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TRANSFORMING DEMENTIA CARE

Electronic Nudges and Pragmatic Trials to Improve Hospital Palliative Care Delivery

Palliative & Advanced Illness Research (PAIR) Center
University of Pennsylvania

Katherine (Kate) Courtright, MD, MSHP
Assistant Professor of Medicine, Palliative and Advanced Illness Research (PAIR) Center, Perelman School of Medicine, University of Pennsylvania

Housekeeping

- All participants will be muted
- Enter **all questions** in the Zoom **Q&A/chat box** and send to Everyone
- Moderator will review questions from chat box and ask them at the end
- Want to continue the discussion? Associated podcast released about 2 weeks after Grand Rounds
- Visit impactcollaboratory.org
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@IMPACTcollab1 https://www.linkedin.com/company/65346172

Learning Objectives

Upon completion of this presentation, you should be able to:

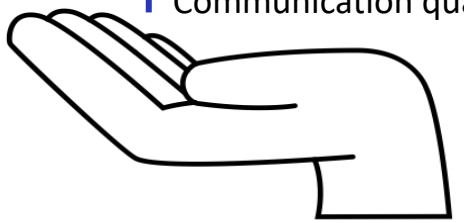
- Describe choice architecture and tradeoffs with different types of behavioral nudges
- Consider ways to leverage technology within a learning health system to improve palliative care delivery
- Anticipate implementation challenges and opportunities for nudges to improve inpatient palliative care delivery

Palliative care is a complex medical intervention that improves patient, family, clinical, and system outcomes in serious illness

70 RCTs of Palliative Care Interventions

Symptom burden
Intensive care near end-of-life
Acute care utilization
Acute and home care costs

Quality of life
Satisfaction with care
Hospice use
Communication quality



Patient-family unit
Any age, disease stage, or diagnosis

Symptom management, psychosocial & spiritual distress, coping
Communication & care planning, end-of-life care

At diagnosis, or as needs arise
Disease progression or sentinel event

Hospital, nursing facility
Community (home, clinic, virtual)

Inter-disciplinary, board-certified palliative care clinicians (“specialist”)
Clinicians of all training and discipline backgrounds (“generalist” or “primary”)

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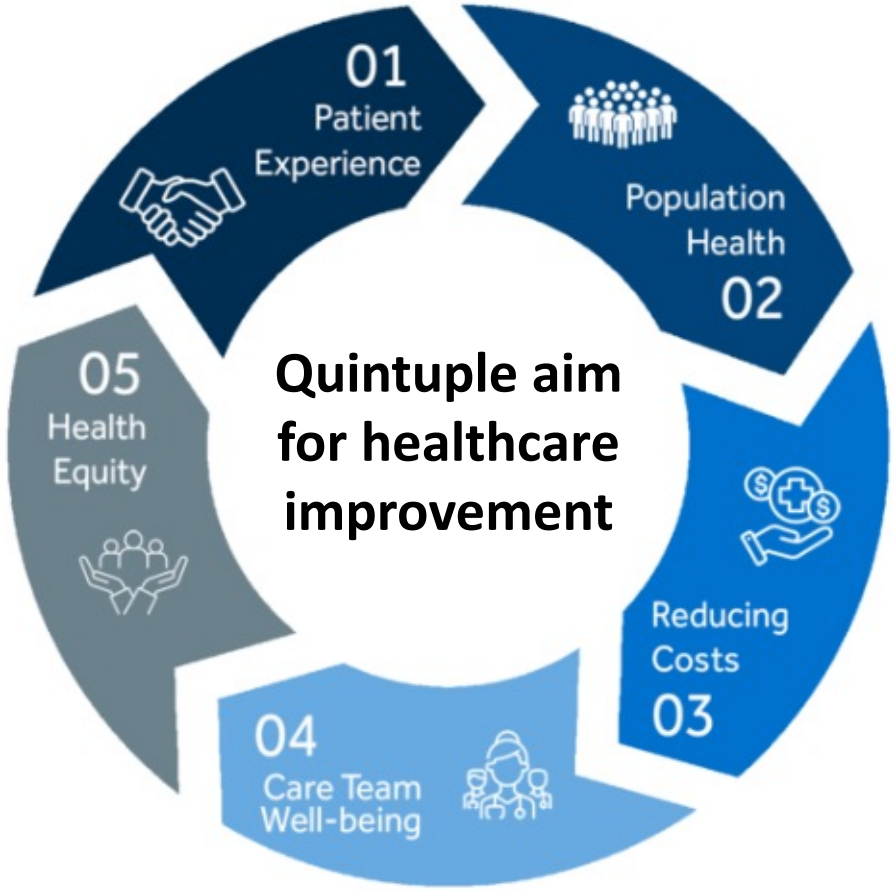
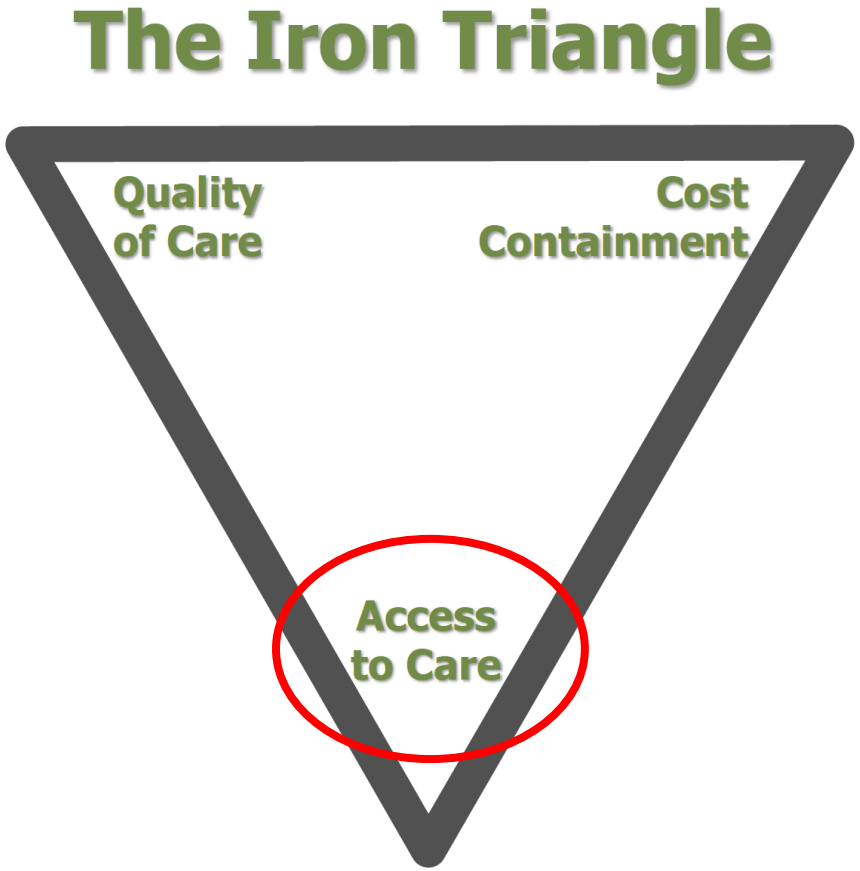
Kavalieratos et al. JAMA 2016
Quinn et al. JAMA 2020
Bajwah et al. Cochrane Database of Sys Rev. 2020

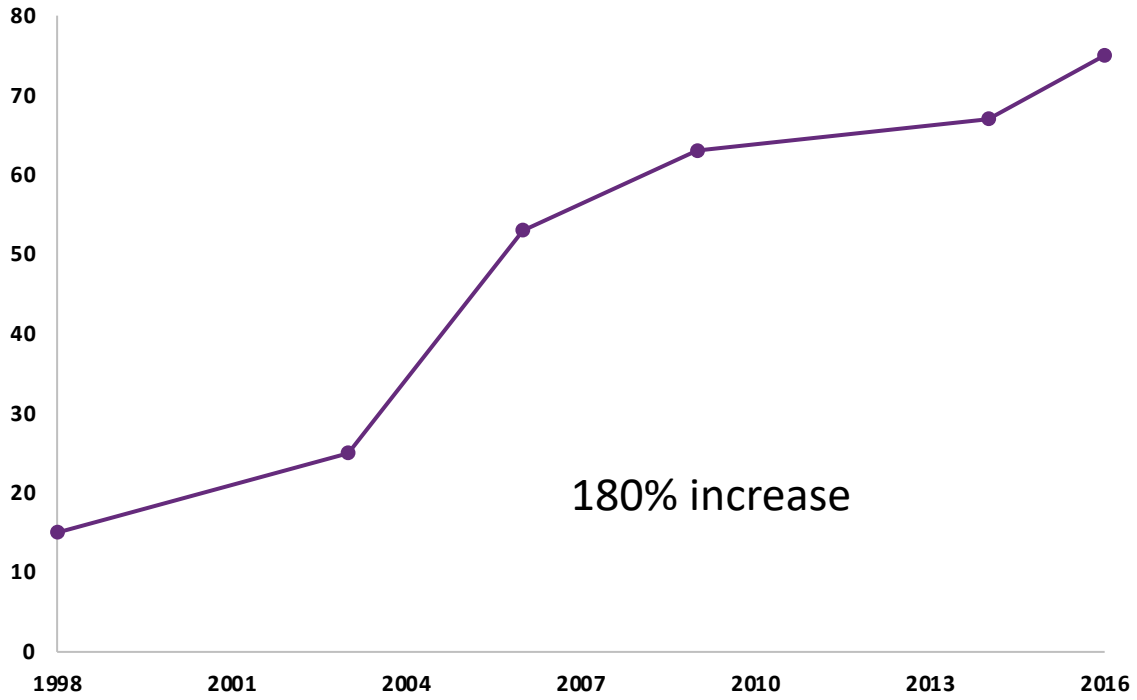
Achieving sustainable, high-value palliative care delivery

