Research Advocacy

30th Fundamentals of Surgical Research Course

Adil H. Haider, MBBS, MPH, FACS

Dean, Medical College
Professor of Surgery and Community Health Sciences
Aga Khan University

Director of Disparities and Emerging Trauma Systems, Center for Surgery and Public Health, Brigham and Women’s Hospital
Research that provides evidence and arguments supporting a particular cause, position or policy

#MakeADifference
3 CRITICAL INGREDIENTS for Research Advocacy
Ingredient 1:

Validity

(both Face and Scientific)
Face and Scientific Validity: Zara Cooper, MD, MSc

- Acute care and trauma surgeon, surgical intensivist @ Brigham and Women’s
- Certified in palliative medicine
- Associate professor of surgery at Harvard Medical School
- BWH President’s Young Investigators Award and the BWH Faculty Development Award winner
Zara Cooper’s story

• A national leader in surgical palliative care and geriatric trauma, she has authored over 100 peer-reviewed manuscripts, chapters, and abstracts and lectures nationally about surgical care in complex older patients.

• Research focuses on improving end-of-life and palliative care as well as reducing non-beneficial care in critically ill surgical patients through improved patient-provider communication

• Currently funded through the National Institute on Aging (NIA), the American Federation for Aging Research (AFAR), the Cambia Health Foundation, the National Palliative Care Research Center (NPCRC) and is a co-investigator on multiple federally funded grants
ACS TQIP
PALLIATIVE CARE
BEST PRACTICES
GUIDELINES

THE Coalition for Quality
in Geriatric Surgery PROJECT
In collaboration with the American College of Surgeons, and with support from the American Geriatrics Society, the Geriatric Trauma Coalition was started by the AAST Geriatric Trauma Committee in 2015 to bring together stakeholder organizations around improving care for older injured patients. With support from the AGS Geriatrics for Specialized Care initiative, funded by the John A. Hartford Foundation, the Coalition is actively working on developing best practice guidelines for hospital care in older injured adults. Under the leadership of Principal Investigator Zara Cooper, co-Investigator Robert Barraco, and project manager Bethany Smalls, the Coalition will review literature across all disciplines of patient care focusing on 1) initial hospital assessment, 2) resuscitation of the older trauma patient, 3) inpatient management and intensive care unit care, and 4) transitions of care. GeriTraC will then work to maintain and establish best practice, define optimal resources, identify gaps in available evidence, establish best practices, establish criteria for outreach and education, and centralize and disseminate evidence and clinical guidelines through its own website and those of participating organizations.

Coalition participants (As of February 2016)

- AAST
  www.aast.org
- American Geriatrics Society (AGS)
  www.americangeriatrics.org
- ACS Committee on Trauma
- ACS Palliative Care Committee
- ACS Trauma Quality Improvement Program (TQIP)
- ACS Coalition for Quality in Geriatric Surgery
  www.facs.org
- Society of Trauma Nurses (STN)
  www.tnanurses.org
- American Trauma Society
  www.amtrauma.org
- American College of Emergency Physicians
  www.acep.org
- American Academy of Physical Medicine and Rehabilitation
  www.aapmrg.org
- John A. Hartford Foundation, National Center on Gerontological Social Work Excellence
  www.jhartfound.org
### A Research Agenda for Surgical Palliative Care

#### Table 1. Current Knowledge Gaps in Palliative Care in Surgery

<table>
<thead>
<tr>
<th>Research focus area</th>
<th>Outcomes that matter to patients</th>
<th>Palliative Surgery</th>
<th>Advance Care Planning and goal concordant care</th>
<th>Integration and scalability</th>
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</thead>
<tbody>
<tr>
<td>Defining outcomes that matter to patients</td>
<td>The severity of many surgical conditions is limited to short-term survival outcomes (function quality of life, time spent in ICU) or outcomes (function quality of life, time spent in ICU) after surgery or defined the benefits and trade-offs of surgery from the patient’s perspective.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Measures to evaluate high-quality palliative care in surgery</td>
<td>Processes of palliative care, including the implementation of a surrogate decision maker, may vary between patients and settings. Studies have not examined how patient values are integrated into decision making.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Communication and decision making</td>
<td>Prior studies have focused on surgical decisions, but not on patient-oriented outcomes.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Aligning surgical treatments with patient-oriented outcomes</td>
<td>Evidence of effectiveness is limited to small clinical trials with patient-oriented outcomes.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
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<tr>
<td>Preoperative advance care planning</td>
<td>Studies have examined how patient values are integrated into decision making.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
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<tr>
<td>Decision making after postoperative complications or critical illness</td>
<td>Studies have examined how patient values are integrated into decision making.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Delivery of palliative care to surgical patients</td>
<td>Integrating palliative care into routine surgical practice.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Integrating palliative care principles into routine surgical practice</td>
<td>Developing scalable models of primary palliative care delivery for surgical patients.</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Developing scalable models of primary palliative care delivery for surgical patients</td>
<td>Identifying patients who would benefit from palliative care specialist consultation</td>
<td>Establishing palliative surgery as a specialty area in surgical care. There is no uniform system for classifying palliative versus curative intent of surgery.</td>
<td>None</td>
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<tr>
<td>ICU, intensive care unit</td>
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</tbody>
</table>
Break out paper.....

