Homeless Incidence and Risk Factors for Becoming Homeless in Veterans

(http://www.va.gov/oig/pubs/VAOIG-11-03428-173.pdf)

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October 30, 2012

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Introduction

- On November 3, 2009, Secretary Shinseki announced a 5-year VA plan to end homelessness among veterans
  - Primary prevention of homelessness is an integral strategy of eliminating homelessness in veterans
  - The most challenging aspect of prevention efforts is to identify high-risk populations for outreach
- Objectives are to:
  - Estimate the incidence of veterans becoming homeless after military separation,
  - Identify risk factors associated with veterans becoming homeless after military separation, and
  - Describe the patterns and extent of the utilization VA specific homeless services by homeless veterans

Methods

- Retrospective longitudinal cohort study of the veteran population included in the LC database

- The population-based LC database identifies and captures every service member (~500,000) who separated from active military service during 7/1/05–9/30/06

  – Integrated details over 100 data files from DoD and VA sources from 10/1/2001 forward
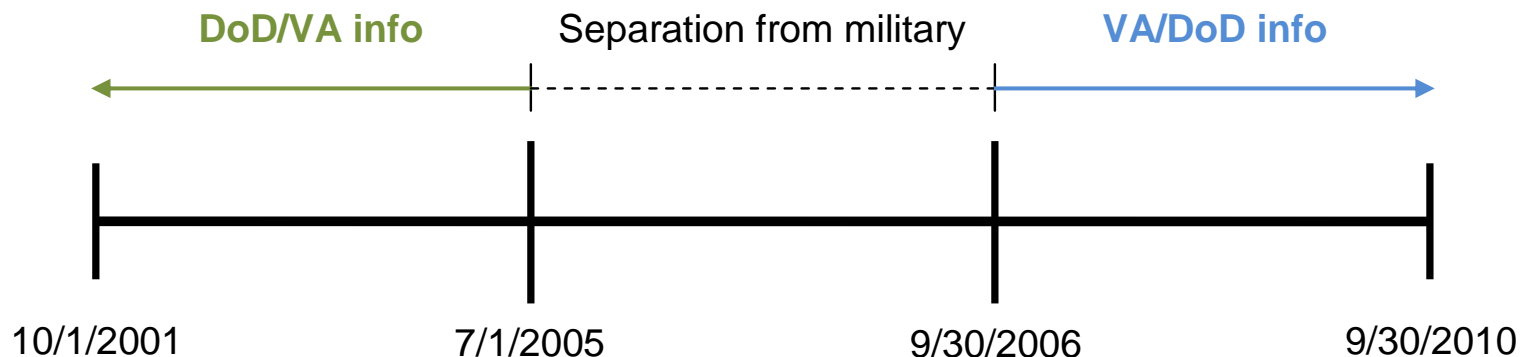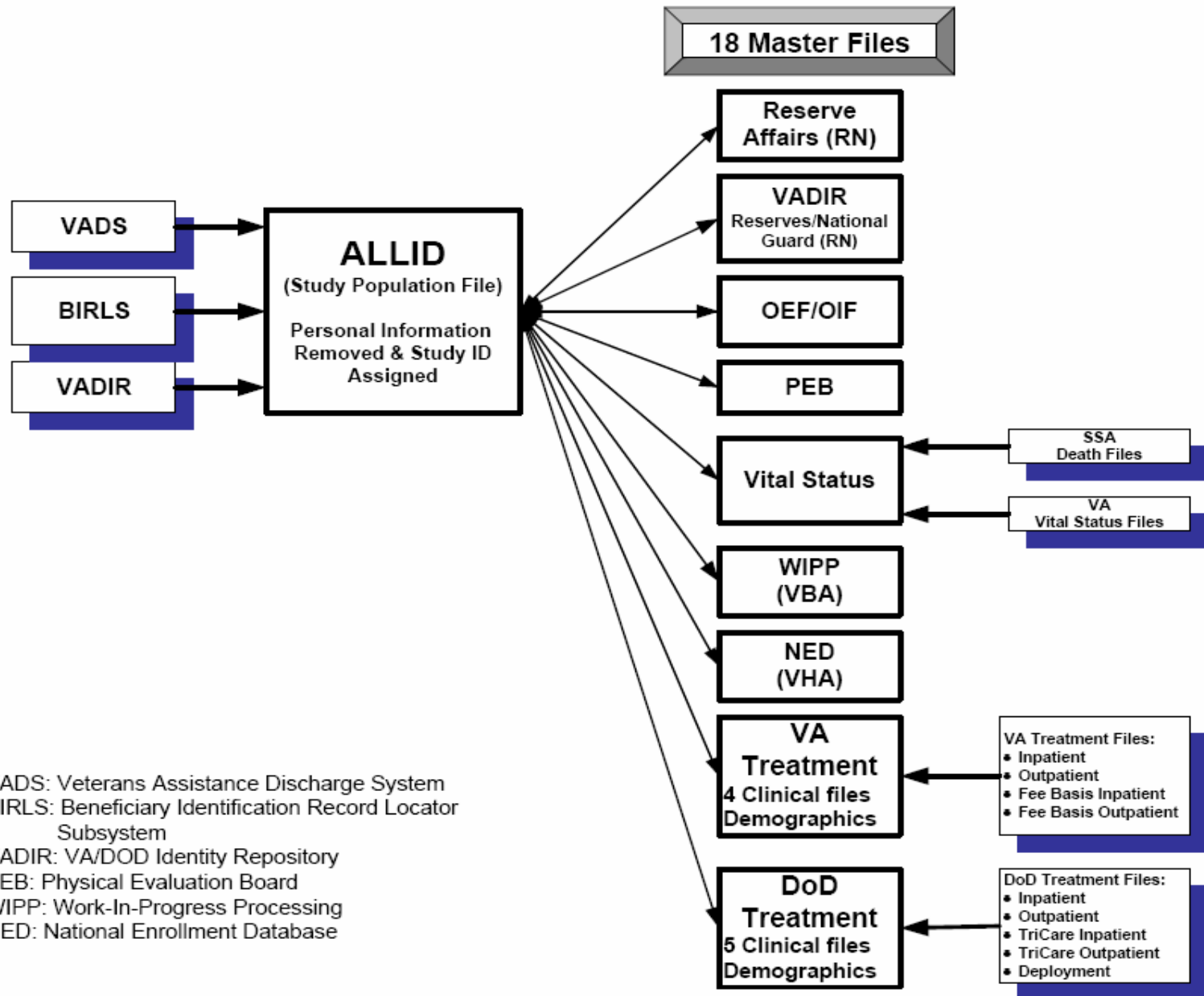
  – Continued longitudinal follow-up

DoD/VA info   Separation from military   **VA/DoD info**

10/1/2001   7/1/2005   9/30/2006   9/30/2010

Figure 1. LC Database: ALLID + 18 Master Files

VADS: Veterans Assistance Discharge System
BIRLS: Beneficiary Identification Record Locator
Subsystem
VADIR: VA/DOD Identity Repository
PEB: Physical Evaluation Board
WIPP: Work-In-Progress Processing
NED: National Enrollment Database

Methods (Continued)

- We defined homeless veterans as veterans who
  - Used specialized VA homeless program services,
  - Had a completed VA healthcare for homeless veterans intake assessment (VA Form X), and/or
  - Received a V60.0 ICD-9 diagnostic code (indicating lack of housing) at VA or DoD
- Our study population includes only those 310,685 veterans aged 17–64 in the LC database who
  - Used VA or DoD care after separation from the military
  - had not experienced any homeless episodes before separation
- We followed their experience encountering their first homeless episode (becoming homeless) from the time they left the military through September 30, 2010

