Improving Patient Access at MIT Medical
C. Gatmaitan, S. Stempak, G. Stoner, S. Subramanian
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Introduction

MIT Medical
• Location: Cambridge, USA
• Multispecialty group practice that serves MIT students and employees and their families
• Employs ~300 people and is both a provider and insurer

The Challenge
• Improving access to primary care services
• Current practice available for primary care appointments can be a matter of weeks
• Lack of standardization of provider schedules and/or inefficient matching of support staff
• Diverse patient population with varying needs and expectations for interaction with their provider
• Cultural history of being “provider-centric” and providing flexible work schedules
• No clearly defined access metrics
• MIT Medical Primary Care is moving towards team-based care, which will require significant schedule reconfiguration

The Practice
• 18 providers, with varying patient-facing hours
• 20 and 40-minute appointments
• Each provider also has administrative time and some have administrative roles as well

Background & Approach

Developing the Approach
1. Interviewing stakeholders about access issues, scheduling practices, team structure, and patient and provider needs
   • Clinicians and clinician leaders
   • Nurses and nursing leaders
   • Patient service representatives (PSRs)
   • Administrative leaders
2. Conducting a literature review of best practices in primary care scheduling
   • Open access scheduling
   • Maximizing “top of license” work for all team members with task delegation
   • Optimizing appointment lengths
   • Optimizing placement of short vs long appointments within day
   • Optimizing scheduled vs same-day appointments to manage demand on different days of the week
   • Continuing data collection and definition of metrics
3. Characterizing supply and demand
   • Supply
     • Based on # of providers, # of patient-facing hours, lengths of appointments
     • Having more short appointments can increase access
   • Demand
     • Based on requests for appointments, scheduled and same-day, and types of appointments
     • Quantification with data is necessary

Methods

Team Recommendations
• Team-let structure planned as 4 providers, 2 nurses, and 2 MA’s per team
• Co-location, communication, and schedule alignment within teams
• Task delegation between roles to move many follow-up and chronic care tasks to nurses and MA’s
• Onsite admin time

Waiting Room Observations
• Observing check-in time, time called back, and check-out time
• Different times of day and different days of the week
• Goals: To assess actual appointment lengths, waiting times, delays in schedule, and variability across days and times

Schedule Template Analysis
• Use quantitative methods to optimize a schedule template for each provider
• Objective function is to maximize total number of appointments
• Model the effect of different constraints, including:
  # of providers
  # of patient-facing hours
  Meetings & lunch, etc.

Results

Appointment Length Analysis

Optimizing Supply of 40-minute Appointments

Conclusions and Future Directions

Summary of Recommendations
1) Realignment of schedules within the team structure for best communication and coordination, along with task delegation to maximize “top of license” work
2) Minimization of 40-minute appointments
3) Minimization of additional provider-specific schedule constraints
4) Data collection for demand estimation

Future Directions
1) Incorporation of demand data into schedule optimization
2) Re-evaluation of appointment lengths to minimize 40-minute appointments
3) Including patient feedback about ideal appointment lengths
4) Measuring impact of team-based structure
5) Getting stakeholder buy-in for schedule coordination

References & Acknowledgments

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An image of the MIT Media Lab is shown with a person working on a computer.