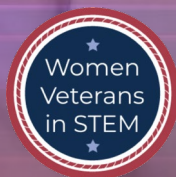


WOMEN VETERANS IN STEM

STRENGTHENING THE PIPELINE FROM SERVICE TO STEM FOR
WOMEN VETERANS



Education
Development
Center





Recommendations



This work is supported by the National Science Foundation under Grant No. 1932651. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



Recommendations

Welcome!



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being



What sector do you work in?

Employer

Policymaker

Professional Organization or Association

Military

Veteran Serving Organization (VSO)

Education

Government Agency

Elected Official

Other





Recommendations

Our goal is to increase the number of
women veterans entering STEM
careers



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce




Health &
Well-being



Project Timeline








White Paper Series



Women Veterans in STEM

Strengthening the Pipeline from Service to STEM

A series focusing on the future of Women Veterans in STEM



ARTICLE 1 of 5

This paper was developed as part of a National Science Foundation-funded project seeking to improve participation by women veterans in the STEM workforce. It is the first of five papers aimed at providing a snapshot of what is currently known about women veterans' participation in the STEM workforce, factors that affect their participation, and promising practices to increase participation and success in these fields. A convening in early 2021 will bring together key stakeholders to discuss the implications of these findings and how to best strengthen and scale the impact of existing initiatives to support women veterans' success.

Engaging and Retaining Women Veterans in the STEM Workforce


Why is it important to support women veterans' entry into STEM careers?

Women veterans bring many strengths to the civilian workforce, including leadership, teamwork, problem-solving skills, resilience and persistence.

Supporting women veterans' entry into the STEM workforce will be advantageous to the field, and also will help the women themselves. Women veterans in STEM professions make 54% more than do women veterans in non-STEM jobs, and they earn 13% more than non-veteran women in STEM.¹ Stronger pathways to STEM careers for women veterans will strengthen post-service financial stability for them and their families.

We know that women veterans are interested in pursuing STEM careers: They are nearly twice as likely to be in a STEM occupation than are non-veteran women. The top three STEM occupation

categories for women veterans are computer and mathematical, computer science and information technology, and engineering.² This ranking is notable because engineering and computer science are two STEM occupation areas where women are most underrepresented, making up just 15% and 26% of the total workforce, respectively.³ Given that most women in the military are women of color,⁴ supporting women veterans' entry into STEM professions will increase both gender and racial diversity in a field where most jobs are held by men who identify as White or Asian.





Women Veterans in STEM

The Pipeline from Service to STEM

The future of Women Veterans in STEM



ARTICLE 2 of 5

National Science Foundation-funded project seeking to improve participation by women veterans in the STEM workforce. It is the first of five papers aimed at providing a snapshot of what is currently known about women veterans' participation in the STEM workforce, factors that affect their participation, and promising practices to increase participation and success in these fields. A convening in early 2021 will bring together key stakeholders to discuss the implications of these findings and how to best strengthen and scale the impact of existing initiatives to support women veterans' success.

Transitioning to the Civilian Workforce

How can we make STEM careers available to help women veterans transition to jobs in STEM fields?

Services that cater exclusively to STEM fields.

80 women participate in the (TAP), which is then transitioned to the Department of Defense (DoD) and the Office of Personnel Management (OPM).¹

The Veterans Health Administration (VHA) provides individualized initial counseling and pre-separation counseling, both of which must be completed no later than 365 days prior to separation or retirement. During the individualized initial counseling, a TAP counselor works with the transitioning service member to help them begin the transition process, complete their personal self-assessment and individual transition plan, and discuss their individual post-transition



Women Veterans in STEM

The Pipeline from Service to STEM

The future of Women Veterans in STEM



ARTICLE 3 of 5

part of a National Science Foundation-funded project seeking to improve participation by women veterans in the STEM workforce. It is the first of five papers aimed at providing a snapshot of what is currently known about women veterans' participation in the STEM workforce, factors that affect their participation, and promising practices to increase participation and success in these fields. A convening in early 2021 will bring together key stakeholders to discuss the implications of these findings and how to best strengthen and scale the impact of existing initiatives to support women veterans' success.

Pathways for Women Veterans

How can we make STEM careers available to help women veterans transition to jobs in STEM fields?