Exhibit 1a. Study population, inclusions and exclusions
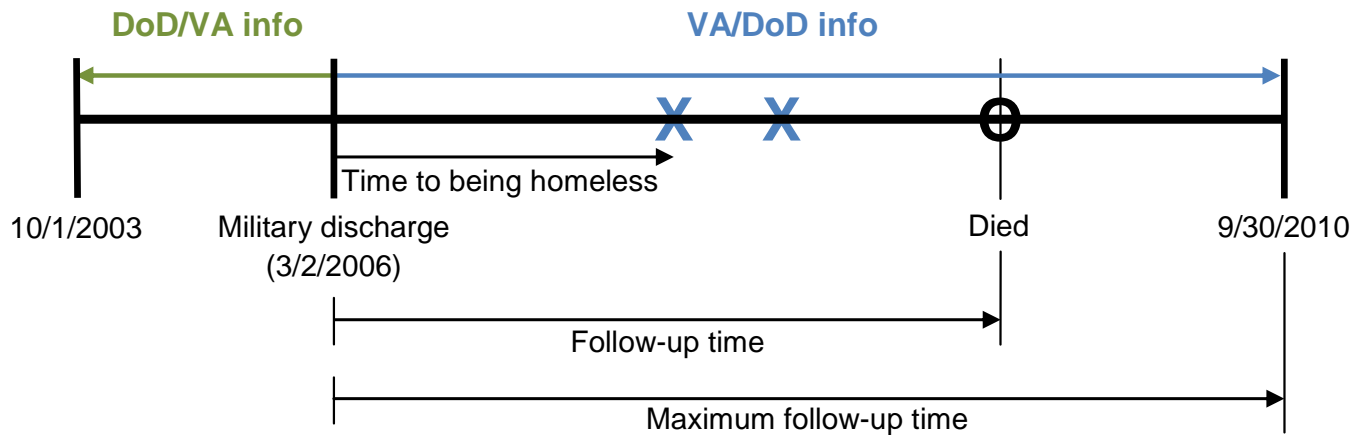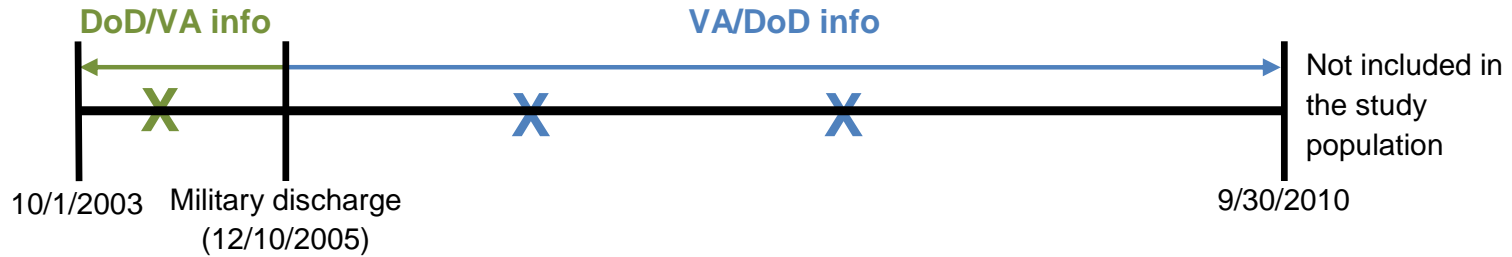
X – Homeless episode
Military discharge during 7/1/2005–9/30/2006
Maximum follow-up time: from military discharge to 9/30/2010
Time to being homeless: from military discharge to first homeless episode

Exhibit 1b. Study population, inclusions and exclusions

|	Number
LC Database population	**491,800**
Exclusions (Total)	**181,115**
Veterans who did not use VA or DoD care after military separation	180,748
Homeless episode prior to military separation	320
Age is missing	2
Age is less than 17	1
Age is greater than 64	44
Study population	**310,685**

Exclfreqs4

Findings

Exhibit 2. OEF/OIF and women veterans experienced higher homeless incidences after military separation
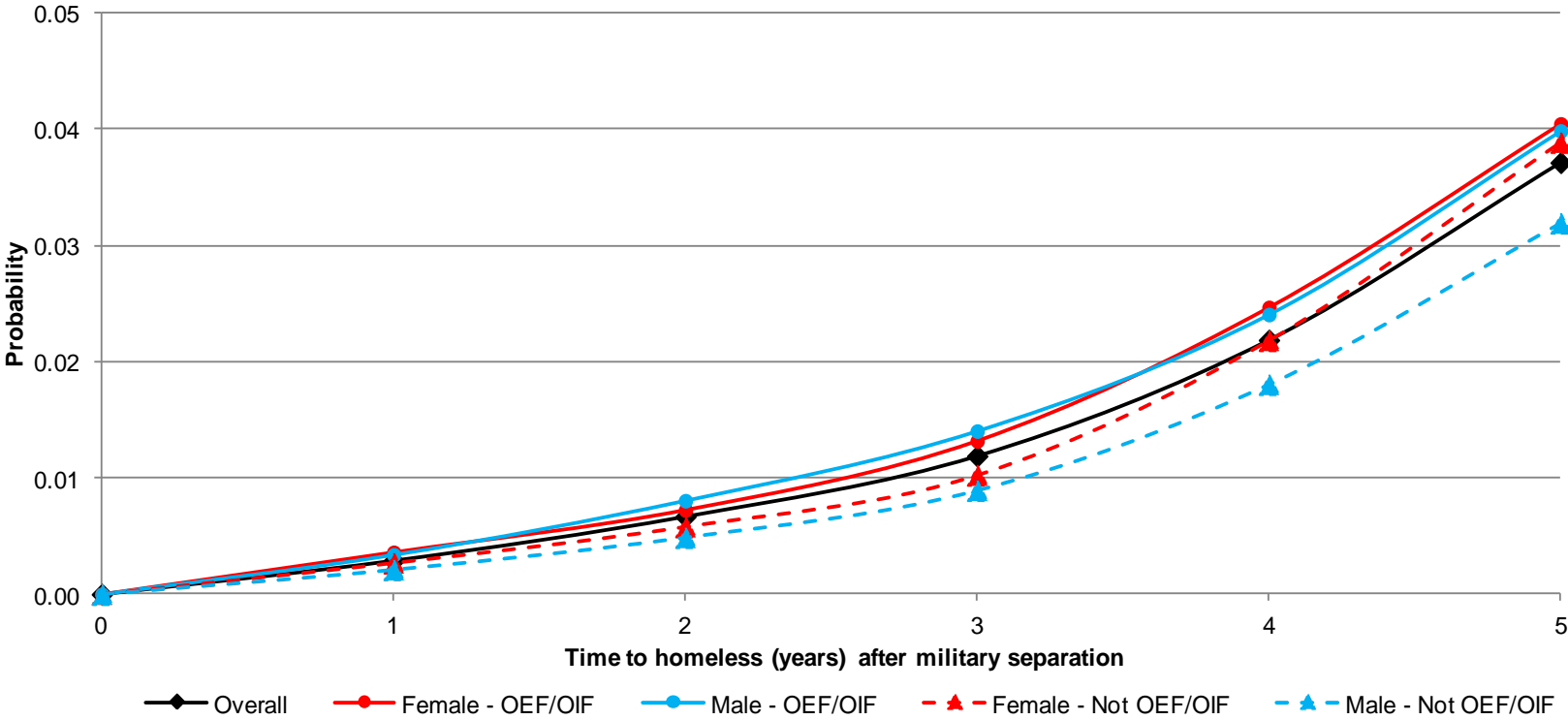
At 5 years of separation from the military, **3.7** % the veterans in the study population experienced an initial episode of homelessness (the newly homeless).

OEF/OIF and women veterans experienced higher incidences of homelessness than their non-OEF/OIF and male counterparts. The 5-year homeless incidence rates ranged from 3.2 % for non-OEF/OIF men to 4.0% for OEF/OIF women veterans.

OEF/OIF veterans experienced slight higher homeless incidences than non-OEF/OIF veterans at each year of the first 5 years after discharge.

# Exhibit 3. Time to first homeless episode after military separation by OEF/OIF status and gender
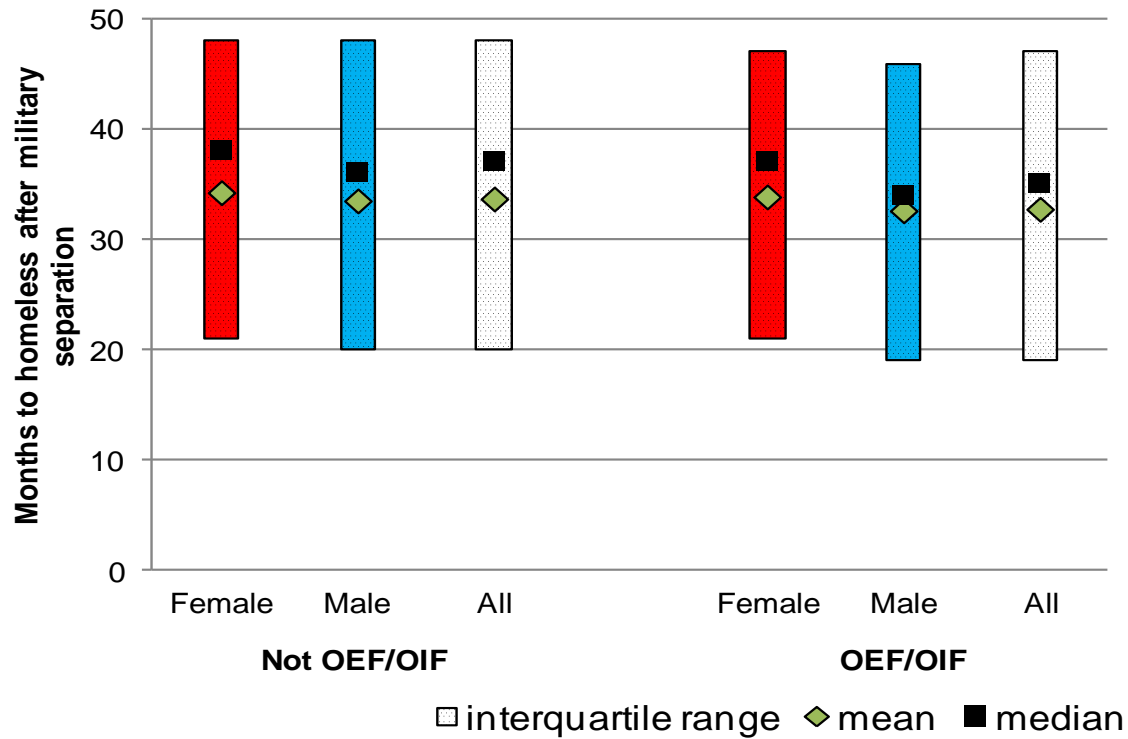
Among the veterans who became homeless, the median times to the first episode of homelessness were close to 3 years, indicating half of new homeless episodes occurred 3 years after discharge from active duty. This suggests a window of opportunity for preventing veterans from becoming homeless after discharge from active duty.

