

AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

AHRQ

AHRQ National Web Conference on the Role of Telehealth to Increase Access to Care and Improve Healthcare Quality

Presented by:
Glen Xiong, MD
Elizabeth D. Ferucci, MD, MPH
Kenneth McConnochie, MD, MPH

Moderated by:
Commander Derrick L. Wyatt
Agency for Healthcare Research and Quality

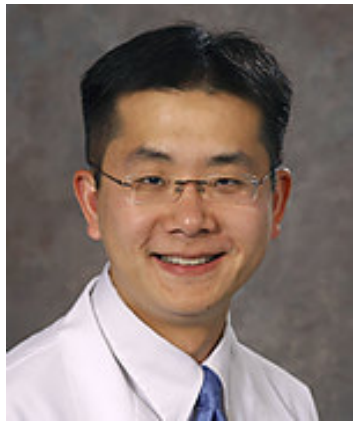
June 09, 2020

Agenda

- Welcome and Introductions
- Presentations
- Q&A Session With Presenters
- Instructions for Obtaining CME Credits

Note: After today's webinar, a copy of the slides will be emailed to all participants.

Presenter and Moderator Disclosures



Glen Xiong, MD
Presenter

Elizabeth D. Ferucci, MD, MPH
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Kenneth McConnochie, MD, MPH
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- Dr. Ferucci has no financial interests to disclose.
- Dr. McConnochie has no financial interests to disclose.

How to Submit a Question

- At any time during the presentation, type your question into the “Q&A” section of your WebEx Q&A panel.
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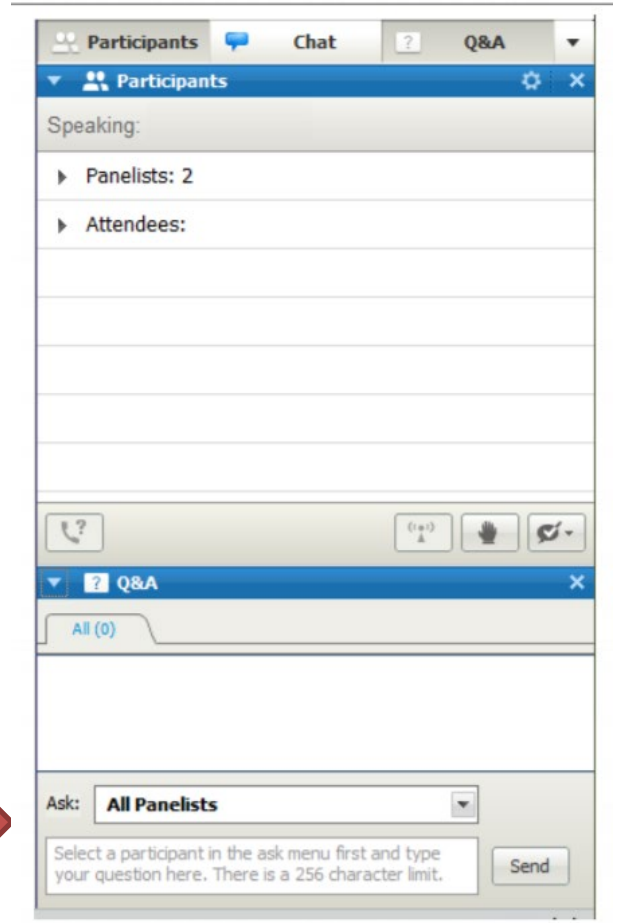

Learning Objectives

At the conclusion of this web conference, participants should be able to:

1. Discuss the effectiveness of telepsychiatry
2. Evaluate the impact of telemedicine on the management of a chronic systemic disease
3. Identify facilitators and barriers to urban telemedicine adoption
4. Discuss how telemedicine can impact care during public health emergencies



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Comparison of Asynchronous Telepsychiatry vs. Synchronous Telepsychiatry in Skilled Nursing Facilities (CATeleST): A Preview

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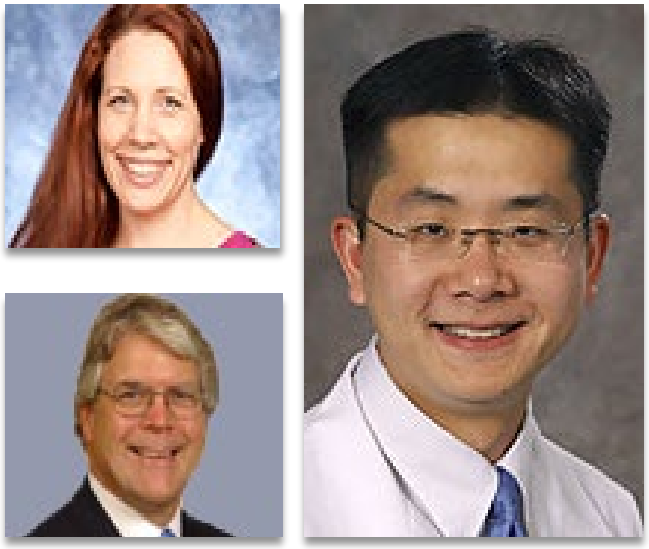
Study Team



- Glen Xiong (PI)
- Peter Yellowlees (co-PI)

Research Staff

- Michelle Parish
- Christi Candido
- Alvaro Gonzalez
- Mario Hernandez
- Nidhi Mundada

Funding by: Agency for Healthcare Research and Quality
R01HS025395

Background and Methods

Background (Telepsychiatry)

Lynch et al, World J Psychiatry (2015): 134 clinical studies

- 86 reported on satisfaction with telepsychiatry
  - Providers concerns about impaired therapeutic relationship
  - Patients tend to report higher satisfaction than providers
- 32 Randomized Controlled Trials (13 examined clinical outcomes)
  - Telepsychiatry appears to be better than usual care (except depression in primary care) and equivalent to face-to-face treatment
  - When non-inferiority designs were appropriately used, telepsychiatry performed as well as, if not better than, face-to-face delivery of mental health services
  - No differences in the patterns of findings for the delivery of pharmacotherapy or psychotherapy delivered via telepsychiatry
  - One study (Fortney et al, JAMA Psych 2015) showed participants were 18x more likely to initiate psychotherapy

Background

Rapid Conversion of an Outpatient Psychiatric Clinic to a 100% Virtual Telepsychiatry Clinic in Response to COVID-19

Peter Yellowlees, M.B.B.S., M.D., Keisuke Nakagawa, M.D., Murat Pakyurek, M.D., Angel Hanson, Jerry Elder, Helen C. Kales, M.D.

In anticipation of a surge of COVID-19 cases in Northern California, the outpatient psychiatric clinic at UC Davis Health, in which 98% of visits initially occurred in person, was converted to a telepsychiatry clinic, with all visits changed to virtual appointments within 3 business days. The clinic had 73 virtual appointments on its first day after full conversion. This column describes the process, challenges, and lessons learned from this rapid conversion. Patients were generally grateful, providers learned rapidly how to work from home, and the clinic remained financially viable with no immediate losses.

Psychiatric Services 2020; 0:1–4; doi: 10.1176/appi.ps.202000230

Background

- Psychiatric disorders occur in up to 65-90% of long-term care or skilled nursing facility (SNF) populations[1-2]
- Less than one-fifth of SNF residents with diagnosable psychiatric disorders receive treatment from a mental health clinician[2,3]
- Synchronous telepsychiatry (STP) has logistical barriers:
  - a. Need to coordinate appointment times on both ends
  - b. Need to reimburse for blocks of time

Telepsychiatric Methods of Providing Care

Synchronous Telepsychiatry (STP)

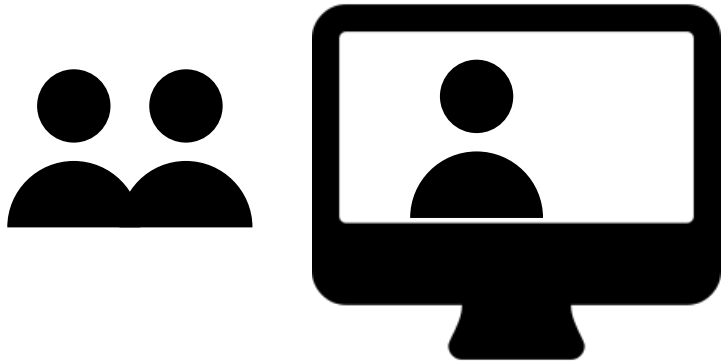
- Live, simultaneous, and interactive videoconferencing between patient and psychiatrist
- Well-known method of providing medical care – over 30 years of use
- Underutilized due to administrative and cost barriers

Asynchronous Telepsychiatry (ATP)

- Previously video-recorded psychiatric interviews performed with mental health clinician, later sent to psychiatrist for review
- Relatively new method of providing medical care, ***never used or studied in the skilled nursing facility setting***
- More cost-effective when compared to STP

Background: Telepsychiatry

Synchronous Telepsychiatry (STP)

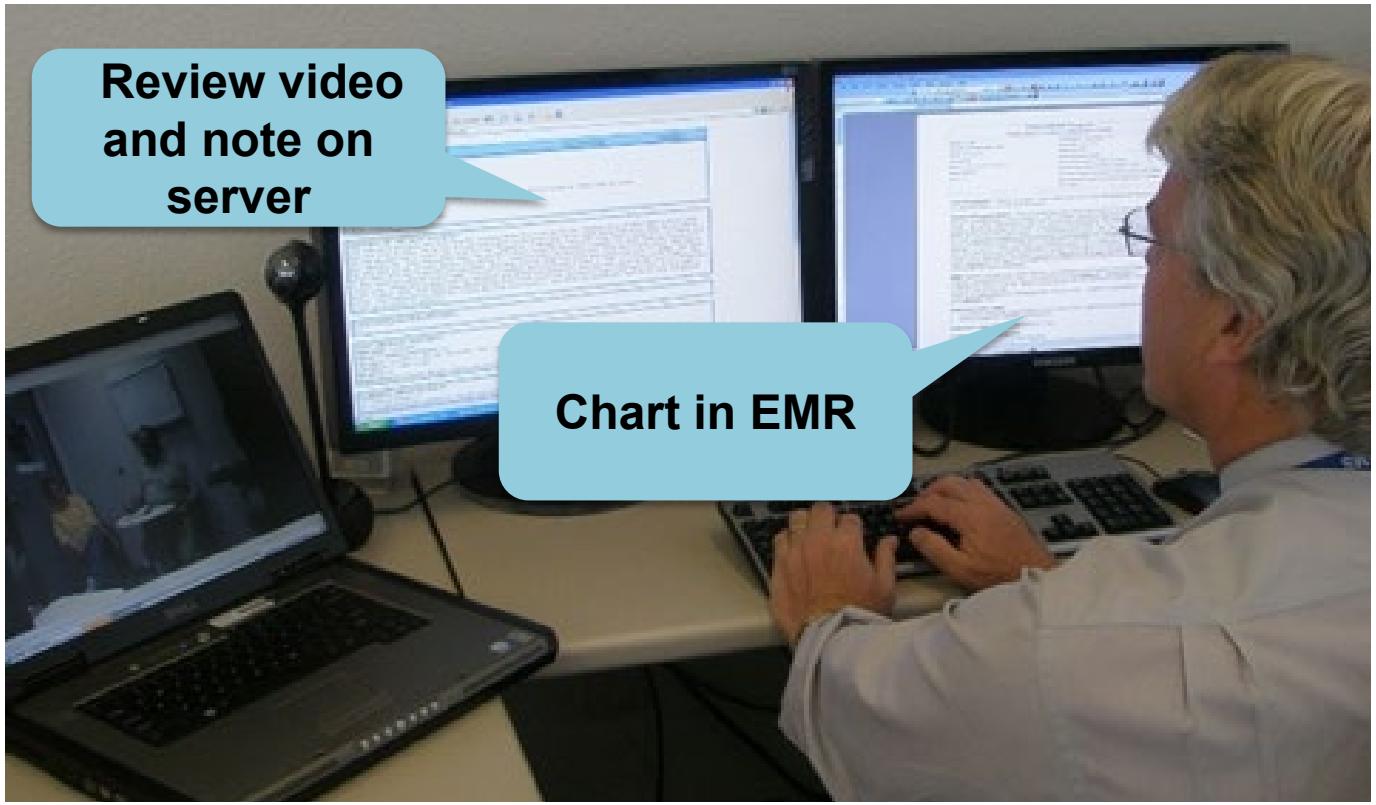


Asynchronous Telepsychiatry (ATP)

ATP Process: Step 1 of 3

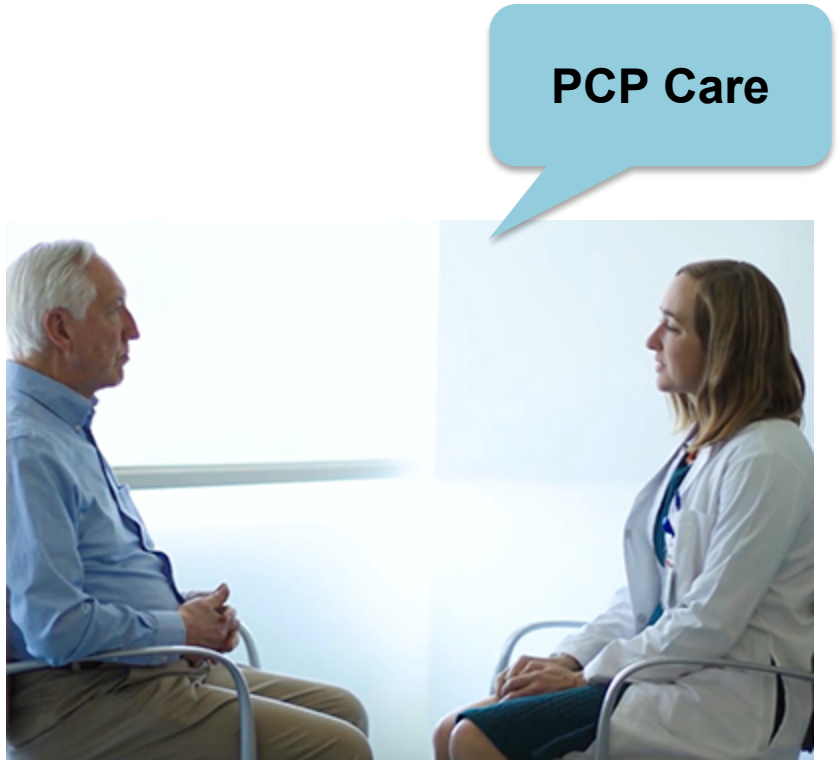
CREDIT: ATA 2018 "Asynchronous Telepsychiatry" Yellowlees et al.

