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The Evolution of Hospital Ethics Committees in the United States: A Systematic Review

Andrew Courtwright and Martha Jurchak

ABSTRACT

During the 1970s and 1980s, legal precedent, governmental recommendations, and professional society guidelines drove the formation of hospital ethics committees (HECs). The Joint Commission on Accreditation of Health Care Organization's requirements in the early 1990s solidified the role of HECs as the primary mechanism to address ethical issues in patient care. Because external factors drove the rapid growth of HECs on an institution-by-institution basis, however, no initial consensus formed around the structure and function of these committees. There are now almost 40 years of empirical studies on the composition, administration, and activities of HECs in the United States. We conducted a systematic review of the available empirical literature on HECs to describe their evolution. As HECs changed over time, they increased their total number of members and percentage of members from nursing and the community. Although physicians increasingly chaired these committees, their presence as a percentage of overall members declined. The percentage of administrative members remained steady, although committees became increasingly likely to have at least one administrative member. HECs were also increasingly likely to report to an administrative body or to the board of trustees or directors rather than to the medical staff. Finally, consultation volume increased steadily over time. There has not, however, been a national survey of the composition of ethics committees, their administration, or volume of consultation in more than 10 years, despite increasing calls for professional standards and quality improvement assessments among HECs.

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INTRODUCTION

Historians trace the origins of hospital ethics committees (HECs) in the U.S. to a series of high profile court cases in the 1970s. Although HECs had existed in various forms—for example, sterilization, abortion, or research ethics committees—it was not until the 1976 New Jersey Supreme Court recommended in *In re: Quinlan* that physicians consult with a "prognosis committee" that the role of HECs in the care of patients was more directly identified. Despite this legal precedent, a 1981 survey revealed that only 1 percent of hospitals in the U.S. had an HEC; of those, 41.2 percent were located in New Jersey.[1] During the early 1980s, the President's Commission for the Study of Ethical Problems in Medicine recommended HECs as a mechanism to address ethical issues in the care of patients.[2] Similarly, the American Hospital Association recommended that HECs—in the form of infant review committees—help clinicians navigate the 1984 Baby Doe regulations. By the end of the 1980s, almost 60 percent of hospitals had a clinical ethics committee.[3] Following a requirement in 1992 by the Joint Commission on Accreditation of Health Care Organizations (JCAHO), that hospitals have a mechanism to ad-

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dress ethical issues arising in the care of patients, almost every hospital in the U.S. developed an HEC to serve this role.[4]

From their inception there has been a substantial normative literature on HECs. In the 1980s, sociologists, physicians, philosophers and bioethicists, administrators, governmental groups such as the President's Commission, and private groups such as the Robert Wood Johnson Foundation wrote extensively on the nature and role of HECs.[5] They made recommendations on the ideal membership and composition of an HECs; the training of HEC members, their length of appointment, and education; the appropriateness of representation by administrators, attorneys, and community members; who (if anyone) should chair these committees and to whom (if anyone) an HEC should report; what role HECs should play, including case consultation, education, and policy development; how and whether HECs should evaluate their clinical and financial impact; and whether they should receive budgetary support for their activities. These writers also focused on the details of the ethics consultation process, including who should be able to consult a committee; whether attending physicians can refuse the involvement of an HEC; whether full committee consensus is required to make a recommendation; whether recommendations should be binding or advisory; and whether HECs should document in the medical record; among others topics.[6]

Because external factors drove the rapid growth of HECs on an institution-by-institution basis, no initial consensus formed around these normative questions. Meanwhile, a parallel descriptive literature accumulated on the structure of actual HECs. Composed largely of reports by single centers and regions—occasionally punctuated by national surveys—these studies had two broad purposes. First, they served as a form of communication among hospitals, describing their own the etiology, composition, and administration of HECs for other institutions that might be developing a new committee or for pre-existing committees facing similar challenges. Authors described the historical institutional or regional forces that led to the development of HECs; their total number, the education of HEC members in bioethics, and the professional roles of their members; the professional backgrounds of chairs and co-chairs; the administrative auspices and reporting structure of HECs; financial and budgetary support; and various aspects of consult services, including who could request a consult and the number of yearly consults conducted. By reflecting on their own experiences, these authors attempted to provide practical guidance for other HECs. Second, by comparing how far existing HECs were from their idealized versions, these studies also sought to engage the normative literature on the composition and function of HECs and identify areas for reform.

We now have almost 40 years of studies on the composition, administration, and activities of HECs in the U.S. The number of ethical issues identified in healthcare have grown over this time, driven by continued technological development including left-ventricular assist devices, extracorporeal membrane oxygenation, and face transplantation, among others, and the new frontiers of genetics and neuroscience. We do not know how, if at all, HECs have changed in response to these developments, or if the addition of organizational ethics consultation or suggestions to combine clinical ethics work with quality improvement, have effected the structure or function of HECs over time.[7] In order to understand the evolution of HECs in the U.S., we conducted a systematic review of the available empirical literature on these organizations.

METHODS

Search Strategy

We used the terms "hospital ethics committee," "ethics committee," "ethics committee AND composition," "ethics committee AND survey," "ethics committee AND membership," "ethics committee AND consultation," and "ethics committee AND administration" to search the Medical Literature Analysis and Retrieval System Online, Journal Storage, Social Sciences Citation Index, and Google Scholar for empirical articles on HECs. Because the published literature on HECs does not predate 1965, we did not search bound volumes of *Index Medicus*. We reviewed the reference sections of identified articles as well as previously published bibliographies on HECs to locate additional publications including dissertations, book chapters, and government reports not found in our initial search.[8]

We reviewed each publication, noting its date of data collection (when available) and date of publication, study population, and the number of committees studied (sample size). We included articles that reported data on one or more of the following three topics: the size and professional composition of the committees; the professional role of the chairperson and the committee's administrative auspices (reporting to the hospital administration, the medical staff, the board of trustees or directors, or another group); and the mean number of yearly consults and who could request an ethics consultation.

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We excluded articles that (1) did not include quantitative data; (2) focused entirely or primarily on ethics committees in skilled nursing facilities or long-term acute care facilities, as the consult volume and composition of these committees differed significantly from that of HECs; (3) reported on the ethics committees of professional organization such as national medical or nursing groups, (4) reported on the composition of the consult service of an ethics committee rather than the committee as a whole, or (5) focused on research ethics committees, such as institutional review boards. We included studies that reported on pediatric ethics committees.

Statistical Analysis

The data are presented as bubble charts. Each bubble represents a single study plotted along the *x*-axis (year/s) and *y*-axis (the independent variable of that chart). The area of a bubble represents the number of committees (sample size) included in the study. For each chart, we calculated a trend line using a weighted, least-squares regression to account for the sample size of each study. For the purposes of the regression analysis, data from studies that covered multiple years were averaged over those years and categorized by the first year of the study. Data reported by first decade and last decade in the text are similarly weighted by sample size.

RESULTS

Literature Search

The literature review yielded 167 articles (see figure 1); 86 (51.5 percent) were excluded from this review. The most common reasons for exclusion were lack of quantitative data (70, or 81.4 percent), focus on nursing homes or long-term care facilities (seven, or 8.1 percent]), or focus on a nonhospital organization (nine, or 10.5 percent). Of the 81 included studies, 59 (72.8 percent) reported data on committee membership and composition, 43 (53.1 percent) reported data on chairpersons and administrative structure, and 54 (66.7 percent) reported data on consultation access and volume.[9] The 81 included studies collectively extended from 1974 to 2012. The majority of the studies were either quantitative surveys, with response rates ranging from 36 percent to 97 percent, depending on the size and target population, or narrative studies reporting on the experience of a single institution.