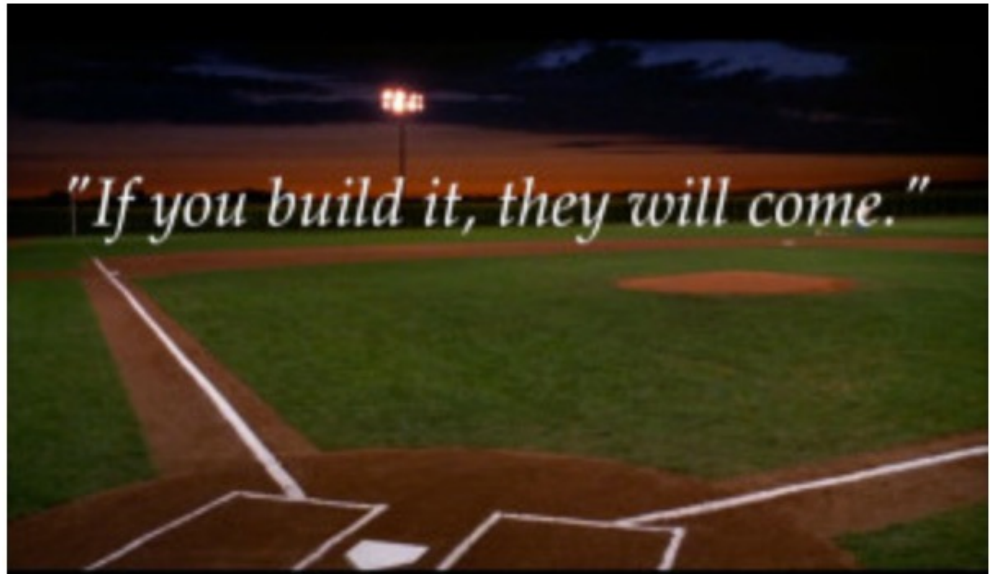




Rapid dissemination of inpatient palliative care programs

% U.S. hospitals (>50 beds) with Palliative care program

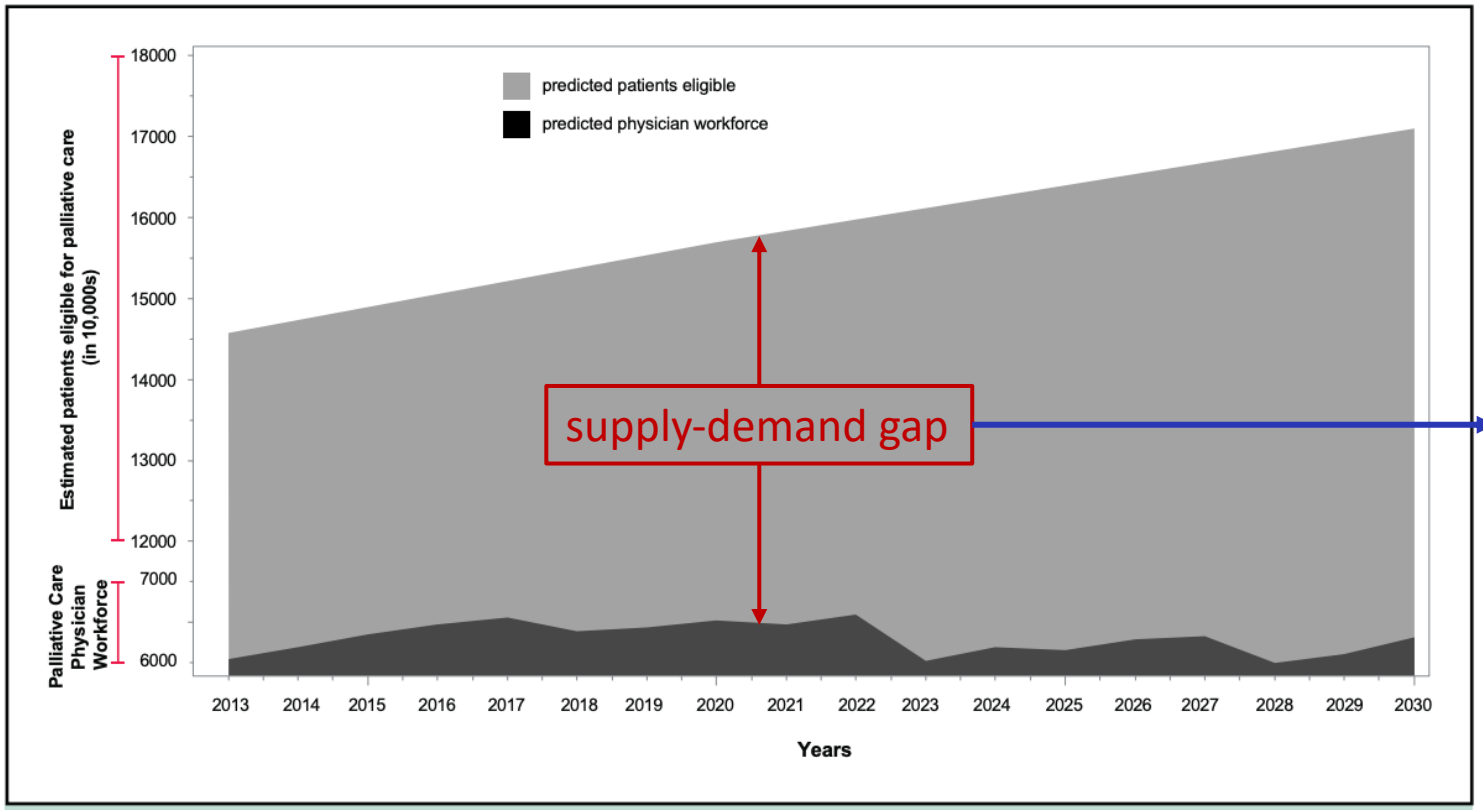




78% increase in number of annual hospital admissions seen by a palliative care team between 2009 and 2014

Dumanovsky et al. J Palliat Med. 2016
https://www.capc.org/report-card/

Future of the Palliative Care Workforce: Preview to an Impending Crisis



System-level solutions
(1) Train up generalists
(2) Target specialists

Figure Projected changes in palliative care physician workforce and seriously ill patients eligible for services.