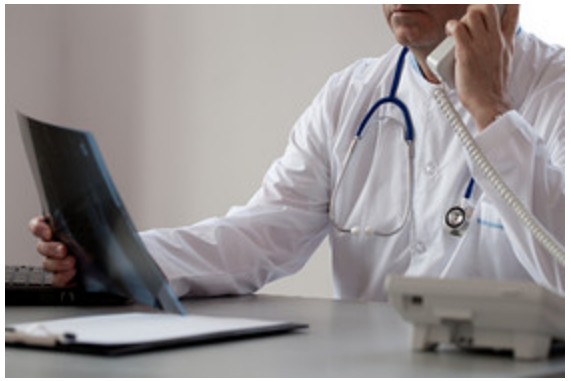
ATP Process: Step 2 of 3



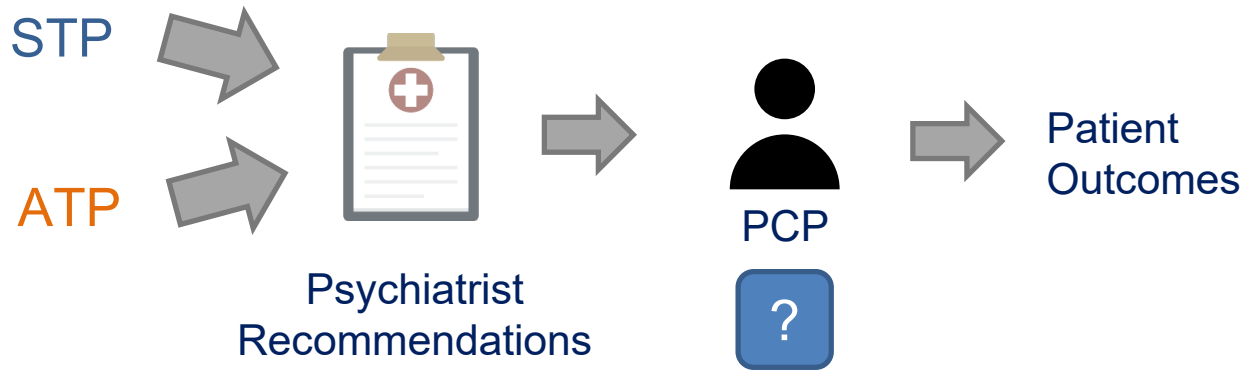
CREDIT: ATA 2018 "Asynchronous Telepsychiatry" Yellowlees et al.

ATP Process: Step 3 of 3





Conceptual Model and Aims



- ATP may result in **more recommendations** than STP
  - Psychiatrists may have more time while writing the consult note in ATP
- **Profiles** of these recommendations are **similar**
  - Psychiatrists feel comfortable making medication changes using ATP
- No **statistical difference in adherence**
  - Evidence that ATP is not worse than STP in Primary Care

Telepsychiatry in Nursing Facilities: A Pilot Study

OBJECTIVE:

To assess the acceptability and feasibility of two telepsychiatry models designed to improve access to psychiatric services for residents living in SNFs.

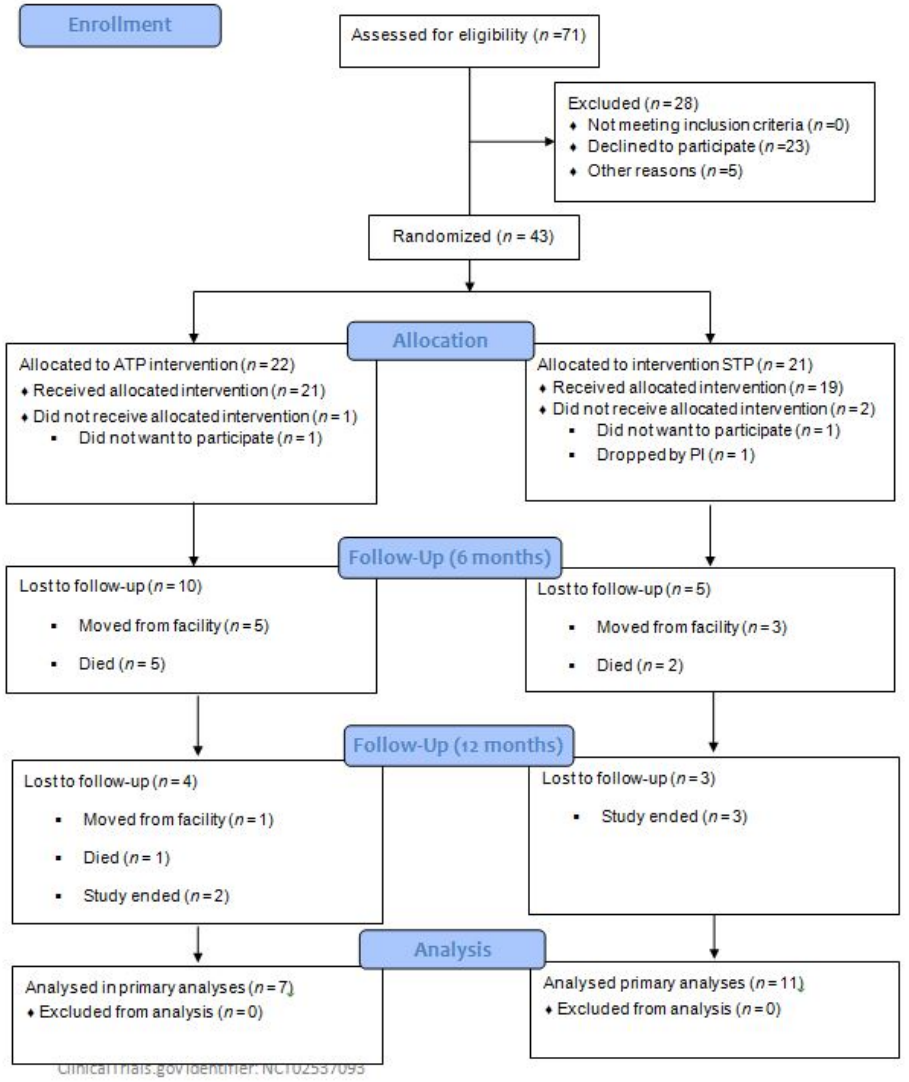
Telepsychiatry in Nursing Facilities: A Pilot Study

Participants:

- Forty-three participants (22 ATP, 21 STP) were randomized
- 40 (21 ATP, 19 STP) completed baseline visits
- Mean age was 72.9 ± 13.3 (ATP) and 75.5 ± 11.1 years (STP)
- Primary diagnoses were
  - Dementia (52% vs 53%)
  - Depression (29% vs 21%)
  - Bipolar disorders (10% vs 26%), and
  - Schizophrenia/primary psychotic disorder (10% vs 0% in ATP vs STP, respectively)

Telepsychiatry in Nursing Facilities: A Pilot Study

- 43 participants (22 ATP, 21 STP) were randomized
- 40 (21 ATP, 19 STP) completed baseline visits
- 25 (62.5%) completed 6-month follow-up visit
- 18 (45%) completed the final visit after 12 months



ClinicalTrials.gov Identifier: NCT02537093

Results

Telepsychiatry in Nursing Facilities: A Pilot Study • Outcomes

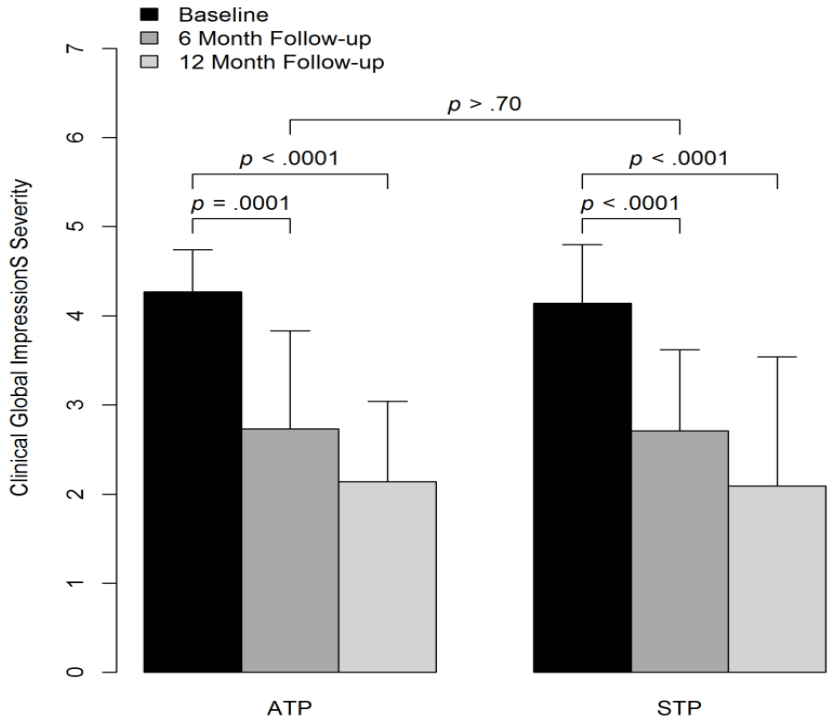


Figure 1. Primary outcome measure for asynchronous telepsychiatry (ATP) and synchronous telepsychiatry (STP) arms at baseline and follow-up

Both groups improved significantly from baseline to 6-month follow-up regardless of group assignment (*p*-values all ≤ 0.01).

There were no significant ATP vs. STP differences in either 6- or 12-month CGI (*p*-values all > 0.70).

Telepsychiatry in Nursing Facilities: A Pilot Study • Outcomes

At the baseline visit:

26 (65%) were taking antipsychotics

26 (65%) were taking antidepressants, and

18 (45%) were taking mood stabilizers

There were no significant differences between the two groups

After the baseline visit:

8 (57%) in the ATP group were recommended antipsychotics reductions.

9 (75%) in the STP group were recommended antipsychotics reductions.

Telepsychiatry in Nursing Facilities: A Pilot Study • Outcomes

Eighteen patients (10 ATP, 8 STP) provided satisfaction data

- 60% in the ATP and 63% in STP group reported being completely satisfied
- The remaining participants reported being somewhat satisfied with the experience in the program
- Fifteen patients (8 ATP, 7 STP), felt comfortable with the care by video
- Twelve patients (5 ATP, 7 STP) were willing to recommend the video visit to a friend or family member

Pilot Study • Conclusion

- We found significant improvement in CGI from baseline to 6-month follow-up, regardless of group assignment
- With our findings and successful completion of the pilot study, we demonstrated the acceptability, feasibility, and impact of both forms of telepsychiatry in the SNF setting
- These results provided preliminary data to support a large, multi-site non-inferiority randomized controlled trial, which is currently ongoing (2017-2022) funded by the Agency for Healthcare Research and Quality (NCT03264560)

CATeleST Design

- Randomized controlled trial to ATP or STP at a 1:1 ratio.
- Target enrollment: n=250; 9 SNF sites
- Follow-up STP and ATP visits occurred at 1, 2, 3, 6 and 12 months.
- Primary outcome was the psychiatrist-completed Clinical Global Impressions (CGI) severity (6 months)
- Secondary outcomes: PHQ-9; BIMS; ED/hospitalization rates

Baseline Characteristics of 188 Participants who Completed Baseline Visits

	ATP (N = 92)		STP (N = 96)		P-value
Characteristic	N	Mean ± SD	N	Mean ± SD	
Age (years)	92	72.7 ± 11.9	96	71.7 ± 12.4	.66
CGI Severity	92	3.8 ± 1.3	96	4.1 ± 1.2	.11
BIMS Score[a]	70	10.6 ± 4.4	77	9.6 ± 5.3	.54
PHQ-9[b]	84	1.1 ± 2.8	87	1.2 ± 2.8	.86
Female	66 (71.7%)		54 (56.3%)		.03
Race[c]					
Asian	4 (4.3%)		2 (2.2%)		.34
White	72 (78.3%)		81 (87.1%)		
African-American	9 (9.8%)		8 (8.6%)		
Other	5 (5.4%)		2 (2.2%)		
Declined to State	2 (2.2%)		0 (0.0%)		
Hispanic Ethnicity[d]	7 (7.8%)		7 (7.5%)		.95
Taking psychiatric medication	83 (90.2%)		83 (86.5%)		.42
Taking antipsychotic medication	39 (42.4%)		33 (34.4%)		.26
Taking antidepressant medication	55 (59.8%)		55 (57.3%)		.73
Taking mood stabilizer medication	30 (32.6%)		33 (34.4%)		.80
Taking benzo medication	22 (23.9%)		22 (22.9%)		.87
Taking other medication	28 (30.4%)		30 (31.3%)		.90
Primary Diagnosis[e]					.69
(N=160)					
Depression	22 (23.9%)		22 (23.2%)		
Bipolar Disorder	9 (9.8%)		12 (12.6%)		
Schizophrenia Related Psychotic	6 (6.5%)		6 (6.3%)		
Dementia/Neurological/Neurocognitive Disorder	33 (35.9%)		34 (35.8%)		
Parkinson's Related Spectrum	4 (4.3%)		4 (4.2%)		

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- Alvaro Gonzales
- Mario Hernandez
- Nidhi Mundada
- Monica Lieng (conceptual slides)
- Debra Kahn (psychiatrist)
- David Liu (psychiatrist)
- Former RAs: Haley Godwin, Murtaza Khan, Olivia Vukcevich

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Impact of Telemedicine on a Chronic Disease: Rheumatoid Arthritis

