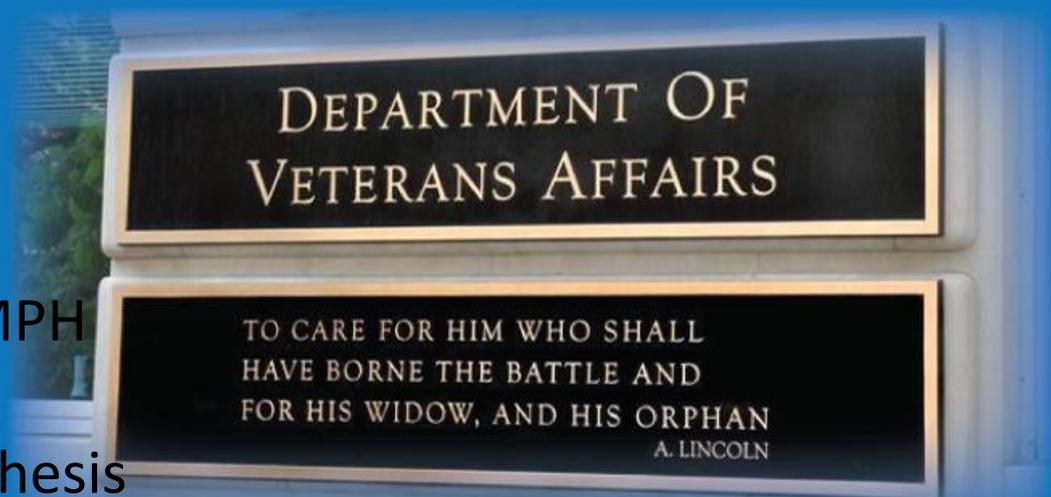




Disparities in Healthcare Quality Indicators Among Adults with Mental Illness: A Systematic Review

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Outline

- Quick intro to Office of Health Equity - OHE
- Why?
- Evidence Synthesis
 - Background
 - Key questions
 - Methods
 - Results
 - Discussion
 - Q&A



Health Equity

- Health equity is attainment of the highest level of health for all people.
- A health disparity is a particular type of health difference that is closely linked with social or economic disadvantage.
- Socio-demographic refers to a variety of socioeconomic (e.g., income, education, occupation) and demographic factors (e.g., age, race, ethnicity, primary language).**
 - Health People 2020 *
 - National Quality Forum**



Vulnerable Populations

Health disparities adversely affect groups of people who have systematically experienced greater social and/or economic obstacles to health and/or a clean environment based on these:

- Racial or ethnic group
- Gender
- Age
- Geographic location
- Religion
- Socio-economic status
- Military Era
- Sexual orientation
- Mental health
- Disability
 - ✓ cognitive /sensory / physical
- other characteristics historically linked to discrimination or exclusion



Health Equity Action Plan

- **Awareness:** Crucial Strategic Partnerships within and outside VA
- **Leadership:** Health equity impact assessed for all policies, EDMs, memos, handbooks, procedures, directives, action plans and NLC decision
- **Health System Life Experience:** Incorporate social determinants of health in Personalized Health Plan
- **Cultural and Linguistic Competency:** Education & training on health equity, cultural competency to include unconscious bias, micro inequities, diversity & inclusion
- **Data, Research and Evaluation:** Develop common definitions and measures of disparities and inequities; Develop strategies for capturing data on race, ethnicity, language, and socioeconomic status and other variables needed to stratify the results for all quality measures and to address disparities; Incorporate health equity into SAIL and Balanced Score



