

# A Survey of Medical Ethics Education at U.S. and Canadian Medical Schools

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## ABSTRACT

**Purpose.** To assess the format, content, method, and placement of medical ethics education in medical schools; the faculty and curricular resources and institutional structure and support of medical ethics; and the perceptions of ethics education among deans of medical education and medical ethics course directors at U.S. and Canadian medical schools.

**Method.** Two questionnaires were mailed to 125 U.S. medical schools and 16 Canadian schools: one to be completed by the deans of medical education and one to be completed by the medical ethics course director. Descriptive statistics were used to compare responses.

**Results.** In all, 123 (87%) deans and 91 (64%) course directors responded, providing information about 91 schools (six Canadian). All responding institutions offered some formal instruction in medical ethics, and among these, 71 (78%) incorporated ethics into required preclinical courses. The primary pedagogic course struc-

ture was small-group discussion and the primary pedagogic method was case discussions. One-fifth of schools provided no funding for ethics teaching, and 47 (52%) did not fund curricular development in ethics. Institutions with a dedicated ethics faculty member were twice as likely to have a mandatory introductory ethics course (64% versus 32%,  $p < .05$ ). The primary obstacles to ethics education were thought to be a lack of time in the curriculum, a lack of qualified teachers, and a lack of time in faculty schedules.

**Conclusions.** Within a few decades the number of U.S. and Canadian medical schools requiring medical ethics has increased. Nevertheless, significant variation in the content, method, and timing of ethics education suggests consensus about curricular content and pedagogic methods remains lacking. Further progress in ethics education may depend on institutions' willingness to devote more curricular time and funding to medical ethics.

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Several factors indicate that we need a rigorous examination of the state of medical ethics education in the United

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States and Canada. First, practicing physicians and medical students alike have voiced their concerns that ethics curricula often fail to address the stage-specific needs of students.<sup>1,2</sup> Second, recent years have witnessed an increase in the revocation of physicians' licenses.<sup>3</sup> In 2002, the Federation of State Medical Boards reported 4,169 prejudicial disciplinary actions against physicians, the nature of which included quality of care issues, allegations of malpractice, inappropriate prescribing of controlled substances, and insurance fraud.<sup>3,4</sup> Finally, indications that medical school may serve to *inhibit* students' moral growth should cause us to rethink

the ethical training of physicians.<sup>5,6</sup>

A recent report by the Association of American Medical Colleges (AAMC) argues that medical schools "must ensure that before graduation a student will have demonstrated . . . knowledge of the theories and principles that govern ethical decision making, and of the major ethical dilemmas in medicine. . . ."<sup>7</sup> The AAMC's statement reflects a growing consensus among medical educators that ethics education should be a core component of medical schools' curricula. Despite widespread agreement that ethics *should* be taught, there is little formal consensus concerning *what*, *when*, and *how* medical ethics is best taught.

Table 1

Overview of Mandatory and Elective Ethics Education at 91 U.S. and Canadian Medical Schools, 2000			
	Mandatory No. (%)	Elective No. (%)	Not Offered No. (%)
Ceremony of professional commitment (e.g., Hippocratic oath ceremony)	72 (79)	6 (7)	13 (14)
Ethics studies as part of other preclinical courses	71 (78)	1 (1)	19 (21)
Ethics studies during clinical years	64 (74)	9 (10)	14 (16)
Introductory course devoted to ethics	50 (55)	4 (4)	37 (41)
Informal ethics studies (e.g., journal clubs)	15 (16)	40 (44)	36 (40)
Independent study or student research in ethics	5 (5)	56 (62)	30 (33)

Few empirical studies exist, and they are limited to a review of course syllabi and brief surveys. These studies have not explored the degree to which ethics education has been incorporated into the formal curricula of medical schools, the institutional resources devoted to ethics, and the perceived barriers to ethics education. Therefore, we undertook a study to assess the state of medical ethics education in U.S. and Canadian medical schools at the start of the 21st century. The primary purpose of this study was to explore the content, timing, course format, faculty, and curricular resources devoted to medical ethics. Furthermore, we strove to gain insight into the attitudes of deans of medical education and medical ethics course directors towards ethics education and determine their perceptions of the obstacles to increasing students' exposure to medical ethics. Our hope is that this research will provide a baseline for future research in the evolving field of medical ethics.