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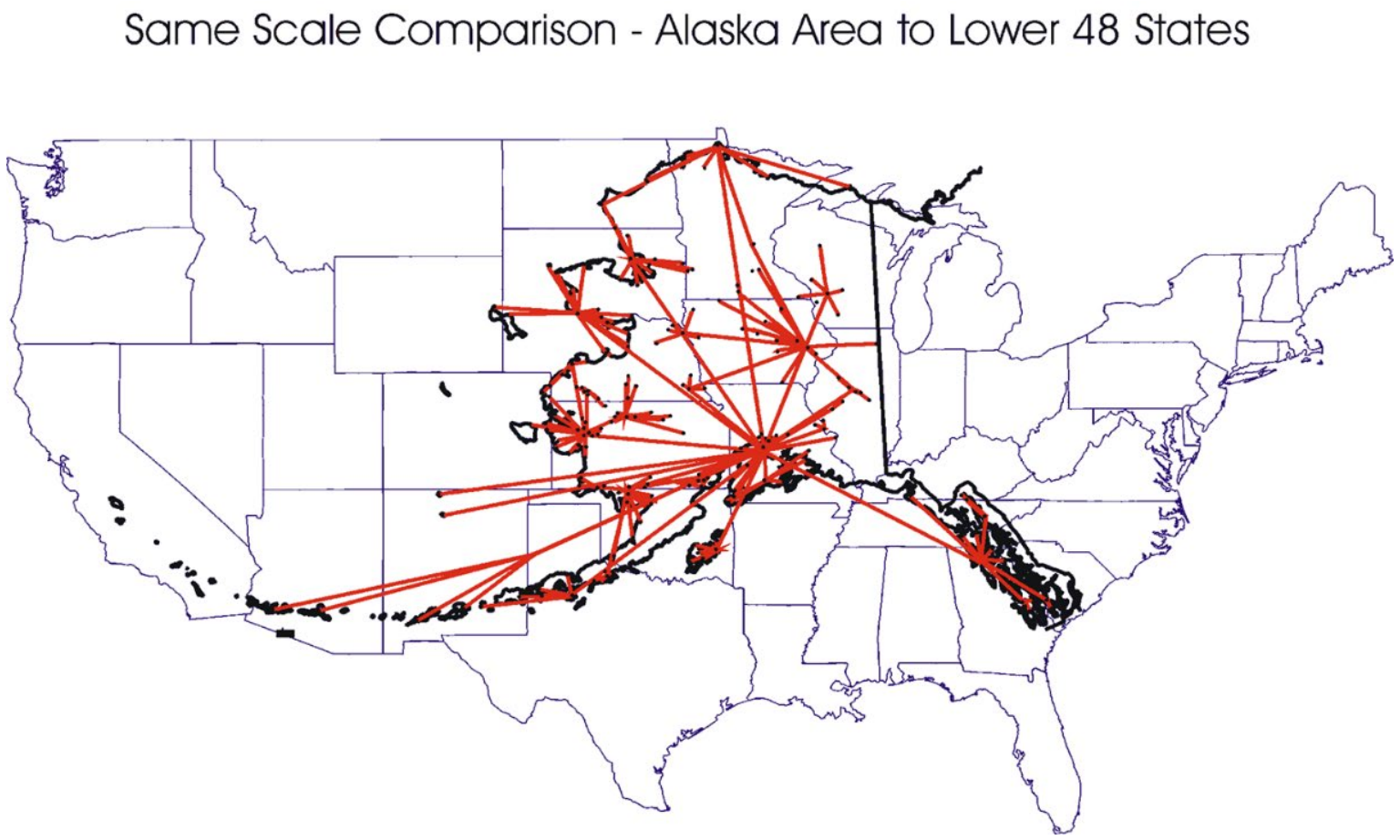
Alaska Native Tribal Health Consortium

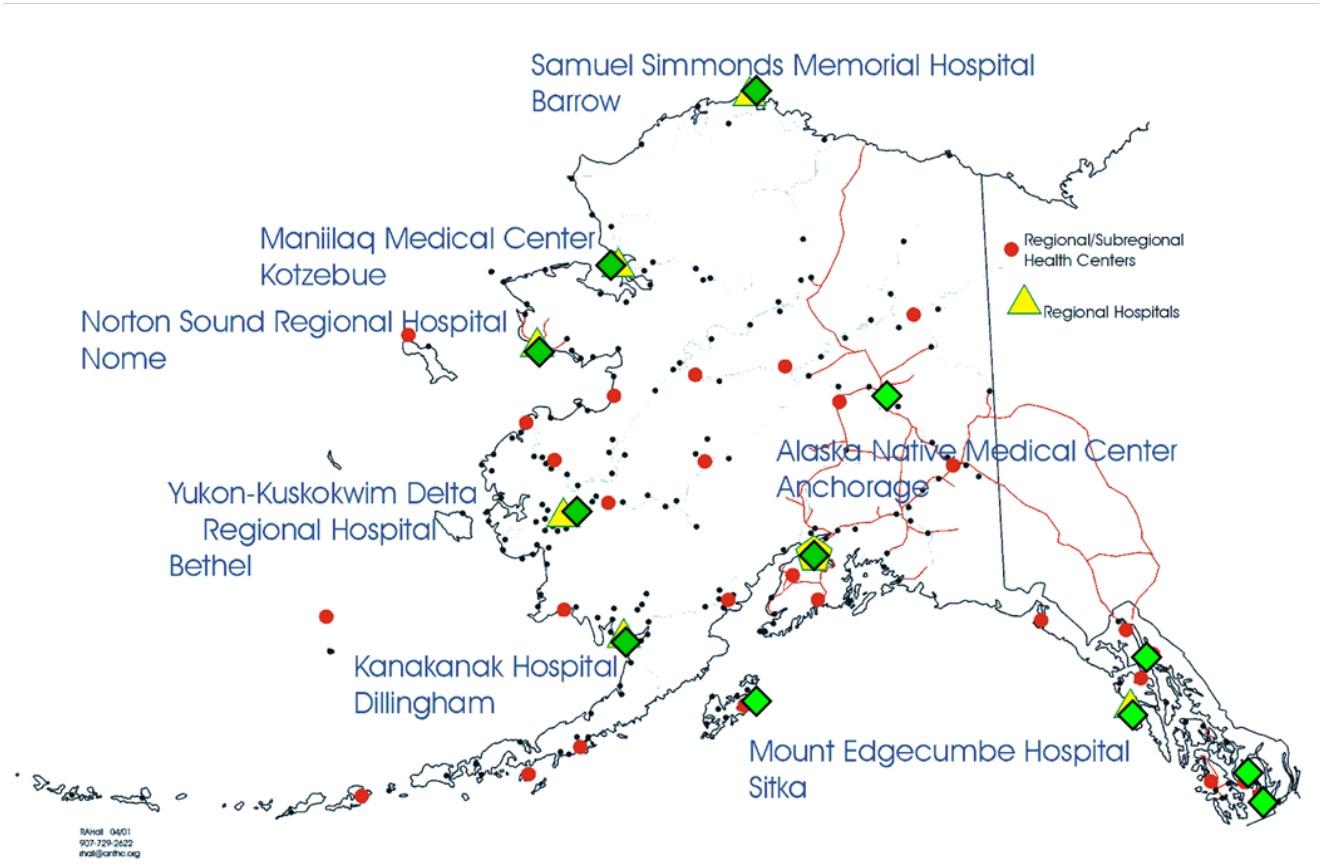
Rheumatoid Arthritis

- Chronic autoimmune disease
- Risk of disability and mortality
- Treat-to-target strategy associated with improved outcomes
- Disease activity monitoring is complex
- Requires access to rheumatologists
- More common in AI/AN populations

Alaska Tribal Health System



Rheumatology Care in the ATHS



◆ Field clinic sites

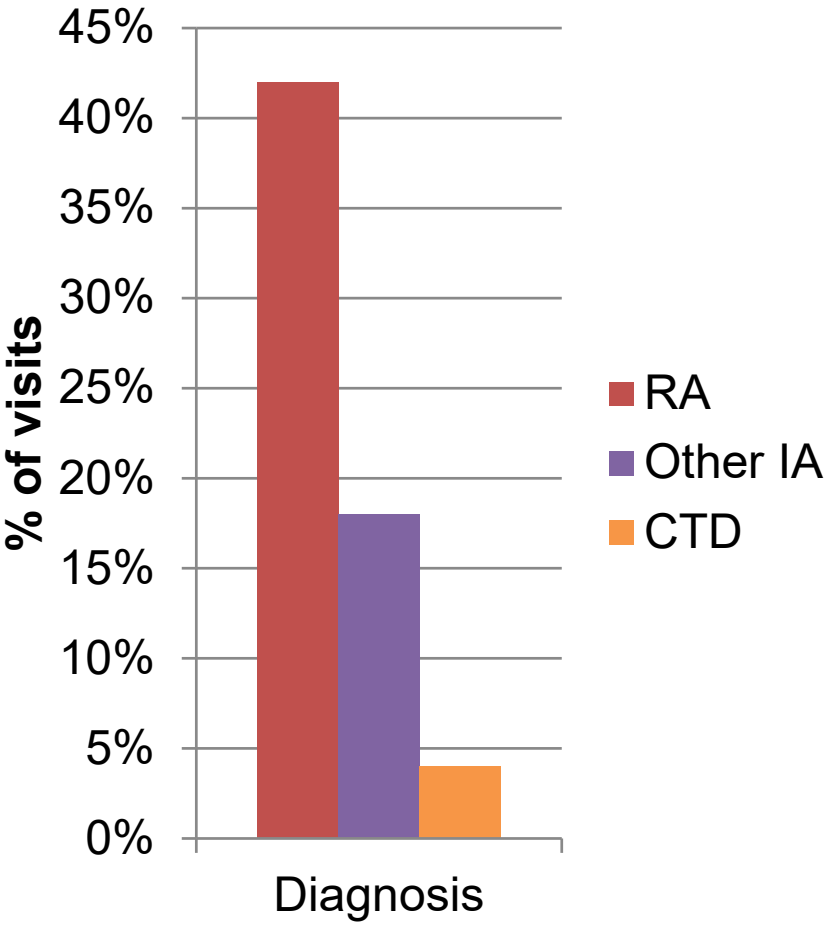
Telehealth in the ATHS

Store and Forward Consults

Live Video Visits

TeleRheumatology Systematic Review

- 20 studies identified through 2015
  - 49% prior to 2010
- 1 randomized controlled trial
- Follow-up phase of care most common
  - 60% of studies
- Synchronous more common than asynchronous
  - Often with trained presenter



McDougall JA, Ferucci ED, Glover J, Fraenkel L. Telerheumatology: A Systematic Review. Arthritis Care Res 2017;69:1546.

Tele-Rheumatology in the ATHS*

- **Phase of care:** follow-up
- **Diseases:** any, but rheumatoid arthritis is most common
- **Method of communication:** synchronous video visits
- **Presenters:** not trained in rheumatology or joint exam
- **Other unique features:**
  - Patient is in a remote clinic, not at home or on mobile device
  - Multiple remote clinic sites
  - Integrate video visits in regular clinic day schedule
  - Alternate with in-person visits at field clinic or hospital clinic
  - Emphasis on continuity (usual rheumatologist, usual site of primary care)

*Pre-COVID-19

Specific Aims – AHRQ R21

- The overall goal of this study was to evaluate the impact of telemedicine rheumatology follow-up on outcomes and quality of care in rheumatoid arthritis (RA).
  - Offered as part of usual care

- Specific Aims:
  - Aim 1: Impact on RA disease activity
  - Aim 2: Impact on access to care and quality of care for RA

Methods

- Individuals with an established diagnosis of RA seeing a rheumatologist for follow-up in the ATHS either in-person or by telemedicine were invited to participate
- Baseline:
  - Patient-reported RA disease activity (RAPID3) and telemedicine perception survey
  - Medical record review for disease characteristics and quality measures
- Follow-up:
  - Telephone follow-up surveys at 6 and 12 months
  - Medical record review for quality measures at 12 months
- Recruitment completed March 2018
- Followed until March 2019

Factors Associated with Telemedicine Use in RA

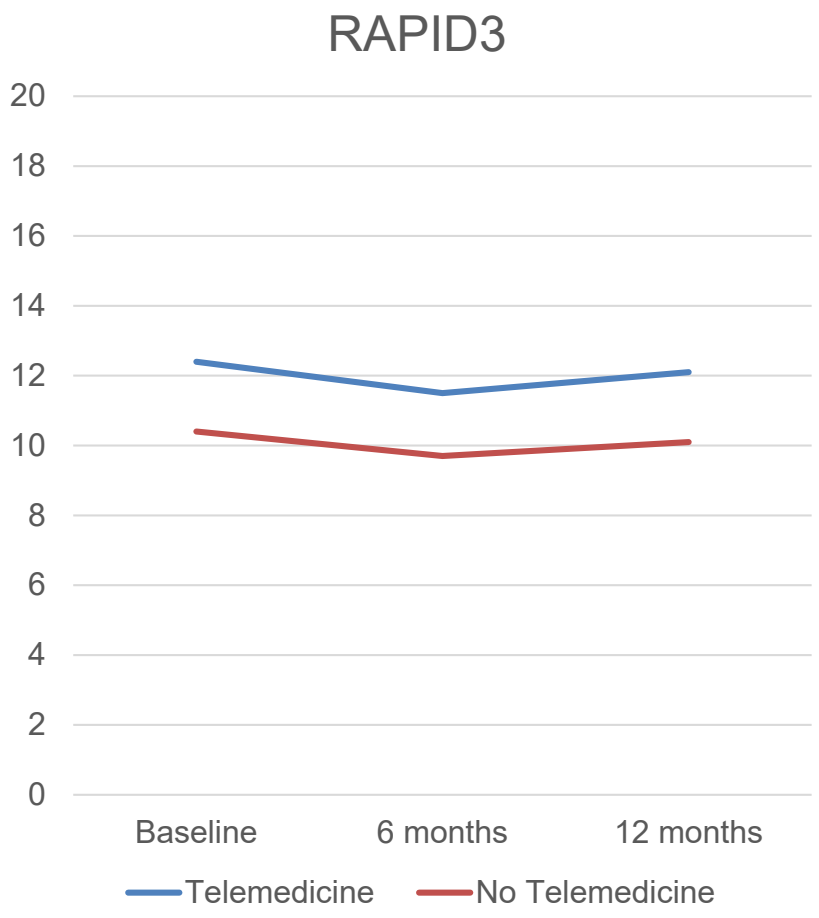
Characteristic	Telemedicine (n=56)	In-person only (n=66)	p-value
Age, year, mean (SD)	52.2 (12.2)	52.2 (13.9)	0.971
Female, n (%)	45 (80%)	57 (86%)	0.372
RA disease duration, years, mean (SD)	10.0 (8.8)	10.2 (10.9)	0.421
RAPID3 score (0-30 scale), mean (SD)	**12.63 (5.4)**	**10.43 (5.5)**	**0.037***
Number of rheumatology visits in past year, mean (SD)	**2.95 (1.35)**	**2.39 (1.32)**	**0.011***
Rheumatologist telemedicine rate, mean (SD)	**0.196 (0.064)**	**0.115 (0.094)**	**<0.001***
Telemedicine survey score (possible range -2 to +2), mean (SD)	**0.547 (0.625)**	**0.238 (0.597)**	**0.001***
Ever seen by telemedicine by another provider, n (%)	9 (16%)	4 (6%)	0.074