Health Equity Action Plan	VA Strategic Plan 2013-2018	Blueprint for Excellence	VHA Strategic Plan	National Partnership for Action & National Stakeholder Strategy
1. Awareness	Strategic Goal 1: Strategic Objective 1.1: ,Strategic Goal 2: Strategic Objective 2.1, 2.2 & 2.3	Strategy 6.2.e, 8.2.d & f	Strategic Goal 1: Strategic Goal 1b, 1e & 1g	Strategy 2 & 4
2. Leadership	Strategic Goal 1: Strategic Objective 1.1	Strategy 6.2d & 9.2.c	Strategic Goal 1: Strategic Goal 1e	Strategy 5 & 6
3. Health System Life Experience	Strategic Goal 1: Strategic Objective 1.1 & 1.2	Strategy 1.2.c, 2.2a, 3.2a & 6.2.e	Strategic Goal 1: Strategic Goal 1b & 1e	Strategy 8 & 11
4. Cultural & Linguistic competency	Strategic Goal 1: Strategic Objective 1.2,Strategic Goal 3: Strategic Objective 3.1	Strategy 2.2a & 6.2d	Strategic Goal 1: Strategic Goal 1b & 1e	Strategy 14, 15 & 16
5: Data research and evaluation	Strategic Goal 1: Strategic Objective 1.1 & 1.2	Strategy 3.2a, 7.2b & 7.2h	Strategic Goal 1: Strategic Goal 1e	Strategy 17, 19 & 20



VHA Blueprint for Excellence

- 2.2.a. VHA will aspire to the “Triple Aim” (Better Health, Care, and Value), and Focus Performance Measurement on Strategic Outcomes.
- 3.2.a. Implement a Population Health Program.
- 7.2.b. Advance Knowledge on Improving Individual and Population Health.
 - 7.2.h. Rapidly Translate Research Findings and Evidence-Based Treatments into Clinical Practice.



Intro to poll Question #1

- A Veteran who served in Vietnam is receiving treatment at a rural VA outreach clinic for management of chronic medical and mental health diagnoses.



Poll Question #1

In how many domains is she vulnerable for health and/or healthcare disparity?

- None
- 1
- 2
- 3
- 4 or more



Why Mental Illness

- Burden of mental illness among Veterans is substantial
- Medical illnesses affect a disproportionate number of people with mental illness
- Chronic medical conditions co-occurring with mental illness are more detrimental to health
- Mental Illness is a vulnerable characteristic



Why OHE and ESP

- Office of Health Equity partnered with the Evidence-based Synthesis Program -ESP
- Systematic review of health disparities in quality indicators of healthcare among adults with mental illness
- ESP to assess if, and to what extent, disparities in healthcare exist for individuals with mental illness in the VA
- To guide future research and policy decisions for the VA



Evidence-based Synthesis Program (ESP)

Disparities in Healthcare Quality Indicators Among Adults with Mental Illness: A Systematic Review of the Evidence

Evidence-based Synthesis Program (ESP)

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Evidence-based Synthesis Program (ESP)

Disclosure

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Evidence-based Synthesis Program (ESP)

VA Evidence-based Synthesis (ESP) Program Overview

- **Sponsored by VA Office of R&D and Quality Enhancement Research Initiative (QUERI).**
- **Established to provide timely and accurate syntheses/reviews of healthcare topics identified by VA clinicians, managers and policy-makers, as they work to improve the health and healthcare of Veterans.**
- **Builds on staff and expertise already in place at the Evidence-based Practice Centers (EPC) designated by AHRQ. Four of these EPCs are also ESP Centers:**
 - Durham VA Medical Center; VA Greater Los Angeles Health Care System; Portland VA Medical Center; and Minneapolis VA Medical Center.

Evidence-based Synthesis Program (ESP)

- **Provides evidence syntheses on important clinical practice topics relevant to Veterans, and these reports help:**
 - develop clinical policies informed by evidence,
 - the implementation of effective services to improve patient outcomes and to support VA clinical practice guidelines and performance measures, and
 - guide the direction for future research to address gaps in clinical knowledge.
- **Broad topic nomination process – e.g. VACO, VISNs, field – facilitated by ESP Coordinating Center (Portland) through online process:**

<http://www.hsrd.research.va.gov/publications/esp/TopicNomination.cfm>

Evidence-based Synthesis Program (ESP)

- **Steering Committee** representing research and operations (PCS, OQP, ONS, and VISN) provides oversight and guides program direction.
- **Technical Expert Panel (TEP)**
 - Recruited for each topic to provide content expertise.
 - Guides topic development; refines the key questions.
 - Reviews data/draft report.
- **External Peer Reviewers & Policy Partners**
 - Reviews and comments on draft report
- **Final reports posted on VA HSR&D website and disseminated widely through the VA.**