Membership and Composition

The total number of members of HECs slowly increased from a mean of 16.3 in the first decade to 17.0 in the last decade of the study (see figure 2 and table 1). There were no periods of particularly rapid growth. On average, the percentage of physicians on HECs declined from 53.5 percent to 30.8 percent between the first and last decades, while the percentage of nurses climbed from 14.0 percent to 22.0 percent (see figures 3A-B and table 2). The percentage of members from hospital administration remained relatively constant, changing from 11.9 percent to 14.5 percent from the first to the last decade (see figure 3C and table 2). Finally, the percentage of community members increased from 1.4 percent in the first decade to 13.1 percent in the last decade (see figure 3D and table 2).

Despite the rising percentage of community members, a substantial number of HECs, ranging from 42.9 percent to 68.0 percent, did not have any community members by the last decade of the study (see table 3). In contrast, the number of HECs with at least one administrative member rose throughout the study years to between 92 percent and 95 percent by the last decade. At all points in time, almost every HEC had at least one physician and nurse member.

Chairperson and Administrative Characteristics

The percentage of HECs with a nonphysician chairperson or co-chairperson fell over the course of the study (see figure 4). In the first decade, 65.1 percent of committees had a nonphysician chairperson or co-chairperson, compared to 41.5 percent by the last decade (see table 4). The most substantial decline took place in the middle years of the study, between 1988 and 1994.

Early HECs were most likely to report to medical staff (see table 5). By the 1990s, however, an increasing percentage of HECs were reporting to the board of trustees or directors or to other committees or organizations within the hospital. Studies from the 2000s indicate that, although medical staffs' auspices remained the most common (40.9 percent), a significant percentage of committees reported to hospital administration (32.1 percent), the board of trustees or directors (18.8 percent), or another body (9.0 percent). Because HECs could report to multiple bodies, these values sum to more than 100 percent.

Consultation Volume and Access

The mean number of yearly consults increased from 7.2 in the first decade to 19.5 in the last decade (see figure 5 and table 6). At all points in time, there were single HECs that saw many more consults than average, including two committees that

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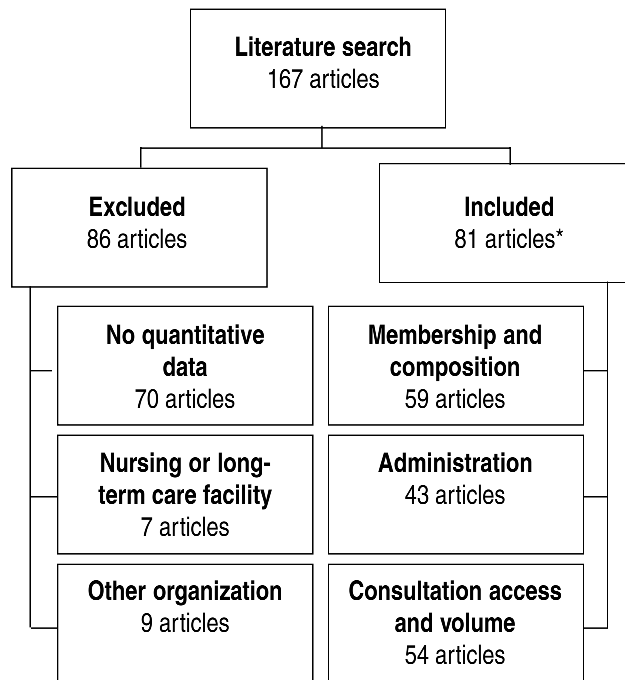
FIGURE 1. Flow diagram of the literature search



* Sum of subdivisions is greater than total number of included articles, as articles could fall into more than one category.

had more than 200 consults a year. Large national surveys, however, consistently reported that most HECs averaged a significantly lower number, between 4.4 to 10.2 consults per year, depending on the decade. Many of the earliest HECs only saw consults at the request of an attending physician and never from patients or family members (see table 7). By the 1990s, however, it was common for HECs to accept requests from patients or family members.

DISCUSSION

During the 1970s and 1980s, legal precedent, governmental recommendations, and professional society guidelines drove the formation of HECs. JCAHO requirements in the early 1990s solidified the role of HECs as the primary mechanism for addressing ethical issues in the care of patients. Here we report on the empirical studies that document the formation of HECs in response to these historical events and their subsequent evolution. These 81 studies include data on 282 to 2,292 committees, depending on the specific variable. The availability of almost four decades of publications allows us to identify broad trends that otherwise have been ob-

FIGURE 2. Change in the mean number of HEC members

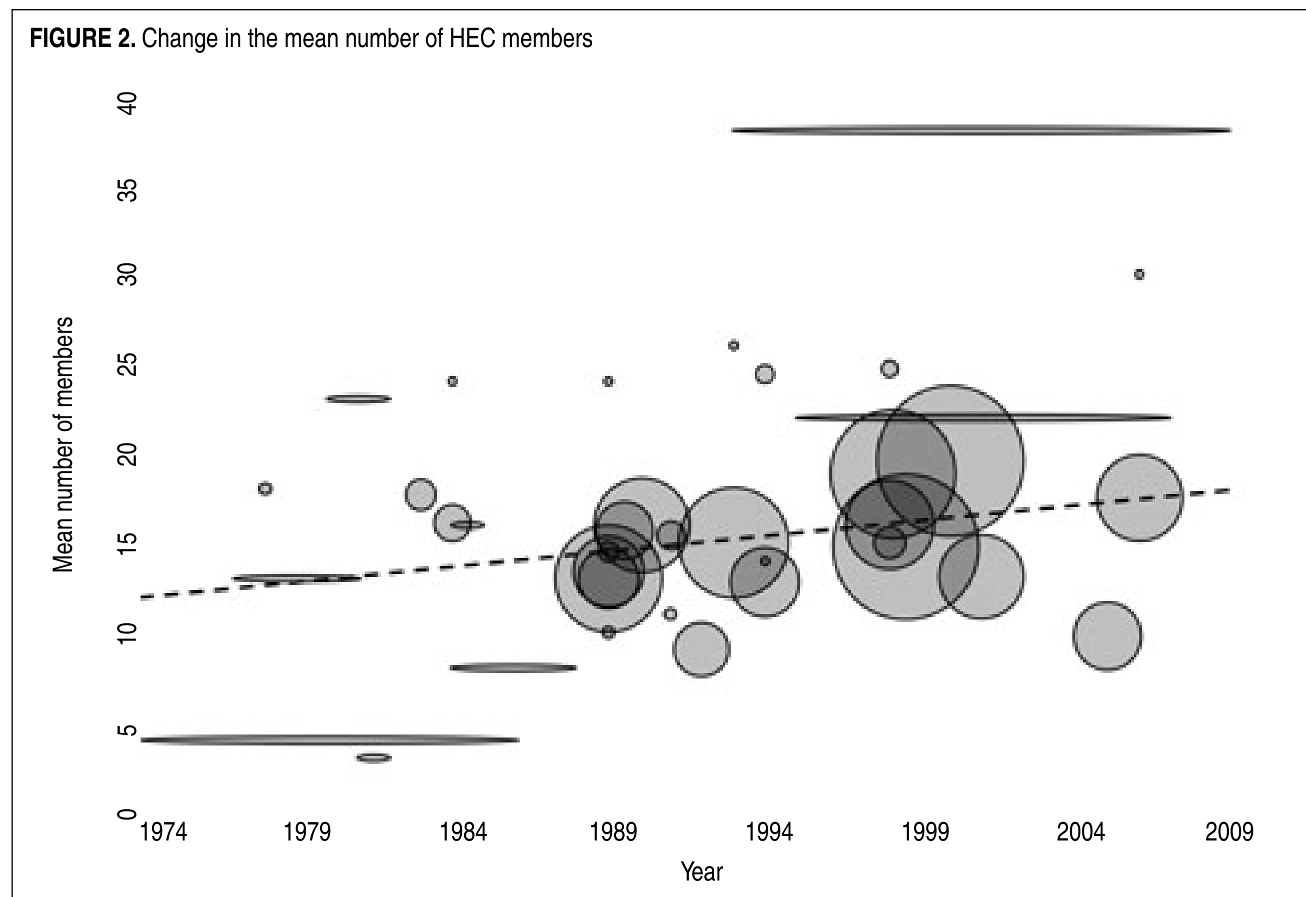


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TABLE 1. Studies reporting on total number of hospital ethics committee members (*N*=38)

