ABSTRACT
We analyzed clinical ethics 10 years ago, assessed its progress in research, education and ethics committees and consultation; wrote predictions for the future of this field and in this article we review previous observations as well as highlight key developments and remaining challenges for clinical ethical work.

INTRODUCTION

Introduction In the context of the current global debate about the ethics of medical interventions, it is often assumed that the use of medical technology is morally acceptable only where it is safe. However, this assumption fails to take into account the potential for unintended effects or harm and the need for a better understanding of the ethics of the interventions involved. In particular, it ignores the potential for bias, and the potential for the use of unrepresentative or untested interventions to influence clinical outcomes.

This paper will examine the ethical implications of the use of medical technology in the context of clinical ethics revisited. It will explore the ethical implications of the use of medical technology in the context of clinical ethics revisited. It will explore the ethical implications of the use of medical technology in the context of clinical ethics revisited.

In the context of the current global debate about the ethics of medical interventions, We hope that a decade from now, when clinical ethics is reviewed by us, the emphasis will no longer be on ethics courses, ethics committees, consultants or any other aspect of ethics, but rather on an understanding among most physicians and medical students that ethics are an essential and natural component of good clinical medicine. We want to see ethical principles at the intersectional level -- in the relations between sick patients and physicians who claim to be able to heal or comfort them. The progress of clinical ethics has led to this vision being realized in the last ten years. In this article, we will review our earlier observations, highlight key developments over the past decade, and discuss remaining challenges for the field. We will use our original format of dividing clinical ethically by research, teaching, committees, consultation activities, as well as revisiting our predictions for future work. This article is based on the opinions of three physicians who have been active in various aspects of healthcare policy. While we hope it will encourage the type of commentary and debate that other earlier ones. The investigation of clinical ethics. We had previously made observations, but this is now a new topic. Ten years ago, we emphasized the need for establishing a research base for clinical ethics. We contended that clinical practice was defined by the clinical area it focused on, such as end-of-life care, consent, priority setting, or women's health. A taxonomy was created for clinical ethics research, which is based on method rather than clinical area. This divided research into whether it used theoretical methods or empirical methods, as shown in Table 1. Ultimately, we asserted that theoretical and empirical research were complementary fields, offering research possibilities that could not be fulfilled independently. Remarkable breakthroughs. The research base of clinical ethics has experienced a significant increase in the past decade. In the early 1990s, the number of new articles in MEDLINE with 'ethics' as indexed keyword increased significantly, continuing the trend from 20 years ago. By 1993, this number had plateaued at over 3000 new Articles per year. But the main research opportunities have not come largely from clinical ethics but from specific programmes such as the US human genome project and the end-of-life movement, which allocated 2% of its

budget to ethical, legal and social issues, and while with funding from organisations including the Soros Open Society Institute, the Robert Wood Johnson Foundation,and the National Institutes of Health came the largest single ethics research project of the past decade - the Study to Understand Prognoses and Preferences and Risks Of Treatment (SUPPORT). Ezekiel Evans was instrumental in setting up the Center for Clinical Bioethics in the USA, while funding for ethics projects among member nations has been allocated by the European Community. Additionally, the Canadian Institutes for Health Research established a peer review panel for health ethics, law, and humanities that will review grants for the first time in fall 2000. The use of quantitative methods is becoming more common in empirical research, both in ethics and beyond, due to the deep-rooted nature of many phenomena examined by ethics researchers. As a result, qualitative methods have become increasingly important in analyzing medical topics such as do-not-resuscitate orders, advanced care planning, and grounded theory. The enduring issues that remain unresolved are being discussed. The majority of national funding agencies have only provided limited amounts of direct funding for ethical research, with most of the additional funding coming from indirect means like operating grants and career awards. Consequently, it remains challenging for funding institutions worldwide to make research into ethical issues a mainstream issue. The majority of major medical and scientific journals now publish ethics articles, but there is a greater amount of commentary than original research. The quality of peer review for ethics research is inconsistent, although this remains an issue that other research types may encounter. The number of ethics specialty journals currently in circulation is now over 10; although these journals are a welcomed addition to the publishing landscape, their impact factors are not as strong as those of major medical and science journals or some specialties, and are therefore not relevant to clinical ethics scholars' promotion and career awards. Furthermore, they are also not read by front line health care workers whom ethics authors might like to influence. Despite no evidence that the time gap between ethics research and publication would be worse for ethics than with other health research, it will remain a challenge for clinical ethics scholars to make full use of the new e-publishing environment. The visibility and validity of ethics research could be improved through interdisciplinary research, which our previous articles neglected to emphasize enough. Rosenfield provided a summary of the following definitions: Researchers can work in parallel or sequentially across different disciplines to solve a common problem. Collaboration across different disciplines is essential for researchers to address a common problem, making it an interdisciplinarity within their research area. A cross-disciplinary approach is employed by researchers to address a problem through the use of overlapping theories, concepts, and approaches. Regrettably, there are not enough interdisciplinary ethics research cases. Inter-professional ethics research, encompassing nursing, social work, pastoral counselling, and other professions, is essential. It also contributes to our understanding of the ethical challenges faced by diverse professional views. We support initiatives such as the Tavistock Principles that seek to unite different profession groups and promote a common ethic. The research base will be further strengthened by strengthening the capacity to conduct research and networking among clinical ethics scholars. We hope that universities, research funding agencies, and journals will increasingly recognize the value of clinical ethical scholarships over the next decade. Furthermore, we hope to witness the growth of international networks that facilitate learning across national boundaries, including such conferences as end-of-life care, priority setting, women's health, etc. Educating on clinical ethics. We had previously made observations, but this is now a new topic. We made the observation about

