



Advancing NIH Research on the Health of Women: A 2021 Conference

Prevention of Chronic Conditions in Women to Advance Health and Function Across the Lifespan

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Prevention of Chronic Conditions in Women

Screening and prevention reduce risks for chronic conditions common in women:

- Cancer: breast, cervical, colorectal, lung
- Cardiovascular disease
- Depression and anxiety
- Diabetes
- Osteoporosis

Prevention of Chronic Conditions in Women

- Preventive service recommendations of the U.S. Preventive Services Task Force and Women's Preventive Services Initiative are covered under provisions of the Patient Protection and Affordable Health Care Act of 2010 (ACA).
- Recommendations are based on
 - Evidence of effectiveness
 - Balance of benefits and harms



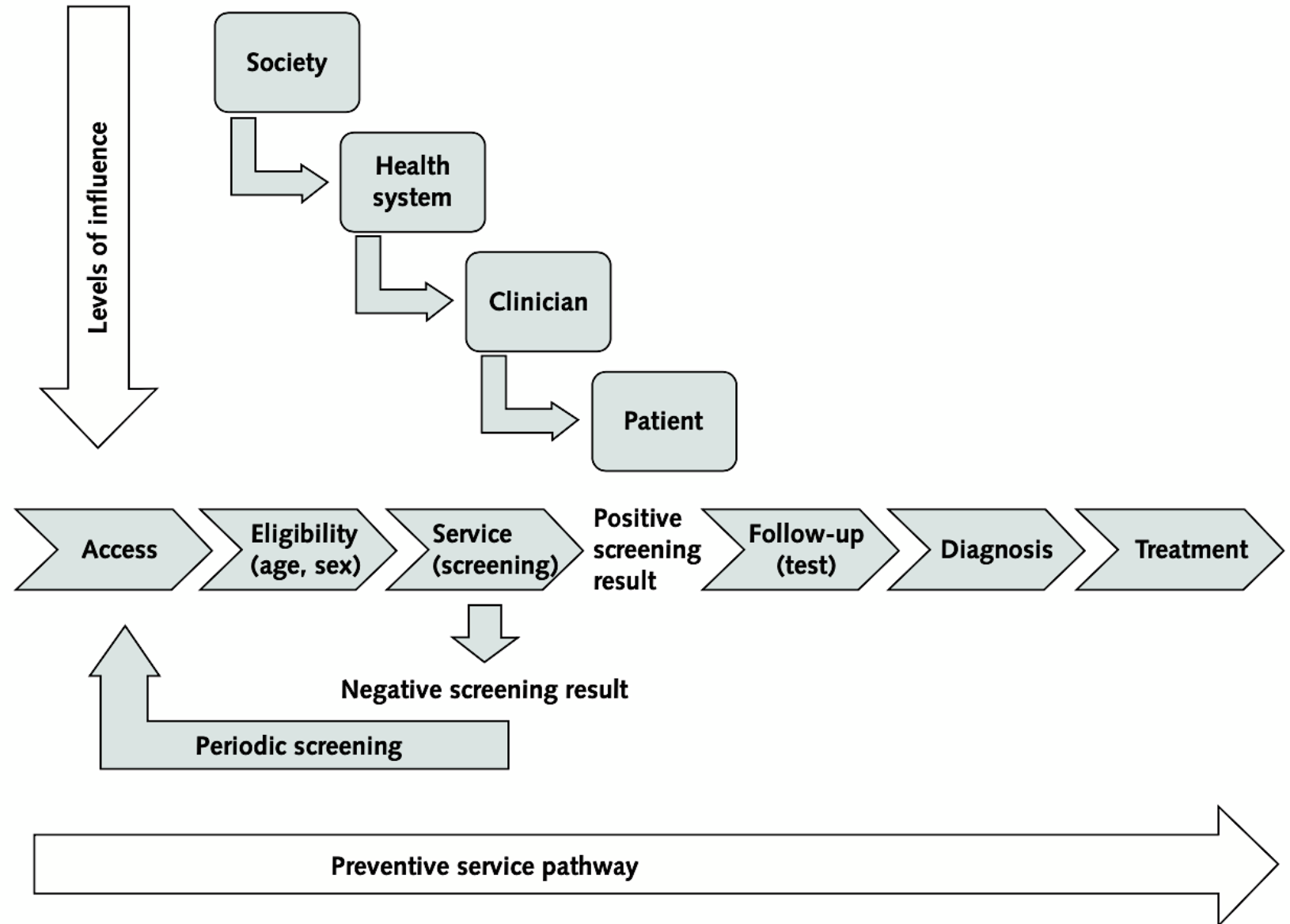
<https://www.womenspreventivehealth.org/recommendations/>