## METHOD

### Data Collection

During the spring of 2000 two questionnaires were sent to 125 AAMC-member medical schools and 16 Canadian medical schools. Both questionnaires were mailed to the dean responsible for medical education. We asked the dean to

complete the first questionnaire, which assessed the dean's opinion of the role of ethics education in medical students' ethical development and the resources devoted by his or her school to ethics education. We asked the dean to forward the second questionnaire to the medical ethics course director at his or her institution. The five-page course directors' questionnaire assessed the requirements and opportunities for ethics education, the pedagogic structure of the primary ethics course, and the time commitment of the course director or co-directors.

A literature search of ethics education curricula and curriculum reviews generated a list of topics and course formats, which formed the basis of the questionnaires' development. Two experts in ethics education at differing institutions assessed the face validity of the questions.

### Data Analysis

Descriptive statistics (frequencies and percentages) were computed for each question. The relationship between variables was assessed using a *t* test for continuous variables and the chi-square test for categorical variables. A *p* value of less than .05 was considered statistically significant. Kappa statistics were performed to determine the agreement between deans and course directors' perceptions of the importance of students'

receiving more ethics education. Open-ended questions were reviewed and classified statistically, where possible, and are otherwise referenced qualitatively. Statistical calculations were performed using SAS version 8 statistical software (SAS Institute, Cary, NC).

## RESULTS

### Demographic Characteristics of Respondents

Of the 141 U.S. and Canadian medical schools, 123 (87%) deans and 91 (64%) course directors responded, yielding information about 91 schools (six Canadian). Most deans (105, 85%) and course directors (73, 80%) were younger than 60; approximately one third of both groups of respondents were women, and only 14 (11%) deans and seven (8%) course directors reported an ethnicity other than "white."

### Overview of Ethics Education

Table 1 describes an overview of mandatory and elective ethics education at the 91 schools. All offered some formal ethics education, and over half of medical ethics course directors (50, 55%) reported offering a mandatory introductory ethics course. Most schools (71, 78%) incorporated ethics studies as a part of other required preclinical courses, with an average 22.5% of the

**Table 2**

Number (%) of Pedagogic Formats of 52 Primary Introductory Ethics Course at U.S. and Canadian Medical Schools, 2000*			
Pedagogic Format	Percentage of Course Time		
	<26%	26–50%	>50%
<b>Structure</b>			
Lecture	25 (48)	19 (37)	8 (15)
Small-group discussion	10 (19)	25 (48)	17 (33)
Role-playing	49 (94)	2 (4)	1 (2)
Videos, movies, etc.	50 (96)	1 (2)	1 (2)
Other	52 (100)	0	0
<b>Method</b>			
Case discussions	9 (17)	19 (37)	24 (46)
Empirical articles	44 (85)	8 (15)	0
Moral philosophy	44 (85)	7 (13)	1 (2)
Literature/humanities	48 (92)	3 (6)	1 (2)

\*In all, 54 schools responded they offered such courses, but two did not provide data shown here.

integrated course meetings devoted to ethics. Ethics during the clinical years (e.g., ethics case conferences) were incorporated into rotations at all but 14 (16%) schools. In addition, almost half

(40, 44%) of the medical schools had informal ethics education opportunities for students in the form of public lectures, discussion groups, or journal clubs. More than half (56, 62%) offered ethics

