Strategies to Achieve Alignment, Collaboration, and Synergy Across Delivery and Financing Systems

Integrating Health and Social Services for Veterans by Empowering Family Caregivers

Research In Progress Webinar
Wednesday, August 7th, 2019
12:00-1:00 pm ET/9:00-10:00am PT
Welcome: Glen Mays

Presenters: Megan Shepherd-Banigan, PhD, MPH

Commentary: Jennifer Henius, LCSW

Q&A: Moderated by Glen Mays
Megan Shepherd-Banigan is a health services researcher; she completed her PhD in Health Services Research at the University of Washington. She studies family support for individuals with mental and physical disabilities. She also focuses on how to creatively and rigorously combine empirical approaches to address methodologically challenging research questions in health systems and policy research. Megan is a core Investigator at the Durham VA Health Services Research and Development and is an Assistant Professor of Population Health Sciences at Duke University. She currently holds a career development award from the VA HSR&D to activate family support to help Veterans with posttraumatic stress engage in evidenced-based therapies.
Jennifer Henius, LCSW

Jennifer Henius is a licensed clinical social worker with nearly 15 years of service at the VA and has served in a variety of clinical and administrative positions. She completed her Masters Degree in Social Work at the University of South Florida and is an alumnus of the VA’s Graduate Healthcare Administration Training Program which serves to develop high performing leaders for careers in health care administration. Jennifer serves as the Senior Health System Specialist for the VA’s Caregiver Support Program Office and provides high level staff work in support of the National Director in the implementation and oversight of Public Law 111-163, Caregivers and Veterans Omnibus Health Services Act of 2010. Jennifer had the lead for drafting the program’s published national policy guidance and is responsible for the Secretary’s Annual Report to Congress. Jennifer supports a broad range of business functions and secured more than $8 Million dollars in provision of the program’s IT requirements and serves as the business lead for this project. Jennifer also serves as the program lead for the collaborative partnership with VA CARES and has served an integral role since its inception in developing the project’s aims under the direction of Dr. Courtney Van Houtven.
Team and Partners

VA HSR&D Durham
• Courtney Van Houtven, PhD, MSc
• Terri Pogoda, PhD
• Nina Sperber, PhD
• Valerie Smith, PhD
• Karen Stechuchak, MS
• Kevin McKenna, MPH
• Katherine Miller, MSPH
• Emili Travis, BA
• VA CARES Evaluation Team (PI: Van Houtven)

Caregiver Support Program VACO
• Margaret Kabat, LCSW-C, CCM
• Jennifer Henius, LCSW
Overview

• Context/Problem
• Potential Strategy
• Research Question 1
  – To explore how caregiver support facilitates engagement with medical and vocational/education services?
• Research Question 2
  – Examine if institutional support for caregivers impacts time to use of the post 9/11-GI Bill benefit, VR&E, and supported employment?
• Conclusions
• Implications
• Partner’s Remarks
  – Jennifer Henius, LCSW, Senior Health System Specialist for VA Caregiver Support Program Office
Veteran

• 3.3 million deployed since 2001
• Advances in battlefield medicine
  • 14% PTSD; 19% TBI
• Some experience reintegration challenges
  • Challenges maintaining social relationships, employment, education; economic vulnerability; decline in health
Veteran: cross cutting medical, social, economic needs

Veterans Health Administration
- Evidenced-based medical and psychological care
- Supported employment
- Institutional support for caregivers through Caregiver Support Program

Veterans Benefits Administration
- Education assistance (post 9/11 GI Bill)
- Vocational rehabilitation and employment (VR&E)
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Family Caregiver

Veterans Health Administration

Veterans Benefits Administration
Veteran: cross cutting medical, social, economic needs

Institutional support for caregivers

Veterans Health Administration

Veterans Benefits Administration

Cross sector alignment mechanism

Family Caregiver
Opportunities in VA
Caregivers & Veterans Omnibus Health Services Act
(P.L. 111-163; May 5, 2010)

Outlined specific new services for caregivers of Veterans:

1. Program of General Caregiver Support for caregivers of eligible Veterans from all eras in need of a caregiver

2. Program of Comprehensive Assistance for Family Caregivers (PCAFC) of eligible Veterans injured in the line of duty on or after 9/11/2001

VA Caregiver Support Program Office housed in Veteran Health Administration, under Care Management and Social Work Services, Patient Care Services.
Program Expansion