<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation-topics>

Prevention Services Pathway

Nelson HD, et al.
Annals Intern Med
2020;172:258-271.

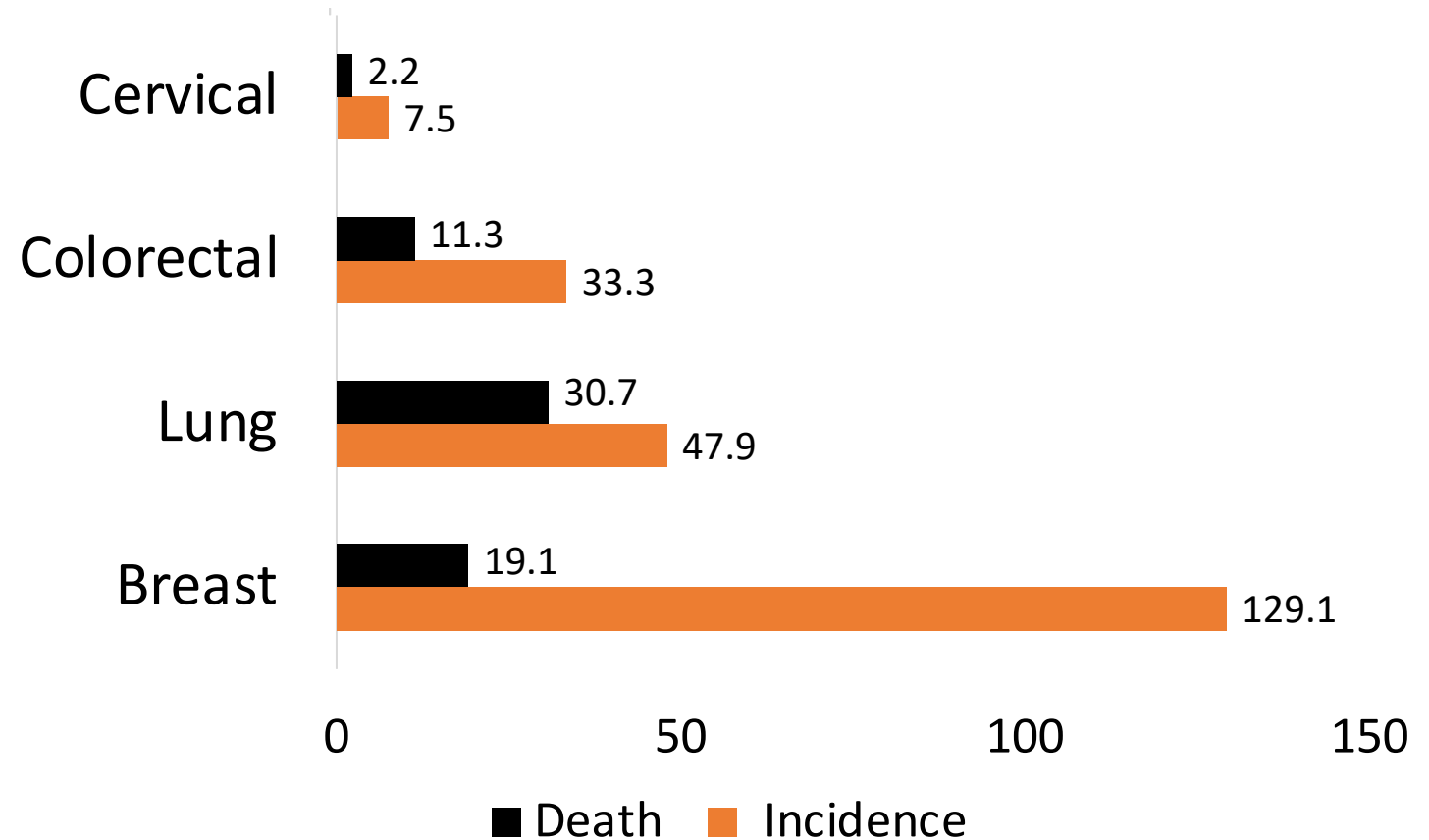


Evidence Gaps Limit Clinical Recommendations

- Research relevant to screening and prevention primarily focuses on:
 - Mechanisms of disease
 - Epidemiologic associations
 - Technologies for screening and diagnostic tests
 - Treatment of conditions once they are identified
- Evidence gaps generally include:
 - Randomized trials of the effectiveness of preventive services on improving health outcomes
 - Clinically relevant risk prediction methods
 - Barriers and facilitators of implementation in different populations
 - Harms

How to Address Evidence Gaps Cancer Screening in Women

2021 Estimated Cases per 100,000 Women



<https://seer.cancer.gov/statfacts/html/cervix.html>

Preventive Services for Cancer Specific to Women

Breast cancer screening	Mammography every 2 years ages 50 and over; age 40 to 49 as indicated by individual factors.
Risk assessment, genetic counseling, and genetic testing	Assess for family history of cancer associated with breast cancer susceptibility 1 and 2 (<i>BRCA1/2</i>) gene mutations; provide genetic counseling and testing if indicated.
Medications to reduce risk for breast cancer	Offer risk-reducing medications (tamoxifen, raloxifene, or aromatase inhibitors) for women aged 35 and older with increased risk for breast cancer and low risk for adverse effects.
Cervical cancer screening	Screen ages 21 to 65 years; interval depend on type of test.

<https://www.womenspreventivehealth.org/recommendations/>

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Preventive Services for Cancer Not Specific to Women

Colorectal cancer screening	Age 45 to 75 years; interval depends on type of test.
Lung cancer screening	Age 50 to 80 years with a 20 pack-year smoking history and currently smoke or have quit within the past 15 years; screen yearly with low-dose computed tomography
Tobacco smoking	Ask about tobacco use, advise smokers to quit, and provide behavioral interventions and pharmacotherapy.