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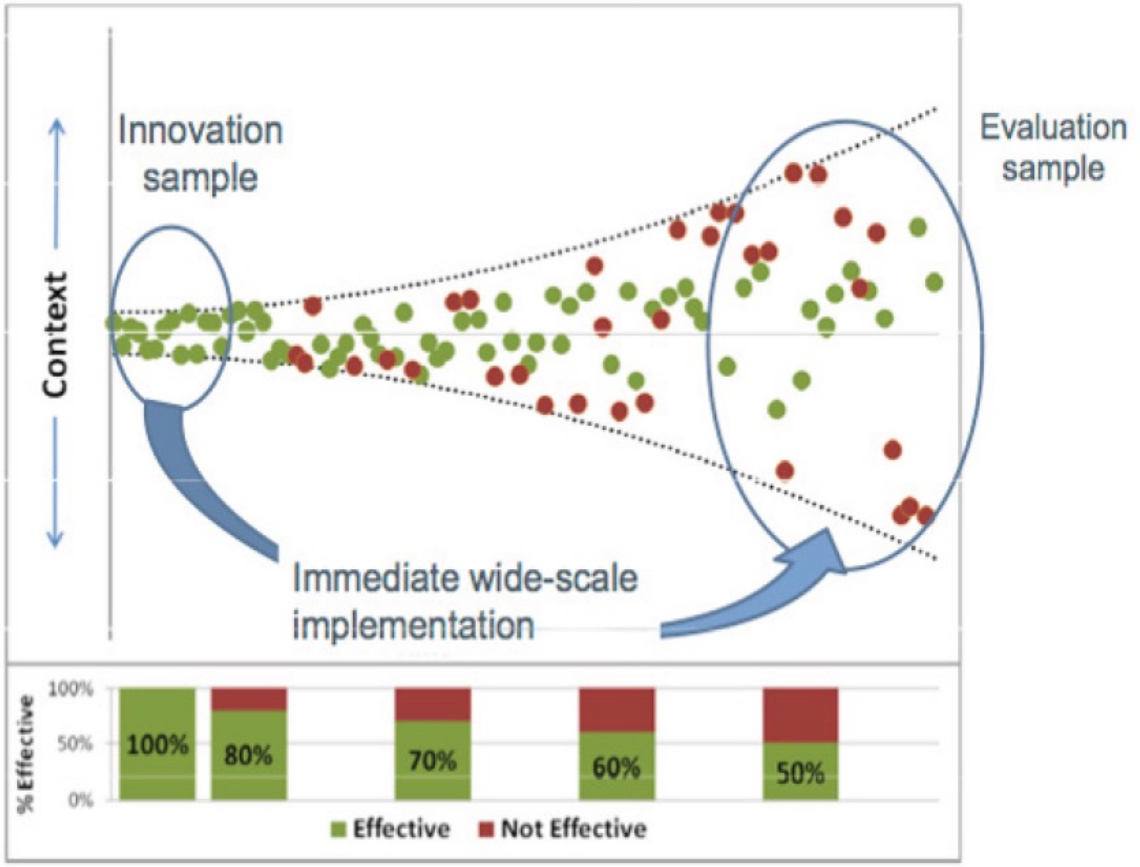
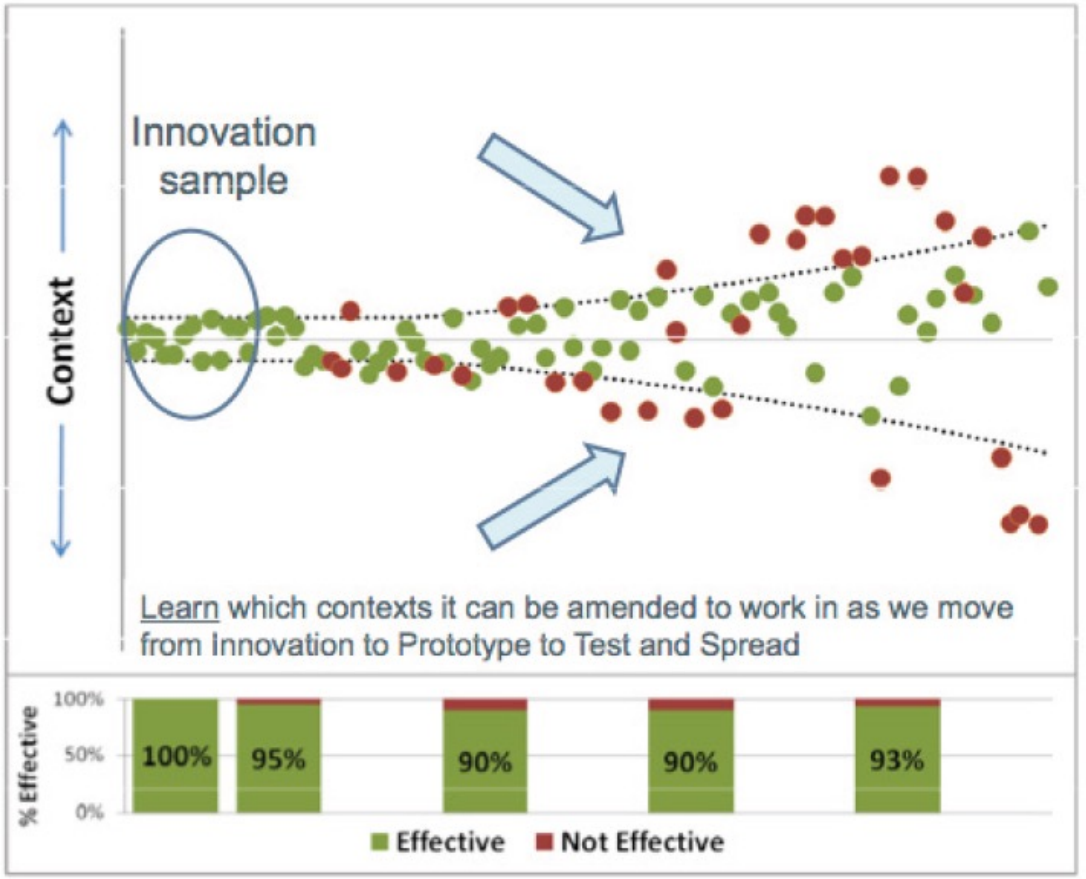
Kamal et al. Am J of Medicine. 2017

Rethinking traditional models of knowledge translation

"Unlearning" health system



Learning health system



Annals of Internal Medicine

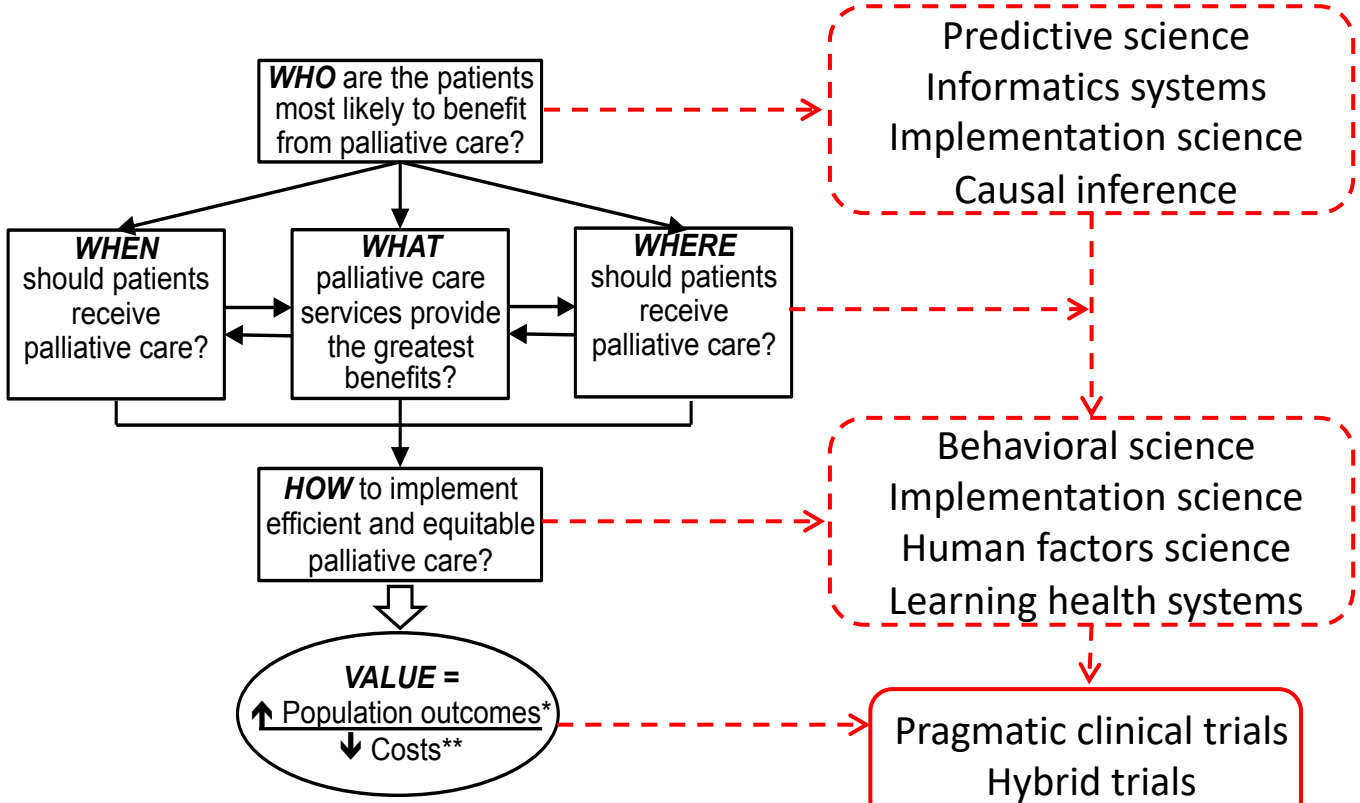
IDEAS AND OPINIONS

A Research Agenda for High-Value Palliative Care

Katherine R. Courtright, MD, MS; J. Brian Cassel, PhD; and Scott D. Halpern, MD, PhD

The next era of palliative care must embrace a broader focus on systems of care, measurement and accountability for palliative services, and national policy changes that promote universal provision of high-quality advanced illness care.

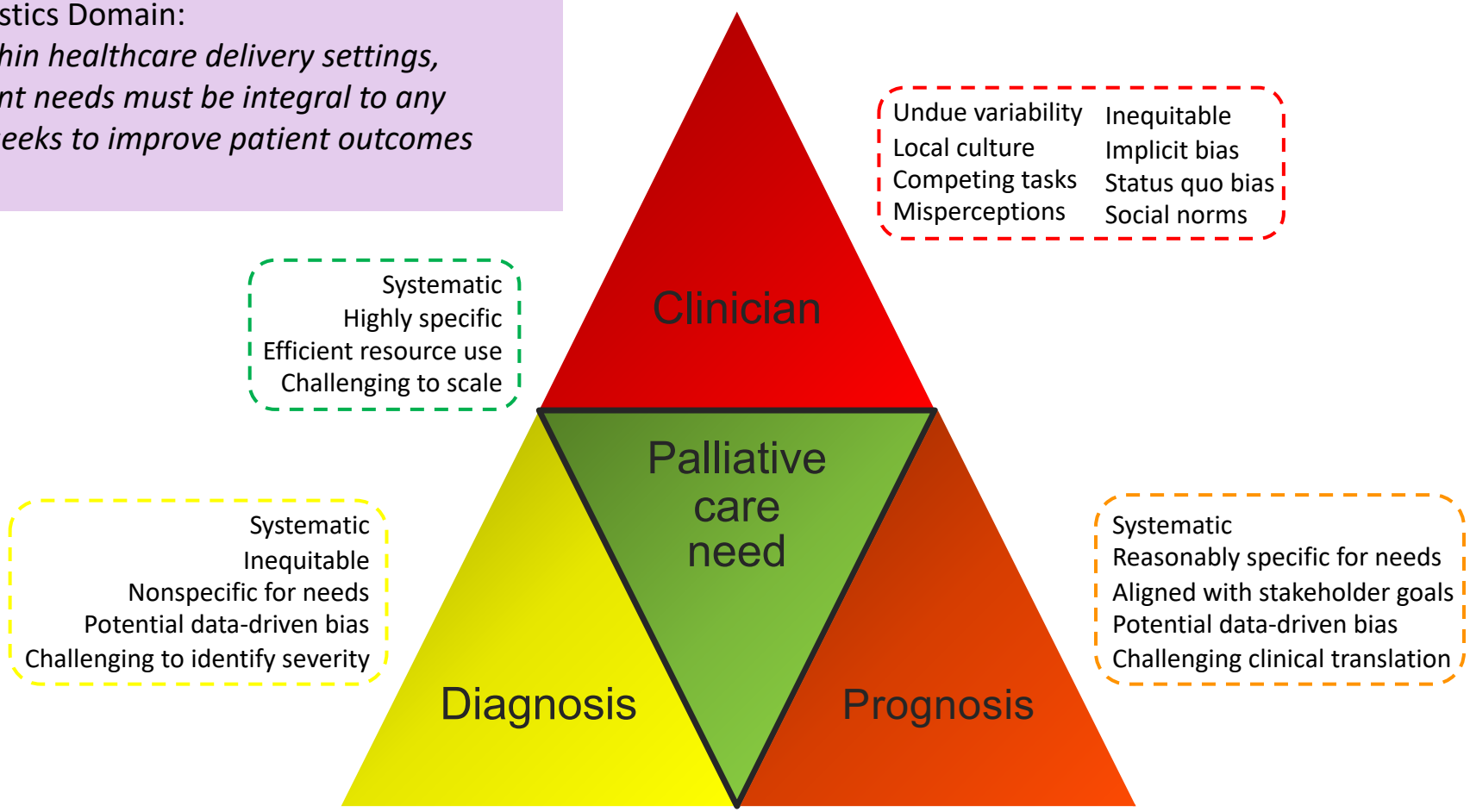
Schenker Y and Arnold R. JAMA 2015.



