BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors. Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Hall, Daniel E

eRA COMMONS USER NAME: DEHALL

POSITION TITLE: Associate Professor of Surgery (University of Pittsburgh) and Staff Surgeon (VAPHS)

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>Completion Date</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yale College, New Haven, CT</td>
<td>BA</td>
<td>05/1991</td>
<td>Biology/Philosophy</td>
</tr>
<tr>
<td>Yale Divinity School, New Haven, CT</td>
<td>MDiv</td>
<td>05/1996</td>
<td>Theology</td>
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<tr>
<td>Yale School of Medicine, New Haven, CT</td>
<td>MD</td>
<td>05/1999</td>
<td>Medicine</td>
</tr>
<tr>
<td>University of Pittsburgh Medical Center, Pittsburgh, PA</td>
<td>Intern/Resident</td>
<td>06/2002</td>
<td>General Surgery</td>
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<tr>
<td>Duke University Medical Center, Durham, NC</td>
<td>Fellow</td>
<td>06/2005</td>
<td>Religion/Health</td>
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<tr>
<td>Duke University, Durham, NC</td>
<td>MHS</td>
<td>05/2005</td>
<td>Clinical Research</td>
</tr>
<tr>
<td>University of Pittsburgh Medical Center, Pittsburgh, PA</td>
<td>Chief Resident</td>
<td>06/2007</td>
<td>General Surgery</td>
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A. Personal Statement

I am a practicing general surgeon at the VA Pittsburgh healthcare system with research interests in surgical ethics, informed consent, and shared decision-making. I also have two masters degrees: one in health services research methodology and the other in theology. This training and experience uniquely prepares me to address the surgical care of frail Veterans considering elective surgery.

My early research focused on the empirical associations between religion and health, leveraging my theological training to consider the relevance and impact of religious worldviews on health care decision-making—especially around the end of life. In particular, I worked on developing a novel approach to measuring religiousness through which I developed expertise in measurement science.

I then broadened my research focus to surgical ethics and the process of informed consent, developing more advanced quantitative and qualitative research expertise through an HSR&D Career Development Award (CDA). During my CDA I competed successfully for a Service Directed Project aimed at improving the quality and efficiency of 10 VA IRBs. This work capitalized on my experience measuring complex behavior and decisions to develop 3 novel measures of IRB quality. It also exposed me to systems engineering techniques for improving the efficiency of complex systems.

Through this work, I established a reliable record of competitive grant funding, effectively managing multiple staff and collaborators to achieve my proposed aims and disseminating those findings through 34 peer reviewed manuscripts, 20 peer reviewed abstracts and 5 textbook chapters. For 2 years, I have been serving on the NIH study section for Central IRBs and Research Ethics. I have also become an expert in the emerging regulations governing the interface between quality improvement and research.

The current pilot project leverages my expertise in measurement science as we seek to calibrate and validate a novel frailty measure. It also capitalizes on my experience with systems engineering to develop and test complex behavioral interventions aimed at improving the care of frail Veterans. Finally, the current work uses my expertise in shared decision-making because patients’ overarching goals of care frequently change as the end of life approaches (as indicated by a diagnosis of frailty), and the patient-centeredness of surgical care for frail Veterans depends on attentively eliciting those goals to inform the shared decision-making process.