Withdrawal of life-sustaining therapy in injured patients: variations between trauma centers and nontrauma centers.

Cooper Z\(^1\), Rivara FP, Wang J, MacKenzie EJ, Jurkovich GJ.

Used most advanced statistical methods at the time.....
Putting the patient first: honoring advance directives prior to surgery.

Cooper ZR, Powers CL, Cobb JP.


Cooper Z¹, Sayal P, Abbett SK, Neuman MD, Rickerson EM, Bader AM.
Surgeons' Perspectives on Avoiding Nonbeneficial Treatments in Seriously Ill Older Patients with Surgical Emergencies: A Qualitative Study.

Cauley CE¹,², Block SD¹,³,⁴,⁵, Koritsanszky LA¹, Gass JD¹, Frydman JL⁶, Nurudeen SM¹,⁷, Bernacki RE¹,³, Cooper Z¹,⁷,⁸.
Palliative Care Interventions for Surgical Patients: A Systematic Review.
Lilley EJ¹, Khan KT², Johnston FM³, Berlin A⁴, Bader AM⁵, Mosenthal AC⁴, Cooper Z⁶.

Palliative Care in Surgery: Defining the Research Priorities.
Lilley EJ¹, Cooper Z¹,², Schwarze ML³,⁴, Mosenthal AC⁵.

Quality Measures in Surgical Palliative Care: Adapting Existing Palliative Care Measures to Improve Care for Seriously Ill Surgical Patients.

Lee KC¹, Senglaub SS², Walling AM³, Mosenthal AC⁴, Cooper Z⁵.


Lilley EJ¹,², Lindvall C³,⁴,⁵, Lillemoe KD⁴,⁶, Tulsky JA³,⁴,⁵, Wiener DC⁴,⁷, Cooper Z¹,⁴,⁷.
New “frailty pathway” for elderly trauma patients reduces delirium and 30-day readmissions


Frailty Identification and Care Pathway: An Interdisciplinary Approach to Care for Older Trauma Patients.

Bryant EA¹, Tulebaev S², Castillo-Angeles M¹, Moberg E¹, Senglaub SS¹, O'Mara L¹, McDonald M¹, Salim A¹, Cooper Z³.
Ingredient 2: Collaboration

Leverage & work with other experts in the field
Leverage & Work with other experts in the field
Amir Ghaferi, MD, MS

• Associate Professor of Surgery and Business, University of Michigan
• Surgeon-in-Chief, University Hospital Operating Rooms
• Director, Michigan Bariatric Surgery Collaborative, a consortium of 40 hospitals and 80 surgeons focused on improving the safety and quality of bariatric surgery.
• President of the Surgical Outcomes Club
• Secretary of the Association for Academic Surgery
Amir Ghaferi’s story

- Research focuses on understanding the relationship of organizational systems and design to quality and efficiency, with the ultimate goal of designing interventions to improve care locally, regionally, and nationally

- Currently funded from the Agency for Healthcare Research and Quality (AHRQ), the National Institutes of Health (NIH), and the Patient Centered Outcomes Research Institute (PCORI)

- Research has been published in prominent journals such as The New England Journal of Medicine, JAMA, Medical Care, and Annals of Surgery

- Active member of several national societies (Association for Academic Surgery, Society of University Surgeons, AcademyHealth) and serves on, chairs, or co-chairs several national committees
Variation in Hospital Mortality Associated with Inpatient Surgery

Amir A. Ghaferi, M.D., John D. Burkmeier, M.D.,
and Justin B. Dimick, M.D., M.P.H.
AHRQ K08

• Specific Aims

1. To develop an in-depth understanding of the key elements necessary for complication rescue
2. To design an intervention that promotes key elements for improving the rescue process
3. To pilot-test an intervention aimed at improving hospital rescue rates
IMPROVING RESCUE