The median times varied from 34 months for OEF/OIF men to 38 months for non-OEF/OIF women. OEF/OIF homeless veterans encountered their first homeless episode slightly sooner than their non-OEF/OIF counterparts after discharge from active duty.

Exhibit 4. At the time of separation(baseline) from active duty, veterans who became homeless after military separation were younger and enlisted with lower pay grades

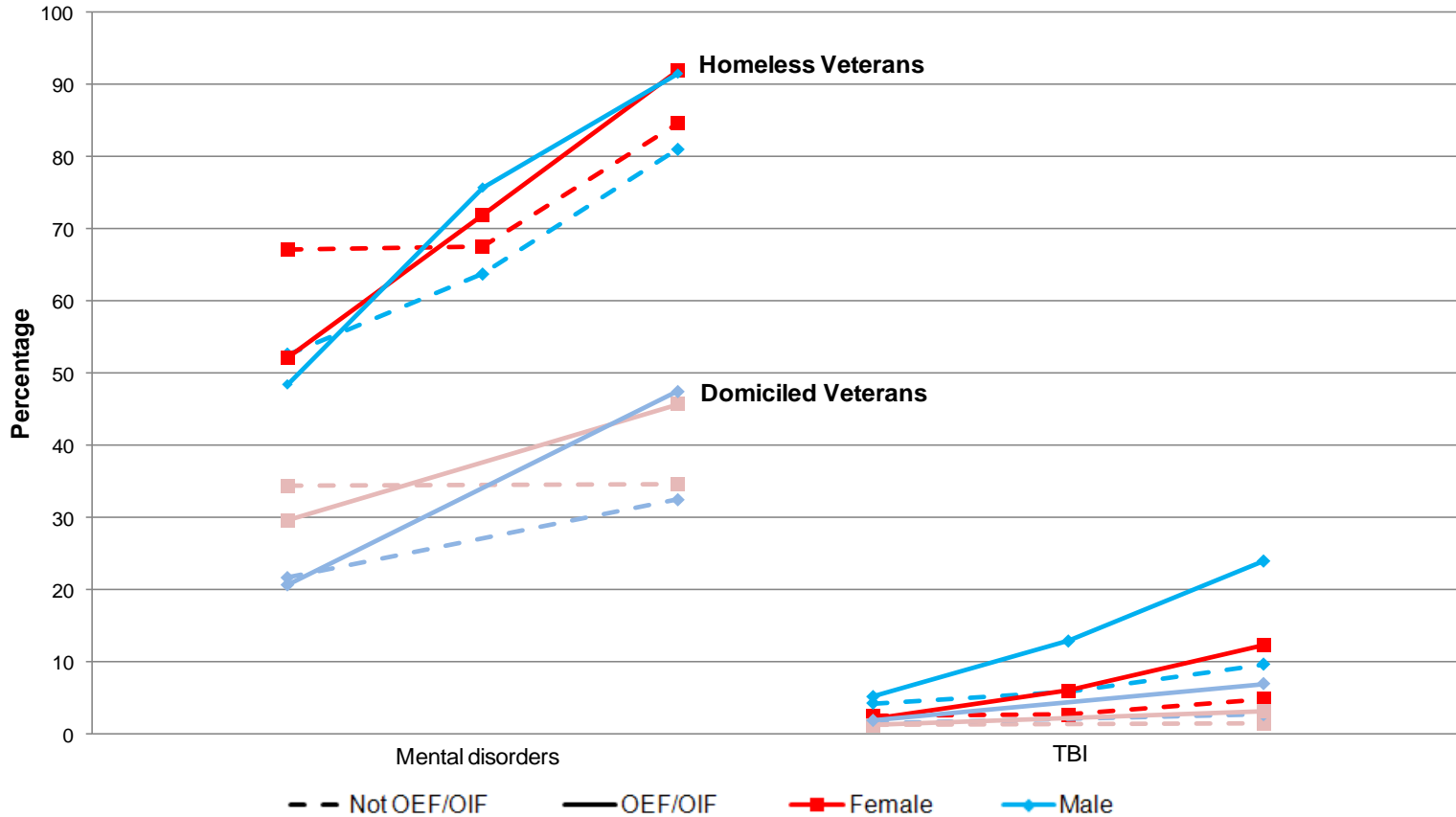|	Homeless Veterans (5,574)						Domiciled Veterans (305,111)					
	Not OEF/OIF			OEF/OIF			Not OEF/OIF			OEF/OIF		
	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male	All
	456	1,493	1,949	405	3,220	3,625	28,025	109,481	137,506	18,233	149,372	167,605
Age at separation (years)												
mean	27.1	27.7	27.5	28.2	28.5	28.4	29.4	30.7	30.4	29.6	31.4	31.2
median	25	25	25	26	25	25	26	27	27	26	28	28
Age categories												
17–24	48.5	49.1	49.0	41.2	43.5	43.3	43.5	40.2	40.9	37.1	32.8	33.2
25–34	35.5	30.3	31.6	40.7	35.5	36.1	27.8	24.0	24.7	37.0	32.5	33.0
35–44	11.2	15.3	14.4	13.6	15.3	15.1	19.0	23.4	22.5	18.0	24.1	23.5
45–54	4.6	4.7	4.7	3.7	5.3	5.1	8.5	10.5	10.1	7.2	9.1	8.9
55–64	0.2	0.5	0.5	0.7	0.4	0.4	1.3	2.0	1.8	0.7	1.5	1.4
Branch (%)												
Army	49.8	58.7	56.6	68.6	68.5	68.5	53.3	54.5	54.3	63.8	65.0	64.9
Navy	27.4	19.0	21.0	17.3	13.1	13.5	18.6	16.2	16.7	15.0	10.7	11.1
Air Force	17.3	9.5	11.3	10.1	4.0	4.7	21.3	16.0	17.1	16.7	10.6	11.3
Marines	4.0	10.3	8.8	4.0	14.4	13.2	5.0	11.0	9.8	4.4	13.7	12.7
other	1.5	2.6	2.3	0.0	0.1	0.1	1.9	2.3	2.2	0.1	0.1	0.1
Character of service (%)												
Honorable/General	90.1	86.6	87.4	93.6	91.3	91.5	87.1	89.4	88.9	93.1	91.8	91.9
Other than Honorable	1.8	5.1	4.3	0.3	3.0	2.7	0.4	0.6	0.5	0.3	0.5	0.4
BC/Dishonorable	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Uncharacterized/missing	7.9	7.8	7.8	6.2	5.7	5.7	12.5	10.0	10.5	6.6	7.8	7.6
Military pay grade (%)												
E1–E4	73.7	77.7	76.8	70.9	69.9	70.0	51.2	47.6	48.3	41.1	39.4	39.6
E5–E9	22.4	19.0	19.8	26.4	28.8	28.5	33.9	38.3	37.4	47.3	49.2	49.0
O1–O3	2.2	1.7	1.9	1.2	0.7	0.7	7.4	5.3	5.7	6.8	4.7	4.9
O4–O10	1.3	0.9	1.0	1.5	0.4	0.5	6.8	7.5	7.3	4.1	5.3	5.1
other	0.4	0.6	0.6	0.0	0.3	0.3	0.8	1.4	1.3	0.7	1.5	1.4
Military component (%)												
Active	90.8	87.9	88.6	65.4	62.5	62.8	87.7	85.5	86.0	53.7	47.3	48.0
Reserve/Guard	9.2	12.1	11.4	34.6	37.5	37.2	12.3	14.5	14.0	46.3	52.7	52.0

