CLINICAL ETHICS

Clinical bioethics integration, sustainability, and accountability: the Hub and Spokes Strategy

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The “lone” clinical bioethicist working in a large, multisite hospital faces considerable challenges. While attempting to build ethics capacity and sustain a demanding range of responsibilities, he or she must also achieve an acceptable level of integration, sustainability, and accountability within a complex organisational structure. In an effort to address such inherent demands and to create a platform towards better evaluation and effectiveness, the Clinical Ethics Group at the Joint Centre for Bioethics at the University of Toronto is implementing the Hub and Spokes Strategy at seven hospitals. The goal of the Hub and Spokes Strategy is to foster an ethical climate and strengthen ethics capacity broadly throughout healthcare settings as well as create models in clinical bioethics that are excellent and effective.

The important point about creating an ethical environment within an organisation is that the proposed structures are multiple, interconnected with one another, and diffused throughout the organisation.4

INTRODUCTION

In 2001, this journal devoted an entire supplement to examining the development of clinical ethics committees, particularly in the UK.5 This excellent report challenges the field of clinical bioethics to further question effectiveness, as well as the sustainability of existing models for delivery of ethics services. In Canada, clinical bioethicists are now employed by many hospitals and, typically, participate on research ethics boards, assist with policy development, serve as hospital ethics committee members, facilitate ethics education rounds, conduct ethics research, as well as provide ethics consultations.6 7 However, there is little evidence as to what counts as good practice in clinical bioethics and little communication among different clinical bioethics programmes about practices and impact, especially at a national level. Moreover within the individual programmes, regardless of size or location, there is often insufficient attention given to issues relating to the integration, sustainability, and accountability of clinical bioethics services. These issues are critically important as they have to do with the long term viability of clinical ethics, and so healthcare organisations, administrators, and bioethicists have compelling reasons to seriously consider the role that clinical bioethics plays in their organisation.

The Joint Centre for Bioethics (JCB) at the University of Toronto is a partnership between the University of Toronto and 10 affiliated hospitals. The JCB is home to the JCB Clinical Ethics Group, which is the largest organised multidisciplinary group of in-hospital clinical ethicists and fellows in Canada, most of whom work full time in the partner affiliated Toronto and area hospitals. These partner hospitals span a diversity of size, type, and specialty mix providing a useful and important backdrop from which to examine clinical bioethics in different settings. The JCB’s Clinical Ethics Group is thus in a unique position to pilot new strategies in clinical ethics toward improving healthcare through excellent and effective clinical ethics services. In this paper we introduce one such pilot initiative called the Hub and Spokes Strategy developed in an effort to realise our commitment to ethics services that are integrated, sustainable, and accountable. We explain the challenges of current clinical bioethics services and, in response to these, propose the Hub and Spokes Strategy.

CHALLENGES IN CURRENT MODELS OF CLINICAL BIOETHICS SERVICES

There are a number of important reasons why organisations need to concern themselves with bioethics.8 These include: responding to accreditation requirements for hospitals9 and residency programmes,10 ensuring research ethics standards are met (such as the Tri-Council Policy Statement in Canada), and maximising research funding opportunities that increasingly have an ethics focus.11 Additionally there are strong philosophical reasons why clinical ethics services are necessary in healthcare settings that aim to improve patient care, staff work life, and excellence in delivery of care.4 10–12 In light of these factors, it is fair to predict that the interest in and demand for clinical bioethics services will only increase in Canada and elsewhere. With trends toward multisite healthcare conglomerates and more complex corporate and organisational structures, we argue the current “lone” clinical ethicist or hospital ethics committee model will be unable to cope with the change in healthcare structures, but also unable to provide an appropriate ethics infrastructure. The challenges to clinical bioethics service provision that we explore below fall into four general themes: the lone clinical ethicist, lack of integration, poor sustainability, and suboptimal accountability.13–14

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Abbreviations: JCB, Joint Centre for Bioethics.

