes.

Educational and training initiatives foster ethical awareness and reasoning among HPs. Programs can be organized at the request of staff or proactively initiated by the BU, and they emphasize key areas such as patient-

centered decision-making, advance care planning (ACP), Advance Directives (AD), end-of-life and palliative care, pediatric palliative care, and the ethical distribution of resources.

Currently, the BU team comprises one senior researcher, a PhD candidate, and two research consultants, each contributing to different aspects of the unit's work. The BU also supervises two institutional ethics services: a Clinical Ethics Committee composed of 15 members [20], and an in-hospital service providing guidance on end-of-life rights and Advance Directives. The BU leader oversees these services and coordinates with the Scientific Directorate. In practice, the BU functions as a clinical ethics support service (CESS) with a strong emphasis on research-oriented activities.

Evidence from the literature suggests that evaluating clinical ethics interventions provides insight into several dimensions: (a) user satisfaction, (b) uptake and engagement among HPs, and (c) the impact of ethics support on patient care, while also generating data to refine and improve services [21]. Accordingly, this study pursues two main objectives:

1. To provide a quantitative account of the BU's activities over its first five years (2016–2020).
2. To explore how HPs perceive the BU's activities and their influence on clinical practice.

Materials and Methods

This study adopted a mixed-methods approach, with a primary focus on quantitative data followed by qualitative inquiry to deepen understanding and interpret findings from the perspective of service users [22].

Quantitative component

Data collection

Quantitative information covering January 2016 to December 2020 was compiled to map the BU's time investment, collaborations, and thematic scope. Collected data included research projects, the number and duration of ethics consultations, educational sessions, training initiatives, covered topics, and collaborating units or institutions. All information was sourced from the BU's internal records.

Data analysis

Descriptive statistics were employed using IBM SPSS Statistics 26. Analyses were conducted by a biomedical statistics expert (ET). Two separate datasets were created: one capturing research activity and another encompassing consultations, supervision, and training. Each dataset was analyzed independently, except for thematic information, which was examined collectively.

Qualitative component

Participants and sampling

A purposive sampling strategy was used to select participants who had interacted with the BU in varying capacities, based on trends identified in the quantitative data. Eligible participants had to:

- Be employed by the local Health Care Service of Reggio Emilia.
- Have engaged in at least one BU activity between 2016 and 2020.

Data collection

In-depth, one-on-one semi-structured interviews were conducted to capture HPs' perspectives on BU activities and their impact on practice. All interviews were held online due to pandemic restrictions, except one conducted in-person. The interview guide was developed by two BU researchers: LDP, the BU Head, and MP, a PhD student in Clinical and Experimental Medicine, both trained in qualitative methods. LG, head of the qualitative research unit, reviewed the guide. The interviews explored (a) satisfaction and perceived effects of BU involvement, (b) unmet needs in ethical support, and (c) expectations for future collaboration. **Table 2** presents the interview guide and example questions.

Table 2. Interview topic guide

Theme	Sample questions
Assessment of the participant's experience with the BU, including satisfaction, impact on clinical practice, and influence on health care interactions	- How would you describe the activities carried out by the BU and their objectives? - Which of these activities have you participated in, and what prompted your involvement? - What are your thoughts on the activities you engaged in? - In your view, how has your experience with the BU affected your clinical practice or the overall care process? For instance, has it influenced interactions within medical teams or across different units?

	- Reflecting on your experience, can you recall a situation in which the BU had a particularly meaningful impact? Please provide an example.
Identification of additional ethical support needs	- Based on your role and your involvement with BU activities, are there any ethical topics that you feel require deeper exploration? Could you give an example? - Considering your workplace, colleagues, and teams, are there other ethical situations that should be addressed more thoroughly? Please provide an example.
Expectations for future engagement with the BU	- The BU is planning to expand its ethics consultation services. What are your views on this initiative? - Looking ahead, what types of activities or programs would you like to see the BU implement in the future?

Each potential participant received a personalized invitation outlining the opportunity to take part in an interview, with the flexibility to select a date and time that was convenient. With explicit consent, interviews were audio-recorded for accuracy. Three researchers (MP, GA, and CG), all experienced in qualitative methods, conducted the sessions. No participants were interviewed more than once, and transcripts were not returned for participant review or correction.