With my team, I have already made significant contributions to the science of surgical frailty. 2 high-impact manuscripts published in JAMA Surgery were covered by national media outlets. The first paper (1) demonstrated a substantial survival benefit for frail patients when their surgeon ordered a preoperative palliative care consult. The second (3) is an editorial about a recent empirical study of frailty in which we outline our vision for the future of frailty-related surgical research and quality improvement. In addition, we presented two high-impact abstracts at the meetings of the American College of Surgeons (ACS) and Association of VA Surgeons (AVAS). Manuscripts associated with these abstracts are currently under review for potential
publication in the Journal of the American College of Surgeons and JAMA Surgery. The first abstract (2) reports the findings from the Omaha FSI that demonstrate a 7 fold survival advantage after implementing the FSI. The second abstract (4) reports preliminary validation of the RAI by comparing the RAI-A and RAI-C to the mFI in a sample of nearly 10,000 patients from the Omaha VAMC. I was also senior author on a related 2014 manuscript “Should age be a bases for rationing health care?” in JAMAs Surgical Mentor. Based on all this work, I was invited to speak about tools for measuring frailty at a 2015 AVAS panel on the preoperative assessment of surgical patients. With colleague Dr. Shipra Arya, I also led one of the high-impact webinars cosponsored by the ACS Surgical Outcomes Club, Association of Academic Surgeons, and the Society of University Surgeons. The title of the April, 2015 webinar was “Current Concepts in Surgical Frailty: Systematic Review and Interventions for Frailty”. The highest impact publications to date are:


For the current proposal, I will dedicate 12.5% effort as Principal Investigator to coordinate all aspects of the proposed research. After securing IRB approval from the VAPHS IRB, I have already secured the requisite VA NSQIP data from the National Surgery Office. With statistician Dr. Shasha Gao (Co-I), I will oversee the calibration of the RAI-C, and its validation in data from the Omaha VAMC furnished by Dr. Jason Johanning (Co-I). I will also work closely with Dr. Rodriguez (Co-I) to conduct, analyze and interpret the semi-structured interviews probing patient’s opinions about the Perioperative Planning consult with palliative care physicians (Aim 2a). I will take primary responsibility for the patient reported outcome measures (Aim 2b), training the RA to administer the surveys and coordinating the analysis of the responses. I will also work closely with Dr. Forman (Co-I) to conduct the chart review aimed at identifying intermediate, frailty-relevant outcome measures like length of stay, hospital admissions, functional status and independent living.

B. Positions and Honors

Positions and Employment

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<tr>
<th>Year</th>
<th>Position</th>
<th>Institution</th>
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<tr>
<td>1986-1989</td>
<td>Lab Technician, New England Biolabs</td>
<td>Beverly, MA</td>
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<tr>
<td>1991</td>
<td>Publisher Representative, Copyright Clearance Center</td>
<td>Salem, MA</td>
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<tr>
<td>1993</td>
<td>Lab Technician, New England Biolabs</td>
<td>Beverly, MA</td>
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<td>1998-1999</td>
<td>Lay Pastoral Assistant, All Saints, Meriden</td>
<td>CT</td>
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<td>1999-2002</td>
<td>Canon Missioner for Young Adults, Trinity Cathedral</td>
<td>Pittsburgh, PA</td>
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<tr>
<td>2002-2005</td>
<td>Assistant Rector, Church of the Holy Family</td>
<td>Chapel Hill, NC</td>
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<tr>
<td>2006-present</td>
<td>Episcopal Priest in Residence, First Lutheran Church</td>
<td>Pittsburgh, PA</td>
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<tr>
<td>2007-2014</td>
<td>Assistant Professor, University of Pittsburgh Department of Surgery</td>
<td>Pittsburgh, PA</td>
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<tr>
<td>2014-present</td>
<td>Associate Professor, University of Pittsburgh Department of Surgery</td>
<td>Pittsburgh, PA</td>
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<td>2007-2011</td>
<td>Affiliate Faculty, Center for Bioethics and Health Law</td>
<td>University of Pittsburgh</td>
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<tr>
<td>2007-present</td>
<td>Staff Surgeon, VA Pittsburgh Healthcare System</td>
<td>Pittsburgh, PA</td>
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<td>2007-present</td>
<td>Core Investigator, Center for Health Equity Research and Promotion</td>
<td>VA Pittsburgh Healthcare System, Pittsburgh, PA</td>
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<tr>
<td>2011-present</td>
<td>Core Faculty, Center for Bioethics and Health Law</td>
<td>University of Pittsburgh</td>
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<tr>
<td>2015-Present</td>
<td>Administrative Consultant for Frailty in Elective Surgery</td>
<td>UPMC, Pittsburgh, PA</td>
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Other Experience and Professional Membership