Exhibit 5. Veterans who became homeless after military separation were more likely to be diagnosed with mental disorders (ICD-9-CM: 290.0--319.0) and/or traumatic brain injury (TBI) prior to separation from active duty
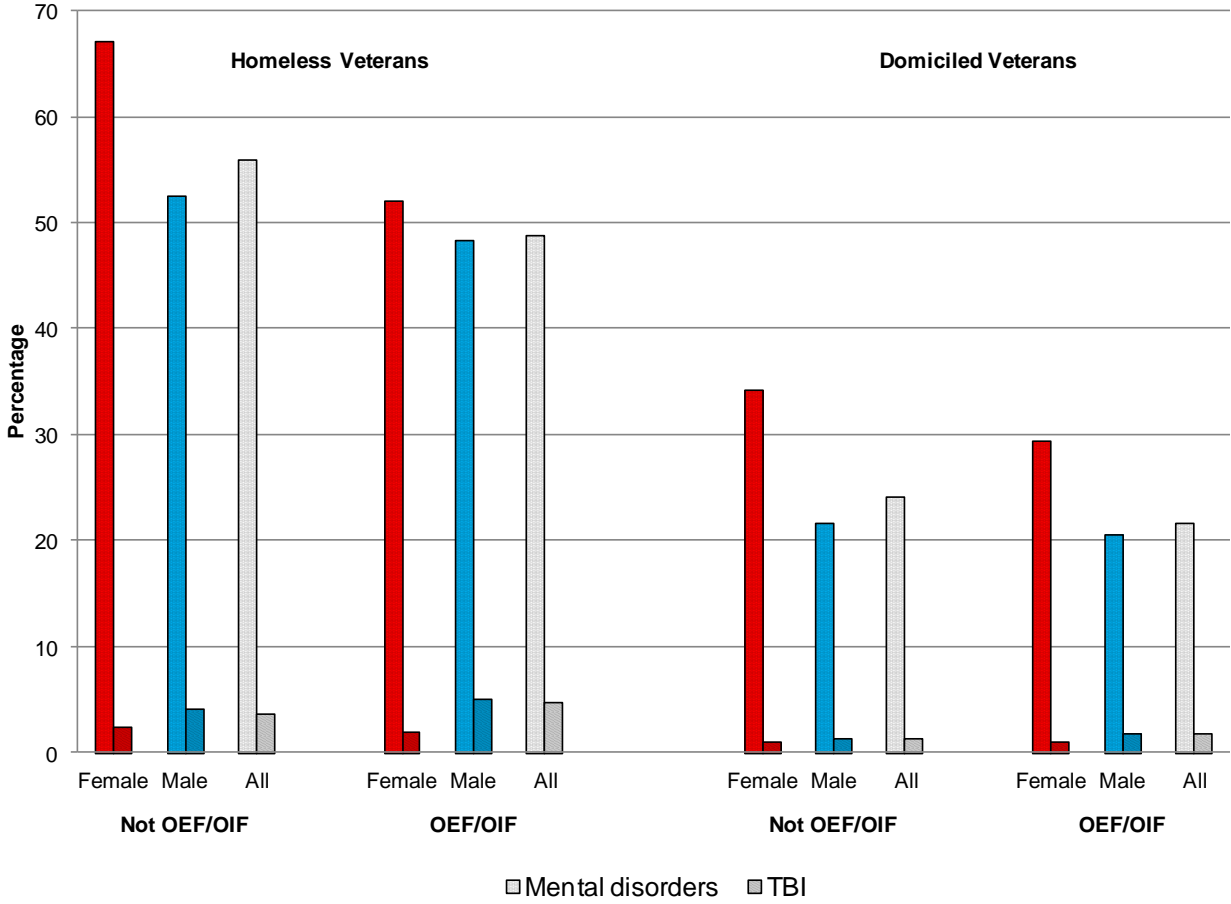
Mental disorders included substance-related disorders and all mental illness

- We included in the study the following 6 specific mental illness categories for separate examination:
  - Anxiety disorders
    - Anxiety disorders excluding post-traumatic stress disorder (PTSD)
    (ICD-9-CM: 300.00, 300.01, 300.02, 300.21, 300.22, 300.23, 300.29, 300.3, 308.3)
    - PTSD (ICD-9-CM: 309.81)
  - Adjustment disorders (ICD-9-CM: 309.0, 309.24, 309.28, 309.3, 309.4, 309.9)
  - Major depression (ICD-9-CM: 296.2, 296.3)
  - Mood disorders (ICD-9-CM: 296.0, 296.2–296.7, 296.80, 296.89, 296.90, 300.4, 301.13, 311)
  - Personality disorders (ICD-9-CM: 301.0, 301.2, 301.4, 301.50, 301.6, 301.7, 301.81–301.84, 301.89, 301.9), and
  - Psychotic disorders (ICD-9-CM: 295.1–295.4, 295.6, 295.7, 295.9, 297.1, 297.3, 298.8, 298.9)
- Substance-related disorders (ICD-9-CM: 291, 292 (except 292.2), 303–305 (except 305.1 and 305.8)
  - Alcohol-related disorders (ICD-9-CM: 291, 303, 305.0)
  - Drug-related disorders (ICD-9-CM: 292 (except 292.2), 304, 305.2–305.7, 305.9)

Exhibit 13. Presence of mental disorders (substance-related disorders and/or mental illness) is the strongest predictor of becoming homeless after discharge from active duty

Consistently, a much higher percent of the newly homeless veterans are diagnosed over time (Prior to Military Separation, before Becoming Homeless, as of 9/30/2010) than their domiciled counterparts in each of the four separate subpopulations defined by OEF/OIF status and gender. Thus, it may be beneficial for VA homelessness primary prevention efforts to focus on the treatment of veterans with mental disorders as well as on their housing risk.