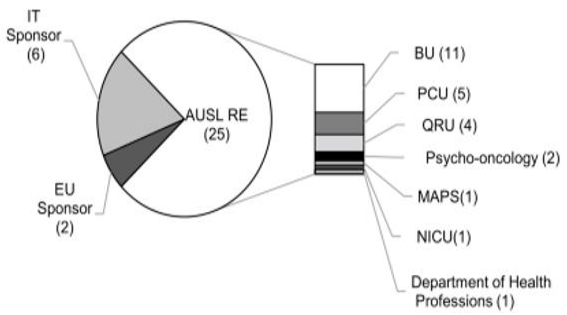
Data analysis

The interview recordings were transcribed word-for-word and analyzed using a thematic framework approach [23]. MP and GA created the analytical framework under LG's supervision, combining two complementary strategies: a deductive approach, in which initial themes were derived from the study's research questions, and an inductive approach, allowing new themes to emerge from the data through open coding. To begin, MP and GA independently reviewed two transcripts, noting observations and preliminary impressions. They then applied initial codes, analyzed emerging themes separately, and subsequently reconciled their findings to create a shared coding framework. MP systematically applied this agreed framework to all interviews to identify recurring patterns, with GA overseeing the process. Final themes and subthemes were refined through discussion between the two researchers, with contributions from LDP, LG, MM, and MC in interpreting and presenting the results.

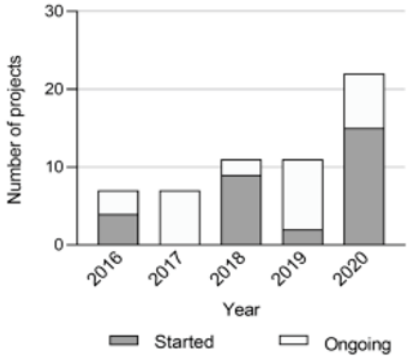
Results and Discussion

Quantitative findings

Over the five-year period from January 2016 to December 2020, the BU contributed to 33 research projects focusing on clinical and organizational ethics. The majority of these projects (n = 25) were initiated by the Azienda USL IRCCS of Reggio Emilia, while eight were led by external organizations—six originating from other Italian institutions and two from European entities. Of these, 11 projects were directly developed and promoted by the BU itself **(Figure 1a).**

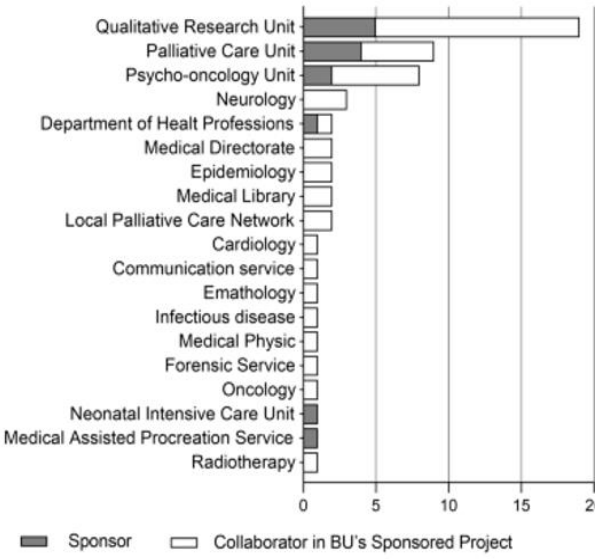


a)



b)

c)



d)

Figure 1. Summary of BU Research Activities. Quantitative overview of projects, collaborators, and target populations for the BU from January 2016 through December 2020. a Project sponsors. b Number of projects initiated or ongoing each year. c Groups targeted by the research. d Units involved as sponsors or contributors in BU-led projects. Abbreviations: IT = Italy, EU = European, AUSL-RE = Azienda AUSL IRCCS di Reggio Emilia, PCU = palliative care unit, QRU = qualitative research unit, MAPS = medically assisted procreation service, NICU = neonatal intensive care unit.

Over the five-year period, the BU's engagement in research steadily expanded, reaching its peak in 2020 with 15 newly launched projects, alongside seven continuing initiatives **(Figure 1b)**. The intended audiences for these studies were diverse, including patients, caregivers, members of ethics committees, and the general public, but the majority (63.6%) primarily targeted healthcare professionals **(Figure 1c).**

The 33 research projects that involved the BU covered a broad spectrum of objectives. Some aimed to reassess and refine professional roles or standard practices within specific clinical contexts, often to update care pathways or introduce new services. Others explored how healthcare staff interpret and manage ethical dilemmas encountered in clinical practice. Additional studies were designed to evaluate structured ethical interventions, such as Advance Care Planning, in defined patient populations. Across all projects, the overarching goals were to enhance the quality of clinical care, improve patient outcomes, and produce scientific publications in peer-reviewed journals.

Collaboration extended to 19 distinct units or services, including 11 directly involved in patient care and eight non-clinical units. Ten units contributed to a single project, six units participated in two or three projects, and three units were engaged in more than eight projects. Four services served dual roles, acting as both sponsors and collaborators on BU-initiated research **(Figure 1d)**.

Beyond research, the BU conducted ethics consultations, training sessions, and supervision activities involving 25 units. Of these, 22 were clinical services, while three were non-clinical, including the health directorate, the health professions directorate, and forensic medicine. Community health services accounted for ten units, and 15 units were hospital-based **(Figure 2).** The amount of time each unit devoted to BU-led activities varied widely, ranging from a single hour for the health directorate to 292 hours for the palliative care unit (median = 8 hours; interquartile range = 2–20 hours).

