

Summer Student Research Program Project Description

FACULTY SPONSOR'S NAME AND DEGREE: Dr. Aziz M. Merchant, MD

PHONE: (973) 972 - 0072

**DEPARTMENT AND INTERNAL MAILING ADDRESS: 185 South Orange Ave. MSB
G530, Newark, NJ 07108, Department of Surgery**

E-MAIL: aziz.merchant@rutgers.edu

PROJECT TITLE (200 Characters max):

Surgical Outcomes Analysis Using Large Administrative Datasets: The National Inpatient Sample and National Surgical Quality Improvement Program

HYPOTHESIS:

Large datasets can allow analysis of surgical disease outcomes while recognizing important contributing factors such as healthcare cost health disparities, socioeconomic factors, other environmental factors, and medical co-morbidities.

PROJECT DESCRIPTION (Include design, methodology, data collection, techniques, data analysis to be employed and evaluation and interpretation methodology)

Study Objectives:

1. Describe the prevalence and incidence of certain surgical disease processes in the United States, such as gallbladder, hernia, appendicitis, diverticulitis, and other surgical emergencies.
2. Recognize important patient and environmental factors in surgical disease outcomes.

Methods

1. Discharge data from the Nationwide Inpatient Sample, the largest US all-payer inpatient care database analyzed for these diseases between 1988 to 2010 in patients > 18 years old.
2. Clinical, risk-adjusted and benchmarked data from the National Surgical Quality Improvement Database may also be used.
3. Patient and disease characteristics including prevalence, age, sex, race, household income, and geographic location will be analyzed studied to determine correlations with disease prevalence.
4. Focus will be on the relationship of outcomes of care and prevalence to healthcare disparities in race, gender, and socioeconomic status.
5. Statistical analysis will be done in conjunction with faculty in biostatistics within the Department of Surgery.

SPONSOR'S MOST RECENT PUBLICATIONS RELEVANT TO THIS RESEARCH

Manuscript Publications (Student and Residents in highlights)

1. Green D, Merchant, AM, Age, But not Insurance Status Predicted Complicated Hernia Presentation in the National Hospital Ambulatory Medical Care Survey, *Submitted for Publication In-Press*, Hernia. HERN-D-15-00252.
2. Miranda L, Palvannan P, Merchant AM, The Combined Effect of Age and Body Mass Index on outcomes Foregut Surgery: A Regression Model Analysis of the National Surgical Quality Improvement Program Data *Accepted for Final Publication-In Press*. Surgical Endoscopy SEND-D-15-00135.

Summer Student Research Program Project Description

3. Patel PV, Merchant AM Ventral Hernia Repair in the Morbidly Obese Patient. A Review of Medical and Surgical Approaches in the Literature. Bariatric Surgical Practice and Patient Care 9 (2) 61-65.
4. Serio S, Clements J, Grauf D, Merchant AM Outcome of Diabetic and Nondiabetic Patients Undergoing General and Vascular Surgery, ISRN Surgery, vol. 2013, Article ID 963930 2013. ddi:10.55/2013/963930.
5. Yanquez FJ, Clements JM, Grauf D, Merchant AM. Synergistic effect of age and body mass Index on mortality and morbidity in general surgery, J Surg Res. 2013 Sep; 184(1) 89-100.
6. Knapps J, Ghanem M, Clements J, Merchant AM. Systematic Review and Pooled Analysis of Staple Line Reinforcement During Laparoscopic Sleeve Gastrectomy (LSG), JSLs. 2013 Jul-Sep;17(3):390-9