Exhibit 14. Veterans Diagnosed with Anxiety, PTSD, and Adjustment Disorders Over Time (Prior to Military Separation, before Becoming Homeless, as of 9/30/2010) by Homeless Status, OEF/OIF Status, and Gender
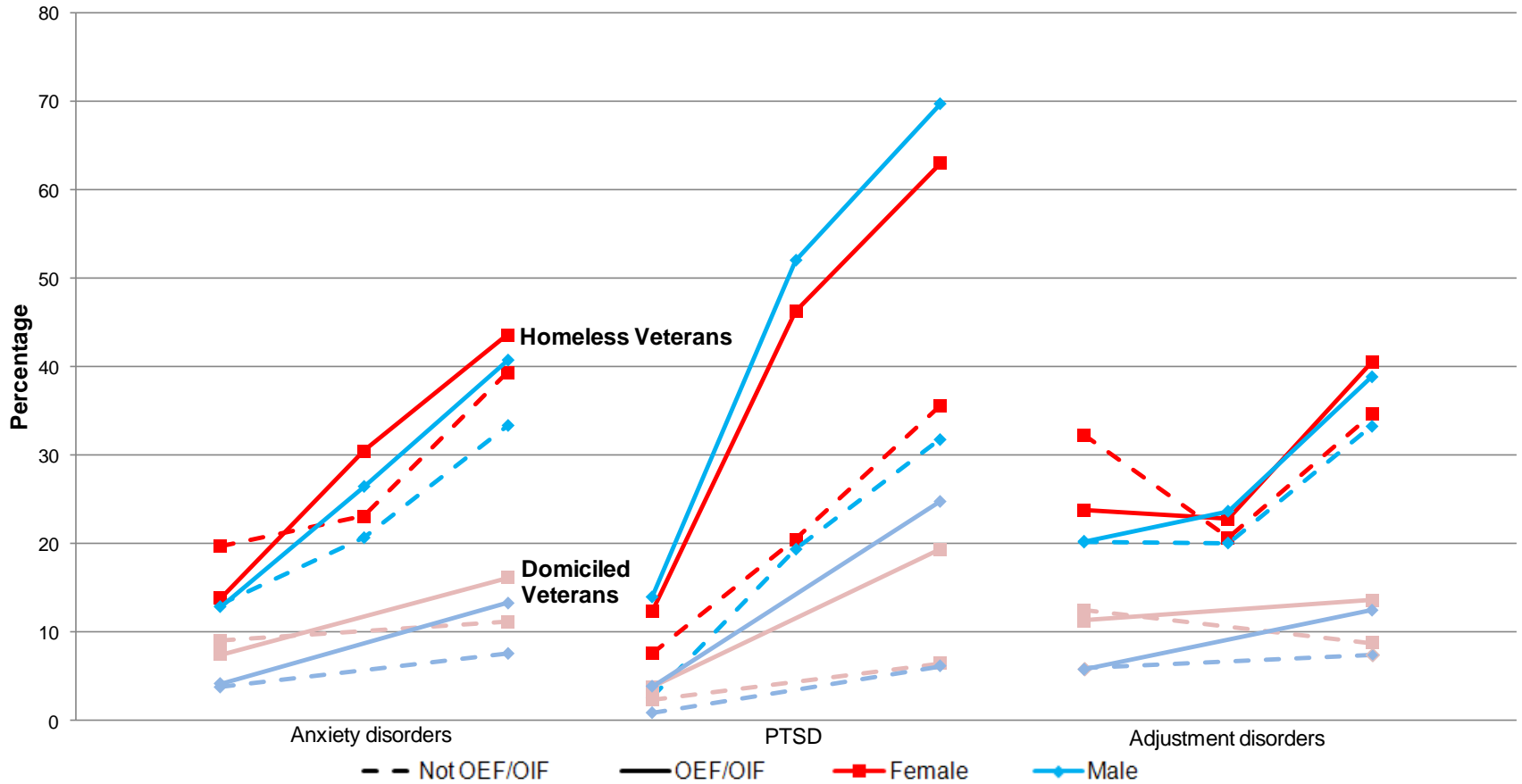
Exhibit 15. Veterans Diagnosed with Mood, Personality, and Psychotic Disorders Over Time (Prior to Military Separation, before Becoming Homeless, as of 9/30/2010) by Homeless Status, OEF/OIF Status, and Gender
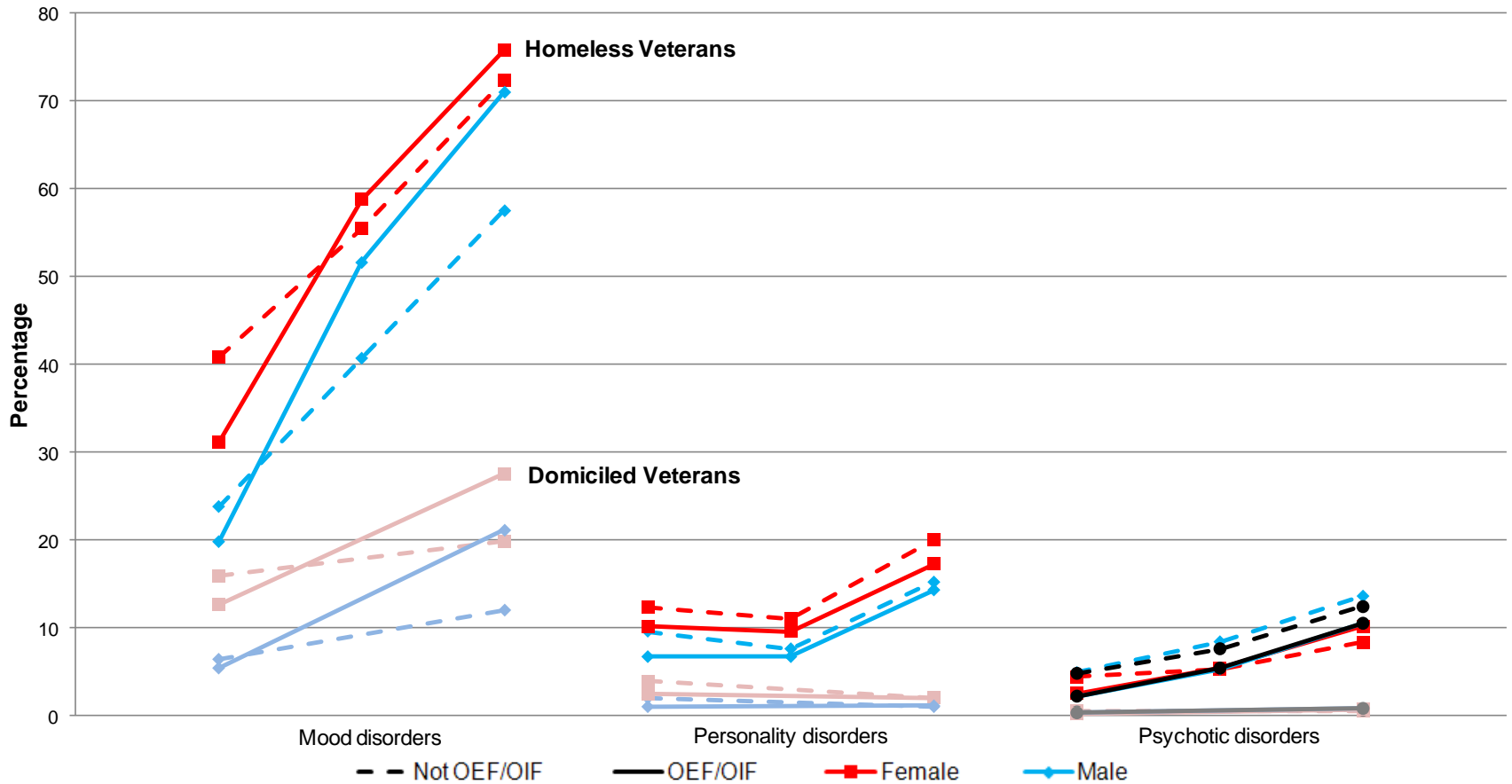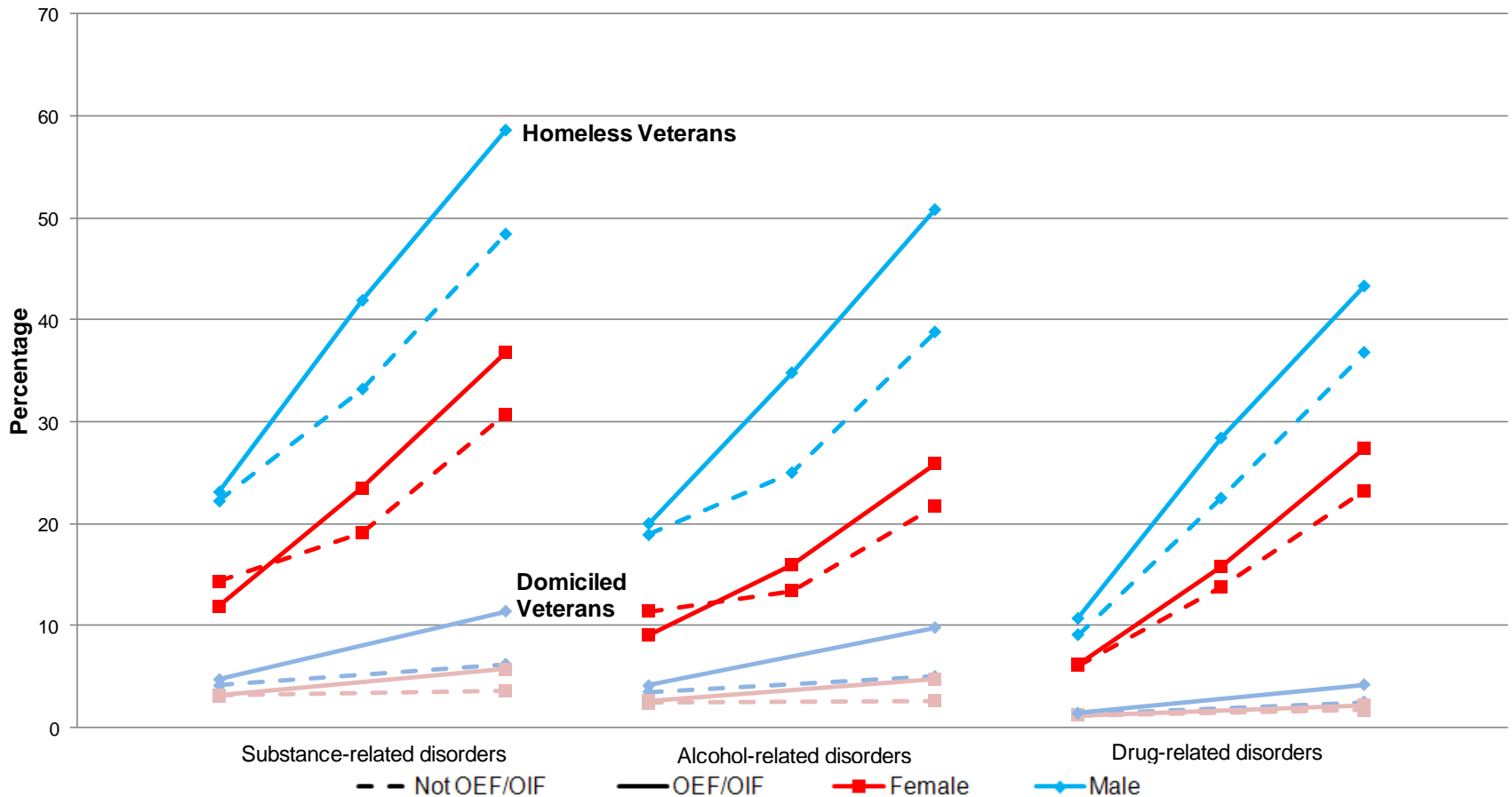
Exhibit 16. Veterans Diagnosed with Substance-Related Disorders Over Time (Prior to Military Separation, before Becoming Homeless, as of 9/30/2010) by Homeless Status, OEF/OIF Status, and Gender

