Genesis Research Inquirer

Who we are...

Genesis Health System Office of Research and Grants Administration is here to help you. If you need assistance please contact us.

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Genesis Health System Research Promotion Fund

To make a request to use the monies in the Research Promotion Fund, go to www.genesishealth.com/research and fill out the online application. You can also contact the Office of Research and Grants Administration for a copy of the application.

Once the Research Promotion Fund Committee receives a completed form, the committee does its best to respond to applications within one week.

If you have questions about the Genesis Health System Research Promotion Fund, please direct them to Sarah Castro at CastroS@genesishealth.com.

Genesis Research Posters

Two groups of Genesis employees recently created posters to present research findings at highly respected conferences.

A group of Residents at the Family Medical Center recently completed a study examining the prevalence and costs of unindicated preoperative diagnostic testing for elective shoulder, knee and hip surgeries. The results of the study will be presented at the Iowa Academy of Family Physicians Clinical Education Conference on October 29-31. Drs. Alla, Galey, Johnson and McAfoos developed the poster for this conference with the assistance of mentors Dr. Andresen and Matt Arnold, PharmD. The group is also working on a publication for this study. A full page version of the poster is included at the end of the newsletter.

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Genesis Research Posters (Continued)

The Genesis in-patient Physical Medicine and Rehabilitation department recently completed an evidence-based practice project to improve oral fluid intake among physical rehabilitation patients. Nicole Matthys RN, BSN, CRRN and Cheryl Osborn RN, CRRN, CNIII developed a poster for the Association of Rehabilitation Nurses Education Conference that was held on September 30—October 3, 2015. The study found increased fluid intake as a result of this project. A full page version of the poster is included at the end of the newsletter.

Health Care Innovation
Supporting a culture of rapid experimentation

A recent article in the August 2015 edition of the New England Journal of Medicine is calling for the use of rapid experiments to test new ideas in a cost effective manner. While not appropriate for every idea, there is value in testing “potentially value-producing ideas faster, less expensively, and more reliably.” Some examples presented in the article include testing the feasibility of a same-day scheduling practice and testing the effectiveness of a texting-based intervention to improve the care of low-income postpartum women with preeclampsia. The authors argue these types of “mini-pilots” can provide initial data more quickly and at a fraction of the cost of typical clinical trials.

This seems like an idea that could benefit Genesis as a community health system, where front-line clinicians and staff are the ones developing and conducting research. It aligns with our LEAN journey to become better, better, better and our mission to provide high-quality health services to all those in need.

You can read the full article “Innovation as Discipline, Not Fad” by visiting the following website—
New Research Examines Service Delivery and Patient Outcomes in Ryan White Funded and Nonfunded Facilities

The Genesis Health Group Infectious Disease Clinic is a Ryan White Part C HIV/AIDS Program (RWHAP) funded facility and has participated in the RWHAP program since 2013. A recent study published in the Journal of the American Medical Association (JAMA) Internal Medicine in August 2015 found greater access to services and improved outcomes among patients that received care at a RWHAP-funded facility.

Patients attending RWHAP-funded facilities were more likely to be aged 18-29, female, Black or Hispanic, have less than a high school education, income at or below the poverty level and lack health care coverage. Therefore, they had significantly more social determinants of poor health.

RWHAP-funded facilities were more likely to provide case-management, mental health, substance abuse and other support services. Patients attending RWHAP-funded facilities were more likely to receive these services, as well. The percentage of patients prescribed ART antiretroviral therapy between RWHAP-funded and non-RWHAP-funded facilities was similar. However, among poor patients, those attending RWHAP-funded facilities were more likely to be virally suppressed. These findings are not insignificant, and suggest the RWHAP plays a significant role in funding services key to successful outcomes.

Under the leadership of Dr. Motwani and in partnership with The Project of the Quad Cities, Genesis provides the following services to patients: outpatient primary health care, early intervention services, HIV counseling, medical nutrition therapy and referrals to oral health, mental health, specialty care, substance abuse and case management services (medical and non-medical). Much of this is possible through participation in the RWHAP.