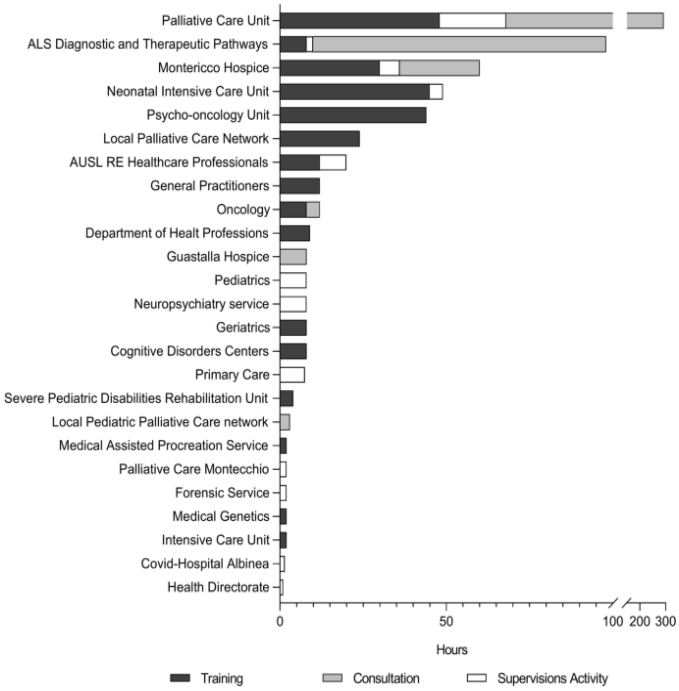


Figure 2. Overview of BU consultations, training, and supervision. Total hours contributed by various AUSL-RE units to BU-led consultations, training sessions, and supervision activities.

Most units participated in only one of the four primary BU activity areas (n = 25). A smaller number engaged in multiple areas, with six units contributing to two areas and four units involved in three. Notably, the Palliative Care Unit (PCU) was the only unit to participate across all four major BU activity domains.

We also examined the ethical topics addressed throughout the BU's initiatives. Many topics were incorporated into more than one type of activity, and four topics were covered across all four activity areas. Except for the ethics of deep palliative sedation, every issue was explored through a research lens **(Figure 3)**.

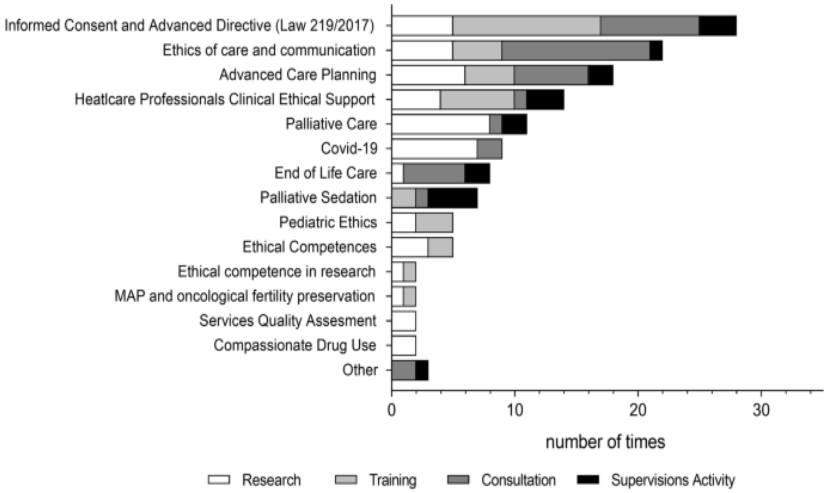


Figure 3. Ethical topics covered in BU activities. The chart illustrates how frequently each topic was addressed across the various activities organized by the Bioethics Unit.

Qualitative findings

To explore healthcare professionals' experiences with the BU, we recruited participants from units that had previously collaborated with the Unit. Building on the quantitative results, we considered several characteristics of the units where potential participants worked:

- Total time invested in BU-led research projects;
- Total time involved in ethics consultations, educational programs, or training sessions organized by the BU;
- Depth and extent of collaboration with the BU;
- Type of unit, categorized by hospital vs. community-based, pediatric vs. adult service, and clinical vs. non-clinical focus.

Units were first classified into three groups according to cumulative hours spent in research projects, consultations, and training activities: low collaboration (≤ 2 hours), medium collaboration (3–12 hours), and high collaboration (> 12 hours). Within each group, units were further evaluated based on the other variables to identify those that were representative or distinct. Participants were then selected from these units.

