Investing in Ending Veteran Homelessness: What is the ROI?

NCHV Annual Conference
June, 2016
Vital Mission
Ending Homelessness Among Veterans

Why so many veterans are homeless, how many veterans are homeless in your state, what housing has to do with it, and how to prevent and end homelessness among veterans.

November 2007
What is the Return on Investment to the federal initiative: *Ending Veteran Homelessness*?

\[(\text{Gain from investment}) - (\text{Cost of Investment})\]

\[(\text{Cost of Investment})\]
Definitions

- **Gain from investment**” (cost savings associated with leaving homelessness) The net cost savings per person during the 12-month period following housing placement multiplied by the number of individuals leaving homelessness during that time period.

Costs experienced across health care, criminal justice, social service agencies, and emergency and first responders.

The top five cost centers are:

- inpatient hospital care (estimate $1,940/day);
- emergency department care ($905/episode),
- psychiatric hospitalization ($605/day);
- ambulance services ($527/event)
- detoxification ($256/day)
Cost offsets

- The amount of money spent while housed compared to costs if that person were still homeless

- Limited analyses to only those with a matched control group (no pre- post- analyses included) that considered global costs
## Table 1
Published articles evaluating cost outcomes associated with housing homeless persons identified in literature search

<table>
<thead>
<tr>
<th>Author/Journal/Year</th>
<th>Population</th>
<th>Intervention/sample size</th>
<th>Costs, cost offsets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basu et al. Health Serv Res 2012 (20)</td>
<td>Homeless and chronically ill</td>
<td>Housing and case management N=407</td>
<td>Cost savings: $9,644 (excluding program costs)</td>
</tr>
<tr>
<td>Gilmer et al Arch Gen Psychiatry 2009 (21)</td>
<td>Homeless with serious mental illness</td>
<td>Supportive housing=338</td>
<td>Nonsignificant cost savings (program costs not broken out)</td>
</tr>
<tr>
<td>Rosenheck et al Arch Gen Psychiatry 2003 (22)</td>
<td>Homeless veterans with psychiatric or substance abuse disorders</td>
<td>Supportive housing with and without case management; case management without supportive housing N=480</td>
<td>Nonsignificant cost savings (program costs not broken out)</td>
</tr>
<tr>
<td>Larimer, et al JAMA 2009 (15)</td>
<td>Chronic homeless with substance use disorders</td>
<td>Supportive housing with case management N=134</td>
<td>Cost savings: $30,801 (adjusted for inflation to 2013 dollars) ($42,828 when excluding program costs)</td>
</tr>
<tr>
<td>Srebnik et al AJPH 2013 (19)</td>
<td>Homeless with recent hospitalization</td>
<td>Supportive housing with case management N=60</td>
<td>Cost savings $55,179 (excludes program costs)</td>
</tr>
</tbody>
</table>
Calculated hypothetical estimates of what the homeless Veteran PIT count would have been for years 2010, 2011, 2012, and 2013 if there were no *Ending Veterans Homeless* initiative by applying the overall net change in homelessness each year to the 2009 PIT.

A prevalence factor was applied to the PIT each year to provide an estimate of the overall number of Veterans who were homeless during the course of that year.
Figure 1: Actual Point InTime Counts v. Projected Point In Time Counts without Ending Veteran Homelessness Initiative

Homeless Veteran PIT Counts (Actual)

Homeless Veteran PIT Counts Without EVH Initiative (Projected)
Table 1. *Net “Gain on Investment” Estimates From a Simple ROI Model*

<table>
<thead>
<tr>
<th>Model</th>
<th>Aggregated Difference in Homeless Counts 2010-2013*</th>
<th>Prevalence factors</th>
<th>Cost savings/Veteran</th>
<th>Total Gain on Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-33,301</td>
<td>3.0</td>
<td>$50,000</td>
<td>$4,995,150,000</td>
</tr>
<tr>
<td>2</td>
<td>-33,301</td>
<td>2.5</td>
<td>$45,000</td>
<td>$3,746,362,000</td>
</tr>
<tr>
<td>3</td>
<td>-33,301</td>
<td>2.0</td>
<td>$40,000</td>
<td>$2,664,080,000</td>
</tr>
<tr>
<td>4</td>
<td>-33,301</td>
<td>2.5</td>
<td>$40,000</td>
<td>$3,330,100,000</td>
</tr>
</tbody>
</table>

*negative difference in aggregate count reflects a reduction in overall number of homeless and a cost reduction (i.e. positive gain on investment)
### Table 3: ROI Models Using Different Assumption Parameters for Prevalence Estimates and Net Costs Savings per Veteran

**Return on Investment Formula:** \[(\text{Gain from investment}) - (\text{Cost of Investment}) / (\text{Cost of investment})\]

<table>
<thead>
<tr>
<th>Model</th>
<th>ROI Calculation</th>
<th>ROI Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>$4,995,150,000 - $2,637,158,000 = 89.4%</td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td>$3,746,362,000 - $2,637,158,000 = 42.0%</td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td>$2,664,080,000 - $2,637,158,000 = 1.0%</td>
<td></td>
</tr>
<tr>
<td>Model 4</td>
<td>$3,330,100,000 - $2,637,158,000 = 26.4%</td>
<td></td>
</tr>
</tbody>
</table>
Caveats to the model

- The break-even point where the ROI was zero was $31,676 per year in cost savings.
- The ROI is expected to increase/break-even point decrease as the gap between actual and expected PIT grows although it may decrease if prevalence adjustments decline.
- Considers aggregated one year saving only – long term costs could either increase or decrease based on age, co-morbidity, etc.
- Potential bias in published cost estimates which might be more heavily weighted towards higher cost/acuity homeless persons.
- Does not include costs savings from prevention although program costs are included in the analysis.
Bottom-line

Housing homeless Veterans is both good social and fiscal policy
Acknowledgements

Project team
  Tom O’Toole
  Erin Johnson
  Vince Kane
  Lisa Pape
  Seth Bridge