Author(s)	Year(s)	Population	Sample size (*n*)	Number of members (mean ± SD)
Brennan 1988	1974-1986	Massachusetts General Hospital	1	4.0
Cohen 1982	1977-1981	Ann Arbor Veteran's Administration Hospital	1	13.0
Esqueda 1978	1978	Montefiore Medical Center and Albert Einstein College of Medicine, New York	2	18.0 ± 1.4
Cranford and Jackson 1984	1980-1982	Hennepin County Medical Center, Minnesota	1	23.0
Grodin et al. 1985	1981-1982	Boston City Hospital	1	3.0
Kusner and Gibson 1984	1983*	14 U.SD. HECs	14	17.6 ± 6.6
Fleischman 1986	1984	Montefiore Medical Center Associated Hospitals, New York	1	24.0
Gallo 1985	1984	Pediatric neurosurgeons in the American Association of Neurological surgeons	20	16.1
Perkins and Saathoff 1988	1984-1985	San Antonio County Hospital	1	16.0
Edens et al. 1990	1984-1988	Shands Hospital, Florida	1	9.0
d'oronzio et al. 1991	1988-1990	New Jersey hospitals	54	13.0
Hoffmann 1991	1989	Maryland, District of Columbia, and Virginia hospitals	75	13.4 ± 1.3
Mahowald 1989	1989*	Six Ohio hospitals	6	14.5 ± 4.4
Niemira et al.	1989	Two rural Vermont hospitals	2	10.0 ± 1.4
Niemira 1988	1989			
Skinner 1991	1989	U.S. hospitals with social workers	173	13.0
Swift 1990	1989	Hartford Hospital, Connecticut	1	24.0
Applegate et al. 1994	1989-1990	Indiana hospitals	49	15.7
Scheirton 1992	1990	U.S. hospitals affiliated with medical schools	137	15.9
Scheirton 1993				
Higgins and Lemke 1995	1991	Southern Baptist-affiliated hospitals	12	15.4 ±11.1
Splaingard 1994	1991	Two Midwestern hospitals	2	11.0 ± 2.8
Backlar 1993	1992	U.S. inpatient psychiatric hospitals	45	9.0
Lappetito and Thompson 1993	1993	Catholic Hospital Association hospitals	284	15.0
Pentz 1998	1993	MD Anderson, Texas	1	26.0
Courtwright et al. 2014	1993-2012	Massachusetts General Hospital	1	38.0 ± 2.6
Kelly et al. 1997	1994	Five West Coast hospitals	5	24.4 ±15.1
Shapiro et al. 1997	1994	Wisconsin hospitals	72	12.8
Slomka 1994	1994*	Cleveland Clinic	1	14.0
Aulisio et al. 2009	1995-2007	MetroHealth Medical Center, Ohio	1	21.5
Csikai 1998	1998*	Pennsylvania hospitals	119	16.0
Csikai and Sales 1998				
Jurchak 1998	1998*	Members of the Society for Bioethics Consultation	245	18.8
McDaniel 2010	1988	Four U.S. HECs	4	24.7 ± 9.1
McDaniel 1999				
McDaniel 1998				
Schick and Moore 1998	1998*	Ohio, Kentucky, and Indiana hospitals	15	15.0
McGee et al. 2001	1998-1999	U.S. hospitals	322	14.9 ± 7.1
Guo and Schick 2003	2000	U.S. hospitals with more than 300 beds	334	19.6 ± 7.3
Milmore 2006	2001	Upstate New York hospitals	107	13.0
Gonsoulin 2009	2005	Louisiana hospitals	69	9.8
Bernt et al. 2006	2006*	Catholic Hospital Association hospitals	112	17.5
Collier et al. 2006	2006*	Lucile Packard Children's Hospital, California	1	30.0

* Data collection date not reported.

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FIGURES 3A-D. Change in representation on ethics committees for (A) physicians, (B) nurses, (C) administrators, and (D) community members.

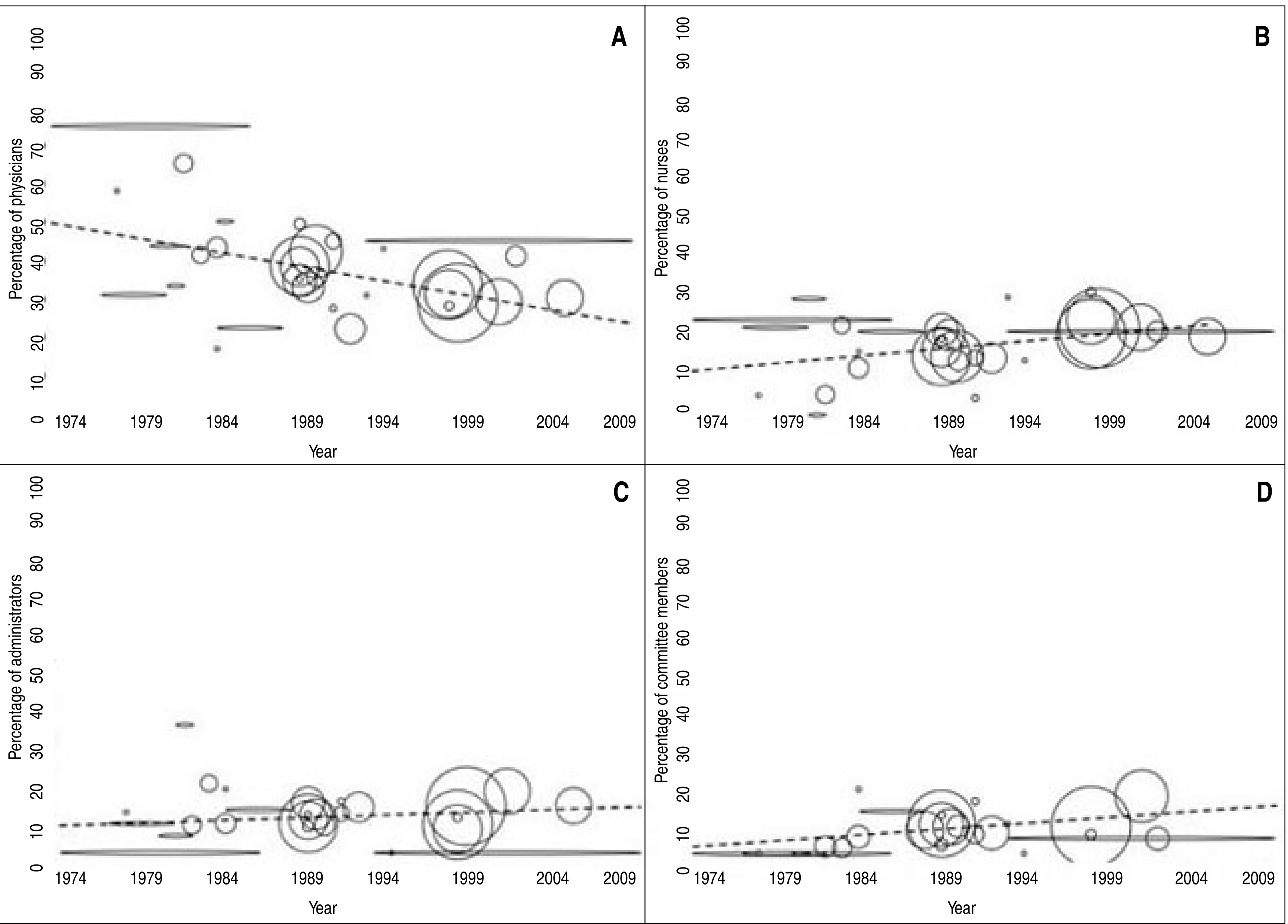

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TABLE 2. Studies reporting on the professional composition of hospital ethics committees (*N*=32)

