

Individualizing the system: Incorporating patient values into primary care for Veterans with multimorbidity

Preliminary Career Development Award Findings

PCAT Cyberseminar

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VA



U.S. Department
of Veterans Affairs

PRIMARY
CARE
ANALYTICS TEAM

Disclosures

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- Primary Care Analytics Team (PCAT), funded by the Veterans Health Administration National Office of Primary Care.



PART 1 – BACKGROUND

- Why values are important
- Current ways being integrated
- What is still unknown



PART 2 – PRELIMINARY FINDINGS

- Patient perspectives
- Values in routine care
- Future directions

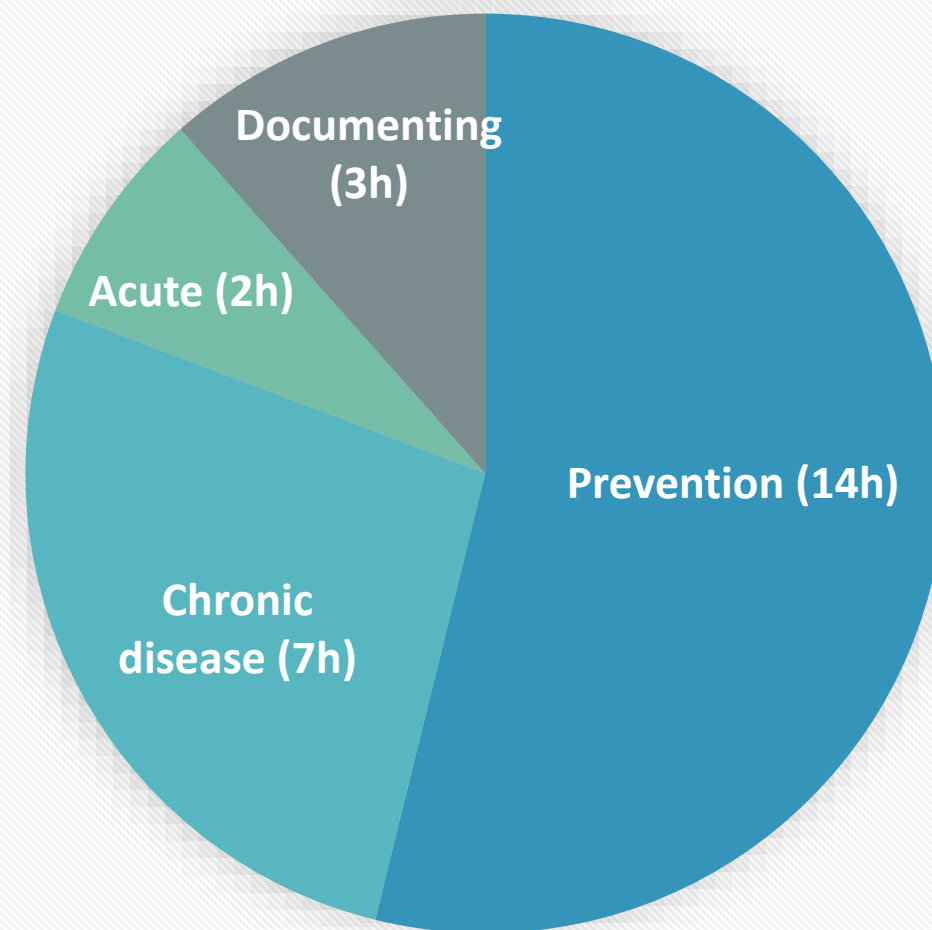
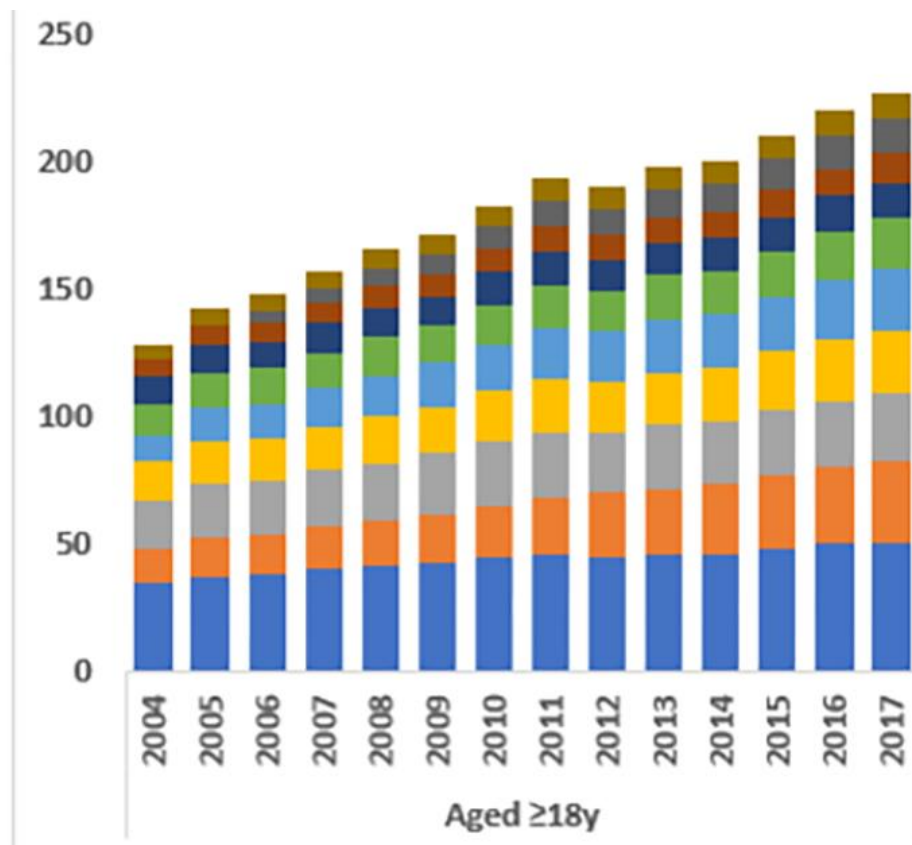
The background of the slide is a close-up, shallow depth-of-field photograph of several rolled-up newspapers. The papers are stacked and slightly overlapping, with their edges and folds clearly visible. The colors of the newspaper pages are muted, showing shades of grey, white, and some hints of blue and red from the mastheads or advertisements. The lighting is soft, creating a textured and layered appearance.

Part I: Background

Multimorbidity is now the norm

- Multimorbidity = multiple chronic conditions
- Globally, prevalence ~ 33%
 - Age, female sex, socioeconomic deprivation
- In US, > 50% of patients

Too much to do, too little time



Tradeoffs are inherent

Explicit

- Agenda setting
- Deferring tasks to outpatient
- Task allocation / division by team role
- Rotation of prevention screening focus
- Quality metrics, P4P

Implicit

- Misalignment of care goals
 - 54% clinicians can identify what disease most concerning to patient
- Patients = symptoms, clinicians = prognosis

Patient-centered care

Meets patient's specific needs,
values, and beliefs



Health values:

What is meaningful and important for well-being and health, generally stable despite context, but may change over time.

Maintaining independence during aging.

Health priorities and goals:

Context-dependent, desired outcomes for healthcare intervention.

Being able to ambulate after physical therapy.

