De-implementing low value health services

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Presenters

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Talk Overview

- The problem of unneeded care
- What is a low value service?
- Catalogs of Low Value Services
- Current HSR&D research
- Priorities for de-implementation (discussion)
- Questions

The problem of unneeded care

- 30% of US health spending is wasted
- Unneeded services were $210 billion of 2009 U.S. health care spending

  --Institute of Medicine (2012)
- 4%-5% of U.S. GDP is health care waste
- 1%-2% of GDP is unneeded health services

What is low value care?

- Care that is not effective
- Care that causes more harm than benefit
- Care that yields too little benefit to justify cost

Low value care

- Care is low value if alternative is dominant (as effective and no more costly)
- In the absence of dominance, find the Incremental Cost-Effectiveness Ratio (ICER)

Incremental Cost-Effectiveness Ratio (ICER)

$$\frac{Cost_{INNOVATION} - Cost_{STANDARD}}{QALY_{INNOVATION} - QALY_{STANDARD}}$$

- Reject innovation if the cost per QALY is "too" high (e.g. $100,000 per QALY)

Catalogs of Low Value Services

- Rand Corp.
- UK NICE
- US Institute of Medicine
- Choosing Wisely Initiative
- Others
- See slides at end of set (before references)

Oregon Health Services Commission

- Oregon Medicaid program ranks services by value
- Threshold set of "sufficient value"
- Affects coverage of managed care plans

--Saha (2013)

Choosing Wisely

- Most recent effort in U.S.
- American Board of Internal Medicine Foundation and Consumer Reports
- 70 medical specialty societies identified 400 examples of low-value care

--Cassel & Guest (2012)

- VA committee to implement

Estimate of Choosing Wisely impact

- Estimated annual savings to Medicare from 11 Choosing Wisely services
  - Antipsychotics in dementia $765 million
  - Unneeded vitamin D screening $199 million
  - 6 services savings of < $10 million

--Colla et al (2015)

Limitations of lists

- Strength of evidence not always clear
- Indication (which sub-group) difficult to define & justify
- Need for prioritization

Current HSR&D Research

- David Au MD, MS

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De-implementation of **I**nhaled **S**teroids to improve **C**are & **S**afety of patients with **COPD** (DISCUSS COPD)

David H Au, MD MS
Behalf of
Improving Safety and Quality through evidence-based deimplementation of ineffective diagnostics and therapeutics

VA HEALTH CARE Defining EXCELLENCE in the 21st Century

COPD Guidelines

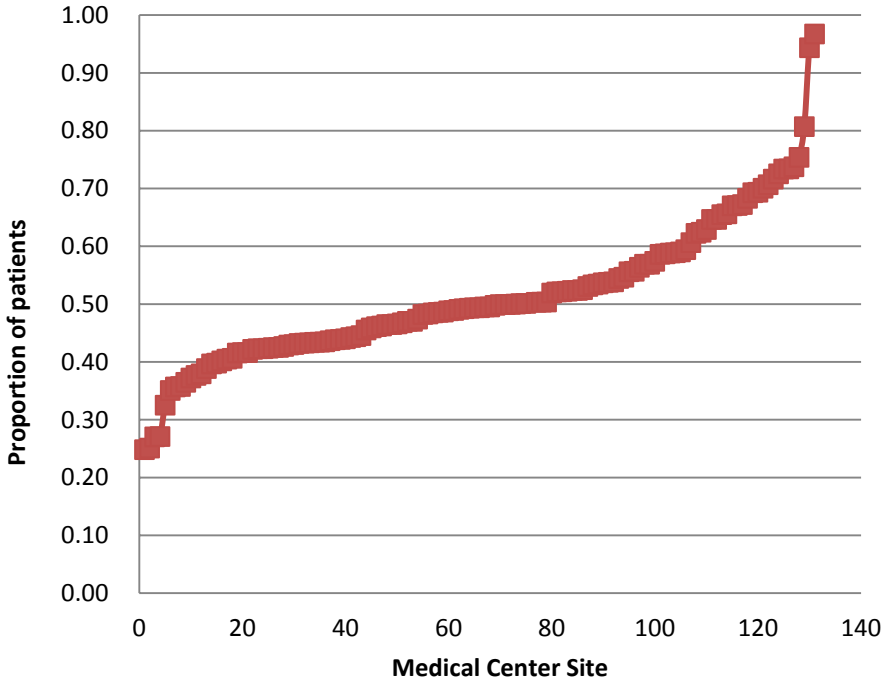
- ICS should be limited to:
  - Patients with severe or very severe airflow obstruction (AFO) as determined by spirometry
  - Patients with frequent exacerbations
- Not provided to:
  - Mild-moderate obstruction
  - No obstruction (no COPD)
  - Limited benefit but real risk
    - Pneumonia (12% increased risk)
    - Oropharyngeal candidiasis
    - Skin bruising

Ernst AJRCCM 2007, Suissa Thorax 2013, Calverley NEJM 2007, GOLD Guidelines

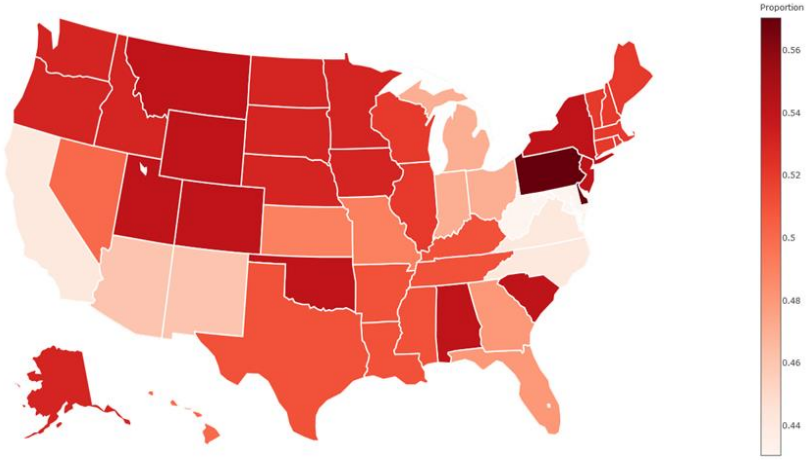
Assessing inappropriate ICS use

(Broader COPD quality issue)