A total of 22 professionals were initially contacted. Four did not respond, while the remainder expressed strong interest in participating. The final sample included 18 healthcare professionals: 16 women and 2 men. Their roles were diverse, comprising two psychologists, one researcher, one biologist, one physiotherapist, one speech therapist, six nurses, and six physicians. Detailed participant characteristics are presented in **Table 3.**

Table 3. Participants characteristics and collaboration with the Bioethics Unit

Cod	Professions	Collaboration with BU (R, EC, ES, E&T)	Working Unit	Level of collaboration (high, good, medium, low)	Time of collaboration
01	Physician	*EC, ES, E&T*	Hospice	High collaboration	*2018–2020*
02	Physiotherapist	*Only E&T*	Rehabilitation Unit for Severe Childhood Disabilities	Medium	*2018, 2020*
03	Physician	*Only E&T*	Intensive care	Medium	*2018 and 2020*
04	Speech therapist	*E&T and ES*	Paediatric care	Good	*2020*
05	Phisician	Only EC (Covid)	Covid-hospital	Low	2020
06	Psychologist	Only R (4 projects)	Neuroloy	Low	Since 2018
07	Psycho-oncologist	*E&T and R (9 projects)*	Psycho-oncology Unit	High	*2015,2018,2020*
08	Methodologist	Only R (18 projects)	Qulitative Research Unit	Low	Since 2016
09	Physician	*E&T, ES; EC, R (13 projects)*	Palliative care Unit	High	*since 2016*
10	Nurse	*E&T, ES; EC, R (13 projects)*	Palliative care Unit	High	*since 2016*
11	Oncologist	*E&T, ES; EC, R (1 projects)*	Oncology	High	*2016, 2019-2020*
12	Nurse	*E&T, EC, R (2 projects)*	Neonatal intensive care	High	*2017–2020*
13	Nurse	*Only ES*	Hospice	Good	*Since 2020*
14	Nurse	*E&T, ES; EC*	Hospice	High	*2018–2020*
15	Biologist	*E&T, R (2 projects)*	Mediaclly Assisted Procreation Service	Medium	*2018–2020*
16	Nurse	*Only ES*	Hospice	Good	*Since 2020*
17	Physician	*Only E&T*	Rehabilitation Unit for Severe Childhood Disabilities	Medium	*2018 and 2020*
18	Nurse	*Only EC*	Neuropsychiatry	Good	*2019*

For further description of each activities, please, see **Table 1**

R= Research activity; EC= Ethics consultation; ES= Ethics Supervision; E&T= ethics education and trainin

The interviews were conducted over the period of February to March 2021, with each session lasting an average of 31 minutes (ranging from 15 to 55 minutes). Analysis using the thematic framework approach revealed four primary themes, accompanied by six subthemes. **Table 4** summarizes these themes and subthemes, illustrating the findings with representative participant quotations.

Table 4. Key themes, subthemes, and illustrative quotations from BU participants

Theme	Subtheme	Representative Quotes
1. Modes and Purpose of BU Collaboration	**1.1 Reasons and Pathways for Accessing the BU**	"In certain situations, I asked myself which person could best assist with this specific question, and I independently reached out to her (the Head of BU)" (C.1.4). "Our initial request was driven by the need for an external viewpoint, a different perspective from ours. Perhaps that is what ethics is: seeing things differently" (C.15.10). "The main reason we contacted the BU was simply because it exists—a resource not commonly available in hospitals" (C.6).
	1.2 BU's Role and Activities	"Ethics training highlighted topics we normally lack knowledge about" (C.2.3). "I believed my choice was right, but I needed someone to help rationalize all decisions and the care process" (C.5.18). "Discussing specific cases in educational sessions revealed disagreements within the care team, showing us the need for more training on palliative sedation" (C.11.1.5). "The BU's purpose is clear: to provide ethical support and confidence, not just methodologically, especially for non-clinical decisions which hold equal importance to clinical ones" (C.16.3).
2. Role of the Bioethicist and Organizational Considerations	**2.1 Personal Competencies and Attitudes**	"Hands-on case discussions were the strongest part of training; they made the theory tangible" (C.10). "Initially, changing my approach to focus less on 'doing' was surprising, but the bioethicist provides non-judgmental guidance, making them ideal for this support" (C.18.20). "Cultural awareness is crucial, and having experts who study these issues ensures useful feedback and overall departmental growth" (C.11.41).
	2.2 Organizational Aspects	"Addressing immediate symptoms is straightforward, but ethics involves long-term pathways, which can conflict with our usual pace" (C.3.28). "With only one point of contact (the BU head), it's unclear who to approach, showing a limitation of the current setup" (C.11.45). "I wasn't aware the BU existed; spreading knowledge of its existence is essential" (C.5.43). "Organizational and cultural barriers mean that reflecting on ethics is often seen as a luxury rather than an integral part of work" (C.2.21).
3. Influence on Healthcare Professionals' Thinking	**3.1 Deepening Reflection**	"Having another trained perspective allows for more mature, nuanced assessments" (C.1.10). "Access to a professional with broader philosophical knowledge helps address daily clinical and ethical decisions" (C.6). "The Head of BU strengthens both individual and team approaches, which is doubly beneficial" (C.13.22). "Sometimes issues are not ethical but relational or organizational; ethics interventions still help clarify the problem type" (C.14.10).
	3.2 Raising New Questions in Clinical Practice	"She (the BU head) guided us to take small steps with families, preparing them gradually for the child's illness, rather than overwhelming them" (C.18.9). "Differences of opinion within the care team are eased by the tools provided by the BU" (C.14.20).