<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation-topics>

Effective Cancer Screening & Prevention

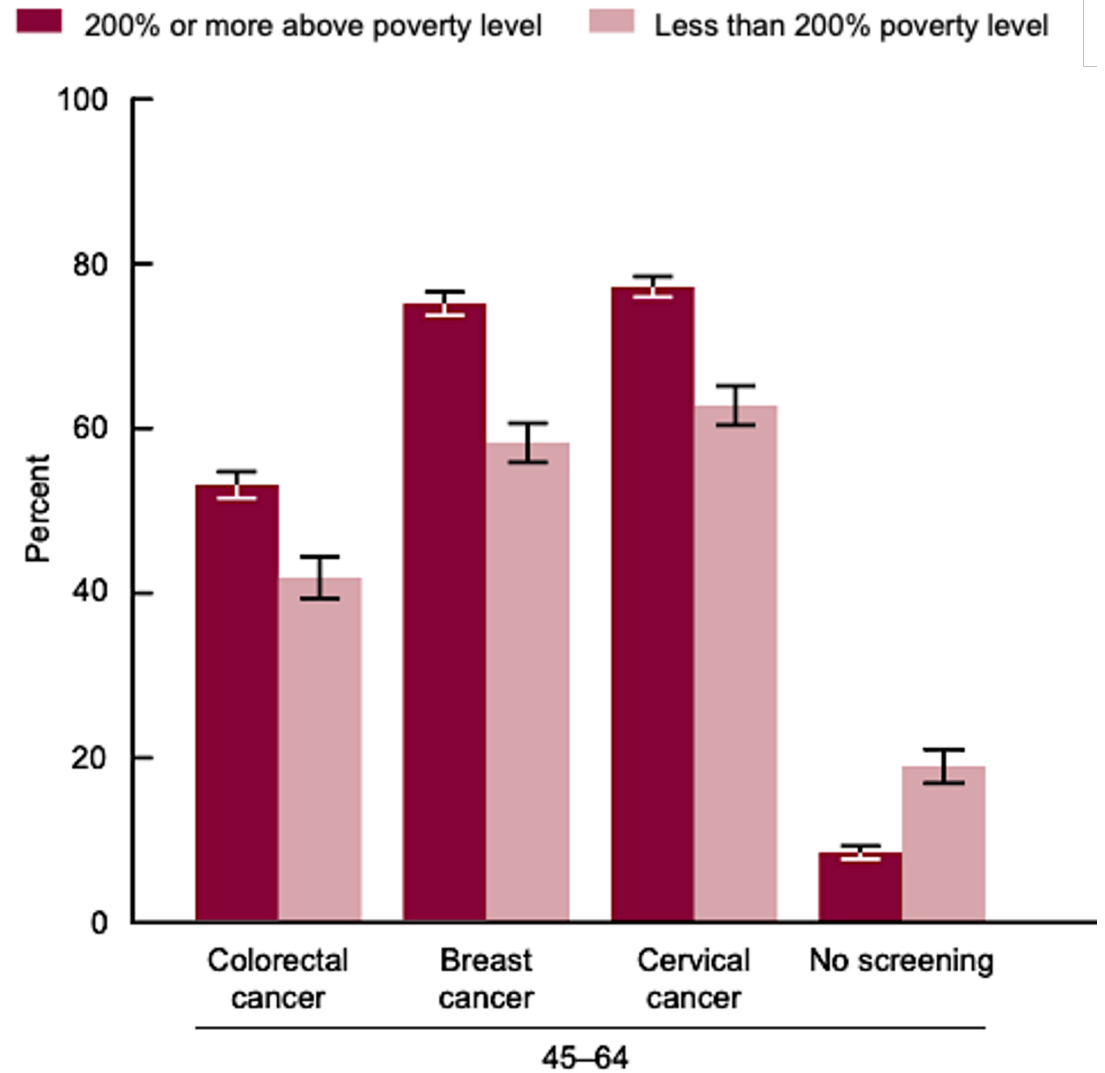
Under Utilization Limits its Impact

- Low rates of lung cancer screening; lack of data specific to women.
- Low uptake in practice:
 - Assessment of family history of breast cancer, genetic counseling, and mutation testing for women at risk
 - Use of medications to reduce breast cancer risk
 - Smoking cessation

Cancer Screening Disparities

Gorina Y, Elgaddal N. NHR
No. 157; June 9, 2021.

Screening Rates in Women



NOTE: 95% confidence intervals shown with error bars.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2015 and 2018.

How to Address Evidence Gaps?

Increase Cancer Screening with Patient Navigation

- Trials compared patient navigation versus usual care in populations experiencing health disparities.
- Services were tailored to the needs of patients to overcome barriers to screening:
 - Education
 - Scheduling
 - Transportation
 - Referrals
 - Reminders