<http://www.hsrd.research.va.gov/publications/esp/reports.cfm>

Poll Question #2

- **What is your primary role in VA?**
 - student, trainee, or fellow
 - clinician
 - researcher
 - manager or policymaker
 - Other

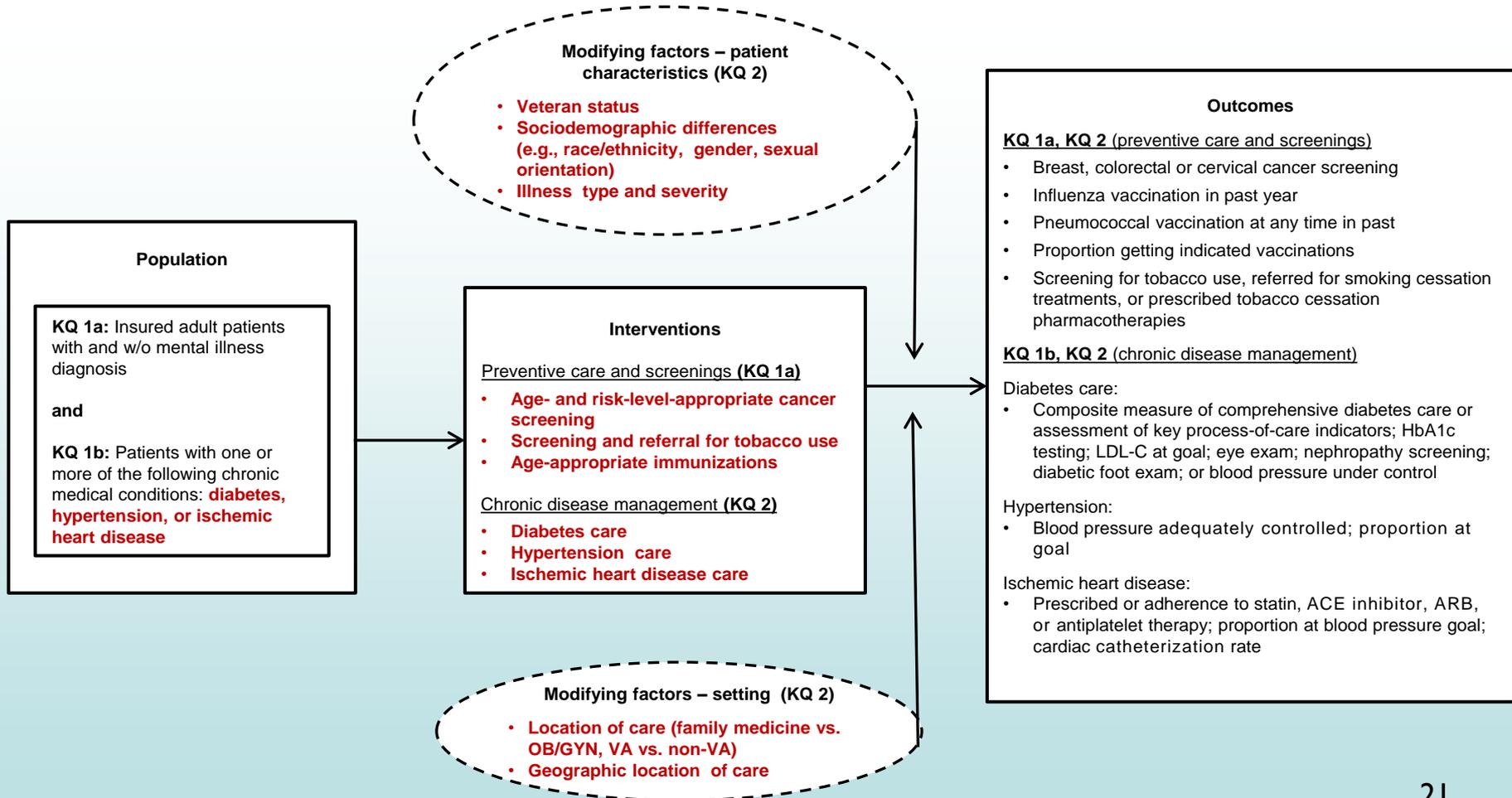
Background: Approach to Assessing Possible Disparities in Healthcare

