

Telehealth and Value in Primary Care

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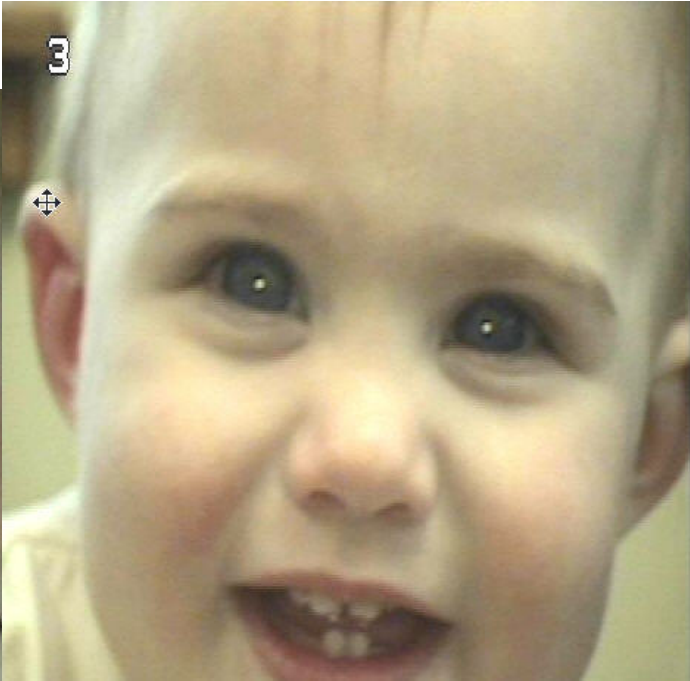
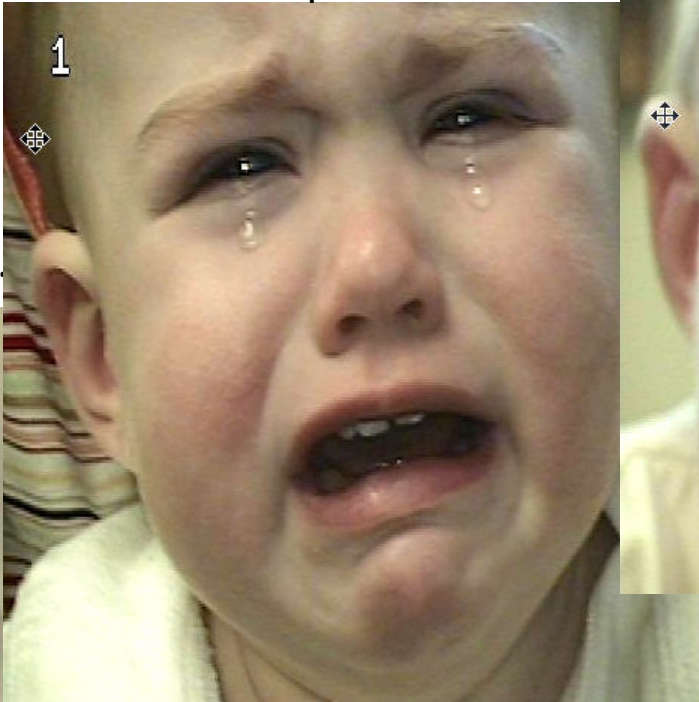
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Value of Telemedicine-Enhanced Care

Tomorrow

Wakening from naptime,
temp 104.

Age 6 mo., dropped off at
childcare, 7:30 this morning.



Diagnosis: acute otitis media

Outcomes that Matter: Family Perspective



Benefits

Usual Care

Child seen 4 hr later
First dose of medication 6 hr later



Benefits

Patient to Provider Telemedicine

Child seen now
First pain medication now
First antibiotic 1-2 hr later

Cost to the Family and Community

Usual Care



- Office , Urgent Care or ED exam room space
- Personnel costs: nurses and med-techs
- Parent misses ½ day of work
- Transportation costs (?ambulance)
- Parking cost
- Payment for ED visit: \$650
- Medication costs
- Provider cost

