Residential Outcomes of Individuals Triaged using the VI-SPDAT

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Introduction

- In an effort to increase the efficiency, efficacy, and consistency of housing service provision for individuals and families experiencing homelessness, the federal Continuum of Care (CoC) program mandates community-level implementation of "coordinated assessment."
- Through coordinated assessment, communities must select a standardized, comprehensive housing eligibility assessment tool.
- Assessment scores are used to triage homeless individuals and families to housing interventions offering varying levels of financial and support services (e.g., permanent supportive housing, rapid rehousing, no housing services).
  - Tools used to triage individuals to housing interventions, such as rapid rehousing, that lack empirical support.
- However, with the rapid implementation of coordinated assessment in communities throughout the U.S., many assessment tools were widely adopted with little to no empirical validation.
  - Implications for the immediate and long-term housing outcomes of vulnerable individuals and families.

VI-SPDAT

- The Vulnerability Index-Service Prioritization Decision Assistance Tool (VI-SPDAT) is a widely-used coordinated assessment tool.
  - No published literature on the measurement properties or effectiveness of the VI-SPDAT.
- 50-item assessment comprised of yes/no questions in four domains:
  - History of Housing and Homelessness
  - Risks
  - Socialization and Daily Functions
  - Wellness
- Four items are rated 1 or 0 by the survey administrator's observation of signs of: poor hygiene or daily living skills, a serious health condition, alcohol or drug abuse, or mental illness.
- Total score ranges from 0-21, with higher scores indicating greater vulnerability and housing service needs.
- Score-based recommendations for housing services are as follows:
  - Scores ≥ 10: permanent supportive housing
  - Scores 5-9: rapid rehousing
  - Scores 0-4: no housing support

Study Aims

- Explore the relation between VI-SPDAT scores and housing placements in a CoC.
- Explore the relation between housing type and time to housing placement following VI-SPDAT administration.
- Examine risk of re-entry to homelessness services following permanent housing based on VI-SPDAT scores and type of housing.

Methods

- Sample: N = 476
  - Collected using administrative data from the Homeless Management Information System (HMIS) in a Midwestern U.S. CoC.
  - Single adults who were administered the VI-SPDAT between April 2014 and April 2016 and who had HMIS residential and homeless service utilization information.
- The sample was placed in four groups based on their living situation following VI-SPDAT administration:
  - Permanent supportive housing (i.e., permanent subsidized housing and support services)
  - Rapid rehousing (i.e., temporary subsidy and housing support services provided)
  - Mainstream housing (i.e., own apartment without financial or support services, Section 8)
  - Street or shelter homeless (i.e., never moved into permanent housing)
- Re-entry to homeless services following permanent housing placement examined for permanently housed subsample (n = 203)
  - The follow-up period between housing date and April 2016 averaged 209.39 days (SD = 124.79, $Range$ 7-531).

Table 1. Housing Placement Groups

Housing Placement after VI-SPDAT Administration	N
Permanent Supportive Housing	65
Rapid Rehousing	33
Mainstream Housing	105
Remained Homeless on the Street or in Shelters	273

Analysis

- Analyses of covariance (ANCOVAs), controlling for the duration of participants' follow-up timeframe, were used to examine the relation between VI-SPDAT scores and:
  a. Housing placement type
     i. Bonferroni post hoc analyses were used to test between-group differences
  b. Whether or not housed participants had a permanent housing subsidy (PSH or Section 8)
- Among participants entering permanent housing, analyses of variance (ANOVAs) were used to examine the relation between number of months to housing placement and:
  a. Housing placement type
  b. Whether or not participants had a permanent housing subsidy
- Two Cox proportional hazards models were conducted to examine risk of re-entry to homeless services following housing (re-entry = 1, no re-entry = 0).
  a. VI-SPDAT score entered in first step
  b. Housing type (PSH, rapid rehousing, mainstream) and subsidized housing (PSH or Section 8 vs. no permanent housing subsidy) entered in the second step.

Results

- VI-SPDAT scores ranged from 0-16 (M = 6.88, SD = 3.11).

Relation between VI-SPDAT scores and housing placement
- Housing status was significantly associated with VI-SPDAT scores, $F(3, 471)$ = 3.96, p = .008.
  - Individuals in mainstream housing had significantly higher VI-SPDAT scores than individuals in rapid rehousing at the p < .05 level.
- Individuals housed with a permanent subsidy had significantly higher VI-SPDAT scores than those housed without a subsidy, $F(1, 200)$ = 24.14, p < .001.

Relation between housing type and time to housing
- Length of time to housing placement was significantly associated with housing type, $F(2, 200)$ = 16.59, p < .001
  - Individuals in rapid rehousing had a significantly shorter wait for housing placement than those in permanent supportive housing and mainstream housing.
- Individuals housed without a permanent subsidy had a significantly shorter wait for housing placement than those housed with a permanent subsidy $F(1, 201)$ = 30.25, p < .001.