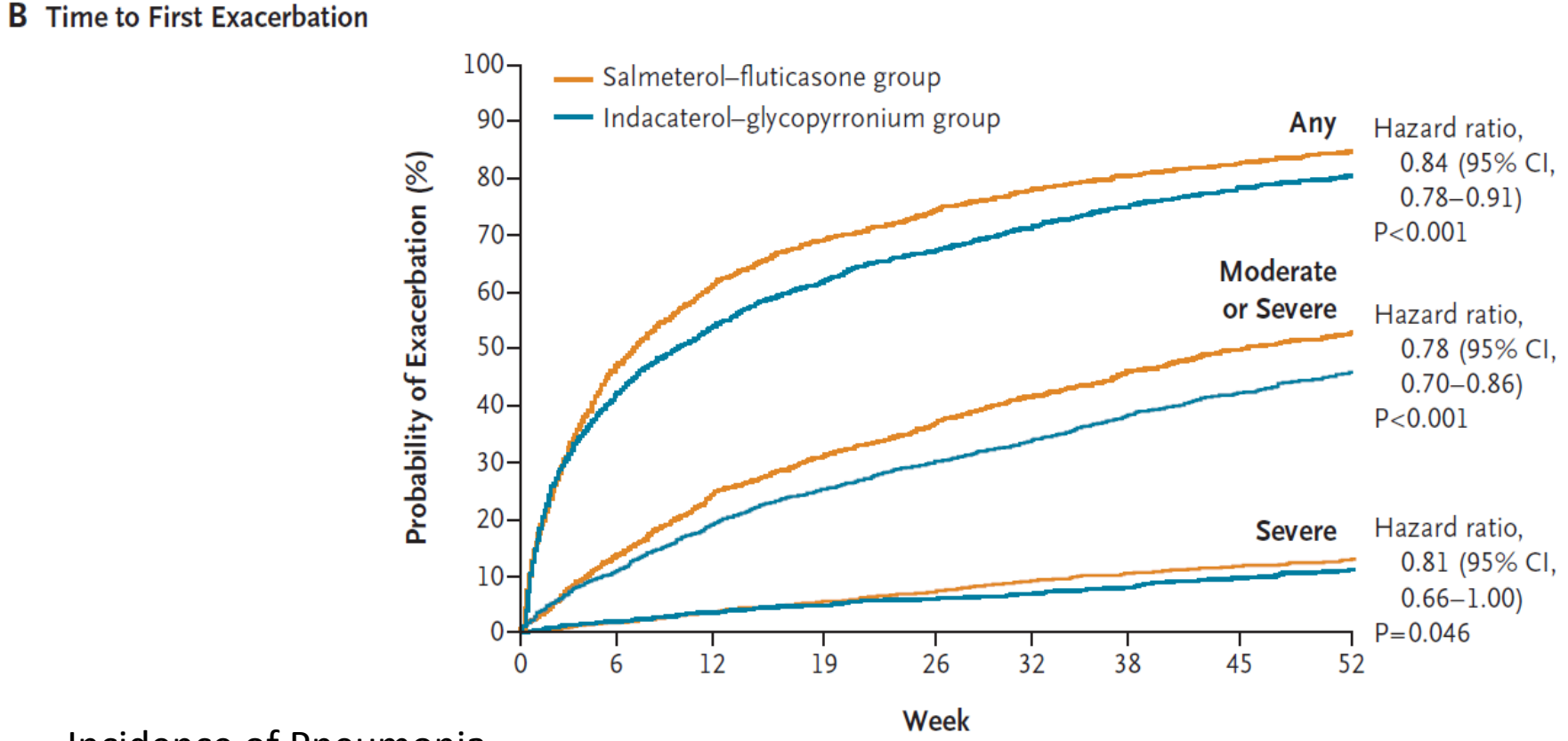
- Spirometry to confirm Dx
  - ~50% of patient get spirometry



- Other clinical indications for ICS
  - Asthma
  - COPD exacerbations



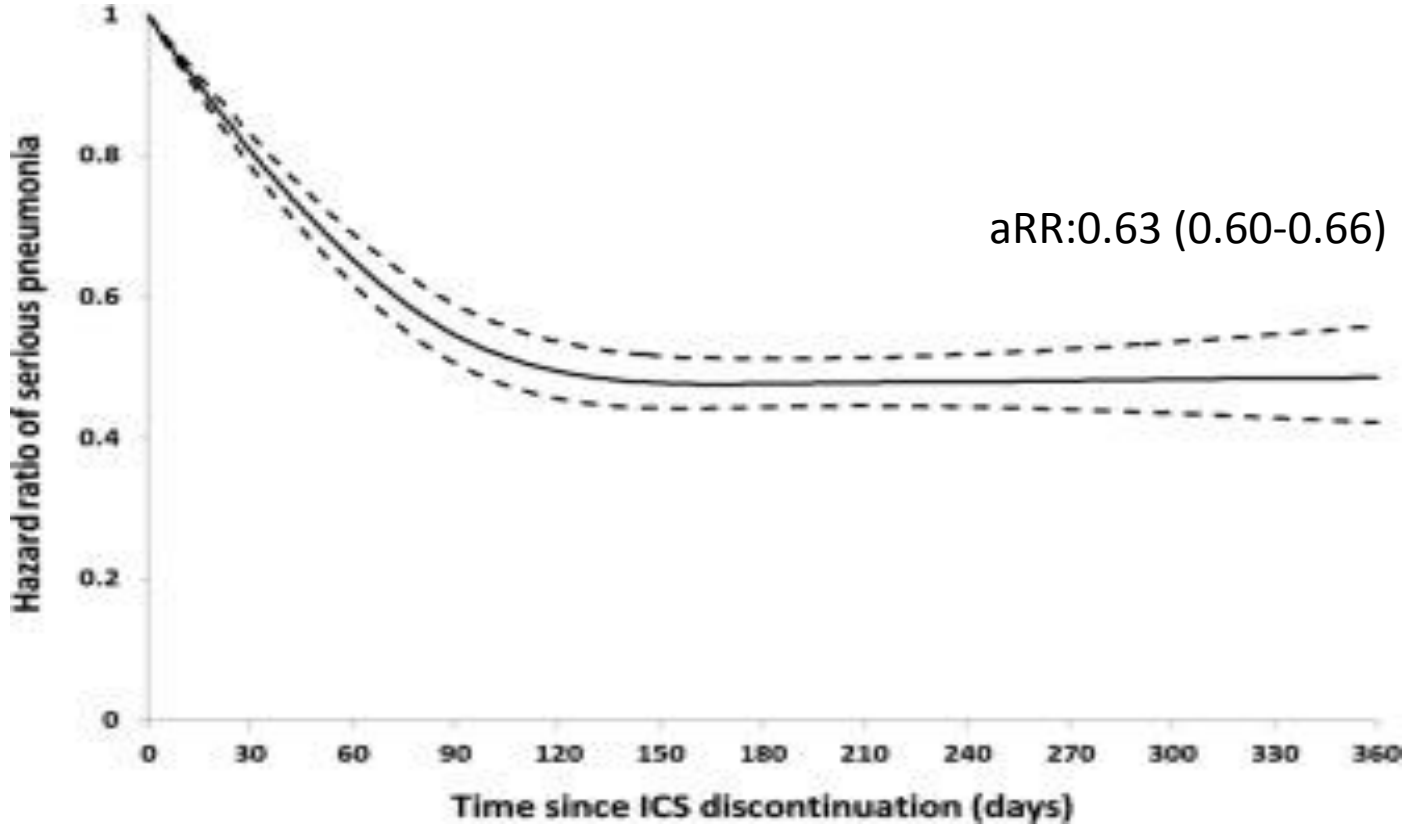
Alternate approaches available and safer



