



PROJECT TITLE: Effective Genetic Test Authorization and Coordination for Improved Patient Care

PROPOSAL NUMBER: 15-06191.UW

PIs: Heim & Mastrangelo

RESEARCH THEME: Patient Experience

BUDGET: \$50,000

UNIVERSITY: UW

PROJECT YEAR: 1

### PROJECT DESCRIPTION:

Genetic testing is a laboratory method that detects changes in human deoxyribonucleic acid (DNA), chromosomes, genes, or gene products (e.g., proteins). DNA for genetic testing may be extracted from a variety of samples, including blood, tissue, buccal swabs, and saliva. There are many thousands of active genetic tests, and a continuous evolution of additions and replacements as genetics research and development is translated to clinical practice. Genetic testing is generally expensive, and so greater attention to the objectives of the proposed tests and their justification are required by the insurance providers, before they will authorize payments for the procedures.

### HOW THIS IS DIFFERENT THAN RELATED RESEARCH:

This research focuses on improving the processes involved in insurance authorization & coordination of clinically appropriate genetic tests for pediatric patients. While much attention has been on the challenges confronting care providers in aligning tests & diagnoses, the financial aspects of genetic testing contribute to the complexity of the system of decisions: the constraints of the 3rd party payers should be acknowledged as potentially influencing the diagnosis & treatment of delivery processes. The complexity & dynamics of the system lead to delays in decisions about genetic testing that may waste resources, postpone patient care & create unnecessary stress for patients and families.

### EXPERIMENTAL PLAN:

A review of the literature & current healthcare practices will assure our team understands the state of genetic testing & the perspectives of patient & families, institutions, care providers, & 3rd party payers. A critical set of partners will be the insurance & payer organizations as we document the internal processes they follow; these processes drive the requirements for the health care providers who require genetic tests for their pediatric patients. Process models will support the analyses & description of the information flows, & decision processes that determine appropriate tests & authorize their performance. Our objective is to develop the program and practice guidelines.

### EXPECTED MILESTONES:

- Months 1-3: Complete the process models for internal operations associated with authorization for genetic testing at SCH
- Months 4-6: Develop a theory of operations process model for the system, starting at the point when the provider submits a test-request
- Months 7-9: Validate the system context model (theory of operation) with payer partners our IAB member had identified as willing to participate. Construct the set of payer process models and identify critical variances among the providers
- Months 10-12: Complete the documentation of the database interview questions, answer and payer characterizations to be used as we document each of their internal authorization/rejection processes

### BENEFITS TO INDUSTRY:

Industry partners will have comprehensive system models identifying the common processes & activities undertaken to select, evaluate, authorize, & order genetic test for pediatric patients. The models will be used in subsequent research efforts to design industry standards.

### EXPECTED DELIVERABLES:

Comprehensive systems models identifying common processes and activities undertaken to select, evaluate, authorize, and order genetic tests for pediatric patients.