**Table 3**

Content Areas Covered in 91 U.S. and Canadian Preclinical Ethics Courses, 2000	
Content Area	No. (%)
Consent (informed consent, proxy consent, etc.)	87 (96)
End-of-life issues	84 (92)
Confidentiality	84 (92)
Truth-telling	82 (90)
Ethical issues relating to student status	68 (75)
Allocation of scarce resources	68 (75)
Assessing patient competence	65 (71)
Access to care	64 (70)
Managed care	62 (68)
Financial incentives/conflicts of interest	55 (60)
Genetic testing and screening	50 (55)
Reproductive technologies	49 (54)
Research ethics	49 (54)
Pediatrics/neonatal care	48 (53)
Medical errors	45 (49)
Abortion	42 (46)
Role of ethics committees	38 (42)
Other	32 (35)

teaching in the form of independent study or students' research in ethics.

Deans who reported having a faculty member whose primary responsibility was to teach medical ethics were twice as likely to have mandatory introductory ethics course (64% versus 32%,  $p < .05$ ). There was no statistically significant relationship between having a mandatory introductory course in medical ethics and institutional ownership (i.e., public or private), medical school region, or the presence of funding for faculty to teach ethics.

**Format of Primary Introductory Ethics Course**

Of the 54 schools that offered a specific ethics course, 38 (70%) allotted 20 hours or more to the course, with an average allotted time of 29 hours. The majority of course time was devoted to lectures and/or small-group discussions. (Often, these lectures and discussion were led by course directors, which we discuss later.) The pedagogic methods also differed, with greatest percentage of course time devoted to case discussions, followed by studies of empirical articles, moral philosophy and, lastly, studies of literature and the humanities (see Table 2).

**Course Content**

**Preclinical ethics courses** Table 3 presents the topics covered in preclinical ethics courses (ethics-only and combined medicine and society-type courses). Almost all dealt with consent, end-of-life issues, confidentiality, and truth-telling. The topics that schools incorporated the least were a discussion of abortion and the role of ethics committees.

**Mandatory third-year clerkships** Formal ethics education in the core rotations (medicine, pediatrics, obstetrics–gynecology, psychiatry, and surgery) was structured around a variety of educational formats (see Table 4). Overall, a

**Table 4**

Formal Ethics Education Reported by Course Directors for Five Mandatory Third-Year Clerkships at 91 U.S. and Canadian Medical Schools, 2000					
Format	Medicine Nb. (%)	Pediatrics Nb. (%)	Obstetrics-Gynecology Nb. (%)	Psychiatry Nb. (%)	Surgery Nb. (%)
Ethics rounds	33 (36)	28 (31)	19 (21)	18 (20)	18 (20)
Discussion groups	43 (47)	32 (35)	26 (29)	26 (29)	16 (18)
Skills training	18 (20)	7 (8)	8 (9)	8 (9)	12 (13)
Other	7 (8)	8 (9)	6 (7)	5 (6)	3 (3)
None	19 (21)	27 (30)	36 (40)	32 (35)	41 (45)

larger proportion of core rotations used ethics rounds and discussion groups, with less attention paid to skills training. Of the rotations, surgery was the least likely to incorporate formal ethics education, with 41 (45%) of the course directors reporting no ethics education in their surgery clerkship.

**Evaluation of Courses, Students’ Reasoning, and Skills**

The majority of schools (80, 88%) offering a medical ethics course or integrating ethics into an Introduction to Medicine course requested that students evaluate the course formally (e.g., via feedback questionnaires), but students’ performances were less likely to be evaluated. Only 48 (53%) of deans reported

their school formally evaluated students’ moral reasoning abilities (e.g., Rest’s Defining Issues Test or case-based essay exam), and only one third formally evaluated students’ behaviors in ethically difficult situations (e.g., giving bad news to patient-actors, discussing DNR [do not resuscitate] orders with patient volunteers).

**Faculty Resources**

In narrative comments, our respondents described the variation in institutional commitments to medical ethics teaching. Some described the existence of a full-time ethics teacher or full-time director of ethics education, but for others the commitment was limited (one primary course director, explained “Very

part-time. Less than one-half day per week for six months of the year”). Some estimated that the time devoted to ethics teaching consumed only 5% of the course director’s time or spoke of faculty members with “multiple commitments,” who allotted 10% of their time to ethics teaching.