REVIEW

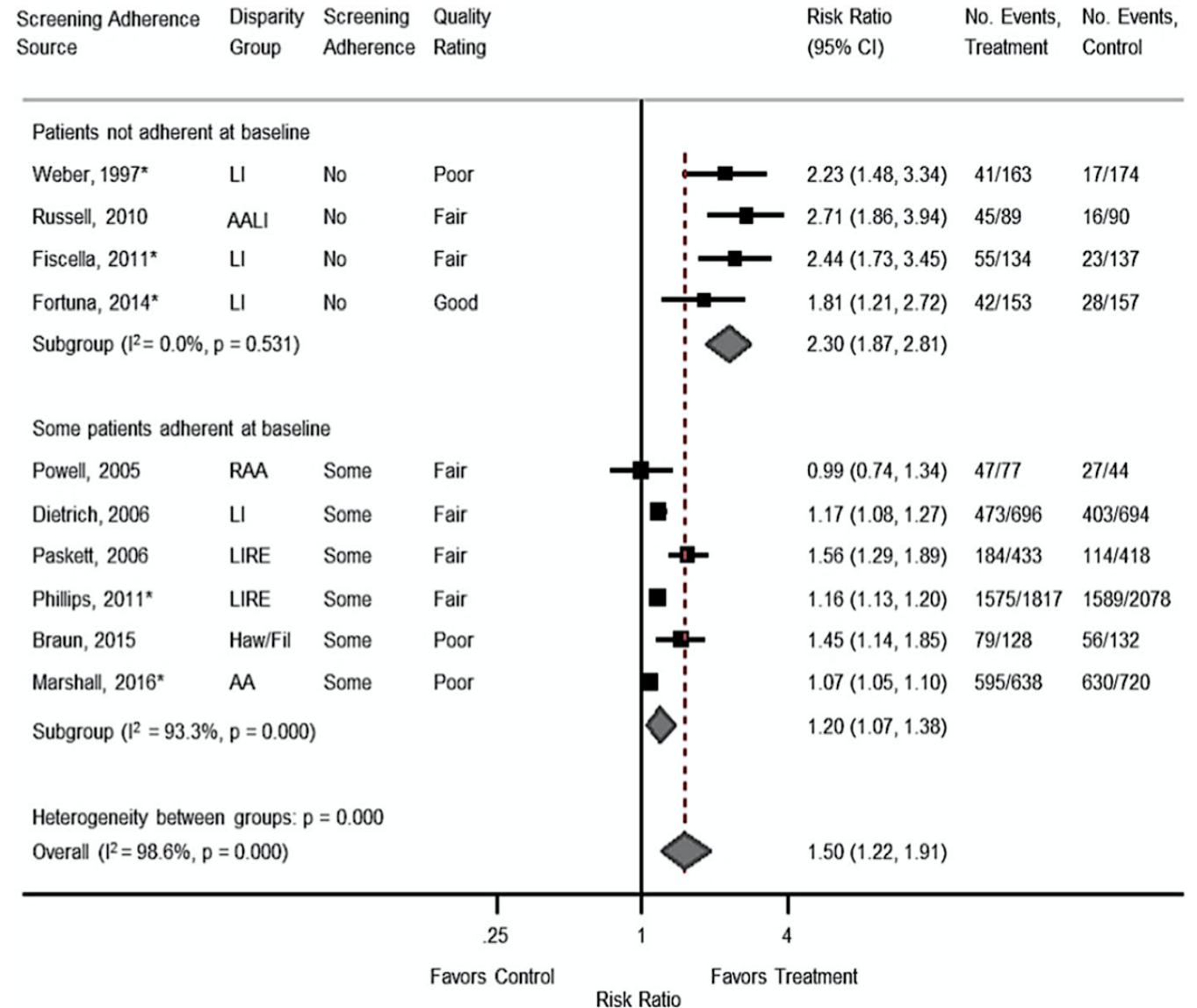
Annals of Internal Medicine

Achieving Health Equity in Preventive Services: A Systematic Review for a National Institutes of Health Pathways to Prevention Workshop

Heidi D. Nelson, MD, MPH; Amy Cantor, MD, MPH; Jesse Wagner, MA; Rebecca Jungbauer, DrPH, MPH, MA; Ana Quiñones, PhD, MS; Lucy Stillman, BS; and Karli Kondo, PhD, MA