- VA OHE interested in assessing possible disparities in healthcare among patients with mental illness
- Assessing healthcare quality is complex & challenging
- Approach: use of tracer conditions/preventive services to serve as indicators of healthcare quality
 - Prevalent conditions
 - Strong evidence and agreement on appropriate care and goals of therapy

Key Questions

- **KQ 1: Among adult patients, are there health disparities for those with mental illness compared to those without mental illness in the following areas:**
 - Receipt of appropriate preventive care services and indicated screening
 - Management of chronic conditions
- **KQ 2: For those with mental illness compared to those without mental illness, do any observed health disparities in preventive care, indicated screening or chronic disease management vary key moderators of interest?**

Analytic Framework



Methods

Study Eligibility

Study Characteristic	Inclusion Criteria
Population	Insured adults with a clinical diagnosis (eg, chart diagnosis), administrative code (eg, ICD-9) or research diagnosis of bipolar disorder, schizophrenia, schizoaffective disorder, MDD (or depressive disorders), or PTSD
Interventions	KQ 1a: breast, colorectal, and cervical cancer screenings; immunizations; screening and referral for tobacco use KQ 1b: care for diabetes; hypertension; ischemic heart disease
Comparators	Populations not selected for mental illness or without a diagnosis of mental illness (excluded population control)
Setting	Studies conducted in the U.S. Conducted in non-mental health, outpatient primary care settings (ED, FP, GIM, primary OB/GYN, geriatrics) and selected specialty settings (eg, endocrinology, cardiology)
Study design	Comparative studies (cohort studies, case-control studies), cross-sectional, pooled patient-level meta-analyses Study sample size ≥ 100 subjects

Data Synthesis

- **If quantitative synthesis possible:**
 - calculated summary odds ratios (ORs)
 - random-effects model with the Knapp and Hartung method to adjust the standard errors of the estimated coefficients
 - evaluated statistical heterogeneity by visual inspection and Cochran's Q and I^2 statistics.
 - if $I^2 \geq 75\%$, report the forest plots w/o summary estimate and range and median of point estimates from individual studies
- **Qualitative synthesis:**
 - gave more weight to higher quality studies
 - analyzed potential reasons for inconsistency in effects across studies by evaluating differences in the study population, intervention, comparator, and outcome definitions

Results

Veterans Health
Administration



www.research.va.gov

Literature Search & Study Characteristics

Literature search:

- Identified 3,964 titles; 310 full-text reviews
- 26 included reports of 23 unique trials

Study characteristics:

• preventive services:

- cancer screening (n=7)
- receipt of immunizations (n=3)
- screening for tobacco use and referral for treatment (n=2)

• management of 3 chronic diseases:

- type 2 diabetes mellitus (n=14)
- hypertension (n=2)
- ischemic heart disease (n=1).

• Study designs:

- cross-sectional (n=11); retrospective cohort (n=10); prospective cohort (n=2)

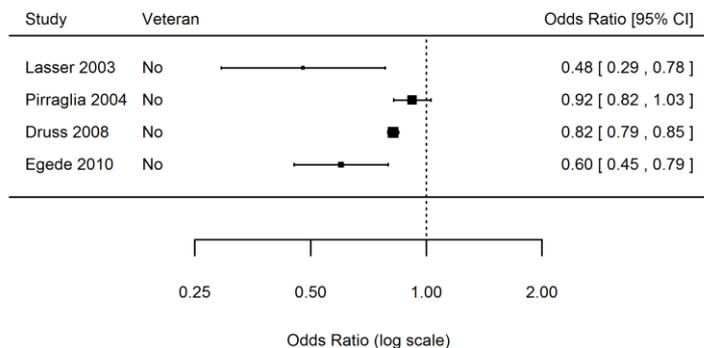
**12 of 23 studies conducted within
the VA healthcare system**