Services that cater exclusively to STEM fields.

on women's participation in STEM divisions or sectors have more opportunities for STEM-related Military Occupational Specialties, women in the military will be required in three domains:

University of Syracuse showed that veterans also develop skills in domains such as ethics and discipline, leadership, adaptability, and teamwork.²

According to *The New Foundational Skills of the Digital Economy*,³ a report from Burning Glass Technologies, other skills will be required in three domains:

Human Skills, or "soft skills," such as critical thinking, creativity, communication, analytical ability, and collaboration

Digital Building Block Skills, which are especially useful to data-driven decision makers and include such things as analyzing data, managing data, and computer programming

STEM jobs will require more technical skills.⁴ A study from the



Women Veterans in STEM

Service to STEM

Women Veterans in STEM



ARTICLE 4 of 5

National Science Foundation-funded project seeking to improve participation by women veterans in the STEM workforce. It is the first of five papers aimed at providing a snapshot of what is currently known about women veterans' participation in the STEM workforce, factors that affect their participation, and promising practices to increase participation and success in these fields. A convening in early 2021 will bring together key stakeholders to discuss the implications of these findings and how to best strengthen and scale the impact of existing initiatives to support women veterans' success.

Health and Well-being of Women Veterans

How can we make STEM careers available to help women veterans transition to jobs in STEM fields?

Services that cater exclusively to STEM fields.

on women's participation in STEM divisions or sectors have more opportunities for STEM-related Military Occupational Specialties, women in the military will be required in three domains:

University of Syracuse showed that veterans also develop skills in domains such as ethics and discipline, leadership, adaptability, and teamwork.²

According to *The New Foundational Skills of the Digital Economy*,³ a report from Burning Glass Technologies, other skills will be required in three domains:

Human Skills, or "soft skills," such as critical thinking, creativity, communication, analytical ability, and collaboration

Digital Building Block Skills, which are especially useful to data-driven decision makers and include such things as analyzing data, managing data, and computer programming

STEM jobs will require more technical skills.⁴ A study from the

Women veterans bring many strengths to civilian workforce, including leadership, teamwork, problem-solving skills, resilience & persistence



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being

Most veterans' support services were developed for male veterans; programs specifically for women veterans are typically fractured and isolated



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being

**As number of women veterans grows, availability and
quality of services available to them must evolve**



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being

Much still needs to be done to ensure that those who have served our country can leverage their experience and leadership expertise into economic opportunities.



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being

Convening Recap

69 participants met, seeking to:

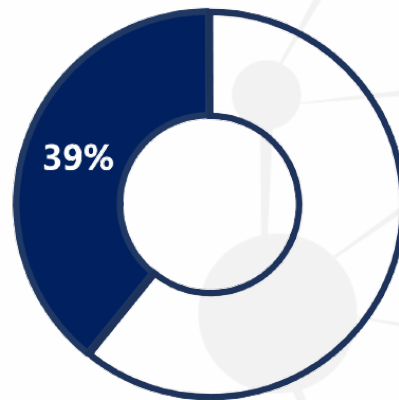
- identify and prioritize strategies to develop and leverage existing services
- stimulate new ideas to provide more targeted outreach to engage, train, and retain women veterans in the STEM workforce

*The Convening
was comprised of:*

4

days,
keynote speakers,
networking sessions,
working groups,

**Veteran or
Active Duty**



3

panel
discussions

STRENGTHENING the PIPELINE from SERVICE to STEM HEALTH and WELL-BEING

A CONVENING ON THE FUTURE OF WOMEN VETERANS IN STEM • EDUCATION DEVELOPMENT CENTER • CONFERENCE • MARCH 2-5, 2021



NORMALIZE SEEKING OUT SUPPORT
(FEAR OF DISABILITY RATINGS)

