

The reliability and validity of the Vulnerability Index and a community-based revised version from Fort Worth, TX

## Background

- ■In 2008, the City of Fort Worth adopted
  Directions Home (DH): a 10 year plan to
  make homelessness rare, short-term and
  non-recurring
- ■2009: Municipal funding created 200 new **Permanent Supportive Housing** (PSH) units
- Paradigm shift: housing readiness approach to a Housing First model (Stefancic & Tsemberis, 2007)

## The Vulnerability Index as a housing prioritization tool

- Vulnerability Index (VI; 100khomes.org.) created by NYC-based Common Ground, based on mortality research by Boston's Healthcare for the Homeless program (Hwang et al, 1998)
- ■As of March 2013, more than 40,000 VI's have been collected in a national database (100khomes.org, 2013); to date there has been minimal psychometric evaluation of this tool (Cronley, et.al, in press)



## A closer look at the Vulnerability Index

People who take the Vulnerability Index receive a score from 0 (not scored at all or no vulnerability) to 8 (highest level of vulnerability.

- To receive a score of 1 or higher, a person must be homeless for a minimum of 6 months.
- Additionally, each of the following is worth 1 point:
  - 1. Kidney/renal disease
  - 2. Frostbite, hypothermia, immersion foot
  - 3. Liver disease
  - 4. HIV+ or AIDS
  - 5. Over 60 years
  - 6. Three or more emergency room visits in previous 90 days
  - 7. Three or more ER or hospitalizations in prior year
  - 8. Tri-morbidity: psychiatric disorder, substance abuse & chronic health condition

## Initial Fort Worth Community Response to the Vulnerability Index (2008)

- Initial pushback- no more agency level control
- ■Items were added, but not included in scoring criteria
- **■** Does Boston translate to Fort Worth?
  - Cold weather injuries
  - Self-report versus health records

### 2009: More local concerns with VI

- Some people with serious health concerns received a score of zero
- Confidential data about health status was uploaded into a national database
- Some questions were overly broad (e.g., mobility and vision impairment) or subjective
- ■Hundreds received scores of 1 and 2
- ■Sole focus on mortality

## "The Fort Worth Way"\*

- Concerns were raised routinely in quarterly evaluation interviews with Directions Home (DH) staff and monthly DH consumer advisory meetings
- The **DH** continuous improvement process led to the creation of a task force in the spring of 2010
- The Fort Worth Vulnerability Task Force met 4 times and included two Delphi Surveys in between meetings

<sup>\*</sup> A phrase coined by Former Fort Worth Mayor Mike Moncrief referring to the uniqueness of our community as well as sense of compassion for one another

## Task Force process & Delphi method

- Meeting 1: Introduction to process and literature
- Interim Survey 1: Assessment of preferred solutions
- Meeting 2: Reviewed survey findings, discussed literature
- Interim Survey 2: Identification of vulnerability characteristics
- Meeting 3: Reviewed survey findings, compared proxy versions
- Interim questionnaire development
- Meeting 4: Refined conceptual definition of vulnerability, developed weighting criterion and new scoring system

## Key Task Force process findings

- Of the 12 participants, 8 responded to the initial survey:
  - 50% agreed that the VI should be used in some capacity but only 12.5% wanted it as 1<sup>st</sup> method
  - 50% agreed that we should create a new way to score the VI
  - 37.5% agreed we should use the VI scores and another method
  - 87.5% agreed that agencies should participate in the decisions
- Voted to establish a committee to review case manager recommendations and special circumstances

## Revising the VI

- Second survey resulted in the suggestion of new items or modifications:
  - Sexual assault while homeless
  - Heart surgery
  - Being blind or deaf
  - Requiring assistive devices for mobility
  - Having an 8<sup>th</sup> grade or less level of education
  - Having swollen, infected or open wounds
  - Difficulty controlling body functions
  - Congestive heart failure
  - Chronic obstructive pulmonary disease (COPD)
- The task force reached a consensus agreement on an expanded definition of vulnerability

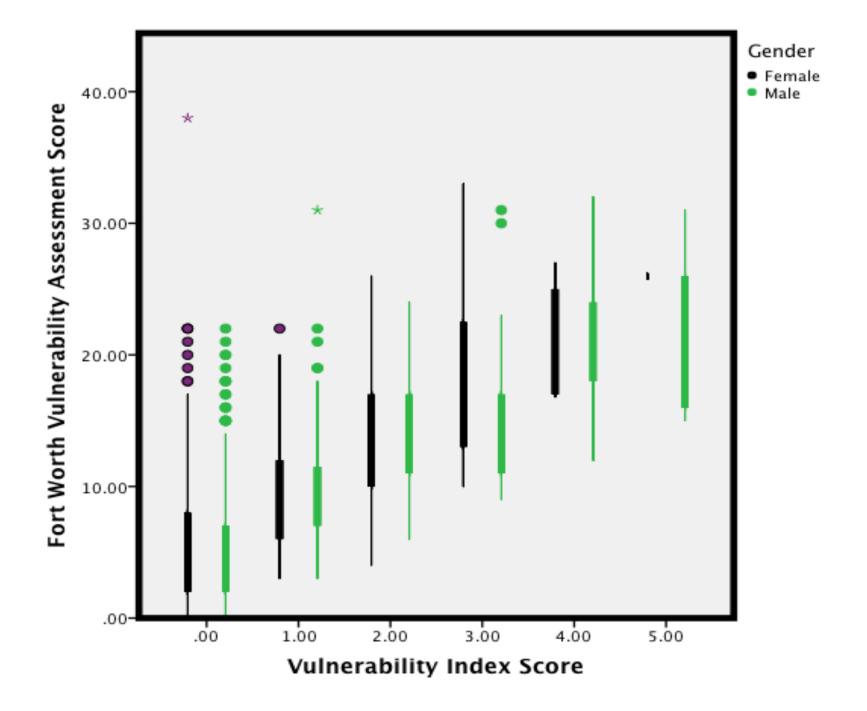
## The Fort Worth Vulnerability Assessment (FWVAS)