Results: Cancer Screening Overview of Studies

- Identified 7 studies that compared cancer screening rates among those with mental illness and those without mental illness.
- Mental diagnoses: 4 composite mental illness; 3 depressive disorders
- 3 studies conducted with VA users

KQ 1a Results: Mammography Screening

Mammography & Depressive Disorders:

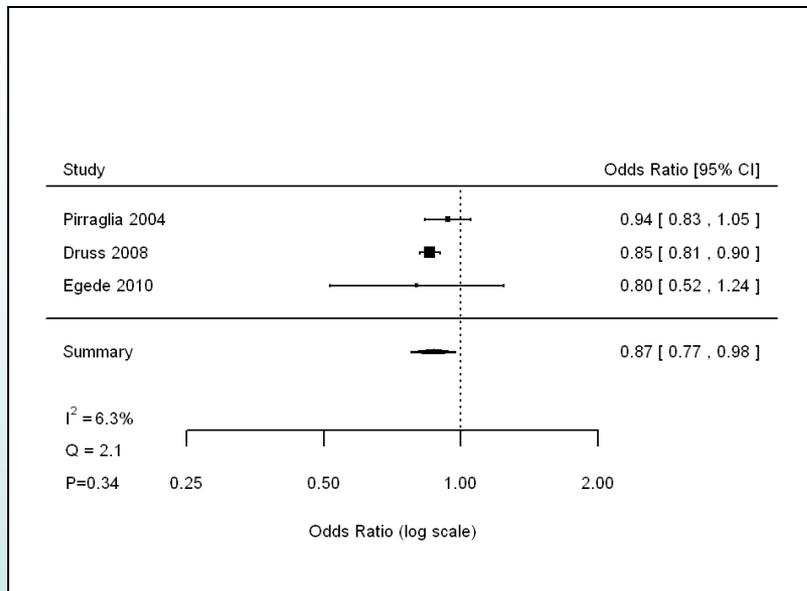


All studies found negative relationships between receipt of mammography and depressive disorders (OR range: 0.48 to 0.92)

- Identified 2 additional studies with ***broadly defined mental illness*** compared to those without mental illness. Results were mixed.
 - Cross-sectional study: 1999 VA External Peer Review Program (EPRP) chart review-based database (OR 0.78; 95% CI, 0.67 to 0.91)
 - Retrospective cohort study: New Mexico VA healthcare system database (OR 0.79; 95% CI, 0.50 to 1.25)

KQ 1a Results: Cervical Cancer Screening

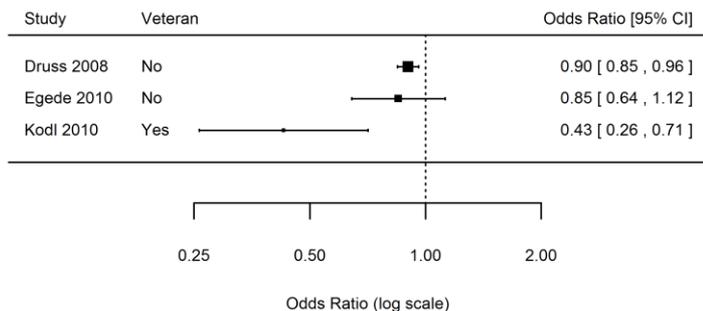
Pap Testing & Depressive Disorders:



- Identified 2 additional studies with ***broadly defined mental illness*** compared to those without mental illness.
- Results mixed.
 - Cross-sectional study: 1999 VA External Peer Review Program (EPRP) chart review-based database (OR 0.87; 95% CI, 0.78 to 0.96).
 - Retrospective cohort study: New Mexico VA healthcare system database (OR 1.71; 95% CI, 0.91 to 3.21)₂₉

KQ 1a Results: Colorectal Cancer Screening

CRC Screening & Depressive Disorders:



- All studies found negative relationships (OR range: 0.43 to 0.90)
- Summary estimate displayed high heterogeneity

- ***Broadly defined mental illness:*** 3 additional studies; results mixed
- ***Psychotic disorders:*** only one study; significant and negative association between a psychotic disorders and receipt of colorectal cancer screening
- ***PTSD:*** only one study; nonsignificant but negative association between a PTSD and receipt of colorectal cancer screening