#NORMALIZE MENTAL HEALTH

MORE MEN
to ADVOCATE
for WOMEN in
MILITARY

the VALUE of
NETWORKING

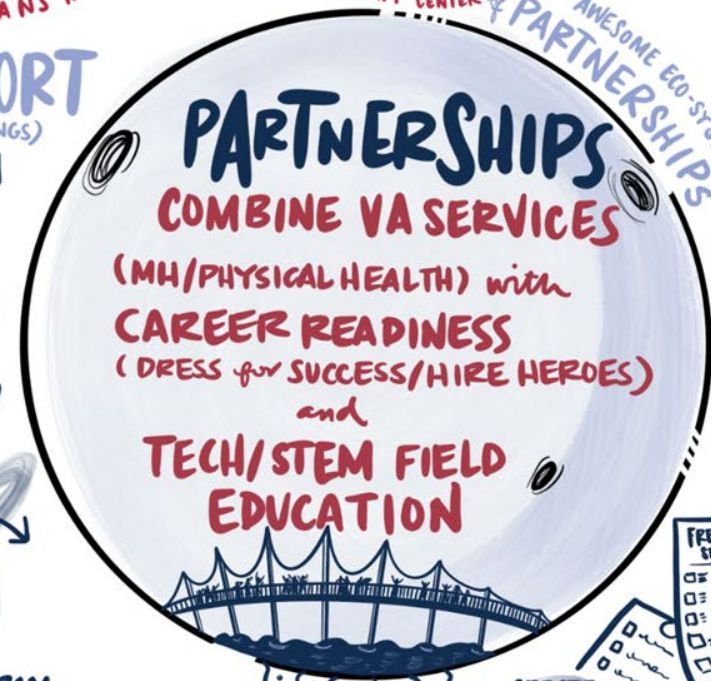
MORE ACCESS to
VA SERVICES

WOMEN MENTORS:
- as a CAREER
- as a SERVICE
- as a TRAINING PROGRAM

HELP them
BE SEEN



MENTORING and
COACHING



AWESOME ECO-SYSTEM
PARTNERSHIPS

the IMPORTANCE
of KNOWING
NEEDS &
VALUES before
JOB SEEKING

TEACH FAMILY &
FRIENDS HOW to
HAVE "the" TALK



#PURPOSE
(and MEANING)
& #VALUES

PROMOTE
SUPPORT/SERVICES
at CHAMBERS of
COMMERCE,
LOCAL MILITARY
DIRs, VSO BASES,
etc.

the
"FREE"
LIST of SUPPORT
SERVICES by
COUNTY/STATE
and FEDERAL

IF YOU SERVED,
YOU DESERVE

CREATE a
CHECKLIST of
HOW-TO EXAMPLES
for a CAREER
SWITCH into
STEM JOBS

DE-MYSTIFY PATHWAYS
to STEM

the value web



STRENGTHENING the PIPELINE from SERVICE to STEM CAREER

A CONVENING ON THE FUTURE OF WOMEN VETERANS IN STEM • EDUCATION DEVELOPMENT CENTER • CONFERENCE • MARCH 2-5, 2021

AWARENESS

BETTER AWARENESS

EDUCATION AT THE POINT OF SEPARATION OF THE OPPORTUNITIES THAT WE KNOW ARE HIGH-VALUE SPECIFICALLY FOR STEM CAREERS VIA A RESOURCE CLEARING HOUSE

- CERTIFICATE OPPORTUNITIES
- RESUME-WRITING SUPPORT
- ASSISTANCE ORGANIZATIONS

ENCOURAGE AND EXPLAIN THE USE OF THE TUITION ASSISTANCE PROGRAM and/or THE POST 9-11 GI BILL ON HOW TO PURSUE A DEGREE IN A STEM RELATED FIELD

DEVELOP & DISTRIBUTE EFFECTIVE BIAS TRAINING EMPHASIZING THE VALUE OF EXPERIENCE

EXPAND OPPORTUNITIES

FOR SERVICE MEMBERS TO GET EXPERIENCE TO PREPARE FOR LIFE AFTER SERVICE

PROFESSIONAL ORGANIZATIONS

- OUTREACH TO MILITARY INSTALLATIONS
- OUTREACH TO STUDENTS

PROVIDE FLEXIBLE OPPORTUNITIES TO CONTINUE AND STAY IN THE WORKFORCE

REVERSE MENTORING

RELATABILITY TO THE NEWER and VICE VERSA - CROSS IDENTITY GROUP MENTORING

BE YOUR OWN ADVOCATE

HIGHLIGHTING LEADERSHIP AND PROBLEM SOLVING QUALITIES ASSOCIATED WITH VETERANS

UTILIZE UNIQUE EXPERIENCES

AS A PLATFORM TO PROGRESS & STRIVE

BROADEN THE NETWORKS

- CONDUCTING RECRUITING ACTIVITIES ON BEHALF OF EMPLOYERS
- LINK TO COMMUNITY COLLEGES
- APPRENTICESHIP PROGRAMS
- VOCATIONAL SCHOOLS
- COMMUNITY INFLUENCERS

FINDING A GROUP THAT UNDERSTANDS YOUR CIRCUMSTANCES and INTERESTS



STRENGTHENING the PIPELINE from SERVICE to STEM TRANSITIONING to the STEM WORKFORCE

A CONVENING ON THE FUTURE OF WOMEN VETERANS IN STEM • EDUCATION DEVELOPMENT CENTER • CONFERENCE • MARCH 2-5, 2021

HELP IN
AVOIDING
GETTING STUCK
IN ROLES



THERE IS GREAT DIVERSITY IN THE
INTER-SECTIONALITY
OF WOMEN VETERANS

NETWORKING
and
MENTORING
with PROFESSIONAL
SOCIETIES and AFFINITY
ORGS.

