Informed Consent Skills in Internal Medicine Residency: How Are Residents Taught, and What Do They Learn?

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ABSTRACT

Purpose. Obtaining informed consent is an essential skill in internal medicine (IM). The authors’ informal observations and formal testing revealed deficiencies in residents’ informed consent skills. This study evaluated how residents acquire informed consent skills and how informed consent skills are addressed in Canadian IM residency programs.

Method. A questionnaire was delivered to all 16 IM program directors in Canada, asking how informed consent is taught and assessed. At the University of Saskatchewan IM residency program, residents were assessed through an objective structured clinical examination station, written examination, and a self-assessment questionnaire.

Results. No consistent approach to teaching or evaluating informed consent skills exists within Canadian IM programs. Program directors and residents identified informal mentoring by residents as an important learning modality. Although residents performed well in discussing procedural indications and techniques, discussing risks was inadequate. Residents focused on general and minor risks but avoided discussing serious risks and had difficulty discussing the frequency of complications. Residents lacked a structured approach to assessing capacity and often assessed only comprehension. Residents were unfamiliar with concepts such as material risk, implied consent, and therapeutic privilege.

Conclusion. Explicit training in informed consent skills is urgently needed. Informal mentoring must be recognized as an important training method for informed consent and supported by appropriate teaching and evaluation strategies to ensure that resident–instructors do so effectively.

Informed decision making is a foundation of the ethical practice of medicine, applying to both decisions regarding the diagnosis and treatment of disease as well as to invasive diagnostic and therapeutic procedures. Traditionally, the term informed consent has been used to refer to patients’ informed decision making, particularly in referring to invasive interventions.

Using the term consent may unintentionally convey to trainees that the desired outcome is the patient’s acquiescence to the plan proposed by the physician rather than facilitating the patient’s informed selection of the course of action that best aligns with their personal values. The literature documents failures of informed consent to adequately meet this goal of collaborative decision making in a variety of contexts. Physicians and patients sometimes view informed consent primarily as a legal exercise in risk management. Patients surveyed after having given informed consent often cannot recall or do not comprehend key information such as indications, risks, and alternatives. Such deficiencies may result from a number of underlying problems. A survey of written surgical consent forms from five institutions in the Los Angeles area revealed that all required a high level of literacy—comparable to that required for reading a scientific journal or academically oriented magazine. Other studies have documented incomplete disclosure of information by physicians. Clearly, the current practice of informed consent often fails...
to fulfill its mandate to ensure informed, voluntary decision making by the patient.

Several studies have demonstrated the deficiencies of residents in obtaining informed consent for specific procedures or treatments. These deficiencies may be attributed to a variety of factors, including lack of awareness of procedural risks, poor communication skills in general, and lack of appropriate feedback on performance.

Canadian trainees in core internal medicine (IM) programs are expected to achieve competence in a variety of invasive procedures. Training in these procedures often occurs informally, with senior residents passing on knowledge and technical skills to junior residents. Instruction often focuses on technical aspects of the procedure, with little attention paid to the process and content of obtaining informed consent.

In the University of Saskatchewan IM residency program, observations of residents performing routine procedures raised concerns about the adequacy of their informed consent skills. This prompted us to undertake a formal assessment of their informed consent skills through an objective structured clinical examination (OSCE) station included in an examination held at the end of the first year of training. The OSCE evaluates core competencies residents are expected to achieve during their rotations through the clinical teaching unit, coronary care unit, and neurology. By this point in their training, residents have had fairly homogeneous experiences and have participated in a variety of procedures including lumbar puncture, thoracentesis, knee joint aspiration, paracentesis, and bone marrow aspiration and biopsy. The residents’ performances in the OSCE station confirmed global deficiencies in informed consent skills. Before the examination, the informed consent station was piloted with senior residents whose deficiencies also raised concerns. In response, we undertook a more in-depth evaluation of the informed consent skills of the entire resident cohort and evaluated how we teach informed consent in our program. We also surveyed all Canadian IM training programs to determine how informed consent skills are taught across the country.