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<td>2005-2009</td>
<td>Associate Member, American College of Surgeons</td>
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<tr>
<td>2006-present</td>
<td>Member, American Society for Bioethics and Humanities</td>
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<td>2009-present</td>
<td>Member, Association of Academic Surgery</td>
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<tr>
<td>2009-present</td>
<td>Fellow, American College of Surgeons</td>
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2010-2013 Council Member, Southwest Pennsylvania Chapter of the American College of Surgeons  
2010-2015 Professional Advisory Group, Clinical Pastoral Education, VA Pittsburgh Healthcare System  
2012-present Member, Association of VA Surgeons  
2012-2014 Member, Ethics Committee, Association of Academic Surgery  
2015-present Member, Research Committee, Association of Academic Surgery  

**Honors (select)**  
1987 NIH Centennial Scholar: Chosen as the single student to represent Massachusetts at the National Institutes of Health Centennial in Washington, DC  
1991 Magna cum laude, Yale College  
2007 Doris B. Maxwell Award for Research  
2010 Junior Scholar for the Practice and Profession Working Group, Program on Medicine and Religion at the University of Chicago  
2010 Course in Scientific Management and Leadership, University of Pittsburgh  
2013 Keynote Speaker for Student Clinician Pinning Ceremony  
2014-2015 NIH Review Panel on Central IRBs and Research Ethics  
2015-2016 HSR&D Scientific Merit Review Board member for HSR5 and HSR5a  

### C. Contribution to Science  
1. **Informed Consent for Clinical Surgery.** As part of my CDA, I conducted a comprehensive, multi-method study of the informed consent process for inguinal herniorrhaphy and cholecystectomy. We conducted this research because informed consent is a central component of the practice of surgery, but we noted discrepancies between clinical practices that were not consistent with ethical theory. The current theory presumes a 1-size fits all model for consent, whereas the lived practice typically tailors the discussions to meet patient information and decision-making preferences. We thought that careful study of the clinical practice of surgical informed consent might inform justify revisions to the ethical theory and administrative policy that would permit the current practice of tailoring the consent conversation to patient-centered preferences. We found (1b) that after the consent process, significantly more patients expressed a preference for participating in decision making with their surgeon (98% versus 71%, \( P = 0.008 \)), suggesting a form of patient activation. However, significantly fewer patients expressed a preference for knowing all possible details about their illness (25% to 83%, \( P \leq 0.001 \)), suggesting that the current process was providing too much information. We also found (1c) that 69% of patients decided to have surgery *before* meeting their surgeon, and 47% stated that the surgeon did not influence their decision. Although the surgeon was an important source of information for most patients (81%), patients frequently described using information gathered before meeting the surgeon, such as other health care providers (81%) or family members (58%). Most (68%) patients perceived iMed as a legal formality with little influence on decision making. This suggests that efforts to improve consent and surgical decision-making need to focus upstream in the referral pathway before patients meet their surgeons. Finally, we found (1d) that patients and providers only discussed a third of the information on the standardized consent forms, the patient-provider discussions frequently included relevant details nowhere documented on the standardized forms, culminating in substantive discussions that clearly satisfied the intent of informed consent regulations. This work led to collaboration with Drs. Fink and Prochazka with whom I published (1a) a comprehensive review of best practice for informed consent in the *Journal of the Canadian Medical Association*. This experience in measuring the consent process is directly relevant to the proposed work aimed at the decision-making process of frail Veterans considering surgery.