teaching clinical ethics to medical students and clinicians ten years ago. Teaching was primarily focused on improving patient care by incorporating quality improvement measures into the teaching process. The teaching of cognitive, behavioural, and character development is crucial. All medical school, residency, and continuing education programs should incorporate teaching into the physician's education. The clinicians who received formal ethics education had an edge in teaching, but the philosopher bioethicists also had a significant role to play. The question of whether teaching clinical ethics through experimentation had any impact was a persistent and challenging inquiry. The shortage of clinicians with the necessary skills to teach clinical ethics was a significant issue. There was a widespread lack of confidence in the teaching of virtue or character. Remarkable breakthroughs. Teaching clinical ethics has become more widely taught in the last 10 years, with ethics being introduced to almost every US and Canadian medical school ten years ago. Similarly, the UK General Medical Council has made ethics teaching mandatory for UK medical schools, while the Canadian Royal College of Physicians and Surgeons has mandated that all residency programmes teach ethics as a requirement for accreditation. Linda Emanuel's Education of physicians in End-of-Life Care Project is an example of exemplary national continuing education programme. The recognition that clinical ethics teaching should be tailored to the learner's individual interests has grown. For instance, medical students desire ethics instruction to address the real problems they face. Additionally, those who teach these curricula at the Royal College of Physicians and Surgeons of Canada have developed specialty-specific curRICULUMs for major clinical specialties. Various methods of teaching clinical ethics, such as role play, standardised patients, and Internet-based cases, have been employed. There has been a debate about whether virtue can be taught. Kopelman has suggested that the "tension between those who wish to teach values and virtues directly" may be more apparent than it is in practice. Medical exams are increasingly addressing ethical issues, leading to the establishment of an expert committee by the National Board of Medical Examiners in the USA to evaluate exam materials for their high number of end-of-life care questions. Clinical ethics education has seen advancements in assessment. The ethical objective structured clinical exam has been created and tested. Sulmasy demonstrated that a clinical ethics course for Johns Hopkins residents resulted in long-term improvements in knowledge and confidence. Hafferty and Franks suggested that clinical medicine should include the teaching of clinical ethics as part of its "hidden curriculum". There has been a rise in the number of opportunities for teaching clinical ethics, with Georgetown University in Washington DC, USA offering specialized bioethics courses for over two decades. Additionally, there is Xi Jinping (MacLean Center for Clinical Ethics) at the University of Chicago, which has trained more than hundert trainees in ethics fellowships, many of whom are now working in leadership positions across North America; the MacLeans Center also trains female clinicians and educators who want to develop into clinician-teachers partnerships. The enduring issues that remain unresolved are being discussed. The development of online clinical ethics teaching modules is essential to reduce duplication and increase the availability of teaching resources. Moreover, as professional development expands, ethics instruction must cater to the convenience and demands of clinicians. This will also enable self-directed learning and distance education. The second point is that we must incorporate the growing understanding of what is effective into continuing education. According to Davis et al, interactive continuing care sessions that encourage participation and skills development can change professional practice and health care outcomes significantly. If we want to change practice, we need