Incidence of Pneumonia
3.2% in LABA/LAMA
4.8% in LABA/ICS
(p=0.02)

FLAME NEJM 2016

Discontinuation of ICS leads to lower risk of pneumonia



aRR:0.63 (0.60-0.66)

Figure 2. Hazard ratio (solid line) and 95% confidence limits (dashed lines) of pneumonia as a function of the time since discontinuation of ICS use estimated by cubic splines models fit by conditional logistic regression, adjusted for age, gender, prior hosp (pna, COPD), recent oral steroids, inhaled meds, other medications for comorbid illness)

Suissa, et al. Chest. 2015; 148(5):1177–1183

Broader issues and questions

- Primary care and organizational efforts do not focus on COPD care
- How do you decrease the inappropriate use of medications?
- What is the role of specialist for patients at the population management level?
- How to support efforts without being intrusive into primary care settings?

Joo COPD 2013, Rinne Am J Manag Care 2016

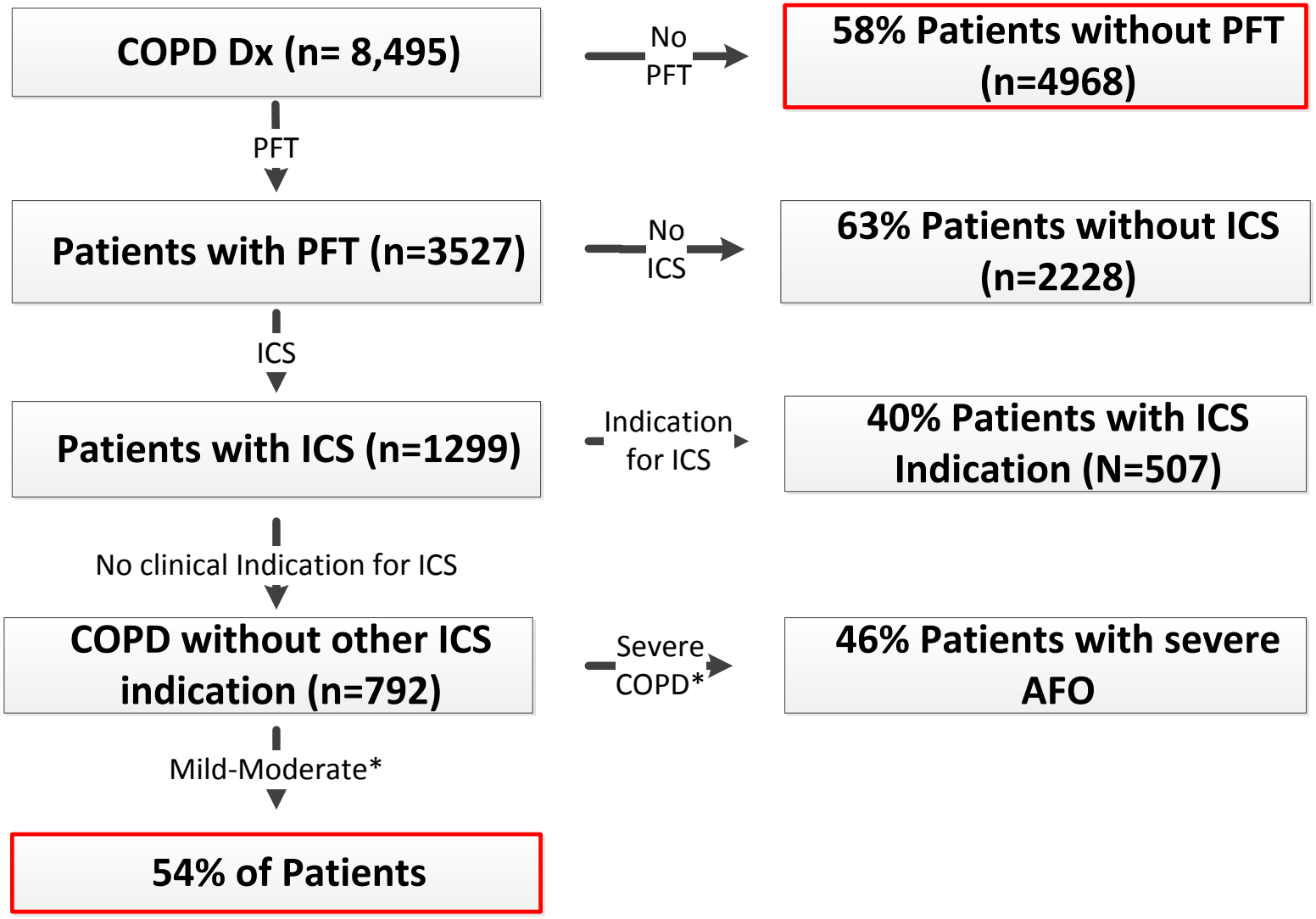
Quality Aims and Design

- **Primary aim:**

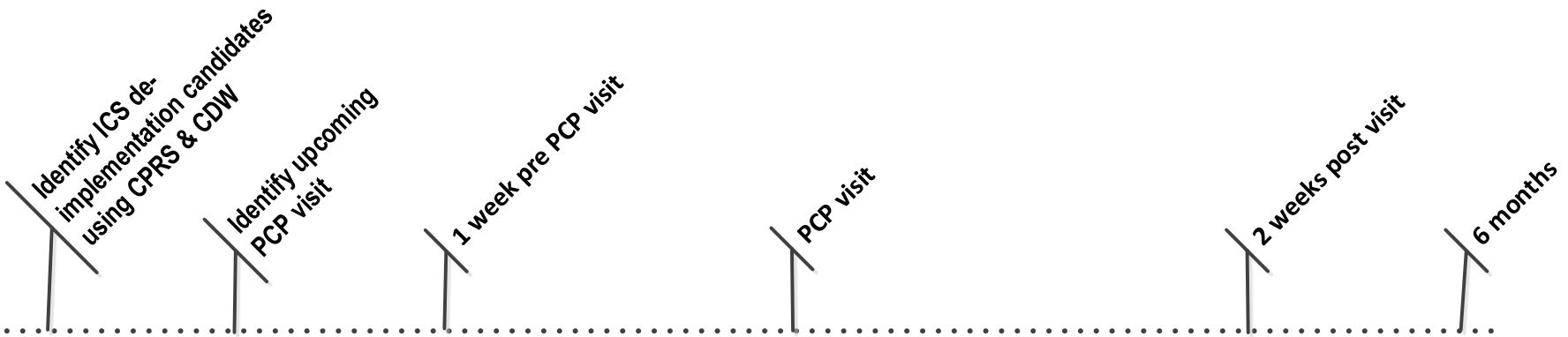
  Decrease use of low value ICS among pts with mild-mod COPD: pulmonary specialist engage at population health

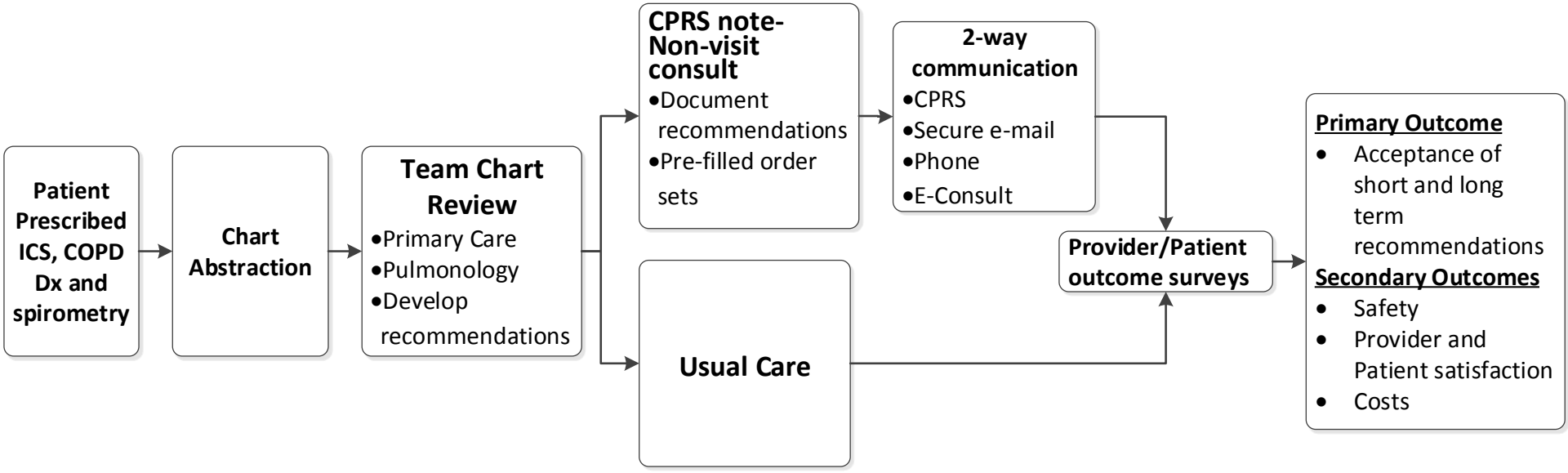
- **Secondary aims to assess:**
  1. Acceptability of the intervention to PCPs and Veterans
  2. Rates of pneumonia
  3. COPD exacerbations and mortality
  4. Budget impact of implementation costs.
- **Design:**
  1. Clustered randomized trial of primary care teamlets (PACT teamlets) and their patients
  2. Intervention targeting the primary care provider

