The 2015 Institute of Medicine report on “Transforming Health Care Scheduling and Access -- Getting to Now” highlights the challenges in scheduling healthcare services. The data on access and wait times in health care are limited. There is a prominent deficiency in research, evidence-based standards, and metrics for assessing the prevalence and impact of these issues. Extended wait times and delays for care have been shown to negatively affect morbidity, mortality, and the quality of life via a variety of health issues, including cancer, heart disease, hip, knee, and spinal fractures, and cataracts of the eye. The timely delivery of appropriate care has also been shown to reduce the mortality and morbidity associated with a variety of medical conditions, including kidney disease and mental health and addiction issues. This study focuses on scheduling challenges in the primary, operating room, and specialty service settings at multiple clinical sites, including the adult and the pediatric populations.

How this is different than related research:
Most scheduling is done based on availability of physician's preference time. Patients are then offered the best possible time that may fit his/her doctor’s schedule. This study will identify the needs of patients and develop a predictive model to estimate the individual needs (and thus length of stay for the appointment). This information is then incorporated within a scheduling optimization framework for dynamic optimization. This allows for optimizing the scheduled service as well as unexpected emergency service.

Value Proposition:
- Develop a profile of patient care characteristics versus resource usage
- Provide clinical-decision support for dynamic clinical scheduling and propose a training guideline for schedulers
- Improve access, timeliness, and quality of care, while reducing waste