Author(s)	Year(s)	Population	Sample size	% Phys.	% Nur.	% Adm.	% Com.
Brennan 1988	1974-1986	Massachusetts General Hospital	1	75.0	25.0	0.0	0.0
Cohen 1982	1977-1981	Ann Arbor Veteran's Administration Hospital	1	30.7	23.1	7.7	0.0
Esqueda 1978	1978	Montefiore Medical Center and Albert Einstein College of Medicine, New York	1	57.9	5.2	10.5	0.0
Cranford and Jackson 1984	1980-1982	Hennepin County Medical Center, Minnesota	1	43.5	30.4	4.3	0.0
Grodin et al. 1985	1981-1982	Boston City Hospital	1	33.3	0.0	33.3	0.0
Younger et al. 1983	1982	U.S. hospitals	17	65.1	5.4	7.1	1.8
Kusner and Gibson 1984	1983*	14 U.S. HECs	14	41.5	23.5	18.0	1.4
Fleischman 1986	1984	Montefiore Medical Center associated hospitals, New York	1	16.7	16.7	16.7	16.7
Gallo 1985	1984	Pediatric neurosurgeons in the American Association of Neurological Surgeons	20	43.3	12.4	7.6	4.3
Perkins and Saathoff 1988	1984-1985	San Antonio County Hospital	1	50.0	NR	NR	NR
Edens et al. 1990	1984-1988	Shands Hospital, Florida	1	22.2	22.2	11.1	11.1
d'oronzio et al. 1991	1988-1990	New Jersey hospitals	54	34.6	17.7	13.0	6.1
Hoffmann 1991	1989	Maryland, District of Columbia, and Virginia hospitals	75	38.3	22.4	8.5	7.5
Mahowald 1989	1989*	Six Ohio hospitals	6	49.4	19.5	6.9	2.3
Niemira et al. 1989							
Niemira 1988	1989	Two rural Vermont hospitals	2	35.0	20.0	10.0	10.0
Skinner 1991	1989	U.S. hospitals with social workers	173	38.5	15.4	7.7	7.7
Applegate et al. 1994	1989-1990	Indiana hospitals	49	33.0	21.0	10.0	7.0
Gallo 1991	1990	Pediatric neurosurgeons in the American Association of Neurological Surgeons	20	35.7	14.3	7.1	7.1
Scheirton 1992	1990	U.S. hospitals affiliated with medical schools	137	42.3	15.4	NR	NR
Scheirton 1993							
Higgins and Lemke 1995	1991	Southern Baptist affiliated hospitals	12	44.9	15.1	10.2	4.9
Splaingard 1994	1991	Two Midwestern hospitals	2	27.3	4.5	13.6	13.6
Backlar 1993	1992	U.S. inpatient psychiatric hospitals	45	22.0	15.0	12.0	5.3
Pentz 1998	1993	MD Anderson, Texas	1	30.8	30.8	NR	7.7
Courtwright et al. 2014	1993-2012	Massachusetts General Hospital	1	45.0	22.0	0.0	4.0
Slomka 1994	1994*	Cleveland Clinic	1	42.9	14.3	0.0	0.0
Csikai 1998	1998*	Pennsylvania hospitals	119	31.2	25.0	6.2	NR
Csikai and Sales 1998							
Jurchak 1998	1998*	Members of the Society for Bioethics Consultation	245	33.4	21.4	7.3	7.0
McDaniel 2010	1998	Four U.S. HECs	4	28.0	32.1	9.2	5.0
McDaniel 1999							
McDaniel 1998							
McGee et al.. 2001	1998-1999	U.S. hospitals	322	28.9	22.8	12.1	NR
Milmore 2006	2001	Upstate New York hospitals	107	29.0	23.0	16.0	15.0
Berchelmann and Blechner 2002	2002*	Connecticut hospitals with more than 100 beds	21	41.0	22.0	NR	4.0
Gonsoulin 2009	2005	Louisiana hospitals	69	30.6	20.4	12.2	NR

* Data collection date not reported.

Phys. = physicians. Nur. = nurses. Adm. = administration. Com. = community. NR = not reported.

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scured by regional or temporal publication biases. To summarize our findings, as HECs in the U.S became larger, more professionally diverse, and more utilized for case consultation, they became increasingly physician-led and increasingly more likely to have representation from hospital administration.

There are a number of possible explanations for the trends we observed. With regard to the size of HECs, most early HECs intentionally sought to engage a broad number of stakeholders during their formation.[10] Although this effort was primarily limited to health professionals, including those in supervisory roles such as division chiefs and nursing directors, the result was larger committees. In contrast, early HECs that formed primarily for case consultation ranged from three to four members.[11] These smaller committees, however, enlarged over time, in keeping with an overall trend in committee growth.[12] This growth was gradual and sustained rather than abrupt and discontinuous. We could not identify any "exogenous" events that led to rapid expansion. For example, the two largest surveys before and after the 1992 JCAHO regulations showed HECs of similar size.[13]

As committees grew, they became more professionally diverse. Although early normative commentators recommended community representation in order to reflect nonmedical perspectives on ethical issues in the care of patients, almost none of the earliest committees included community members.[14] While there were efforts in the middle years of the study to launch separate community-based rather than hospital-based HECs, over time, community members did become increasingly represented on HECs.[15] Overall community representation, however, stayed below 15 percent, even in the last decade of the study. Based on our own experience, we speculate that even HECs that are able to successfully re-

TABLE 3. Studies reporting on the percent of hospital ethics committees with at least one physician, nursing, administrative, or community member (*N*=18)

Author(s)	Year(s)	Population	Sample size	% Phys.	% Nur.	% Adm.	% Com.
Guidi 1983	1982	New York, New Jersey, Connecticut, and Massachusetts hospitals	52	100.0	42.0	48.0	NR
Kalchbrenner et al. 1983	1982	Catholic Hospital Association hospitals	30	87.0	70.0	70.0	<30
Younger et al. 1983	1982	U.S. hospitals	17	100.0	47.0	53.0	23.0
Kusner and Gibson 1984	1983*	14 U.S. HECs	14	100.0	100.0	78.6	21.4
McIntyre and Buchalter 1984	1983	New Jersey hospitals	54	78.0	19.0	54.0	NR
Van Allen and Miles 1987	1985	Minnesota hospitals	33	NR	NR	NR	66.0
Mason et al. 1989	1988	Manhattan, Bronx, and Staten Island hospitals	14	100.0	100.0	85.0	14.0
Hoffmann 1991	1989	Maryland, District of Columbia, and Virginia hospitals	75	100.0	98.0	80.0	56.0
Levine-Ariff 1989	1989*	Nursing Directors of National Association of Children's Hospitals and related institutions	58	100.0	100.0	NR	NR
Mahowald 1989	1989*	Six Ohio hospitals	6	100.0	100.0	100.0	16.7
Skinner 1991	1989	U.S. hospitals with social workers	185	99.0	94.0	83.0	45.0
Schick and Moore 1998	1990*	Ohio, Kentucky, and Indiana hospitals	15	100.0	100.0	86.7	73.3
Smith et al. 2007	1990-2004	Texas Hospital Association hospitals	148	97.0	88.0	88.0	10.8
Lappetito and Thompson 1993	1993	Catholic Hospital Association hospitals	301	98.0	98.0	98.0	58.0
Shapiro et al. 1997	1994	Wisconsin hospitals	72	100.0	98.6	96.8	56.3
Hoffmann et al. 2000	1997	Maryland hospitals	40	100.0	100.0	95.0	52.9
Milmore 2006	2001	Upstate New York hospitals	107	98.0	94.0	92.0	32.0
Berchelmann and Blechner 2002	2002*	Connecticut hospitals with more than 100 beds	21	100.0	100.0	NR	57.1

* Data collection date not reported.
Phys. = physicians. Nur. = nurses. Adm. = administration. Com. = community. NR = not reported.