**METHOD**

**Program Directors’ Survey**

We surveyed the program directors at all 16 Canadian IM training programs using a written questionnaire. The questionnaire was handed directly to program directors at meetings of the Canadian Association of Internal Medicine Program Directors or sent to program directors by e-mail. Nonresponders were followed up by phone or e-mail. The questionnaire asked about teaching methods, estimated hours of teaching per year in informed consent, evaluation methods, personnel involved in teaching, and the program directors’ opinions of their residents’ skills in informed consent.

**Residents’ Assessment and Survey**

Residents in the University of Saskatchewan internal medicine residency program were assessed through a written examination covering the principles of informed consent and an informed consent OSCE station. Two evaluators rated responses to written short-answer questions independently, and disagreement was resolved through discussion and consensus. The OSCE station required residents to obtain consent from a patient with suspected herpes encephalitis, with a scenario designed to raise the possibility of impaired capacity. Residents also completed a self-assessment questionnaire regarding their competence and comfort in obtaining informed consent in a variety of situations and how they learned informed consent skills.

**RESULTS**

**Program Directors’ Survey**

Responses were obtained from all 16 IM residency program directors. Nine of the 16 directors reported their programs offered specific training in informed consent. Although a variety of teaching strategies were reported, all nine programs with specific training used case studies as a teaching method. Three programs used lectures and role play or practice sessions. One program used all three of these methods. Twelve of the 16 program directors recognized that informal mentoring played an important role in training informed consent skills. In six programs, informal mentoring was the only mechanism identified for training. One program neither had a formal teaching program nor recognized the role of informal mentoring.

Informed consent was taught by a variety of faculty. In most programs (n = 13), departments of medicine faculty were involved, either through formal teaching or informal mentoring. Five programs used professional ethicists, and seven programs used faculty members with a special interest in ethics. Of programs using only informal mentoring (n = 7), four used both faculty and resident mentors, two used only faculty mentors, and one used resident mentors.

Assessment of informed consent was most often done through informal observations of residents (eight of 16 programs). Seven programs had a specific assessment strategy, one used multiple-choice questions, and six used OSCE stations. Five of 16 programs reported no method of assessment.

Program directors evaluated the average level of ability in informed consent (excellent, good, adequate, marginal, or deficient according to specific descrip-
tions) of the PGY-3 residents in their program. Table 1 shows the distribution of responses and definitions. Eight of nine directors of programs with formal training rated their residents as having adequate to good skills, compared with four of seven directors of programs without formal training.

Program directors were also asked to estimate the amount of teaching time per year spent addressing informed consent skills. In all, 14 program directors provided estimates of teaching time; responses ranged from zero to ten hours per year, with a mean of 2.1 hours per year. Several program directors indicated uncertainty about their estimates. Ethical issues relating to informed consent received the most attention in teaching, accounting for 42.6% of teaching time (range, 33% to 60%), 38.6% of teaching time addressed “how to do it” (range, 20% to 50%), and medical–legal aspects accounted for 18.6% (range, 10% to 33%) of time teaching.

Residents' Assessment and Survey

Informed consent OSCE stations were conducted in our program in May 2000, May 2001, and July 2001. In May 2000 and 2001, only PGY-1 residents were evaluated. In July 2001, all core IM residents (PGY-1 to PGY-3) were evaluated as part of a pretest for an academic half-day addressing informed consent. Table 2 outlines the results of these OSCE stations. Residents performed well discussing indications for the procedure, explaining the technique, and discussing generic risks (pain, bleeding, infection). They performed poorly in discussing major (potentially life-threatening or disabling) risks. Residents tended to avoid mention of such risks and had difficulty discussing the magnitude of risk. Residents rarely mentioned the possibility of failure of the procedure. In the lumbar puncture station, the case scenario was specifically de-
signed to suggest the possibility of impaired capacity. Only 45% of residents spontaneously assessed any aspect of capacity and when prompted, none of the residents had a thorough, structured approach. In most cases, residents simply asked the patient if they understood the information provided (without actual verification of comprehension) or requested the patient to restate the information in their own words. Other aspects of capacity were rarely addressed.

