

# GEMS of the Week



## SPOTLIGHT

### **Refugee Health in the United States**

Where Do We Start? Many Needs, Few Answers!

### **Breast Cancer Risk and Incidence in Transgender Individuals**

How to Guide Screening

### **Can Exercise Impact Quality of Life in Older Adults with Cancer?**

# Refugee Health in the US: Where Do We Start? Many Needs, Few Answers!

## Interventions to Improve Health Among Refugees in the United States: A Systematic Review

Bitterfeld L, Ozkaynak M, Denton AH, et al. Interventions to Improve Health Among Refugees in the United States: A Systematic Review. *J Community Health*.

2025;50(1):130-151. doi:10.1007/s10900-024-01400-2

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**KEY TAKEAWAY:** Diverse interventions to address infectious diseases, women's health, general health, diet/exercise, health literacy, oral health, diabetes, family health, and substance abuse have varying effectiveness on improving their respective outcomes compared to varying controls among refugees in the United States.

**STUDY DESIGN:** Systematic review with a narrative synthesis of 11 cohort studies, nine non-randomized experimental, five qualitative, four randomized controlled trials (RCTs), three retrospective, two quality improvement (QI) projects, two mixed-methods, and one cross-sectional (N=13,573)

**LEVEL OF EVIDENCE:** STEP 3 (downgraded due to high heterogeneity of studies with few RCTs, lack of pooled statistical analysis, and ill-defined interventions and outcomes)

**BRIEF BACKGROUND INFORMATION:** Refugees face a high rate of both communicable and non-communicable diseases, impacted by barriers to care. While interventions to address these issues exist, little is known about which are most effective. This study aimed to identify and assess patient-level interventions to improve health outcomes in refugee populations across the United States (US).

**PATIENTS:** Refugees and asylees in the US

**INTERVENTION:** Patient-level interventions

**CONTROL:** No intervention, usual care, or pre-intervention baseline

**PRIMARY OUTCOME:** Health knowledge, satisfaction, behavior, and clinical health markers

### METHODS (BRIEF DESCRIPTION):

- Four databases were searched (PubMed, Embase, CINAHL, Web of Science).
- Eligible studies involved U.S.-based refugees of any age and evaluated measurable health outcomes. Mental health-focused and non-refugee-specific studies were excluded.

- Reviewers screened studies and assessed quality using the Mixed Methods Appraisal Tool.
- Interventions were grouped by healthcare provision, resource support, and education strategies, and targeted general health, infectious disease, women's health, diet/exercise, health literacy, oral health, diabetes, family health, and substance use.
- The studies compared the intervention groups to those who didn't receive the intervention, had usual care, or pre-intervention baseline.
- The primary outcomes included health knowledge, satisfaction, behavioral outcomes, and physical health markers.
- Results were synthesized narratively given heterogeneity of studies.

**INTERVENTION (# IN THE GROUP):** Not available

**COMPARISON (# IN THE GROUP):** Not available

**FOLLOW-UP PERIOD:** Not available

### RESULTS:

Primary Outcome –

- Education, home-based care, and follow-up visits improved treatment initiation and completion for tuberculosis (6 studies, n=3,661) and hepatitis B (1 study, n=4,132).
- Patient navigation and educational videos increased breast and cervical cancer screening (3 studies, n=409). Some pregnancy support programs improved breastfeeding intent, while others showed no significant differences (1 study, n=113). A rideshare program reduced missed gynecologic visits (1 study, n=78).
- Patient-centered medical homes, telehealth, and home visits improved clinic attendance and care continuity (4 studies, n=3,367). Group education enhanced quality of life (2 studies, n=154).
- Community-led programs improved knowledge and family engagement. Behavior change outcomes were mixed (5 studies, n=335).
- Workshops and peer-led sessions improved understanding of the healthcare system and pharmacy use (3 studies, n=471).
- Educational efforts increased oral hygiene knowledge and engagement, particularly among children and families (3 studies, n=283).

