patient findings and inform the development of the provider aspect of a
communication intervention centered on designing educational mate-
rials for women with various health literacy levels within the patient-
centered cancer communication process. DISCUSSION/SIGNIFICANCE OF IMPACT: Detecting the usefulness of cancer edu-
cational materials, as perceived by young women with breast cancer, is
fundamental to developing communication interventions that improve
cancer outcomes. This study will identify how materials can be
improved in the critical informational-exchange component of the
patient-communication process.

**4173**

**An interactive, online Research Education Hub built with a standard Learning Management System focused of education and career development for students, postdocs, faculty, and research staff**

Russell Lackey1, Alfred Vitale1, and Edwin van Wijngaarden1

1University of Rochester Medical Center

OBJECTIVES/GOALS: The University of Rochester CTSI Research
Education Hub is designed to: 1) connect the local research community
with essential internal and external educational resources; 2) create a
community of inquiry and collaboration across the translational sci-
cence workforce pipeline within the university. METHODS/STUDY
POPULATION: The Research Education Hub (RE-Hub) utilizes the
university’s widely used Learning Management System (LMS),
Blackboard, and accessible to anyone at the university with a
BlackBoard account. The RE-Hub greets users with an overview, an
introduction of key local faculty experts in relevant research method-
ologies, and links to institutional research programs and helpdesks.
Users are provided with curated educational resources organized by
topic areas including, but not limited to, research methodology, statis-
tical analysis, and grantsmanship. Discussion boards were created for
users to ask general research questions and to connect with others in the
translational research community. RESULTS/ANTICIPATED
RESULTS: The RE-Hub was designed to be flexible and responsive to the changing needs of the local research community. User feedback will be used to identify improvements in the organization and content of the RE-Hub. Future improvements will include additional topic areas that span translational competencies, additional materials added to existing topic areas, and facilitation of better collaboration and integration of career development programs and grantsmanship resources. DISCUSSION/SIGNIFICANCE OF IMPACT: The Research Education Hub provides the University of Rochester translational science research community with a space to
explore educational resources, to interact with colleagues and ask
research related questions, and to help develop and/or improve other
educational programs at the university.

**4470**

**Are nurses’ attitudes toward caring for hospitalized adults with intellectual disabilities associated with nurse and nursing unit characteristics?**

Melissa Lynn Desroches1

1Tufts University CTSI

OBJECTIVES/GOALS: (1) Determine nurse (age, education level,
years of experience, ID education/training, contact with people with
ID, communication apprehension, beliefs about patient quality of life), and nursing unit (teamwork, staffing and resources, per-
sion-centered care) characteristics that are associated with and
predictive of nurses’ attitudes, positive emotions, and negative
emotions toward caring for adults with ID. (2) Explore nurses’
perspectives of perceived barriers and facilitators to providing
nursing care to hospitalized persons with ID and medical comorbid-
ity, and how nursing care differs when caring for a person with ID. METHODS/STUDY POPULATION: This mixed methods nested analysis will employ an internet survey of medical-surgical registered nurses to collect nurses’ attitudes and emotions toward caring for hospitalized persons with ID and medical comorbidity, nurse characteristics, and nursing unit characteristics. We intend to recruit 150 medical surgical nurses currently practicing in the United States via email invitation to the membership of the Academy of Medical Surgical Nurses. Purposeful maximum variation sampling will be used to invite a subset of respondents for qualitative, semi-structured tele-
phone interviews to elicit barriers and facilitators to nursing
care of persons with ID and how nursing care differs when caring
for persons with ID. RESULTS/ANTICIPATED RESULTS: We hypothesize that lower nurse education level, fewer years of experience, less ID education/training, lower amount of con-
tact with people with ID, increased communication apprehen-
sion, and lower beliefs about the quality of life of persons
with ID will be associated with negative nurse attitudes and
emotions toward caring for people with ID. Further, we hypoth-
thesize that lower levels of nursing unit teamwork, staffing and
resources, and person-centered care practices will be associated
with negative nurse attitudes and emotions toward caring for
people with ID. DISCUSSION/SIGNIFICANCE OF IMPACT: The proposed research is an important first step in determining
potential nurse and nursing unit factors influencing nurses’ atti-
itudes toward caring for people with ID. It will lead to targeted
interventions to enhance nursing care quality and reduce hospit-
al-associated healthcare disparities among people hospitalized
with intellectual disabilities and medical comorbidities.

**4539**

**Building a Translational Science pipeline: The Indiana CTSI STEM K-12 Program**

Elmer Sanders1, Vanessa Barth, PhD2, Leigh-Ann Cruz3,
Ilesha Sherrer, MS, MEd.4, Jacob Olson, MEd.5, Emily Speidell, MS,
MEd.6, Elvia Solis, MA1, Sharon Harrison, MA8, Amy Hinshaw9, and
James A. McAteer, PhD10

1Indiana University School of Medicine; 2Eli Lilly and
Company; 3Cardinal Ritter High School; 4Pike High School;
5Decatur Central High School; 6Decatur Central HS; 7Arsenal
Technical High School; 8Indiana CTSI K-12 STEM Program;
9McKenzie Center for Innovation and Technology; 10IU School of
Medicine

OBJECTIVES/GOALS:

- Develop strong network of science teachers interested in pro-
moting scientific research to their students.
- Place students in an immersive summer research internship that,
  when possible, matches their career interests.
- Expose students to the numerous career paths within the STEM
  field.