

# Alcohol Abuse or Dependence Most Prevalent Comorbidity Among 48,384 HIV-Infected VA and California Medicaid Beneficiaries

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## BACKGROUND

HIV is now a complex chronic disease in which the management of common comorbid behaviors and conditions is of increasing importance. Few population estimates of comorbid illness exist for HIV-infected populations in the post-HAART era. We sought to characterize the prevalence of comorbid illnesses and AIDS-defining conditions in two separate populations of HIV-infected individuals in the United States.

## CASE IDENTIFICATION

We identified individuals infected with HIV under care in the California state Medicaid (Medi-Cal) program and the United States Veterans Healthcare System (VA) from 10/1/97-12/31/03. Using data from the VA national electronic medical record and from Medi-Cal claims combined with California hospital discharge abstracts, we identified and compared the prevalence of 20 comorbid conditions and 12 AIDS-defining conditions for these individuals. Using a validated method of identifying comorbid events based upon ICD-9 codes, clinical events occurring within 12 months before and 6 months after presentation for HIV care were considered prevalent cases.

## ANALYSIS

- Identified and assessed patient demographics for the two populations.
- Assessed the prevalence of the 20 comorbid conditions and 12 AIDS-defining conditions in the two HIV-infected populations.
- Used a weighted average of the samples to determine the top 10 conditions and compared the unadjusted prevalence in the two samples using chi square tests.

## ACKNOWLEDGEMENTS

Funding: National Institute on Alcohol and Alcohol Abuse (2U10 AA 13566); and the Veterans Health Administration; the VHA Office of Research and Development; and, VHA Public Health Strategic Health Care Group; the University AIDS Research Program (ID-05-LA-034), and the National Institute on Aging (K08 AG023024-01A1).

The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs.

## RESULTS

### DEMOGRAPHICS

	VACS (N = 16,573)	Medi-Cal (N = 31,811)	P
<b>Age mean: IQR</b>	48	38	0.01
99%	77	73	
75%	53	45	
50%	47	38	
25%	41	31	
1%	26	0	
<b>Male sex n(%)</b>	16,173 (98)	23,920 (75)	<0.01
<b>Race/Ethnicity n(%)</b>			
Black	6,852(41)	8,093 (25)	<0.01
White	4,737(29)	13,544 (43)	<0.01
Hispanic	1,080(7)	8,038 (25)	<0.01
Other	3,904(24)	2,136 (7)	<0.01
<b>HAART** n(%)</b>	7,880(68)		
<b>AIDS n(%)</b>	5,931(36)	24,401 (77)	<0.01
<b>CD4<sup>†</sup> mean: IQR</b>	326	-	
99%	1,190		
75%	479		
50%	277		
25%	100		
1%	2		
<b>Viral Load<sup>†</sup> mean: IQR</b>	104,931	-	
99%	750,000		
75%	108,469		
50%	19,415		
25%	786		
1%	50		

### LIMITATIONS

- Retrospective study using administrative data.
- Medicaid and the VA represent sicker HIV/AIDS populations than live in the general population.
- Results may not generalize to other HIV-infected populations

### PREVALENCE OF COMORBID CONDITIONS

	VACS	Medi-Cal	P
	%	%	
<b>Comorbid Illnesses</b>			
Hypertension	23	13	<0.01
Drug abuse	22	10	<0.01
Alcohol abuse	20	18	<0.01
Hepatitis C	14	5	<0.01
Pulmonary Disorder	9	12	<0.01
Diabetes	9	6	<0.01
Major depression	9	5	<0.01
Hyperlipidemia	8	3	<0.01
Renal failure	7	9	<0.01
PTSD	6	0	-
Coronary artery disease	6	4	<0.01
Schizophrenia	5	5	0.99
Bipolar disorder	4	4	0.99
Stroke	2	3	<0.01
Congestive heart failure	2	4	<0.01
End stage liver disease	2	4	<0.01
Peripheral vascular disease	2	2	0.99
Pancreatitis	1	2	0.99
Decompensated liver disease	1	3	<0.01
Renal stone	1	1	0.99
<b>AIDS-defining Illnesses</b>			
Bacterial pneumonia	8	12	<0.01
Thrush	8	11	<0.01
PCP	5	7	<0.01
Opportunistic fungi	2	4	<0.01
Herpes simplex	2	3	<0.01
Tuberculosis	2	3	<0.01
Cytomegaloviral disease	1	3	<0.01
Kaposi's Sarcoma	1	2	<0.01
Mycobacterium	2	2	0.99
HIV dementia	1	2	<0.01
Herpes zoster	2	2	0.99
Enteric parasites*	0	0	-

### DISCUSSION

- Comorbid illnesses are common in both populations studied.
- Individually, hypertension is the most common in the VA, while alcohol abuse is more common in the Medi-Cal population. Overall, alcohol abuse is the most common condition across both groups.
- The burden of disease represented by comorbid illnesses exceeds that of traditional AIDS-related illnesses in these two populations.
- The VA population tends to have higher rates of comorbid diseases, while the Medi-Cal cohort tends to have higher rates of AIDS-related illnesses, perhaps indicating a more chronically ill VA population.

### CONCLUSIONS

- Substance abuse, in particular alcohol abuse/dependence, is the most common comorbidity among those with HIV infection, and exceptionally common in the younger population.
- Other comorbid conditions are also common.
- Now that treated HIV infection enjoys an extended life expectancy, the management of comorbidity is of increasing importance.