According to the course directors, faculty members in the clerkship departments were primarily responsible for ethics teaching during the clinical years (47, 52%), with hospital ethicists (29, 32%) and teachers of preclinical ethics courses (33, 36%) conducting a smaller share of the formal clinical ethics curriculum. The principal medical ethics course directors tended to hold MDs (44), and/or PhDs (42), and fewer held JD (7) or MPH (4) degrees. Most deans (86, 70%) reported there was a faculty member at their school whose primary responsibility was to teach medical ethics to medical students. Although full-time ethics researchers were less common, 69 (56%) deans reported part-time researchers (58 schools maintained between one and five part-time researchers, and 11 reported more than five such positions; see Table 5).

**Faculty Compensation**

The wide variation in the time commitments of ethics faculty paralleled large differences in the compensation received by ethics course directors. Many directors teach ethics as part of a general teaching requirement and receive no special compensation. Others teach ethics as their “primary job description” and are compensated as such. Still others receive a portion of their salary in return for teaching ethics, with various levels of reward. For example, compensation for teaching ethics constituted 50% of one course director’s salary and only 5% of another’s. Many course directors cited lack of financial compensation and faculty support as a concern. Of the responding deans, one-fifth re-

**Table 5**

Responses of 123 Deans Regarding Faculty and Curricular Resources for Ethics Education at U.S. and Canadian Medical Schools, 2000			
Resource	Yes Nb. (%)	No Nb. (%)	Don’t Know Nb. (%)
At least one full-time ethics teacher	86 (70)	35 (28)	0
School funds teaching in ethics	97 (79)	24 (20)	0
School funds curricular development in ethics	71 (58)	47 (38)	0
School receives outside funds for ethics teaching and/or curricular development	37 (30)	84 (68)	0
Full-time ethics researchers	38 (31)	56 (46)	14 (11)
Part-time ethics researchers	69 (56)	12 (10)	27 (22)

Table 6

Responses of 123 Deans and 91 Course Directors Regarding their Perceptions of Obstacles to Ethics Education at U.S. and Canadian Medical Schools, 2000		
Perceived Obstacles to Increasing Education	Deans	Course Directors
	No. (%) Agree	No. (%) Agree
Lack of time in curriculum	50 (41)	52 (57)
Availability of qualified teachers	43 (35)	32 (35)
Lack of time in faculty schedules	34 (28)	39 (43)
Availability of an established curriculum	22 (18)	14 (15)
Financial cost of qualified teachers	18 (15)	26 (29)
Resistance from faculty	16 (13)	15 (16)
Resistance from students	13 (11)	12 (13)
Financial cost of developing a curriculum	13 (11)	15 (16)
Resistance from administration		7 (8)
Other	6 (5)	4 (4)

ported their school supplied no funding for teaching ethics, and 47 (38%) schools did not fund curricular development in ethics.

### Institutional Structures for Ethics Education

The institutional structure for ethics education varied among schools, with one-third reporting the existence of an ethics program, and approximately one-fifth (26, 21%) reporting an ethics center. The remaining schools had ethics departments (16, 13%), divisions (11, 9%), institutes (5, 4%), or other structures in place (10, 8%). Slightly more than one-tenth (13, 11%) had no institutional ethics structure.

### Obstacles to Ethics Education

We received 87 pairs of responses (responses from the dean and course director of the same school). Overall there was poor agreement between these deans and course directors' perceptions of ethics education with kappa statistic < .6 for all variables. Although 71% of course directors favored more ethics education, only 56% of deans shared this

opinion (kappa = .3). Both deans and course directors who supported an increase in medical ethics education were asked to indicate the obstacles to increasing ethics education at their institutions (see Table 6). Lack of time in the curriculum, the limited availability of qualified teachers, and the lack of time in faculty schedules were cited most frequently by both groups. Resistance from faculty and students and the financial cost of developing a curriculum were the least-identified obstacles. Seven (8%) of course directors perceived resistance from the administration as an obstacle to increased ethics education at their schools.