Not shown and not associated: autoantibodies, erosions, smoking, comorbidity index, DMARD prescribed, distance

Ferucci ED, et al. Arthritis Care Res 2019 doi:10/1002/acr.24049

Outcomes of RA with Telemedicine

- Disease activity (RAPID3)
  - ► No significant change over time
- Multivariate model
  - ► Associated with telemedicine group and age
- No difference in proportion in low disease activity or remission or in functional status over time



Ferucci ED, et al. Manuscript under review

Quality of Care for RA with Telemedicine

Quality Measure	Telemedicine (n=63 patients with 114 visits)	In-Person Only (n=59 patients with 103 visits)	p-value
Number of rheumatologist visits in year after study enrollment, mean (SD)	1.8 (1.2)	1.7 (1.4)	0.67
At least one visit to a rheumatologist in the study year, n (%)	56 (89)	45 (76)	0.06
Proportion of visits in which disease activity is documented (% of visits)	28 (25)	41 (40)	0.02*
Proportion of visits with moderate or high disease activity documented in which a change in medications is prescribed (% of visits)	19/23 (83)	17/23 (74)	0.47
Proportion of visits in which functional status assessment is documented (% of visits)	28 (25)	30 (29)	0.45
DMARD prescribed in past year (% of patients)	61 (97)	58 (98)	0.6

*No longer associated on multivariate analysis

Ferucci ED, et al. Manuscript under review

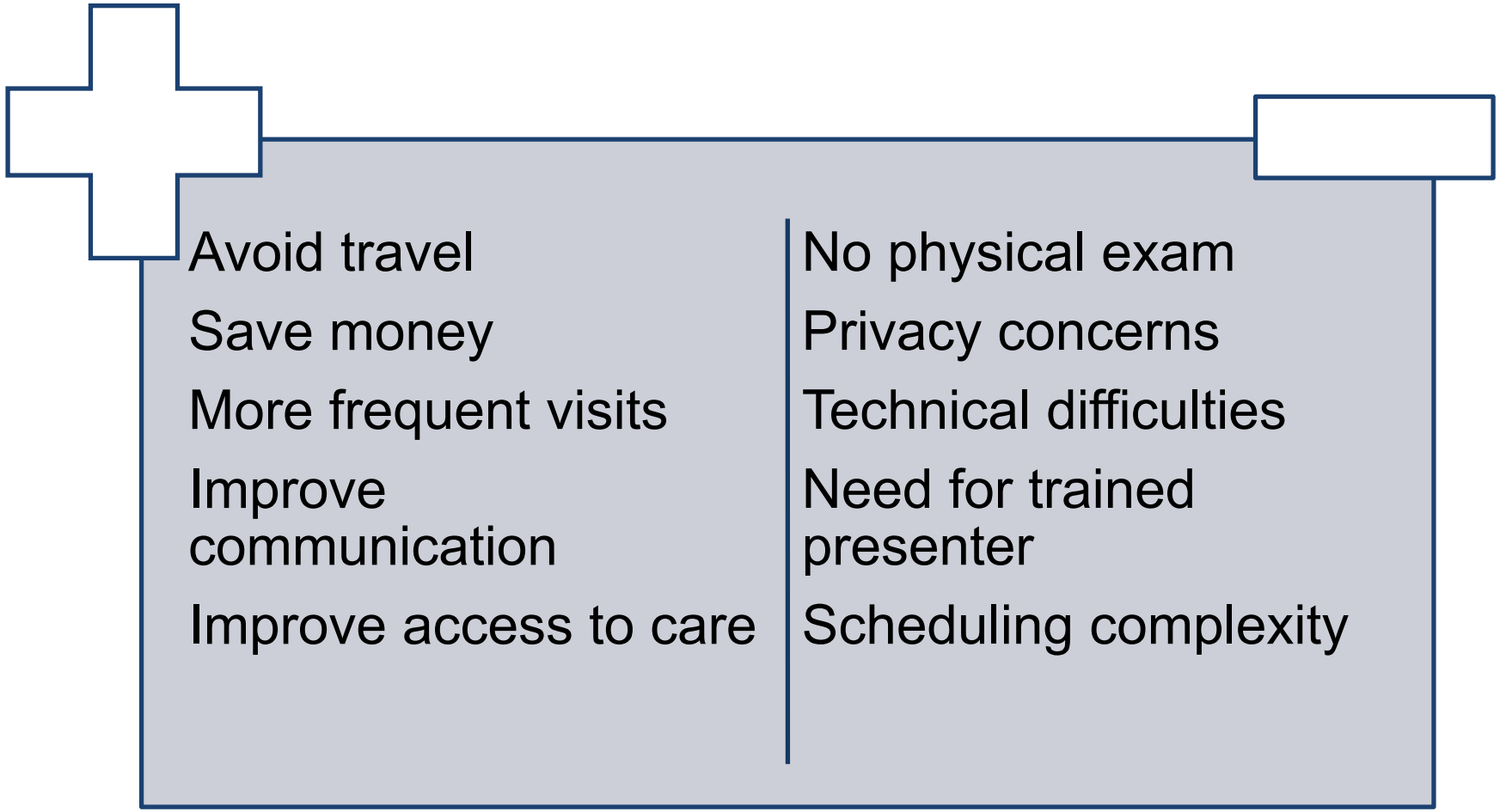
Limitations of the Study

- Observational study of existing practice
  - Unable to randomize
  - Challenging to design a study in the setting of possible changes in practice over time
- Short duration
- Small number of patients

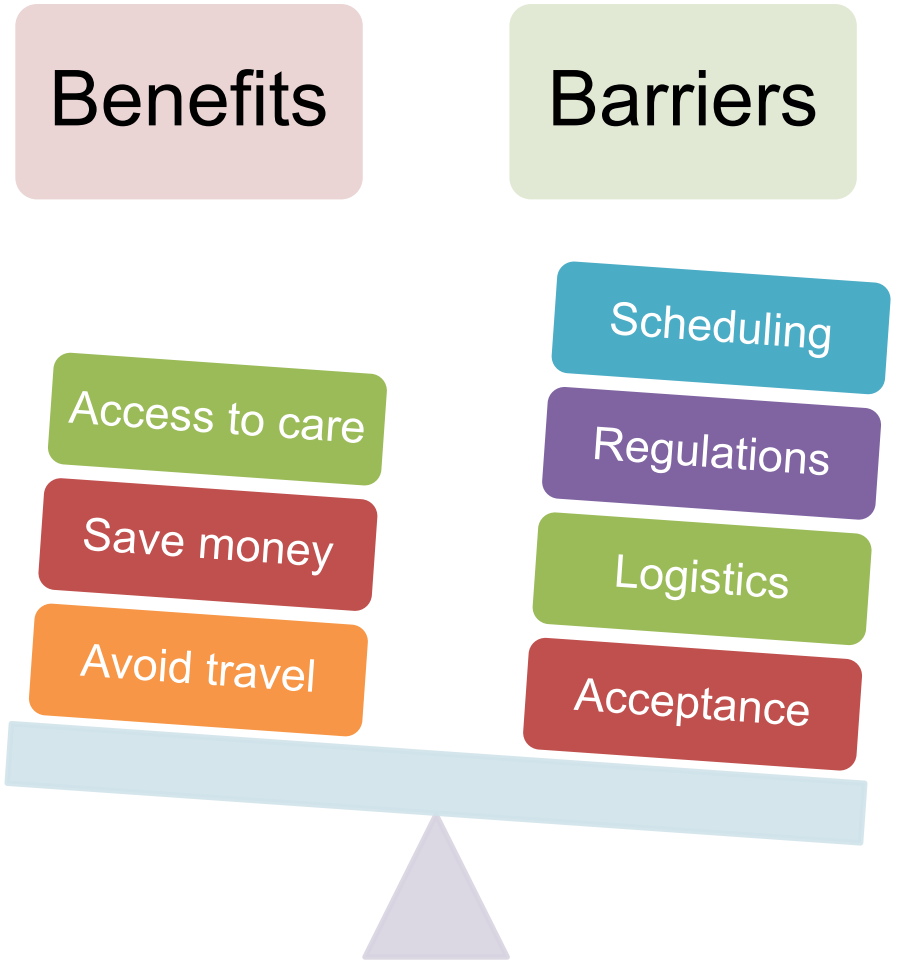
Study Conclusions

- Telemedicine can be useful in management of RA
- More likely to be used when:
  - More active disease
  - Patients have favorable opinions of telemedicine
  - Physician uses telemedicine more often
- No clear difference in disease activity or quality of care vs. in-person only care in the short term
- Ability to see patients more often may improve long term disease outcomes

Lessons Learned: Patient and Provider Perspectives

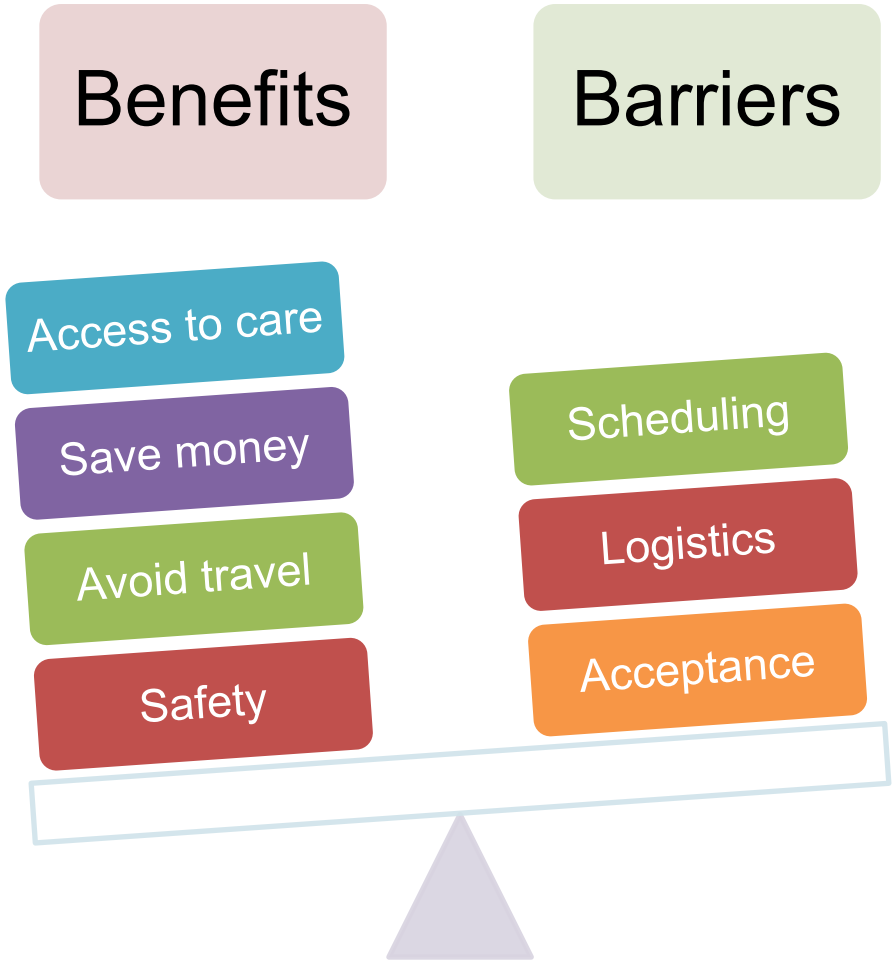


The Future of Telehealth in Clinical Practice



Pre-COVID-19

The Future of Telehealth in Clinical Practice



Post-COVID-19

Future Research: Impact of Telemedicine on Chronic Disease

- AHRQ-funded R01 study focuses on broader set of chronic diseases
- Specific Aims:
  1. Determine the **predictors** of receiving care by video telemedicine for chronic disease
  2. Investigate the relationship between video telemedicine and **clinical outcomes** of chronic diseases
  3. Perform a **cost comparison** of video telemedicine and in-person visits for chronic disease specialty care

Future Research: Impact of Telemedicine on Chronic Disease

- Mixed-methods study
- Changes in telehealth use patterns will affect predictors, outcomes, and cost analysis
- Dramatic increase during pandemic likely to persist over time
- Future plans include re-assessment of predictors and outcomes over time

Acknowledgements

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The content is solely the responsibility of the authors and does not necessarily represent the official views of the Agency for Healthcare Research and Quality.