Anticipated Patients

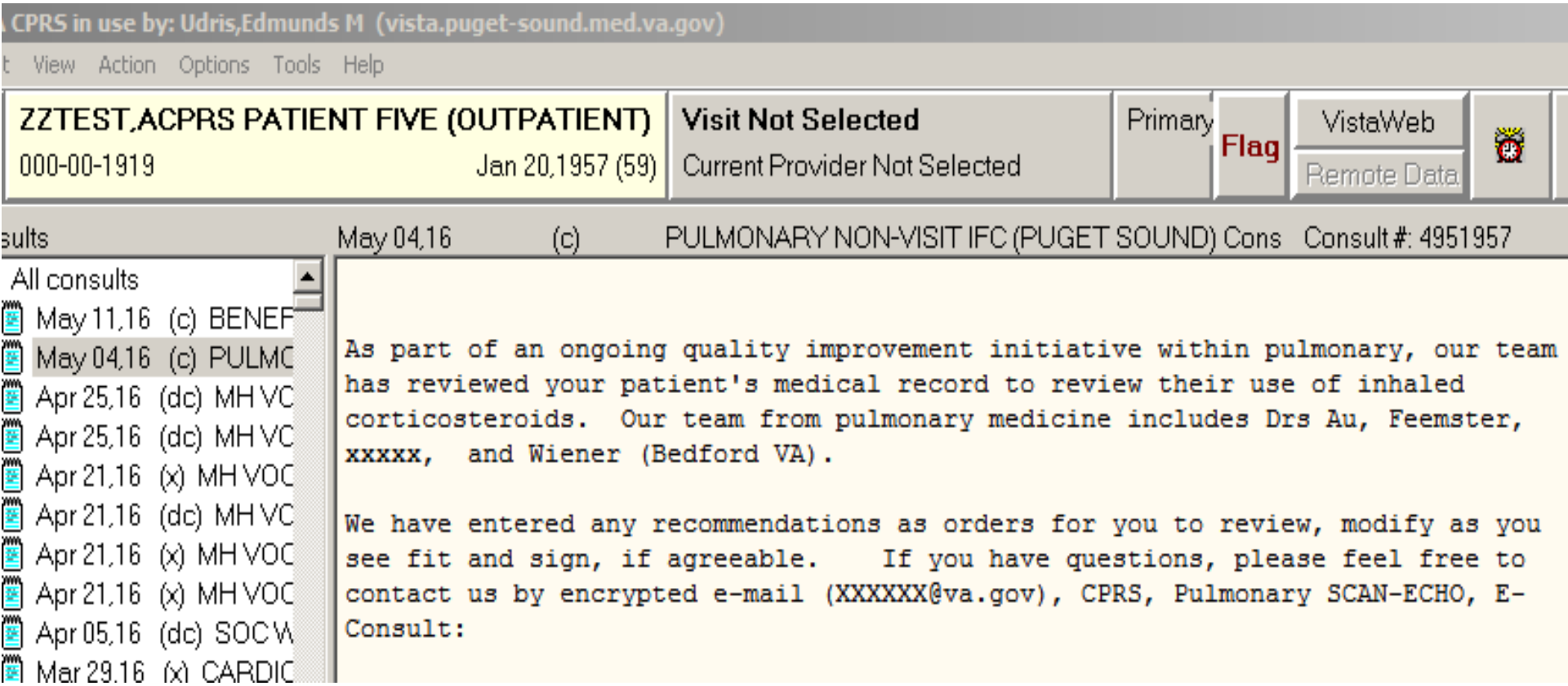


Design & Intervention





Example of CPRS note