NORMALIZE

- CAREGIVING + EMPLOYMENT
- FLEXIBLE WORK OPTIONS and the FAMILY BENEFITS
- DUAL CAREER PLANNING



MENTORSHIP
is CRITICAL AT ALL LEVELS

PARTNERSHIPS
to PROMOTE
VSO ROSTERS
to WOMEN VETS

SEEING ROLE-MODELS
THAT LOOK LIKE THEM

WOMEN
MENTORS



DIRECT
WOMEN INTO
EDUCATION
to CONNECT
TECHNICAL
SKILLS

**EMPOWER
WOMEN'S
VOICES**

with
RESOURCES for
SELF ASSESSMENT
and SUPPORT




the value web



STRENGTHENING the PIPELINE from SERVICE to STEM

A CONVENING ON THE FUTURE OF WOMEN VETERANS IN STEM • EDUCATION DEVELOPMENT CENTER • CONFERENCE • MARCH 2-5, 2021

EDUCATION Pathways


BETTER EDUCATE VETERANS TO ASSESS QUALITY PROGRAMS THAT WILL YIELD THE OUTCOMES THEY WANT

BETTER EDUCATE FACULTY WITHIN UNIVERSITIES ON VETERAN NEEDS

INCORPORATE STEM INTO EARLY, MID & LATE CAREER TAP EDUCATION




TEACH VETS TO REFRAME SERVICE TO WHAT IS PRIZED/NEEDED FOR CIVILIAN WORKFORCE

CHILD CARE RESOURCES FOR STUDENTS THAT ARE ACCESSIBLE DURING CLASS & STUDY TIME

AN INFORMATION CLEARINGHOUSE
BETTER & MORE COMMUNICATION
RESOURCES / EDUCATION / INFO ON TUITION ASSISTANCE
OUTREACH RESOURCES FOR ON-BASE EDUCATION CENTERS, INFORMATION ON CERTIFICATION PROGRAMS

INCORPORATE STEM COURSES INTO MOS TRAINING
PROVIDE CERTIFICATION THAT TRANSFER TO CIVILIAN SPACE, UNIVERSITY SABBATICAL PROGRAMS

HAVE CIVILIAN STEM WOMEN MENTOR WOMEN SERVICEMEMBERS
INCLUDE FREE MEMBERSHIPS TO PROFESSIONAL ASSOCIATIONS

PAID INTERNSHIPS ARE KEY!

MENTORSHIP PROGRAMS (WITH INDUSTRY, PROFESSORS, PEERS...)