The percentages of mental disorder diagnoses among newly homeless OEF/OIF veterans are higher than those of their non-OEF/OIF counterparts over time

- Although the percent of OEF/OIF veterans diagnosed with mental disorders and specific categories (except for PTSD) of mental illness before discharge from active duty are generally lower than their non-OEF/OIF counterparts
- This signifies that the impact of serving in OEF/OIF on becoming homeless is partly manifested as the intermediate outcomes of mental disorders
- Thus, our study implies that enhanced access to effective mental health services and substance use treatment may facilitate a reduction in occurrences of newly homeless veterans and should remain a focus of primary prevention efforts

Exhibit 21. Homeless veterans, especially women, had received disproportionally higher military sexual trauma (MST)-related treatment than domiciled veterans as of 9/30/2010
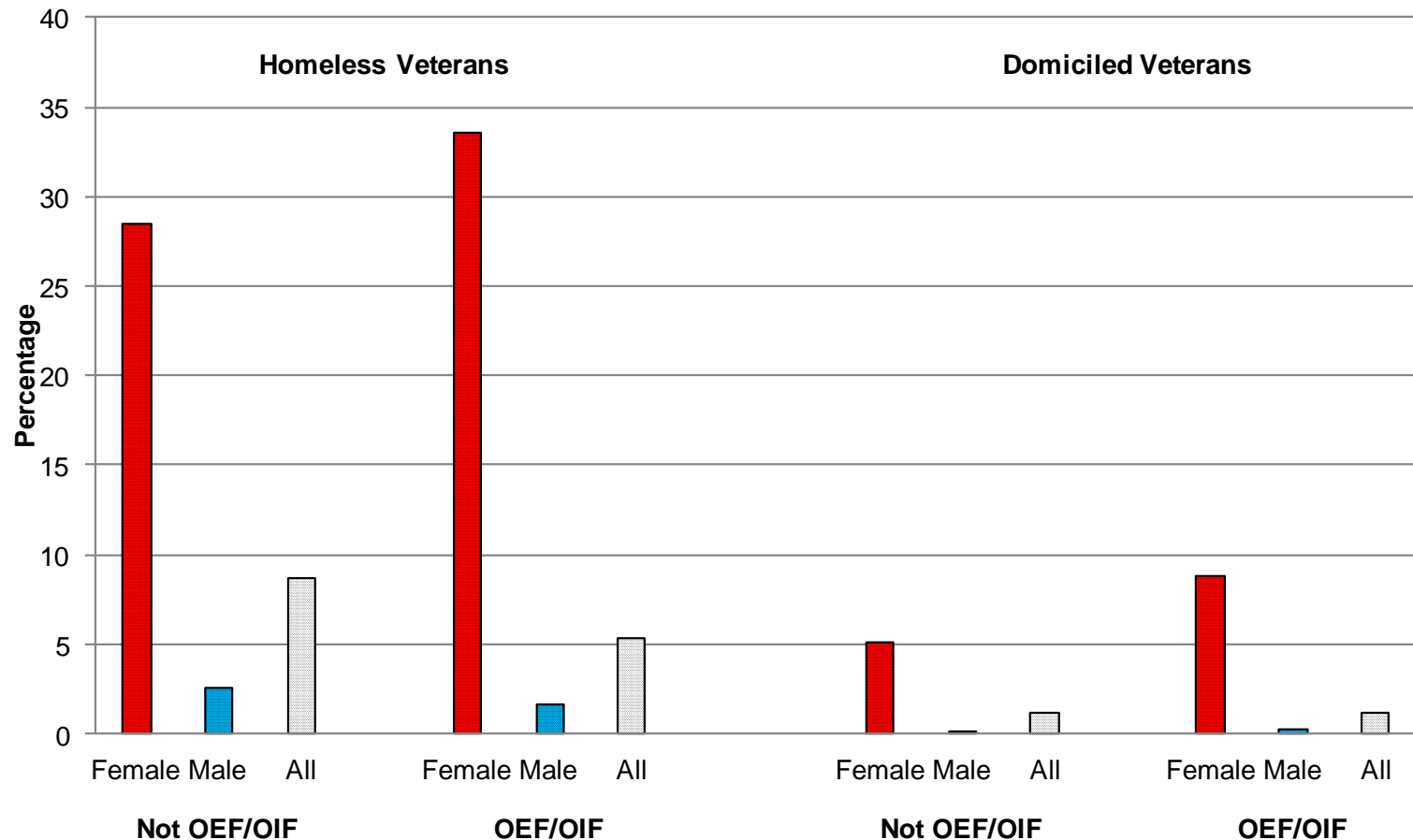

At the end of the study, the percentages of homeless veterans who had received MST-related treatment were over 3 times higher than those of their domiciled counterparts

Exhibit 22. Majority of the newly homeless women veterans who received MST-related treatment had received the treatment prior to they became homeless
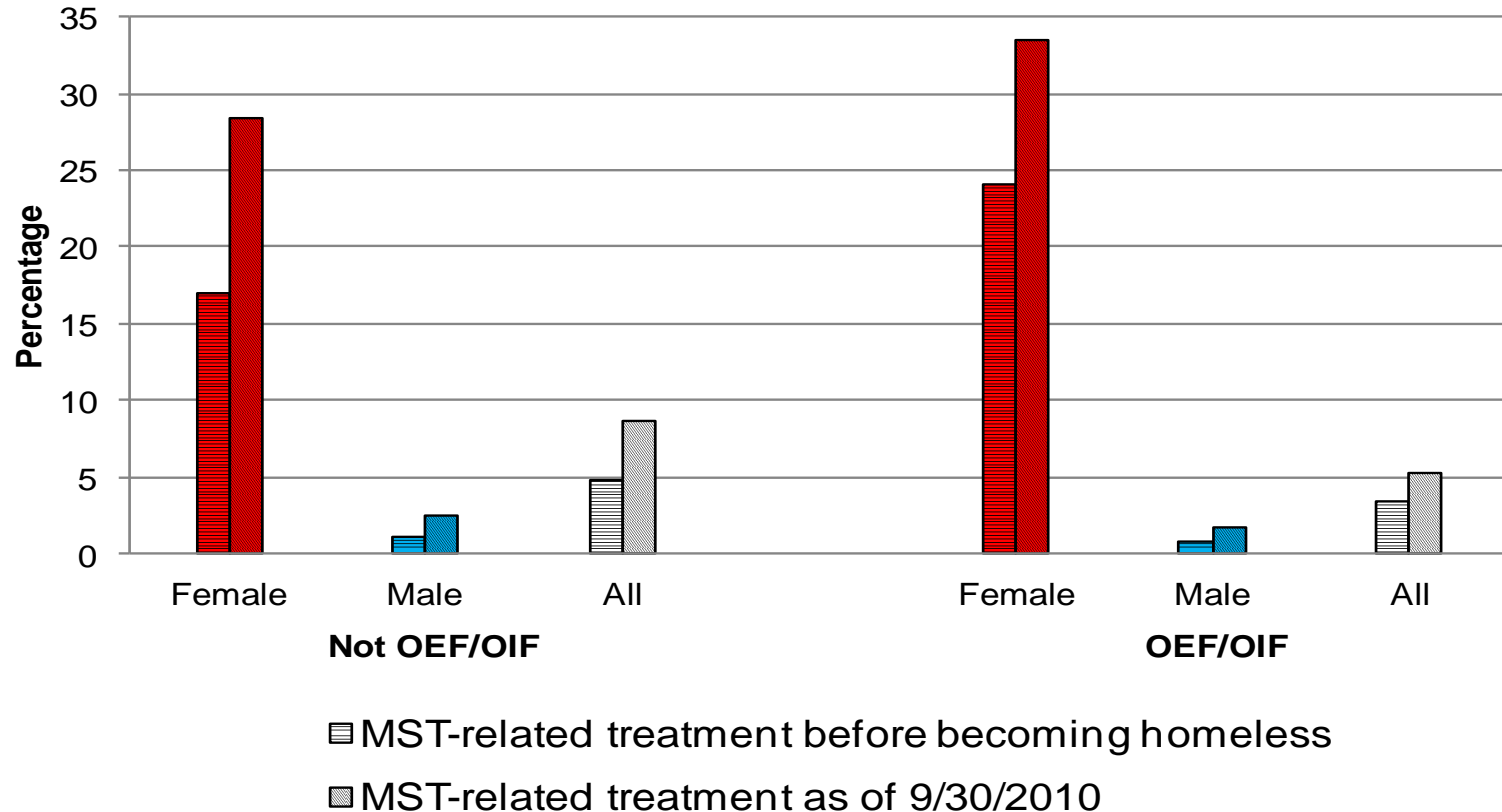
This reveals that MST is a risk factor in veterans for becoming homeless, especially in women veterans