*Outcomes include clinical outcomes and patient and caregiver experiences
**Costs include direct, indirect, and opportunity costs

Identifying who is most likely to benefit from palliative care

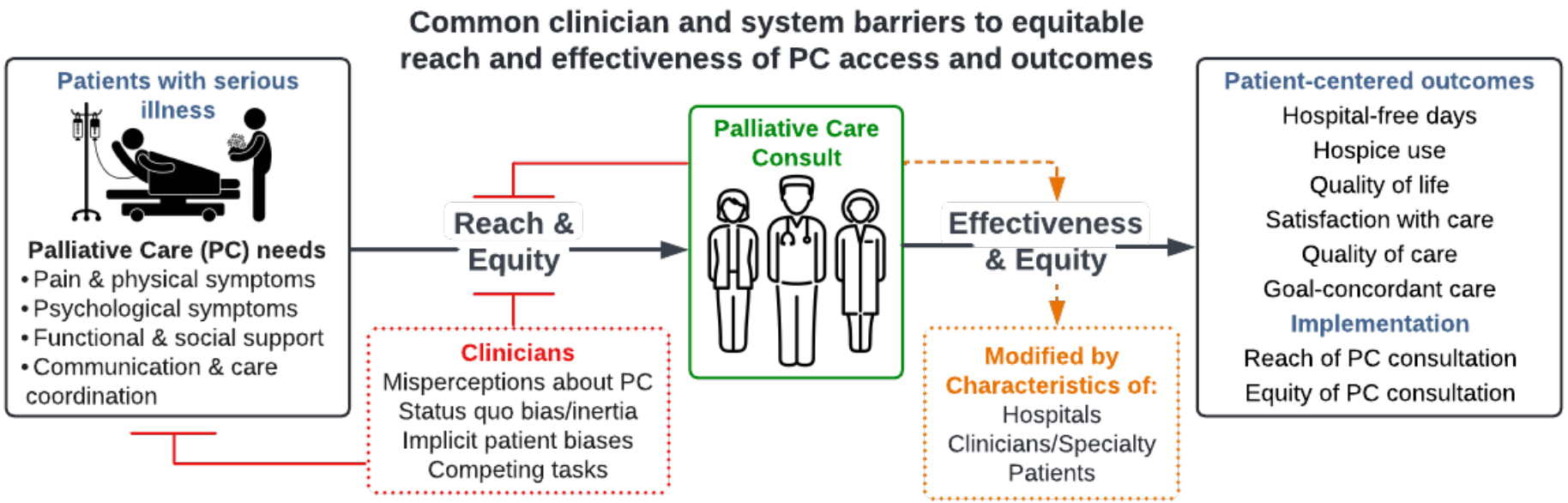
Consolidated Framework for Implementation Research (CFIR)
Individuals/Characteristics Domain:
Need Subdomain: Within healthcare delivery settings, consideration of patient needs must be integral to any implementation that seeks to improve patient outcomes
(IOM, 2001)



Damschroder LJ et al. Imp Sci. 2009

How to overcome common barriers to patient-centered, effective and equitable palliative care delivery

Consolidated Framework for Implementation Research (CFIR)
Inner and Outer Settings: where the innovation is being implemented; defined at multiple, inter-related levels



Nudging clinicians to improve palliative care delivery

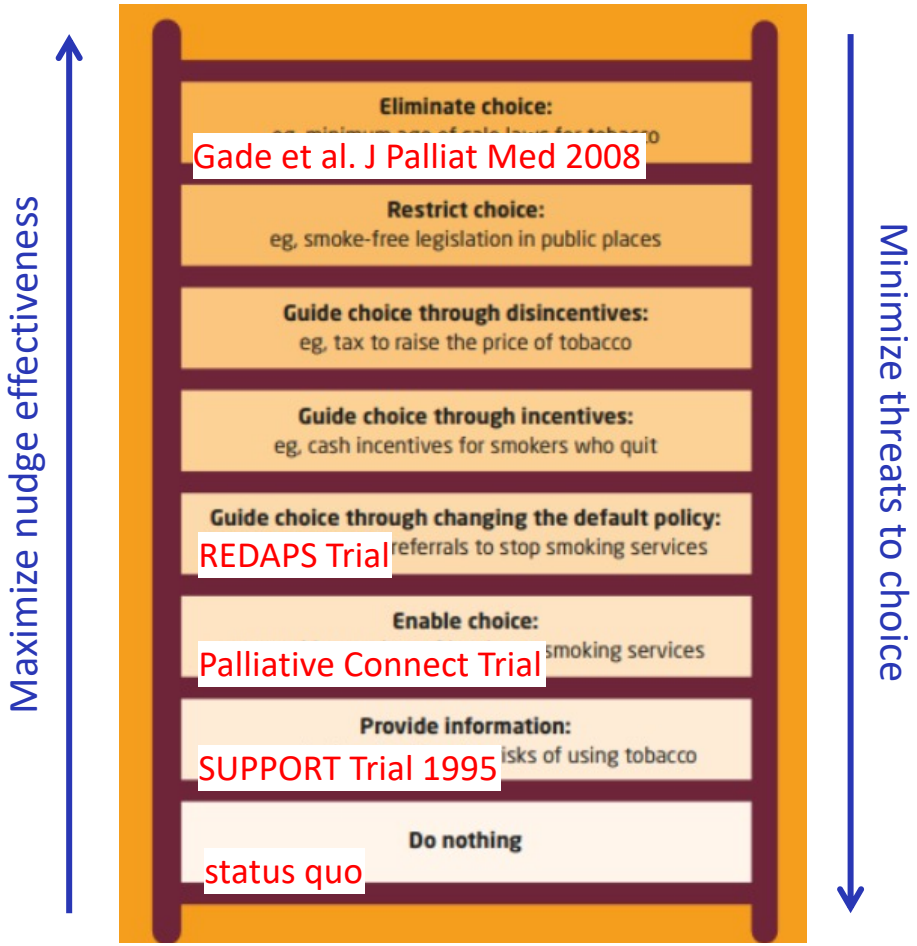
Nudge: Decision-affecting feature of the choice environment that neither restricts the options nor materially alters the incentives

> Inevitably, some choices will be presented first or as the default, meaning that the ethical task for the conscientious clinician is not to avoid *influencing* choice, but to avoid *restricting* choice.[21]

Swindell JS et al. Chest. 2011

> Ethically acceptable strategies for "nudging" patients' choices must be based on the best-interest standard and must complement, rather than replace, shared decision-making.

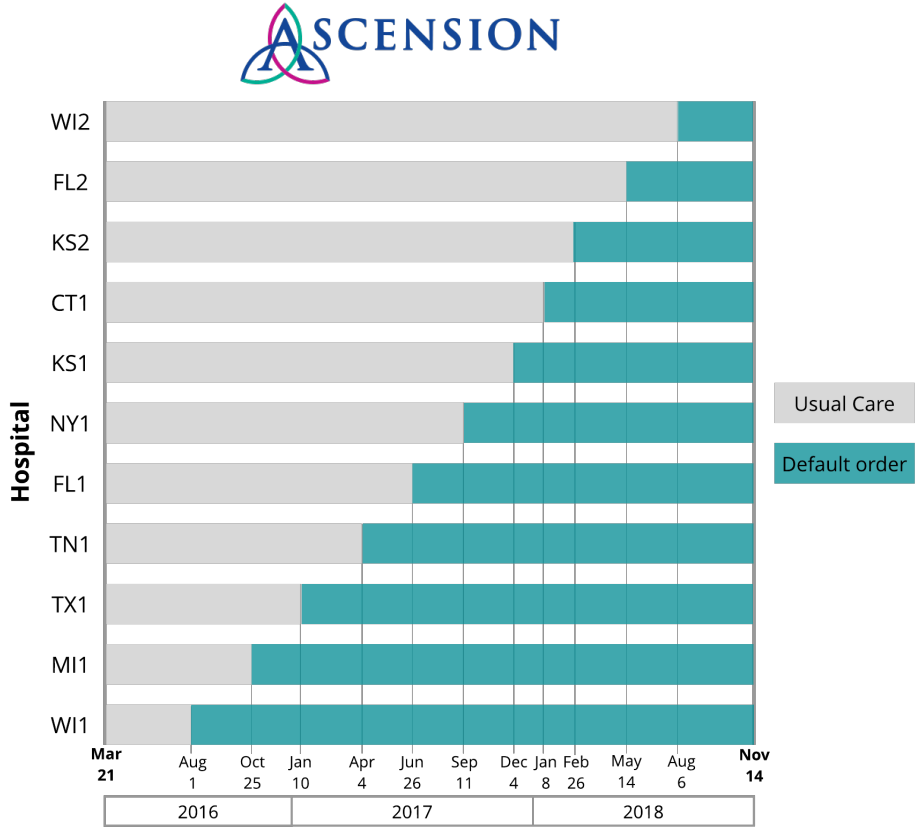
Gorin M et al. Hastings Ctr Report. 2017