- **Triple weighted items** appear to be urgently life limiting or a threat to public health
  - Kidney disease, liver disease, heart disease or arrhythmia, cancer, heart surgery, HIV/AIDS
- **Double weighted items** increase risk of harm or injury, or represent a condition that may be exacerbated if an individual remains homeless
  - Over age 60, diabetes, physical mobility problems, homeless 6+ months,
     Hepatitis C, COPD, congestive heart failure, stroke, legally blind or deaf
- Single weighted items represent general health concerns or more serious concerns that one would expect to be managed closely by health professionals

#### FWVAS cont.

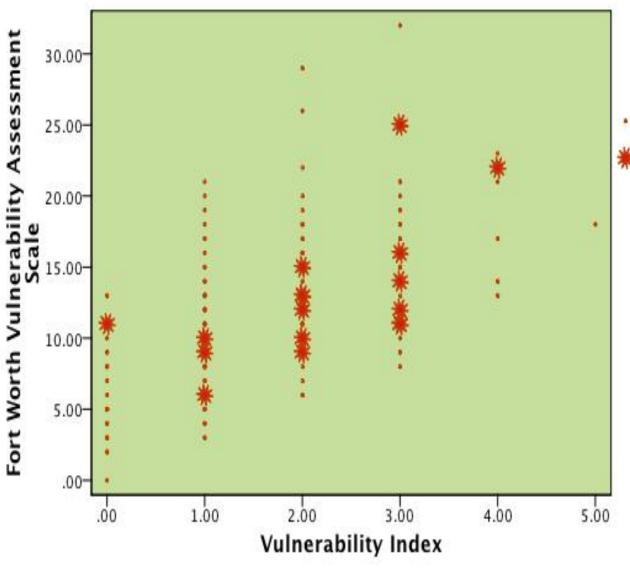
#### ■Single point items:

- Tuberculosis
- Mental health warrant, mental health tx
- Emphysema, asthma
- 3 or more hospital admissions in 1 yr, 3 or more ER visits in 3 mos
- IV drug use, substance abuse tx, substance abuse problem
- 8<sup>th</sup> grade education
- Injured in an attack while homeless, sexually assaulted while homeless
- Swollen or infected wounds, control over bodily functions,
- Frost bite or immersion foot
- Trimorbidity (health/mental health/substance abuse)



## Correlates between VI & FWVAS

- Enrolled PSH clients (n = 271):
  - .549 (p < 0.001)
- ■All assessments (n = 1519):
  - **.658** (p < 0.001)



Deceased, not housed or disenrolled due to health problems

Not deceased or disenrolled due to health

# Deceased or disenrolled due to health

\*Sample only includes clients enrolled in voucher program (n=271 w/17 deaths/health disenrollments)

#### +

## Basic psychometric comparisons

|  | Vulnerability<br>Index (N = 1483)                              | Fort Worth Vulnerability Assessment Scale (N = 962) |
|--|--|---|
| Description  | 25 measured and 8 scored items with a possible score of 0 to 8 | 32 scored items with a possible score of 0 to 52    |
| Mean<br>SD<br>Actual Range                               | .66<br>.89<br>0 to 5   | 7.9<br>5.6<br>0 to 38                               |
| Reliability/Internal<br>Consistency:<br>Cronbach's alpha | .35  | .74   |



#### Conclusions

- More psychometric work on the Vulnerability Index is needed
- Fort Worth was able to address some key local concerns:
  - Greater variability provided guidance on who should be "next in line" for an open housing voucher
  - Content validity was increased by expanding the operational definition of vulnerability
  - Supported a mechanism to respond to those with high needs but less than 6 months of homelessness
  - The creation of a "tenant solutions committee" provides an inter-agency context to review concerns



# Additional Concerns About Housing Placement and Prioritization

- Some high-scoring individuals are not appropriate for Permanent Supportive Housing
  - Need more/better assisted living options
  - Medical respite
  - Group homes
- Vulnerability may increase for victims of domestic violence after housing

## THANK YOU!!!

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