VA Mission Act 2018 ends the disparity of limiting the PCAFC to caregivers of post 9/11 Veterans only and newly authorizes financial planning and legal services as additional VA benefits extended to qualified caregivers.
1. Problem (complex health/social needs among Veterans)
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2. Potential strategy (family caregivers)
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2. Potential strategy (family caregivers)

3. Opportunities in VA (institutional support, data integration)
1. Problem (complex health/social needs among Veterans)

2. Potential strategy (family caregivers)

3. Opportunities in VA (institutional support, data integration)

4. Research questions:
   - **RQ 1.** What features of family caregiver support increase Veteran access to medical and employment/education services?
   - **RQ 2.** Can institutional support for family caregivers through PCAFC impact use of employment/education services (e.g., post 9/11 GI Bill, VR&E, and supported employment)?
Research Question 1
What features of family caregiver support increase Veteran access to medical and employment/education services?
Approach

• 26 joint in-depth telephone-based Veteran/caregiver dyad interviews
  – Veteran and caregiver participate together
• Sample: Dyads in which caregivers had enrolled in PCAFC and veterans used one of
  the employment or education services
• Thematic analysis
  – Structural coding (based on qualitative scripts)
  – Content coding
  – Summarize themes
  – Conducted checks for coding consistency
Results
Qualitative sample statistic n=26

- **Veteran**
  - Mean age: 42 years
  - Male: 100%
  - White: 64%
  - Married: 85%

- **Caregiver**
  - Mean age: 39 years
  - Female: 100%

- Used Post-9/11 GI Bill: 65%
- Used VR&E: 58%
- Used Supported employment: 15%
- Used at least 2 services: 42%
Veteran recovery encompassed health and employment/education needs

Vocational and education services

Grew skills

Increased socialization

Improved health

Increased self-confidence

“For me it was therapeutic [...] I believe that something like that will help a lot of Veterans [that suffer] from PTSD.” (ID 61, Veteran)
Lack of interaction between VA Bureaus inhibits VA’s ability to address cross-cutting needs

- Limited interaction between VHA clinical health care teams and VBA employment/education counselors
- Lack of understanding on VHA side about how to access VBA services

“[there is a] disconnect between the service side, the benefits side, and the VA health care side. Health care providers, the admissions and the benefit [counselors] focus on theirs ...So they might know of [other services], but they wouldn’t know how to apply or the details of the program.” [ID 1357, caregiver]
Caregivers provide range of supportive tasks that help veterans engage in VA services

- Caregiver tasks to help veterans engage in VA services
  - Instrumental support
  - Emotional
  - Coordination
  - Advocacy
  - Informational
- More widely cited for health care
Caregivers provide range of supportive tasks that help veterans engage in VA services

- Instrumental support
  - driving Veteran to medical appointments
  - registering for classes
  - helping to complete assignments
  - completing paperwork for VA benefits or school disability services
Caregivers provide range of supportive tasks that help veterans engage in VA services

Coordination

“Informing [providers] of progress at home, how he’s doing mentally, how he’s doing physically. And then letting them know side effects or anything that [is] going on with medications that he’s taking.” (ID 736, caregiver)
Advocacy

“I was able to help by going to the registrar’s office, going to the special services department, and ensuring that everything was handled, and the professors were aware that he isn’t a joke and he’s here, and he wants to be taken seriously. But it’s more than just the arm that’s missing; it’s the intellectual and emotional disabilities that affect these Veterans more because it’s harder for us able bodies to recognize the difference.”

(ID 15, caregiver)
Institutional support for family caregivers was key for improving veteran use of health care

Elements of institutional support

• Point of contact for family
• Financial assistance
• Acknowledge caregiver role
Institutional support for family caregivers was less influential for employment/education services

Elements of institutional support

- Financial assistance
- Encourage patient to pursue (vocational) service

One of the nurses there [PCAFC Program] was saying, ‘well you could do something for yourself, and you can go to school’”. (ID 67, caregiver)
Conclusions

• Employment/education services improved health
  – Include in patient treatment plans?
• Caregivers could operate as a bridge between health and non-health services
  – Already carrying out key tasks in health care setting
  – Direct translation of these tasks to vocational/education settings; but occur less often
  – Well positioned to communicate with clinical teams
• Institutional support for caregivers has clear impacts on health care; those impacts could be extended beyond health sector
Research Question 2
Does participation in PCAFC impact time to use of the post 9/11-GI Bill benefit, VR&E, and supported employment?
Approach

• Data
  – VHA EHR
  – Caregiver Support Program administrative data
  – VBA administrative data