Randomized Evaluation of Default Access to Palliative Services (REDAPS) Trial

UH3AG050311 NCT02505035

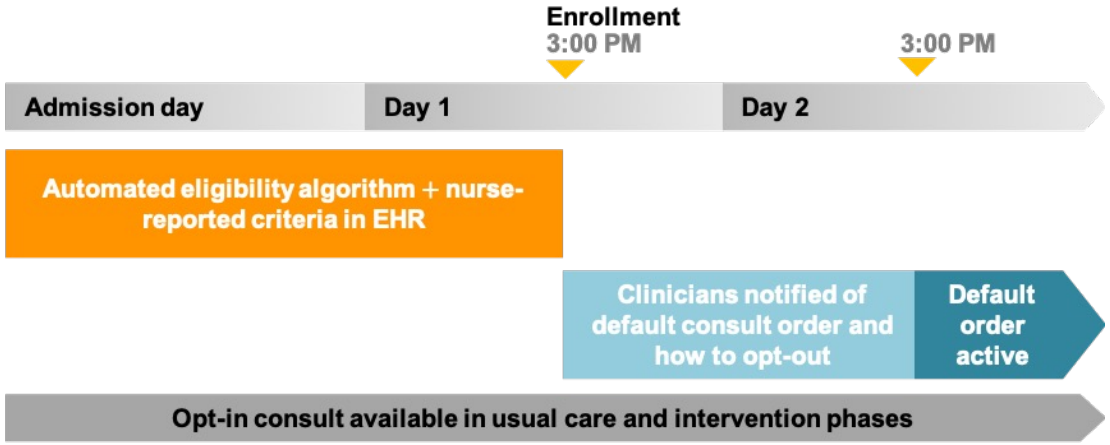
Stepped-wedge trial comparing opt-in (usual care) to opt-out (default consult order) approach for palliative care consultation among older inpatients with advanced, noncancer serious illness



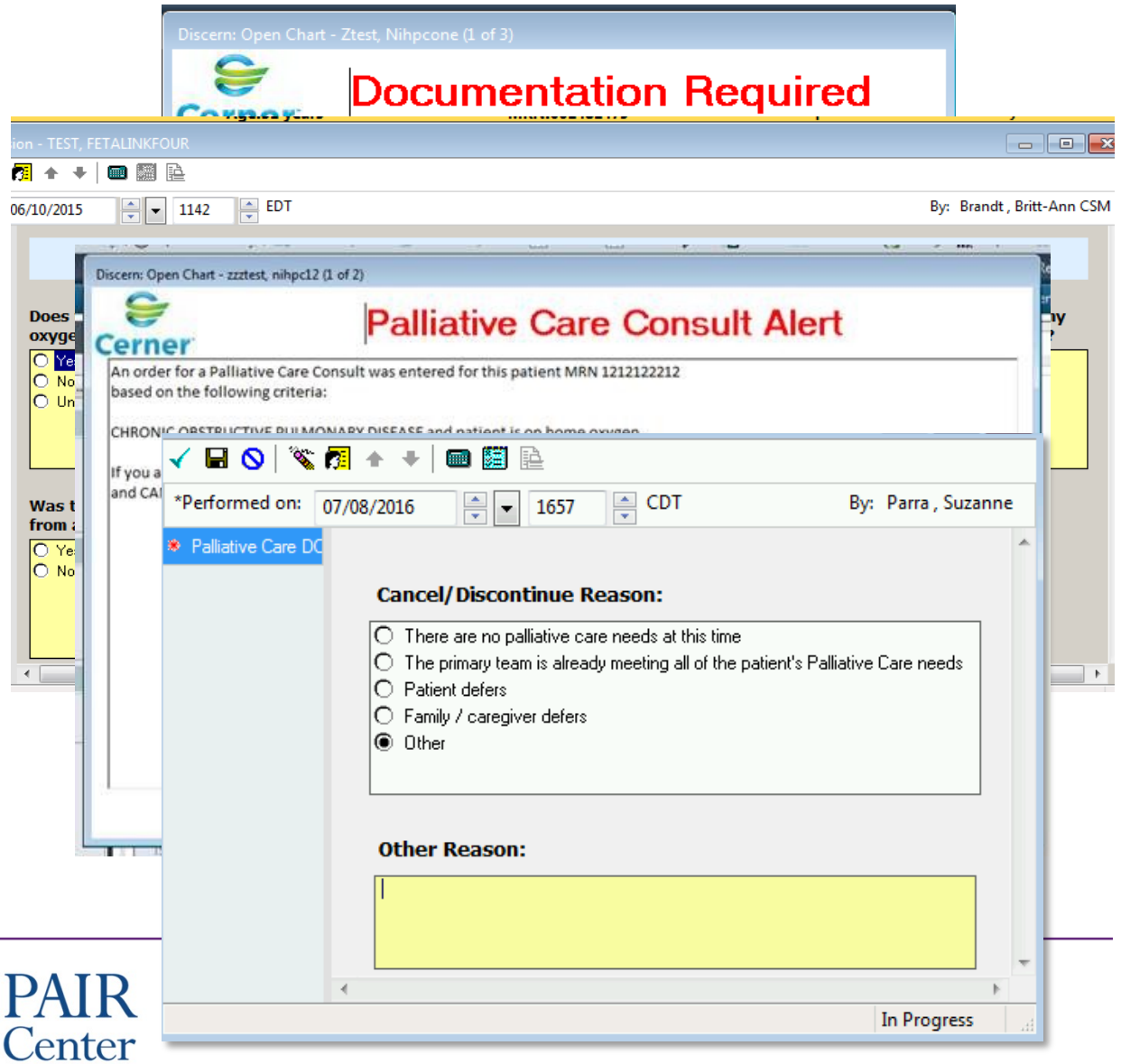
Key Attributes	REDAPS Trial
Goal	Inform inpatient specialty PC delivery decisions
Design	Inform benefits & costs of opt-out consult real-world conditions
Question	Effectiveness—does inpatient PC consultation work in practice?
Setting	11 diverse hospitals (single health system)
Randomization	Cluster (hospital)
Participants	Advanced COPD, dementia, or ESRD; age ≥65
Intervention	Opt-out consult; occurred as in normal practice
Comparator	Real-world usual care (clinician opt-in)
Outcomes	**Hospital LOS**, hospice use, ICU admission, DNR change
Data Collection	Routine in EHR at point of care
Stakeholder engagement	Input from varied stakeholders at all stages