BRINGING ABOUT COLLABORATION TO IMPROVE SURGICAL SAFETY AND QUALITY OF CARE
OUR MISSION

Our mission is to improve surgery through research, education, training, and collaboration. Our website is here to provide valuable information and resources on current research and quality improvement projects, training opportunities, and ways to get involved with local, state, and national communities as steps toward making surgery safer for all patients.
• Serve as Director of a 40 hospital, 70 surgeon statewide collaborative
• Oversee multiple QI initiatives and studies
  • Peer to peer video coaching (NIDDK)
  • M-PIRRE: ED visit and readmission reduction program
  • Video analysis of sleeve gastrectomy technique (AHRQ)
  • Social media collaboration
  • Patient decision aid development (PCORI)
  • FUTURE: enhanced recovery and opioid optimization program
Ingredient 3: Connect

Both IRL and Metaphorically
Words to Inspire: 24 Powerful Moments From Recent Medical School Commencement Speeches
Ryan Syrek, MA | June 17, 2019 | Contributor Information

“Find your caravan and don’t let go.”

Image courtesy of Adil Haider

“Lesson number one is to be open for your passion, and when you feel it, pursue it. Sometimes your passion chooses you... Lesson number two: Be humble. And I know this is a surgeon saying 'be humble!' Be humble, acknowledge your gaps, and address them to truly master the terrain you're trying to conquer. Now, that being said, passion and manic mastery is not enough... Lesson 3: Find your caravan and don't let go. Some days you'll lead and some days you'll follow. Your caravan of teammates will aid you on your journey.”

Adil Haider, MD, MPH, at Washington University School of Medicine in St. Louis's 2018 Commencement
Wanted to take care for patients with fewer means

So – I had planned to go work in Africa.....
You don’t have to go to Africa to care for the poor and disenfranchised...

“You can do that right here in Baltimore” EEC III
Black Children Experience Worse Clinical and Functional Outcomes After Traumatic Brain Injury: An Analysis of the National Pediatric Trauma Registry

Adil H. Haider, MD, MPH, David T. Efron, MD, Elliott R. Haut, MD, Stephen M. DiRusso, MD, PhD, Thomas Sullivan, BS, and Edward E. Cornwell III, MD

Background: Recent studies suggest racial disparities in the treatment and outcomes of children with traumatic brain injury (TBI). This study aims to identify race-based clinical and functional outcome differences among pediatric TBI patients in a national database.

Methods: A total of 41,122 patients (ages 2–16 years) who were included in the National Pediatric Trauma Registry (from 1996–2001) were studied. TBI was categorized by Relative Head Injury Severity Score (RHISS) and patients with moderate to severe TBI were included. Individual race groups were compared with white as the majority group. Differences between races in functional outcomes at discharge in three domains—speech, locomotion, and feeding—were determined using multiple logistic regression. Cases were adjusted for age, sex, severity of head injury (using RHISS), severity of injury (using New Injury Severity Score and Pediatric Trauma Score), premorbidities, mechanism, and injury intent.

Results: A total of 7,778 children had moderate or severe TBI with or without associated injuries. All races had similar demographics. Hispanics (n = 1,041) had outcomes comparable to whites (n = 4,762). Black children (n = 1,238) had significantly increased premorbidities, penetrating trauma, and violent intent. They also had higher unadjusted mortality and longer mean intensive care unit and floor stays. After adjustment, there was no difference in the odds of death between black and white children. However, black patients were more likely to be discharged to an inpatient rehabilitation facility and had increased odds of possessing a functional deficit at discharge for all three domains studied.

Conclusion: Black children with traumatic brain injury have worse clinical and functional outcomes at discharge when compared with equivalently injured white children.

Key Words: Racial disparities, pediatric traumatic brain injury, functional outcomes.

2006 ACS Surgical Forum
Excellence in Surgical Research Award
National Disparities Working Group
Race and Insurance Status as Risk Factors for Trauma Mortality

Adil H. Haider, MD, MPH; David C. Chang, MPH, MBA, PhD; David T. Efron, MD; Elliott R. Haut, MD; Marie Crandall, MD, MPH; Edward E. Cornwell III, MD

Objective: To determine the effect of race and insurance status on trauma mortality.

Methods: Review of patients (aged 18-64 years; Injury Severity Score ≥9) included in the National Trauma Data Bank (2001-2003). African American and Hispanic patients were each compared with white patients and insured patients were compared with uninsured patients. Multiple logistic regression analyses determined differences in survival rates after adjusting for demographics, injury severity (Injury Severity Score and revised Trauma Score), severity of head and/or extremity injury, and injury mechanism.

