Combining Ethics Inquiry and Clinical Experience in a Premedical Health Care Ethics Internship

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Abstract

Problem
The professional formation of physicians begins in the premedical years, and educators are now recommending that medical ethics and humanities courses be considered essential components to becoming a physician rather than elective prerequisites for medical school admission. As a result, questions have arisen about how to teach students ethical reasoning skills prior to their professional training, as they have limited opportunities now to develop these skills and the related competencies in a real-world medical context.

Approach
The authors describe Santa Clara University’s Health Care Ethics Internship (HCEI), an undergraduate college experience that emphasizes ethical inquiry and immerses students in health care settings to foster deep learning. The HCEI includes mentored clinical rotations integrated with classroom inquiry into ethical theory, structured reflection, and professional development considerations. A survey of former students (2001-2002 to 2017-2018) explored their perceptions of these program components and the impact of the experience on their preprofessional readiness, career choice, and professional capabilities.

Outcomes
Of 185 former students, 89 (48.1%) completed the survey. Students reported that the HCEI: (1) assisted them in gaining admission to medical school; (2) had a positive influence on their career decisions; (3) increased their professional capabilities; (4) helped them develop preprofessional competencies; (5) gave them knowledge and experience they used in their personal and professional ethical decision-making; and (6) increased their moral sensitivity and ethical responsibility.
Next Steps

Integrating clinical rotations into ethics education exposes premedical students to real-world ethical questions, helps them develop a nuanced understanding of a health care career, and prepares them for the medical school admissions process. Other universities should consider implementing a similar program to prime their students for continued professional and moral development during medical school and residency.
Problem

Medical education reform efforts recognize that professional formation begins in the premedical years. In addition, the Project to Rebalance and Integrate Medical Education recommends that ethics and humanities courses be considered essential components to becoming a physician rather than elective prerequisites for medical school admission.\(^1\) Together with competence in the natural and life sciences, the Medical College Admission Test (MCAT) assesses students’ knowledge of the social and behavioral sciences as well as their critical analysis and reasoning skills.\(^2\) Consequently, premedical students seek exposure to the humanities and work to develop critical thinking skills to buttress their MCAT exam preparation. Further, admissions committees determine applicants’ medical school readiness by evaluating their preprofessional competencies, including cultural competence, teamwork, and ethical responsibility,\(^3\) as demonstrated in their personal statements and letters of reference.\(^4\) Once in medical school, however, the typical ethics survey course fails to couple ethics foundations with the real-world experience needed for complex medical practice.\(^4\) Given the time and resource limits in medical school curricula and the need for educational breadth, deep learning experiences related to ethics should begin during the premedical years.

The Markkula Center for Applied Ethics Health Care Ethics Internship (HCEI) at Santa Clara University (SCU) provides undergraduate college students with real-world engagement with ethics, values, and the intricacies of health care. In this report, we describe the HCEI pedagogical approach and the perceived impact of the experience on students in terms of their preprofessional readiness, career choice, and professional capabilities from 2001 to 2018.
Approach

The yearlong HCEI was started in 2001. It exposes undergraduate college students to real-life medical situations while providing them with space to apply reflective and ethical tools to their experience (see Appendix 1 for an overview of the program components, resources, and evaluation). Annually, the program accepts 12 to 19 junior and senior students, with 239 students completing the program through the 2017-2018 academic year. Students, most of whom are on the premedical track, represent many disciplines including biology, bioengineering, and public health science.

Clinical experience component

Students shadow health care professionals in clinical environments including the intensive care unit, emergency department, medical and surgical floors, physical therapy service, palliative care service, chaplaincy service, memory care facilities, outpatient clinics (e.g., pediatrics), assisted living facilities, and hospice service. Through shadowing, students observe these professionals in their everyday work. Students interact and converse with patients, families, interprofessional team members, and preceptors, although they are restricted from providing patient care. One student is present in a unit or clinic at a time. With their preceptors, students may be at patients’ bedsides, in team or senior leadership meetings, or at other events that allow them to experience real-world activities, interactions, and ethical questions in diverse contexts.

Unlike in other professional development settings, such as medical school, HCEI students are unencumbered by the need to do another job or develop technical skills (e.g., completing a physical exam). Instead, they focus on the social and ethical interactions among patients, families, and health care professionals through careful observation and meaningful conversation.
Classroom component

The classroom component includes time for experiential reflection and ethical reasoning, specifically identifying ethics questions and developing arguments in response. Students share their experiences, discuss how these experiences affected them, and consider related ethical questions. By retelling the stories of the health care professionals and patients they encounter and exploring their own responses, students make meaning out of their experience in a supportive, confidential classroom environment. This format supports students encountering unfamiliar situations, particularly those involving deep conflict, life-limiting illness, and/or death and dying.