www.jmedethics.com
Challenge 1: the lone clinical ethicist
In large academic health science centres in Toronto, for example, the trend in clinical bioethics has been one of relying on a single bioethicist to provide ethics services, education, and research—often to multiple sites. This trend has come about in reaction to findings that traditional ethics committees that rely on volunteer members with little training or resources in ethics may not be providing the kind of ethics support as once hoped, leading some to argue for serious reconsideration and greater evaluation of the role and function of such committees.13 17 The lone clinical bioethicist (with or without a hospital ethics committee) however faces a number of challenges related to specialisation, workload, and peer support. Firstly, healthcare technology is evolving rapidly, questioning the assumption that a single generalist clinical ethicist can have sufficient biomedical understanding of highly specialised areas of medicine to provide adequate clinical bioethics support to all disciplines and subspecialties.13 17 This challenge may be felt more acutely in large general hospitals than in specialty hospitals or smaller community hospitals.

Secondly, even where clinical ethicists have the generalist and specialist competencies to be a valuable resource to their organisation, they cannot alone provide all the clinical bioethics services, education, and research required by, in particular, large and often multisite health science centres. A lone clinical bioethicist is often expected to provide a consultation service, ethics rounds in-services, committee leadership/support, research ethics review, ethics research, college/university teaching, and local/international collaboration and leadership. The inability of one person to meet all the multifaceted ethics needs of the organisation—whether due to specialisation and/or workload—is at the heart of the challenges related to sustainability, integration, and accountability discussed below.

Thirdly, the lone clinical bioethicist suffers without a community of peer support. A clinical bioethicist must be an organisational “insider,” a trusted colleague and valuable resource. At the same time, however, they are sometimes called upon to be a more neutral “outsider”; one who is willing to ask tough questions of colleagues and administrators if the need presents itself.14 15 Thus, the role of the lone clinical bioethicist comes with a degree of vulnerability. This may be mitigated in cases where the ethicist can access second opinions outside the organisation or has a well-functioning ethics committee within the organisation. However access to other outside clinical ethicists, or support from often inexperienced ethics committee volunteers, is not sufficient to sustain an ethics infrastructure and manage all the complex relationships required in this position.

Challenge 2: lack of integration
The responsibility to engage in ethics practice belongs to everyone within the hospital, from those in the boardroom to those at the bedside. Supporting ethics at all levels is a tall order for a clinical bioethicist providing clinical bioethics services. Granted, a clinical bioethicist never really works alone—there are generally others who provide assistance related to clinical bioethics services, either formally (for example, patient relations, risk management, professional practice, chaplaincy) or informally (for example, palliative care team, local clinician opinion leaders). In many settings, however, ethics services are provided in a fragmented and ad hoc basis. The challenge here is not only making stakeholders aware of the available services but coordinating these services to best serve the entire organisation. The clinical bioethicist may not be well positioned to coordinate these activities, especially if lines of accountability or job descriptions are unclear, overlapping, and conflicting. Moreover, even with available resources, there may be clinical divisions, professional disciplines, or, in today’s multisite health corporations, entire campuses where ethics needs go unmet because of limited number of hours in a day.

In discussing the “ethics gap” in healthcare organisations, Silva describes the following two phenomena: (1) “putting the cart before the horse” and (2) the “Band-Aid solution”.19 20 In the former, “health care organisations have sought to deal with specific clinical bioethics issues surrounding death and dying, organ transplantation, and informed consent, to name a few, before they have assessed the ethical life and ethical infrastructure of the total organisation” (page 2). Regarding the latter, “health care organisations have attempted to resolve ethical issues primarily through one or two approaches (e.g., clinical bioethics committees or ethics consultants) rather than using a wholistic systems approach” (page 2). The idea then is that ethics must be integrated into the healthcare environment, like threads woven into a fabric, so an increased awareness of the usefulness or impact of ethics is noticed and felt in day-to-day activities related to patient care. This “lived experience” of ethics must be sustained through the necessary resources, individual and organisational commitment, ongoing needs assessment and evaluation, and used to identify opportunities for improvement that will move the organisation towards excellence. Rather than functioning as relatively freestanding “add-ons,” clinical bioethicists and ethics committees need to be envisioned as focal points for ethics integration and leadership, strengthening ethics capacity throughout the organisation so that it is felt by those giving and receiving care.