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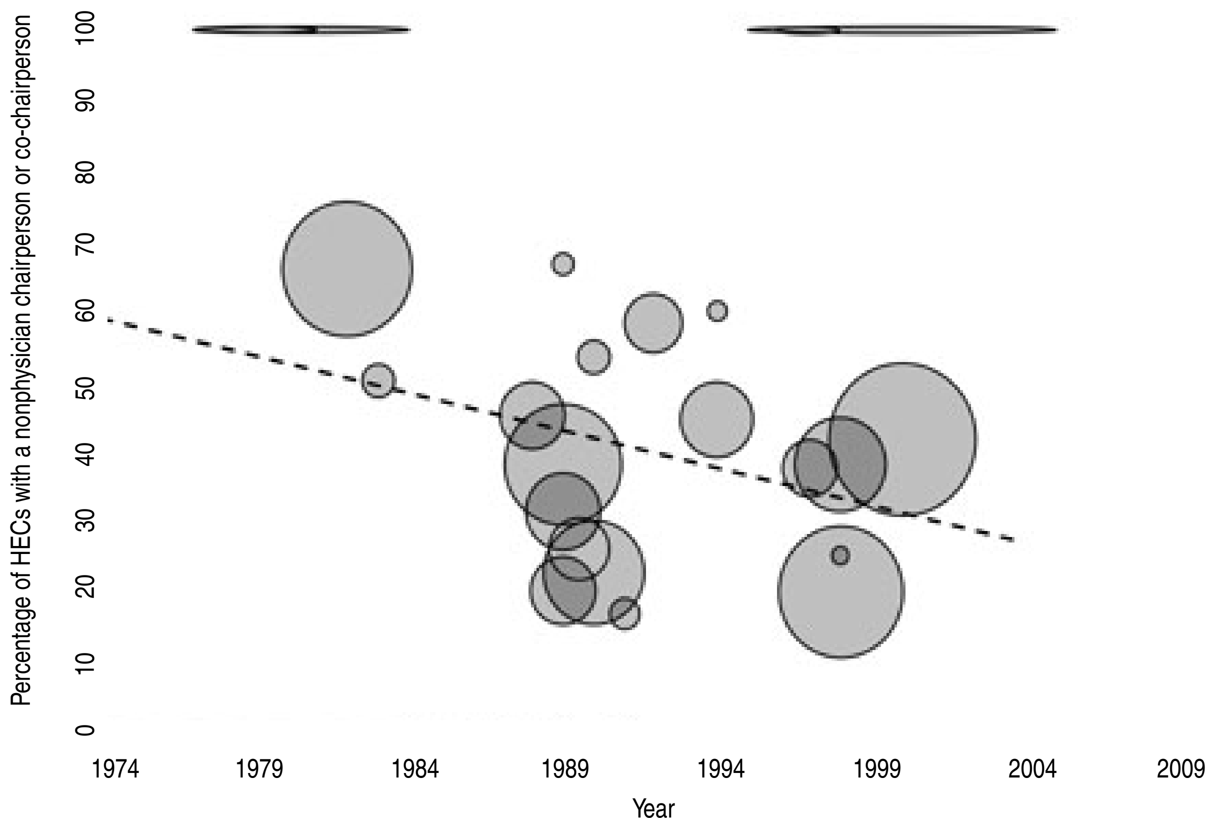
cruit community members are more likely to find individuals with pre-existing positive relationships with the hospital, such as former patients or family members of patients. If true, this would suggest that HECs remain unlikely to have the same diversity as the communities they serve.[16] As HECs are increasingly called upon to serve as a forum for evaluating the beliefs and values of patients' surrogates who are involved in conflicts over life-sustaining treatment, they must continue to work to provide balanced perspectives.[17]

The increase in community and nursing members was associated with a corresponding decrease in the percentage of physician members. Physicians made up at least half of many early committees, particularly those with a primary case consultation role, but subsequently declined to below a third of members.[18] This decrease was disproportionate to the overall increase in the size of HECs, suggesting that this was a real phenomenon rather than an artifact of the growth of committees. The reasons for the decline are not obvious and have not been previously reported in the literature. It may be that committees consciously worked toward early normative goals that HECs have no more than one-third physician members or that physicians left HECs as they became more diverse and therefore perceived as less prestigious.[19] As early ethical issues—such as the permissibility of withdrawing ventilator support at the request of an incapacitated patient's surrogate—became more settled, there might also have been less interest among physicians in participating in committee activities.

Regardless of the reason for the decline in physician members, physicians increasingly chaired HECs over the course of the study. A likely explanation for this phenomenon is that many of the earliest HECs were found within Catholic Hospital Association (CHA) hospitals.[20] CHA HECs had a strong tradition of clergy leadership, with two-thirds of early committees having nonphysician chairs or co-chairs. With the increasing prevalence of HECs in institutions without this tradition, the overall number of nonphysician chairs decreased. Supporting

FIGURE 4. Change in the percentage of hospital ethics committees with nonphysician chairperson or co-chairperson



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this hypothesis, excluding CHA studies from the analysis of chairpersons suggests that the rate of decline of nonphysician HEC leadership was less dramatic, declining from 52.9 percent, rather than 65.1 percent, to 41.5 percent from the first to the last decade of the study. As an alternative explanation, however, there may have been an expectation of physician leadership that mirrored a hospital's organizational hierarchy.

Although the percentage of HEC members from hospital administration remained relatively constant throughout the study years, HECs were increasingly likely to have at least one member representing administration. This change occurred primarily in the

TABLE 4. Studies reporting on the percent of hospital ethics committees with a non-physician chairperson or co-chairperson (*N*=32)

Author(s)	Year(s)	Population	Sample size	% Nonphysician chair or co-Chair
Brennan 1988	1974-1986	Massachusetts General Hospital	1	0.0
Cohen 1982	1977-1981	Ann Arbor Veteran's Administration Hospital	1	100.0
Kliegman et al. 1986	1977-1984	University Hospitals of Cleveland	1	100.0
Kalchbrenner et al. 1983	1982	Catholic Hospital Association hospitals	228	66.0
Kusner and Gibson 1984	1983*	14 U.S. HECs	14	50.0
Fleischman 1986	1984	Montefiore Medical Center associated hospitals, New York	1	0.0
Perkins and Saathoff 1988	1984-1985	San Antonio County Hospital	1	0.0
Edens et al. 1990	1984-1988	Shands Hospital, Florida	1	0.0
Fletcher et al. 1990	1987-1989	University of Virginia Hospital	1	0.0
d'Oronzio et al. 1991	1988	New Jersey hospitals	57	45.0
La Puma et al. 1992	1988-1989	Lutheran General Hospital, Illinois	1	0.0
Hern 1990	1989	AMI Denver hospitals	1	0.0
Hoffmann 1991	1989	Maryland, District of Columbia, and Virginia hospitals	75	31.3
Levine-Ariff 1989	1989*	Nursing Directors of National Association of Children's Hospitals and related institutions	58	20.0
Mahowald 1989	1989*	Six Ohio hospitals	6	66.6
Niemira et al. 1989 Niemira 1988	1989	Two rural Vermont hospitals	2	0.0
Skinner 1991	1989	U.S. hospitals with social workers	185	38.0
Applegate et al. 1994	1989-1990	Indiana hospitals	49	26.0
Scheirton 1992 Scheirton1993	1990	U.S. hospitals affiliated with medical schools	137	22.6
Schick and Moore 1998	1990*	Ohio, Kentucky, and Indiana hospitals	15	53.3
Higgins and Lemke 1995	1991	Southern Baptist affiliated hospitals	12	16.7
Splaingard 1994	1991	Two Midwestern hospitals	2	0.0
Backlar 1993	1992	U.S. inpatient psychiatric hospitals	45	58.0
Kelly et al. 1997	1994	Five West Coast hospitals	5	60.0
Shapiro et al. 1997	1994	Wisconsin hospitals	72	44.3
Aulisio et al. 2009	1995-2007	MetroHealth Medical Center, Ohio	1	100.0
Waisel et al. 2000	1996-1998	59th Medical Wing Air Force Hospital, Texas	1	100.0
Hoffmann et al. 2000	1997	Maryland hospitals	40	37.5
Csikai 1998 Csikai and Sales 1998	1998*	Pennsylvania hospitals	112	38.0
Jurchak 1998 McDaniel 2010 McDaniel 1999	1998*	Members of the Society for Bioethics Consultation	222	20.3
McDaniel 1998	1998	Four U.S. HECs	4	25.0
Guo and Schick 2003	2000	U.S. hospitals with more than 300 beds	294	41.5

* Data collection date not reported.