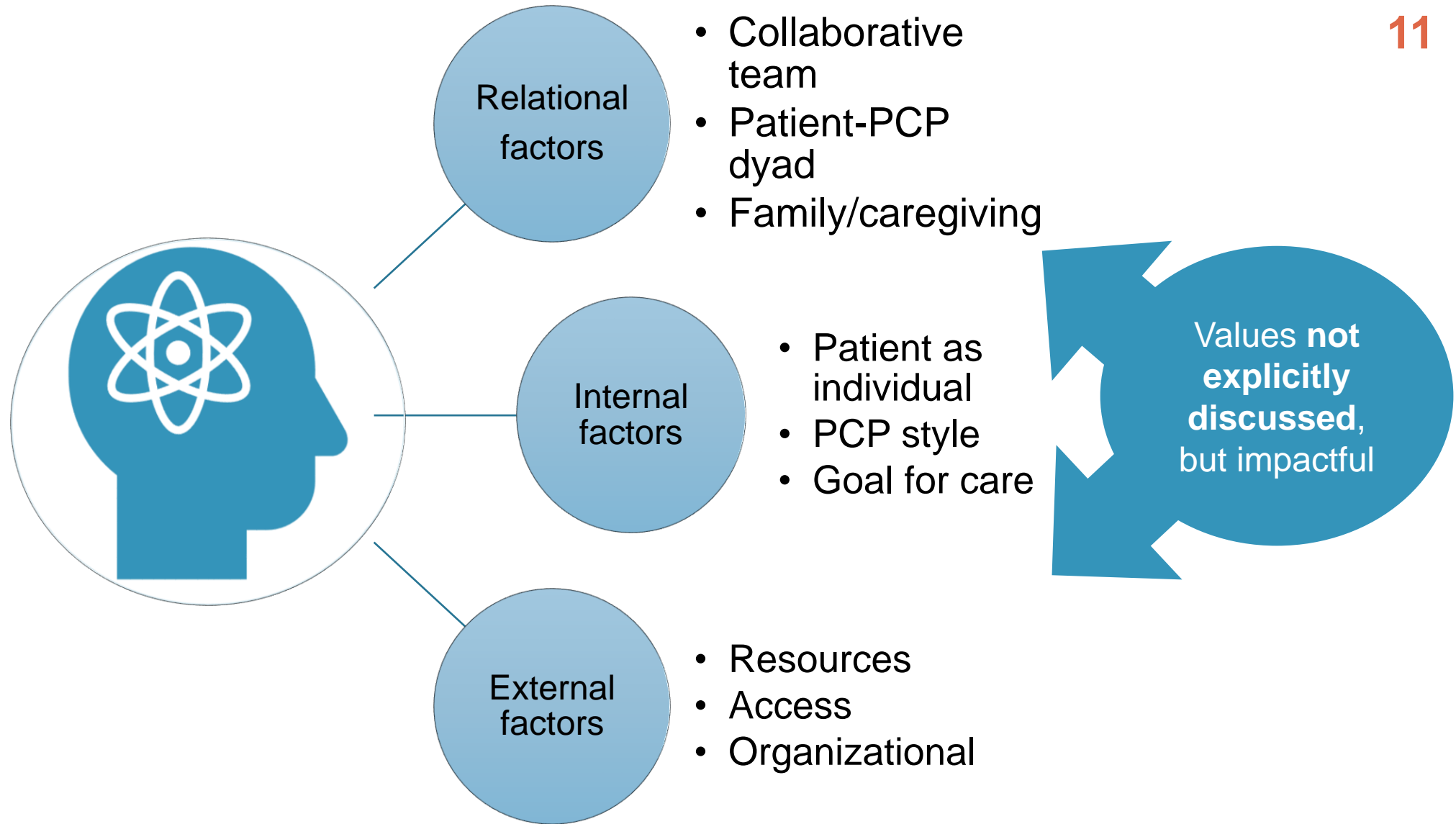
Health preferences:

Desired treatments or interventions acceptable, based on context and health goals.

Avoiding use of wheelchairs.

Values:
What is
meaningful &
important to
health and
well-being

Domain	Definition	Examples	%
Principles	Standards or virtues	Spirituality, independence	42%
Relationships	Connections with others	Family, friends	63%
Emotions	Feelings or moods	Accomplishment, comfort	66%
Activities	Pursuits (work or leisure)	Reading, meals	66%
Abilities	Physical or mental capacities or skills	Mental sharpness, mobility	61%
Possessions	Tangible things owned or cherished	'55 Chevy, house	34%



Systemic incorporations of values

- **VA Whole Health**
- **CMS**
- **IHI 4M's**
- **NCQA**
- **Patient Priorities Care**

VA: Whole Health

What & How:

System “cultural transformation”

- Values elicited primarily through self-reflection or open-discussion tool (PHI)
- Minimal explicit care plan guidance

Evidence base:

- Quasi-experimental or observational data
- Largest evidence in chronic pain, mental health

Live Whole Health.



PERSONAL HEALTH INVENTORY

Use this circle to help you think about your whole health.

- “Me” at the center of the circle: This represents what is important to you in your life, and may include your mission, aspirations, or purpose. Your care focuses on you as a unique person.
- Mindful awareness is about noticing what is happening when it happens.
- Your everyday actions make up the green circle. Your options and choices may be affected by many factors.
- The next ring is professional care (tests, medications, treatments, surgeries, and counseling). This section includes complementary approaches like acupuncture and yoga.
- The outer ring includes the people, places, and resources in your community. Your community has a powerful influence on your personal experience of health and well-being.



Rate where you feel you are on the scales below from 1–5, with 1 being not so good, and 5 being great.

Physical Well-Being	1 NOT SO GOOD	2	3	4	5 GREAT
Mental/Emotional Well-Being	1 NOT SO GOOD	2	3	4	5 GREAT
Life: How is it to live your day-to-day life?	1 NOT SO GOOD	2	3	4	5 GREAT

What matters most to you in your life right now? Write a few words to capture your thoughts:

Centers for Medicare & Medicaid Priority Measures, CPC+ (2017-2022)

What & How:

Reimbursement model included:

- Longitudinal care management
- Patient engagement processes
 - Shared decision making
 - Advance care planning
 - Health coaching and motivational interviewing

Evidence base:

- Low uptake (staffing, buy-in, complexity)
- Low patient perception of involvement

Building Value-Based Care and Advancing Health Equity



Institute for Healthcare Improvement: 4M's (2016 -)

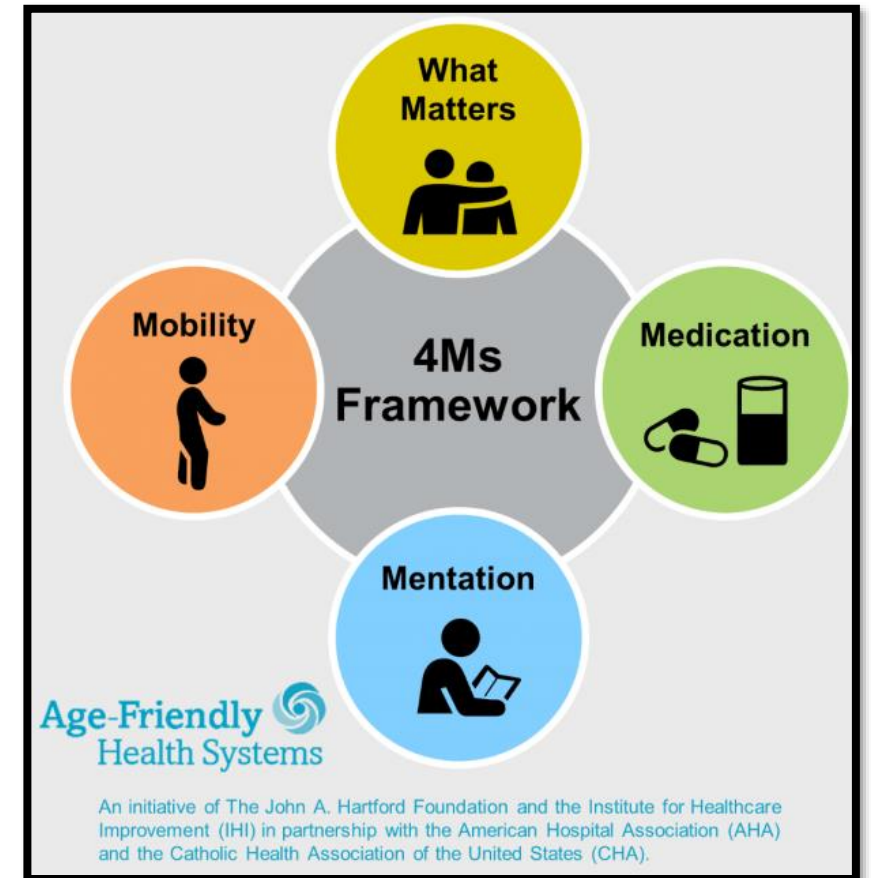
What & How:

Theoretical framework to use in care

- Applied esp. to older adults
- Suggested uses (e.g., annual visit)
- No preferred role for who elicits, open discussion
- No specifics on how to use in care plan

Evidence base:

- Broad evidence
- Limited generalizability for 4M's specifically



National Committee for Quality Assurance Measuring What Matters Most (2018 -)

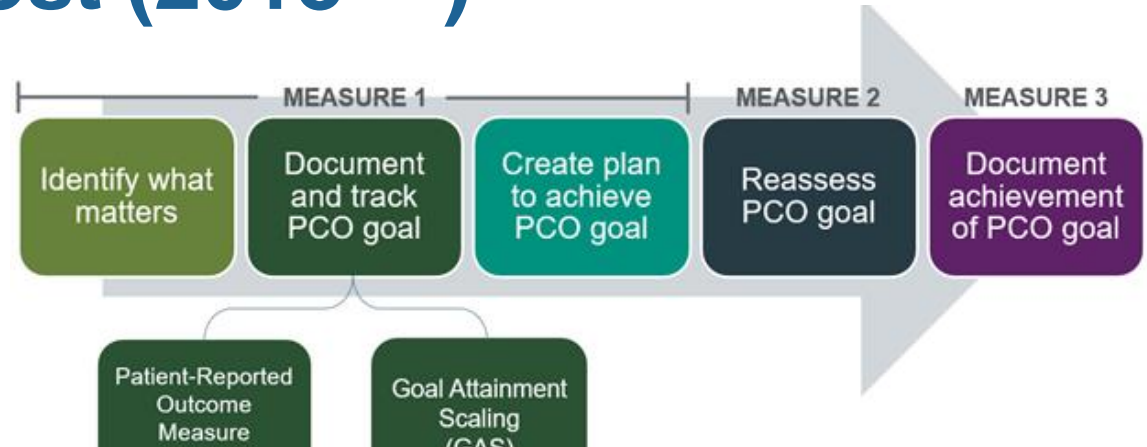
What & How:

Quality certification process measures

- 2 phase demonstration project
- Patient-reported outcomes measures

Evidence base:

- Feasible, providers liked it, + trust, + communication,
- Concerns: heterogeneity, scope of goal setting, implementation challenges



2018-2020 Testing

<ul style="list-style-type: none"> • Medicaid Case Management • Case Management • Geriatric and Serious Illness Programs 	1309 Individuals
	103 Clinicians
	13 Sites

2021-2024 Testing

<ul style="list-style-type: none"> • Home Based Primary Care • Certified Community Behavioral Health Clinics • Area Agencies on Aging • Care Coordination Organization 	5000+ Individuals
	180+ Clinicians
	17 Sites

Clinician Types: RN, NP, SW, MD, CHW, Peer Navigator, Care Manager, Qualified Mental Health Professional, Counselors, Licensed Therapists

Patient Priorities Care

What & how:

Research care model

- Applied to older adults with MCC
- Elicitor is advanced practitioner
- Values as prompted + open-discussion
- Some limited guidance on use in care plan

Evidence base:

- Non-randomized, matched trials
- Randomized trial underway
- Mixed evidence: shared decision-making, treatment burden, medications stopped



What is still unknown



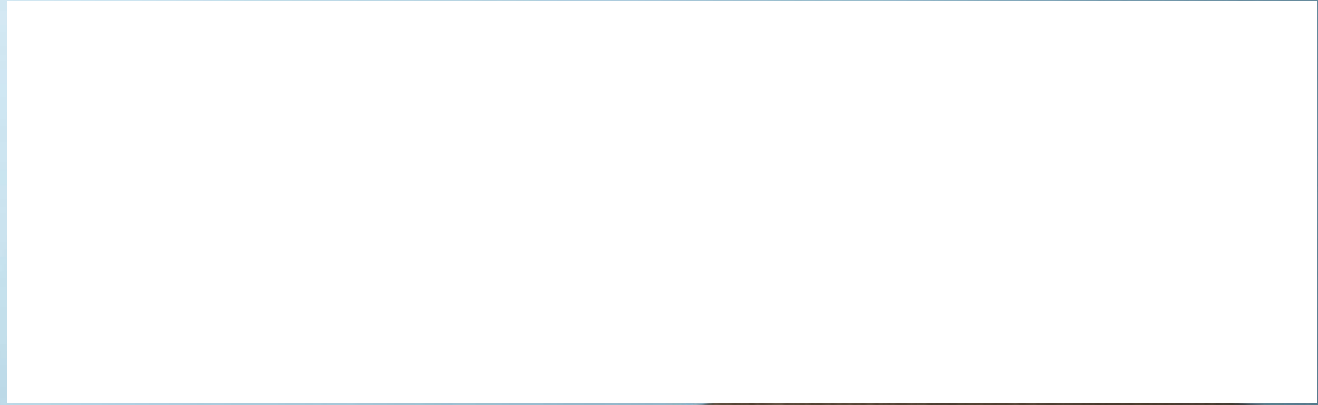
When & how do patients think about values during health decisions?



Can values guide explicit tradeoffs in routine care?



How to reconcile values into clinically actionable care?



VA



U.S. Department
of Veterans Affairs

- Objective: To improve patient-clinician alignment on what is important and how to address tradeoffs in tasks/needs.

Veterans with $\geq 75\%$ risk of hospitalization (CAN) / 1 y
 ≥ 2 chronic diseases

- Personal values - What is most important to your well-being and health

Categories of meaningful principles, emotions, possessions, relationships, abilities, or activities

What is still unknown



When & how do patients think about values during health decisions?

Aim 1. Understand how and when Veterans with multimorbidity connect values to health and healthcare decisions.



Can values guide explicit tradeoffs in routine care?

Aim 2. Examine how VA ambulatory quality metrics align with, and can support Veteran priorities and values.

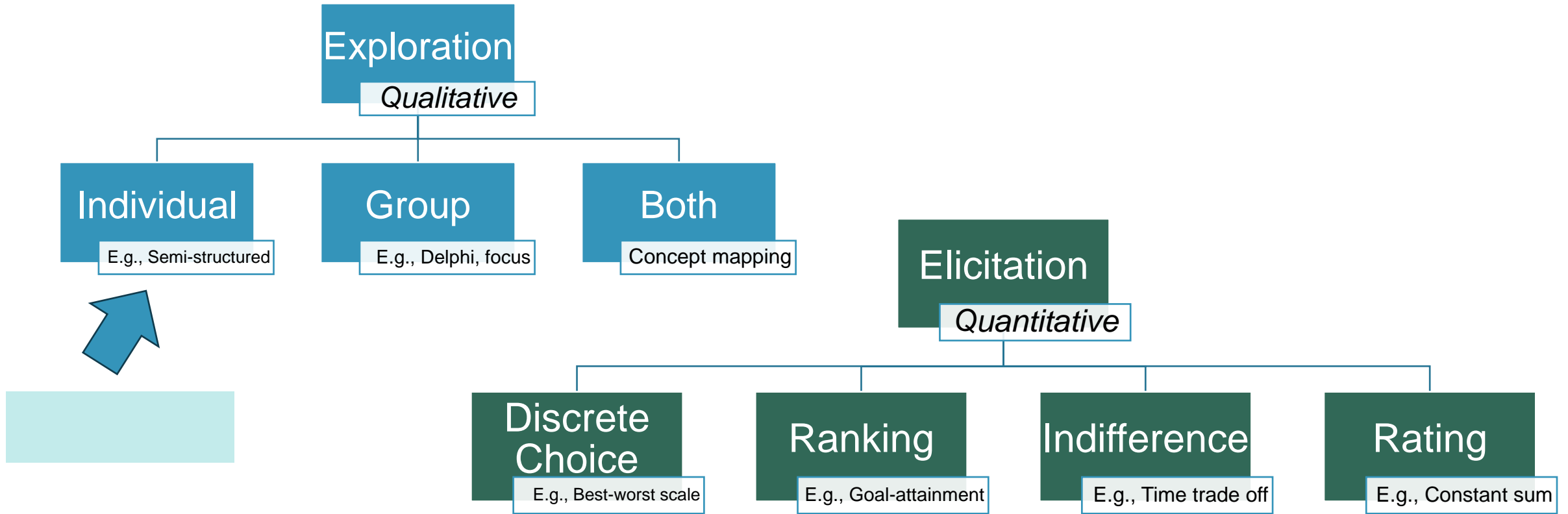


How to reconcile values into clinically actionable care?

Aim 3. Refine and pilot test the acceptability and feasibility of “Vet-Align”, a primary care intervention for Veterans with multimorbidity.