Courtright KR et al. Annals ATS. 2016

Embedded enrollment and intervention



Enrolled	N=34,239
Primary analytic sample (LOS ≥72hr)	N=24,065



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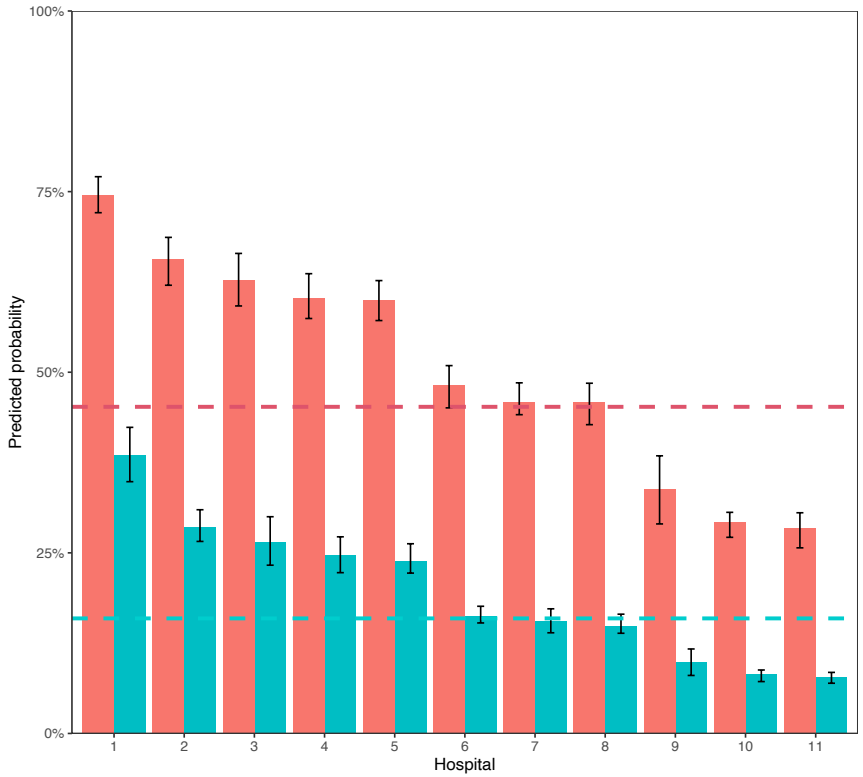
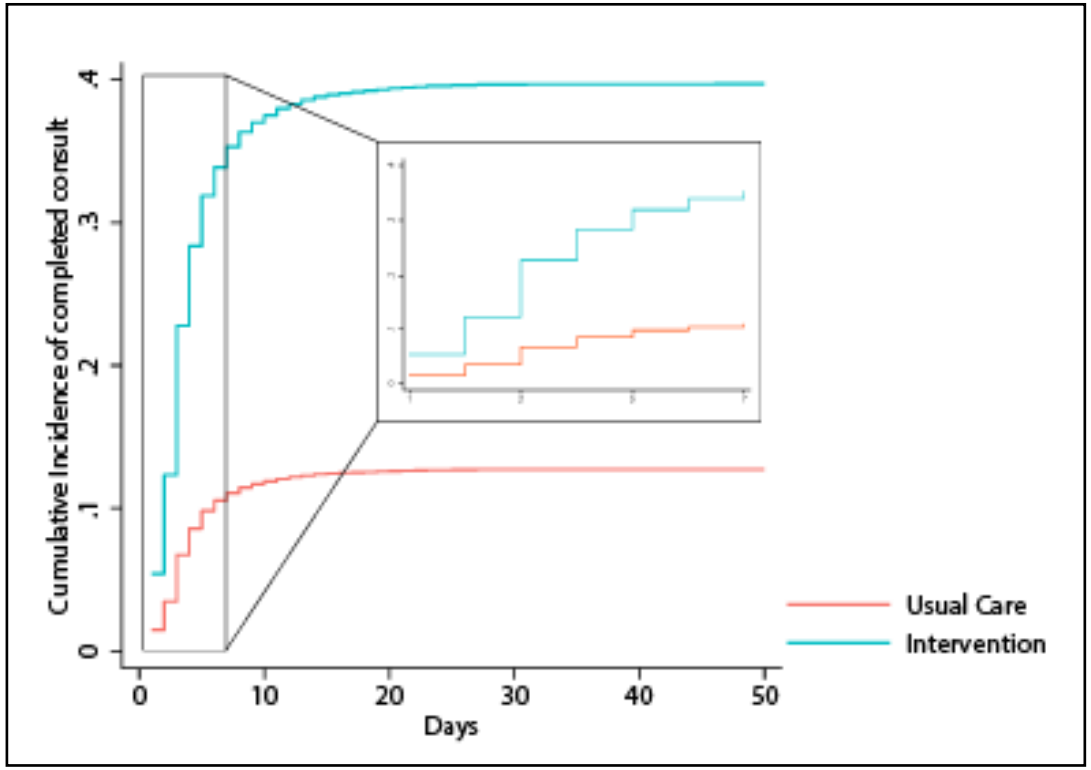
Default strategy is an effective nudge to improve frequency and timing of inpatient palliative care

Consults completed

44% default strategy vs 16.6% usual care



Mean time-to-consult ↓ 1.2 days with default order



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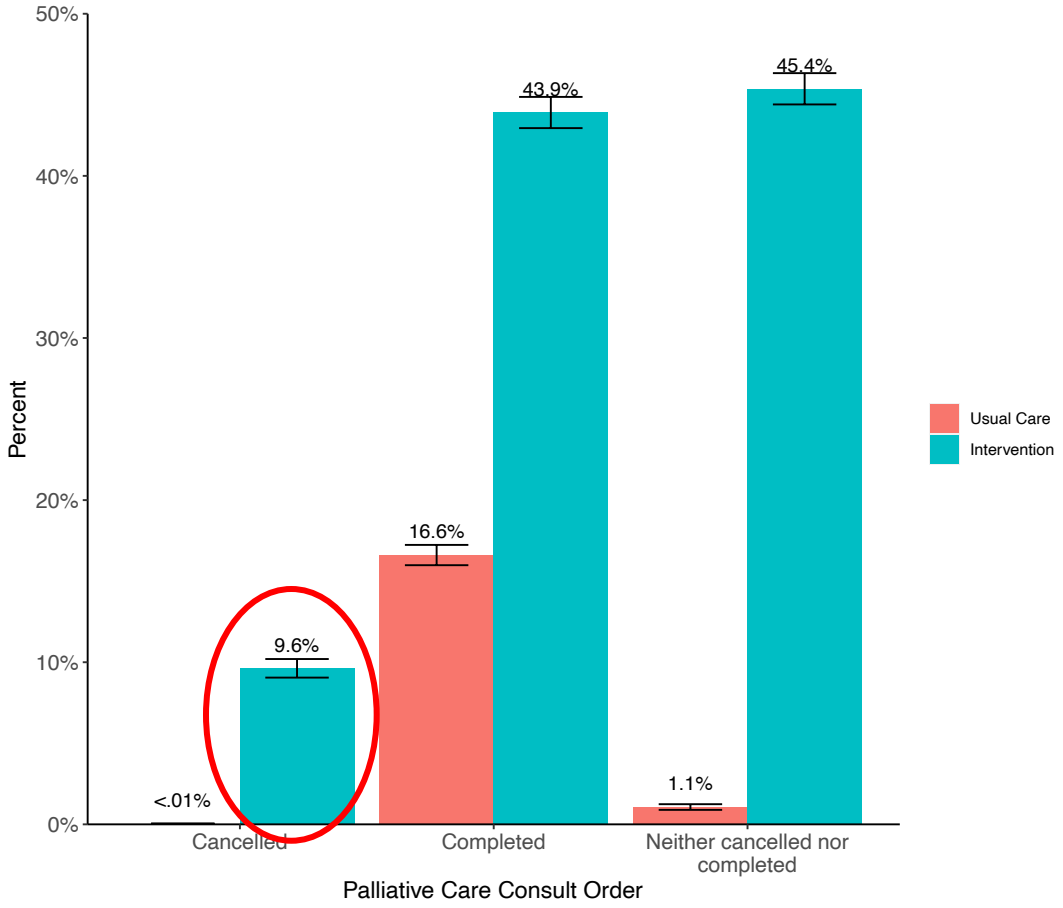
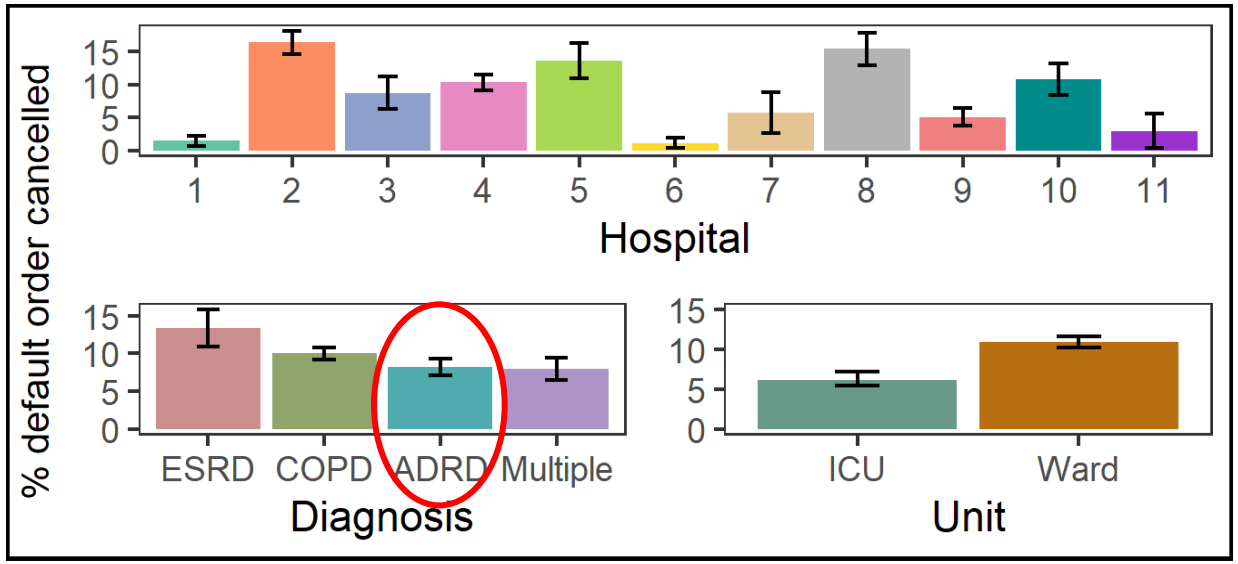
Courtright KR et al. manuscript under review 2023

Default strategy was highly acceptable to clinicians and patients: Intervention delivery adherence challenges