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ALASKA NATIVE
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Telemedicine to Reduce Disparities in in Primary Care

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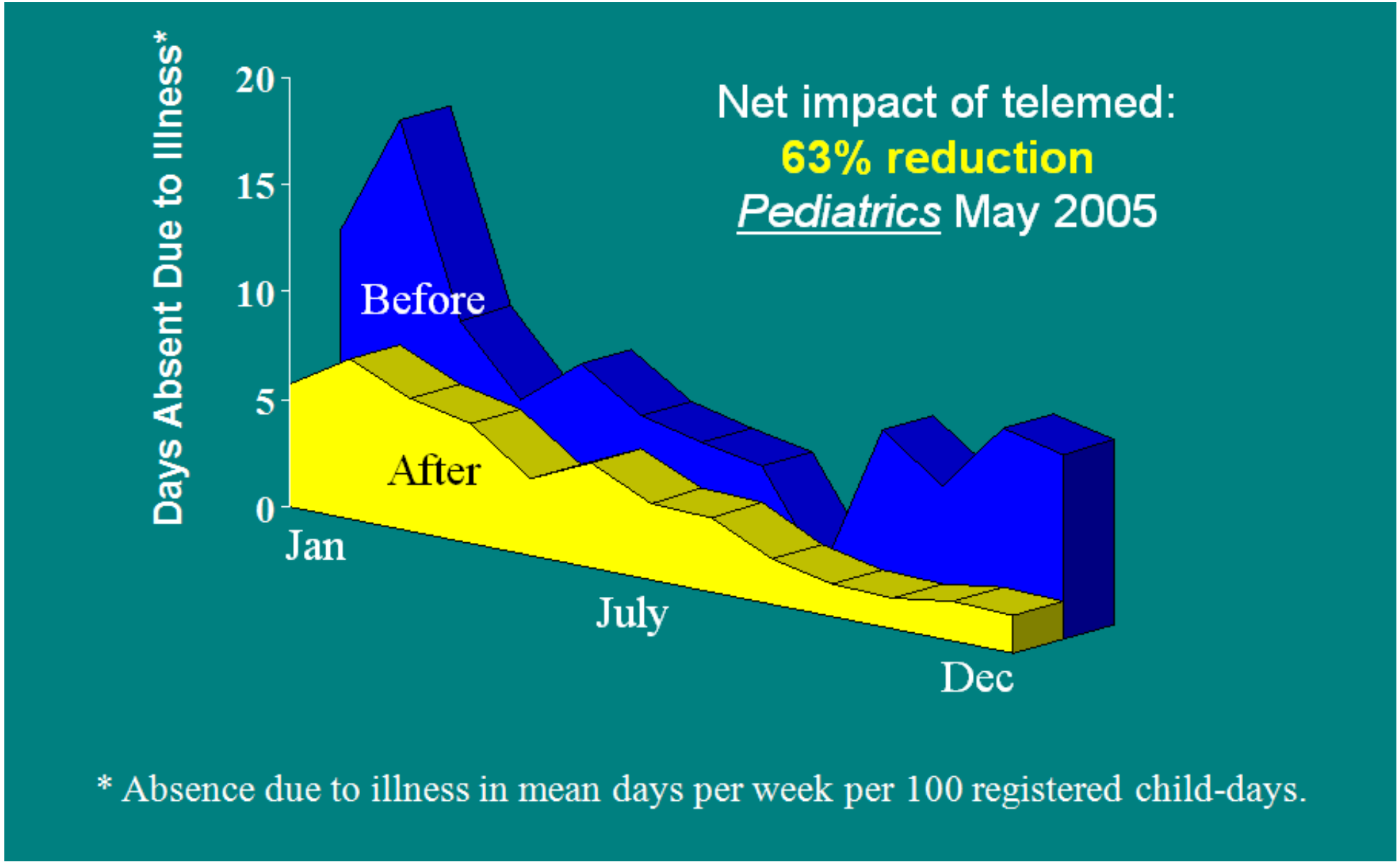
University of Rochester Medical Center

Agenda

- Examine the capacity and limitations of different telemedicine models.
- Describe our model (**Information-Rich Connected Care**).
- Review evidence supporting effectiveness and efficiency of the **Information-Rich Connected Care** model as used in primary care.

Effectiveness: Absence from Child Care Due to Illness



Effectiveness and Efficiency: Summary

- Visits completed **> 14,000**
- In child care, schools, center for special needs children, neighborhood/after-hours sites **> 70 child 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:

  90% City children covered (Medicaid managed care, Commercial)

  6% Not yet paying: FFS Medicaid

  4% Uninsured

  100%
- Observed reduction in Emergency Department visits:
  - Among children in regular city elementary schools and childcare: **at least 22% fewer**
  - At a child development center serving special needs children: **50% fewer**

Potential

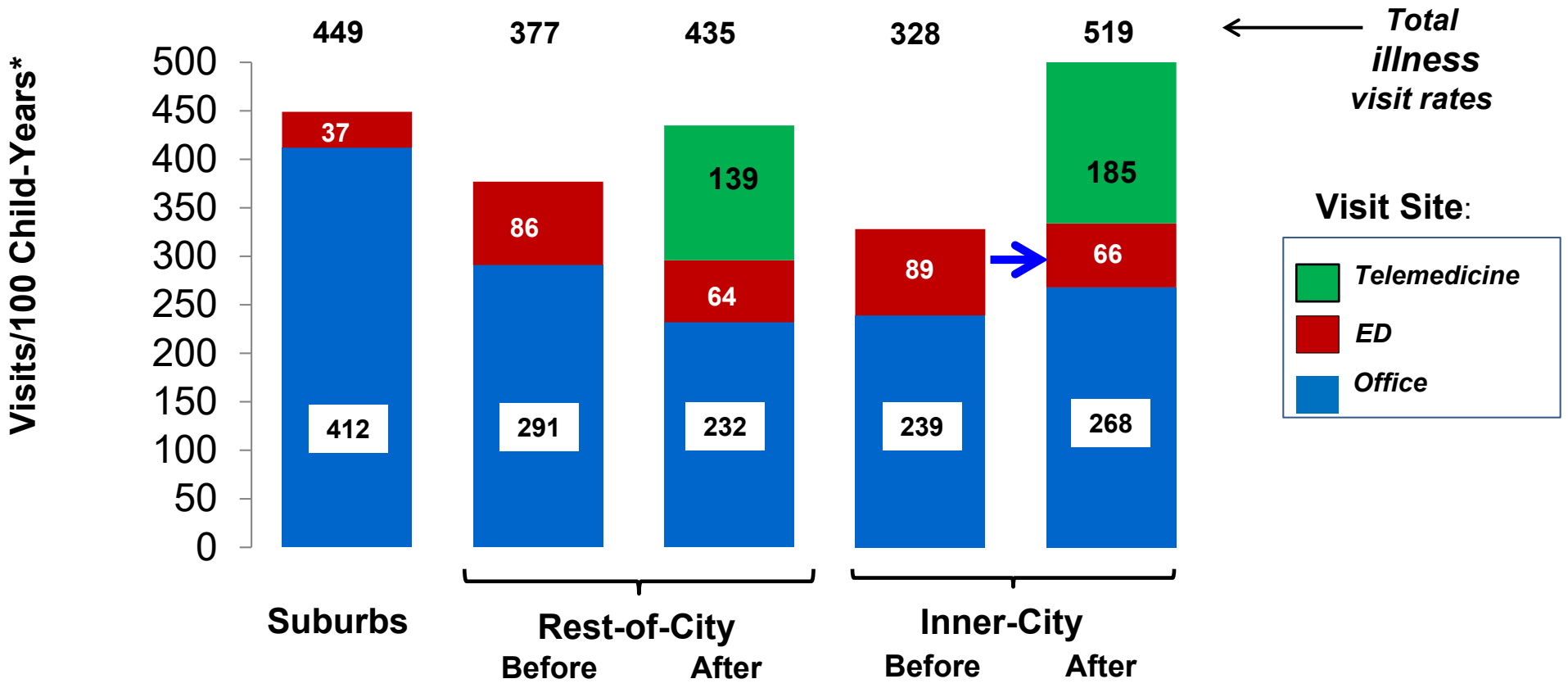
- Pediatric primary care acute care office visits appropriate for telemedicine = 85%
- Pediatric emergency department visits appropriate for telemedicine = 40%

But Is It Safe?

- **Acute Illness Observation Scale (AIOS)**
  - Quality of cry
  - Reaction to parent stimulation
  - State variation
  - Color
  - Hydration
  - Response to social overtures
- **Respiratory Observation Checklist**
  - Tachypnea
  - Retractions
  - Impression of respiratory distress
- **In-person vs. Video (independent evaluations)**
- **Excellent inter-observer agreement**

Illness Utilization Before and After Telemed Access: Change in Visit Rates* for Suburban, Rest-of-City and Inner-City Children

***Primary Comparisons**:* Suburban vs. Inner City groups before and after telemedicine



* Rates as visits per 100 child-months.

Telehealth

May 11, 2016 | 11:37 AM

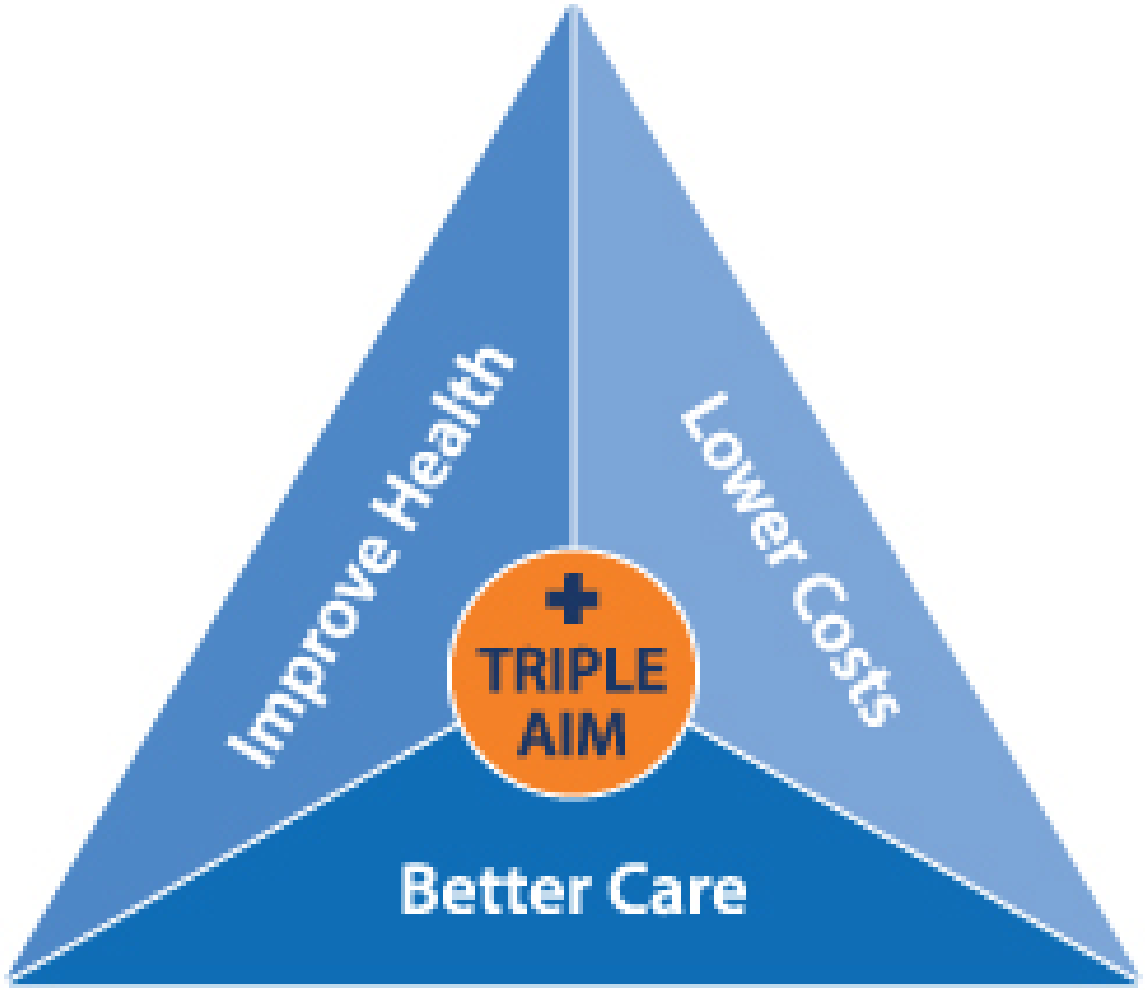
Telemedicine – A Growing Enabler of the Triple Aim and Shift to Value-Based Care

Telemedicine, a key initiative to the Triple Aim and shift to value-based reimbursement models, is rightfully gaining traction in the market with key stakeholder, and has the power to transform the patient-provider paradigm.

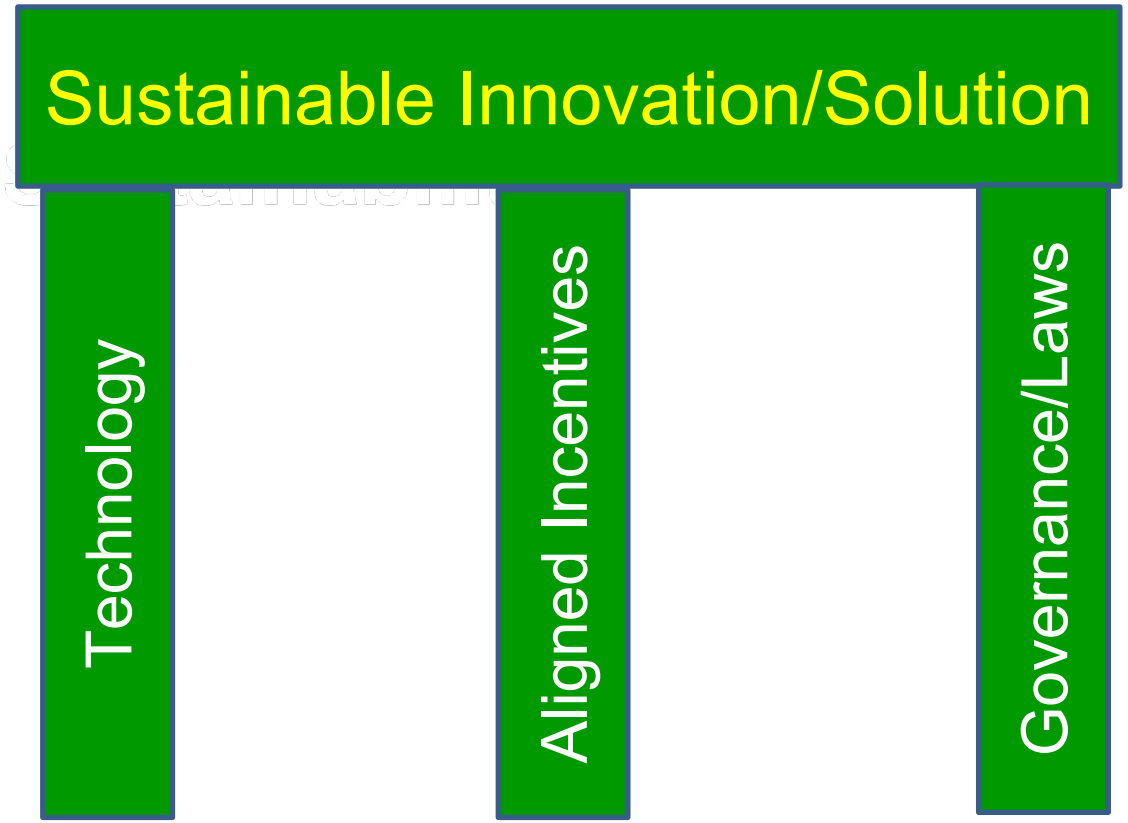
1. True or False?