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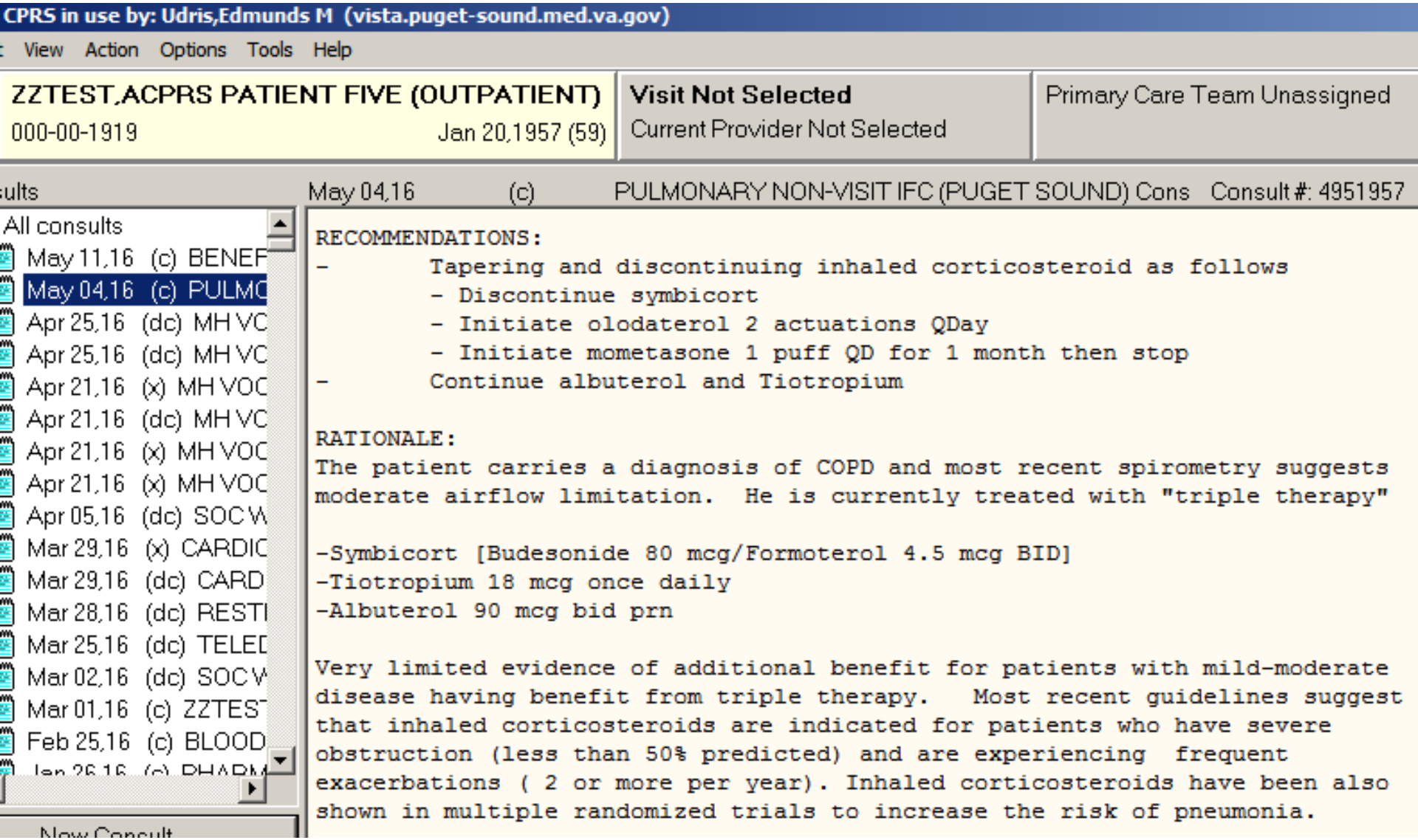
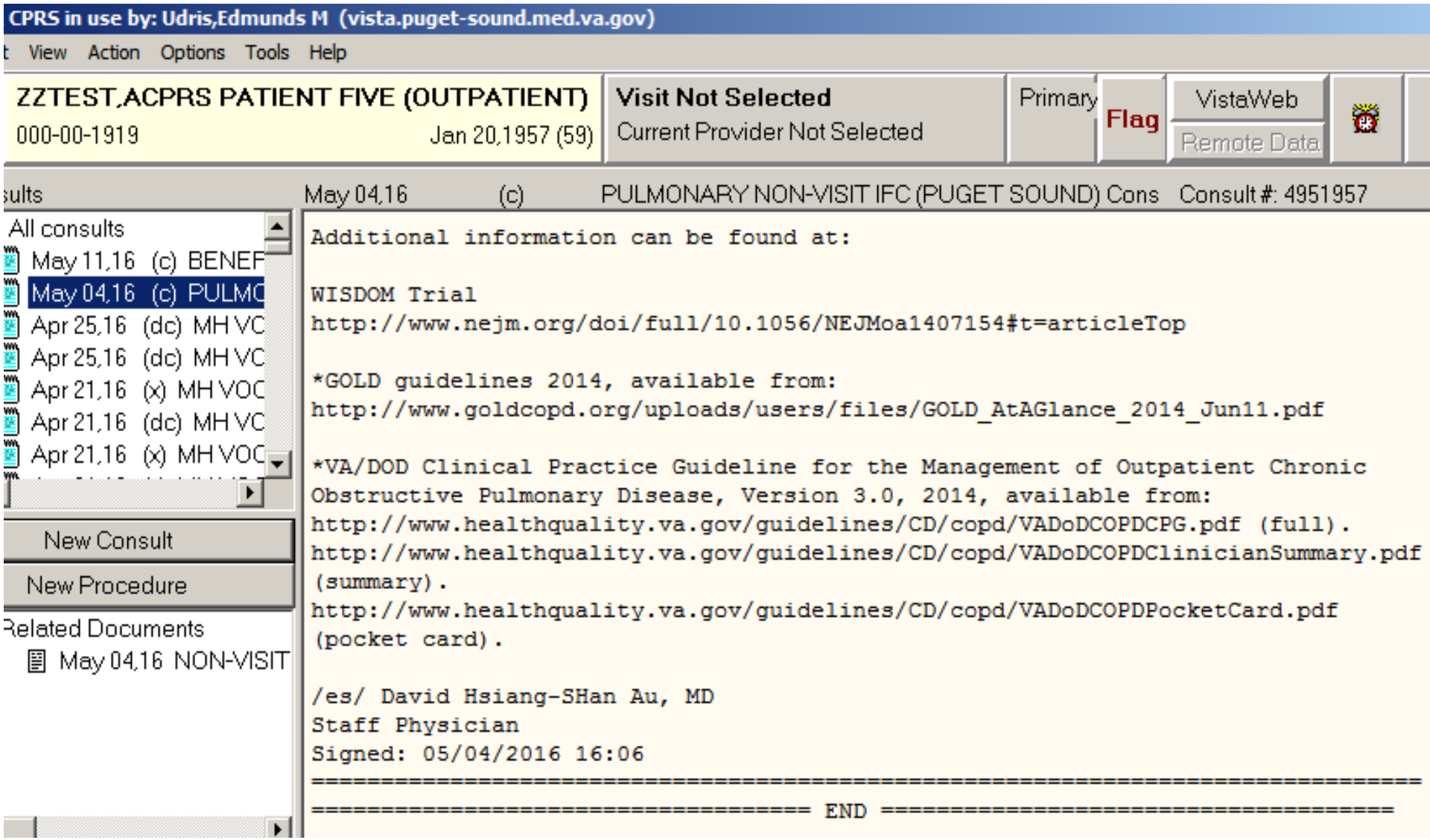