Challenge 3: poor sustainability
While it is encouraging that healthcare organisations are turning their eye towards ethics, placing a clinical bioethicist and/or ethics committee as the “ethical centre” of an organisation, without an overall cultural commitment to ethics within/from the organisation, may not be effective or sustainable. The unsupported clinical bioethicist will spend as much of his/her time managing issues related to workload, credibility, buy-in, resources, and interpersonal relationships as the time he/she spends in supporting the ethical life of an organisation.

Many clinical bioethics committees and clinical ethicists struggle to achieve a sustained and supported role within the infrastructure of the organisations in which they function. At the JCB, for example, some hospital based clinical bioethics programmes do not have line-item budgets. This suggests that ethics is less visible or not acknowledged as an obvious hospital expenditure. To be a sustainable and effective resource, clinical bioethics services must receive adequate ongoing funding and support.20

Challenge 4: suboptimal accountability
Another challenge faced in the traditional model of providing clinical bioethics services is the need to develop appropriate lines of accountability and reporting. At the JCB affiliated hospitals, reporting structures vary across institutions with some clinical ethicists reporting directly to the hospital’s CEO, some reporting to a vice president, and others to a department director.1 In some circumstances the clinical ethicist’s direct supervisor may not have a background in clinical bioethics, or the kinds of skills or experience necessary to ensure appropriate evaluation or quality input for the services the clinical bioethicist provides.
Furthermore, clinical bioethicists who must rely on staff volunteers (for example, risk managers, ethics committee members) to assist in providing ethics services are hard pressed to demand accountability regarding these services when there are no formal lines of reporting.

An established mechanism for reporting would heighten the profile of ethics at an important level of decision making. Such a reporting relationship would also allow the clinical bioethicist access to those whose influence and backing is needed in providing strong support for ethics services in the hospital. In addition, with other services or departments within the organisation, established mechanisms to review and examine the effectiveness of clinical bioethics services are needed.

**TOWARDS INTEGRATION, SUSTAINABILITY, AND ACCOUNTABILITY IN CLINICAL BIOETHICS: THE HUB AND SPOKES STRATEGY**

The strategy being developed and piloted at seven affiliated hospitals of the University of Toronto JCB is called the Hub and Spokes Strategy. This initiative began in 2001 at one of the affiliated JCB hospitals as part of a strategic planning exercise to address the challenges inherent in the single bioethicist model of clinical bioethics. Soon the strategy spread to other affiliated hospitals of the JCB because of its promise to address major challenges posed by the lone bioethicist model practiced at most hospitals. This strategy continues to evolve from the practical work and experience of a number of bioethicists working collaboratively at JCB affiliated hospitals. The strategy at its roots emerged from reflection on practice about how to improve ethics services rather than theoretical discussions of applied ethics in the clinical setting. The Hub and Spokes Strategy was inspired by both organisation and business literature and was informed by years of interaction with national and international clinical ethics communities and other ethics networks.

The goal of the Hub and Spokes Strategy is to embed ethical considerations and strengthen ethics capacity broadly throughout the different levels of decision making found in healthcare institutions so that ethics can directly impact and influence quality patient care. The strategy aims to strengthen staff’s (for example, clinicians, managers, researchers) capacity in clinical bioethics at a local unit, programme, or service level, providing decentralised resources coordinated by a more centralised core of ethical leadership while emphasizing a commitment to improvement and effectiveness.

The metaphor for the Hub and Spokes Strategy is that of a wheel with a core centre from which spokes radiate out towards an outside rim. The hub consists of the core clinical bioethics leadership, while the spokes consist of clinicians and ethics resource leaders with training in ethics who help to integrate ethics awareness, knowledge, and skills throughout the organisational structure (see fig 1).