In the HCEI, we focus on developing critical analysis and reasoning skills by overlaying student observations and reflections with considerations of ethical theory, narrative ethics, character formation, and the application of decision-making frameworks.

Our approach diverges from typical undergraduate college ethics pedagogy, which often focuses on headline-worthy cases (e.g., gene editing) that may not help at the bedside. Instead, HCEI students use real-time clinical encounters as the basis of their ethical reflection and analysis. They develop skills in oral case presentation, value identification, and everyday ethics. They discover connections among effective communication, attention to ethics considerations, and patient outcomes. Guided reflection papers support their critical thinking and analysis of their lived experience.

Students also engage in narrative-based reasoning through literature discussions on works such as Anne Fadiman’s *The Spirit Catches You and You Fall Down*, the story of a Hmong family’s culturally complex encounter with Western medicine. This narrative challenges students’ presuppositions, promotes their introspection and empathy, and enhances their awareness of the suffering of healers and those who are healed.
Program evaluation

To assess the impact of the HCEI, we developed an email survey to capture former students’ perceptions of their preprofessional readiness, career choice, and professional capabilities as a result of participating in the HCEI. Previously administered surveys\(^8,9\) and the literature on effective internship programs guided our survey design. The 45-item survey included multiple choice (9), Likert scale (21), open-ended (3), and demographic (12) questions. The full survey instrument is available at https://www.scu.edu/ethics/hcei/survey/.

Between the 2001-2002 and 2017-2018 academic years, 239 students completed the HCEI. On average, 14 students participated annually (range: 8 to 19). During April and May 2019, former students received an invitation to complete the survey via email. After accounting for failed email contacts, we had a “contactable” population of 185 former students (77.4%). We calculated descriptive statistics for responses to each survey question.

The Santa Clara University Institutional Review Board approved this study.

Outcomes

Response rate and demographics

In total, 89 (48.1%) students completed the survey. The median response rate by academic year was 46.2% (range: 0.0% [0 of 7 contactable respondents] for 2009-2010 to 84.2% [16 of 19 contactable respondents] for 2017-2018).

The most commonly reported majors included biology (42, 47.2%), public health science (25, 28.1%), and humanities such as art or philosophy (11, 12.4%). Seventy-one (79.8%) students initiated or completed an additional degree after graduation, and 44 (49.4%) pursued degrees in medicine or dentistry. Among graduates with a master’s degree, certificate, or other licensure, most worked in health-related fields, and recent graduates typically held health care jobs.
Respondents’ demographics generally reflected the demographics of students who completed the HCEI. Of the 77 respondents who provided demographics, 54 (70.1%) were female, 59 (76.6%) were White, 8 (10.4%) were Hispanic, 7 (9.1%) were first-generation college students, and 13 (16.9%) received grants (e.g., Pell Grants) reserved for low-income students. The full demographics data are available upon request.

Students’ clinical experiences (78 respondents) reflected the available rotations, including the emergency department (57, 73.1%), intensive care unit (48, 61.5%), family medicine clinic (38, 48.7%), medical-surgical oncology department (27, 34.6%), hospice service (26, 33.3%), and a wound care clinic (20, 25.6%), among others.

Vocational path

Students reported that the HCEI helped them determine a vocational path (65/79, 82.3%) and formulate their post-graduation plans (57/79, 72.2%). They also reported that their HCEI experience helped them gain admission to a clinically related graduate program (49/77, 63.6%). Seventy-nine (100.0%) respondents reported that the clinical rotations had value for their professional growth, and 70 (88.6%) said the HCEI increased their professional capabilities.

Preprofessional readiness

Although the HCEI supports the development of multiple preprofessional competencies, we highlight 3 here: ethical understanding and responsibility, teamwork, and cultural competence.

Ethical understanding and responsibility. Students reported that the HCEI equipped them with tools to identify ethics-related questions in graduate school (48/77, 62.3%), the workplace (58/74, 78.4%), and everyday life (65/76, 85.5%). The development of ethical sensitivity (i.e., the ability to recognize an ethical issue) translated into ethical judgement and commitment.