Example of CPRS note



Questions?

Assessing When to Stop or Scale Back Unnecessary Routine Services: The ASSURES Study

January 18, 2017

HERC Seminar

INSTITUTE FOR HEALTHCARE POLICY & INNOVATION
UNIVERSITY OF MICHIGAN

Eve A. Kerr, MD, MPH
VA Center for Clinical Management Research &
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VA CCMR

JAMA Internal Medicine

Invited Commentary

LESS IS MORE

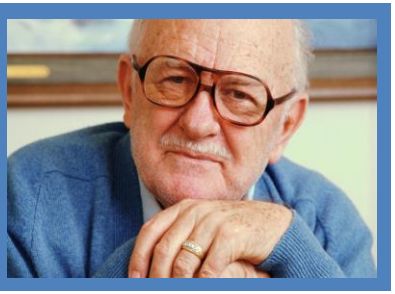
Deintensification of Routine Medical Services
The Next Frontier for Improving Care Quality

Eve A. Kerr, MD, MPH; Timothy P. Hofer, MD, MS

July 2016 Volume 176, Number 7

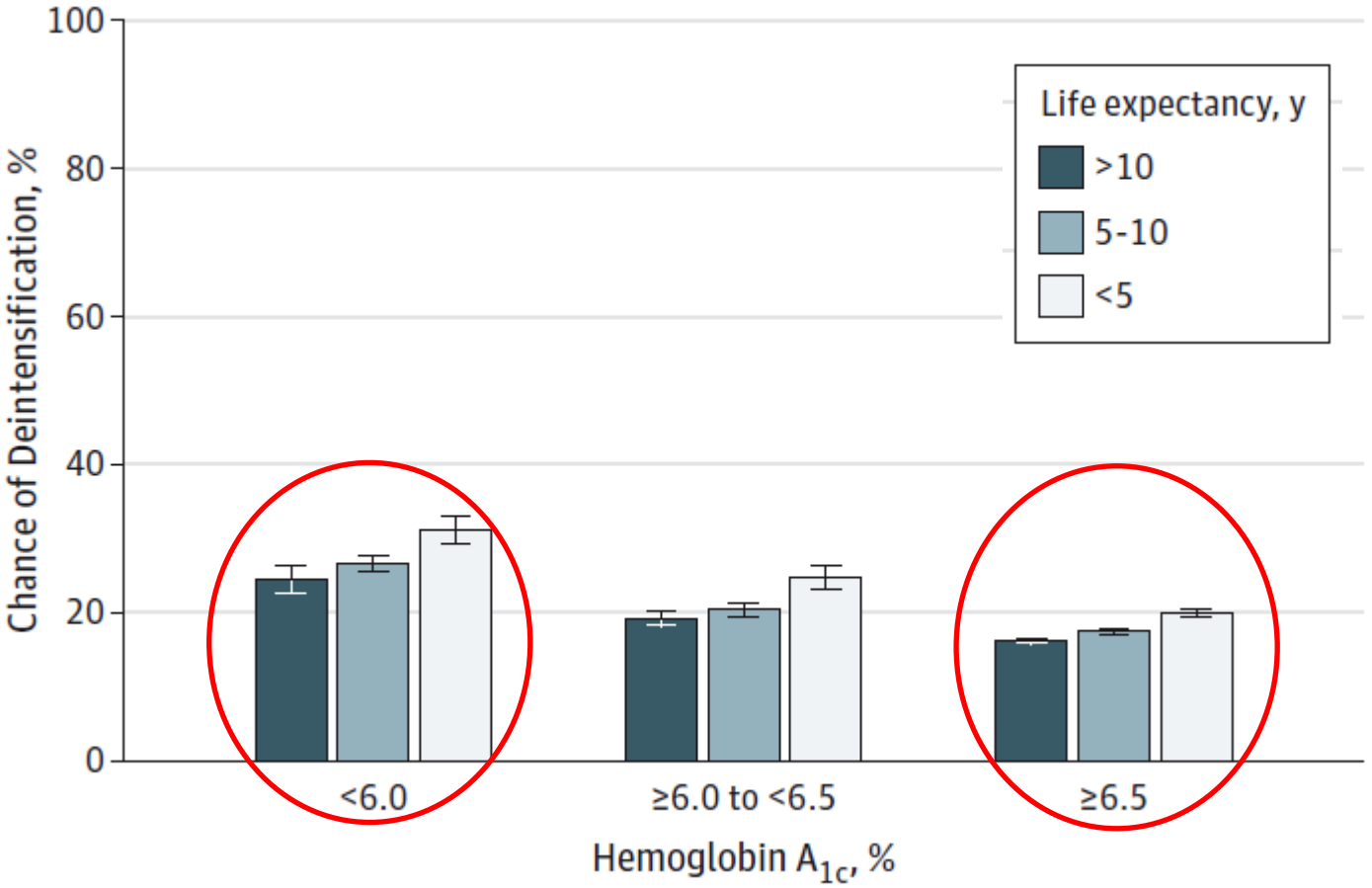
"… a substantial amount of health care involves the long-term use of medication interventions for chronic and ongoing conditions, such as diabetes. Little guidance exists on when physicians and patients should begin the process for deintensifying medical services – stopping or scaling back the intensity or frequency of medical interventions that are currently part of a patient's ongoing management."