*Aim 1:
Patient Perspectives*

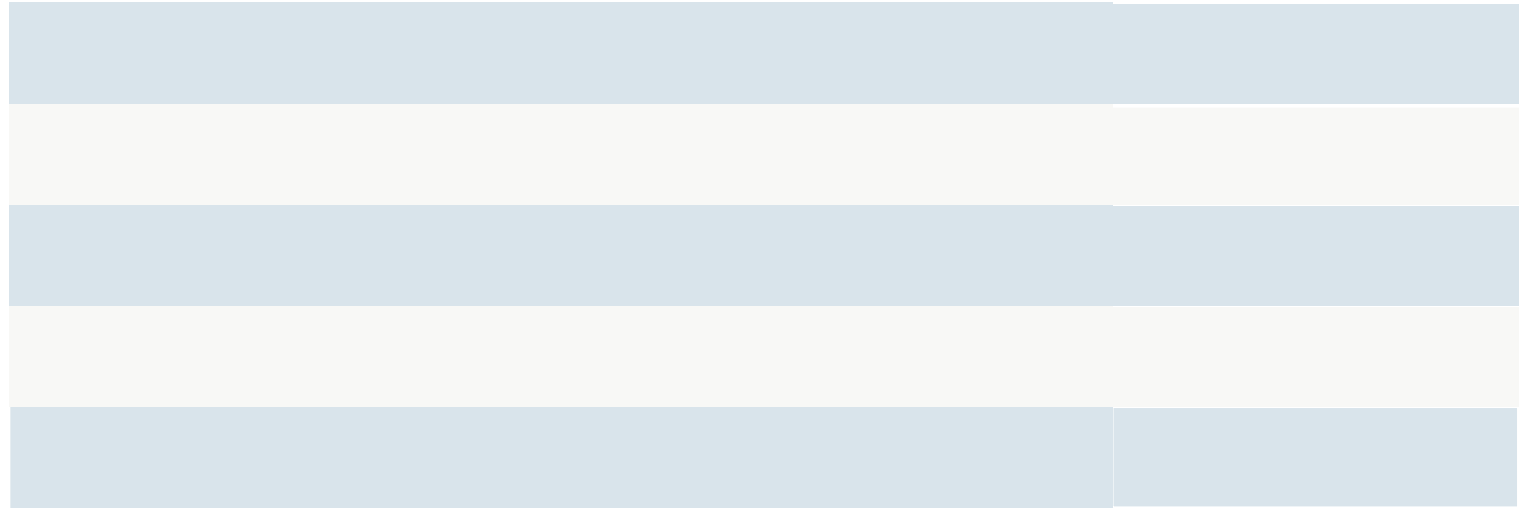
“How asked” is important



Methods

- Patients: $\geq 75^{\text{th}}$ CAN for hospitalization risk (1y)
 - Multimorbid (≥ 2 : depression, diabetes, hypertension, kidney disease)
- Mailed pre-interview worksheet (self-reflection) to prepare
- Individual, semi-structured 30-60m interviews (virtual)
 - 2-member interviews for fidelity at onset
- 15Q interview guide
- Inductive & deductive content analysis
 - Deductive: values framework, limited terms
 - Atlas.ti, Excel supported

27
Participants



Theme 1) Personal values are rarely discussed in healthcare settings or reflected in healthcare decision-making



Feeling that doctors don't have the time, topic is not as high-priority

"We don't have time for it. I've got to deal with my medical issues rather than [that]. These poor doctors are overworked." P12.



Feeling values not relevant.

"[My value] was never really brought up. [...] To tell you the truth, I never really thought of it much." P19.



Especially for patients with pain or depression.

"These are things I haven't really thought about, [...] I don't think about much other than the pain." P06.

Theme 2) Patients perceive “what matters” as relevant only for select health contexts or choices



Symptoms, not values, drive the majority of decisions

“I decided I’m not going back to have that done, because that was too much pain.” P06.



Values relate to some specific decisions: surgery choices, high-risk medications, stopping medications (esp. pain)

But not others: daily medicines



Veteran-specific values and alignment with Veteran identify

“I think for a lot of Veterans, we don’t like to be an inconvenience, or feel like an inconvenience.” P11.

Theme 3) Talking about values can help or harm, depending on who, how, and where discussed



Discussions can help personalize care and improve decision-making

"I would have liked to have [discussed it], yes, because I would have questions, I would have gone, 'do I really wanna do this?'" P19.



Some Veterans feel conditions on how to share, and values discussions not always wanted

P05: *"No, we didn't talk about [values]".* Interviewer: *"Is that something you would have liked to have been able to talk about with your doctor?"* P05: *"Not necessarily."*



If pressed to disclose, or inaction after brought up, some will disengage

"I didn't talk with my doctor about it because it got me so upset about hurting that I just quit going to that doctor." P06.

Alignment with similar studies



Most helpful during uncertainty, choice



Variation in ability to articulate, receptivity



Timing important



Facilitation requires trust

Operational Applications

- ✗ Avoid as “check-box”
- ✗ Avoid time pressure
- ✗ Less helpful for routine visits
- ✗ Avoid pressing

- ✓ High-impact decisions
- ✓ Feeling “known”
- ✓ May need trusted staff
- ✓ If broach, reflect in care plan
- ✓ If Veteran, recognize “identity”

Conclusions

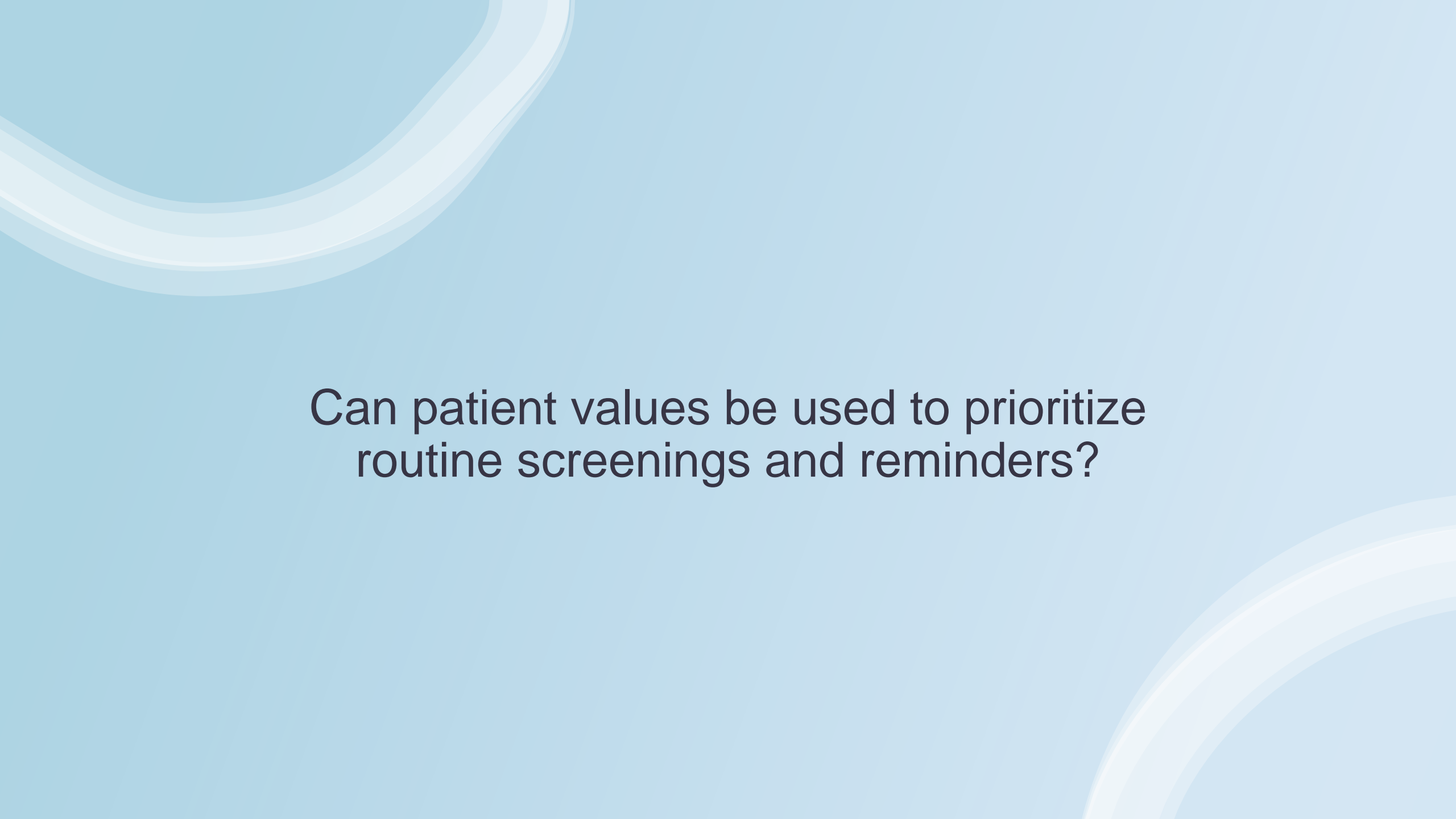
Asking is impactful

- Aligning goals
- Clarifying treatment decisions
- Understanding motivation
- Contributes to patient-centeredness

But matters...

- **HOW**
- **WHERE**
- **WHEN**
- **WHO**

*Aim 2:
Value-aligned
tradeoffs*



Can patient values be used to prioritize
routine screenings and reminders?