The full article can be found by visiting the following webpage — [http://archinte.jamanetwork.com/article.aspx?articleid=2430794&resultClick=3](http://archinte.jamanetwork.com/article.aspx?articleid=2430794&resultClick=3)

IRB Approved New Projects: September—October, 2015

BREAST CANCER COLLABORATIVE REGISTRY (BCCR): Investigator-Initiated Multi-Site Institutional Non-Interventional Trial
Principal Investigators: George Kovach, MD
Rationale and Purpose: The purpose of this study is to implement and maintain a comprehensive data and biospecimen bank known as the Breast Cancer Collaborative Registry (BCCR). The registry and biospecimen bank will provide core support services for future multidisciplinary research on breast cancer and other chronic diseases carried out by members of the Fred and Pamela Buffett Cancer Center as well as internal and external research collaborators from different participating institutions/centers.

Nutrition Day in Worldwide Hospitals
Principal Investigators: Polly Graham and Donna Sivertsen
Rationale and Purpose: The purpose of this international cross-sectional multicenter audit is to generate a risk and level of nutritional intervention profile for an individual unit/ward based on case-mix, structures and social environment. This profile should give a snapshot on the relation of risk to resource allocation.
Research Research Highlights—Two Studies were Completed in Sep—Oct, 2015

Perioperative temperature management: The relationship between a quality performance measure and positive patient outcome
Principal Investigator: Jon Lemke, PhD
Study Purpose: The purpose of the study was to evaluate the similarity between compliance with the NQF quality performance measure, perioperative temperature management, and adherence to evidence based practices to prevent perioperative hypothermia (preoperative forced air warming, intraoperative forced air warming, IV fluid warming) and positive patient outcomes in a community hospital.
Results: 5.8% of patients for whom the quality performance measure was met were hypothermic upon admission to the Post Anesthesia Care Unit. The greatest gaps between compliance with the measure and normothermia were found in Urology (8.5%) and Orthopedics (7.7%).

Multisensor Chronic Evaluations in Ambulatory Heart Failure Patients (Multisense)
Principal Investigator: Robert Brewer, MD
Study Purpose: The purpose of this study was to collect chronic ambulatory data from multiple sensors available to CRD-D devices in order to develop algorithms for the early detection of worsening Heart Failure. The primary objectives of this study were to determine how ambulatory sensor measurements changed with worsening HF, and to develop multisensor detection algorithms.
Results: Pending data analysis

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Summary of Genesis Health System IRB Activity
September—October, 2015

Opportunities for Physicians on the Genesis Institutional Review Board?
The Genesis Health System Institutional Review Board (IRB) is looking for physicians with an interest in research and ethics!

Member Responsibilities
1. Attend IRB meetings twice a month (2nd and last Tuesday) in-person or by phone
2. Review IRB application materials prior to each meeting and be ready to discuss issues related to human subjects protection
3. Keep abreast of regulations and policies governing IRB review and the conduct of human subjects research (training and continuing education provided)

INTERESTED? Call or e-mail Sarah Castro at 421-7957 or castros@genesishealth.com
The Prevalence and Cost of Unindicated Preoperative Diagnostic Testing for Elective Shoulder, Knee, and Hip Surgeries

N. ALLA, MD; A. ANDRESEN, MD; M. ARNOLD, PHARM.D; E. GALEY, MD; E. JOHNSON, DO, H. MCAFOOS

OBJECTIVES
- Assess adherence to ACC/AHA 2007 Guidelines on Perioperative Cardiovascular Evaluation and Care for Noncardiac Surgery
- Perform cost assessment of unindicated testing
- Quantify any additional imaging or consultation done as a result of unindicated testing

BACKGROUND
- Little change in preoperative test ordering has been noted despite endorsement of ACC/AHA guidelines
- Previous studies examining cataract surgeries showed mean monthly expenditures on testing to be 42% higher than during the preceding 11 months
- Excessive preoperative testing has not been shown to improve outcomes

STUDY DESIGN
- Retrospective analysis of 301 patients randomly sampled and proportionally allocated from a total of 531 surgeries
- Exclusion Criteria: Acute and emergent surgeries and surgeries performed at outside institutions
- Data was collected from Jan 1, 2014 to June 30, 2014
- Preoperative histories were reviewed for inclusion of functional capacity
- A preoperative assessment algorithm was used to assess appropriateness of testing
- Cost assessment was performed using the 2014 Medicare cost to charge ratio

PREOPERATIVE ASSESSMENT ALGORITHM

YES

Active Cardiac Conditions?