Take home message: Cancer Screening Results

- Adequate studies to conduct 3 meta-analyses, all but one pooled analysis displayed high heterogeneity ($I^2 \geq 75\%$).
- Nearly all studies displayed a similar pattern of a negative association; not all comparisons were statistically significant.
- ONLY 3 studies assessed cancer screening among VA users with and without mental illness; similar pattern of negative associations
- ***Existing evidence suggests small to moderate disparities in cancer screening for people with mental illness***

KQ 1a Results: Immunization

- **Evidence limited; only 3 studies**
- **Results were mixed; no large disparities reported across studies.**
- **Influenza vaccination**
 - 1 studies found evidence to support disparities in receipt of influenza vaccinations
 - 1 study found no significant differences in self-reported receipt of influenza vaccinations.
- **Pneumococcal vaccinations**
 - 1 VA study reported that patient with a psychiatric diagnosis had a lower probability of receiving a pneumococcal vaccine than patients without a psychiatric diagnosis.
 - 1 non-VA study reported that those with depression were no less likely to report receiving a pneumococcal vaccine than those without depression.

Results KQ1a: Screening & Referral for Tobacco Use

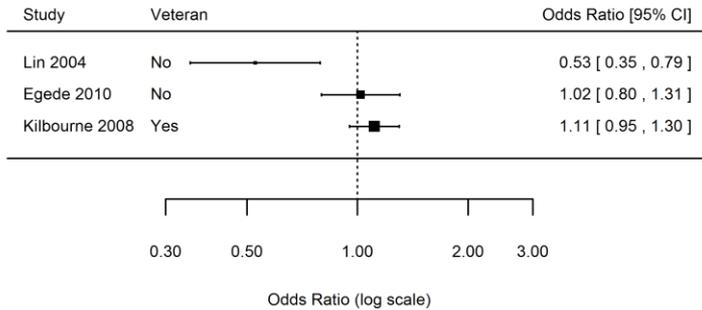
- **Limited comparative evidence: only 2 cross-sectional studies (both with VA user)**
 - Study 1: those with mental illness are more likely to be screened for tobacco use and referred for counseling
 - Study 2:
 - smokers with ***PTSD*** and ***depressive disorders more likely*** to receive a physician's recommendation for smoking cessation medications
 - smokers with ***schizophrenia less likely*** to receive advice to quit from physicians
 - ***No differences*** were found for smokers with a dx of ***bipolar disorder***

KQ 1b: Diabetes Care Overview of Studies

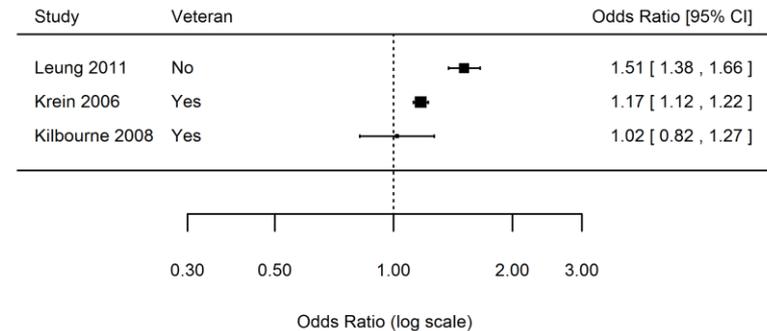
- Identified 14 studies that compared diabetes process of care outcomes among those with mental illness and those without mental illness.
- All studies relatively recent (2002-2012)
- Mental diagnoses: 7 composite mental illness; 6 SMI; 5 depressive disorders; 1 PTSD
- 7 studies conducted with VA users