Risk of re-entry to homeless services
- VI-SPDAT score approached significance as a predictor of risk of re-entry to homeless services over time, B = .10, p = .052.
- Housing type significantly improved the model beyond the effect of VI-SPDAT score, χ^2 (2, N = 203) = 7.73, p = .02.
  - Individuals housed in rapid rehousing were at significantly greater risk of re-entry to homeless services after housing compared to those housed in permanent supportive housing, adjusted Hazard Ratio = 4.93 95% CI [1.57, 15.38], p = .006, and mainstream housing, adjusted Hazard Ratio = 2.77 95% CI [1.11, 6.94], p = .03.
- Housing with a permanent subsidy significantly reduced individuals' risk of re-entry to homeless services beyond the effect of VI-SPDAT score, adjusted Hazard Ratio = 4.12 95% CI [1.71, 9.90], p = .002.
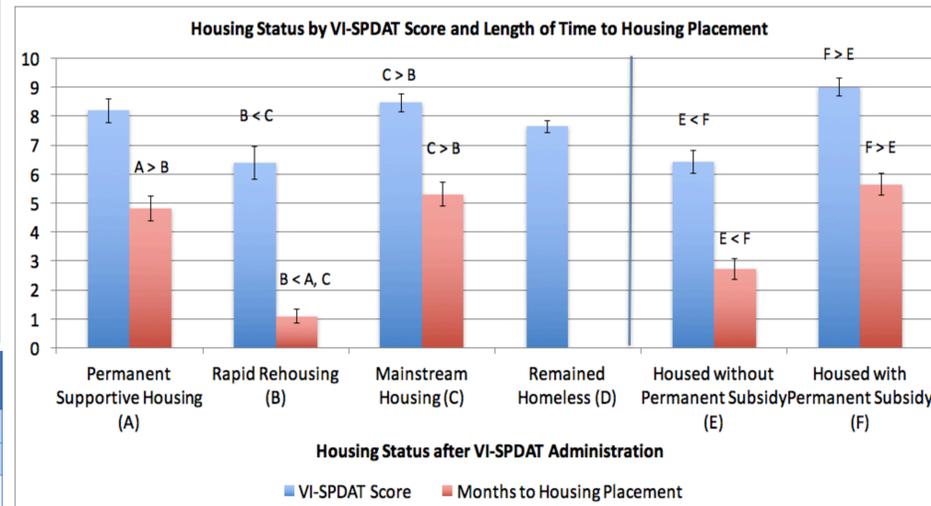

Figure 1. Mean VI-SPDAT score by length of time to and type of housing placement
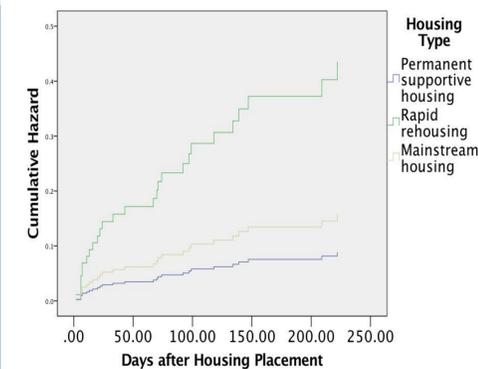

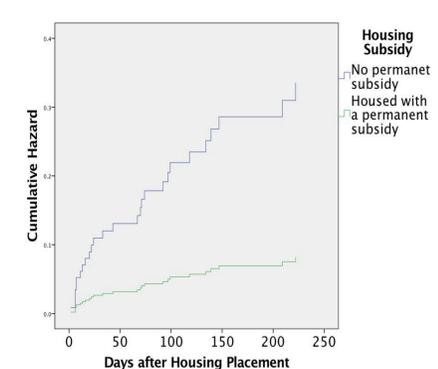**Figure 2.** Risk of re-entry to homeless services by housing type

Figure 3. Risk of re-entry to homeless services by housing subsidy

Discussion

- Individuals in mainstream housing had higher VI-SPDAT scores and longer waits before becoming housed than individuals in rapid rehousing, suggesting some vulnerable individuals may have sought housing on their own due to scarce rapid rehousing resources in the community.
- Despite having lower scores and faster housing placement, individuals receiving rapid rehousing were at greater risk of becoming homeless again after housing than individuals receiving permanent supportive housing or residing in mainstream housing.
- In this community, many individuals were housed in placements that did not align with the recommended intervention based on their VI-SPDAT scores.
  - Thus, the availability of housing resources likely has a greater influence on housing opportunities than VI-SPDAT scores.
- Housing type is a more important predictor of re-entry to homeless services than VI-SPDAT score.
  - Consistent with previous research (Byrne et al., 2016; Gubits et al., 2015), programs such as PSH and others permanent subsidy programs reduce risk of homelessness.

Limitations

- Due to the nature of the administrative (HMIS) data used in this study, demographic information about the participants could not be ascertained, which limits the generalizability to the broader population of people experiencing homelessness.
- The sample size was limited for between-group analyses.
- Data were derived from the tool's implementation in a community context, and it is likely that the study findings would vary across communities depending on housing resources.
- Re-entry to homeless services was only a proxy for residential stability. Some individuals in the sample who did not re-enter services in this CoC may have experienced subsequent homelessness (e.g., lived on the street, moved out of the CoC).

Conclusions

- Ongoing development of the VI-SPDAT and other coordinated assessment tools is recommended.
- Process evaluations of coordinated assessment are warranted to explore how individuals are triaged to housing in practice and challenges to facilitating rapid housing placement based on assessment scores
- Further research on short-term subsidy programs, such as rapid rehousing, are needed to identify characteristics of individuals who benefit from these services in order to guide development of assessment tools triaging individuals to these interventions.

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