Patient Navigation Improves Cancer Screening Rates

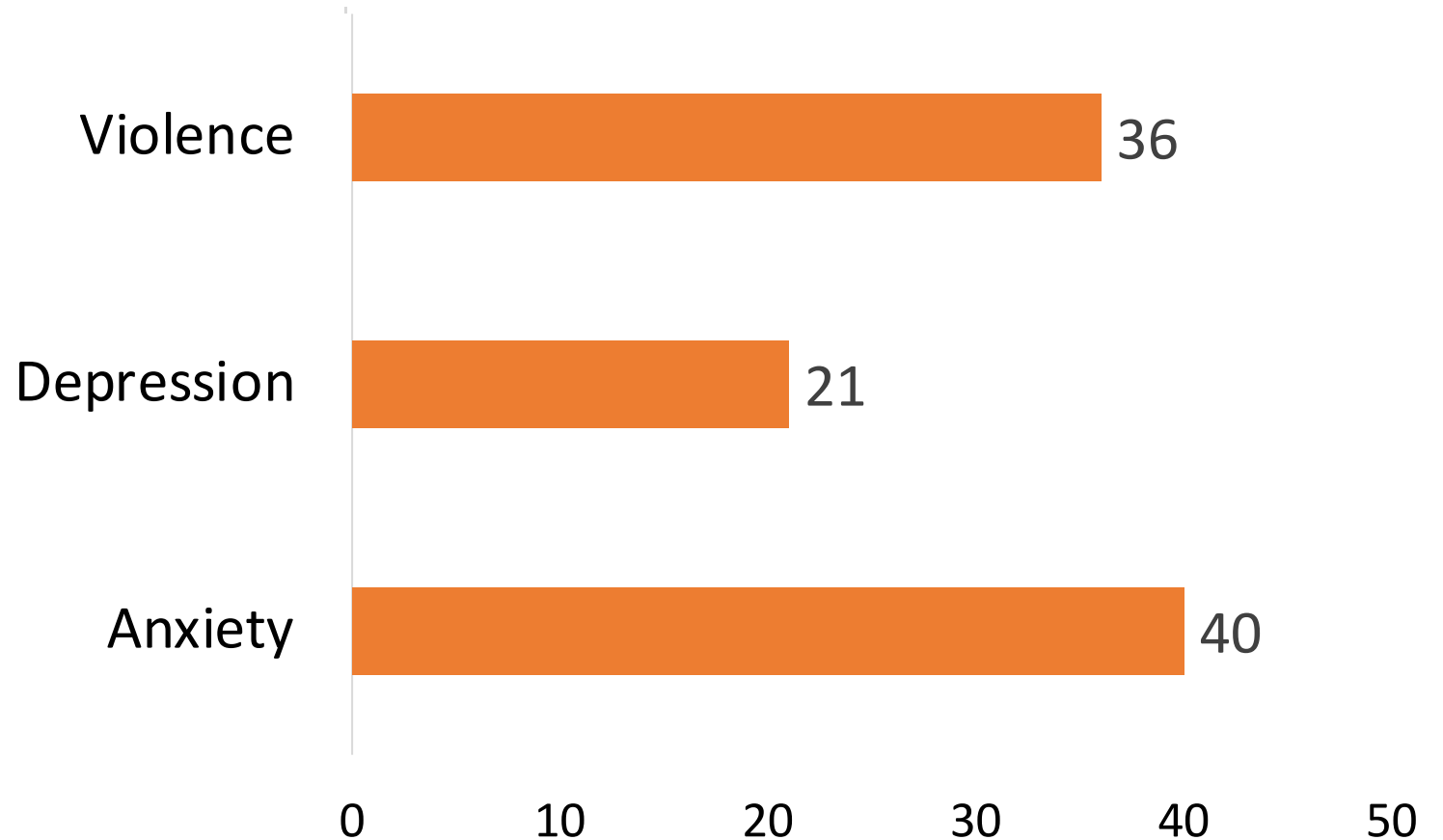
- Trials of patient navigation versus usual care indicate higher breast cancer screening rates with navigation.
- Similar results for colorectal and cervical cancer screening.



How to Address Evidence Gaps

Depression, Anxiety & Violence in Women

Lifetime Prevalence Rates in Women



<https://www.cdc.gov/nchs/products/databriefs/db303.htm>

<https://pubmed.ncbi.nlm.nih.gov/15877314/>

Kessler RC, et al. Int J Methods Psychiatr Res. 2012;21: 169-84.

Preventive Services to Identify Depression, Anxiety, and Violence

Depression screening	Screen for depression including pregnant and postpartum women; refer for appropriate therapy.
Anxiety screening	Screen for anxiety in adolescents and adult women including pregnant and postpartum women; refer for appropriate therapy.
Intimate partner violence screening	Screen for intimate partner violence and provide or refer women who screen positive to ongoing support services.

<https://www.womenspreventivehealth.org/recommendations/>

<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation-topics>

Conditions are Related, Yet Often Undetected

- Depression, anxiety, and intimate partner violence are often not addressed in health care.
- While intimate partner violence can cause physical injuries, it also leads to other serious conditions.
- Identification of one condition can help detect another.

**Depression,
suicide**

**Anxiety, panic
attacks, sleep
disturbance**

Eating disorders

**Chronic
headaches**

**Gastrointestinal
distress**

**Musculo-
skeletal
symptoms**

**Post-traumatic
stress disorder
(PTSD)**

**Unhealthy
alcohol and
drug use**

How to Address Evidence Gaps?