		"Interactions with patients improved; professionals are now more focused on understanding and empathy, reducing hierarchical distance" (C.15.33).
4. Emerging Needs	—	"Formalizing these activities in a structured way would be highly beneficial" (C.1.16). "If the BU were consistently present, interventions could happen earlier, improving care pathways" (C.3.23). "Expanding this training to all departments is crucial because ethical questions arise everywhere" (C.13.38). "A system within the facility dedicated to ethical care would provide a foundation for all HPs, as ethics underpins the profession but is often under-recognized" (C.16.35). "COVID-19 highlighted many ethical challenges; supporting HPs ethically prevents dissatisfaction and burnout" (C.16.36).

Ways and significance of BU collaborations

Accessing the BU

Participants generally described access to the BU as informal, spontaneous, and highly personal (C.1.4; C.1.6). In some cases, introductions were facilitated by other professionals or department directors. The most frequently cited motivations for contacting the BU were the need for guidance on Law no. 219 concerning Advance Directives and Advance Care Planning, as well as the desire to enhance professional quality of care (C.15.10). After the initial contact, most participants coordinated with the Head of the BU to determine which type of service—research involvement, ethics consultation, or ethics training—would best meet their needs. The mere presence of the BU within the hospital was also often highlighted as a reason for engagement (C.6.6). Participants characterized their collaboration in varying ways, describing it as "germinal" or "in progress" (C.11.4), while others reported more intensive involvement, labeling it "extensive," "daily," or "varied" (C.9.4; C.10.11; C.15.1). A few participants noted an abrupt interruption of collaboration due to the COVID-19 pandemic (C.13.14).

BU's role and activities

Those involved in BU research projects emphasized that the topics addressed often centered on the patient's internal experience and autonomy in decision-making (C.15.3.1). Participants appreciated the interconnectedness of the BU's various activities, which fostered a practical, hands-on approach rather than a purely theoretical one (C.8.16). This was particularly evident in training sessions and care team case discussions, with participants noting the innovative nature of the subjects covered in educational programs (C.2). Individual ethics consultations were sought by HPs seeking reassurance and guidance in interpreting complex emotions (C.5), while ethical supervision was seen as a structured, multidisciplinary discussion within care teams (C.11.1.5).

Role of the Bioethicist and organizational considerations

Personal attitudes and competencies

Participants viewed the bioethicist as a key professional to be involved in complex case discussions, much like other specialists. They valued attributes such as responsiveness (C.7), availability, communication skills (C.11.11), and a practical approach to problem-solving (C.10). The bioethicist's ability to support HPs in expressing their thoughts without judgment was particularly appreciated, as was their role in alleviating moral distress. Participants emphasized that the bioethicist possesses advanced expertise that facilitates alternative perspectives, fostering patient-centered decision-making (C.18.20).

Organizational considerations

While most participants reported no major issues in collaborating with the BU, some organizational challenges were identified. Activating ethics consultations in urgent situations was considered difficult, often occurring too late to prevent conflicts, highlighting the benefit of a more proactive approach (C.3.28). Other limitations included the lack of additional trained personnel to support the bioethicist (C.11.45) and insufficient awareness among staff regarding BU services (C.5.43). A few participants perceived bioethics as a "niche" area and suggested a more bottom-up approach, such as greater integration of BU personnel into daily healthcare activities (C.D).

Impact on healthcare professionals' attitudes fostering deeper reflection

Participants reported that engagement with the BU, particularly through ethics consultations and research projects, promoted a more reflective and nuanced approach to clinical practice (C.1.10). Collaborating with the BU stimulated new questions and encouraged attention to the practical, day-to-day ethical challenges of patient care (C.6). Some participants noted that working with the BU increased awareness of the limits of their own competencies (C.7), while others reported that it supported a more holistic understanding of clinical cases (C.13.22; C.14).

Identifying emerging ethical questions in clinical practice

Participants highlighted that BU-led research activities enabled them to pay closer attention to the ethical dimensions of healthcare challenges. For instance, following a four-hour ethics training session, pediatric healthcare professionals requested a research project specifically focused on pediatric advance care planning. They also noted that ethics support helped them better coordinate the timing of end-of-life care for pediatric patients with the time parents needed to navigate these complex circumstances (C.18.9; C.18.10). Many participants reported feeling supported (C.5.21), reassured, at ease (C.5.27; C.15.27), and more confident (C.10) when making difficult decisions, both in patient interactions and in collaboration with colleagues (C.14.20; C.15.33).