- Group visits and storytelling interventions improved knowledge, confidence, and self-management of diabetes (2 studies, n=64).
  - Parenting and cohesion programs supported communication and caregiving (1 study, n=50).
  - Culturally adapted tobacco cessation efforts increased participation, though long-term outcomes were unclear (2 studies, n=487)
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#### **LIMITATIONS:**

- High variability was present in interventions and outcome measurements.
  - Many studies measured process outcomes rather than clinical or behavioral outcomes.
  - Generalizability was limited due to culturally specific or small sample studies.
  - Most studies lacked long-term follow-up and sustainability assessments.
  - No statistical analysis was performed.
  - Interventions and outcomes were poorly defined.
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# Breast Cancer Risk and Incidence in Transgender Individuals: How to Guide Screening

## Risk and Incidence of Breast Cancer in Transgender Individuals: A Systematic Review and Meta-Analysis

Corso G, Gandini S, D'Ecclesiis O, et al. Risk and Incidence of Breast Cancer in Transgender Individuals: A Systematic Review and Meta-Analysis. *Eur J Cancer Prev.* 2023;32(3):207-214.

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**KEY TAKEAWAY:** Female-to-male (FTM) and male-to-female (MTF) individuals are at a statistically significant greater risk of developing breast cancer than cisgender men. MTF individuals are at a lower risk of breast cancer compared to cisgender females. There is no significant risk difference between FTM and cisgender females regarding breast cancer.

**STUDY DESIGN:** Systematic review and meta-analysis six observational cohort studies and 35 case reports (N=12,770)

**LEVEL OF EVIDENCE:** STEP 2 (downgraded due to low rates of disease in cohorts, and lower incidence cohorts were excluded)

**BRIEF BACKGROUND INFORMATION:** There is an increasing population of individuals whose sex at birth differs from their sex identity. People within the transgender community have traditionally been excluded from conventional clinical studies regarding breast cancer, and in turn there is a lack of guidelines for screening mammography within this population. This literature review aimed to evaluate the breast cancer risk and incidence in transgender people.

**PATIENTS:** MTF and FTM individuals

**INTERVENTION:** Sex-affirming hormone treatment

**CONTROL:** Cisgender individuals

**PRIMARY OUTCOME:** Breast cancer (BC) development

### METHODS (BRIEF DESCRIPTION):

- PRISMA guidelines were used to identify studies regarding breast cancer screening within the transgender population from 1968–2023 in PubMed and Scopus.
- Transgender individuals affected by BC were included in the study. Risk was evaluated in cohort studies that had ≥3 cases of BC in the screened population.

- Editorials, non-English case reports, and congress abstracts were excluded from the study.
- Hormonal treatments included testosterone use (ranging from unknown to 25 years; doses not stated in study; some studies unknown duration) or estrogen use (ranging from 3–40 years; doses not stated; some studies unknown duration).
- Random effect model was used to calculate standard incidence ratio (SIR) of breast cancer in MTF and FTM compared to the cisgender expected group.

### INTERVENTION (# IN THE GROUP):

- FTM: 34 with BC
- MTF: 45 with BC

### COMPARISON (# IN THE GROUP):

- FTM: 6,604
- MTF: 6,166

### FOLLOW-UP PERIOD: Not available

### RESULTS:

Primary Outcome –

- There was no significant difference in the risk of developing BC between FTM individuals and cisgender women (standard incidence ratio [SIR] 0.42; 95% CI, 0.1–2.4).
- FTM are at a higher risk of developing breast cancer than cisgender men (SIR 63; 95% CI, 32–125).
- MTF are at a higher risk of developing BC than cisgender men (SIR 23; 95% CI, 5.5–92) though less than cisgender women (SIR 0.30; 95% CI, 0.22–0.42).

### LIMITATIONS:

- Only cohort studies with ≥3 BCs diagnosed was included in the meta-analysis.
- Low number of BC events in the included studies.
- Wide confidence intervals with unclear estimation.
- One study included did not report an SIR estimate, authors had to calculate one from crude data from the paper.
- Significant heterogeneity present
- Cisgender data was calculated from external cohorts and reported in the included cohorts with only calculated data available.