to move beyond small group learning and develop opinion leaders in clinical ethics. Additionally, bedside teaching is often the most effective way of teaching clinical ethical issues, even though it may not be as well-known. Thirdly, we must take advantage of the informal curriculum. Clinicians in high-ranking positions who do not show respect for patients can impede the education of medical students and residents, which no ethics education programme can remedy. We need to create a culture in our academic programmes and clinical teaching units that is sensitive to the ethical concerns of patients and families. This will happen if we recruit the right individuals for ethics training, and hang on to this coat tail. The importance of incorporating character in medical education cannot be overstated. The more complex the subject, the more important it is for educators to focus on character formation and not just teaching virtues. This requires both faculty role modelling and building a sustainable community of clinicians who understand the needs of patients and families, which are not present in many modern medical schools today. Fifth, we need to emphasize evaluation. Physicians must consider evaluating clinical ethics at all levels, including by reviewing in-training evaluation reports and measuring the effectiveness of the measures used during patient assessments. Furthermore, it is important to seek data from physicians, nurses, and other healthcare providers that accurately portrays the behavior of patients and their families at the bedside. We need teachers who possess both clinical and ethical skills to teach them more effectively. This is especially true if we are referring to the fact that most universities do not have sufficient staff to provide teaching aid for patients at the bedside, which is why academic health science complexes need to develop faculties for teaching ethics beyond formal ethics training. Ethics committees and consultations We had previously made observations, but this is now a new topic. Ten years ago, we identified three primary functions of ethics committees and consultants: education, institutional policy development, and case consultation. Our argument on ethics consultation was that: The main focus is on enhancing patient care and improving their well-being. • The ethics consultant is expected to possess both ethical and clinical expertise, not necessarily being a medical professional. The consultant's recommendations are interpreted as suggestions that the referring physician may accept or reject. Three significant hazards of ethics consultations and committees were emphasized: Refusal of moral decision making by the referring physician. The ethics consultant has obstructed moral decision making by disengaging people. The ethics committee's lack of responsibility is a significant issue. Four distinct types of ethics case consultation were outlined: Committee work is purely ethical, with no ethics consultations involved. The ethics committee does not systematically review the consultations provided by Committee members who act as consultants. Consultations will be reviewed by a post-facto committee review. The ethics consultation service is the sole option available, with no involvement from any entity or group of individuals. We underscored the dearth of evidence that had fueled the development of ethics committees and consultation services, and we advocated for the evaluation of these programs. Remarkable breakthroughs. The American Society for Bioethics and Humanities' report on 'Core Competencies for Health Care Ethics Consultation,' which was co-authored by Robert Arnold and Stuart Youngner, was a significant development in the past decade. The report outlined core competencies for ethics consultation in health care, but did not authorize programmes or certification of individuals or groups to conduct such consultations. During the 1990s, two humorous yet invigorating articles challenged the clinical ethics movement. Ruth Shalit, writing for The New Republic in 1997, took aim at clinical ethical conduct in

"When we were philosopher kings," stating that it failed to uphold educational standards or evidence of effectiveness, its "attitude of superior virtue", her ability to mix empirical and theoretical knowledge, and even the issue of ethics-for-hire. The Lancet published an editorial in the same year, which concluded: "The ethics industry must be based on practical application rather than theoretical thinking. Debating ethical issues is just as important in everyday medical practice as choosing the most suitable treatment for patients. Any departments of ethics that are detached from the medical profession, wallowing away ideas and speculations, are redundant." These criticisms hold significant truths, requiring clinical ethicists to be more humble, self-critical, and reflective in their thinking. The Tavistock Group, Joanne Lynn, and Joan Teno all utilized clinical ethics to guide quality improvement efforts. Clinical ethics has witnessed a surge in interest towards resolving conflicts, particularly in areas like cultural difference and end-of-life care. This focus is expected to continue in the next decade. The enduring issues that remain unresolved are being discussed. The most exciting thing for ethics committees and consultants is that they can incorporate them into the quality improvement culture of health care organisations. This includes developing report cards for health Care Quality Improvement Organisations, as seen in Boston's Picker Institute where patients' concerns about improving their care are being heard by clinical teams and senior management. Another significant issue is that of organizational responsibility. If a board member of HCNO inquires, "Do you consider this company to be ethical?" and we need to provide measurable evidence and definitions for these indicators. However, there is no comprehensive answer to this question given the US Joint Commission on Accreditation of Health Care Organisations. What would be the most suitable approach to developing an accountability framework or ethics infrastructure for health care organisations? The recognition that health care organisations have capital assets, beyond equipment and buildings, also encompasses individuals working within the organization is growing rapidly. While clinical ethics acknowledges the importance of education for health professionals and employs modern methods of continuing education, it has not emphasized strengthening the capacity of health workers to address pressing clinical issues. Another difficulty is the ongoing work on organizational ethics, which is currently in its early stages of conceptual and methodological development. Organisational ethics involves collective accountability, meaning that individuals act together to achieve an ethical mission. This mission involves defining and implementing appropriate actions at all levels of institutional responsibility. What is considered the source of this obligation? Should organisational and clinical ethics committees be separated or combined? And do they have ethical obligations beyond the welfare and self-interests of the professionals they represent? Despite significant improvements in clinical ethics processes, the objective of improved clinical outcomes remains unattainable. Our colleagues in medical ethics are calling for increased efforts to demonstrate better patient outcomes related to clinical ethical activities.