KQ 1b Results: HbA1c Testing

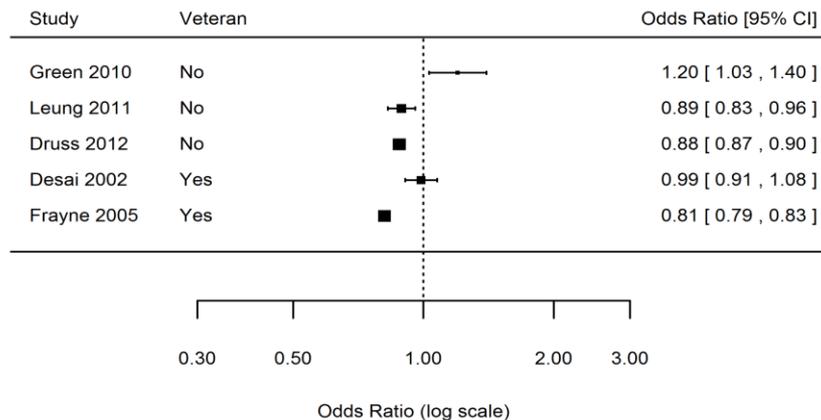
HbA1c Testing & Depressive Disorders:



HbA1c Testing & SMI:

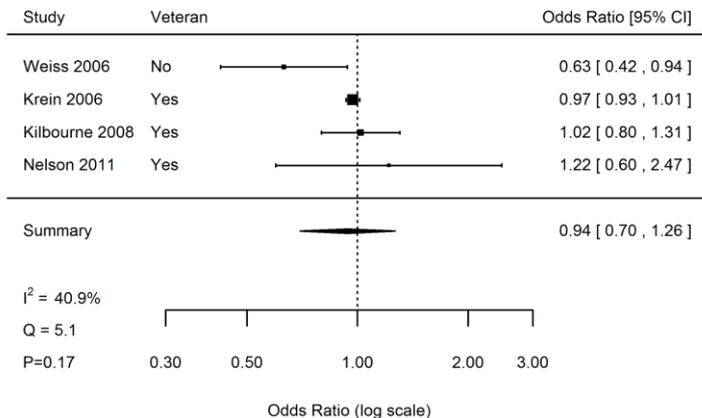


HbA1c Testing & MH DX:



KQ 1a Results: LDL-C Control

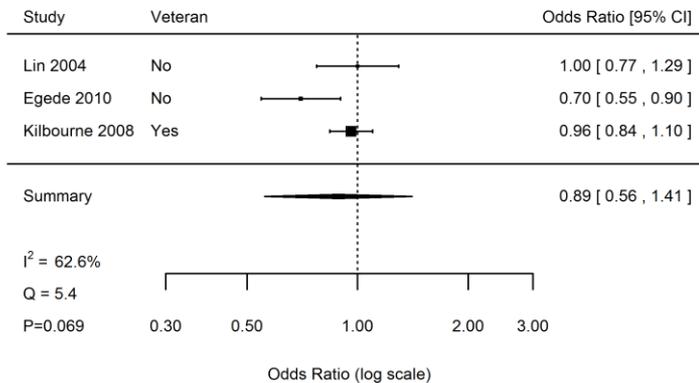
LDL-C Control & SMI:



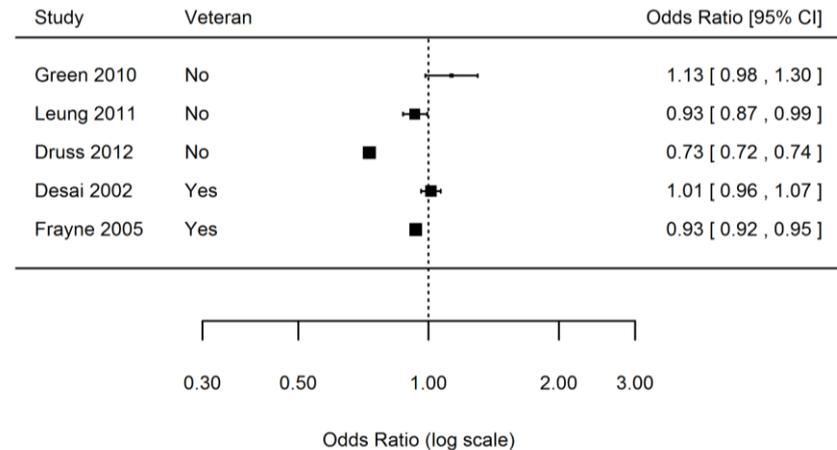
- ***Depressive disorders:*** 2 studies; no less likely to have LDL-C values at goal than patients without a diagnosis of mental illness
- ***PTSD:*** 1 study; no less likely to have LDL-C values at goal than patients without a diagnosis of mental illness
- ***Broadly defined mental illness:*** 2 studies; more likely to have poor LDL-C control

