### Pediatric Telehealth Economic Framework

### 2. Describing an Intervention



## **Creating a Logic Model**

A Logic model illustrates how *inputs* and *resources* lead to intended *outcomes* through *activities* and *interventions* in a *system*. It is based on a well stated purpose (or mission) that should motivate stakeholders to do the interventions and activities. The model also includes a description of existing conditions that can either support or hamper the efforts.

- **Inputs and resources** are the people, equipment, and other tools that are used for the activities and interventions. Tools can include knowledge and guidelines, methods, services, technology, and other items that are used by people. People can include staff, providers, patients, and other stakeholders who will contribute to completion of the listed interventions.
- Interventions and activities are actions that are done to direct the course of change
- **Outcomes** are measurable results from the interventions/activities that will informs whether or not the purpose has been achieved.

Table 1: Steps for Using a Logic Model as a Tool	
Step 1: Vision	State the overall vision for the project – this statement articulates the reason for
	the interventions and activities of the project.
Step 2: Objectives	State the project objectives. These objectives should lead to either
	1) a better understanding of how to achieve the vision or
	2) contribute to fulfilling the vision.
Step 3: Inputs and	Identify inputs and resources that used to perform the activities or interventions
Resources	
Step 4: Activities	List the activities and interventions (things that you do)
and Interventions	
Step 5: Outcomes	State the measurable short-term and long-term outcomes that accomplishes the
	objective. Results of the processes (including outputs). Measures the gap between
	the desired outcomes and actual outcomes.

### 2. Describing an Intervention



# Logic Model: Virtual Care for Medically Complex Children

Vision

Reduce avoidable hospitalizations and emergency visits for medically complex children while improving their quality of life through a home-based virtual care program.

**Primary Objective** 

- To compare rates and cost of hospitalizations and ED visits, family quality of life (estimated by days without ED
  or hospital contact) before and after enrollment in an in-home virtual program for medically complex children.
- Benchmark with similar programs in other states

## Inputs

- Funding: institutional, payers, and grants
- Staff: Nurses, nurse practitioners, social workers, virtual physicians, medical subspecialists, primary care physicians, telemedicine coordinators
- Time
- IT Infrastructure and equipment: software, hardware (for patients and providers), Electronic medical record. IT support and training
- Patients and families: children with medical complexity and their parents, caregivers, and other family members

# Intervention/ Activities

- Develop system for communication and coordination of medical and social needs with a centralized virtual care team
- Identify high-needs complex children through medical record review and direct referrals
- Patient enrollment and installation of app for communication
- · Engagement with virtual team
- · Education for patient and staff
- Regularly scheduled visits
- Escalation visits for acute illness
- Patient care interventions based on evidence or consensus-based care practices

## Short-Term Outcomes

- Decreased emergency department visits and hospitalizations compared to preenrollment
- Decreased length of hospital stay when admitted
- Decreased cost of care
- Increased days at home
- · Improved medication compliance
- Improved patient and parent experience
- Decreased travel time
- Improved appointment compliance and adherence to contingency plans

# Long-Term Outcomes

- · Long term health outcomes
- Improve quality of life, decrease morbidity and mortality
- Improved, financially sustainable telemedicine model
- Improved efficiency of teambased care for children – PCP/specialist
- Relationships amongst team and caregivers
- Establishment of evidence base to inform value-based arrangements for high needs children





Formative feedback loop





Context and Dependencies Equity variables (language, technology and broadband access and reliability, digital literacy), subspecialty access, Financial support for staff and technology, access to patient data, Disparity risk factors must be considered, technology is reliable, subspecialists are available, accessibility to required data