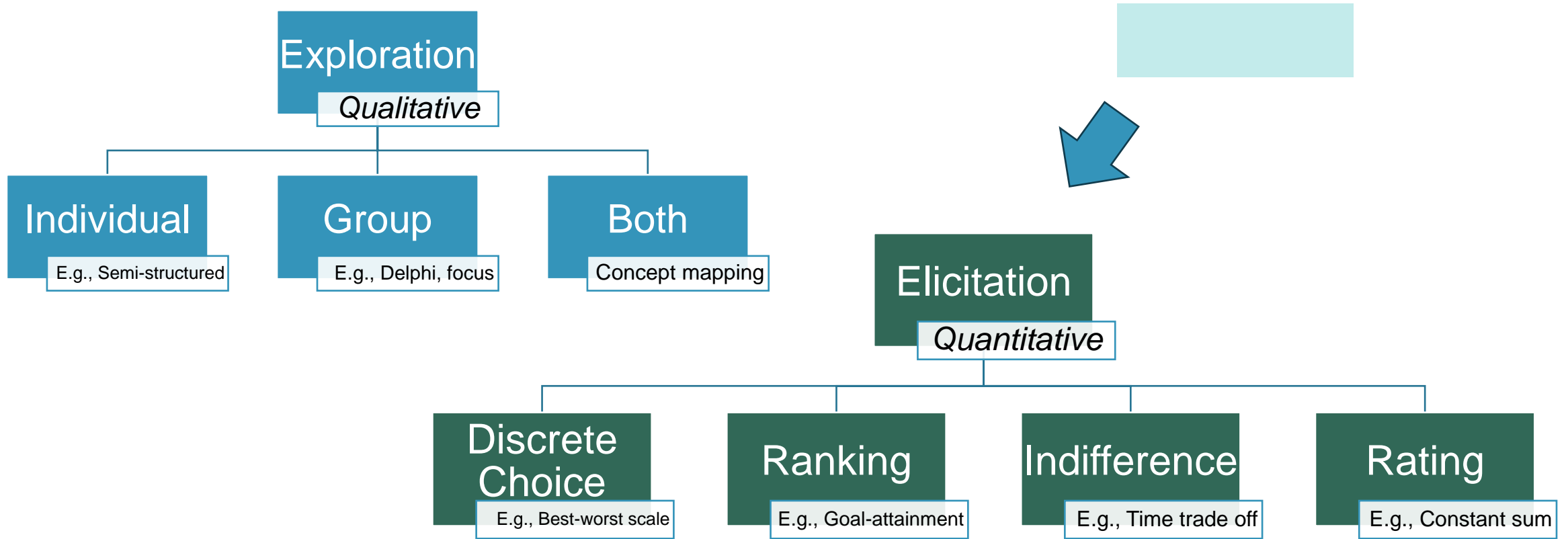
Trade-offs = deliberately prioritizing

- History:

- Oregon Medicaid coverage prioritization
- World Bank - cost-effectiveness review
- Committee on Preventative Services Prioritization / National Commission for Prevention Priorities
 - Select criteria to consider → review evidence to score → combine criteria to compare items
 - Equal weight to cost effectiveness & clinical preventable burden
- Modern iteration: COVID resource triage scoring

No patient-centered frameworks currently exist for prioritizing between routine screenings / clinical reminders

“How asked” is important



Method selected changes results

- Prostate cancer screen shared decision-making study
- N=911 men (mean age 60y, 1/2 college graduates)
 - Rating test: 54% - reducing death as most important
 - Balance: 35%
 - Discrete choice: 33%

	←—————→					
	Not at All Important					Very Important
	0	1	2	3	4	5
1. The chance of being diagnosed with prostate cancer <u>over 10 y</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The chance of dying from prostate cancer <u>over 10 y</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The chance of having to have a prostate biopsy <u>as a result of screening over 10 y</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Balance Sheet

Please examine the following table or "balance sheet." Consider each feature below. Please select the option that you prefer the most at the bottom of the table.

Feature of Choice	No Screening	PSA Screening
Chance of being diagnosed with prostate cancer <u>over 10 y</u>	40 in 1000	80 in 1000
Chance of dying from prostate cancer <u>over 10 y</u>	4 in 1000	3 in 1000
Chance of having a prostate biopsy <u>as a result of screening over 10 y</u>	0	240 in 1000
Chance of becoming impotent or incontinent <u>as a result of screening over 10 y</u>	0	20 in 1000
My Preference	<input type="checkbox"/>	<input type="checkbox"/>

Comparison 6

Which option do you prefer?

Feature	Option 1	Option 2
Chance of being diagnosed with prostate cancer <u>over 10 y</u>	60 in 1000	40 in 1000
Chance of dying from prostate cancer <u>over 10 y</u>	3 in 1000	4 in 1000
Chance of having a prostate biopsy <u>as a result of screening over 10 y</u>	240 in 1000	0 in 1000
Chance of becoming impotent or incontinent <u>as a result of screening over 10 y</u>	10 in 1000	0 in 1000
	Prefer option 1 <input type="checkbox"/>	Prefer option 2 <input type="checkbox"/>

MCDA for values-clarification

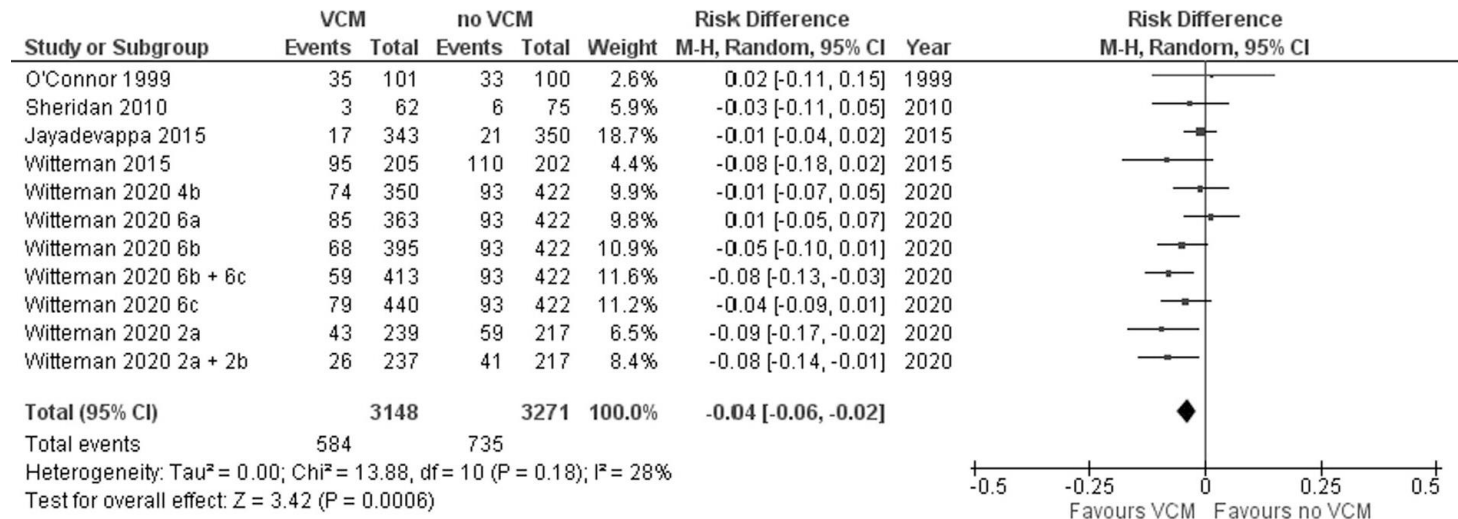
(-) Values-incongruent decisions

(-) Decisional conflict

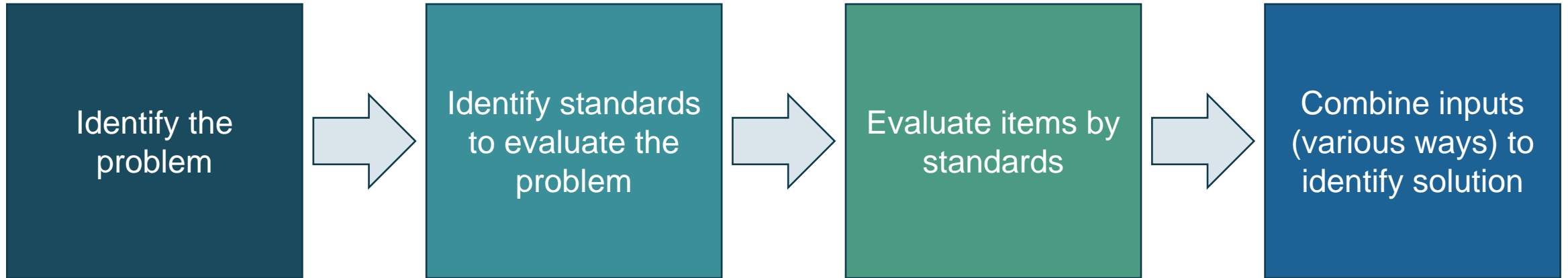
Multi-criteria decision analysis most helpful