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early 1990s, which may reflect the administrations' interest in ensuring compliance with JCAHO regulations. Alternatively, as HECs became more active in shaping hospital policy or in consulting on complex cases with legal exposure for institutions, HECs may have reached out to administration to ensure they were represented. Finally, some authors have suggested that administrations' interest in using HECs as mechanisms to limit the cost of conflicts over prolonging life-sustaining treatment may account for their increased involvement.[21] In this context, some HECs have explicitly refused to have administrative members in order to avoid the perception of a conflict of interest.

Consistent with the increased involvement of hospital administrations, the number of HECs under the auspices of administration, board of trustees, or boards of directors increased over the years of the study. The majority of HECs, however, continued to report to medical staff. The relationship between medical staff and HECs likely reflects that physicians initiated the formation of many HECs and would have constituted them under a familiar structure such as medical staff.[22] We do not have available data, however, as to whether the change in auspices over time reflects existing committees transitioning to a different auspice or new committees forming under nonmedical staff auspices. It may be

TABLE 5. Studies reporting on the administrative body to which hospital ethics committees report (*N*=23)

Author(s)	Year(s)	Population	Sample size	% Admin	% Med staff	% Bd of trust/ direc	% Other
Cohen 1982	1977-1981	Ann Arbor Veteran's Administration hospital	1	0.0	0.0	100.0	0.0
Kusner and Gibson 1984	1983*	14 U.S. HECs	14	28.6	50.0	14.3	7.1
Leiken 1987	1983	Children's National Medical Center, Washington, D.C.	1	0.0	100.0	0.0	0.0
Edens et al. 1990	1984-1988	Shands Hospital, Florida	1	0.0	100.0	0.0	0.0
Van Allen and Miles 1987	1985	Minnesota hospitals	31	38.7	38.7	22.6	0.0
Fletcher et al. 1990	1987-1989	University of Virginia Hospital	1	0.0	100.00	0.0	0.0
Nash et al. 1989	1988	HECs that subscribe to *HEC Forum*	189	35.0	53.0	19.0	15.0
d'oronzio et al. 1991	1988-1990	New Jersey hospitals	57	49.1	56.0	33.3	0.0
Hern 1990	1989	St. Luke's Presbyterian Hospital, Colorado	1	0.0	100.0	0.0	0.0
Levine-Ariff 1989	1989*	Nursing directors of National Association of Children's Hospitals and related institutions	58	38.0	55.0	7.0	1.8
Morrison et al. 1989	1989*	Participants in the "Improving Hospital Ethics Committees" Conference	31	29.0	58.1	9.7	3.2
Niemira et al. 1989							
Niemira 1988	1989	Two rural Vermont hospitals	2	0.0	100.0	0.0	0.0
Skinner 1991	1989	U.S. hospitals with social workers	185	54.5	47.0	19.0	3.5
Swift 1990	1989	Hartford Hospital, Connecticut	1	0.0	100.0	0.0	0.0
Applegate et al. 1994	1989-1990	Indiana hospitals	49	22.0	20.0	41.0	0.0
McClung et al. 1996	1990-1992	Westchester County Medical Center, New York	1	0.0	100.0	0.0	0.0
Higgins and Lemke 1995	1991	Southern Baptist affiliated hospitals	12	16.7	75.0	8.3	0.0
Lappetito and Thompson 1993	1993	Catholic Hospital Association hospitals	303	19.0	15.0	31.0	35.0
Slomka 1994	1994*	Cleveland Clinic	1	0.0	0.0	0.0	100.0
Jurchak 1998	1998*	Members of the Society for Bioethics Consultation	242	NR	50.2	29.1	27.5
Milmore 2006	2001	Upstate New York hospitals	107	34.0	39.0	18.0	9.0
Berchelmann and Blechner 2002	2002*	Connecticut hospitals with more than 100 beds	20	25.0	60.0	25.0	0.0
Bruce et al. 2011	2007-2008	Cleveland Clinic	1	0.0	0.0	0.0	100.0

* Data collection date not reported.

NR = not reported. Admin. = administration. Med. staff = medical staff. Bd of trust/direc = board of directors/trustees.

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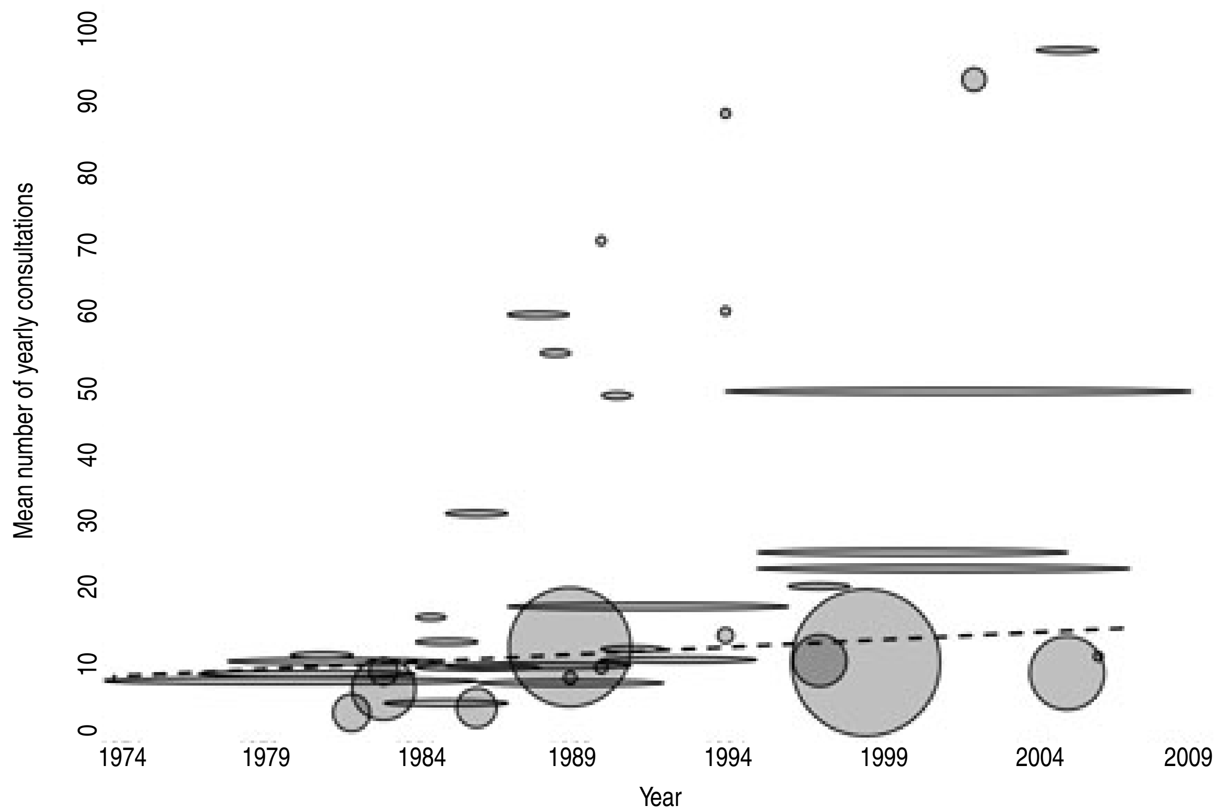
that funding was provided to HECs through hospital administration, which led to a shift toward administrative auspices, although the limited available data do not suggest an increase in funding for HEC activities over time. Alternatively, increasing relationships with administration may be directly related to the growth in the number of administrative members, who may have encouraged closer connections with hospital leadership, given the organizational ethics role that some committees had.

