

Modeling Team-Based Primary Care using Computer Simulation



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Steering Committee

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Outline

1. Project Rationale

2. Simulation Modeling Parameters:

- Analysis Unit : one primary care clinic
- Resolution : by day of week and by hour
- Inputs : healthcare demand characteristics
- Outputs : clinic supply of healthcare personnel
- Extras : outcomes, measures, financials, animation

3. Business Processes

4. Your Thoughts

Project Rationale

Create
Simulation

Nov 2014 – Mar 2015

Pilot at One
Clinic (FM)

April – June 2015

Implement
in 10 Clinics

April – Dec 2015

Phase II Clinical Transformation

- Applying Team-Based Care Concepts
- Team-Based Care = what market demands
- Effective team → successful transformation
- Requires practice and personal changes
- Involves clinical teams, leadership, patients
- Partial alignment with NCQA's PCMH # 2 :

*Team | Navigation | Integration | After-Hour
Education | Self-Management | Advice | Roles and
Responsibilities | Personalization | Improvement*

Statement of Purpose

- based on the Demand, we would like to **Tailor**:
 - Session Configurations
 - Targets and Objectives
 - Locations and Allocations
- ... in order to make a **net + Impact** on:
 - Health
 - Operations
 - Finances
 - Experience

Performance Measures

1. Financial Outcomes

- Costs
- Revenues

2. Operational Outcomes

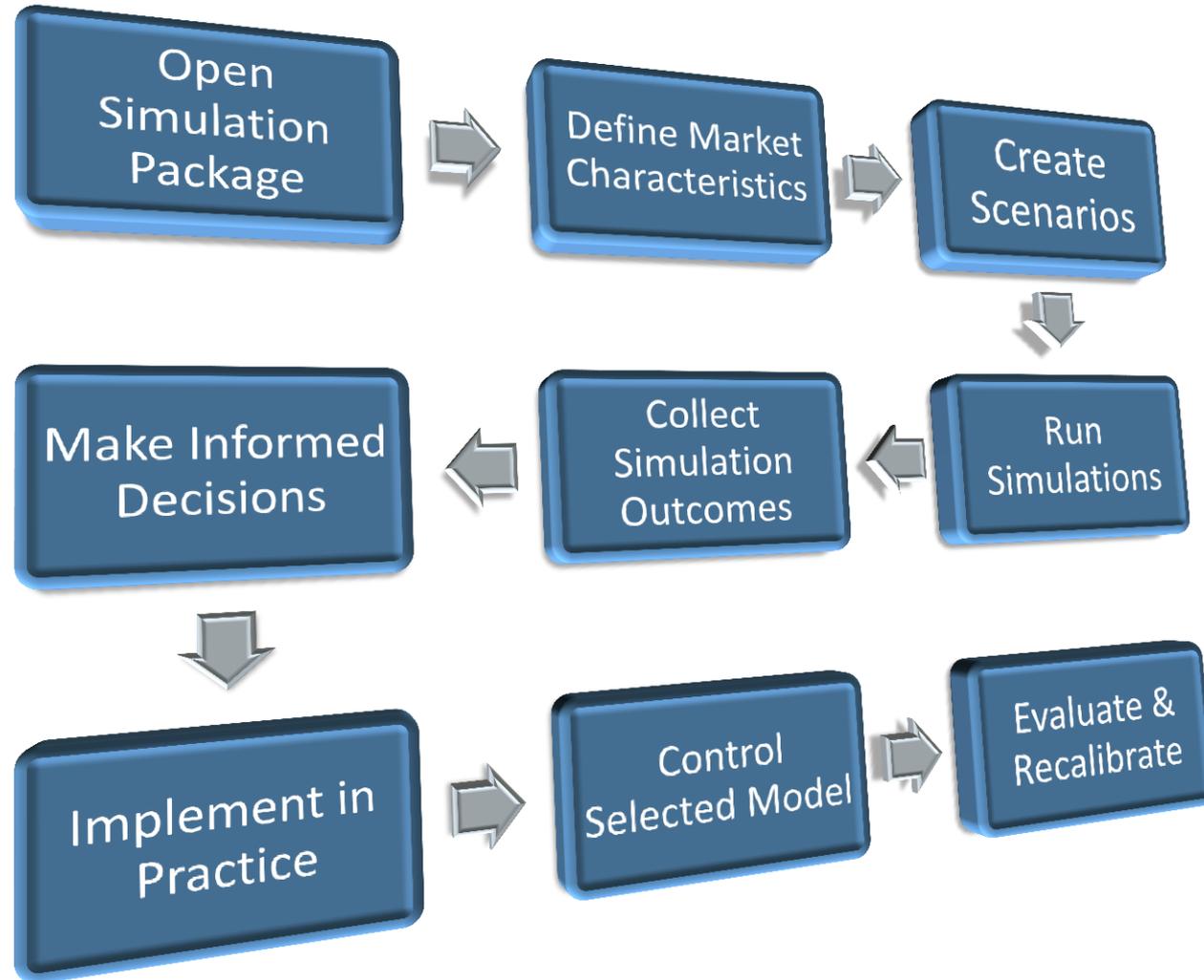
- Unmet demand
- Waiting lines

3. Care Measures (e.g. quality targets)

4. Health Outcomes (e.g. hospitalizations)

5. Experience of Patients and Team

Business Processes



Create a Scenario to Test

- Confirm or modify population demand
- How to care for Level I, II, III populations
 - % Care in Clinic
 - % Remotely
 - % Indirectly
- Confirm or modify population characteristics
- Confirm or modify team responsibilities
- Confirm or modify expected service durations

Next Steps – Sim Development

- Short-Term:
 - Encode remaining models (care, health, exp., \$\$)
 - Complete fixed-staffing simulation model
 - Operationalize simulation-driven results:
 - Standard Operating Procedures
 - Training Materials and Programs
 - Job Descriptions / Negotiations
- Long-Term:
 - Migrate toward closed-system simulation model