



Cost-Effectiveness of Supported Employment for Veterans with Spinal Cord Injuries

AUTHORS: Patricia L. Sinnott, P.T., Ph.D., M.P.H.
 Vilija Joyce, M.S.
 Pon Su, M.S.
 Lisa Ottomanelli, Ph.D.
 Lance L. Goetz, M.D.
 Todd H. Wagner, Ph.D.

DATE: 2014

PUBLICATION: *Archives of Physical Medicine and Rehabilitation*, 95(7), 1254-1261

PUBLICATION TYPE: Peer-Reviewed Journal Article

KEYWORDS: Cost effectiveness analysis, cost-utility analysis rehabilitation, spinal cord injuries, vocational rehabilitation

RESEARCH HIGHLIGHTS

- Gainful employment for individuals with a spinal cord injury (SCI) is a recurring challenge. Clinical trials on supported employment (SE) intervention have established that SE is at least two times more effective in gaining competitive employment, expedites the time to said employment, and achieves greater annualized weeks worked. Considering the previous findings and that about 26,000 veterans seek SCI treatment at the VA, this study seeks to determine the cost-effectiveness of SE for veterans with SCI who are being treated by the VA.
- The cost of Spinal Cord Injury Vocational Integration Program (SCI-VIP) intervention at the one-year mark was not significantly different from the usual employment assistance offered to veterans with SCI.
- The program is cost effective in terms of increasing clinical program outcomes of employment, but was not shown to be cost effective in terms of increases on measures of quality of life (Quality Adjusted Life Years).
- After two years of follow-up, newly confirmed findings show that SCI-VIP is comparatively, cost-effective. This is consistent with research on SE that shows significant differences in benefits in quality of life and employment accruing beyond the first year. Using longitudinal data, future researchers should explore the long-term effectiveness of supported employment interventions.

ABSTRACT

Objective: To estimate the cost-effectiveness of a supported employment (SE) intervention that had been previously found effective in veterans with spinal cord injuries (SCIs). *Design:* Cost-effectiveness analysis, using cost and quality-of-life data gathered in a trial of SE for veterans with SCI. *Setting:* SCI centers in the Veterans Health Administration. *Participants:* Subjects (N=157) who completed a study of SE in 6 SCI centers. Subjects were randomly assigned to the intervention of SE (n=81) or treatment as usual (n=76). *Intervention:* A vocational rehabilitation program of SE for veterans with SCI. *Main Outcome Measures:* Costs and quality-adjusted life years, which were estimated from the Veterans Rand 36-Item Health Survey, extrapolated to Veterans Rand 6 Dimension utilities. *Results:* Average cost for the SE intervention was \$1821. In 1 year of follow-up, estimated total costs, including health care utilization and travel expenses, and average quality-adjusted life years were not significantly different between groups, suggesting the Spinal Cord Injury Vocational Integration Program intervention was not cost-effective compared with usual care. *Conclusions:* An intensive program of SE for veterans with SCI, which is more effective in achieving competitive employment, is not cost-effective after 1 year of follow-up. Longer follow-up and a larger study sample will be necessary to determine whether SE yields benefits and is cost-effective in the long run for a population with SCI.”

IMPLICATIONS

FOR PRACTICE

Veterans with SCI looking for employment should participate in SE interventions offered through the VA or other organizations. Previous studies have shown that participating in SE interventions can mediate some of the challenges individuals with SCI might face when seeking employment. Despite not being cost-effective after the first year, data from previous studies have shown that SE is at least two times more effective in achieving competitive employment, expediting the time to achieving first employment, and achieving greater annual weeks worked. Veterans with SCI who are seeking employment should know that there are resources available to assist them. Veterans with SCI should advocate for themselves, being sure to inform the VA of resources that would assist them with a successful transition to employment.

FOR POLICY

The VA might implement supported employment (SE) interventions for veterans with spinal cord injuries. Though this analysis does not report that SE is cost-effective after one year of follow-up, previous studies have shown that SE is very effective in gainfully employing veterans with spinal cord injuries (SCI) in meaningful jobs. Considering the VA cares for approximately 26,000 veterans with a SCI, the VA might conduct comparative studies with their veterans to better understand which care interventions provide the best employment results for veterans with SCI. Given that SE has been proven effective in previous studies, policymakers might allocate funds to offer more SE interventions to veterans who do not utilize VA services and the non-veterans with SCI. Though establishing spinal cord injury intervention programs might not be less expensive than usual care, it is generally more effective in gainful employment for the participants. To find more cost-effective interventions, policymakers might distribute funds to further study more cost-effective and equally effective SE interventions for individuals with SCI. As more research becomes available, policymakers might introduce legislation aimed at offering similar services to non-veterans with SCI.

FOR FUTURE RESEARCH

This study was limited by the small sample size (N=157) and sampling frame. Future researchers should increase the sample size of veterans with spinal cord injuries (SCI) to further explore the cost-effectiveness of SE intervention. Similarly, future studies should sample veterans from additional VA SCI centers and should sample veterans with SCI who are not currently receiving treatment from the VA. A majority of studies on SE and SCI have been on the general public. To further understand the unique challenges and best solutions for veterans with SCI seeking employment, more studies on SE interventions for veterans with SCI need to be conducted. Some of the researchers involved in this study are continuing a two year follow-up with SE interventions and are finding through preliminary results that SE interventions might be more cost-effective after 2 years. Future researchers should continue studying SE long term, focusing on benefits for veterans with SCI and cost-effectiveness. Furthermore, it might prove beneficial to evaluate ways to continue the effectiveness of SE interventions while increasing cost-effectiveness.

AUTHOR INFORMATION

Patricia L. Sinnott, P.T., Ph.D., M.P.H.^{1, 2}

Vilija Joyce, M.S.²

Pon Su, M.S.²

Lisa Ottomanelli, Ph.D.³

Lance L. Goetz, M.D.⁴

Todd H. Wagner, Ph.D.²

¹ Patricia.sinnott@va.gov

² VA Health Economics Resource Center, and Center for Innovation to Implementation, VA Palo Alto Health Care System

³ Health Services Research and Development Center of Innovation on Disability and Rehabilitation Research, James A. Haley Veterans Hospital

⁴ Spinal Cord Injury and Disorders, Hunter Holmes McGuire VA Medical Center; Department of Physical Medicine and Rehabilitation, Virginia Commonwealth University