Abstract/Presentations

7. Integrative Health Symposium, Rutgers Biomedical and Health Sciences, Newark NJ May 2015. The Association of Insurance Status with Complicated Inguinal Hernia Presentation.
8. Association of Academic Surgeons, Academic Surgical Congress, Feb 2013, New Orleans LA. Yanquez F, Grauf D. Clements JC. Merchant AM. Effect Of Age And BMI On Mortality And Morbidity In Elective And Emergent General Surgery. Oral Presentation. Clinical Trials & Outcomes Global Measures Of Quality
9. Association of Academic Surgeons, Academic Surgical Congress, Feb 2013, New Orleans LA. Serior SS, Grauf D, Clements JC, Merchant AM. Analysis Of Outcomes Of Diabetic And Nondiabetic General Vascular Surgery Patients Oral Presentation; Clinical Trials & Outcomes Global Measures Of Quality.
10. Clinical Robotic Surgery Association (CRSA) Meeting Sept 2012, Chicago IL. Single port Versus multiport robotic cholecystectomy: a systematic review and pooled analysis. Poster Presentation.
11. Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) 2012 Scientific Session, March, 2012, San Diego, CA. A Systematic Review and Pooled Analysis of Staple Line Reinforcement During Laparoscopic Sleeve Gastrectomy (LSG), Poster Presentation.

IS THIS PROJECT SUPPORTED BY EXTRANURAL FUNDS?

Yes or No
(IF YES, PLEASE SUPPLY THE GRANTING AGENCY'S NAME)

THIS PROJECT IS: Clinical Laboratory Behavioral Other

THIS PROJECT IS CANCER-RELATED

Please explain Cancer relevance

Summer Student Research Program

Project Description

THIS PROJECT IS HEART LUNG & BLOOD-RELATED
Please explain Heart, Lung, Blood relevance

THIS PROJECT EMPLOYS RADIOISOTOPES

THIS PROJECT INVOLVES THE USE OF ANIMALS

PENDING APPROVED IACUC PROTOCOL#

THIS PROJECT INVOLVES THE USE OF HUMAN SUBJECTS

PENDING APPROVAL IRB PROTOCOL #M

THIS PROJECT IS SUITABLE FOR

UNDERGRADUATE STUDENTS ENTERING FRESHMAN
SOPHOMORES ALL STUDENTS

THIS PROJECT IS WORK-STUDY: Yes or No

THIS PROJECT WILL BE POSTED DURING ACADEMIC YEAR
FOR INTERESTED VOLUNTEERS: Yes or No

WHAT WILL THE STUDENT LEARN FROM THIS EXPERIENCE?

The overall goals of the Research Program are to:

1. Allow motivated medical students of any level to participate in mentored research projects for a minimum of 8-10 weeks or even longer as desired by the student during Medical School.
2. Introduce/enhance medical students understanding of clinical research principles as it applies to clinical data, health, disparities, and surgical outcomes.
3. Provide a strong foundation in the ethical conduct of research and understanding of the Institutional Review Board (IRB) process.
4. Strengthen skills in critical evaluation of data and reinforce the concept of evidence-based medicine.
5. Broaden medical students knowledge of the role and relevance of research to clinical medicine.
6. Develop basic skills of oral and written presentation, poster presentation, and Manuscript preparation and submission.

Summer Student Research Program
Project Description

.

+

Summer Student Research Program
Project Description

SPONSOR'S MOST RECENT PUBLICATIONS RELEVANT TO THIS RESEARCH:

IS THIS PROJECT SUPPORTED BY EXTRAMURAL FUNDS?

Yes or No

(IF YES, PLEASE SUPPLY THE GRANTING AGENCY'S NAME)

THIS PROJECT IS: Clinical Laboratory Behavioral Other

THIS PROJECT IS CANCER-RELATED

Please explain Cancer relevance

THIS PROJECT IS HEART, LUNG & BLOOD- RELATED

Please explain Heart, Lung, Blood relevance

THIS PROJECT EMPLOYS RADIOISOTOPES

THIS PROJECT INVOLVES THE USE OF ANIMALS

PENDING APPROVED IACUC PROTOCOL #

THIS PROJECT INVOLVES THE USE OF HUMAN SUBJECTS

PENDING APPROVED IRB PROTOCOL # M

THIS PROJECT IS SUITABLE FOR:

UNDERGRADUATE STUDENTS ENTERING FRESHMAN
SOPHOMORES ALL STUDENTS

THIS PROJECT IS WORK-STUDY: Yes or No

THIS PROJECT WILL BE POSTED DURING ACADEMIC YEAR

FOR INTERESTED VOLUNTEERS: Yes or No

WHAT WILL THE STUDENT LEARN FROM THIS EXPERIENCE?