List of possible topics for consideration within the Postdoctoral Fellowship:

The AANA Foundation Postdoctoral Health Services Fellowship Research Award focuses on the preparation of individuals with the expertise to develop and conduct health services research regarding nurse anesthetists. The AANA has prepared a list of possible topics and questions for research by the postdoctoral fellow relevant to the focus of this fellowship program which has been reviewed and modified by program faculty. The topics are not limited to the ones below. The postdoctoral fellow must prepare a statement of their research interests as part of their application. Some of the main areas of concern to nurse anesthesia in health services research fall into the study categories below. A list of publications related to these topics follows.

For the 2017 Application, the following research questions are of particular interest to program faculty. Applications proposing to conduct research related to the topics are particularly requested. The questions are:

1. What are the dimensions of rural anesthesia practice when compared to other practice settings? What is critical to determine a CRNA’s readiness for a practice in rural anesthesia?
2. What are the morbidity and mortality rates for the 50 or 100 most common surgical procedures performed in the United States?
3. Has patient access to care (surgical, obstetrical, endoscopy, dental services, and pain management) improved in states that have opted out of physician supervision?

Quality and Safety

Studies of the cost-effectiveness of nurse anesthesia from the perspective of health care institutions, payers and other stakeholders to inform alternative payment models for anesthesia services

The influence of autonomous practice, the presence or absence of supervision requirements, the impact of removing supervision (specifically in the Veterans Health Administration (VHA) ) on improved efficiency, decreased waiting times, reduced costs, and improved quality of care and patient outcomes

Studies of the comparative effectiveness of nurse anesthesia practice examining quality outcomes in comparison to other provider disciplines

Health Work Force Studies

a. Supply and Demand study from an epidemiologic perspective (Population Health-needs assessment) regarding population demand based on need for surgical and anesthesia services (including pain services) to address appropriate workforce. This
could be a great area of interest to policy makers. It could show the need for independent CRNAs in rural areas.

b. Econometric supply and demand model for anesthesia services
c. Demonstrating a continued and growing need for anesthesia providers for surgical and nonsurgical cases in rural and urban areas are very good topics for consideration. All of these examples are good starting points for the postdoc to use as a jumping off point

**Variation in the quality of surgical mortality and anesthesia**

a. Quality variation in surgical hospital mortality looking at severity indices and differences regarding anesthesia delivery models. This is a good topic, but it reminds me of the last one that we did. I would like to see something a little different.

**Identifying appropriate variables for risk adjustment in anesthesia**

a. Attribution of surgical mortality to anesthesia in relationship to proximity of death and complications (e.g., 48 hours, 7 days, 30 days)
b. Identification of risk indicators and anesthesia specific variables
c. Episode of care variables and attribution to anesthesia services

**Alternative Payment Models**

a. Bundled payment and how much risk should anesthesia take on with this type of payment modality. Analyze the current bundled payment programs. What are the risks to anesthesia?
b. Role of anesthesia in an ACO Value Based Modifiers and how would you propose the quality and cost composite score for anesthesia services regarding beneficiary attribution?

**Regional Variation in anesthesia services and costs**

a. Looking at Medicare, Medicaid, and Commercial payers
b. Medicaid and CRNAs providing services by state examining patient health (Cost and Impact)
c. Evaluating Commercial plan policies regarding CRNA coverage and trends by states
d. Cost Effectiveness Studies: How do CRNAs save the system money?

**Optimizing Surgical and Anesthesia Care**

a. What metrics would you use to determine outcome measures
b. How does the model improve quality care
c. Determine the model for the most efficient team in the PSH
b. How do you optimize anesthesia preoperative and postoperative assessment in the form of process measures to develop a composite score for quality?
Examples of Related Research:

- **Risk adjustment for comparing hospital quality with surgery: how many variables are needed?**
  Dimick JB¹, Osborne NH, Hall BL, Ko CY, Birkmeyer JD.

- **Impact of present-on-admission indicators on risk-adjusted hospital mortality measurement.**
  Dalton JE¹, Glance LG, Mascha EJ, Ehrlinger J, Chamoun N, Sessler DI.

- **Quality and Safety Indicators in Anesthesia: A Systematic Review**
  Anesthesiology 5 2009, Vol.110, 1158-1175.
  doi:10.1097/ALN.0b013e3181a1093b
  Guy Haller, M.D., M.Sc., Ph.D.;

- **The perioperative surgical home (PSH): a comprehensive review of US and non-US studies shows predominantly positive quality and cost outcomes.**
  Kash BA; Zhang Y; Cline KM; Menser T; Miller TR. *Milbank Q;* 92(4): 796-821, 2014 Dec.