Unstable CAD
- Recent MI (within 1 month)
- CHF, severe/new
- Arrhythmia – AFB w/RVR
- Severe Valve Disease

NO

Functional Capacity

<4 METS
- Eat, dress, toilet
- Walk indoors around home
- Walk 1-2 blocks on level surface
- Takes care of self

PDOR

Evaluate
1. Procedural risk
2. Safety

Stabilize
3. Optimize

Proceed to surgery

No workup

Number of Clinical Risk Factors (DM, CVA, CKD, CHF, CAD)

1. Proceed
2. Proceed w/ beta blocker for HR control or consider non-invasive coronary eval

RESULTS

95% Confidence Intervals for Estimated Rates of Patients Receiving Unindicated Lab Tests

Number of indicated and unindicated Imaging, Consults, etc

95% Confidence Intervals for Estimated Rates of Unindicated EKGs, Consults, Stress Tests and Imaging

Estimated Cost Per 1,000 Patients

REFERENCES


SITE LOCATION: GENESIS QUAD CITIES FAMILY MEDICINE RESIDENCY, UNIVERSITY OF IOWA COLLEGE OF MEDICINE, DAVENPORT, IA

EVALUATION
- Total of 1,826 preoperative tests ordered
- 1,732 of these tests were unindicated (94.85%)
- Most common unindicated lab tests were UA, CMP, CBC, and INR
- Most common unindicated non-lab testing included EKG, CXR, stress test, and cardiology consults.
- Cost per 1,000 patients: $331,306 (95% CI: $283,354-$397,010)

LIMITATIONS
- Only inpatient surgeries at Genesis Medical Center were included
- Inability to include patients that had preoperative evaluations and testing without undergoing surgery
- Costs reflected the Medicare cost to charge ratio and does not account for other insurance payers
- Changes in the health system prior to our study (to secondary and liability issues) have reduced the number of routine CXRs performed preoperatively

CONCLUSIONS
- There is significant unindicated preoperative testing being performed
- There is significant cost associated with this testing
- There is potential to reduce unindicated testing as well as the associated costs

DEMOGRAPHICS

Mean Age: 65.78 years
Age Range: 43-94 years
% 65 or older: 52.49%
Male: 128 (42.52%)
Female: 173 (57.48%)
Total: 301
Total Indicated: 94 tests
Total Un-indicated: 1,732 tests
Total Tests Ordered: 1,826 tests
Overall % of Un-indicated: 94.85%
LITERATURE REVIEW
MgGrail & Kelchner found that post stroke patients in Inpatient Rehabilitation had a poor fluid intake, even if they did not have dysphagia, as compared to a similar population in the community. (2012)
Simmons, et. al. explains that verbal prompts and beverage preference compliance was effective in increased fluid intake among hospitalized patients (2001).

BENEFITS OF WATER
- Transports nutrients to cells
- Cushions joints
- Protects organs and tissues
- Helps food digestion
- Rids the body of waste
- Relieves constipation
- Weight management
- Longer life
- Flushes toxins
- Helps regulate temperature
- Protects your spinal cord
- More energy

COMPLICATIONS FROM DEHYDRATION
- Blood clots
- Pneumonia
- Urinary tract infections
- Fatigue/weakness
- Cardiac changes/palpitations
- Dizziness/confusion/low blood pressure
- Sepsis/death
- Thrush/Dry Mouth/Skin Fragility
- Blood draws
- IV Sticks/invasive procedures
- Kidney failure
- Hypovolemic shock

DIETITIAN RECOMMENDATIONS
• FLUID GOAL PER KG ACTUAL WEIGHT

HYDRATION COSTS
- PICC Line $1,025
- Peripheral $25

$2.99 PER MUG

Why do I need to drink fluids?
I don’t like water.
I don’t know what to drink.

How much do I need to drink?

FLUID OPTIONS

“Working Together One Day at a Time”