Students also reported that the HCEI equipped them to make ethics-related decisions in the
workplace (53/74, 71.6%) and in everyday life (62/76, 81.6%) and gave them the courage to speak up about ethics concerns in graduate school (33/77, 42.9%), the workplace (39/74, 52.7%), and everyday life (52/76, 68.4%). They rated the clinical rotations as the most important component for helping them to understand ethics in health care.

Becoming ethically responsible requires developing ethical sensitivity and engaging in ethical reasoning and behavior while resisting negative peer pressure to act otherwise. Students noted the value of the HCEI in cultivating their ethical reasoning skills, including a sense of responsibility to think carefully and speak helpfully in ethically fraught situations. One student wrote, “My experiences…taught me how to see ethical dilemmas from differing viewpoints and to utilize ethical theories to guide medical decision making.” Students also appreciated that the HCEI allowed them to apply the basic principles of medical ethics to their experiences and to the conundrums encountered in medical practice; one student noted, “I have been working in and around medicine and have yet to encounter someone who was able to gain this kind of clinical experience and develop this kind of ethical framework during their undergraduate experience.”

**Teamwork.** The HCEI increased students’ awareness of the importance of collaboration and interprofessional teamwork in delivering good patient care. For example, a chaplaincy rotation increased one student’s understanding of the significance of “teamwork and working with other members of the hospital staff for a holistic approach to healing.” Another student commented, “Having a general knowledge and respect for many [health care] specialties has made me a better member of [health care] teams and has allowed me to better advocate for my patients and their needs.”
Cultural competence. Santa Clara County, where all HCEI sites are located, is majority minority, with nearly 40% of residents born outside the United States. Having students work in this community, and augmenting their experience with discussion and course readings, supports students’ development of cultural competence. Highlighting this growing cultural awareness, one student wrote:

A Russian speaking patient was hospitalized, and the family said it was not culturally appropriate for them to keep the patient informed…. The ethical question was whether or not the patient should be informed of his medical condition and status, despite what was culturally familiar to the family.

Direct observation of culture-based (mis)communication and value dissonance, coupled with relevant readings, helped students understand the sociocultural factors influencing health care interactions. The HCEI approach emphasizes that medicine is a culture, and every medical encounter spans multiple diversity dimensions.

Career path and professional capabilities

More than 80% of students reported that the HCEI influenced their career decisions, often confirming their career trajectory. One student wrote, “I suspect I would’ve ended up in critical care regardless, but the internship probably helped to cultivate an interest.” For other students, the HCEI opened new paths. Another student noted, “I went into Podiatry after spending one month at the wound care center. I knew little about the profession and the doctor I shadowed was an excellent mentor and influence.”

In addition, more than three-quarters of students indicated that they developed professional capabilities during the HCEI. One noted,
Being able to spend time in an [intensive care unit] is one of the most valuable personal and professional experiences I got from the Internship. It opened my eyes to the complexity of that care environment and the way complex medical decisions impact people and their families.

The development of mentoring relationships and professional capabilities may be particularly important for first-generation college students and those from socioeconomically disadvantaged backgrounds, who often lack the personal and financial resources to complete the clinical hours typically required for medical school admission.

**Study limitations**

First, the lack of viable contact information for 54 (22.6%) former students, although expected for a program that has spanned more than 15 years, limited our initial study population. Another limitation was the self-reported data we collected to measure impact. However, the response rate for those we could contact (89/185, 48.1%) combined with a respondent pool that mirrored the total population of former students supports the conclusion that the outcomes we report here broadly reflect students’ perceived value of the HCEI experience. Finally, comprehensive structured interviews with former students could add depth to the qualitative findings we share here.

**Next Steps**

The HCEI has primed students for continued professional and moral development during medical school and residency. It has achieved SCU’s goal of enabling students to develop competence, conscience, and compassion. The overwhelmingly positive outcomes that have come from our approach of classroom inquiry plus clinical observation support replication in other undergraduate college settings. Although the student population at SCU, a West Coast
Jesuit university, may not directly reflect the undergraduate study body elsewhere, replicating the HCEI in other settings would further establish its credibility and broaden its potential impact. Appendix 1 lists key features necessary for replication.