Results: A total of 429,731 patients met inclusion criteria. African American (n=72,249) and Hispanic (n=41,770) patients were less likely to be insured and more likely to sustain penetrating trauma than white patients (n=202,978). African American and Hispanic patients had higher unadjusted mortality rates (white, 5.7%; African American, 8.2%; Hispanic, 9.1%; P = .05 for African American and Hispanic patients) and an increased adjusted odds ratio (OR) of death compared with white patients (African American OR, 1.17; 95% confidence interval [CI], 1.10-1.23; Hispanic OR, 1.47; 95% CI, 1.39-1.57). Insured patients (47%) had lower crude mortality rates than uninsured patients (4.4% vs 8.6%; P = .05). Insured African American and Hispanic patients had increased mortality rates compared with uninsured white patients. This effect worsened for uninsured patients across groups (insured African American OR, 1.2; 95% CI, 1.08-1.33; insured Hispanic OR, 1.51; 95% CI, 1.36-1.64; uninsured white OR, 1.59; 95% CI, 1.46-1.64; uninsured African American OR, 1.78; 95% CI, 1.63-1.90; uninsured Hispanic OR, 2.20; 95% CI, 2.13-2.29). The reference group was insured white patients.

Conclusion: Race and insurance status each independently predicts outcome disparities after trauma. African American, Hispanic, and uninsured patients have worse outcomes, but insurance status appears to have the stronger association with mortality after trauma.

Arch Surg. 2008;143(10):945-949
No Insurance? That’s a Killer.

Uninsured patients are 50 percent more likely to die of traumatic injuries than those with health insurance.

David Noonan
NEWSWEEK
From the magazine issue dated Nov 10, 2008

Reading medical journals can be a real headache. Here, the topics are important, but the demands of scientific accuracy make for dense, technical prose. The language is almost always an agony of arcane jargon and clunky grammar. Long, tangled sentences, heavy with terms like “multivariate analyses,” are assembled to make small points. Research methods are explained in exhaustive detail, while conclusions are larded with caveats and qualifiers that pretty much render them inconclusive. It’s the literary equivalent of wet cement.

Every now and then, however, you come across a statement that is the exact opposite of all that—a few simple words of plain English weighted with meaning. I encountered such a sentence in a study that appeared in the October issue of Archives of Surgery. Here it is: “In brief, insurance represents more than just the ability to pay a bill.” That is as clean and concise a summation of a profound and complicated truth as I have come across since I first started paying attention to health-insurance issues more than a decade ago.

Of course, what insurance (and the lack of it) often represents, as numerous studies have shown, is the difference between care and no care, between an early cancer diagnosis and a late diagnosis, between properly managing a chronic condition like asthma and waiting until a dangerous attack occurs. For some of the patients in the Archives of Surgery study, which was led by Johns Hopkins trauma surgeon Adil Haider, what insurance represented was nothing less than the difference between life and death.
Surgical Disparities: A Comprehensive Review and New Conceptual Framework


Health care disparities are defined as “differences in the quality of care received by minorities and non-minorities who have equal access to care and no difference in preferences or needs for treatment.” Minority populations include, but are not limited to, racial/ethnic minorities, people with disabilities, and lesbian, gay, bisexual, and transgender (LGBT) groups. Multiple types of surgical disparities have been described in the literature. Minority status has been frequently associated with surgical disparities and poor surgical outcomes. For example, studies have shown that compared with white patients, racial minority patients have less access to care, satisfaction with care, medically indicated treatments, and surgical procedures, and timely follow-up. Additionally, socioeconomically disadvantaged groups and rural populations receive poorer quality hospital-based care compared with more affluent and suburban groups, including fewer minimally invasive operations, and limited access to high-volume hospitals.

Surgical disparities can be experienced at multiple points along a patient’s health care trajectory (Fig. 1). This trajectory is composed of a patient’s preoperative access to surgical care, intraoperative quality of care received, and postoperative outcomes. Propensity, a patient’s access to surgery may be shaped by his or her insurance status and proximity to high volume hospitals. During an operation, hospital-level variations in surgical volume and protocol and provider-level variations in practice and decision-making affect the quality of care the patient receives. Postoperatively, surgical disparities take the form of disparate outcomes in morbidity and mortality, complications, and availability of quality rehabilitative services. The presence of surgical disparities early in a patient’s health care trajectory may increase the likelihood of disparities downstream. Without understanding mechanisms that cause disparities, interventions to modify factors that may potentially mitigate the presence of disparities are severely limited. A 2013 review by Haider and colleagues proposed a simple method to classify disparities according to patient, provider, and systemic factors. Race/ethnicity, socioeconomic status (SES), and other factors were considered as interplaying issues, each of which affect surgical disparities. The review highlighted the interconnectedness of these factors, as well as the importance of further research to better understand the impact of each factor on surgical care.