Screen & Prevent Related Conditions

- Development of accurate instruments to screen for both anxiety and depression.
- Understand relationships between conditions.
- Improve early detection and treatment to prevent chronic course and co-morbid conditions.

APPENDIX 1. The Four-Item Patient Health Questionnaire (PHQ-4) for Anxiety and Depression

Over the <i>last 2 weeks</i>, how often have you been bothered by the following problems?	Not at All	Several Days	More Than Half the Days	Nearly Every Day
Feeling nervous, anxious, or on edge	0	1	2	3
Not being able to stop or control worrying	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3
Little interest or pleasure in doing things	0	1	2	3

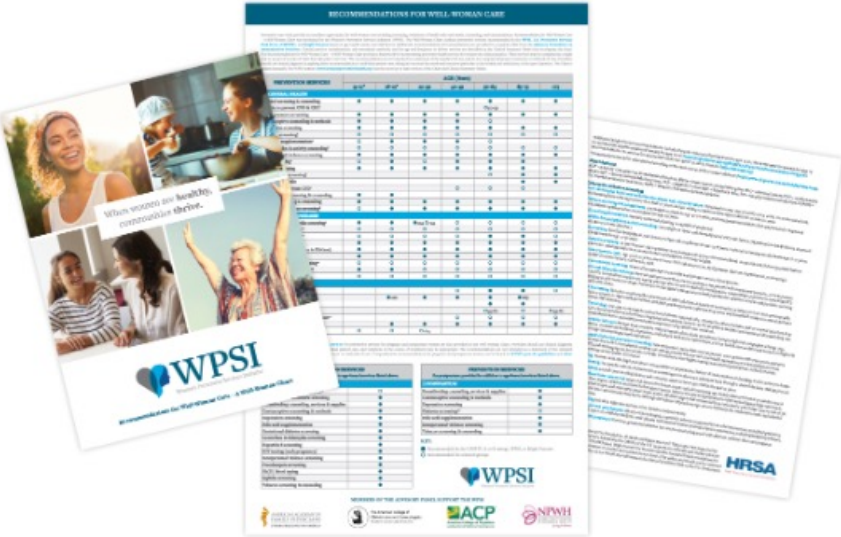
Kroenke K, et al. *Psychosomatics* 2009; 50:613-621.

WPSI Well-Woman Chart

Screening & Prevention for Related Conditions

https://www.womenspreventivehealth.org/wp-content/uploads/WPSI_WWC_11x17_2021Update.pdf

PREVENTION SERVICES	AGE (Years)						
	13-17 ^a	18-21 ^a	22-39	40-49	50-64	65-75	>75
♥ GENERAL HEALTH							
Alcohol use screening & counseling	●	●	●	●	●	●	●
Anxiety screening	●	●	●	●	●	●	●
CVD & CRC prevention with aspirin ¹					○ ₅₀₋₅₉		
Blood pressure screening	●	●	●	●	●	●	●
Contraceptive counseling & methods	●	●	●	●	○		
Depression screening	●	●	●	●	●	●	●
Diabetes screening ²	○	○	○	○	○	○	○
Fall prevention						●	●
Folic acid supplementation ³	○	●	●	●	○		
Healthy diet & activity counseling ⁴	○	○	○	○	○	○	○
Interpersonal & domestic violence screening	●	●	●	●	●	●	●
Lipid screening ⁵	○	●	○	●	●	●	
Obesity screening & counseling	●	●					
Osteoporosis screening ⁶							
Statin use to prevent CVD ⁷							
Substance use screening & assessment	●	●					
Tobacco screening & counseling	●	●					
Urinary incontinence screening ⁸	○	●					
♥ INFECTIOUS DISEASES							
Gonorrhea & chlamydia screening ⁹	●	●					
Hepatitis B screening ¹⁰	○	○					



Prevention of Chronic Conditions in Women

Screening and prevention reduce risks for chronic conditions common in women

Evidence gaps limit clinical prevention recommendations

Research improves screening and prevention in women:

- Personalized approaches that address patient needs.
- Recognition of inter-related conditions unique to women and their effects on health and function across the lifespan.