Further needs

Participants recommended establishing a more structured system for interacting with the BU, including clearer, formalized access procedures (C.1.6). They suggested stronger integration between the BU and clinical wards, with the BU adopting a more proactive approach (C.4; C.6). There was also a call to expand the "common ground" on ethical issues across different professional roles, using practical and hands-on methods (C.7; C.13.38; C.16.36). Overall, participants emphasized the importance of normalizing ethical discussions within routine clinical practice (C.6). Key areas identified for further exploration included end-of-life care, communication, advance directives, research ethics, advance care planning, shared decision-making, and ethical challenges arising from COVID-19.

Both the quantitative data and qualitative interviews provided critical insights into the BU's influence on clinical practice. Quantitative findings demonstrated a significant increase in BU research projects and collaborative activities with other units over time, a phenomenon that can be described as "inter-related growth." Our results suggest that integrating empirical bioethics research with traditional clinical ethics services within the same unit generates mutual reinforcement, creating synergistic effects. For example, several research projects emerged from ethics consultations, while other consultations were integrated into ongoing research projects. Healthcare professionals particularly valued the combination of research, training, and ethics consultation, emphasizing the importance of expanding these initiatives and disseminating BU knowledge across the organization. This represents a novel finding, as most prior studies focused exclusively on either research activities [24, 25] or ethics consultation [3, 10, 26].

The data also show that BU research projects positioned the unit as a cross-institutional resource, adaptable to various clinical settings and professional groups. Engaging in research-driven ethical problem-solving fostered collaboration between bioethicists and healthcare professionals and allowed the development of tailored ethics tools and interventions. This approach encouraged healthcare professionals to integrate ethics into daily practice, consistent with empirical bioethics frameworks such as 'deliberative engagement,' the 'embedded researcher,' and the 'committed researcher' [27]. These approaches combine patient-centered services with multidisciplinary research teams to better understand stakeholder perspectives and establish ethically coherent and practically viable frameworks [27].

Despite growing interest in empirical bioethics [24, 28], its implementation faces challenges, including limited training for bioethicists in empirical methods and lack of consensus on appropriate methodologies [29]. Standardized approaches remain debated [30], yet our findings highlight the value of a clinical ethics support service (CESS) that combines research projects with consultation activities.

Another key finding concerns ethics consultation. The BU's consultations have historically focused exclusively on healthcare professionals. Patient involvement in CESS remains a debated topic in Europe [31], with limited theoretical and empirical evidence. While including patients or family members in consultations can provide valuable insights and enhance decision-making, it may also increase tensions or inhibit candid discussion [32].

Finally, qualitative data indicated that healthcare professionals appreciated the practical orientation of ethics training, which prompted reflection on daily clinical challenges and professional competencies. Previous studies confirm that multidimensional ethics education—combining lectures, workshops, small-group discussions, and ethical rounds—enhances ethical knowledge, sensitivity, application of ethical principles, and identification of ethical issues in practice [33-35].

Our qualitative analysis also underscored the bioethicist's supportive role within healthcare teams. Participants reported feeling reassured and more confident when navigating complex clinical decisions. These observations align with existing literature, which highlights the ethicist's role in fostering an environment conducive to ethical reflection and thoughtful deliberation [36].

Nevertheless, the provision of ethics consultation by a single bioethicist represents only one form of Clinical Ethics Support Service (CESS). Various models of CESS have been implemented internationally, including the Clinical Ethics Committee (CEC) framework, which is particularly prevalent in Europe. A CEC is a multidisciplinary institutional body tasked with examining, discussing, and addressing ethical challenges in patient care [3]. Its function is to provide guidance or recommendations to healthcare professionals regarding the optimal course of action for specific clinical cases, often formalized through written institutional responses. Unlike consultations provided by a single bioethicist, support from a multidisciplinary and pluralistic team can be especially valuable for complex cases involving conflicting moral perspectives [37].

Given that our findings indicate healthcare professionals have become increasingly aware of the ethical dimensions of their clinical practice, we hypothesized that they could benefit further from the involvement of a multidisciplinary committee in managing intricate moral situations. In response, the BU initiated an empirical bioethics research project focused on the implementation and evaluation of a CEC, aiming to further integrate its range of activities.

Strengths and limitations

A major strength of this study lies in its mixed-methods evaluation of the BU, combining both quantitative and qualitative approaches. To our knowledge, no previous experience has simultaneously assessed a BU's ethics consultation, training, and empirical research activities. Additionally, the emphasis on research distinguishes our BU from similar initiatives.

However, there are limitations to consider. This study was conducted within a single local context using a convenience sample. Furthermore, because comparable BUs do not exist elsewhere in Italy, the findings are specific to one research hospital in northern Italy. Nationally and internationally, there are no comparable quantitative datasets for benchmarking.

Conclusion

Our study aimed to provide evidence of the BU's impact on clinical practice, and the results offer new insights into the integration of empirical research, ethics consultation, and ethics training. The combination of these activities fostered greater collaboration and promoted an "ethical culture" among local healthcare professionals. This integrated approach could serve as a potential model for other large hospitals. Future research should examine the feasibility and effectiveness of this model in diverse healthcare settings and across different countries.