The narrative comments of deans and course directors help to further identify the obstacles to improving ethics education. Many respondents mentioned the need for horizontal and longitudinal integration of ethics curricula across all four years of medical school. A lack of coordination between preclinical and clinical ethics curricula and the scattering of third- and fourth-year students into departmentally based clinical clerkships on multiple clinical campuses were cited as challenges to the development of a cohesive curriculum. Many respondents also referred to the need for

increased institutional support—in the form of a full-time bioethics coordinator or an undergraduate department of bioethics—while others highlighted the need for grading and accountability across the ethics curriculum.

### Deans' Opinions on Ethics Education and Role Modeling

The responding deans unanimously agreed that role models could have a significant effect on a student's ethical behavior. Most also agreed that courses in ethics should be mandatory for all students (116, 94%) and that the ability of a faculty member to act as an ethical role model should be an important factor in assigning clinical teaching responsibilities (115, 93%). Approximately two-thirds (83, 67%) agreed that the admissions process should include more emphasis on the ethical qualities of applicants. Opinions varied, however, as to whether courses in ethics could have a significant effect on a student's ethical behavior, and whether the medical school curriculum fosters good ethical development in medical students. In fact, 22 (18%) felt the medical school culture does not foster good ethical development.

### DISCUSSION

We assessed the content of medical ethics education at U.S. and Canadian medical schools: how it is taught, who is teaching it, and with what resources. Past studies have shown an increase in ethics education over the last thirty years, and our results indicate this trend continues.<sup>4,8,9</sup> All respondents addressed ethics either in a mandatory single course or as part of other required preclinical courses. A more striking increase in the incidence of ethics education is evident in the clinical years. We found that 64 (74%) schools have required ethics studies during these years—representing more than a dou-

bling of clinical ethics education since Bickel's 1985 study.<sup>10</sup>

The results of our study, however, reveal significant variation among medical schools in terms of their commitment to ethics education—as indicated in the amount of time and resources devoted to ethics curricula and its development within institutions. Although we found evidence of a general increase in the incidence of ethics education during the clinical years, a lack of full-time ethics teachers and researchers persists. This lack of faculty is not surprising in light of the fact that 20% of the schools did not fund teaching in ethics, and 38% provided no funding for curricular development in ethics.

Our results further indicate a disparity between the ideals set forth for ethics education and the actual delivery of ethics curricula. Despite the AAMC's call for providing students with knowledge of the theories and principles that govern ethical decision making, 80% of schools teaching ethics during the pre-clinical years spent less than 25% of course time on moral philosophy. Although 94% of responding deans felt that courses in ethics should be mandatory for all students, only 55% of the schools had a mandatory introductory ethics course. Furthermore, although the majority of deans agreed that being a physician was not sufficient background to be an effective teacher of ethics, many deans also reported a lack of funding for ethics teaching at their institutions.

### Course Content

Like the recent review of course syllabi by Dubois,<sup>9</sup> our study revealed a similar variation in the content of ethics curricula, reflecting an emerging awareness that students, residents, and practicing physicians have different, stage-specific needs in terms of medical ethics education.<sup>1,2,11</sup> The ethical issues relating to a student's status constituted one of the

top five subject areas addressed in both ethics-only and medicine and society-type courses. The narrative comments of a few deans and course directors reiterated that students have "different concepts of ethical dilemmas," which may be ascribed to their "developmental stage."

As discoveries from the Human Genome Project are translated into the clinical arena, physicians will need to understand the ethical and social implications of genetic testing. It is therefore surprising that we found only 55% of schools addressed this topic in their pre-clinical ethics courses. Just as courses in the basic sciences must change to incorporate new information, so too must courses in ethics tackle the unprecedented questions raised by technological advances.