2. What's value, quality?

Objectives: *Triple Aim*



Three Pillars of the Sustainability



Care via Telemed vs. In-Person

Equivalent to In-Person

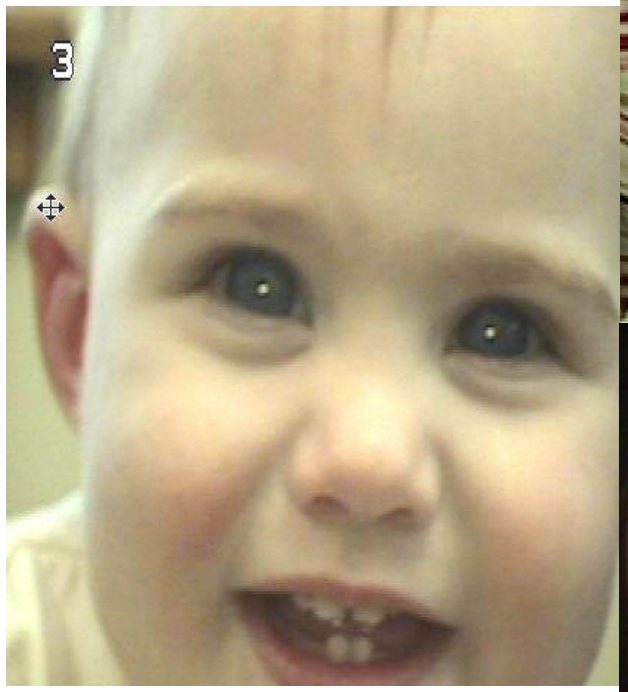
- Diagnose as accurately
- Manage as effectively

Better than In-Person

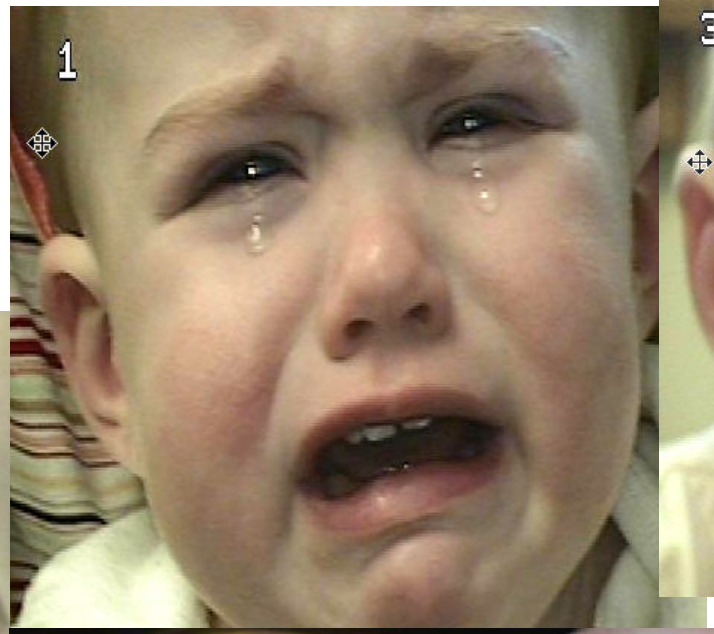
- More convenient
- Less costly, especially versus Emergency Department

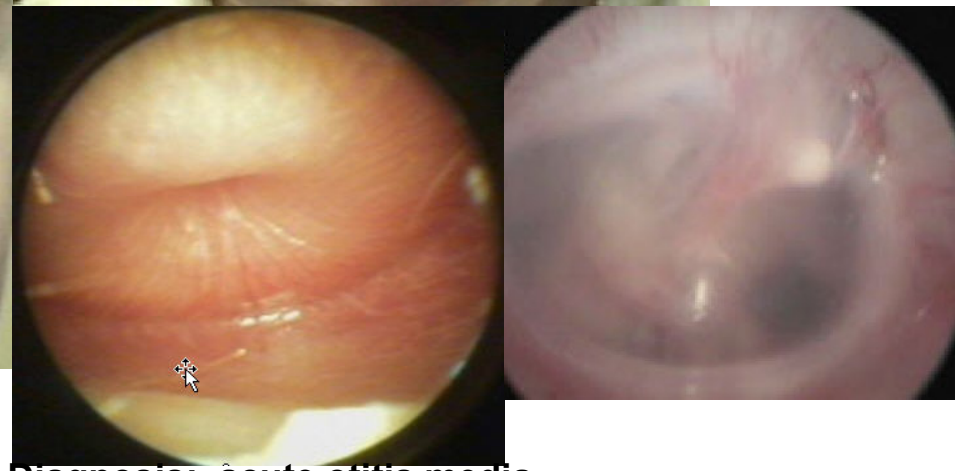
Health-e-Access Telemedicine Model

Age 10 mo., dropped off at childcare, 7:30 this morning.

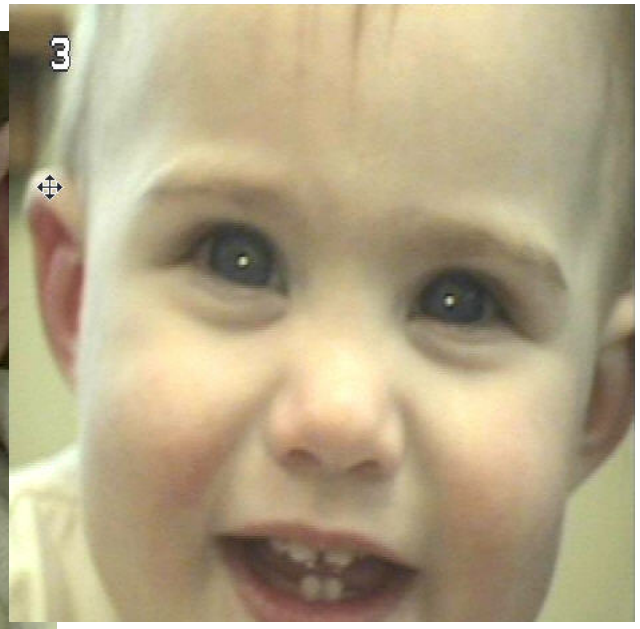


Waking from nap, temp 104





Tomorrow



Diagnosis: acute otitis media

Health-e-Access Telemedicine Model

Child site

Video conference window - view at child site

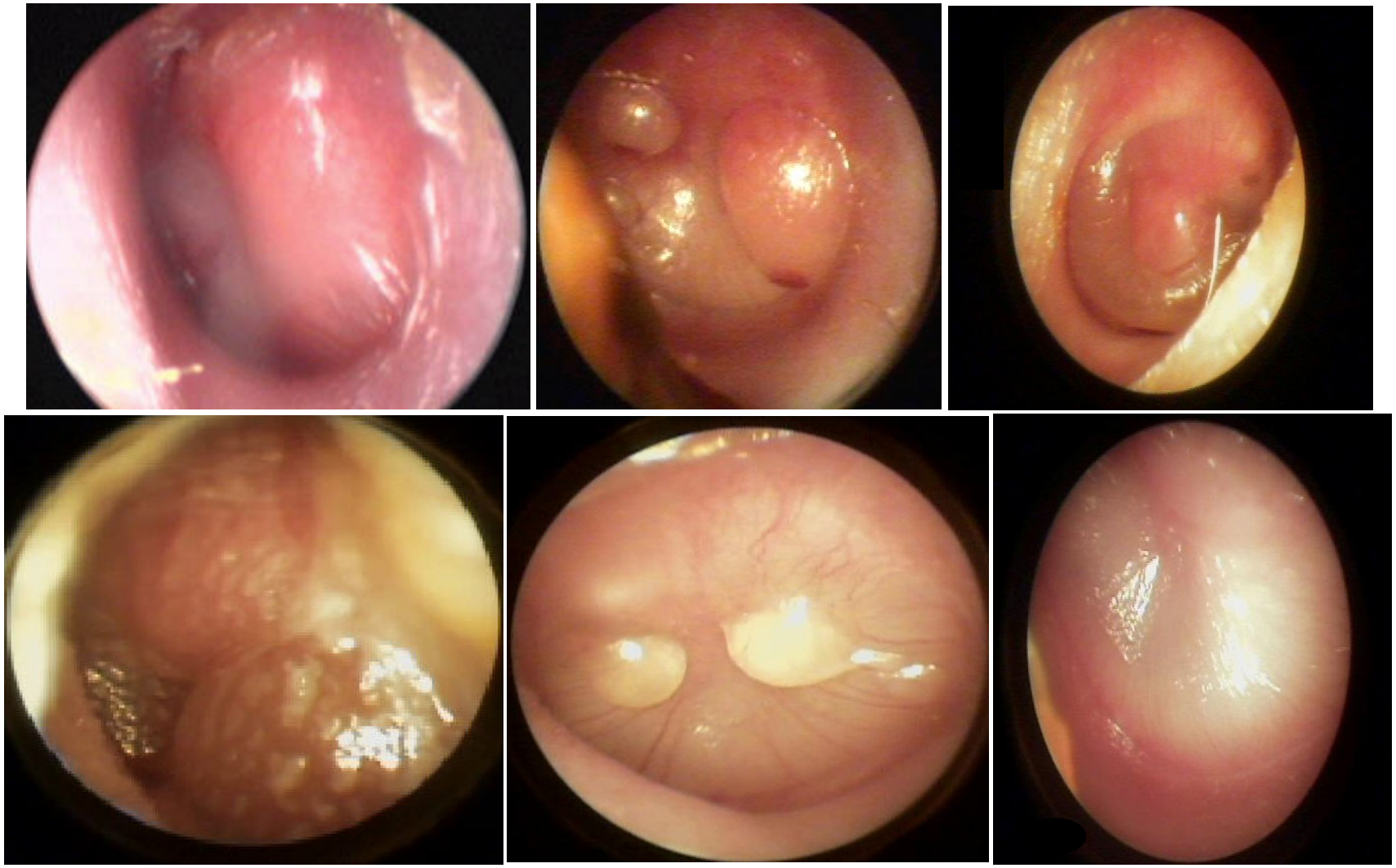
secure web connection

Clinician site

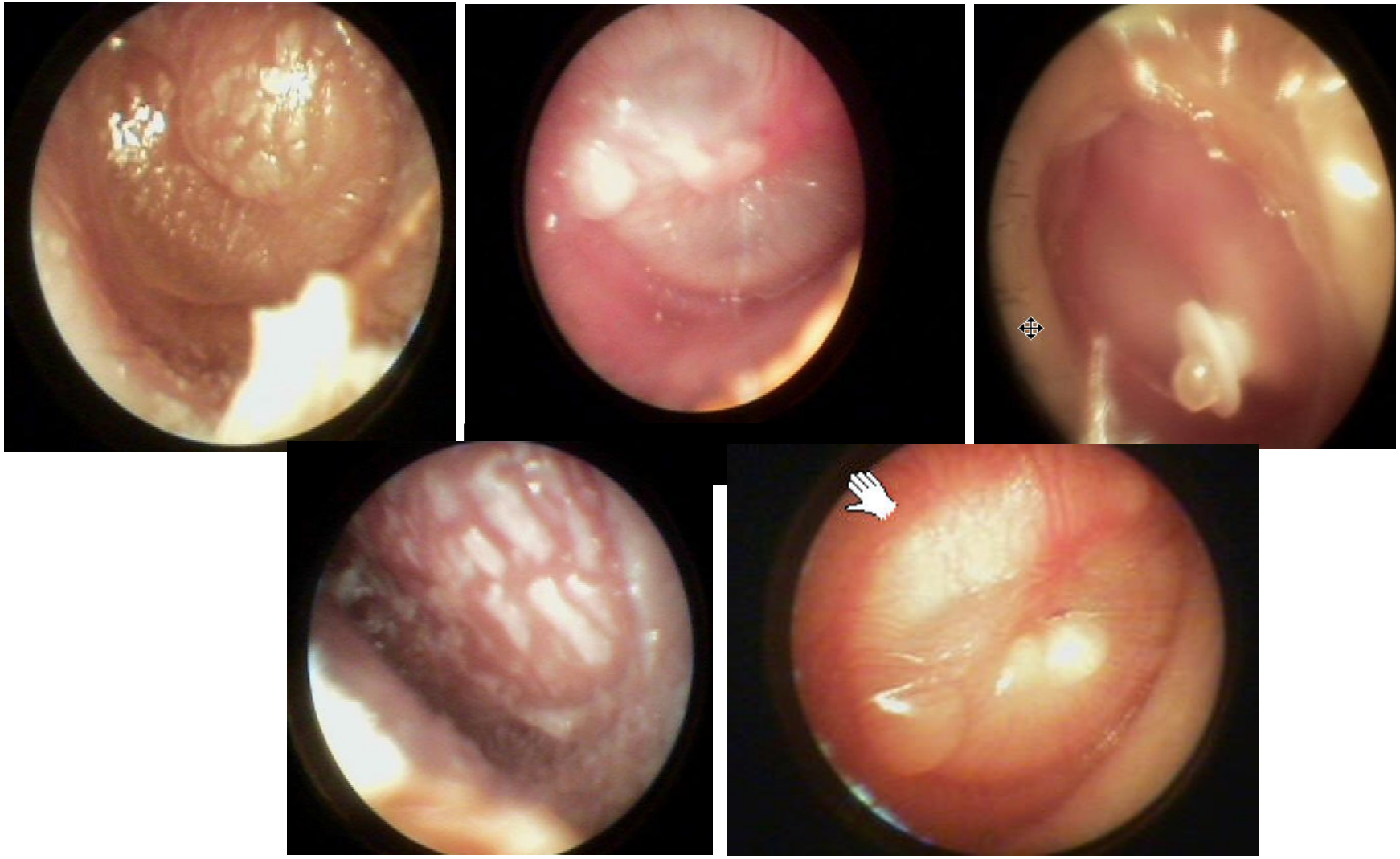
Video conference window - view at clinician site