CONCLUSION

Future developments in clinical ethics are being explored. We had previously made observations, but this is now a new topic. Our forecasts for clinical ethics ten years ago were: The ethical challenges posed by biotech advancements have resulted in new issues. The development of clinical ethics through research base strengthening and the establishment of graduate programmes and fellowships is being pursued. The intersection of clinical ethics and health policy, with a focus on the ethical

framework of health care institutions and systems, is being explored. Enhancing public education and participation. The conceptual underpinnings of bioethics are being developed. Changes in the doctor-patient relationship. Remarkable Changes Our prediction about the ethical challenges of biotechnology is just as accurate today as it was a decade ago. In the past decade, there were significant developments in this area, including cloning, xenotransplantation, stem cells, and the completion of the sequencing phase of The Human Genome Project. These developments occupied the attention of institutions such as the US National Bioethics Advisory Commission, the Organisation for Economic Co-operation and Development (OECD, Paris, France), the World Health Organisation, undoinguing, while also taking account taking the attitude towards the same level of Clinical ethics has achieved several milestones in terms of maturation, such as involving clinicians, entering medical organizations and institutions, spawning significant research and teaching initiatives, creating new career opportunities for physicians and other clinician staff. However, there is little evidence to suggest that clinical ethics can significantly contribute to improving patient care and outcomes, and further research is needed to assess the effectiveness of these efforts. Health policy researchers Ubel and Nord have conducted experiments on the trade-off between equity and efficiency. Holm has pointed out that priority setting requires more direct and effective solutions, while Daniels and Sabin have created "accountability for reasonableness" as a model for decision making. The field of clinical ethics has seen a remarkable increase in public education, although public consultation and involvement has fallen short. Art Caplan, renowned for his efforts to make bioethics issues relatable to the general public, is now considered arguably the most prominent interest among major news organizations. We believe these ethical issues will receive more attention and hopefully more progress in the next decade. The development of 'Principles of Biomedical Ethics' by Tom Beauchamp and Jim Childress has been a significant contributor to the conceptual foundations of clinical ethics. Jonsen, Siegler, and Winslade's clinically casuistical approach is still relevant for those interested in ethical issues. In the last decade, feminist theory has emerged as an important method, while feminist scholars have extended their analyses to topics such as reproduction. Virtue ethics, hermeneutics, or phenomenology need to be reconciled and rational order. The field of clinical ethics is not rooted in philosophy, law, or theology but rather lies in medicine, with an emphasis on the doctor-patient relationship. After two decades of development, the physician-client relationship has become much worse than it was during the introduction of medical practice in the United States due to bureaucratic practices like managed care in 1990s. It is alarming to learn that the patient-doctor relationship is deteriorating after all these years. How can clinical ethical principles be considered strong when the lack of fundamental relationships and patient relations remain if it isn't it? The enduring issues that remain unresolved are being discussed. The major ethical predicament at hand is the enormous differences in global health. Clinical ethics have historically been a focus in developed nations, but the movement towards universal health standards is expected to gain momentum. In 10 years time, when we revisit clinical ethics, we anticipate a release of the 2006 World Health Report on Global Health Ethics, which will address major global issues in bioethics, including biotechnology, research ethics and other important areas such as end-of-life care, priority setting, women's health, child health or mental health and rehabilitation ethics. Peter A Singer is backed by a grant from the Canadian Institutes of Health Research in support of his Investigator award. What are the answers? A list of seven commissioned responses to this article can be found at. If you want to leave a comment on the article

by Singer et al or any of the answers, please send us an email at editorial@biomedcentral.com.