Similarly, financial incentives and conflicts of interest were not addressed in almost two-thirds of the preclinical ethics courses, despite the fact that academic research has received increasing support from commercial entities over the past 25 years.<sup>12</sup> Increased commercial support poses substantial risks, as is illustrated by recent unfortunate events in which scientists embarked on clinical trials while holding equity in companies that promised to reap significant financial awards from the trials.<sup>13</sup> As the boundaries between academic medicine and industry continue to blur, medical students must be exposed to the ethical issues raised by the emerging partnership between industry and medicine.

Very few ethics courses devoted time to literature or the humanities. Because medical ethics and medical humanities represent distinct ways of analyzing dilemmas and shaping the character of future physicians, medical schools should safeguard both of these fields.<sup>14</sup>

### Faculty and Curricular Resources

Even though most deans agreed that being an effective teacher of ethics re-

quires special training, faculty development is lacking and the scarcity of qualified teachers is an obstacle to increasing ethics education. Of the schools in our study, 20% provide no funding for teaching in ethics. Medical education is no longer subsidized as heavily as in the past, and institutions need to provide financial support to those who teach medical students. An approach to dealing with the issue has been developing at U.S. medical schools and is increasing widely.<sup>15</sup> One model for change can be found in Rouan et al.'s "Teaching Recognition and Reimbursement Plan," instituted at the University of Cincinnati, which attempts to measure and reward teaching faculty, emphasizing the value of teaching.<sup>16</sup>

Curricular development is similarly underfunded. The lack of dedicated teaching staff and the absence of an established curriculum may contribute to an increased prevalence of guest lecturers in introductory ethics courses. Although guest lecturers can add insight and texture to a course, a curriculum taught primarily by guest lecturers is undesirable and suggests that some institutions may not have role models available longitudinally. The overwhelming need for faculty and curricular development requires that more funding be allocated to establishing a curriculum and supporting a qualified and adequately compensated teaching staff.

### Perceptions of Ethics Education

In their 1989 article, Miles et al. conclude that successful medical ethics education programs are dependent upon four interrelated factors: "a dean's office that is intellectually and financially committed to ethics education, an administrative center, a competent and organized faculty, and the respect of faculty colleagues for the importance of ethics education."<sup>17</sup> In light of this assertion, course directors' reports of perceived resistance from the administra-

tion and our finding that some schools reported no institutional ethics structure whatsoever are troubling. The presence of a centralized institutional structure devoted to ethics could help to overcome the obstacles to developing a cohesive longitudinal medical ethics curriculum. Also noteworthy is the fact that course directors and deans do not appear to agree that students should receive more ethics education. For ethics education to reach its highest potential, deans and course directors must work together towards overcoming obstacles. Models for change, such as medical school "academies" at the University of California, San Francisco, Harvard University, Mayo Clinic, and Baylor College of Medicine can promote ethics teaching through the allocation of funds and the provision of support and skills training.

### Limitations

Our study is limited by the lack of information on ethics education at schools that did not respond to our survey. Although we had a very high response rate from deans of medical schools, fewer course directors responded to our survey. It is possible that nonresponders do not have a robust ethics education curriculum. Although we did a broad survey of course directors and deans, we did not obtain in-depth information about *what* is taught. Our survey also consisted of primarily closed-ended questions. It is, therefore, possible that we did not capture some aspects of ethics education within medical schools. A qualitative analysis of ethics education course materials would be useful in providing this type of detailed course-content information. Lastly, we are unable to determine if the variation in content we found in ethics differs from content variation in other disciplines (e.g., basic sciences). It is also possible that the variation among schools reflects the fact that ethics is

still a relatively young field with no developed consensus about what should be taught.