Synthesis and purpose

Extant research has documented disparities in surgical outcomes due to factors such as race/ethnicity and SES. More research is needed to conceptualize these and other factors and identify potential causal mechanisms. The objectives of this study were to survey and update extant surgical disparities literature, and synthesize this literature into a framework for conceptualizing and studying inequities as related to their causal mechanisms and/or impact. The resultant framework is intended to inform future interventions designed to mitigate disparities in surgical care and outcomes. The themes derived from this review were presented.

Disclosure Information: Nothing to disclose.

Received February 11, 2016; Revised April 8, 2016; Accepted April 25, 2016.

From the Center for Surgery and Public Health, Brigham and Women’s Hospital, Harvard Medical School, and Harvard Chan School of Public Health, Boston, MA (Torain, Maragh-Bass, Lilley), Pfizer Pharmaceuticals, New York, NY (Najjar), and the National Institute of Diabetes and Digestive and Kidney Diseases.
National Research Action Plan
Setting a National Agenda for Surgical Disparities Research Recommendations From the National Institutes of Health and American College of Surgeons Summit

Adil H. Haider, MD, MPH; Irene Dankwa-Mullan, MD, MPH; Allysah C. Maragh-Bass, PhD, MPH; Maya Torain, BS; Cheryl K. Zogg, MSPH, MHS; Elizabeth J. Lilley, MD, MPH; Lisa M. Kodadek, MD; Navin R. Changoor, MD; Peter Najjar, MD, MBA; John A. Rose Jr, MD, MPH; Henri R. Ford, MD, MHA; Ali Salim, MD; Steven C. Stain, MD; Shahid Shafi, MD, MPH; Beth Sutton, MD; David Hoyt, MD; Yvonne T. Maddox, PhD; L. D. Britt, MD, MPH

Health care disparities (differential access, care, and outcomes owing to factors such as race/ethnicity) are widely established. Compared with other groups, African American individuals have an increased mortality risk across multiple surgical procedures. Gender, sexual orientation, age, and geographic disparities are also well documented. Further research is needed to mitigate these inequities. To do so, the American College of Surgeons and the National Institutes of Health-National Institute of Minority Health and Disparities convened a research summit to develop a national surgical disparities research agenda and funding priorities. Sixty leading researchers and clinicians gathered in May 2015 for a 2-day summit. First, literature on surgical disparities was presented within 5 themes: (1) clinician, (2) patient, (3) systemic/access, (4) clinical quality, and (5) postoperative care and rehabilitation-related factors. These themes were identified via an exhaustive preconference literature review and guided the summit and its interactive consensus-building exercises. After individual thematic presentations, attendees contributed research priorities for each
### Department of Health and Human Services

#### Part 1. Overview Information

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<th>Participating Organization(s)</th>
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<td>National Institutes of Health (NIH)</td>
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<tr>
<td>National Institutes on Minority Health and Health Disparities (NHMD)</td>
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<td>National Cancer Institute (NCI)</td>
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<td>National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)</td>
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<td>Office of Research on Women’s Health (ORWH)</td>
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<td>National Institute of Nursing Research (NINR)</td>
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<tr>
<th>Components of Participating Organizations</th>
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<tr>
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<tr>
<td>Surgical Disparities Research (R01)</td>
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**Key Dates**

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<td>August 5, 2016</td>
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<th>Open Date (Earliest Submission Date)</th>
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<td>October 4, 2016</td>
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<th>Letter of Intent Due Date(s)</th>
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<td>90 days prior to the application due date</td>
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<tr>
<td>November 4, 2016, June 7, 2017, June 7, 2018 and June 7, 2019, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.</td>
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**70 Million USD in Funding**

**3 R01 Grants (10 M USD)**
Research Advocacy: VCC Model

VALIDITY  COLLABORATION  CONNECTION

Adil Haider
@AdilHaiderMD

Dean, Aga Khan University Medical College, Pakistan @akuglobal; Trauma Surgeon and Public Health Scientist; Former President @AcademicSurgery; Husband & Dad