The volume of consults increased steadily over the study years. This is in contrast to the expectations of some authors who suggested that the utilization of HECs is directly related to the presence of physicians or other members with advanced medical knowledge.[23] It may be that the increased prevalence of nurse committee members—who are more likely to report and to respond to moral distress in their role as bedside health professionals—led to the increased utilization of HECs.[24] As with the number of members, however, there were no periods of particularly rapid growth, even following JCAHO regulations. Increased consultation with HECs continued, despite several historical events that might be expected to decrease the volume of consults, including the growing prevalence of palliative care services and a concerted effort by HECs in their educational capacity to equip health professionals with tools to address ethical issues independently.[25] It may be that the introduction and increasing use of medical technologies at the end of life drove ethics consultation. We cannot, however, exclude the possibility that the rise in consultation was related to the growing elderly population in the U.S. and their increased rates of hospitalization.

In keeping with the *Quinlan* recommendations, many early HECs viewed themselves as providing a service only to health professionals, specifically attending physicians.[26] The primary exception was pediatric HECs, in which committee members explicitly encouraged parental consultation, reflecting, in part, early attempts to engage with Baby Doe regu-

FIGURE 5. Change in the mean number of yearly HEC consultations



Note: does not include bubbles for three studies from individual centers that saw 127, 239, and 260 consults per year. These studies were, however, included in the trendline calculation.

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TABLE 6. Studies reporting on the total number of hospital ethics committee consultations (*N*=41)

Author(s)	Year(s)	Population	Samle size	Number of consults (mean ± SD)
Brennan 1988	1974-1986	Massachusetts General Hospital	1	5.6
Kliegman et al. 1986	1977-1984	University Hospitals of Cleveland	1	6.7
Michaels and Oliver 1986	1978-1985	Children's Hospital of Pittsburgh	1	8.4
Cranford and Jackson 1984	1980-1982	Hennepin County Medical Center, Minnesota	1	9.3 ± 4.2
Grodin et al. 1985	1981-1982	Boston City Hospital	1	260.0
Younger et al. 1983	1982	U.S. hospitals	17	1.0
Kusner and Gibson 1984	1983*	12 U.S. HECs	10	6.9 ± 9.6
McIntyre and Buchalter 1984	1983	New Jersey hospitals	50	4.4
Leiken 1987	1983-1987	Children's Hospital National Medical Center, Washington, D.C.	1	2.4
Perkins and Saathoff 1988	1984-1985	San Antonio County Hospital, Texas	1	14.6
Fleischman 1986	1984-1986	Montefiore Medical Center associated hospitals, New York	1	11.1
Edens et al. 1990	1984-1988	Shands Hospital, Florida	1	7.5 ± 3.6
d'Oronzio et al. 1991	1985-1987	New Jersey hospitals	20	1.7 ± 1.2
La Puma et al. 1988 La Puma 1987	1985-1987	University of Chicago Hospitals and Clinics	1	29.3
Andereck 1992	1985-1991	Pacific Presbyterian Medical Center, California	1	8.1
van der Heide 1994	1986-1992	Four Connecticut hospitals	1	5.3
Fletcher et al. 1990	1987-1989	Health Science Center of the University of Virginia	1	57.4
Schenkenberg 1997	1987-1996	Salt Lake City Veteran's Administration Hospital	1	16.1
La Puma et al. 1992	1988-1989	Lutheran General Hospital, Illinois	1	52.0 ±16.9
Niemira et al. 1989 Niemira 1988	1989	Two rural Vermont hospitals	2	6.0 ± 1.4
Skinner 1991	1989	U.S. hospitals with social workers	185	10.2
Finkenbine and Gramelspacher 1991	1990	Two Indianapolis hospitals	2	7.5 ± 6.4
White et al. 1993	1990	Saint Thomas Hospital, Tennessee	1	68.0
Orr and Moon 1993	1990-1991	Loma Linda University Medical Center, California	1	46.0
McClung 1996	1990-1992	Westchester County Medical Center, New York	1	10.0
Yen and Schneiderman 1999	1990-1995	San Diego Children's Hospital and Health Center	1	8.6
Courtwright et al. 2014	1993-2012	Massachusetts General Hospital	1	46.7 ± 3
Heilicser et al. 2000	1994	Ingalls Memorial Hospital, Illinois	1	58.0
Kelly et al. 1997	1994	Five West Coast hospitals	3	12.0 ±10.6
Orr et al. 1996	1994	Loma Linda University Medical Center, California	1	86.0
Swetz et al. 2007	1995-2005	Mayo Clinic, Minnesota	1	23.8
Aulisio et al. 2009	1995-2007	MetroHealth Medical Center, Ohio	1	21.4
Waisel et al. 2000	1996-1998	59th Medical Wing Air Force Hospital, Texas	1	19.0 ±17.6
Hoffmann et al. 2000	1997	Maryland hospitals	36	8.5
McGee et al. 2001	1998-1999	U.S. hospitals	275	8.1 ±15.3
Johnson et al. 2012	2000-2010	Grady Memorial Hospital Georgia	1	127.0
Nilson et al. 2008	2002	Seven New York hospitals	7	90.8
Tapper et al. 2010	2004-2006	Emory University Hospital, Georgia	1	95.0 ±22.5
Gonsoulin 2009	2005	Louisiana hospitals	69	6.6
Collier et al. 2006	2006*	Lucile Packard Children's Hospital, California	1	9.0
Bruce et al. 2011	2007-2008	Cleveland Clinic	1	239.0

* Data collection date not reported.
SD = standard deviation.

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TABLE 7. Studies reporting on the percent of hospital ethics committees allowing consultation from patients or family members (*N*=40)

Author(s)	Year(s)	Population	Sample size	% allowing patient or family to consult
Brennan 1988	1974-1986	Massachusetts General Hospital	1	0.0
Cohen 1982	1977-1981	Ann Arbor Veteran's Administration Hospital	1	100.0
Kliegman et al. 1986	1977-1984	University Hospitals of Cleveland	1	100.0
Esqueda 1978	1978	Montefiore Medical Center and Albert Einstein College of Medicine, New York	2	0.0
Michaels and Oliver 1986	1978-1985	Children's Hospital of Pittsburgh	1	100.0
Grodin et al. 1985	1981-1982	Boston City Hospital	1	100.0
Younger et al. 1983	1982	U.S. hospitals	16	63.0
Kusner and Gibson 1984	1983*	14 U.S. HECs	14	50.0
Leiken 1987	1983-1987	Children's Hospital National Medical Center, Washington, D.C.	1	100.0
Fleischman 1986	1984	Montefiore Medical Center Associated Hospitals, New York	1	100.0
Gallo 1985	1984	Pediatric Neurosurgeons in the American Association of Neurological Surgeons	20	62.0
Perkins and Saathoff 1988	1984-1985	San Antonio County Hospital, Texas	1	0.0
Edens et al. 1990	1984-1988	Shands Hospital, Florida	1	100.0
La Puma et al. 1988				
La Puma 1987	1985-1987	University of Chicago Hospitals and Clinics	1	0.0
Andereck 1992	1985-1991	Pacific Presbyterian Medical Center, California	1	0.0
Fletcher et al. 1990	1987-1989	Health Science Center of the University of Virginia	1	100.0
Schenkenberg 1997	1987-1996	Salt Lake City Veteran's Administration Hospital	1	100.0
Nash et al. 1989	1988	HECs that subscribe *HEC Forum*	164	66.0
Niemira et al. 1989	1989	Two rural Vermont hospitals	2	0.0
Niemira 1988				
La Puma et al. 1992	1988-1989	Lutheran General Hospital, Illinois	1	0.0
Skinner 1991	1989	U.S. hospitals with social workers	185	70.0
Applegate et al. 1994	1989-1990	Indiana hospitals	49	100.0
Gallo 1991	1990	Pediatric Neurosurgeons in the American Association of Neurological Surgeons	60	66.0
Orr and Moon 1993	1990-1991	Loma Linda University Medical Center California	1	100.0
McClung 1996	1990-1992	Westchester County Medical Center, New York	1	100.0
Yen and Schneiderman 1999	1990-1995	San Diego Children's Hospital and Health Center	1	100.0
Backlar 1993	1992	U.S. inpatient psychiatric hospitals	58	86.0
Heilicser et al. 2000	1994	Ingalls Memorial Hospital, Illinois	1	0.0
Kelly et al. 1997	1994	Five West Coast hospitals	3	100.0
Orr et al. 1996	1994	Loma Linda University Medical Center, California	1	100.0
Shapiro et al. 1997	1994	Wisconsin hospitals	69	51.0
Swetz et al. 2007	1995-2005	Mayo Clinic, Minnesota	1	100.0
Aulisio et al. 2009	1995-2007	MetroHealth Medical Center, Ohio	1	100.0
Waisel et al. 2000	1996-1998	59th Medical Wing Air Force Hospital, Texas	1	100.0
Jurchak 1998	1998*	Members of the Society for Bioethics Consultation	278	91.1
McGee et al. 2001	1998-1999	U.S. hospitals	275	94.0
Fox et al. 2007	1999-2000	U.S. hospitals	420	94.0
Berchelmann and Blechner 2002	2002*	Connecticut hospitals with more than 100 beds	21	90.5
Tapper et al. 2010	2004-2006	Emory University Hospital, Georgia	1	100.0
Bruce et al. 2011	2007-2008	Cleveland Clinic	1	100.0