Exhibit 23. Homeless veterans were more likely to receive compensation for service-connected disabilities (as of September 30, 2010)
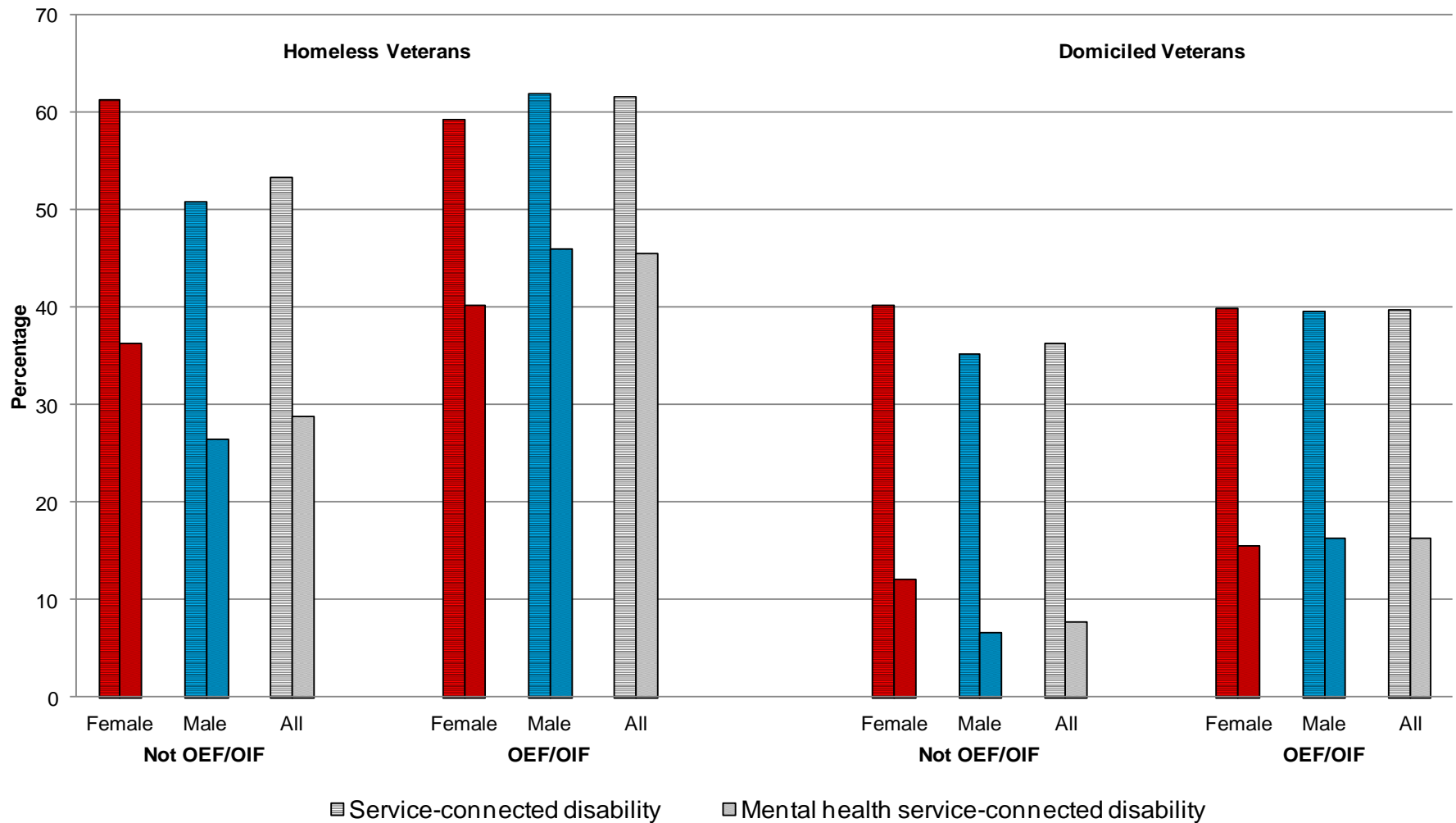
Over half (51–62%) of the homeless veterans were receiving VA compensation for their service-connected disabilities at the end of the study, higher than their domiciled counterparts (35–40%)

Exhibit 25. Majority (83–95%)of the homeless veterans who were receiving VA compensation at the end of the study (9/30/2010) were receiving the compensation prior to their first episode of homelessness
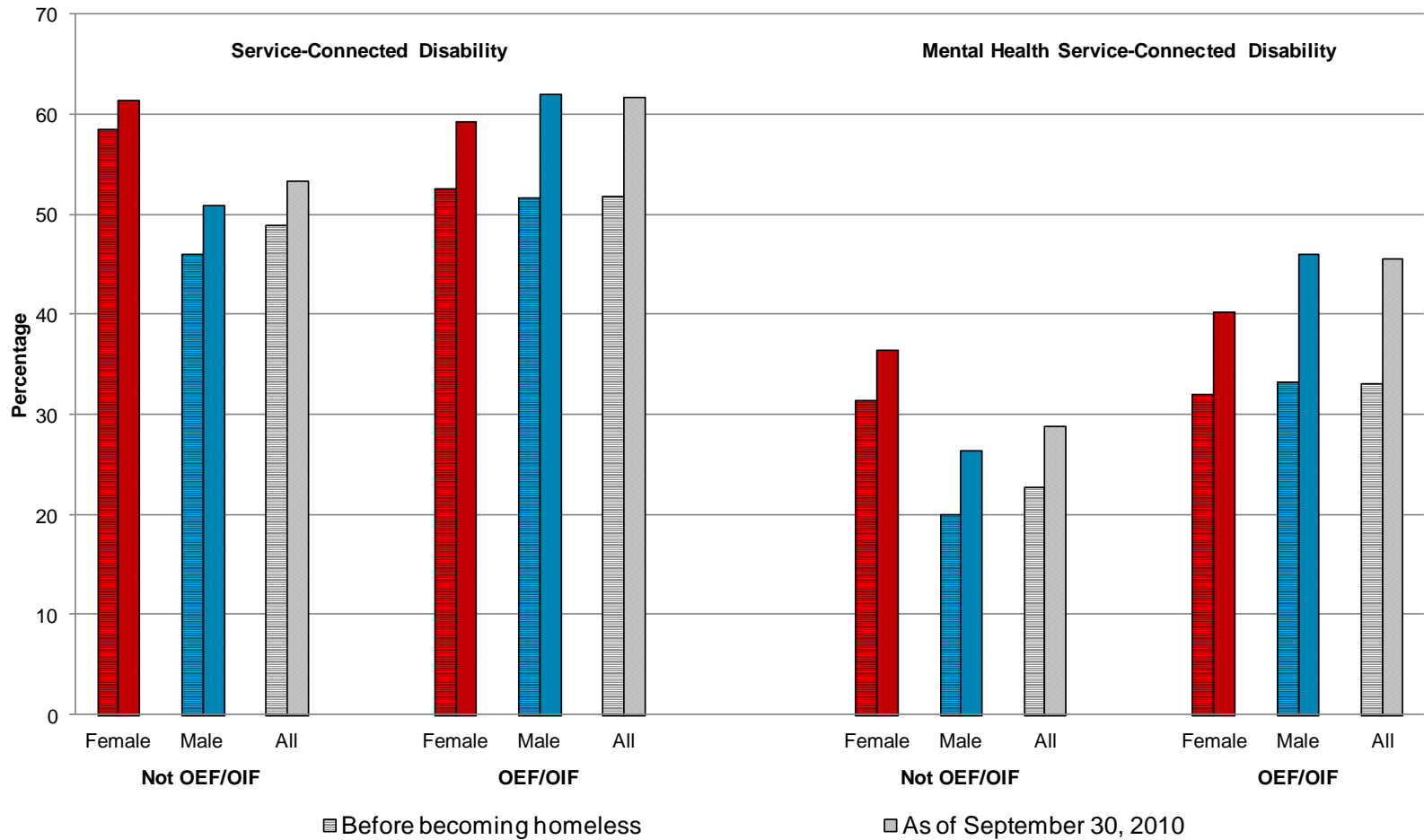
Exhibit 24 Homeless veterans received higher disability ratings even prior to their first homeless episode