Acknowledgments: We are grateful to Cinzia Gradellini who helped the research team with qualitative interviews, and to all the HPs who participated in this study. Their collaboration has been invaluable, as is their commitment to bringing ethics to the patient's bedside. This study was partially supported by Italian Ministry of Health – Ricerca Corrente Annual Program 2023.

Conflict of Interest: None

Financial Support: None

Ethics Statement: The Ethics Committee of the Local Health Authority of Reggio Emilia (Aven) approved the study (Protocol n. 2020/0109819 on 24/09/2020). Written informed consent was obtained from all participants after a clear explanation of the study objectives and to ensure confidentiality. All methods were carried out in accordance with relevant guidelines and regulations.

References

1. Aulisio MP, Arnold RM, Youngner SJ, Hudson B. Health care ethics consultation: nature, goals, and competencies. A position paper from the society for

health and human values-society for bioethics consultation task force on standards for bioethics consultation. Ann Intern Med. 2000;133(1):55–7. doi:10.7326/0003-4819-133-1-200007040-00012
2. Boniolo G, Sanchini V. Consulenza etica e decision-making clinico. Per comprendere e agire in epoca di medicina personalizzata. 1st ed. Milan: Pearson; 2017.
3. Rasoal D, Skovdahl K, Gifford M, Kihlgren A. Clinical ethics support for healthcare personnel: an integrative literature review. HEC Forum. 2017;29(4):313–46. doi:10.1007/s10730-017-9325-4
4. Fletcher JC. What are the goals of ethics consultation? A consensus statement. J Clin Ethics. 1996;7(2):122–6.
5. Goldenberg MJ. Evidence-based ethics? On evidence-based practice and the "empirical turn" from normative bioethics. BMC Med Ethics. 2005;6:E11. doi:10.1186/1472-6939-6-11
6. Borry P, Schotsmans P, Dierickx K. The birth of the empirical turn in bioethics. Bioethics. 2005;19(1):49–71. doi:10.1111/j.1467-8519.2005.00424.x
7. De Panfilis L, Merlo DF, Satolli R, Perin M, Ghirotto L, Costantini M. Clinical ethics consultation among Italian ethics committee: a mixed method study. PLoS One. 2019;14(12):e0226710. doi:10.1371/journal.pone.0226710
8. De Panfilis L, Merlo DF, Satolli R, Coppola T, Ghirotto L, Costantini M. Clinical ethics consultation and research ethics consultation: a call for Italy. Am J Bioeth. 2018;18(1):63–4. doi:10.1080/15265161.2017.1403665
9. Leuter C, Petrucci C, Caponnetto V, La Cerra C, Lancia L. Need for ethics support in clinical practice and suggestion for an Ethics Consultation Service: views of Nurses and Physicians working in Italian Healthcare Institutions. Ann Ist Super Sanita. 2018;54(2):117–25. doi:10.4415/ANN_18_02_07
10. Furlan E, Viafora C, Oprandi N, Cipolletta S. Creare e coordinare una rete regionale di comitati etici per la pratica clinica. Risultati e lezioni apprese da uno studio qualitativo svolto in Veneto/Establishing and coordinating a regional network of healthcare ethics committees. Findings and lessons learnt from a qualitative research in the Veneto Region (Italy). Medicina E Morale. 2019;68(1):11–23. doi:10.4081/mem.2019.564
11. Regione Veneto. Deliberazione della Giunta Regionale n. 4049 del 22 dicembre 2004. Interventi in materia di Bioetica. Istituzionalizzazione del Comitato regionale per la Bioetica. Linee-guida per la costituzione ed il funzionamento dei Comitati etici per la sperimentazione. Linee-guida per la costituzione ed il funzionamento dei Comitati etici per la pratica clinica. 2004. Available from: https://bur.regione.veneto.it/BurvServices/Pubblica/DettaglioDgr.aspx?id=178000
12. Regione Toscana. Deliberazione della Giunta regionale. 2021. Available from: http://www301.regione.toscana.it/bancadati/atti/Contenuto.xml?id=5309988&nomeFile=Delibera_n.1219_del_22-11-2021
13. Azienda Sanitaria Universitaria Integrata di Trieste. Formalizzazione dell'organizzazione supportante l'etica clinica nell'A.S.U.I. di Trieste, in attuazione dell'Atto Aziendale adottato con decreto n. 476/2017. Available from: https://asugi.sanita.fvg.it/export/sites/aas1/it/documenti/all_dss/mat_info/dss_nepc_dcr_606_2017_org_etica_cl_asuits.pdf
14. National Committee of Bioethics. Clinical Ethics Committees. 2017. Available from: https://bioetica.governo.it/en/opinions/opinions-responses/clinical-ethics-committees
15. National Committee of Bioethics. The role of Bioethics Experts in Ethics Committees. 2021. Available from: https://bioetica.governo.it/en/opinions/opinions-responses/the-role-of-bioethics-experts-in-ethics-committees
16. Petrini C. Will medically-assisted suicide mean the rebirth of (clinical) ethics committees in Italy? Med Leg J. 2020;88(1_suppl):26–30. doi:10.1177/0025817220923650
17. Huxtable R, Ives J. Mapping, framing, shaping: a framework for empirical bioethics research projects. BMC Med Ethics. 2019;20(1):86. doi:10.1186/s12910-019-0428-0
18. Molewijk B, Stiggelbout AM, Otten W, Dupuis HM, Kievit J. Empirical data and moral theory. A plea for integrated empirical ethics. Med Health Care Philos. 2004;7(1):55–69. doi:10.1023/b:mhep.0000021848.75590.b0