The academic half-day pretest included a written examination of informed consent concepts and a self-assessment questionnaire. The written component was administered to all available core residents and several sub-specialty (PGY-4 and PGY-5) residents. Results are reported in Table 3 (ability to identify key elements of informed consent) and Table 4 (ability to define specific terms related to informed consent). Comparing the responses to these two questions reveals that, even when residents recognized key elements of informed consent (such as autonomy and capacity), their ability to provide an accurate definition of these concepts was limited. Few residents were able to provide correct definitions of terminology specific to informed consent (material risk, implied consent, and therapeutic privilege).

Observing role models was the most common learning method reported. Role models were senior (PGY-3 or greater) or junior (PGY-1 or PGY-2) residents and faculty. One-on-one teaching by senior or junior residents or faculty was the second most important source of instruction. Lectures, small-group teaching, and self-study were rarely reported as a means of acquiring informed consent skills. Five of the 19 residents surveyed indicated that they had never received any instruction in informed consent.

Residents were asked to rate their level of comfort in obtaining informed consent in a variety of conditions and procedures using a visual analogue scale, with instructions to assume they had complete competence in the technical aspects of the procedure. The left anchor for the scale was “extremely uncomfortable” and the right anchor “completely comfortable.” Responses are reported in Table 5. Overall, residents were only moderately comfortable obtaining informed consent, even given fairly common procedures and scenarios. In most scenarios, residents’ comfort levels increased with the duration of training, but this increase was generally modest.

### DISCUSSION

Our survey of IM residency program directors revealed that teaching informed consent varies greatly across Canada. There is no standard approach or curriculum used to teach informed consent. A few programs have structured approaches, but a significant proportion has little or no formal teaching. The evaluation of informed consent skills also varies across the country, with less than half of Canada’s programs formally evaluating informed consent skills. The key role of residents in teaching informed consent, as identified in our survey of residents, is likely underappreciated because only five of 16 program directors acknowledged their residents’ role in teaching informed consent skills.

Observations of our residents revealed that they often failed to discuss serious risks of procedures. Residents may have been unaware of some of the serious (but uncommon) risks, or they may have been concerned that anxiety

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**Table 3**

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<th>Training Year</th>
<th>Key Element*</th>
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<tr>
<td></td>
<td>Autonomy</td>
</tr>
<tr>
<td>PGY1 (n = 11)</td>
<td>78%</td>
</tr>
<tr>
<td>PGY2 (n = 7)</td>
<td>100%</td>
</tr>
<tr>
<td>PGY3+ (n = 6)</td>
<td>17%</td>
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*Residents were given credit for responses that included either the specific term or an appropriate description of the concept.

**Table 4**

<table>
<thead>
<tr>
<th>Response</th>
<th>Terminology</th>
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<tbody>
<tr>
<td></td>
<td>Autonomy</td>
</tr>
<tr>
<td>Correct definition</td>
<td>16%</td>
</tr>
<tr>
<td>Partially correct</td>
<td>71%</td>
</tr>
<tr>
<td>Incorrect</td>
<td>4%</td>
</tr>
<tr>
<td>No answer/uncertain</td>
<td>8%</td>
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</table>
Residents also lacked understanding of key terminology and concepts in informed consent and, when presented with specific consent tasks in a variety of contexts, were only moderately comfortable with their abilities to obtain informed consent. Our study demonstrates significant gaps in the teaching and assessment of informed consent knowledge and skills. Because our IM program is relatively small, (eight to 11 residents per postgraduate year) it is not possible to make significant comparisons from year to year. Although the survey of program directors raises broader concerns, we did not directly assess residents in other programs. Information collected from both program directors and residents was often based on recall and is, therefore, subject to bias. Although these factors may limit the conclusions that can be drawn from our study, evidence of a standard approach to teaching or evaluating informed consent within IM training programs is lacking. The lack of attention to preparing residents to teach informed consent skills to junior colleagues is of particular concern because mentoring and instruction by residents appears to play a key role in learners’ acquisition of competency in informed consent. Our study, along with others reported in the literature, demonstrates the need for enhanced training in informed consent with an emphasis on collaborative decision making between physicians and patients. One of the key deficiencies our study identified was a failure to address serious procedural risks, a finding also noted by Huntley et al.9 in a study of consent for colonoscopy obtained by junior house officers. Their study found that one third of junior house officers failed to discuss the serious risks of colonoscopy, and they attributed this failure to their lack of awareness of these risks. Residents need to be adequately informed about the risks of procedures for which they obtain consent—information that is not always available in a readily accessible format.