Current students have expressed interest in experiencing community-based health care services (e.g., harm reduction programs, street medicine) as well as exploring deeper social justice issues, suggesting program modifications that further support their interest in engaging with diverse, underserved populations and developing cultural competence. We plan to consider how to incorporate these recommendations into the program. In addition, future research could determine whether the HCEI levels the playing field for first-generation students or students from low-income households who might not otherwise be able to include such experience on their medical school applications, thereby making them stronger candidates and contributing to a pipeline of diverse, highly-qualified medical school applicants.10

Because SCU is a master’s-level university with no health professions schools, we partner with community hospitals, hospice services, and elder care facilities to offer an adequate number and variety of rotations for students. Managing multiple contracts is time intensive and can cause undesirable year-to-year fluctuation in the number of students we are able to accept into the program. We continue to explore site consolidation through collaboration with health systems to minimize these limitations. Universities with medical, nursing, or other health professions schools may be able to integrate their undergraduate college students into university-associated health care settings under existing contracts, thus lowering the administrative burden and stabilizing class sizes.
An undergraduate college ethics education is vital preparation for a health care career. Although students can have difficulty visualizing the situations described in traditional ethics case study pedagogy, clinical experiences can help them deepen their understanding of these situations. Students may not remember the intricacies of ethical theory, but they do remember their experiences and the stories of those health care professionals and patients they encounter. Future research could include comparing the ethical awareness of former HCEI students with that of other prehealth college graduates and determining the effects of the clinical experience and classroom components of the HCEI on fostering ethical sensitivity and preprofessional readiness. Given the increasing emphasis in medical school admissions on having direct health care experiences, the HCEI is of interest to premedical undergraduate college students, as evidenced by the number of applications we receive each year, which are 3 times our capacity. After almost 2 decades of success, we can demonstrate the value of the HCEI as a component of premedical education and encourage its implementation at other universities as we continue to innovate to meet students’ evolving needs.
References


## Appendix 1
### Key Features of the Health Care Ethics Internship (HCEI), Markkula Center for Applied Ethics, Santa Clara University (SCU), 2001-2018

<table>
<thead>
<tr>
<th>Key features</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Goals and context</strong></td>
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<tr>
<td>Program goals</td>
<td>The clinical and classroom components were designed so students could develop the skills to:</td>
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<tr>
<td></td>
<td>• Identify ethical issues/dilemmas in a health care setting</td>
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<td></td>
<td>• Critically evaluate ethical issues, arguments, and decisions</td>
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<td></td>
<td>• Understand the essential elements of a respectful, collaborative, productive, and compassionate health care professional-patient relationship</td>
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<td></td>
<td>• Integrate ethics into their future professional roles</td>
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<td></td>
<td>• Reflect on their vocational choice in light of their interests and gifts and the needs of the community</td>
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<tr>
<td>Organizational context</td>
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<td></td>
<td>• To graduate, all students at SCU must take 1 core ethics course. Many of these courses focus on theory; most do not offer an experiential component.</td>
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<tr>
<td></td>
<td>• The HCEI was developed to provide real-world experience for premedical and pre-health professional students. It reflects SCU’s mission to develop persons of competence, conscience, and compassion through, for example, a core requirement in experiential learning for social justice, which this course fulfills.</td>
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<tr>
<td><strong>Resources</strong></td>
<td></td>
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<tr>
<td>Staffing: Ethics content and</td>
<td>This course facilitator is responsible for:</td>
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<tr>
<td>site development lead</td>
<td>• Classroom content</td>
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<td></td>
<td>• Support for preceptors and students</td>
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<td></td>
<td>• Negotiating contracts with the rotation sites</td>
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<td></td>
<td>• Site and rotation development</td>
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<tr>
<td>Staffing: Administrative lead</td>
<td>This administrator is responsible for:</td>
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<td></td>
<td>• Rotation site contract management (e.g., tracking, assuring SCU signature completion)</td>
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<td></td>
<td>• Student preparedness and rotation scheduling</td>
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<td></td>
<td>• Primary student and preceptor support, including:</td>
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<tr>
<td></td>
<td>o Being the primary point of contact with the rotation sites (e.g., scheduling, compliance)</td>
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<td></td>
<td>o Being available to preceptors during all scheduled student rotations (e.g., explaining program specifics and expectations, addressing concerns that arise)</td>
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<td></td>
<td>o Providing regular student check-in opportunities</td>
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<tr>
<td>Additional support</td>
<td>These individuals are responsible for:</td>
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- Informational website content to promote the program
- Program brochure/informational materials
- Online application portal
- Student application review and interviews

**Student experience**

**Student recruitment and minimum requirements**

- An average of 14 students participate each year. Placement opportunities vary with rotation site availability.
- Annual recruitment outreach is done to prehealth student organizations, students in courses frequently taken by prehealth students, the premedical advisor, email contact, and flat screen posting.
- Basic requirements for applicants include being a junior or senior and passing an approved ethics course.
- The application packet consists of a completed application form, an official transcript, a 300-500 word letter of intent, and 2 letters of recommendation, one of which must be from a SCU faculty member.
- After packet review, a subset of applicants is selected for interviews.