Mr. H and the Case of Too Many Medications



- Mr. H is 77 year old man with diabetes and chronic kidney disease
- He takes lisinopril, chlorthalidone, atorvastatin, aspirin, and acetaminophen for back pain
- He is also on glipizide 10 mg BID and metformin 1000 mg BID
- His BP is 125/65 mm Hg and Hemoglobin A1c is 6.5%

Predicted Probability of De-intensification by Hemoglobin A1C Levels and Life Expectancy



Sussman JB, Kerr EA, et al. JAMA IM 2015

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What Do VA PCPs Think About De-intensification of Medications for Mr. H?

Question (N=562)	% Agree/ Strongly Agree
I think this patient would benefit if his HbA1c is maintained below 7.0%.	38.6%
I would worry that reducing his diabetes medication could leave me vulnerable to a future malpractice claim.	23.5%
I would worry that reducing his diabetes medication would lead to an HbA1c that falls outside of current performance measures.	42.1%

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Caverly TJ, et al. JAMA IM 2015

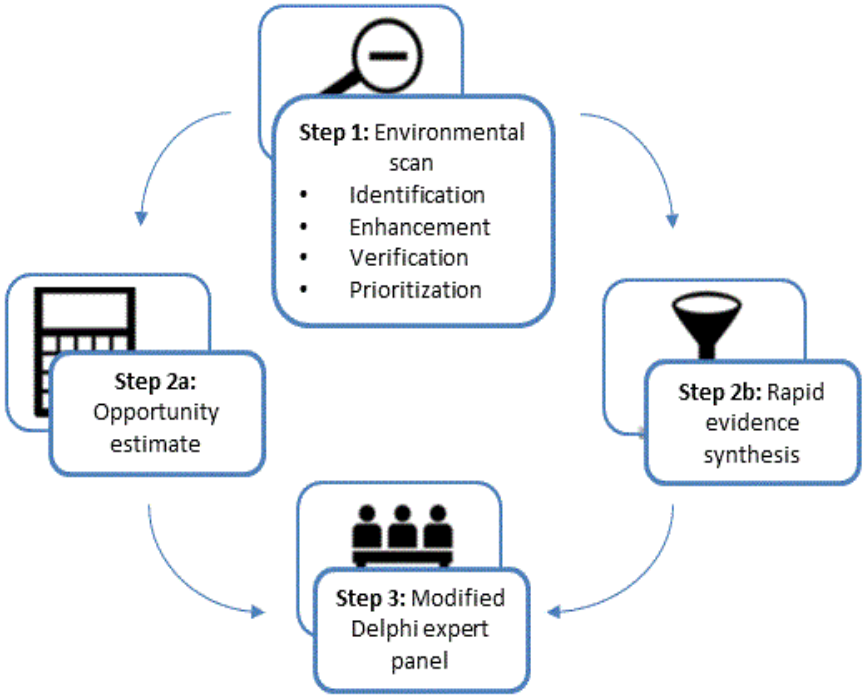
VA CCMR

The ASSURES Study

Specific Aims:

- To identify and validate clinical indications for de-intensification in primary care
- To assess prevalence and reliability of measures of de-intensification in VHA
- To develop multi-component strategies to disseminate and implement de-intensification measures

Aim 1: To identify and validate clinical indications for de-intensification in primary care



<u>Preliminary Results from Step 1</u>:

- 768 recommendations met the inclusion criteria
- Study investigators identified 419 as important in VA, valid, and feasible to measure
- After grouping similar recommendations and prioritizing internally, 46 were distributed to our Advisory Council for further prioritization
- 32 were ultimately prioritized by the Advisory Council

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Aim 2: To assess prevalence and reliability of measures of de-intensification in VHA

- Determine the data source(s) required
  - Automated data, manual medical record abstraction, other
- Outline the measure using the measure specifications (e.g., numerator, denominator, exclusions) established in Aim 1
- Generate the measures (i.e., characterize the prevalence of de-intensification in VHA)
- Examine reliability of the measure, variation in de-intensification rates across sites, and predictors of de-intensification

Aim 3: To develop multi-component strategies to disseminate and implement de-intensification measures

- Conduct collaborative decision-making sessions with patients and providers in order to identify:
    1. Gaps in understanding and potential barriers to deploying de-intensification measures
    2. A consensus on strategies to address patient, provider, motivational, and/or organizational challenges to implementing appropriate de-intensification
- Synthesize findings from the above sessions and other Aims into practical intervention strategies