• Sample: 1 cohort per employment/education service
  – Veterans under 55 whose caregivers applied to PCAFC between May 1, 2010 and Sept. 30, 2014
  – Excluded if used service outcome prior to PCAFC application

• Control: Caregivers applied to PCAFC and were never approved for enrollment
Approach

Instrumental variable Cox proportional hazards regression models (Camblor-Martinez et al, 2018)

- **Treatment**: Ever approved for PCAFC
- **Outcome**: Time to application for the post 9/11 GI Bill benefit, VR&E, or supported employment
- **Instrumental variable**: facility-level percentage approval for PCAFC in the 6 months prior to application
- **Sensitivity analysis**: ran naïve adjusted Cox proportional hazards regression model (without IV)
Approach: Rationale for IV

- Unable to randomize individuals to PCAFC
- Assume non-random selection
  - Individuals who are accepted into PCAFC may have unobserved characteristics that also affect use of vocational services
    - Personal expectations for engaging in work/school may be related to PCAFC selection and use of vocational services
- IV allows analyst to pseudo randomize or sort individuals such that their characteristics are balanced across treatment groups!
Descriptive Statistics
### Table 1: Quantitative sample characteristics

<table>
<thead>
<tr>
<th></th>
<th>Post 9/11 GI Bill</th>
<th>VR&amp;E</th>
<th>Supported employment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>9,776</td>
<td>9,390</td>
<td>19,217</td>
</tr>
<tr>
<td>% service use</td>
<td>14.7%</td>
<td>19.2%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Veteran Age (m, sd)</td>
<td>37 (30, 47)</td>
<td>36 (29, 46)</td>
<td>35 (30, 45)</td>
</tr>
<tr>
<td>Veteran male gender</td>
<td>91.6%</td>
<td>91.9%</td>
<td>90.5%</td>
</tr>
<tr>
<td>Veteran White race</td>
<td>74%</td>
<td>73.2%</td>
<td>70%</td>
</tr>
<tr>
<td>Veteran Hispanic ethnicity</td>
<td>11%</td>
<td>12.1%</td>
<td>12.3%</td>
</tr>
<tr>
<td>CG married to Veteran</td>
<td>80%</td>
<td>80.5%</td>
<td>80.4%</td>
</tr>
<tr>
<td>Veteran PTSD diagnosis</td>
<td>67.7%</td>
<td>68.5%</td>
<td>68.1%</td>
</tr>
<tr>
<td>Veteran TBI diagnosis</td>
<td>27%</td>
<td>27.6%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Musculoskeletal disorder/disease</td>
<td>61.9%</td>
<td>59.1%</td>
<td>61.0%</td>
</tr>
</tbody>
</table>
Analytical Model Results
IV Strength and Validity Assumptions

• IV strongly related to the treatment variable
• Covariates are more balanced across levels of IV than treatment variable
  – Can only examine on observed covariates, but assume that unobserved also balanced
Hazard ratio (95% Confidence Interval)

Post 9/11 GI Bill  
VR&E  
Supported employment

Naïve adjusted Cox PH model

IV adjusted Cox PH model (2SRI + frailty)

Models adjusted for health comorbidities, demographics, distance to nearest facility, caregiver/veteran relationship, VA-level disability and insurance variables, service use, facility fixed effects, and application time period fixed effects.

Instrumental variable=facility-level percentage approval for PCAFC in the 6 months prior to application
Hazard ratio (95% Confidence Interval)

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<td>Naïve adjusted Cox PH model</td>
<td>0.94 (0.86, 1.04)</td>
<td>1.00 (0.45, 2.22)</td>
<td></td>
</tr>
<tr>
<td>IV adjusted Cox PH model (2SRI + frailty)</td>
<td>1.00 (0.45, 2.22)</td>
<td></td>
<td></td>
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Models adjusted for health comorbidities, demographics, distance to nearest facility, caregiver/veteran relationship, VA-level disability and insurance variables, service use, facility fixed effects, and application time period fixed effects.