KQ 1a Results: Diabetic Eye Exams

Eye Exams & Depressive Disorders:



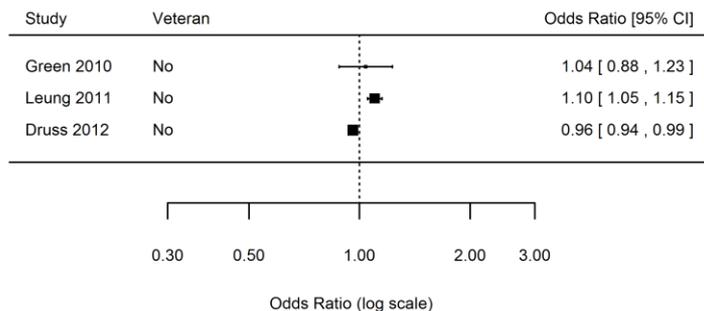
Mental Illness & Eye Exams



- **SMI:** 3 studies; results mixed and range from significant and positive to significant and negative associations.

KQ 1a Results: Nephropathy Screening

Nephropathy Screening & SMI:



- Little variability in point estimates; all cluster around no effect

- ***Depressive disorders:*** 2 studies; no less likely to have screening than patients without a diagnosis of mental illness
- ***SMI:*** 2 studies; results mixed and ranged from similar rates to a positive association

Take home message: Diabetes Care Results

- While several studies addressed depressive disorders, SMI, or composite groups of diabetic patients with mental illness, only one study assessed the impact of PTSD on diabetes quality of care indicators.
- Adequate studies of sufficient homogeneity conduct 8 meta-analyses; however, all but one pooled analysis displayed high heterogeneity ($I^2 \geq 75\%$).
- ***For most outcomes, results were inconsistent and suggest small to modest disparities in diabetes care for people with mental illness.***

KQ 1b Results : Hypertension Care

- Limited comparative evidence; only 2 studies and both were VA studies
- Qualitative synthesis found no significant differences in adequacy of blood pressure control between individuals with and without mental illness diagnoses.

KQ 1b Results: Ischemic Heart Disease Care

- Limited comparative evidence; 1 study
- Between adults with and without SMI, no difference found in receipt of appropriate pharmacotherapy or rate of invasive intervention procedures post-myocardial infarction
- No study provide comparative evidence on
 - prescription/adherence to antiplatelet therapy
 - blood pressure at goal

KQ 2 Results: Do effects vary by key characteristics?

- Limited data on the interaction effects of mental health status by key moderators.
- No subgroup or analyses for the subgroups of interest in the eligible studies for cancer screening, immunizations, tobacco screening and referral, or ischemic heart disease.
- One study with 2 separately published analyses assessed mental health disparities in hypertension and diabetes process of care indicators
 - geographic location (urban vs. rural)
 - race/ethnicity (black vs. non-black)
 - no significant differences were noted for either subgroup

Limitations

- Only selected certain mental health dx
- US only studies
- Limited studies for many conditions
- Observational studies only; possibility of multiple forms of bias
- Significant heterogeneity
- Lack of data on key subgroups of interest

Summary

- Weak signal to support disparities; results were inconsistent
- Majority of studies displayed negative associations between mental illness and quality indicators
- Most meta-analyses displayed high heterogeneity in the summary estimates
 - small number of studies
 - differences in populations (eg, identification of those with current vs. lifetime mental illness)
 - assessment of outcomes (eg, self-report versus claims data)
 - study design issues (eg, which covariates were used in adjusted analyses)
- Beyond DM, existing literature sparse
- Opportunity for future high quality studies

Questions?

ESP Questions?

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The full report and cyberseminar presentation is available on the ESP website: <http://www.hsrd.research.va.gov/publications/esp/>

OHE Questions?

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<https://vaww.vha.vaco.portal.va.gov/sites/OHE/Pages/Default.aspx>