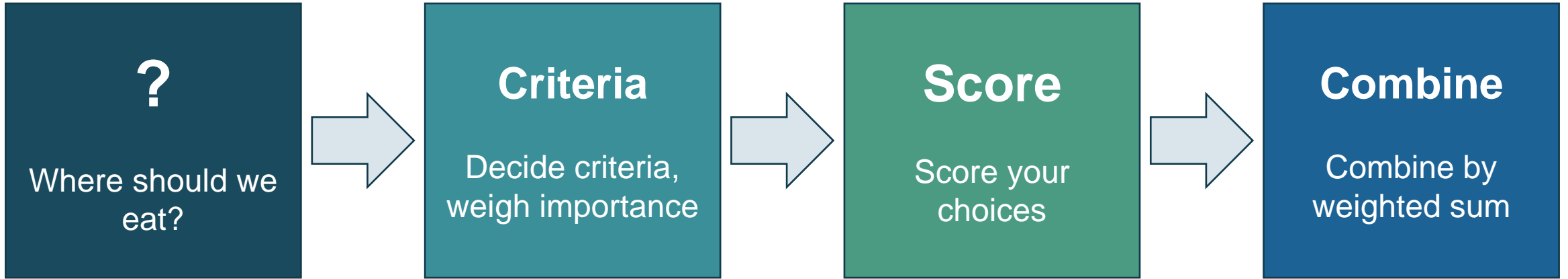
- Vs. pros and cons, rating scale, others

Risk of Values-Incongruent Decisions^{*}: Overall (All Values Clarification Methods Together)



Multi-criterion decision analysis





- 1. Distance? 50%
- 2. Cost? 10%
- 3. Vegetarian? 40%

Tom's Meat Shack

Distance: Next door (10)	x 50%	= 5
Cost: \$\$\$ (3)	x 10%	= 0.3
Vegetarian: None (0)	x 40%	= 0
		SUM: 5.3

Snack Palace

Distance: Far (2)	x 50%	= 1
Cost: \$ (10)	x 10%	= 1
Vegetarian: Some (4)	x 40%	= 1.6
		SUM: 3.6

Methods

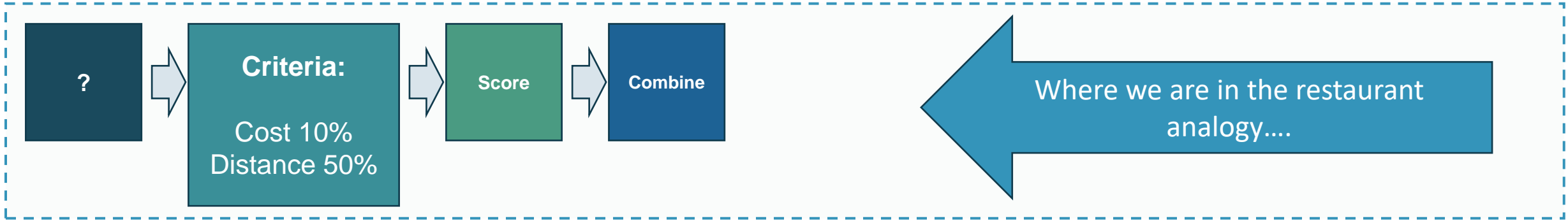
- 2-round survey sent to Topic Experts
 - Round 1 – what criteria are most important when evaluating metrics/reminders for a specific outcome
 - Round 2 – scoring actual metrics/reminders by criteria
- Topic Experts – 10+y expertise, diverse geography
 - Purposeful sampling
- Iterative stakeholder input
 - Veterans
 - Research method consultants
 - National office representatives
 - Local operational partners

3 values-aligned outcomes

- **Physical and cognitive functioning**
- **Mortality**
- **Reduction of symptoms**

Participants

- 21 experts
 - 9 sites
 - 17 Research Investigators
 - 8 Professors
 - 10 Chief/Associates
 - All clinical expertise
- 2 survey rounds
 - 86% response rate/round



What “criteria” reflect if a metric/reminder aligns with a values-oriented outcome?

Experts “distribute” 0-100 points;
More points = more important



Considering outcome of....

Maintaining function	Extending life	Reducing symptoms/pain
-----------------------------	-----------------------	-------------------------------

Round 1:

Criteria & Weights

*3 Versions (1/outcome)
Initial & final criteria selected with stakeholder weigh-in*

To best support “physical function”, metrics/reminders should...

Be directly actionable by clinicians/team

Advance safety and reduce harm to patients

Be highly valid (measuring what they are supposed to measure)

Be grounded in published, high-quality evidence

Reflect high-prevalence health issues (affecting the most patients possible)

Be easy to complete as measurement tasks and/or measured via EHR data

Improve service effectiveness (optimize appropriate care, minimize waste/medical burden)

Contribute to timely, efficient, and accessible care

Be highly reliable (provides same results if measured repeatedly)

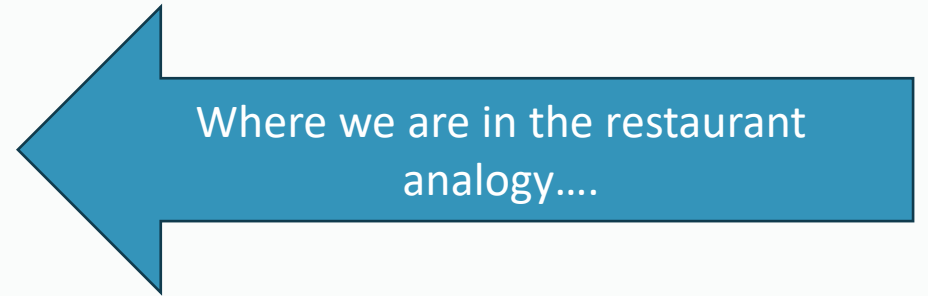
Advance care that is equitable (accurate and fair across patient subgroups)

Reflect shorter-term goals (e.g., process measures)

Reflect longer-term health goals (e.g., outcome measures)

Round 1: Results

Item	Function	Mortality	Symptoms
Actionability	1	4	1
	11	6	2
Validity	6	2	3
	7 (tie)	3	4
High-prevalence health issues	4	1	5
Ease to complete	3	9	6
Improve service effectiveness	12	10	7
	5	8	8
Reliability	10	5	9 (tie)
	7 (tie)	12	9 (tie)
Short-term goals (e.g., processes)	7 (tie)	11	11
	2	7	12



Round 2:

Performance scores

- Experts scored metrics/reminders by final list of criteria
- *Received subset of total metric list (53)*
- *Metrics selected with stakeholders*
- *Given “evidence summary” for reference to use*

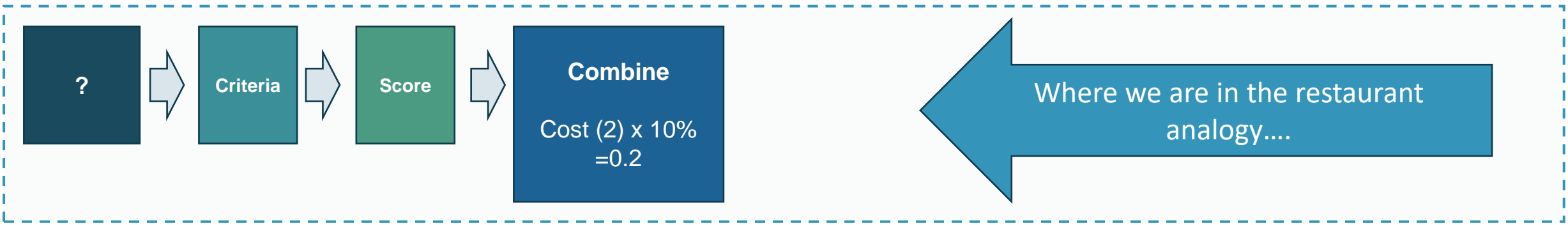
Abdominal aortic aneurysm screening in at-risk patients	
Description	Screening for abdominal aortic aneurysm in men between 65-75 years, who are current or former smokers.
Evidence Discussion	Abdominal aortic aneurysm (AAA) rupture predicts 18%-32% mortality. However, the prevalence of AAA disease has been decreasing, largely due to cardiovascular risk factor management and lower smoking rates.
Level of Evidence & Guideline Source	USPSTF: "B" (moderate benefit).
Prevalence (approx., per 1000)	2.2
Population at Risk	Male US Veterans (age-specific)

To the best of your knowledge, please score the above VHA primary care quality metric and/or clinical reminder, for use with for patients with multiple chronic conditions, according to each of the following properties...