Instrumental variable=facility-level percentage approval for PCAFC in the 6 months prior to application
<table>
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<tr>
<td>Naïve adjusted Cox PH model</td>
<td>0.94 (0.86, 1.04)</td>
<td>0.84 (0.75, 0.93)</td>
<td></td>
</tr>
<tr>
<td>IV adjusted Cox PH model (2SRI + frailty)</td>
<td>1.00 (0.45, 2.22)</td>
<td>0.94 (0.55, 1.95)</td>
<td></td>
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*Models adjusted for health comorbidities, demographics, distance to nearest facility, caregiver/veteran relationship, VA-level disability and insurance variables, service use, facility fixed effects, and application time period fixed effects.*

*Instrumental variable=facility-level percentage approval for PCAFC in the 6 months prior to application*
## Hazard ratio (95% Confidence Interval)

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<tr>
<td>Naïve adjusted Cox PH model</td>
<td>0.94 (0.86, 1.04)</td>
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<td>1.29 (1.01, 1.67)</td>
</tr>
<tr>
<td>IV adjusted Cox PH model (2SRI + frailty)</td>
<td>1.00 (0.45, 2.22)</td>
<td>0.94 (0.55, 1.95)</td>
<td>1.35 (1.06, 1.79)</td>
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Models adjusted for health comorbidities, demographics, distance to nearest facility, caregiver/veteran relationship, VA-level disability and insurance variables, service use, facility fixed effects, and application time period fixed effects.

Instrumental variable=facility-level percentage approval for PCAFC in the 6 months prior to application.
Conclusions

• PCAFC associated with use of supported employment
  – Possible that linkages between supported employment and PCAFC are more direct because located within VHA?
Implications for Practice

• Caregiver support for employment/education services
  – Aligns well with PCAFC’s orientation towards recovery/psychosocial rehabilitation
• Translate into practice
  – Tools/information to help caregivers navigate VBA services
  – Treatment plans that address employment/education needs
  – PCAFC staff to strengthen relationships with VBA programs
Implications for Policy

• Define employment/education as priority determinants of health
• Extend on work being done to involve caregivers in health care teams
• Shift perspectives around role caregivers can play
  – in employment/education sector
  – to perform cross-sector coordination
• Educate providers, counselors, caregivers and Veterans
Commentary: Caregiver Support Program Office—Jennifer Henius, LCSW

• Implications of caregiver involvement in social services for PCAFC mission
  – Strengthen psychosocial approach
• Programmatic changes to make CSCs aware of connection between health and social needs
• Role that PCAFC is playing in crafting mechanisms to change expectations for how caregivers can be involved in non-health services
• What PCAFC can do in program implementation to encourage caregivers to help veterans engage in vocational/education services
Dissemination

Papers

• Leveraging institutional support for family caregivers to meet the health and vocational needs of patients with disabilities. *R&R Nursing Outlook*

• The effect of institutional support for family caregivers on veteran use of vocational and educational services. *In preparation, target Journal of Health Economics*

• Facilitators and Barriers for Disabled Veterans to Engage in Vocational and Educational VA Services. *In preparation, target Psychological Services*

Presentations


• Institutional Support for Informal Caregivers As a Mechanism to Enhance Use of Vocational Reintegration Services for Disabled Veterans. *Poster presentation at the Academy Health 2019 Annual Research Meeting, Washington, DC June 2019.*

• Institutional Support for Informal Caregivers As a Mechanism to Enhance Use of Vocational Reintegration Services for Disabled Veterans. *Poster presentation at the American Society of Health Economists, Washington, DC June 2019.*
Additional Resources

Caregiver Support Program
https://www.caregiver.va.gov/

Post 9/11 GI Bill
https://www.benefits.va.gov/gibill/post911_gibill.asp

Vocational Rehabilitation and Employment
https://www.benefits.va.gov/VOCREHAB/edu_voc_counseling.asp

Compensated Work Therapy Program (Supported Employment)
https://www.va.gov/health/cwt/supportedemployment.asp
Thank you!
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Questions?

www.systemsforaction.org
Upcoming Webinars

• August 21\textsuperscript{st}, 2019 12 p.m., ET
  Systems for Action Individual Research Project
  TBD

• September 11\textsuperscript{th}, 2019 12 p.m., ET
  Systems for Action Individual Research Project
  \textit{Financing Integrated Health and Social Services for Populations with Mental Illness}
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EXTRA SLIDES
Approach for Rationale for IV

• IV is a variable that is only related to outcome through treatment variable
• To be justified IV must be strongly related to treatment (IV strength) and must not be related to outcome except through treatment (IV validity)
• Used new IV method\(^1\) developed for Cox PH models, which applies a two-stage residual inclusion (2SRI) plus a frailty term in the second stage equation

\(^1\)Camblor-Martinez et al, 2018
IV Strength and Validity

• IV Strength: F test of IV in 1st stage equation
  – Post 9/11 GI Bill: F-statistic=1.3
  – VR&E: F-statistic=17.2
  – Supported employment: F-statistic=36.2

• IV Validity: Balance of covariates was greatly improved across median of IV compared with treated/control groups