	Homeless Veterans (5,574)						Domiciled Veterans (305,111)					
	Not OEF/OIF			OEF/OIF			Not OEF/OIF			OEF/OIF		
	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male	All
	456	1,493	1,949	405	3,220	3,625	28,025	109,481	137,506	18,233	149,372	167,605
As of September 30, 2010												
Service-connected disability												
Overall percentage rating, mean	52.2	50.9	51.3	54.3	58.1	57.7	43.8	42.6	42.9	41.5	42.6	42.5
Overall percentage rating, median	50	50	50	60	60	60	40	40	40	40	40	40
Mental health service-connected disability[1]												
Overall percentage rating, mean	64.5	67.5	66.6	65.9	68.1	67.9	57.9	61.2	60.2	56.7	58.7	58.5
Overall percentage rating, median	70	70	70	70	70	70	60	60	60	60	60	60
Before becoming homeless												
Service-connected disability												
Overall percentage rating, mean	46.7	44.4	45.1	47.0	50.7	50.3	Not applicable			Not applicable		
Overall percentage rating, median	40	40	40	40	50	50						
Mental health service-connected disability[1]												
Overall percentage rating, mean	59.6	61.2	60.7	58.8	62.8	62.3	Not applicable			Not applicable		
Overall percentage rating, median	60	60	60	60	60	60						

[1] Disability conditions codes: 91xx–95xx

The findings are new, and they are surprising in that a higher (46–59) percent of the homeless veterans than their domiciled (35–40 percent) counterparts (at the end of the study) had access to some stable and seemingly moderate funds before their first homeless episode to prevent becoming homeless. More studies are called for to investigate the relationship between service-connected disability payments and their impact on homelessness.

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Exhibit 26. Utilization of VA homeless programs by homeless veterans

HCHV/HCMI includes community outreach.
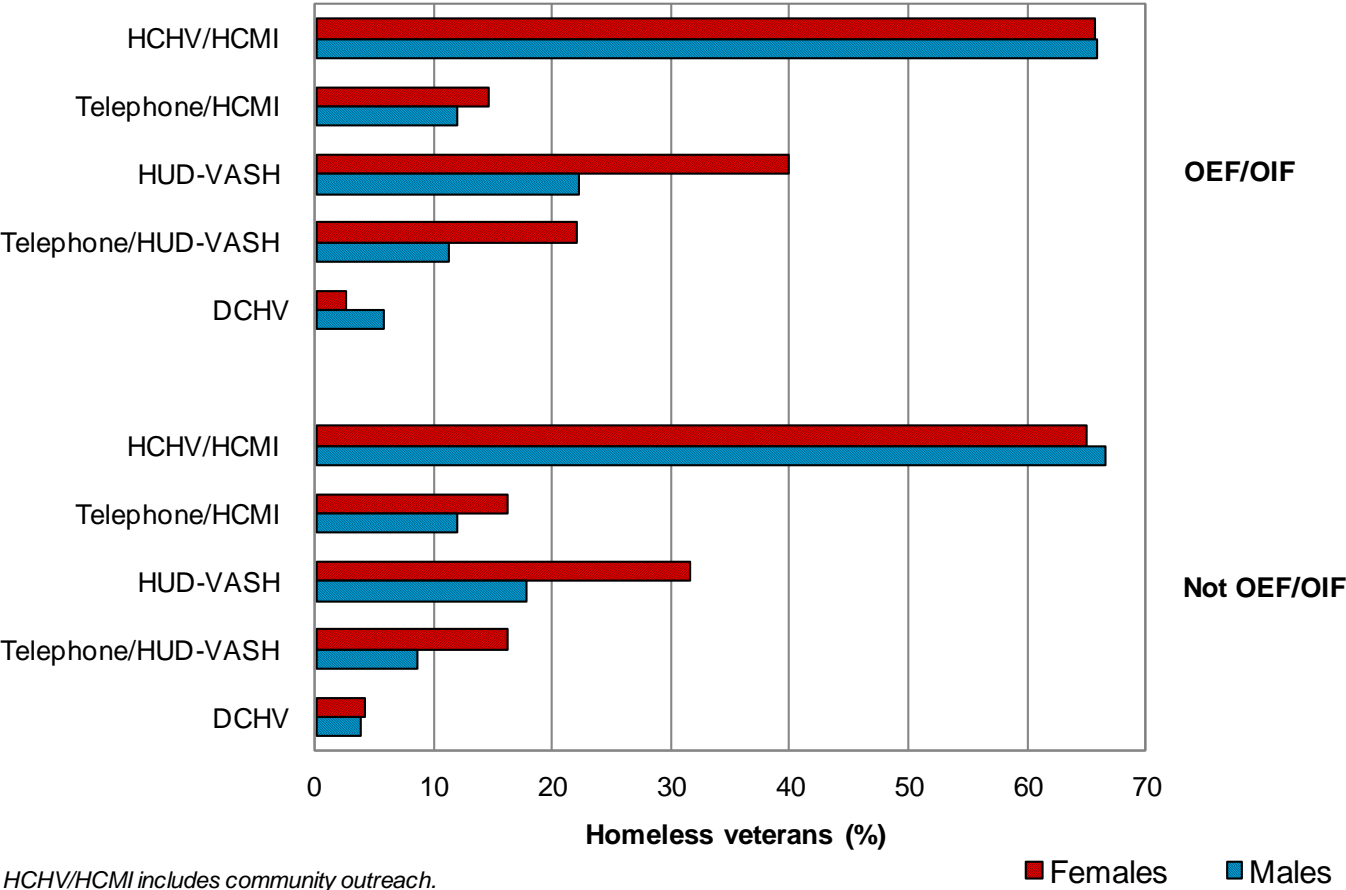
Approximately 65% of homeless veterans utilized the VA's Health Care for Homeless Veterans (HCHV)/Homeless Chronically Mentally Ill (HCMI) Program

OEF/OIF and women homeless veterans were more likely to utilize the Department of Housing and Urban Development-VA Supportive Housing (HUD-VASH) Program

Discussions

- By incorporating DoD treatment data with VA data, for the first time, we are able to identify veterans who did not experience any homeless episodes before discharge from active duty to
  - study the occurrence rate of the newly homeless and
  - investigate the effect of mental disorders and TBI diagnoses during military service on becoming homeless
- We innovatively looked at risk factors at the time of becoming homeless for the homeless veterans, in addition to the two points in time—at discharge from active duty (baseline) and at the end of the study
  - This provides us broader insights on the pathways of the risk factors and their effect on veteran homelessness

Discussions (Continued)

- The longitudinal cohort nature of our study eliminates the limitations of most studies that employ a cross-sectional design
  - In cross-sectional studies, participants were assessed for homelessness and risk factors simultaneously at a particular time period
    - We cannot distinguish the newly homeless from the chronically homeless
    - We cannot determine causality or temporal sequence of risk factors and homelessness
    - It thus remains unclear whether the newly homeless and chronically homeless share the same risk factors and whether, say, a diagnosis of substance-related disorders and/or mental illness preceded homelessness, or whether substance-related disorders and/or mental illness are the result of adaptations to the stresses and dangers associated with the homeless experience
  - Our longitudinal cohort study allows us to exclusively investigate risk factors over time to better understand their pathways and effects on veteran homelessness
    - We clearly demonstrate that the presence of a diagnosis of substance-related disorders and/or mental illness is a predictor of becoming homeless in veterans

Acknowledgments

- VAOIG report (May 4, 2012):
  Homeless Incidence and Risk Factors for Becoming Homeless in Veterans, May 4, 2012
  http://www.va.gov/oig/pubs/VAOIG-11-03428-173.pdf
- Lin Clegg, Ph.D., Director
- Nathan McClafferty, MS
- Patrick Smith, MS
- Jarvis Yu, MS
- Karen McGoff-Yost, MSW, LCSW
- Elizabeth Bullock

- Special Acknowledgement :
  The National Center for Homelessness Among Veterans
  U.S. Department of Veterans Affairs