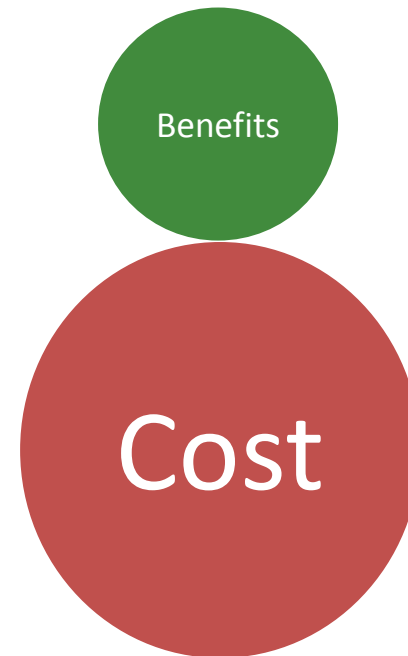
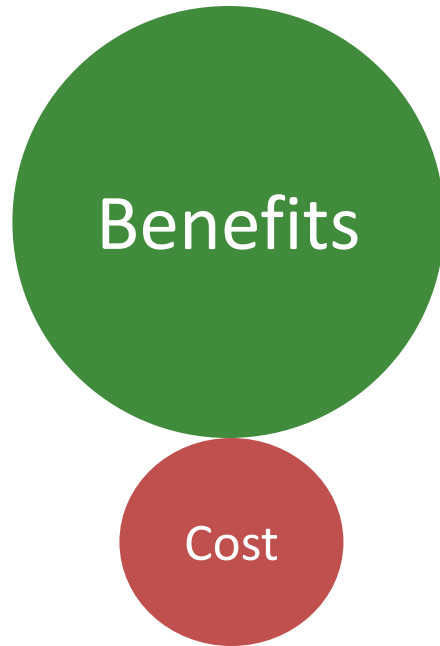
Patient to Provider Telemedicine



- Little or no cost for patient exam room space
- Patient-end equipment and connectivity
- No incremental cost for provider space or equipment
- Personnel costs: med-tech (telemed assistant) and scheduler
- No transportation or parking cost
- Parent misses no work
- Payment for telemed visit: \$75
- Medication costs (equal)
- Provider cost (equal or less)

Relative Value: Family and Community Perspective

Telemedicine >> **Usual Care**



Child site



Provider site



Video conference window - view at clinician site



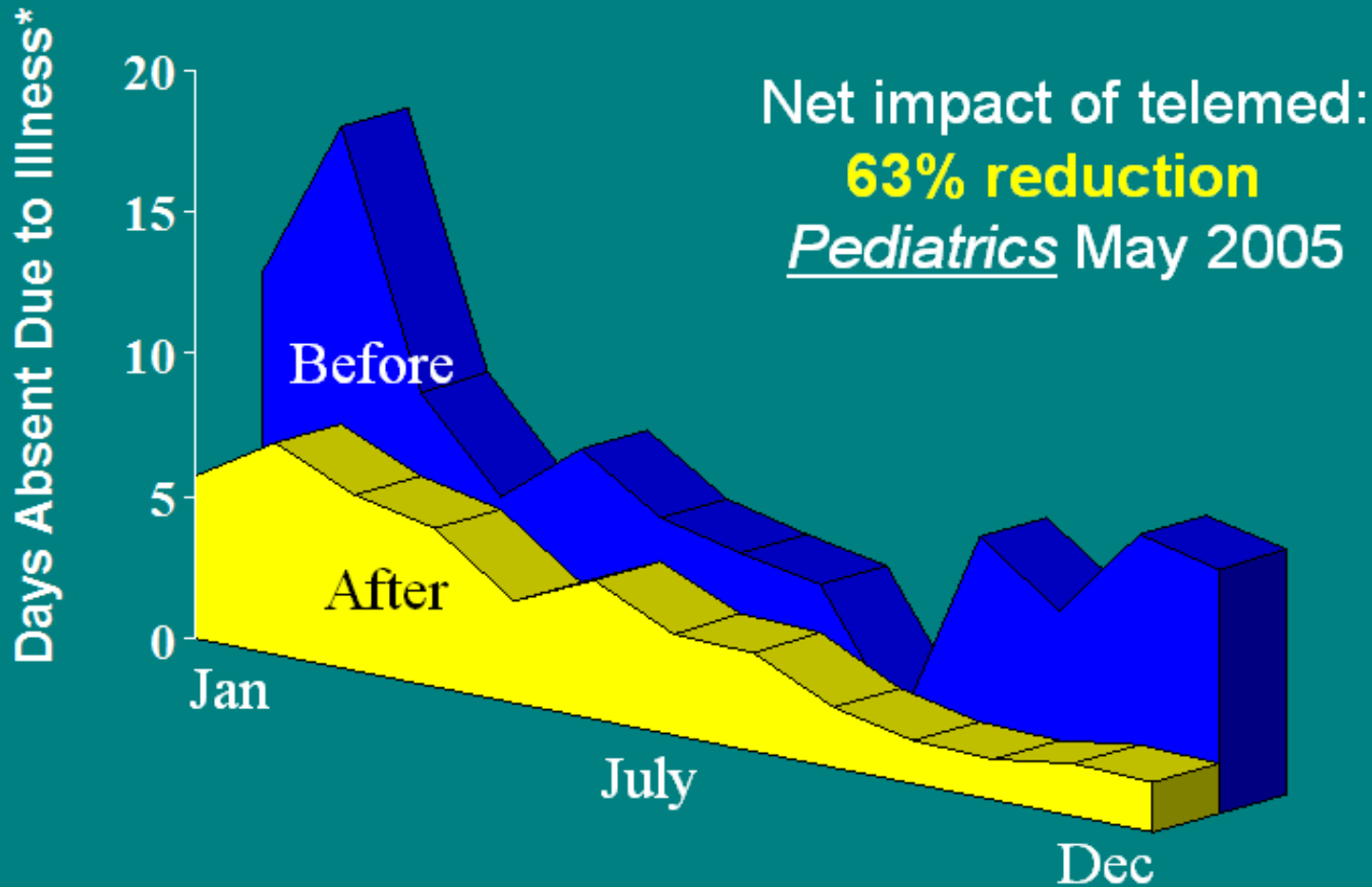
Video conference window - view at child site