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*The views expressed herein are those of the author and do not necessarily reflect the official policy of the Department of the Army, Defense Health Agency, Department of Defense, or the U.S. Government.*

# Can Exercise Impact Quality of Life in Older Adults with Cancer?

## Exercise Interventions for Depression, Anxiety and Quality of Life in Older Adults with Cancer

Soong RY, Low CE, Ong V, et al. Exercise Interventions for Depression, Anxiety, and Quality of Life in Older Adults with Cancer: A Systematic Review and Meta-Analysis. *JAMA Netw Open*. 2025;8(2):e2457859. Published 2025 Feb 3. doi:10.1001/jamanetworkopen.2024.57859  
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**KEY TAKEAWAY:** Exercise, especially mind-body exercises, can help anxiety, depression, and healthcare-related quality of life (HRQoL) in older adults with cancer.  
**STUDY DESIGN:** Systematic review and meta-analysis of 27 randomized controlled trials (RCTs) (N=1,929)  
**LEVEL OF EVIDENCE:** STEP 2 (downgraded due to high heterogeneity)

**BRIEF BACKGROUND INFORMATION:** Cancer and its treatment can significantly affect the psychological aspects of life. Exercise can help improve both depression and anxiety. This study aimed to analyze if exercise interventions can improve psychological quality of life in patients >60 with cancer.

**PATIENTS:** Adults >60 years old with a diagnosis of cancer

**INTERVENTION:** Exercise

**CONTROL:** Varied, but all had no supervised exercise program

**PRIMARY OUTCOME:** Severity of depression, anxiety and HRQoL

Secondary Outcome: Mind body exercises, length of intervention, >70 or <70 years old

### METHODS (BRIEF DESCRIPTION):

- RCT studies using exercise interventions such as conventional physical training or mind-body exercises were included in the study.
- Studies included any type of cancer without regard to comorbidities.
- Participants had a wide variety in exercise interventions including frequency, duration, intensity and setting.
- Control group also varied, ranging from medical therapy only to maintaining daily activities to receiving only educational reading material.
- HRQoL was assessed by functional assessment of cancer therapy, while anxiety and depression were

assessed by Hospital Anxiety and Depression Scale or Brief Symptom Inventory.

### INTERVENTION (# IN THE GROUP):

- Depression: 424
- Anxiety: 350
- HRQoL: 965

### COMPARISON (# IN THE GROUP):

- Depression: 402
- Anxiety: 335
- HRQoL: 901

### FOLLOW-UP PERIOD: Not available

### RESULTS:

Primary Outcome –

- Exercise decreased depression severity compared to control (12 studies, n=826; standardized mean difference [SMD] –0.53; 95% CI, –0.79 to –0.28;  $I^2=55\%$ ).
- Exercise decreased anxiety severity compared to control (9 studies, n=685; SMD –0.9, 95% CI, –0.66 to –0.12;  $I^2=41\%$ ).
- Exercise improved HRQoL compared to control (26 studies, n=1,866; SMD 0.63; 95% CI, 0.10–1.2;  $I^2=90\%$ ).

Secondary Outcome –

- Mind-body exercises decreased depression severity compared to conventional exercise (SMD –0.89; 95% CI, –1.5 to –0.27).
- Mind-body exercises decreased anxiety severity compared to conventional exercise (SMD –0.77; 95% CI, –1.5 to –0.01).
- There was a greater improvement of HRQoL with patients <70 years old compared to those >70 years (SMD 0.91; 95% CI, 0.1–1.7).
- There was no difference in psychological outcomes regarding cancer type, social status, ethnicity, marital status, or education.

### LIMITATIONS:

- Studies varied on frequency of treatment, duration of treatment, and whether protocols were supervised or not.
- Due to unequal amounts of attention given to intervention and control groups, it cannot be

ascertained how much of the observed effect was due to attention vs exercise.

- There was a lot of heterogeneity in the population with different cancer diagnoses, treatments, and overall baseline health levels.

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