JAMA Internal Medicine

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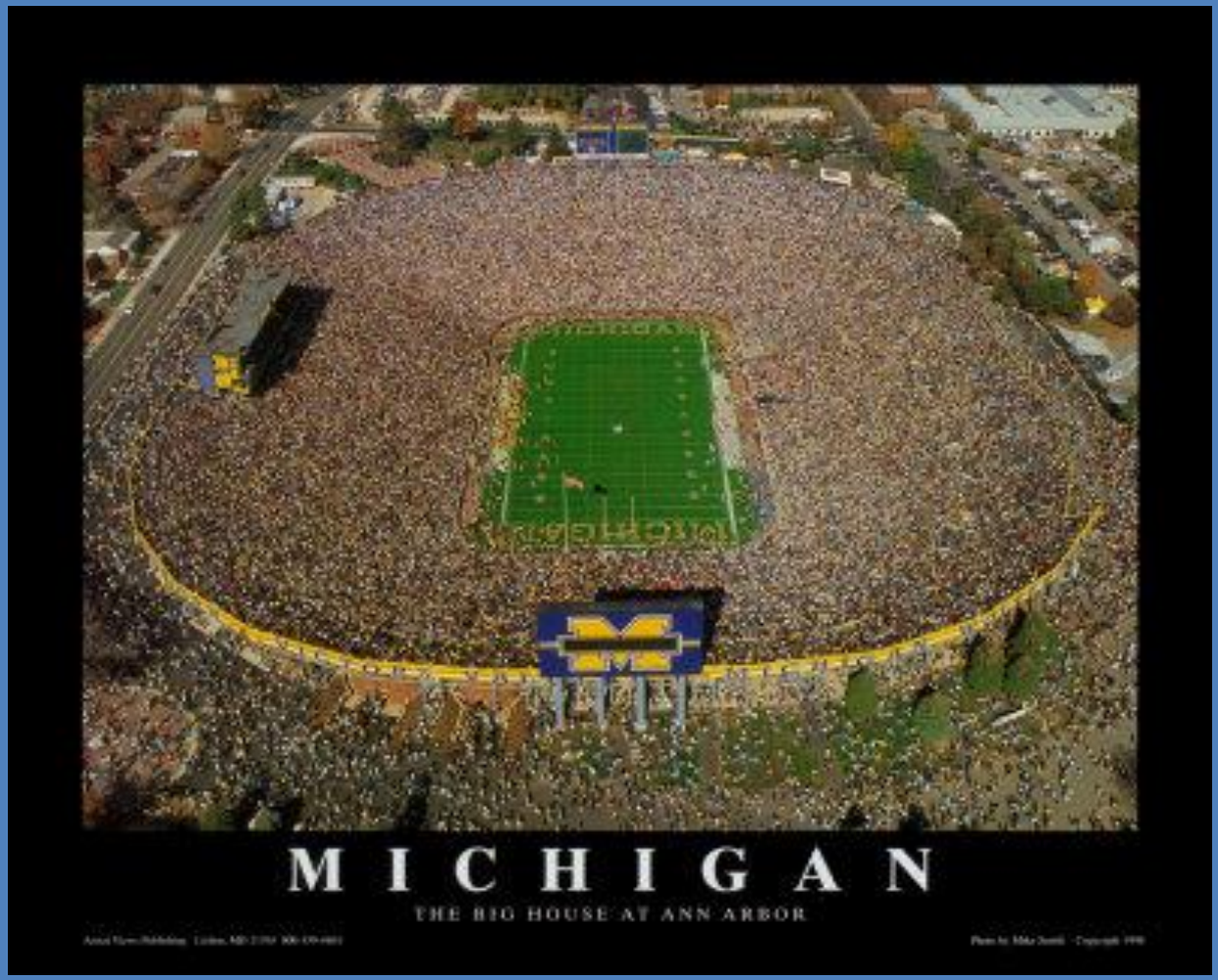
"Balancing the medical profession's focus on aggressively treating patients who are likely to benefit with an explicit consideration of when to deintensify treatments when they are no longer useful or are potentially harmful, and doing so in a manner that is respectful to the patient-physician relationship and promotes shared decision making, is the next frontier for improving care quality."



QUESTIONS?

Unneeded CD4 testing

- Routine CD4 testing no longer needed for HIV+ patients with good viral control
- VA providers reduced testing by 11% over 4 years, saving $196,000 annually
- Testing could be reduced a further 29%, saving an additional $600,000 annually

--Barnett et al (2016)

Inappropriate low-back MRI

- MRI not needed for new onset, uncomplicated low-back pain
- 31% - 59% of VA lumbar spine MRIs are not appropriate
- 11% of ordering providers account for 50% of inappropriate scans

--Avoundjian (2016), Gidwani (2016)

Inappropriate low-back MRI

- Mixed methods study (2016-2019)
- Qualitative Interviews: What distinguishes primary care providers who order many lumbar spine MRIs?
- Quantitative Study: What is the effect of inappropriate scans on surgery, pain, pain medications, cost?

How would you prioritize? (poll)

Which service would you de-implement first?

#1: Harmful service

-100 QALYs $20 million cost

#2: Ineffective service

+0 QALYs $100 million cost

#3: Low-value service

+1,000 QALYs $600 million cost

CEA perspective

- #3 > #2 > #1
- Expected value if savings reinvested at $20,000/QALY

  #1: +100 + 1,000 = 1,100 QALY gain

  #2: 0 + 5,000 = 5,000 QALY gain

  #3: -1,000 +30,000 =29,000 QALY gain

How to set priorities?

- Disinvestment programs proposed for the Australian health plan
- Criteria for identifying and prioritizing interventions

--Elshaug et al (2009)

Elshaug: use criteria developed for technology assessment

- Cost
- Quality Adjusted Life Year
- Availability of cost-effective alternative
- Equity (access by patient sub-groups)
- Strength of evidence
- Disease burden in affected patients
- Futility

Catalogs of low-value services

Rand Corporation list of inappropriate services

- Rand Corp. generated one of the first listings
- Updated in 2005
- Most recent listing identifies hospitalization, surgery, drugs

--Schuster, McGlynn, & Brook (2005)

National Institute on Health and Care Excellence (NICE)

- Proposed disinvestment by U.K. National Health Service

  --Pearson & Littlejohns (2007)

- NICE “Do not do” list found in the “Savings and productivity collection”

  https://www.nice.org.uk/guidance

Institute of Medicine

- Listed ineffective and harmful treatments widely used in the U.S

--US Institute of Medicine (2008)

Oregon Health Services Commission

- Oregon Medicaid program has ranked services by value
- Threshold set of "sufficient value"
- Coverage of managed care plans reflect these priorities

--Saha (2013)

National Priorities Partnership

- Consortium of health care organizations listed inappropriate services

  --National Priorities Partnership (2008)

Network for Excellence in Health Innovation (NEHI)

- Identified peer reviewed studies identifying waste or inefficiency
- 460 studies 1998 - 2006

--New England Healthcare Institute (2008)

Tufts Cost-Effectiveness Registry

- Identified low-value services
- Goal to define services that could be excluded from a value-based insurance coverage

--Neumann et al (2010)

American College of Physicians workgroup

- 37 examples of low value diagnostic and screening tests

--Qaseem et al (2012)

Choosing Wisely

- Most recent effort in U.S.
- American Board of Internal Medicine Foundation and Consumer Reports
- 70 medical specialty societies identified 400 examples of low-value care

--Cassel & Guest (2012)

- VA committee to implement

References

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