WAITING ROOM			
ID	Name	Orig Site	
301	Imani	Carlson Metro YMCA	
<i>I was unable to get real clear pictures of the ear because ...</i>			
2713	Kierra	Levis Street YMCA	
<i>I will be on a field trip be back at 2:00pm</i>			

WAITING ROOM		
ID	Name	Orig Site

Effectiveness: Absence from Child Care Due to Illness



* Absence due to illness in mean days per week per 100 registered child-days.

Effectiveness and Efficiency: Summary

- Reduction in absence from child care due to illness: **63%**
- Visits completed **> 14,000**
- In child care, schools, center for special needs children, neighborhood/after-hours sites **> 70 sites**
- Completion rate: **97%** (3% referred to higher level of care)
- Would otherwise have gone to ED, Urgent Care or office: **94%**
- Allowed parent to stay at work/school: **93%** (estimated time saved = 4.5hr/visit)

Effectiveness and Efficiency: Summary

- Continuity with Primary Care Medical Home: 83%
- Provider participation:
 - primary care practices = 10
 - providers > 70
- Local payer reimbursement:
 - City children covered ~ 90% (Medicaid managed care, Commercial)
 - Not yet paying: FFS Medicaid ~6%
 - Uninsured ~ 4%

Effectiveness and Efficiency: Potential

- Observed reduction in ED visits:
 - ✓ Fewer among children in regular city elementary schools and childcare - **at least 22%**
 - ✓ Fewer among special needs children attending a child development center - **almost 50%**
- Pediatric primary care office visits appropriate for telemedicine = **85%**
- Pediatric emergency department visits appropriate for telemedicine = **40%**

Newer Primary Care Models

Pediatric Acute-Illness Care

- ◆ Neighborhood/after-hours access - avoid ED

Pediatric Chronic Problem Care

- ◆ Asthma management – avoid school absence, ED, hospital
- ◆ ADHD management – avoid grade retention, school dropout

Pediatric Dentistry

- ◆ Dental screening – avoid extensive dental work, tooth loss

Geriatric Acute-Illness Care

- ◆ Senior Living Communities - avoid ED, hospital
- ◆ Home-based monitoring – detection deterioration early, avoid ED, hospital