19. Hurst S. What "empirical turn in bioethics"? Bioethics. 2010;24(8):439–44. doi:10.1111/j.1467-8519.2009.01720.x
20. Comitato Etico Clinico AUSL Reggio Emilia. Available from: https://www.ausl.re.it/comitato-per-letica-nella-clinica-cec
21. Haltaufderheide J, Nadolny S, Gysels M, Bausewein C, Vollmann J, Schildmann J. Outcomes of clinical ethics support near the end of life: a systematic review. Nurs Ethics. 2020;27(3):838–54. doi:10.1177/0969733019878840
22. Creswell JW, Plano-Clark VL. Designing and conducting mixed methods research. 3rd ed. Thousand Oaks: Sage; 2010.
23. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Med Res Methodol. 2013;13:117. doi:10.1186/1471-2288-13-117
24. Wangmo T, Provoost V. The use of empirical research in bioethics: a survey of researchers in twelve European countries. BMC Med Ethics. 2017;18(1):79. doi:10.1186/s12910-017-0239-0
25. Chadwick R, Wilson D. The emergence and development of bioethics in the UK. Med Law Rev. 2018;26(2):183–201. doi:10.1093/medlaw/fwy011
26. Fox E, Tarzian AJ, Danis M, Duke CC. Ethics consultation in U.S. hospitals: opinions of ethics practitioners. Am J Bioeth. 2022;22(4):19–30. doi:10.1080/15265161.2021.1893550
27. Fournier V, Bretonnière S, Spranzi M. Empirical research in clinical ethics: the "committed researcher" approach. Bioethics. 2020;34(7):719–26. doi:10.1111/bioe.12742
28. Ives J, Dunn M, Molewijk B, Schildmann J, Bærøe K, Frith L, Huxtable R, Landeweer E, Mertz M, Provoost V, Rid A, Salloch S, Sheehan M, Strech D, de Vries M, Widdershoven G. Standards of practice in empirical bioethics research: towards a consensus. BMC Med Ethics. 2018;19(1):68. doi:10.1186/s12910-018-0304-3
29. Davies R, Ives J, Dunn M. A systematic review of empirical bioethics methodologies. BMC Med Ethics. 2015;16:15. doi:10.1186/s12910-015-0010-3
30. Brooks L, Bell D. Teaching, learning and assessment of medical ethics at the UK medical schools. J Med Ethics. 2017;43(9):606–12. doi:10.1136/medethics-2015-103189
31. Brierley J, Archard D, Cave E. Challenging misconceptions about clinical ethics support during COVID-19 and beyond: a legal update and future considerations. J Med Ethics. 2021;47(8):549–52. doi:10.1136/medethics-2020-107092
32. Magelssen M, Pedersen R, Miljeteig I, Ervik H, Førde R. Importance of systematic deliberation and stakeholder presence: a national study of clinical ethics committees. J Med Ethics. 2020;46(2):66–70. doi:10.1136/medethics-2018-105190
33. Stolt M, Leino-Kilpi H, Ruokonen M, Repo H, Suhonen R. Ethics interventions for healthcare professionals and students: a systematic review. Nurs Ethics. 2018;25(2):133–52. doi:10.1177/0969733017700237
34. De Panfilis L, Tanzi S, Perin M, Turola E, Artioli G. "Teach for ethics in palliative care": a mixed-method evaluation of a medical ethics training programme. BMC Palliat Care. 2020;19(1):149. doi:10.1186/s12904-020-00653-7
35. Sader J, Audétat MC, Nendaz M, Hurst S, Clavien C. Design bioethics, not only as a research tool but also a pedagogical tool. Am J Bioeth. 2021;21(6):69–71. doi:10.1080/15265161.2021.1915416
36. DuVal G, Clarridge B, Gensler G, Danis M. A national survey of U.S. internists' experiences with ethical dilemmas and ethics consultation. J Gen Intern Med. 2004;19(3):251–8. doi:10.1111/j.1525-1497.2004.21238.x
37. Crico C, Sanchini V, Casali PG, Pravettoni G. Evaluating the effectiveness of clinical ethics committees: a systematic review. Med Health Care Philos. 2021;24(1):135–51. doi:10.1007/s11019-020-09986-9