The Hub and Spokes Strategy’s core innovation is fostering local networks of ethics capacity and accountability. Such networks are composed of individuals organised along programme, service, or professional lines who function as local ethics resource leaders. Although networks of ethics capacity have been discussed previously in the literature, these have been applied more narrowly to ethics committees. We believe that such networks can be expanded across the whole organisation’s ethical life rather than limited to a single ethics network/committee. Organisational change can be enhanced through building the capacity of staff and facilitating supported networks of shared ethical concern towards improved patient care and quality of staff work life.

According to Ham, “the role of reformers is less to search for the next eye-catching idea than to build capacity for change and innovation to occur from within health-care organisations”.

Early experience in piloting the Hub and Spokes Strategy has shown us some of the strategy’s strengths and opportunities as well as insights into challenges we may face in its future implementation. The remainder of this paper will address these findings.

**Revising the role of the clinical bioethicist**

As stated previously, a lone clinical bioethicist cannot meet the many and diverse needs within complex healthcare settings. In the Hub and Spoke Strategy at the JCB, the clinical bioethicist functions with clerical support and in some cases a clinical bioethics fellow in the hub’s core providing the focal link among a network of ethics spokes who provide ethics support and education in their various areas of service. At the JCB, clinical bioethicists in the hub all have graduate level training in bioethics, at least a Master’s degree, plus significant clinical bioethics experience. These clinical bioethicists come from clinical and non-clinical disciplines such as law, medicine, nursing, philosophy, social work, psychology, and theology.

The primary goal of the hub is to enhance awareness, knowledge, and skills by building and supporting ethics capacity and networking throughout the hospital. The hub also strives to improve patient care and quality of staff work life by integrating ethics into research, education, and clinical practice. To this end, key activities may include: clinical bioethics consultation, ethics education, committee leadership and support, research, and university teaching. The hub coordinates, mentors, and supports the spokes to function as clinical bioethics resources within their area of healthcare practice, responding to day-to-day problems with ethical dimensions.

The Hub and Spoke Strategy overcomes the challenges related to specialisation, workload, and peer support inherent in the lone clinical bioethicist model. This is achieved by developing an interprofessional ethics community that has local knowledge/expertise, mechanisms for work sharing and mutual support. In addition, by recruiting spokes with strong existing ties and relationships within the organisation, the difficulty faced by many clinical bioethicists, who spend months and sometimes years to build trust and credibility, is...
mitigated. This model transforms the role of lone clinical ethicist to one of assuming leadership in coordinating and promoting ethics activities. This shift to leadership requires additional assistance for clinical ethicists in terms of mentorship or professional development to successfully transition from being the only ethicist to administering a clinical bioethics portfolio.

**Improved integration**

The greatest strength of the Hub and Spokes Strategy is its power to integrate ethics services into an organisation. In other words, this strategy weaves clinical bioethics into the organisational fabric so that its impact is felt directly by the staff and, most importantly, by the patients and their family members. The Hub and Spokes Strategy can be adapted to any corporate structure, building on the community and relationships that have already been developed and, where necessary, building new ones. The spokes, coordinated and mentored by the hub, are the mechanisms for integration. Spokes provide improved local access and specialised expertise building on established relationships. The decentralisation of ethics resources in the Hub and Spokes Strategy is the first step in making sure that ethics is understood not just as the clinical ethicist’s role, but as an integrated part of everyone’s role.

The spokes help implement ethics policies and educational initiatives and provide consultations in a way that is sensitive to the local context. At the same time spokes provide feedback to the hub about grassroots ethical issues that may need to be dealt with at a broader level. In striving for a true integration of clinical bioethics services, the activities of the integrated spokes coordinated by the hub provide a network of communication about ethical issues that flows seamlessly across the organisation.

The nature of the particular unit/programme/service area will determine how best to integrate the ethics services provided by spokes. Spokes may include frontline healthcare providers, unit managers, clinical educators, professional practice leaders, and the like. For a multisite amalgamated academic health sciences centre, for example, spokes from different sites or units may be recruited. At a smaller institution, spokes might be recruited along programmatic lines (for example, cancer services spoke, cardiac care spoke) or professional lines (for example, nursing spoke, social work spoke). What appears to be key is that spokes are recognised by their colleagues as ethics resource leaders and that spokes are accessible resources for these colleagues as they face ethical challenges in their everyday work.