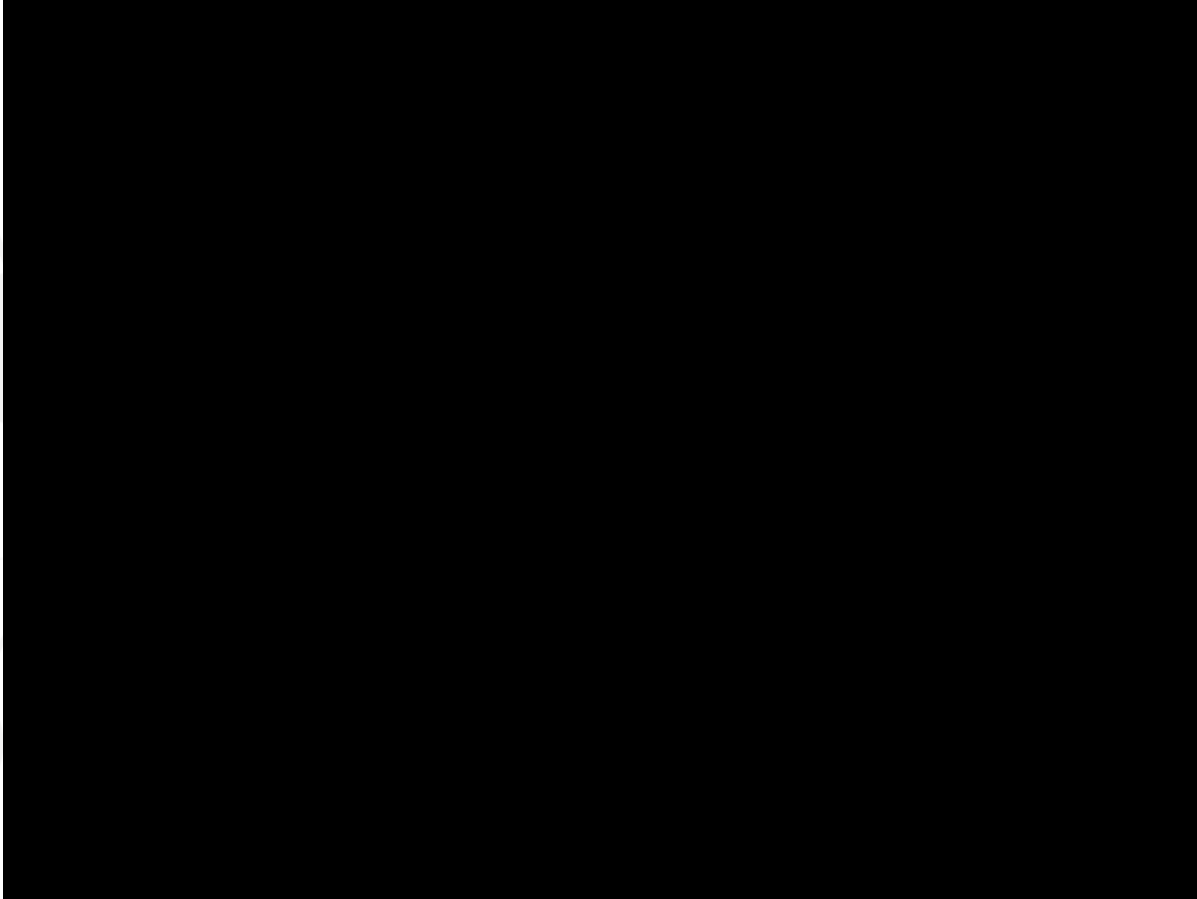
BRIDGE PROGRAMS TO PREPARE WOMEN VETERANS FOR THE INTEGRATION INTO EDUCATION

FOLLOWED WITH CONTINUOUS ENGAGEMENT WITH RESOURCES

TEACH TARGETED NETWORKING THROUGH PROFESSIONAL ORGS



Convening Video





National Center for Women Veterans in STEM



Policymakers



STEM
Educators



Women
Veterans



STEM
Employers



Veteran Serving
Organizations



National Center for Women Veterans in STEM Resource Roundup

Employment

Education

Transition &
Other

STEM Employment

Challenges

- “Employers didn’t recognize my MOS as actual work experience.”
- “How does my military experience translate to the civilian workforce?”

National Center for Women Veterans in STEM

- Employers receive technical assistance on recruiting, hiring, and integrating veterans into the workplace
- Women Veterans access coaching on how to translate their military experience to a civilian resume
- Women Veterans access self-assessment tools and career roadmaps

The National Center will connect women Veterans with:

[Hire Our Heroes](#) | [Talent Bridge for Veterans](#) | [Veterans at Work Certificate Program](#)

...just to name a few, what else should we include?

STEM Employment - what resources should women Veterans be connected with?

Powered by  Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app



STEM Education

Challenges

- “I wasn’t sure where to begin my post-service education journey.”
- “I feel like I have to hide my veteran status.”
- “What prerequisites do I need to begin a STEM program?”

National Center for Women Veterans in STEM

- Resources and guidance for women service members and veterans to understand the opportunities and pathways in STEM
- Customized technical assistance to higher education institutions on how to better recruit and retain women veterans, develop mentoring programs, and establish communities of practice

The National Center will connect women Veterans with:

GI Bill | Edith Nourse Rogers STEM Scholarship | VET TEC | One2One Mentorship Program

...just to name a few, what else should we include?

STEM Education - what resources should women Veterans be connected with?

Powered by  Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app



Transition & Other Support

Before the National Center for Women Veterans in STEM

- “Services are disjointed and hard to navigate.”
- “I wasn’t sure where to start”
- “I had to forge my own path to a STEM career”

National Center for Women Veterans in STEM

- Centralized hub of information, resources, and services with specific portal for women service members and veterans
- Existing networking and mentoring organizations that serve veterans are navigable and searchable in a centralized location
- Webinars and tutorials to orient users to the site

The National Center will connect women Veterans with:

TAP | AMVETS | Onward to Opportunity (O2O) | Women Veterans Network (WoVeN) | MilitaryHire

...just to name a few, what else should we include?