- **Impact of the economic downturn on total joint replacement demand in the United States: updated projections to 2021.**
  Kurtz SM¹, Ong KL¹, Lau E², Bozic KJ³.

- **Trends in Operating Room Procedures in U.S. Hospitals, 2001–2011: Statistical Brief #171.**
  Weiss AJ, Elixhauser A.
  Healthcare Cost and Utilization Project (HCUP) Statistical Briefs [Internet]. Rockville (MD): Agency for Health Care Policy and Research (US); 2006-. 2014 Mar.

- **The changing distribution of a major surgical procedure across hospitals: were supply shifts and disequilibrium important?**
Friedman B, Elixhauser A.

- **Demographics and trends in nonoperating-room anesthesia.**
  Lalwani K1.

- **The Economic Impact of a Rural General Surgeon and Model for Forecasting Need, 2010**
  http://digitalprairie.ok.gov/cdm/ref/collection/stgovpub/id/24192

- **Variability in the measurement of hospital-wide mortality rates.**
  Shahian DM1, Wolf RE, Iezzoni LI, Kirle L, Normand SL.

- **Variability in General Surgical Procedures in Rural and Urban U.S. Hospital Inpatient Settings**
  Mark Doescher, Elizabeth Jackson, Meredith Fordyce, Dana Lynge
  March 2015
  https://www.ruralhealthresearch.org/publications/963

- **Broadly applicable risk stratification system for predicting duration of hospitalization and mortality.**
  *Anesthesiology.* 2010 Nov;113(5):1026-37. doi: 10.1097/ALN.0b013e3181f79a8d.
  Sessler DI1, Sigl JC, Manberg PJ, Kelley SD, Schubert A, Chamoun NG.

- **VMB Attribution of Quality and Cost Measures**

- **2015 Physician Value-based Payment Modifier**
  Summary of 2015 Physician Value-based Payment Modifier Policies [PDF, 182KB]

- **Design and Use of Performance Measures to Decrease Low-Value Services and Achieve Cost-Conscious Care**
  David W. Baker, MD, MPH; Amir Qaseem, MD, PhD, MHA; P. Preston Reynolds, MD, PhD; Lea Anne Gardner, PhD, RN; Eric C. Schneider, MD, MSc, on behalf of the American College of Physicians Performance Measurement Committee*
**Bundled payments for care improvement initiative: the next evolution of payment formulations: AAHKS Bundled Payment Task Force.**


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**Roles for specialty societies and vascular surgeons in accountable care organizations.**


Goodney PP, Fisher ES, Cambria RP.


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**Attention To Surgeons And Surgical Care Is Largely Missing From Early Medicare Accountable Care Organizations**

James M. Dupree, Kavita Patel, Sara J. Singer...

doi: 10.1377/hlthaff.2013.1300 Health Aff *June 2014* vol. 33 no. 6 972-979

[http://content.healthaffairs.org/content/33/6/972.abstract](http://content.healthaffairs.org/content/33/6/972.abstract)

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**Reforming payments to healthcare providers: The key to slowing healthcare cost growth while improving quality?**

M McClellan - The Journal of Economic Perspectives, 2011 - JSTOR


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**Analysis of Bundled Payment**

RAND > Published Research > Technical Reports > TR-562/20 >


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**Bundled Payment Fails To Gain A Foothold In California: The Experience Of The IHA Bundled Payment Demonstration**

M. Susan Ridgely, David de Vries, Kevin J. Bozic, Peter S. Hussey

doi: 10.1377/hlthaff.2014.0114 Health Aff *August 2014* vol. 33 no. 8 1345-1352

[http://content.healthaffairs.org/content/33/8/1345.abstract](http://content.healthaffairs.org/content/33/8/1345.abstract)

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**Growth of Ambulatory Surgical Centers, Surgery Volume, and Savings to Medicare**

Lane Koenig and Qian Gu


doi:10.1038/ajg.2012.183
General surgery contributes to the financial health of rural hospitals and communities.  
Doty B, Heneghan SJ, Zuckerman R.  

Cost effectiveness analysis of anesthesia providers.  
*Nurs Econ.* 2010 May-Jun;28(3):159-69.  
Hogan PF, Seifert RF, Moore CS, Simonson BE.  