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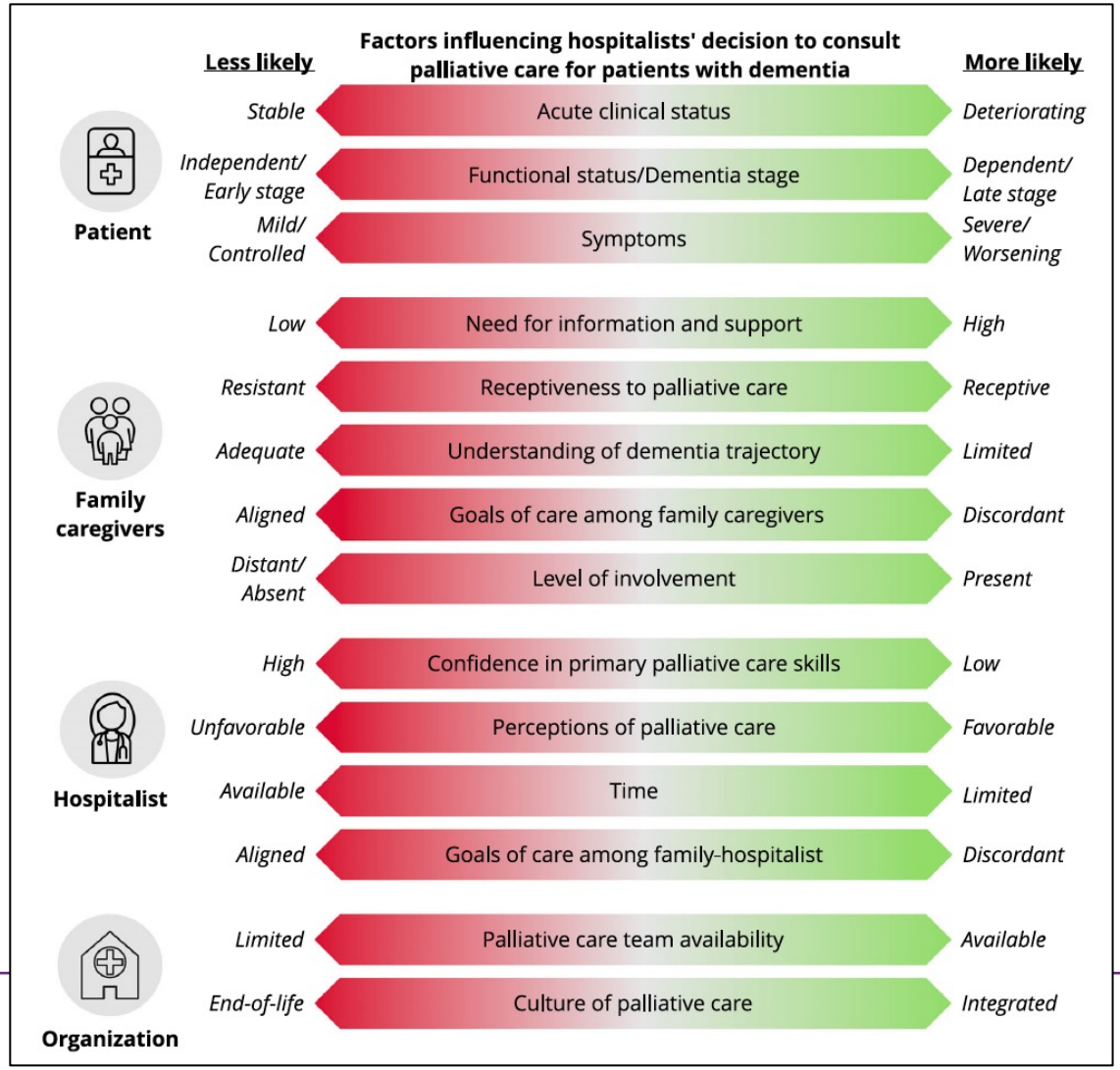
Courtright KR et al. manuscript under review 2023

Hospitalists' perspectives on palliative care consultation for patients with advanced ADRD

Consolidated Framework for Implementation Research (CFIR) Individuals Domain:
Roles Subdomain: Applicable to the implementation and their location within the inner and outer settings.

- Embedded qualitative study within the REDAPS trial to understand implementation context
- Semi-structured interviews with **29 hospitalists at 7 REDAPS trial hospitals** regarding their perspectives on and decision-making for palliative care consultation for hospitalized patients with advanced ADRD.

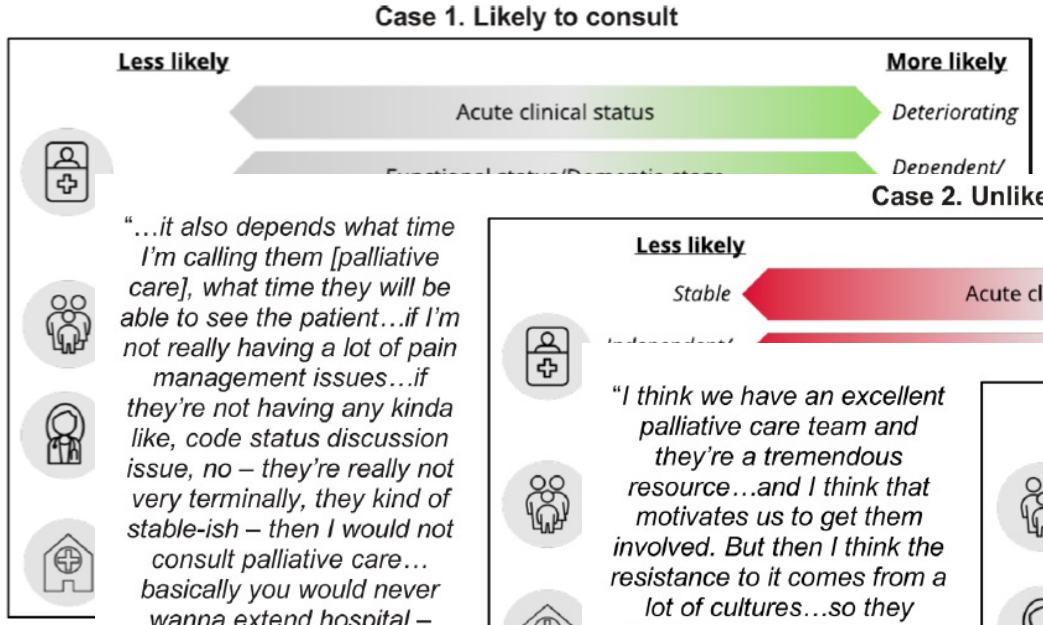


Courtright KR et al. JAGS. 2020

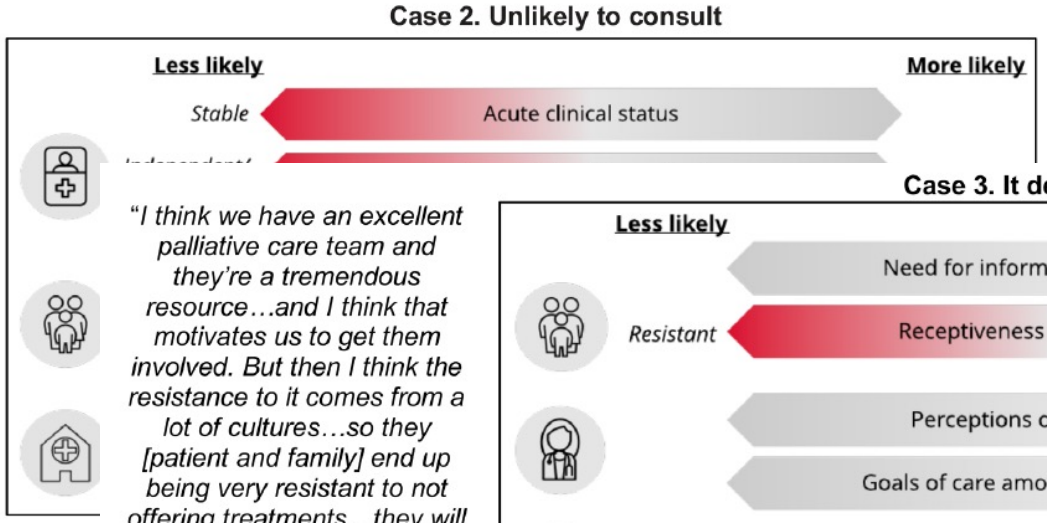
"I Don't Have Time to Sit and Talk with Them": Hospitalists' Perspectives on Palliative Care Consultation for Patients with Dementia

Katherine R. Courtright, MD, MS,[*†‡§†] *Trishya L. Srinivasan, BA,*[*†] *Vanessa L. Madden, BS,*[*] *Jason Karlawish, MD,*[†§¶‖**] *Stephanie Szymanski, BA,*[*] *Sarah H. Hill, PhD,*[††] *Scott D. Halpern, MD, PhD,*[*†‡§¶] *and Mary Ersek, PhD, RN*[§‖‡‡§§¶¶]

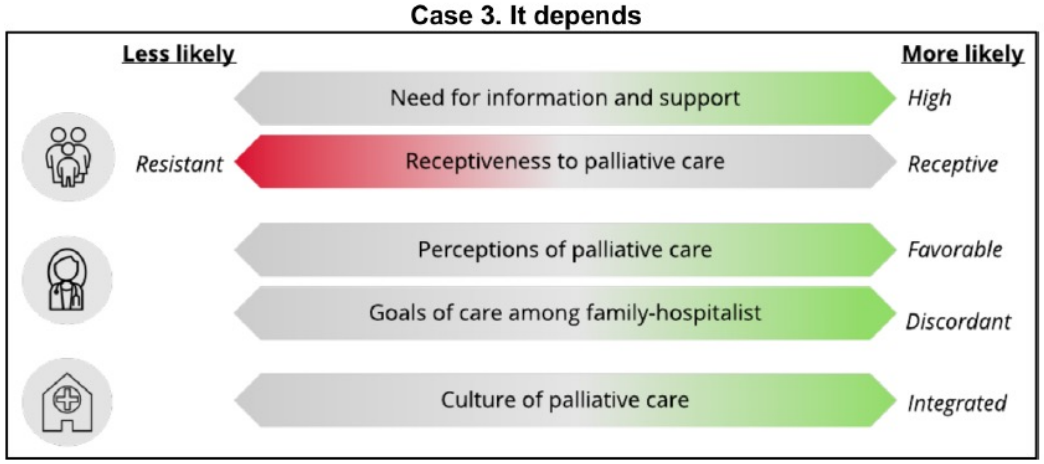
"I have a patient last week who had dementia and was pretty unaware of her situation…she had acute cholecystitis and was not a surgical candidate…and so in that scenario I used palliative care consult for lots of different reasons…help with goals of care…as well as kind of symptom management… helping to set limits…it was really helpful to have a team I think for the family to help with all those complex decision-making." [H10, F]