Our study also found that residents receive little formal assessment of and feedback on their informed consent skills. Kondo et al.11 document that residents significantly overestimate their performances in key aspects of informed consent. Failing to evaluate and provide formative feedback makes it difficult for residents to be aware of their own deficiencies and remedy them.

Our study and others in the literature point out the urgent need for enhanced teaching of informed consent skills in postgraduate training programs. Such teaching must be supported by an effective strategy for regular formative feedback and accurate summative evaluation to help residents achieve a high level of competence. Because residents themselves play a key role in passing on informed consent skills from one cohort to the next, it is critical that they be equipped not only with the knowledge and skills to obtain informed consent but also with the knowledge and skills to be effective mentors and evaluators of junior colleagues. Teachers’ limited skills in informed consent perpetuate deficiencies. Lack of robust evaluation systems allow these deficiencies to go unremedied and leave graduates ill-prepared to address issues of informed consent in their own practices.

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REFERENCES


Cover Note

The George Washington University Medical Center

The George Washington University Medical Center is an internationally recognized interdisciplinary academic health center which has provided medical care in the Washington, DC metropolitan area since 1825. The Medical Center comprises the School of Medicine and Health Sciences, the 11th oldest medical school in the country; the School of Public Health and Health Services; George Washington (GW) Hospital, jointly owned and operated by The George Washington University and Universal Health Services, Inc.; and GW Medical Faculty Associates, an independent faculty practice plan.

The first GW medical department was funded by its faculty and the first facility was built in downtown Washington near Ford's Theatre. The distinguished faculty included Thomas Sewell, professor of anatomy, and James Staughton, professor of surgery.

By 1844, the department had outgrown its facility, so Congress designated the Judiciary Square jail space as the Washington Infirmary to be operated by GW. This was the first incarnation of GW Hospital, the only hospital in the nation's capital at the time, and one of the earliest teaching hospitals. In 1948, the Foggy Bottom district became the new home for the hospital.

In 2002, the hospital moved to a brand new $96 million facility across the street. There, the new Clinical Learning and Simulation Skills (CLASS) center was opened which features full-scale mock operating rooms with highly sophisticated computer-controlled mannequins. CLASS also features 12 exam rooms that are fully wired for sound and video, so interactions with so-called "standardized patients" can be observed, recorded, and stored in a completely digital environment.

Emergency medicine and disaster preparedness have become hallmarks of GW Medical center's mission. The treatment of President Ronald Reagan following a 1981 assassination attempt was perhaps the most high profile crisis the Medical Center endured. Located just blocks from the White House, GW Medical Center has continued to see its share of major events: Vice President Cheney has made several visits to GW Medical Center for heart troubles; the Medical Center's proximity to the Pentagon made it the destination for ambulances from the scene of the September 11, 2001 disaster; a month later, the Medical Center screened more than 700 people for anthrax. Recently, GW also launched the Response to Emergencies and Disasters Institute (READI), designed to provide emergency training to fire, EMS, and police officials, as well as to public health authorities and other nontraditional first responders.

When the medical department opened in 1825, Dr. Sewell ventured a prediction that GW would be instrumental in creating a “new era” in the science of medicine. Through its many accomplishments it appears The George Washington University Medical Center has already made good on that prediction and the promise for the future is bright.

For more information about The George Washington University Medical Center, go to (http://www.gwumc.edu).

GW Medical Center
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