Normal Tympanic Membrane

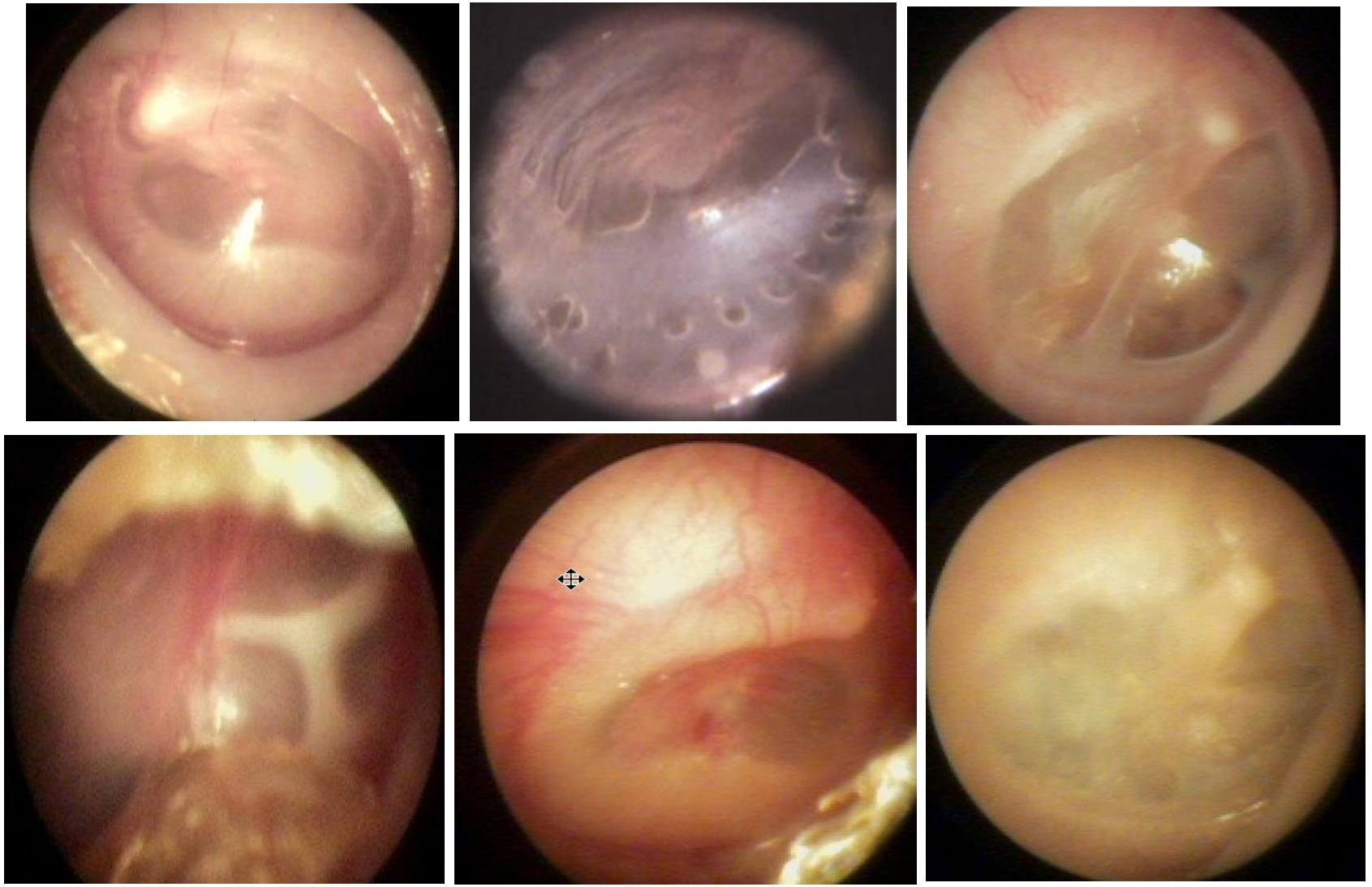
Acute Otitis Media:
Like You've Never Seen It



Acute Otitis Media:
Like You've Never Seen It



Otitis Media with Effusion



13-Year Experience

Visits by Type of Access Site by Year: May 2001 thru June 2013

Sites:		City Child Care	Suburban Child Care	City Elementary [A]	Child Development Center	Suburban Elementary	Neighborhood After-Hours	City High and Junior High[A]	Row Total N %	Column %
2001[B]	N	173							173	**1.3**
	%[C]	100							100	
2002	N	445							445	**3.3**
	%	100							100	
2003	N	575							575	**4.2**
	%	100							100	
2004	N	981							981	**7.2**
	%	100							100	
2005	N	1094	20	54					1168	**8.6**
	%	93.7	1.7	4.6					100	
2006	N	1086	48	273	7	20			1434	**10.6**
	%	75.7	3.3	19	0.5	1.4			100	
2007	N	739	43	382	105	53			1322	**9.7**
	%	55.9	3.3	28.9	7.9	4			100	
2008	N	519	22	194	87	17			839	**6.2**
	%	61.9	2.6	23.1	10.4	2			100	
2009	N	447	26	218	70	2	125		888	**6.5**
	%	50.3	2.9	24.5	7.9	0.2	14.1		100	
2010	N	618	20	427	75	0	438	16	1594	**11.8**
	%	38.8	1.3	26.8	4.7	0	27.5	1	100	
2011	N	597	6	766	76	0	421	60	1926	**14.2**
	%	31	0.3	39.8	3.9	0	21.9	3.1	100	
2012	N	378	0	758	53	0	316	79	1584	**11.7**
	%	23.9	0	47.9	3.3	0	19.9	5	100	
2013[D]	N	119	0	375	25	0	77	35	631	**4.7**
	%	18.9	0	59.4	4	0	12.2	5.5	100	
Total	N	**7771**	**185**	**3447**	**498**	**92**	**1377**	**190**	**13560**	**100.0**
	%	**57.3**	**1.4**	**25.4**	**3.7**	**0.7**	**10.2**	**1.4**	**100.0**	

Highlighted numbers (gray background) indicate the year that service was initiated at a particular type of site.

[A] Included city school discrict, charter and parochial schools. [B] Last 8 months of 2001 only.

[C] Row percents. [D] First 6 months of 2013 only.

13-Year Experience

Table 2. Distribution of Primary Diagnosis for 13,560 Completed Visits

RANK	Top 20 Primary Diagnoses[A]	%
1	acute otitis media	19.5
2	upper respiratory tract infection	9.9
3	pharyngitis, not otherwise specified	7.8
4	conjunctivitis	6.0
5	Streptococcal pharyngitis	5.7
6	otitis media with effusion	4.4
7	viral illnesss, not otherwise specified	4.0
8	ear pain	3.8
9	conjunctivitis, unspecified	3.8
10	tinea corporis	2.8
11	atopic dermatitis	2.3
12	dermatitis, not otherwise specified	2.0
13	tinea capitis	1.9
14	diaper dermatitis	1.7
15	rash, etiology unknown	1.7
16	insect bite	1.4
17	impetigo	1.2
18	allergic rhinitis	1.2
19	cerumen impaction	1.1
20	cellulitis	0.9
	all other	16.9
		100.0

[A] Includes all diagnoses comprising 0.9% of the total or greater.

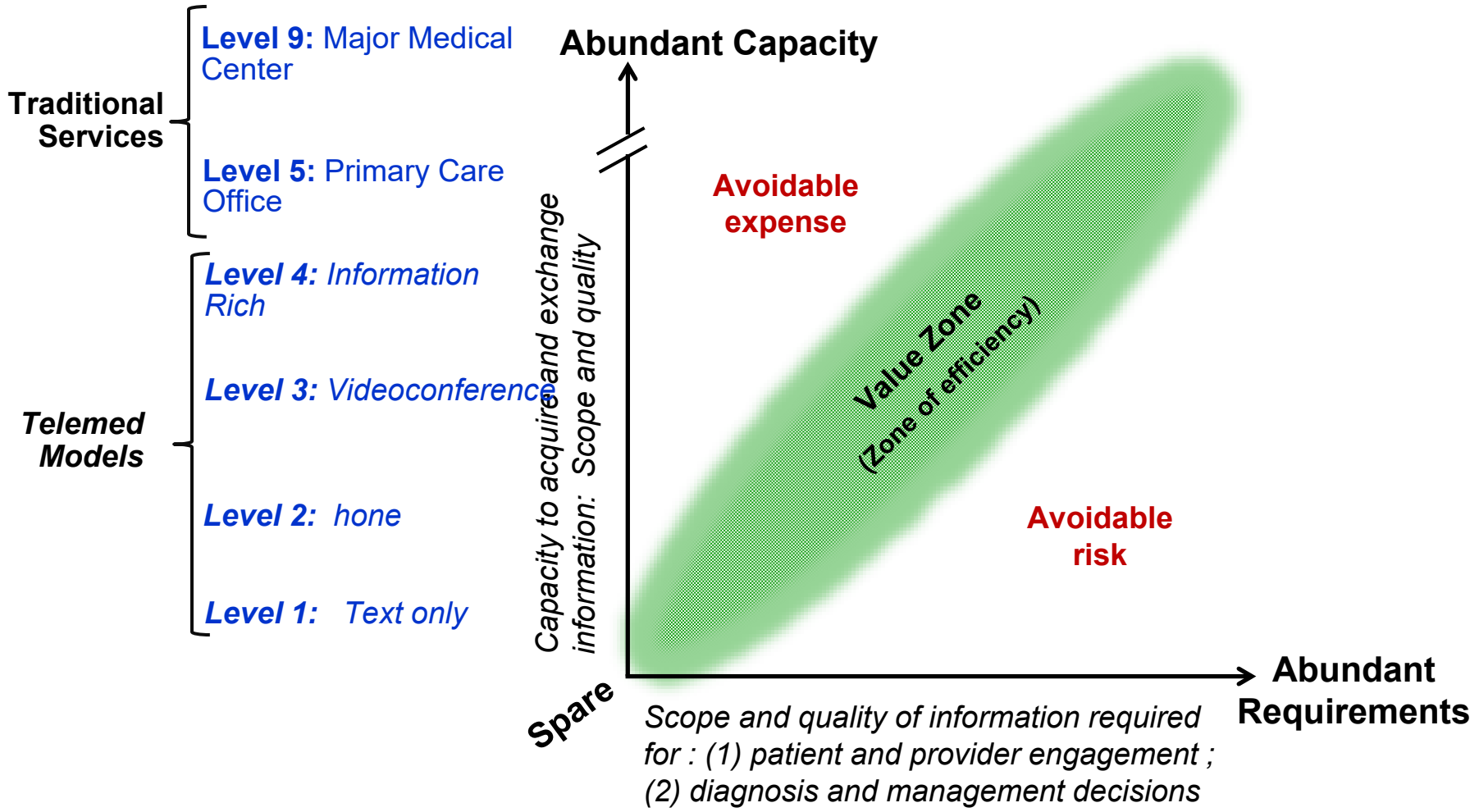
13-Year Experience

Table 3. Distribution of Telemedicine Visits by Key Resource Requirement

Resource requirements	Total	Column %	Cumulative %
Ear exam[A]	4313	31.8	31.8
Other upper respiratory exam	4265	31.5	63.3
Skin, scalp exam	2775	20.5	83.7
Eye exam[B]	1560	11.5	95.2
Lower respiratory exam[C]	341	2.5	97.7
306 visits with primary diagnosis[F] classified as "beyond scope"			
Hands-on exam[D]	218	1.6	99.4
Behavioral evaluation	68	0.5	99.9
Technology not in model	11	0.1	99.9
Subspecialist evaluation	7	0.1	100.0
Specialized history[E]	2	0.0	100.0
Total	13560	100.0	

[A] Often reqiring cerumen removal.
[B] Excluding retinal exam.
[C] Auscultation of lungs.
[D] May require clinician to palpate, manipulate, or perform neurologic exam.
[E] Such as evaluation for child abuse or neglect.
[F] Ten diagnoses accounted for 75.8% of these 306 (diarrhea/gastroenteritis, laceration, attention deficit disorder, adjustment reaction, headache, abdominal pain, medication reaction, fussy infant/toddler, sebaceous cyst, allergic reaction).

Usefulness Is Determined by Capacity to Acquire Information that Meets Requirements for Information



Why is Real-Time Video Interaction Important?

- Much of the time, the most valuable service you offer as a clinician is reassurance.
- Capacity to reassure depends on trust.
- Trust in diagnostic decisions and treatment recommendations is strongly influenced by communication skills.
- Critical communication skills qualities include capacity to convey genuine concern and accurate empathy.

Reading the Mind in the Eyes

Playful

Comforting

Playful

Irritated

Bored

Reading the Mind in the Eyes

Aghast

Baffled

Distrustful

Distrustful

Terrified

Reading the Mind in the Eyes

Embarrassed

Guilty

Concerned

Fantasizing

Concerned

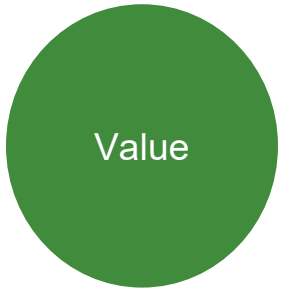
Beyond Words …

The "Reading the Mind in the Eyes" Test Revised Version:
A Study with Normal Adults, and Adults with Asperger Syndrome
Or High-functioning Autism

Simon Baron-Cohen, Sally Wheelright, Jacqueline Hill, Yogini Raste, and Ian Plumb
University of Cambridge, U.K.

Journal of Child Psychology and Psychiatry. (2001) 42;241-252.