1a. **Hall DE**, Prochazka AV, Fink AS. Informed consent for clinical treatment. CMAJ. 2012;184(5):533-40. PMC3307558


2. **Institutional Review Board Quality and Efficiency.** As part of a multi-site, multi-method study of 10 VA IRBs, I managed a diverse team of collaborators to 1) map the IRB review processes at each site; 2) measure the time required to complete review of newly submitted protocols; and 3) measure the quality of IRB review.
with each of 3 newly developed quality measures. We found significant variation between sites in design, review time and quality, suggesting that the procedures at some sites might be sources of best practice that could be implemented throughout the system. Our methods also demonstrate that it is possible to measure IRB performance reliably, and these methods could be used to inform longitudinal, iterative initiatives aimed at improving IRB performance. We have presented our data in several venues, including national meetings, presentations to VA Central Office leadership, and an Office of Research Oversight webinar. In addition to the manuscripts below, there are 2 other manuscripts in preparation reporting findings about IRB review quality. These methods of systems engineering and measurement of complex systems are directly relevant to the proposed work and the long term goal of improving the perioperative care of frail veterans considering elective surgery.


3. Ethics Education for Surgical Residents. As part of my overarching interest in surgical ethics and the moral formation of good surgeons, I have collaborated with colleagues to develop curricular resources for teaching ethics to surgeons and surgical residents. This included a small cohort study demonstrating the effectiveness of a specific curriculum in improving both knowledge and confidence in surgical ethics. It also included a study of emergent liver transplantation that showed that transplant patients did not think their surrogates should have the authority to decline the recommendations of their surgeons regarding transplantation. This work demonstrates excellence and leadership in surgical ethics, and this will inform the current work aimed at responsibly informing the decision-making process of frail surgical patients.


4. Empirical Associations between Religion and Health. My early work in religion and health began with a thorough critique of the existing literature that was methodologically and philosophically flawed in its presupposition that religion could be studied the same way as aspirin. I also developed and defended boundaries in which physicians could responsibly engage patients’ religiousness as part of the clinical encounter. Empirical work focused on developing a novel, “contextual” tool for measuring religiousness that addressed key weaknesses of existing measures. It also focused on interpreting the clinical significance of religious belief and practice by placing the effect size of religious attendance into the context of other widely recommended medical interventions like exercise and statin therapy. The 2006 article on religious attendance was among the 7th most downloaded paper that year for the journal, garnering national and international media coverage. This experience with measuring complex phenomena and negotiating controversial subject matter laid the foundation for the current work on the complex and potentially controversial decisions surrounding surgery and frailty.

5. **Pedagogical Consequences of Surgical Resident Work Hour Restrictions.** With a wide team of colleagues, I have been interested in the consequences of duty hour restrictions, and as a site-PI, we have conducted two surveys among residents and program directors to explore their attitudes and opinions. This work exposed me to the REDCap software used in our current work on frailty, and it prepared me to engage surgical leadership across the country regarding emerging policies aimed at improving the quality and safety surgical education and the clinical care of surgical patients.


**Complete List of Published Work in MyBibliography:**

**D. Research Support**

**Ongoing Research Support**
None

**Completed Research Support** (select)

CDA 08-281 (Hall) 07/01/10-06/30/15
VAHSR&D

**Improving Surgical Informed Consent to Better Meet Patient Preference**
This Career Development Award aims to provide additional training and mentored research aimed at developing a leadership role in the field of surgical ethics. Research supported by this CDA focuses on the process of informed consent
Role: PI

SDR 11-399 (Hall) 07/01/12-12/31/14
VA HSR&D

**Describing Variations in IRB Efficiency, Quality and Procedures**
This Service Directed Research Award aims to improve the quality and efficiency of VA IRB review processes by modeling the process flow at 10 VA IRBs and measuring variation in IRB efficiency and quality.
Role: PI

N/A Barnato (PI) 05/01/11-06/01/12
Greenwall Foundation

**Social Norms Governing ICU Triage for Critically Ill Elders with Terminal Illness**
This Service Directed Research Award aims to improve the quality and efficiency of VA IRB review processes by modeling the process flow at 10 VA IRBs and measuring variation in IRB efficiency and quality.
Role: Co Investigator for-cost extension to accomplish further analyses of these data.