Validity (measuring what it is supposed to measure)

(-5) Not at all valid (-4) (-3) (-2) (-1) (+1) (+2) (+3) (+4) (+5) Highly valid

○ ○ ○ ○ ○ ○ ○ ○ ○ ○



Value Aggregation Model: Direct Weighting, Simple Weighted Sum

- $\text{SUM} [(\text{Mean criteria weight, per outcome}) * (\text{Mean metric score per criteria})]$
- $\text{SUM per Outcome (Mortality, Symptoms, Function)} = \text{Rank per Outcome}$

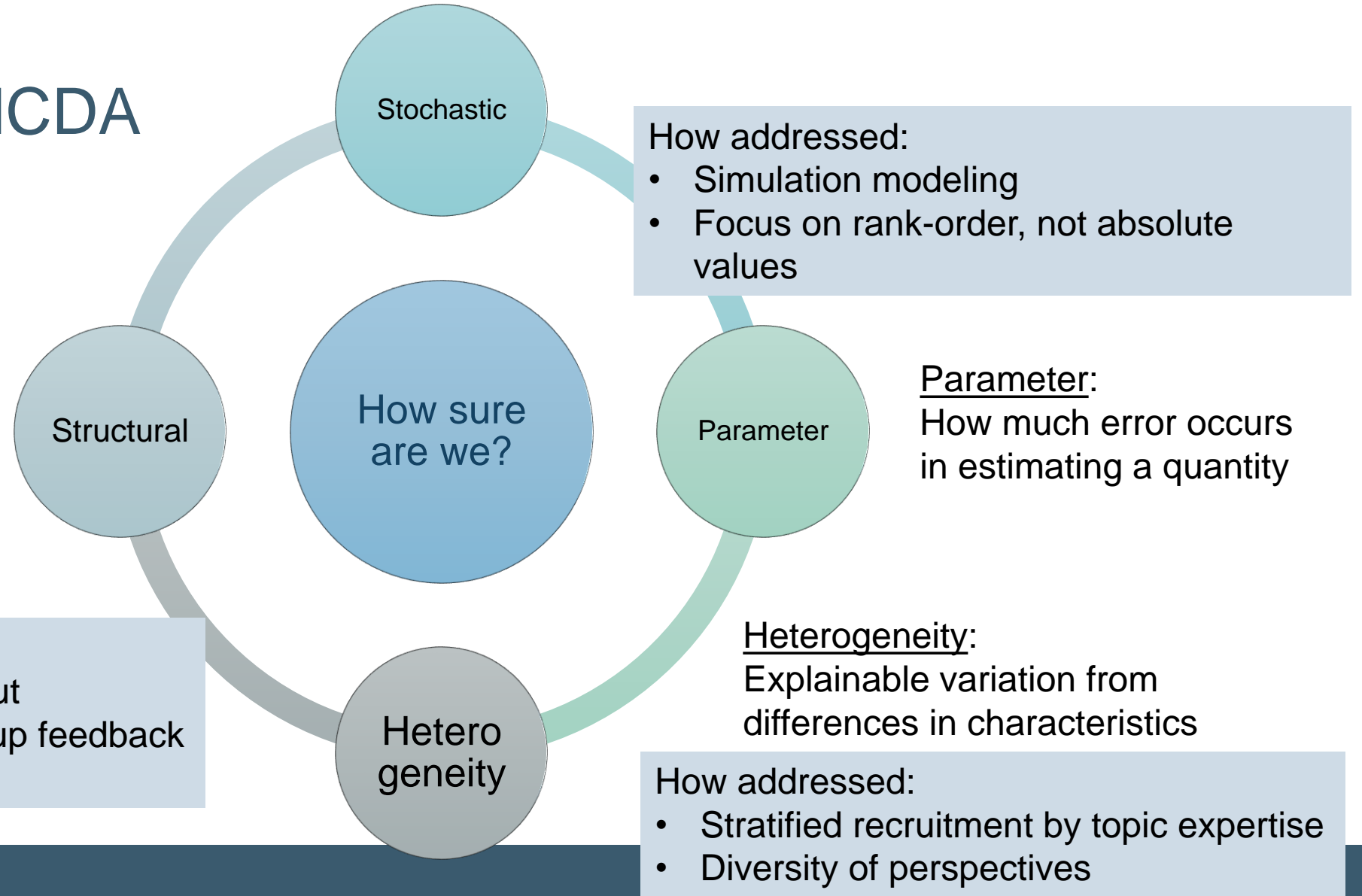
Method Assumptions & Limitations [Technical notes]

- *Criteria are compensatory (if one better, other worse)*
 - *Weights are assumed as value-tradeoffs*
 - *Interval scale properties of scores (10 to 20 is same as 40 to 50)*
- *All respondents given equal weight in answers*
- *Some loss of information expected in scaled categories*
- *Criteria weight elicitation is separate from performance weight (independent)*

Stochastic:

Random variation from among otherwise identical people

Uncertainty in MCDA



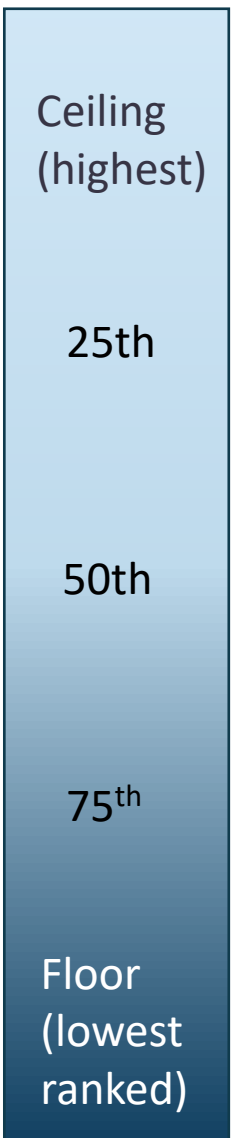
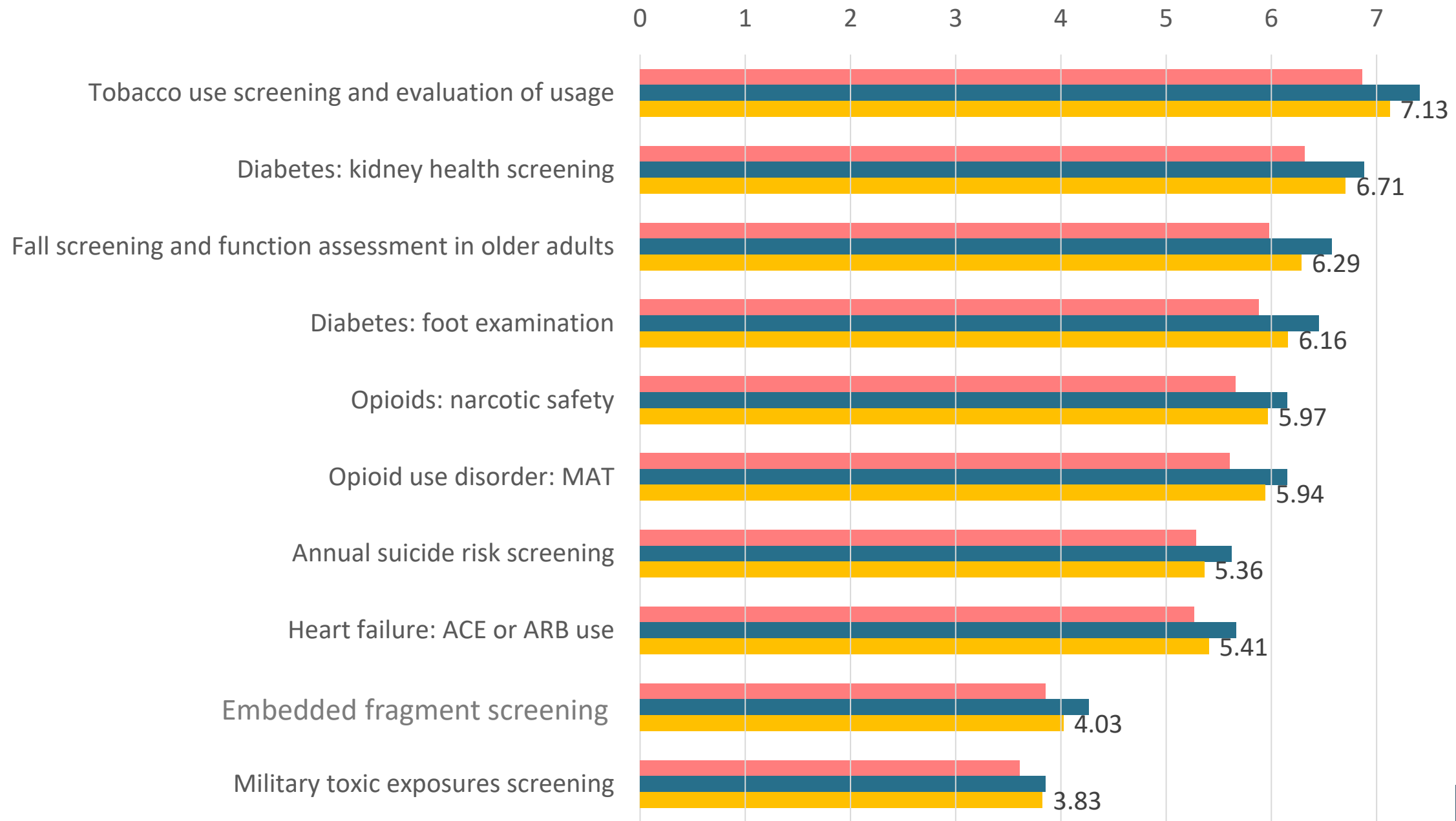
Structural Uncertainty:
Uncertainty from if all relevant pieces included, and how criteria are structured