Value of Care to the Community



Usual Care

Child seen 4 hr later, at best
First med dose 6 hr later

Health-e-Access (Information Rich Telemed)

Child seen now
First pain medication now
First antibiotic ~ 1 hr later

Cost to the Community

Usual Care

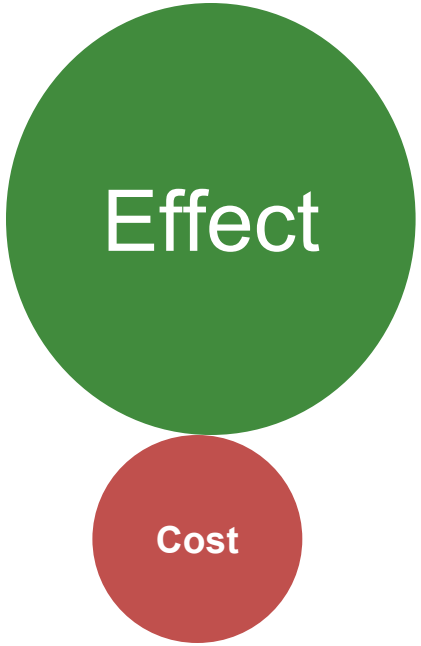
- Office, Urgent Care or ED exam room space
- Personnel costs: nurses and med-techs
- Parent misses ½ day of work
- Transportation costs, often ambulance
- Parking cost
- Payment for ED visit $600
- Medication costs
- Provider cost

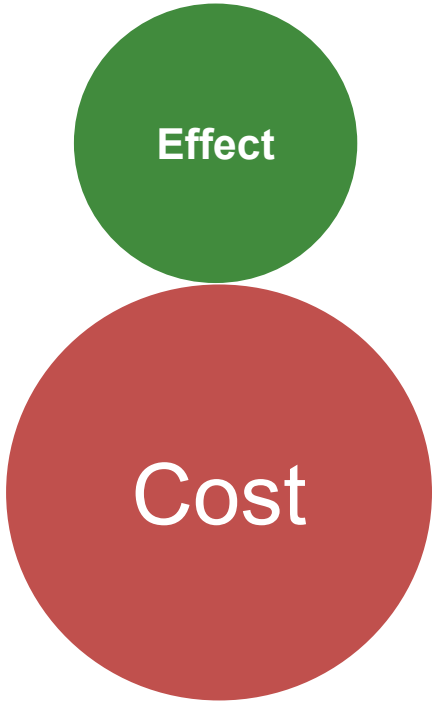
Information Rich Telemedicine

- Little or no cost for patient exam room space
- Patient-end equipment and connectivity
- No incremental cost for provider space and equipment
- Personnel costs: med-tech (telemed assistant) and scheduler
- No transportation or parking cost
- Parent misses no work
- Payment for telemed visit ($90)
- Medication costs (equal)
- Provider cost (equal or less)

Value (Bang for Buck): Societal Perspective

Telemedicine >> Usual Care





Is this a patient-oriented care system of care?

- **Dominant Insurer** is working with **Video-Only Inc. #1** to achieve consistency among insurer affiliates nationwide.
- The goal is to reduce both the emergency department and urgent care visits.
- Insurer believes the prime sites for patients using the system will be home and work. Insurer is "agnostic" to site. Work site availability of telemedicine is very important to local employers.
- Consumer focus groups conducted by the insurer indicates that patients want their own doctors to be participating. Video-Only #1 will, however, have a backup virtual network that can be accessed by Insurer's patients if the patient's own physician does not sign up.

A patient-oriented system? - continued

- Video-Only #1 efforts are also targeted towards minor acute illness.
- Major Insurer believes that most local physicians will participate.
- Major Insurer stresses that in the Kaiser system there are more virtual than face-to-face visits (well, in dermatology anyway).
- **Major supermarket chain** (whose pharmacy is a major profit center) has formed an alliance with **Video-Only Inc. #2**
- **Major medical center** (same community) has been approached by major supermarket chain

To be determined …

- Will technology components be “enriched” to meet information requirements beyond those of video interaction?
- Who staffs access sites, and what is the organizational architecture?
- Is service exclusive to patients of participating provider organizations?
- Will all insurance organizations pay for telemed visits?
- What sites will be used as access points?

Is this payer promoting telemedicine ?

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Important Information for Our Health Care Provider Partners

TO: **Physicians, Health Care Practitioners, Facilities and Hospitals**

DATE: **April 29, 2016**

SUBJECT: **Telemedicine Coverage Mandate and Use of Modifiers GT and GQ**

Modifiers:

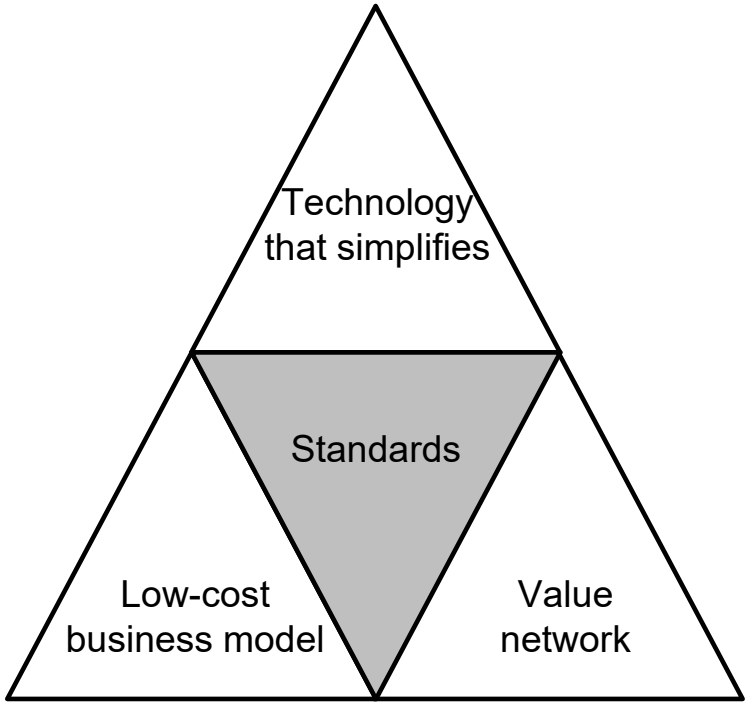
- **GT** (via interactive audio and video telecommunications system); and
- **GQ** ("Store and Forward Technology," which is "Asynchronous" electronic transmission of a patient's health information in the form of patient-specific digital images and/or prerecorded videos from a provider at an originating site to a telemedicine provider at a distant site.)
- Effective August 1, 2016, covered services reported with modifiers "GT" or "GQ" will be reimbursed at 50 percent of the rate payable when these services are performed on a face-to-face basis for all programs, except Medicare Advantage.

Why isn’t everyone using it in primary care?

“… even though it *could* save money, that's not what's happening. It tends to be an addition. You do the telemedicine; it leads to more tests. It leads to more follow-up visits”

“… when you look at the data, it turns out that telemedicine overall is not necessarily a big cost saver."

Disruptive Innovations* and Their Dissemination



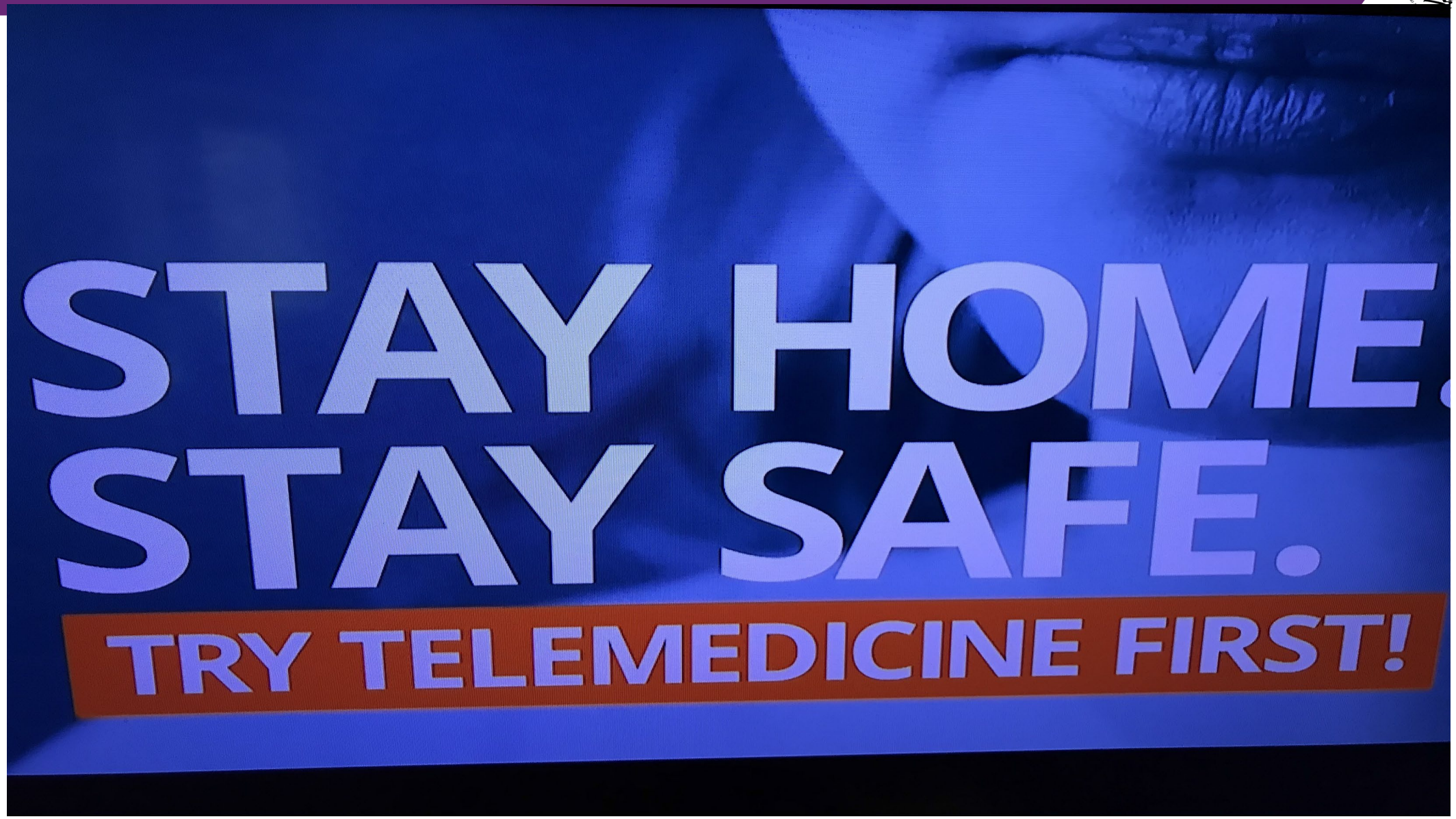
- **Technology that simplifies – IT**
- **Value network -**
  All dominant stakeholders must have a piece of the action = "*economically coherent*" (When herding cats move their food.)
- **Low-cost business model**
- **Standards**
  - ✓ **clinical guidelines**
  - ✓ **regulations**

* Joseph Schumpeter

Christensen C, Grossman J, Hwang J. The Innovator's Prescription: A Disruptive Solution for Health Care. 2009.

Implementation and Dissemination in Primary Care Practice

- Understand state-specific regulations
- Identify a HIPAA-compliant technology platform
- Identify access sites – office hours, after hours
- Articulate phone triage guidelines – what parent concerns are appropriate for telemedicine?
- Establish appropriate financing
- Promote to patients - process, payment


STAY HOME.
STAY SAFE.
TRY TELEMEDICINE FIRST!

Contact Information

Kenneth M. McConnochie, MD, MPH
University of Rochester Medical Center
kmcconnoc@gmail.com

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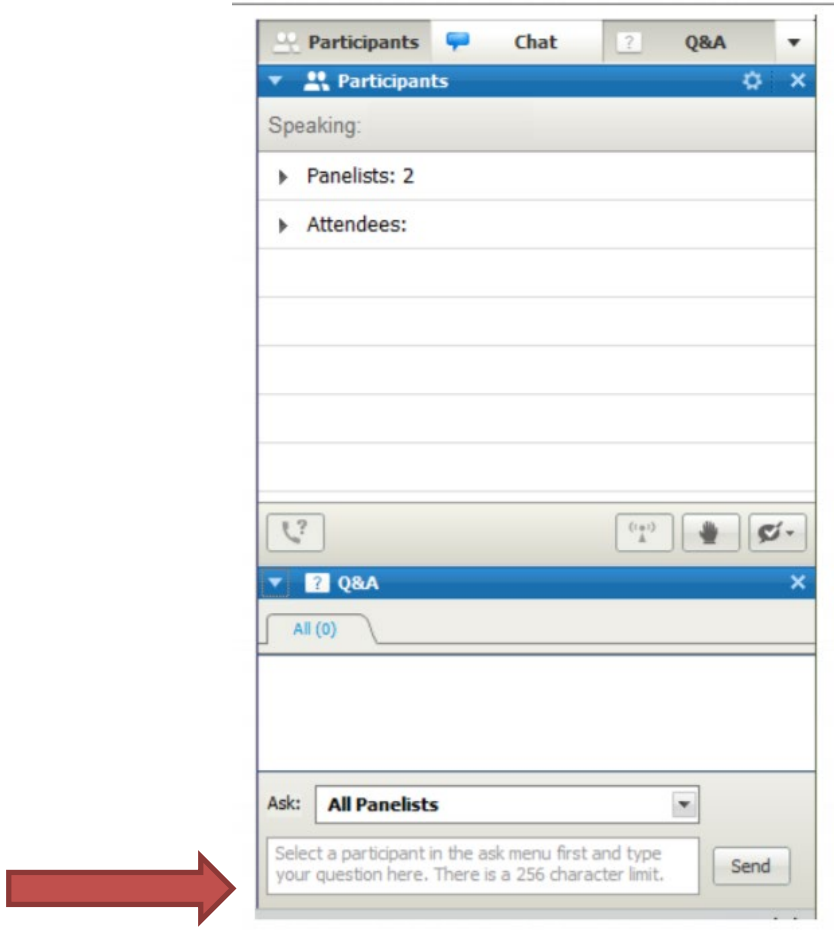
- At any time during the presentation, type your question into the “Q&A” section of your WebEx Q&A panel.
- Please address your questions to “All Panelists” in the drop-down menu.
- Select “Send” to submit your question to the moderator.
- Questions will be read aloud by the moderator.



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