* Data collection date not reported.

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lations.[27] Consultation services for non-pediatric HECs did become more widely available over time, and the majority of HECs accepted consultation requests from patients and families by the 1990s.[28] As recently as 1998, between 5 and 10 percent of HECs continued to provide consultation only at the request of physicians, nurses, or ancillary health professionals.[29] We do not know, however, whether all contemporary HECs now accept consults from any individual, including patients or family members, as this information has not been collected or published.

One notable exception in the reporting of the activity of HECs is the relative paucity of information on the development of policy and education—two of the three primary tasks of an institutional healthcare ethics committee—compared to ethics consultation. We do not know whether this is related to a publication bias toward a more "interesting" consultation role of HECs, or reflects their actual relative time commitments. Nor do we know whether the work of developing policy or education continued under the auspices of HECs but was not reported in the broader literature. It is possible that HECs have ceded this work to other entities in the organization, such as compliance or professionalism divisions or the office of general council. And ethics education may be accomplished by physicians' or nurses' continuing education programs, or through increased integration into nursing and medical school curricula without the involvement of HECs. Given the ongoing need for these activities in healthcare organizations, further exploration into the current role of HECs would add an important perspective to the current literature.

Reporting on the involvement of "professional ethicists" in HECs was relatively sporadic in the available literature. This may reflect that these individuals have only become a more significant presence in the past 10 years and would, therefore, have been less of a focus in the available literature. Although we collected information on chairpersons and the education of HEC members, these data were too variable in their reporting and definitions to be comparable. Given the ongoing interest and theoretical discussion of the professionalization of ethics consultation and educational standards for ethics consultation, we believe it would be extremely valuable for national organizations to define categories of education such as seminar-based training, experiential training, advanced degrees, *et cetera*. Until there is consensus about what constitutes formal bioethics training, interested researchers will be unable to produce data that are comparable across multiple studies. Similarly, data on committee financial support or salary support for consultations were limited and were not clearly defined between studies and eras. We note, however, that many studies commented on the relative lack of financial support for HEC activities, despite the institutional emphasis on the need for these organizations. These issues are related: despite 40 years of institutional, judicial, professional, and legislative insistence on the importance of HECs almost nothing has been written on the support provided to and the impact of HECs. Nor do the articles we surveyed address the substantive question of how to quantify the moral impact of HECs. How do they contribute to the moral life, moral climate, and moral environment of an organization, if at all? This has been, from our survey of the empirical literature on HECs, an "untouchable" question for the last 40 years.

There are several limitations to our study. First, as with any systematic review, we cannot guarantee that we have included all data of interest, although we used a comprehensive and overlapping research strategy across multiple electronic and hardcopy databases. In particular, we would not have had access to ethics committee reports or studies that may have been internally generated but not submitted for academic publication. Second, because we relied on the published literature, it is likely that many of the smaller studies represent "outlier" committees that are reporting their experiences because of some unique characteristic of their service. For example, smaller studies consistently reported more total members or more yearly consults than larger studies in similar years. Although we used a weighted, least-squares regression rather than a standard regression for our analysis, we cannot exclude the possibility that variables such as size or volume are overestimated because of publication bias. It is, however, reassuring that large studies from similar time periods reported roughly similar results across different geographic and hospital populations. Third, although we did not study nonhospital-based ethics committees, it is important to note that the late 1980s and early 1990s saw an increasing prevalence of ethics committees in nursing homes and rehabilitation facilities, home health agencies, national medical organizations such as the American College of Physicians, and inter-institutional committees.[30] Fourth, we note that the categories selected for this systematic review reflect areas in which multiple institutions have published reliable and comparable data for the last 40 years. As this is the case, we did not include narrative articles and clinical trials that reported findings relevant to HECs but that were not duplicated or replicated outside of

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single centers or institutional experiences. For example, there has been important research conducted on the quality assessment of HEC consultations and the clinical impact of HEC consultations on patients, families, and clinicians.[31] Such data are essential for improving and revising the consultation process, but are less relevant to the structure and evolution of HECs in the U.S. as a descriptive project.

CONCLUSIONS

It has been more than 10 years since the last national survey study of HECs. As ethics committees move toward further professionalization and are increasingly called upon to provide a forum for resolving disputes about life-sustaining treatment, it is essential to have an updated assessment of their current structure and activities. This includes both their consultation service and their educational and policy related roles, which, despite having an arguably broader impact on how institutions manage ethical challenges on a day-to-day basis, remain underreported in the existing literature. An updated survey of HECs is also essential for existing committees to compare their current structure, activities, education, administration and impact, a necessary step for organizational quality improvement.

In order to provide as unbiased and comprehensive a portrait as possible, we would suggest that such a study draw from the American Hospital Association files to identify survey targets rather than the membership of bioethics or clinical ethics professional societies or specialty journals.[32] We would advocate for two separate surveys. The first study would do the following:

1. Cover ethics case consultation
2. Collect data on the following:
   - The number and professional background of the members of the ethics consultation service
   - The number of yearly consults
   - The distribution of consults from a standard list of consultation categories such as the Armstrong Clinical Ethics Coding System©
   - The methods of case consultation (one consultant, subcommittee, whole ethics committee, other)
   - Institutional financial support for ethics consultation (none, administrative assistant salary, consultant standing salary, pay-by-consult, "on call" reimbursement, or other)
   - The education of consultants
   - The utilization of "professional" ethicists
3. Ethics consultation quality evaluations.[33]

We recommend articles by Milmore, Jurchak, Fox and colleagues, and Hoffmann as models.[34]

The second survey would cover HECs outside of their case consultation role, including data on the total number of members and their professional backgrounds; these would include administrative, professional ethicist, and community member representation (and, if possible, an assessment of how community members came to join the HEC). Other data would include:

1. The chairperson's profession and educational background
2. To whom the HEC reports (hospital administration, the medical staff, the board of trustees or directors, or another group)
3. The frequency of meetings
4. Policy and organizational ethics-related activities (developing policies, reviewing policies, and the specific types of policies considered)
5. Educational activities within the HEC and within the hospital (ethics rounds, journal clubs, nonmember "shadowing," invited speakers and seminars, and formal educational programs)
6. Institutional financial support for nonconsultation activities.

We would recommend articles written by Kushner and Gibson, McGee and colleagues, Guidi, and Klachbrenner and colleagues as models for this study.[35]

CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

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