"…it also depends what time I'm calling them [palliative care], what time they will be able to see the patient…if I'm not really having a lot of pain management issues…if they're not having any kinda like, code status discussion issue, no – they're really not very terminally, they kind of stable-ish – then I would not consult palliative care… basically you would never wanna extend hospital – acute care hospitalization for palliative need." [H20, F]



"I think we have an excellent palliative care team and they're a tremendous resource…and I think that motivates us to get them involved. But then I think the resistance to it comes from a lot of cultures…so they [patient and family] end up being very resistant to not offering treatments…they will be very resistant to even talking about end of life or palliative." [H28, F]



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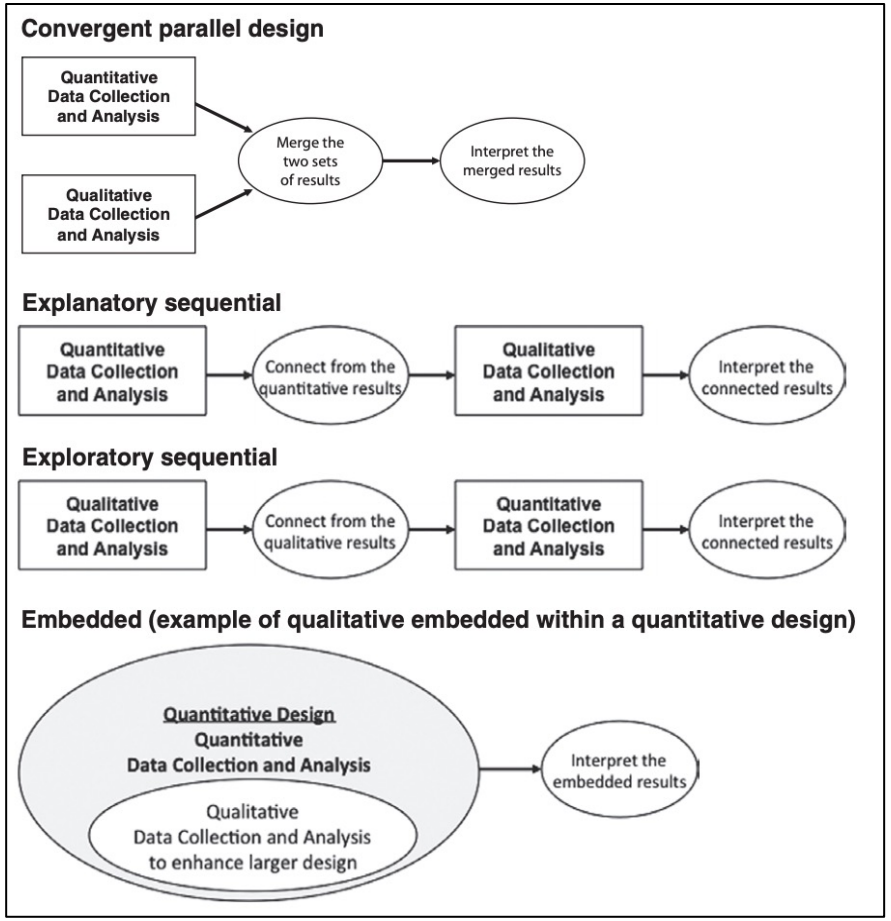
Courtright KR et al. JAGS. 2020

Qualitative research and hybrid trials offer opportunities to enhance knowledge translation from PCTs

- Determine whether intervention delivered as intended, why or why not
- Understand why an efficacious intervention was or was not effective
- Forecast patterns of heterogeneity to inform subgroup analyses
- Richly describe implementation context at multiple levels
- Inform decision to discontinue a comparator arm

	Hybrid Type 1	Hybrid Type 2	Hybrid Type 3
Primary aim	Determine effectiveness of an intervention Understand context of implementation	Determine effectiveness of an intervention Determine feasibility and/or potential impact of an implementation strategy	Determine impact of an implementation strategy Assess clinical outcomes associated with implementation
Implementation aim	Secondary aim	Co-Primary aim	Primary aim



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Curran GM et al. Med Care. 2012

Reflections from first PCT in palliative care

- Stakeholder buy-in and input from all implementation roles is key for conducting a successful PCT
- Predictive enrichment of target population benefits all stakeholders and evidence-generation
- Fully embedded screening and enrollment procedures mitigate selection biases and clinician burden
- Broad secondary outcomes needed to tell a more complete story about real-world study impacts
- Intentional, embedded qualitative studies provide rich insight for interpretation of trial findings
- Implementation challenges are guaranteed; prepare to be nimble (form vs function)

Palliative Connect Trial

R01AG073384 NCT05502861

Hybrid type 1 effectiveness-implementation trial comparing usual care vs active choice nudge for clinicians to provide primary or specialist palliative care among hospitalized adults at high risk of death within six months.

Penn Medicine

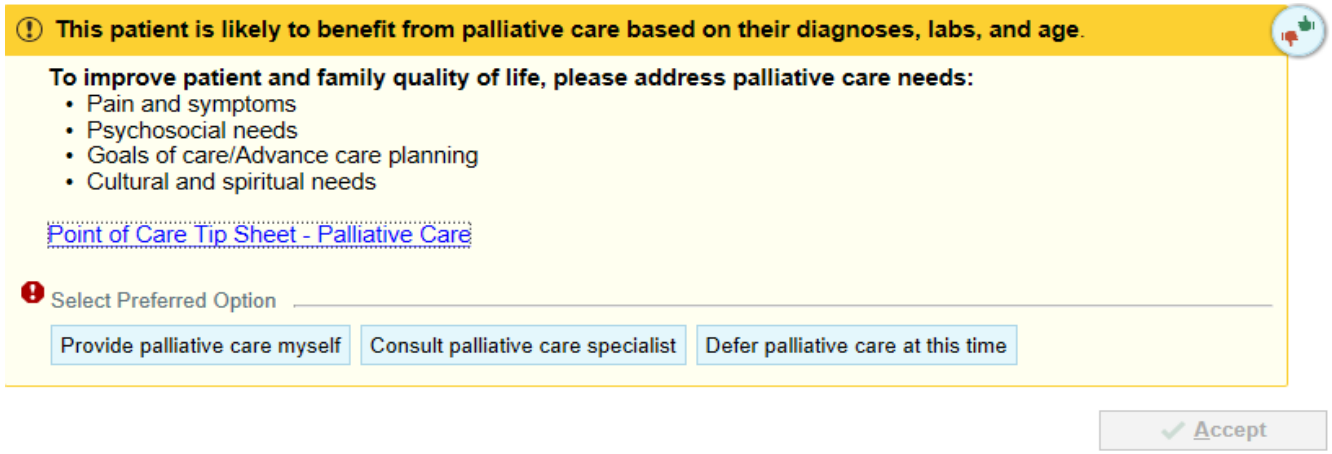
cluster	Nov '23	+15wks	+30wks	+45wks	+60wks	+75wks	+90wks
1	control	treatment	treatment	treatment	treatment	treatment	treatment
2	control	control	treatment	treatment	treatment	treatment	treatment
3	control	control	control	treatment	treatment	treatment	treatment
4	control	control	control	control	treatment	treatment	treatment
5	control	control	control	control	control	treatment	treatment
6	control	control	control	control	control	control	treatment

Embedded EHR Screening and Enrollment

- Machine learning prognostic model integrated into EHR
- Eligibility: age ≥18yrs + predicted 6-month mortality risk ≥40%
- Projected N=16,000 eligible encounters
- Enrollment ~7am on 2nd full hospital day

Embedded Intervention and Data Collection

- Nudge delivered via BPA upon chart open (clinician role targeted)
- Primary outcome hospital-free days through 6 months
- Secondary outcomes: PC processes of care, economic, and clinical
- Automated PROs among random subset via digital research platform



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Courtright KR et al. J Gen Int Med. 2019

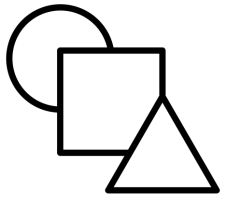
Form vs Function in Palliative Connect trial implementation

Core Functions and Forms of Complex Health Interventions: a Patient-Centered Medical Home Illustration

Mónica Perez Jolles, PhD, MA[1], Rebecca Lengnick-Hall, MSSW, MPAff[1], and Brian S. Mittman, PhD[2]

Core functions are an intervention's fundamental purposes to reach intended goals. Fidelity assessed at this level.

Nudge received by clinician(s) primarily responsible for patient's inpatient medical decision-making



Forms are the strategies used to meet each of an intervention's core functions. Customize or tailor to local context and population.

Tailored nudge delivery to local hospital culture for designating primary inpatient clinician team roles in the EHR

It takes a village!

Bethany Sewell, MSW
Project Manager

Brian Bayes, MS, MBBI
Data Manager

Corinne Merlino, BS
Research Coordinator

Casey Whitman, MS
Data Analyst

Michael Harhay, PhD
CRT Methodologist and Statistician

Colin Wollack, MS
Epic Analyst

Tamar Klaiman, PhD
Qualitative Researcher

<u>Co-Is and Consultants</u>:
Scott Halpern, PhD
Judy Shea, PhD
Fan Li, PhD
Norma Coe, PhD
Susan Regli, PhD

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Questions?