### CONCLUSIONS

Students of U.S. and Canadian medical schools should graduate with a baseline level of knowledge in ethics, as they do in the basic sciences. The current state of ethics education, however, does not insure a common standard for ethics education. Our findings reveal variation in the methods, curricula content, and the placement of ethics coursework within the four-year curriculum. This variability is matched by inconsistencies in funding and development at individual schools.

Future research should address the need for a model curriculum that responds to students' concerns in addition to providing basic training in moral reasoning and ethical decision making. Ideally, an ethics curriculum should be integrated both horizontally and vertically across the four years of medical school so as to "demonstrate the ubiquitous nature of ethical issues and to convey the message that competence in medical ethics is central to being a doctor."<sup>18</sup> Basic theoretical principles upon which ethics education is based must also be applied in ethical skills training: students should be taught skills such as discussing DNR orders and advance directives, dealing with dying patients, and giving bad news. Lastly, all schools should provide an institutional structure for teaching ethics and increase funding and support for faculty and curricular development.

As medical ethics education continues to "come of age,"<sup>17</sup> we should also reexamine the medical school culture within which the ethics curriculum is situated. The concerns raised by both deans and course directors suggest that medical training, often characterized by its hierarchical structure and team-player mentality,<sup>1</sup> has the potential to

undermine the goals of ethics education. Future studies should address these concerns. The future of ethics education does not lie solely in faculty and curricular development, but also in the creation of an ethical environment in which students can learn and physicians can practice.

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### *Cover Note*

#### UNIVERSITY OF ILLINOIS AT CHICAGO COLLEGE OF MEDICINE

The precursor to the University of Illinois at Chicago (UIC) College of Medicine was founded as the College of Physicians and Surgeons of Chicago, popularly called P&S, in 1881. Five physicians established the proprietary medical school by personally funding a building to house the first class of 100 students. The curriculum consisted solely of clinical training during the first 10 years. But beginning with the 1891 term, an innovative program shift resulted in training in the basic sciences as well.

Medical schools flourished at the turn of the 20th century with 150 existing nationwide. P&S was one of 14 medical schools in Chicago. The large number of U.S. medical schools with inconsistent admission requirements and educational standards all contributed to an enormous excess of uneducated and ill-trained medical practitioners. In 1908, the Carnegie Foundation for the Advancement of Teaching commissioned Abraham Flexner, an external reviewer, to study medical education in U.S. and Canadian medical schools. His findings, the 1910 Flexner Report, generated massive reforms in medical education that are still applied today. Flexner found P&S as one of only a handful of Chicago medical schools deemed salvageable.

In 1913, after two decades of negotiations among P&S, University of Illinois officials, and state of Illinois legislators, the once proprietary medical school became the state's first college of medicine: the College of Medicine of the University of Illinois.

A cooperative agreement in 1919 between the university and the Illinois Department of Public Welfare resulted in the construction of the Research and Educational Hospitals, including a psychiatric institute, a surgical institute for children, an institute for juvenile research, a clinical institute, and a new eye and ear infirmary. The university agreed to provide the facility with professional staff for teaching and research into the causes and prevention of disease.

In 1931, the University of Illinois College of Medicine became one of the largest medical schools in the country. An entering class of 175 became the first in college history to attend classes in the new building at the current home of the college, 1853 West Polk Street (which is about two miles west of downtown Chicago).

In the early 1970s, the state mandated regional sites in Peoria, Rockford, and Urbana-Champaign to provide health care for the state's underserved population. College wide, UIC now has the largest medical school in the country with a total enrollment of 1,300. Students pursue their medical school studies among the four educational sites.

The aging Research and Educational Hospitals were the catalyst to build the University of Illinois Hospital in 1980. Current building projects include a new College of Medicine Research Building, with completion scheduled for April 2005. The new Magnet Resonance Imaging Center has been designed to accommodate the 9.4 Tesla magnet, the world's largest whole body magnet for medical imaging.

For more information about the UIC College of Medicine, please visit (<http://www.uic.edu/depts/mcam/index2.html>).

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