**Clinical experience component**

- Rotations: Each student completes 2 rotations/quarter (6 rotations/year). Rotations provide experience in diverse clinical areas (e.g., intensive care, physical therapy, hospice) and work settings (e.g., patient bedside, team meetings).
- Preceptors: Typically, preceptors are nurses or physicians who agree to have a student shadow them. Nurse managers often assign the role to members of their nursing staff; physicians tend to be those who work with residents or are residents themselves. During a rotation, a student shadows a preceptor for 5 hours/week for 4 weeks, for a total of 20 hours per setting.
- Orientation: The Markkula Center for Applied Ethics provides a required orientation session that includes student self-introductions, icebreakers, and initial team-building; an overview of classroom and rotation logistics and requirements including how students are to respond (i.e., withdraw with positive affect) if patients or families do not verbally consent to their presence when explicitly asked by a preceptor; and blood-borne pathogen training.
- Site onboarding: Students complete site-specific onboarding at each clinical site consistent with the institutional requirements for other student cohorts (e.g., nursing, social work, or medical students), including health screening, drug screening, criminal background check, and site-specific Health Insurance Portability and Accountability Act (HIPAA) and security training done by assigned staff. Subsequently, students receive a badge at each site.
- Ongoing SCU-student engagement: Students must check in with the SCU administrative staff prior to and at the end of each rotation. Prior, they discuss what to expect during the rotation, what makes the rotation unique, and where the student might need additional preparation (e.g., reading about care of the dying patient before a hospice rotation). After, they discuss what the student noticed during the
Classroom component | Class meets 6 times/quarter for 3 quarters in 100-minute sessions that include:
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| Lectures on ethical theory and its application including ethics concepts taught through the use of Jonsen, Siegler, and Winslade’s Four Box Method and the Markkula Center for Applied Ethics’ Framework for Ethical Decision Making.  
Guided reflection to support understanding of individual and shared experiences and enable the application of ethics concepts in context.  
Case studies to provide additional contexts for ethical problem solving.  
Think-pair-share discussions to promote active learning by tapping into students’ prior knowledge and current experience and to develop ethical problem-solving skills through practice.  
Role play to practice key professional skills (e.g., giving bad news) and begin to understand the complexities of medical-ethical decision making from both the health care professional and patient points of view.  
Art and literature to increase observational skills and support the development of empathy.  
Pre-class readings to introduce ethics concepts (e.g., *Clinical Ethics: A Practical Approach to Ethical Decisions in Clinical Medicine* by Jonsen et al), the patient experience (e.g., *The Spirit Catches You and You Fall Down* by Fadiman), and the clinician experience (e.g., *Uncommon Wisdom: True Tales of What Our Lives as Doctors Have Taught Us About Love, Faith and Healing* by Castaldo and Levitt).  
Guests from the field to provide professional modelling and introduce specialties and perspectives students might not encounter during their rotations.
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### Evaluation

| Student evaluation, feedback, and success | Course grade is pass/no pass based on but not limited to:  
- Attendance  
- Active participation in rotations and class  
- 6 rotation reflection papers  
- 3 case-based term papers  
Students receive written developmental feedback on papers and oral feedback and problem-solving support during pre- and post-rotation check-ins and class  
Student success depends on:  
- Clarity of their expectations and observational role  
- Purposeful interaction and willingness to learn from preceptors, patients, families, and interprofessional teams during moments of vulnerability, tragedy, and joy. |
Acknowledgement of their own presuppositions, values, and biases during observation and reflection and a supportive learning environment that encourages students to make these acknowledgements

Overall program evaluation

- On-going program assessment to track students’ ethical awareness immediately pre- and post-HCEI
- Participation in SCU’s teaching evaluation program
- End-of-year student feedback questionnaire to guide revisions to the program
- Survey of and phone contact with preceptors to obtain feedback and guide revisions to the program

Essential components for successful program implementation and replication

- Administrative team with organizational skills and flexibility
- Active and timely mentoring to develop and support students’ problem-solving and critical thinking skills during each rotation
- Mutuality and timeliness in relationship management with rotation sites to ensure ongoing program improvement and responsiveness to site and student needs
- Development of an accurate and anticipatory timeline for rotation and classroom management shared with preceptors and students
- An interactive and dynamic classroom experience to enable active learning

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