- How addressed:
- Stakeholder iterative input
 - Patient engagement group feedback
 - Beta-testers

Estimating uncertainty in the results

- Bayesian simulation modeling
 - Overall score (Mean) and variance (SD) creates a probable distribution
 - Randomly sample from that distribution 5,000 times
 - Describe range of simulated potential ranks

**Normal distribution used here for simplicity, but other conditionals may apply in other studies*



■ FUNCTION
 ■ MORTALITY
 ■ SYMPTOMS

Preliminary Results: Function – Top 15

	Mean	SD	Rank	% at +/- 1 of Rank	% of Time in top 15
Tobacco use screening and evaluation of usage	6.86	0.42			
Diabetes: glucose control	6.32	0.40			
Influenza immunization in patients $\geq 65y$	6.31	0.40			
HIV testing in average-risk patients	6.31	0.41			
Diabetes: kidney health screening	6.31	0.35			
Pneumococcal immunization	6.31	0.38			
Depression screening	6.20	0.37			
Tobacco cessation intervention	6.18	0.40			
Hepatitis B immunization in high-risk patients	6.15	0.37			
Blood pressure control in hypertensive patients	6.12	0.33			
Influenza immunization in adult patients $< 65y$	6.10	0.41			
Housing and food insecurity screening	6.09	0.42			
Diabetes: retinal screening	6.05	0.40			
Fall screening and function assessment in older adults	5.98	0.37			
Tobacco use screening and evaluation of usage	5.88	0.38			

Preliminary Results: Mortality – Top 15

	Mean	SD	Rank	% at +/- 1 of Rank	% of Time in top 15
Tobacco use screening and evaluation of usage	7.41	0.69			
Influenza immunization in patients >= 65y	6.92				
Pneumococcal immunization	6.90				
Diabetes: kidney health screening	6.88				
HIV testing in average-risk patients	6.82				
Diabetes: glucose control	6.79				
Hepatitis B immunization in high-risk patients	6.78				
Depression screening	6.73				
Diabetes: retinal screening	6.70				
Influenza immunization in adult patients < 65y	6.69				
Tobacco cessation intervention	6.59				
Housing and food insecurity screening	6.59				
Fall screening and function assessment in older adults	6.57				
Blood pressure control in hypertensive patients	6.53				
Diabetes: foot examination	6.45				

Preliminary Results: Symptoms – Top 15

	Mean	SD	Rank	% at +/- 1 of Rank	% of Time in top 15
Tobacco use screening and evaluation of usage	7.13	0.42			
Influenza immunization in patients >= 65y	6.71				
Diabetes: glucose control	6.63				
Pneumococcal immunization	6.60				
Hepatitis B immunization in high-risk patients	6.59				
Diabetes: kidney health screening	6.56				
HIV testing in average-risk patients	6.56				
Depression screening	6.51				
Tobacco cessation intervention	6.42				
Influenza immunization in adult patients < 65y	6.42				
Diabetes: retinal screening	6.29				
Fall screening / function assessment in older adults	6.29				
Housing and food insecurity screening	6.25				
Blood pressure control in hypertensive patients	6.24				
Cervical cancer screening in eligible patients	6.23				

Conclusions

Outcome matters

- Priority order does vary
- But some consistency (high/low)

And...

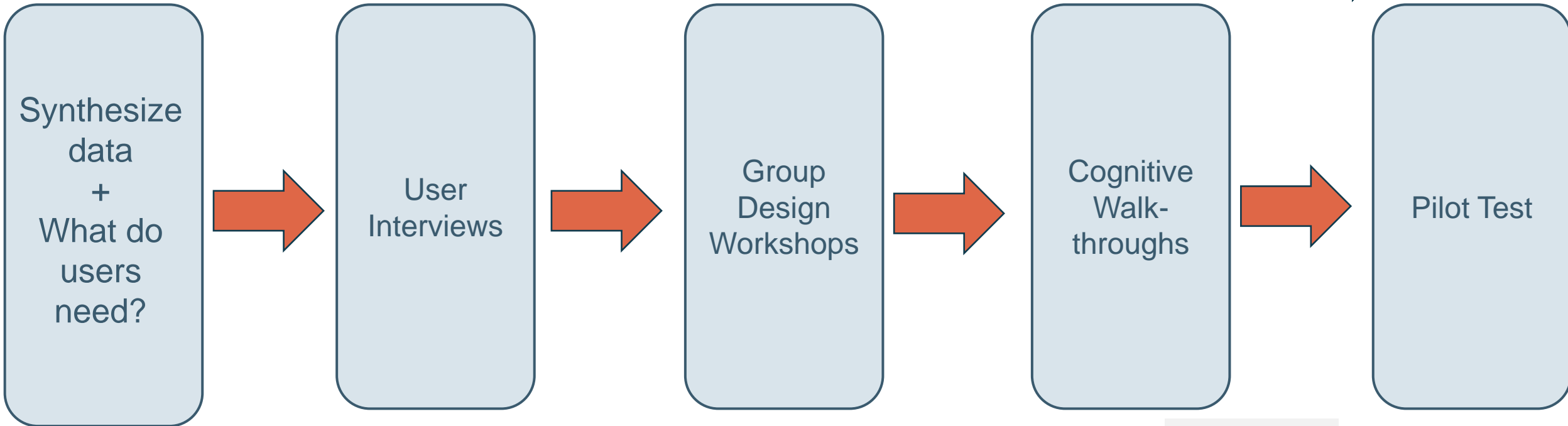
- Criteria important, have independent use
- Validity requires stakeholder input

(Future directions)

Aim 3:

Links to clinical care

Stakeholder & Veteran input & iterative review



- Preliminary literature and guidelines
- Aim 1 & 2 results
- Veteran Engagement Board Feedback
- Patient consultant feedback
- PCP interviews (2020-2021)

Richard
76 years old
Federal Way, WA

Native English speaking
Vietnam Veteran
Retired
Some college
Low technology use
Does not have broadband internet or devices at home

Values

Relationships

- His wife, son, daughter-in-law, and granddaughter are the most important people in his life. His wife is in an extended care facility. He sees his family several times a week.
- Neighbors and friends from the local Veterans group.
- A small dog (8 year old beagle).

Abilities

- Enjoys working on the lawn, in his shop, and golfing.
- Going to the Veterans group for breakfast with his friends.

Environments

- He would like to avoid loneliness and increase comfort.

Routine

Housekeeping Dog walking Golfing Medications Reading

Abilities

- Golfing once a week with his friends and taking his dog for daily walks.
- Vision. He enjoys reading the newspaper and doing the crossword puzzles.
- Mobility to work on lawn, care for his house and work in his shop.

Possessions

- His home he has owned with his wife for 30 years.
- His truck.

Principles

- Independence. He wants to be able to do the things he enjoys without help.

BIO

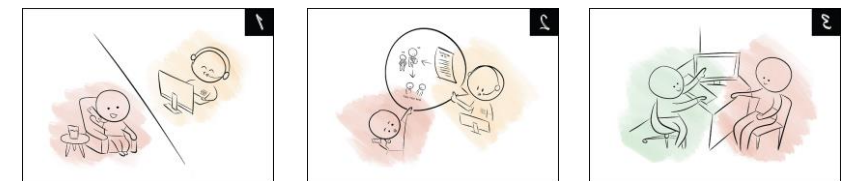
Richard is a 76 year old Vietnam-era Veteran that lives all home by himself with his dog. Three months ago, Richard's wife, Mary, was placed into an extended care facility ready for dementia. Richard visits Mary every day. Their son, Sean, is their only child and lives with his wife and Richard's granddaughter a few miles away.

HEALTH STATUS

Richard is currently managing hypertension, diabetes, depression, arthritis, PTSD, and chronic kidney disease. His arthritis limits how often he can golf, do yard work, and work in his shop. He is still smoking, and his depression is poorly controlled since placing his wife in an extended care facility and he tends to find his activities less enjoyable. He takes 7 different medications and finds it is hard to manage medical and oral with his

"It's hard keeping up with my health since moving my wife into a care home."

Storyboards



User Profile

Thank you!

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**VHA Office of Patient-Centered
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