Another important integrative element of the strategy is its commitment to multidisciplinarity. We believe that spokes recruited from a variety of disciplines, programmes, and services will not only improve the breadth of expertise and viewpoints available to the ethics community but also minimise the chances that important voices go unheard. Patients, family members, and staff are more likely to benefit from ethics services where spokes are positioned locally “where patients live”, allowing spokes to bring their in-depth knowledge of the relevant patient care issues to the discussion.

Having a spoke as a point person for ethics concerns in his/her own area of service has, occasionally, given rise to some challenges. For example, a spoke may struggle to be impartial in a consult involving controversial behaviour by one or more of his/her close colleagues. There may be a need, therefore, for the hub to provide or arrange an ethics consultation in cases where there might be a disqualifying conflict of interest or discomfort for the spoke. Spokes always have the option of drawing on the expertise in the hub and staff should be informed that they too have that option if they feel it would be more comfortable or appropriate not to involve the spoke in a particular case.

**Improved sustainability**

A key part of the Hub and Spoke Strategy’s sustainability lies in its integrated structure and focus on capacity strengthening. The hub offers core leadership of the institution’s clinical bioethics programme and is responsible for strategic planning, clinical bioethics oversight, quality assurance, and accountability. The hub coordinates and mentors the spokes, providing administrative support and educational development. The responsibilities of a spoke may vary across institutions and programmes, depending on needs and available resources. Spokes may act as point people for ethics consultations in their patient care/service area, as co-organiser (with the hub) of unit-based ethics rounds, and as a member of the ethics committee/network. The hub and spokes work closely together to help ensure that the healthcare institution’s policies, procedures, and practices reflect ethical standards for quality patient care and to provide resources to achieve this.

Because of the many demands of providing clinical bioethics services within a large academic healthcare organisation, a lone clinical ethicist is at risk of developing stress, burnout, and isolation. This ultimately affects long-term sustainability. Clinical bioethics services dependent on the efforts of a lone clinical ethicist are vulnerable in some instances to the disappearance of clinical bioethics support, should the ethicist leave the organisation. Clinical bioethics services that are integrated or woven through the organisational structure are more likely to offer necessary peer support to those bioethicists in crisis and may proactively address triggers for stress and isolation. In the rare circumstance that the bioethicist chooses to leave an organisation, an integrated model such as the Hub and Spokes Strategy will not unravel so easily and therefore will be more sustainable, even with the departure of one individual.

The strategy’s structure and focus on capacity strengthening is only one of the keys to long-term sustainability. Another key is an organisational commitment to providing the resources necessary to support that structure. This is one of the most significant challenges that we have faced in implementing the strategy. Having spokes provides many advantages in terms of integration and sustainability but these spokes are very often busy professionals. If they are to function effectively as part of this strategy, spokes should have some time dedicated to ethics (for example, some percentage of an FTE) or have ethics responsibilities built into their job description so that their clinical bioethics work does not merely become an impossible “add on” to their other responsibilities. It is important to keep in mind that there is often not an additional resource requirement because a percentage of their time to the management of such ethical issues. This model proposes a strategy to formalise these informal relationships, where they exist, in a more sustainable way. An indispensable part of the strategy would appear to be an ethics “champion” at a senior level who can advocate for the necessary resources to ensure the success of the Hub and Spokes Strategy.

Although sufficient resources are essential, moving from the lone clinical bioethics model to the Hub and Spokes Strategy need not be a large upfront investment. Few institutions are in the position to simultaneously train and provide release time for numerous spokes to function as local ethics resources. A transitional approach underway in one of the JCB hospitals is as follows: (1) designate clinical ethicist together with part-time clerical support and a clinical bioethics fellow as the Hub; (2) begin with modest job
description for spokes, focused on providing first contact for local ethics consults and helping organise local ethics rounds/in-services; (3) recruit spokes in areas of greatest need who (a) are ethics resource leaders, (b) have relatively flexible positions, and (c) ideally are already functioning informally in “spoke-like” ways; and (4) use hub (in collaboration with other institutions launching Hub and Spokes Strategy) to provide spokes with start-up education and training. The strategy can then be tailored to the needs and available resources of an institution—it can range from supporting very few spokes with modest responsibilities to several masters-trained spokes with more time dedicated to ethics consultation, education, and research.