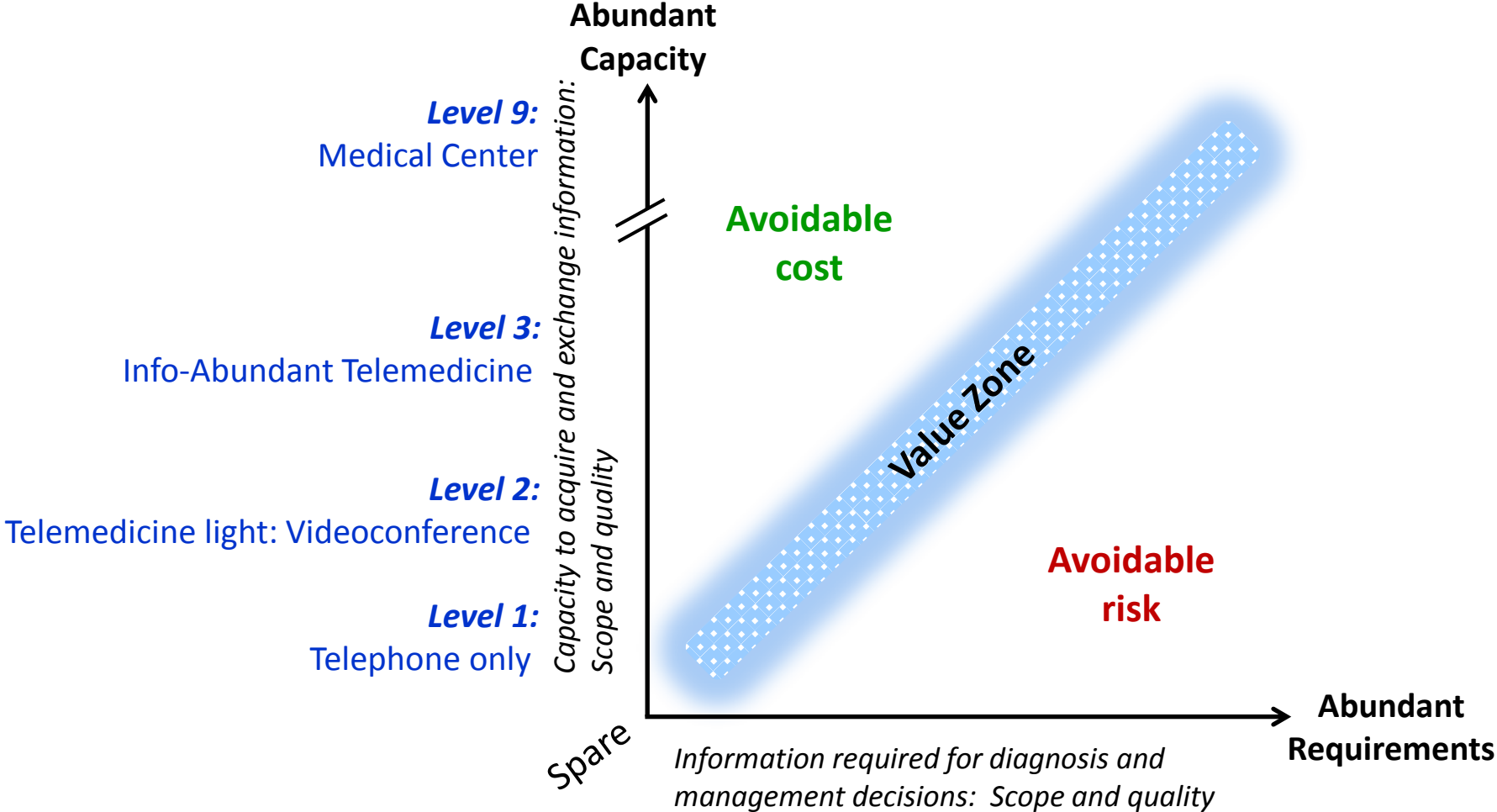
Primary Care Applications

- **Unlimited**
- **Health care is fundamentally a process of information acquisition, interpretation and exchange**
- **At some point in the care process for any problem, it is advantageous to patients to engage at a distance.**

Barriers

- **Deeply entrenched care process**
- **Human response to uncertainty**
- **Provider scarcity**
- **Fee-for-service financing**
- **Productivity measured as units of service**
- **Lack of relevant regulations**
- **Lack of established “best practices”**

Value and the Continuums of Information Requirements and Capacity



Facilitators

- ◆ Organize into Integrated Practice Units (IPUs)
- ◆ Measure and focus on outcomes that are most meaningful to patients
- ◆ Cost-based accounting
- ◆ Bundled payment for care cycles
- ◆ Enabling information technologies (the continuum)
- ◆ Care guidelines (“best practices”) and regulations enabling all the above

20,000 Foot Perspective

- Disruptive innovation – Clayton Christenson
- Creative destruction – Joseph Schumpeter

- *“All costs are variable in the long run”*