

# Medical Education Outcomes Center University of Minnesota Medical School

*Linking medical education to health outcomes*

## **Table of Contents**

### **Overview**

### **Goal**

### **Components**

#### **Research Center**

#### **Training Innovation Program**

### **Success Benchmarks**

### **Research Questions**

#### **Indicators of Academic Success**

#### **Indicators of Workforce Success**

#### **Factors that Impact Patient Outcomes**

### **Why Minnesota? Why now?**

## **Overview**

There is a need to more effectively connect medical education experiences to learner, workforce and health outcomes. By doing so, admission to medical school and programming across the medical education continuum becomes more data driven with the goal of producing future physicians that are diverse, meet workforce needs, and can positively impact health outcomes. This connection is especially important in Minnesota since 70% of the actively practicing physician workforce in the state has trained at the University of Minnesota Medical School.

## **Goal**

Use evidence based data to effectively connect admission to medical school and programming across the medical education continuum to learner, workforce and health outcomes.

By accomplishing this goal we will:

- Analyze clinical data to continuously inform educational design.
- Contribute to nation's leading research and innovation in medical education.
- Attract and retain top physicians and educators for Minnesota.

## **Components**

### Research Center

The center will provide the technology infrastructure, research design, and analytic support for performing outcomes research in medical education. Tasks will include:

- Enhancing our medical education database (data warehouse and research capacity in order to link educational data to health outcome data in order to identify predictors of learners' future clinical performance.
- Using clinical outcomes data to continuously inform educational design.
- Determining outcomes of pipeline, admissions, and education programs designed to address workforce needs (underrepresented in medicine, underserved rural and urban communities, physician-scientist .
- Enhancing scholarship and research in medical education through analysis of innovative teaching methodologies, platforms, and evaluation and assessment techniques.
- Effectively competing for extramural funding for education and health services research.

### Training Innovation Program

New models of health profession education will be developed, implemented and assessed in this component of the center. Tasks will include:

- Revamping curriculum and clinical training programs to incorporate new models of health promotion and care.
- Assessing the effectiveness of new models of clinical training.
- Integrating interprofessional education, team care, social determinants of health, prevention and wellness, and quality improvement and patient safety into training programs.
- Developing statewide network of interdisciplinary primary care teaching clinics with particular emphasis on underserved urban and rural communities.
- Developing pipeline programs and funding to prepare and recruit students from groups underrepresented in the state's current and future health workforce.
- Expanding and enhancing a faculty development program to prepare faculty to effectively train the future physician workforce.

## **Success Benchmarks**

- Successful integration of all data sources into a framework that allows us to effectively analyze the outcomes of current and new educational programs.
- Ability to link the educational data warehouse with clinical practice data focusing on quality, safety, cost and care experience.
- Extramural grants and publications in the area of medical education outcomes.
- Recruitment and retention of students underrepresented in the state's health workforce.

- Improved access and quality of care in rural and underserved communities.
- Reduction in health disparities throughout Minnesota.

## **Research Questions**

### Indicators of Academic Success

- What admissions criteria are the best indicators for selecting medical students who will meet workforce, health outcome and scholarship goals?
- What factors predict academic success in medical school?
- Have students who go on to become chief residents shared any specific clinical training experiences during UME? (Examples: longitudinal integrated clerkship experience; common clinical training sites)
- Does shortening medical school training impact academic performance in medical school or health care outcomes once in practice?

### Indicators of Workforce Success

- What clinical training models have the greatest impact on meeting workforce needs?
- What factors predict future career choice and practice site for medical students, residents and fellows?
- What characteristics of RPAP sites are most apt to produce students who go into rural primary care?
- Which family medicine, internal medicine and pediatrics training sites are most apt to produce students who go into primary care?
- What is the correlation between sites that have strong patient outcomes and sites that influence students to go into primary care?
- What is the correlation between sites that use an interprofessional model of patient care and those that influence students to go into primary care?

### Factors that Impact Patient Outcomes

- How can we improve medical education to improve clinical care?
- What are the clinical implications of variations in medical education?
- What are the characteristics of a training site that best predict clinical outcomes?
- What are the factors that predict failure as a physician?

## **Why Minnesota? Why now?**

Minnesota is uniquely positioned to be one of the first states to examine relationships between health care training, patient outcomes and workforce metrics. The state is home to innovative institutions that are leaders in health care analysis, including Minnesota Community Measurement, the Institute for Clinical Systems Improvement, and Stratis Health. The University of Minnesota Medical School is well positioned to take advantage of this access to form partnerships across the training/delivery continuum.

The medical school is committed to becoming a top research institution in the next 5 to 10 years. The Outcomes Center, with its robust database, will provide an essential resource for faculty to use in developing educational scholarship.