Transition - what other resources should women Veterans be connected with?

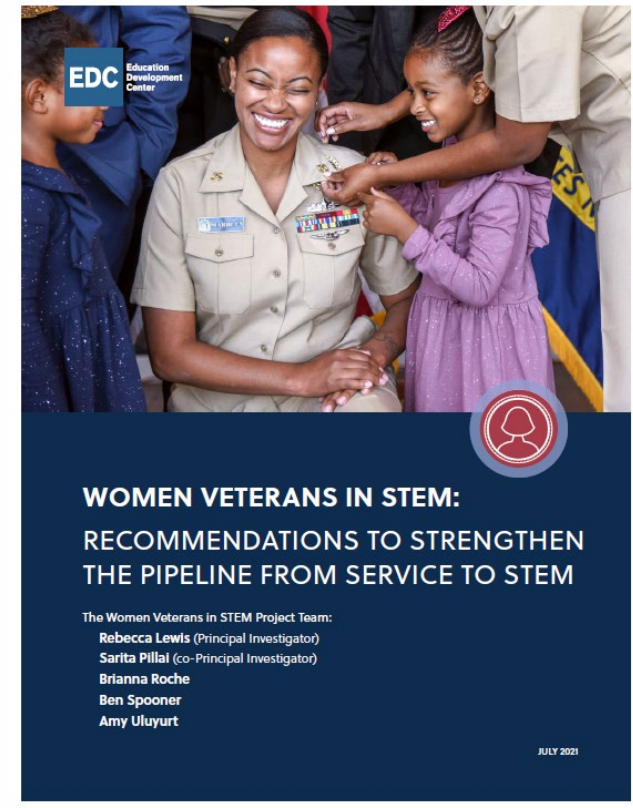


Powered by  **Poll Everywhere**

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

Actionable Recommendations

- Mentoring: Tapping the Power of Women Veterans
- Expanding Networking Opportunities
- Building Strong Systems to Support Transitions
- Engaging Higher Education and Employers
- Partnering with the Military to Change Culture



Mentoring: Tapping the Power of Women Veterans

- Be a **mentor!**
- Sponsor **affinity groups for women veterans** and host **networking events** to match with mentors
- Seek **women veterans as advisors** (reverse mentoring) to better understand the unique needs of women veterans and more effectively attract them to and retain them in STEM education and the workforce.

Expanding Networking Opportunities

- Establish a **professional networking alliance** specifically for women veterans to connect with STEM professionals.
- **Waive conference registration fees** for women veterans transitioning from the military.
- **Offer technical assistance to relevant professional networking organizations** regarding the needs of women veterans in STEM.

Building Strong Systems to Support Transitions

- **Ensure that transition planning starts long before departure** and assists women in identifying and translating the skills and knowledge gained in service to relevant STEM fields
- **Professional development and training opportunities**, such as apprenticeship or internship opportunities with STEM employers
- Webinars, resources, and support to **coach veterans to advocate for themselves** to secure employment in the civilian sphere, and build interviewing skills so they are prepared for the experience

Engaging Higher Education and Employers

- **Broaden recruiting networks** to include vocational schools, community colleges, and apprenticeship programs, which may reach more women veterans
- Learn more about veterans' experiences by **tapping veteran employees as advisors** to create new engagement and retention practices as well as veteran alumni to serve as mentors to help student veterans transition and excel in higher education.
- Coach post-secondary advisors and human resources professionals on **translating military experience** to civilian language.

Partnering with the Military for Cultural Change

- Ensure that all service members have **equitable access to transition support**, including post-military career planning (pre-transition), support during the transition, and post-transition resources.
- **Create a transition services office that serves all branches**, rather than individual offices for each branch
- **Hire an independent external agency to assess TAP**, with a particular focus on the unique experiences, needs, and challenges of women veterans

Call to Action!

What are some other things you can do?

- Share the report on **social media**
- Join the **Linkedin Group**
- **Join us!** Be part of this collaborative effort to create stronger pathways to STEM for women veterans



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being

Call to Action! What recommendations will you commit to implementing?



Powered by  **Poll Everywhere**

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app



Learn More & Share!



@WomenVetsSTEM



LinkedIn: Women Veterans in STEM Convening

WomenVetsSTEM.edc.org



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being

Thank you!



Transition
Services



STEM
Education



Women
Veterans



STEM
Workforce



Health &
Well-being