Improved accountability

The Hub and Spokes Strategy seeks to formalise relationships that were previously informal or implicit. The hub provides the necessary resources, support, mentoring, feedback, and evaluation for the spokes. In turn, the spokes are accountable to the hub for providing high quality ethics services. To ensure strong and sustained support for a clinical bioethics infrastructure within the organisation, the hub is directly accountable to senior levels of the organisation.

Ideally, the hub requires a system of peer support and quality review from colleagues in the field who have similar responsibilities within healthcare settings. This essential practice allows bioethicists working in healthcare organisations to question institutional practices with some distance and perspective and seek support in circumstances where a bioethicist may feel compromised or conflict. The JCB provides weekly formal consultation debriefing opportunities for the group of clinical ethicists in the local hospitals, a forum to exchange ideas and innovations, and a network of support in which individual members of the clinical ethics group can seek support from other members. Individual clinical ethicists who are part of the JCB also conduct and collaborate in educational initiatives and research. These are some of the mechanisms then by which JCB bioethicists are indirectly held professionally accountable by their community of peers, offered opportunities to enhance skills and knowledge through JCB activities, and provided with the forum to seek necessary support from colleagues engaged in similar work.

Another vehicle for accountability being tested through the Hub and Spokes Strategy at the JCB is a clinical ethics forum (which may replace the traditional ethics committee). The clinical ethics forum is comprised of the hub, the spokes, a senior management representative, patient/family/lay representation, and other key stakeholders. In regular meetings, this forum provides quality peer review of ethics consults. It also coordinates activities, distributes shareable resources, provides opportunities for professional development, and, most importantly, builds a community of support. The emphasis of the forum is to develop and sustain an active accessible clinical ethics service that is monitored for quality improvement and effectiveness. This may be particularly applicable to community hospitals that rely on volunteer ethics committee members. Ethics forum leadership strives to: (1) reorient hospital clinical ethics services towards goals of integration, sustainability and accountability; (2) reconstitute the ethics committee by ensuring local leadership at programmatic, service, and discipline levels rather than relying on volunteer interest as the only source of membership. This would allow for a committee with more accountable representation from key disciplines, programmes, and services; (3) build ethics service provision into the job description of local ethics resource leaders and providing some protection of such individuals’ time; (4) provide ethics resource leaders with opportunities for ethics related training through, for example, affiliations with larger ethics programmes or with distance learning programs; and (5) create reporting structures and performance reviews that will provide the necessary accountability for ethics activities.

Future directions for the Hub and Spokes Strategy

Early experience with the Hub and Spoke Strategy suggests that it will be successful in improving the integration, sustainability, and accountability of clinical ethics services. At the JCB, this same model is also being applied to medical education (see http://www.utoronto.ca/pgme/) and other JCB activities. However there remain important issues for future research. For example: What are the specific contributions or goals of a bioethicist? How should clinical bioethicists prioritise their tasks? How do clinical bioethicists know if they are effective? It is for this reason that the JCB Clinical Ethics Group is conducting a study called the Project Examining Effectiveness in Clinical Ethics (PEECE). The purpose of this research is to help guide the evidence based development of clinical bioethics activities in Canada and elsewhere, and provide a basis for future research examining effectiveness in clinical bioethics based on feedback from key stakeholders. Although some consensus about goals in the field does exist, there is a dearth of evidence as to how and whether these goals are actualised and evaluated in practice from the perspectives of key stakeholders. We believe this will practically inform the core competency and model curriculum work of the American Society of Bioethics and Humanities (see http://www.bioethics.upenn.edu/faculty/doukas) and the working conditions initiative from the Canadian Bioethics Society (see http://www.bioethics.ca/english/workingconditions). It is our hope that the perspectives offered in this study will strengthen the Hub and Spoke Strategy and the broader ethics community.

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References


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