

Growing Old Behind Bars: The Health Profile and Healthcare Needs of Older Men

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The population of older adults in the United States grew by more than half from 1990 to 2009. During that time the overall prison population doubled, yet the population of older adults in prison more than tripled (Williams et al 2012). Twenty-eight states now hold more than 1,000 older prisoners, compared with just two states in 1990 (ACA 2010). Given that older adults have more medical and healthcare service needs than younger adults, research is needed to identify the prevalence of co-occurring mental and physical health conditions in older prisoners (Williams et al. 2012).

Although knowledge on the health of older prisoners is limited, research has documented that older adults in prison are not a healthy group. They are significantly more likely to have one or more chronic condition (Loeb and AbuDagga 2006) or disability (Williams et al. 2006) than their non-incarcerated counterparts and consistently report health declines since incarceration (Loeb and AbuDagga 2006). Consequently, older prisoners are the largest consumer of healthcare within prisons making them the most expensive subpopulation to incarcerate (Aday 2003; Mitka 2004). Reports from states with large prison populations show that the per capita healthcare costs for older prisoners are 3.5 times what they are for younger prisoners (State of Florida 2007; Williams 2006) and this financial healthcare burden is likely extended to communities. Particularly effected are those communities that are challenged with reintegrating a large number of former inmates (Clear 2007).

This study examines the multimorbidity of chronic conditions including diseases and impairments among elderly (age 50+; Loeb and AbuDagga 2006) male inmates using the BJS Survey of Inmates in State Correctional Facilities (n=1,160). We identify social risk factors associated with each health profile. Identification of these health profiles will aid in providing appropriate care models for the elderly population in prisons. A descriptive analysis identifies the comorbid and non-comorbid prevalence rate for each of 13 chronic conditions as well as the average number of chronic conditions associated with the index chronic condition (Figure 1). A Latent Class Analysis (Table 1) of the chronic conditions resulted in a 3 class solution: 1) healthy aging, 2) unhealthy aging, and 3) high risk aging. Chi-square and one-way ANOVA (Table 2) and multivariate logistic regression (Table 3) identifies the social risk factors associated with each health class. Analyses include sampling weights and robust standard errors.

Findings demonstrate the need for a multimorbid care model for this vulnerable aging population. This model advocates for shifting care from a focus on single diseases to a model of care that emphasizes prioritizing the chronic medical conditions that most affect health status and quality of life (Salive 2013). Correctional healthcare systems should incorporate care coordination, education, and shared decision making for every potential intervention. An emphasis should also be placed on transitioning care, including medication adherence, upon release to the community. This is a particularly timely issue since the Affordable Care Act Medicaid expansion now provides healthcare coverage to former prisoners who were previously denied Medicaid (Regenstein and Rosenbaum 2014). The findings also demonstrate that comorbidity of chronic conditions with poor mental health, drug dependence and other disorders, and injecting drug use should be considered in comprehensive healthcare plans.

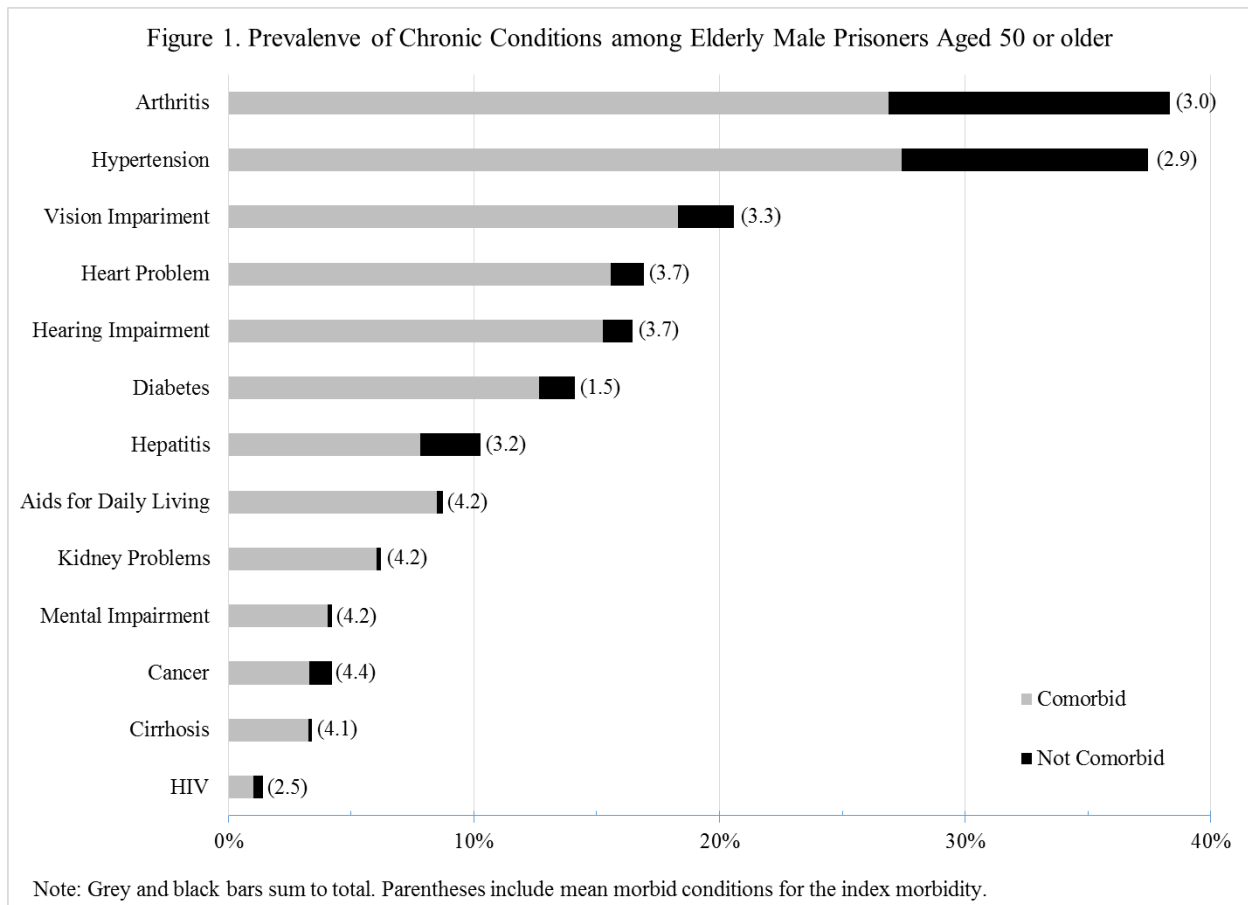


Table 1. Prevalence (%) of Chronic Conditions within Health Classes from Latent Class Analysis among Elderly Male Prisoners (n=1,160)

	Healthy	Unhealthy	High Risk
N	644	454	63
Percent	55.5	39.1	5.4
Arthritis	19.6	62.3	58.8
Hypertension	22.8	58.1	44.0
Vision Impairment	10.1	32.5	40.2
Heart Problems	2.9	35.5	20.6
Hearing Impairment	4.7	29.8	40.3
Diabetes	3.6	28.0	20.6
Hepatitis	8.0	4.8	73.4
Aids for Daily Living	0.2	18.5	23.6
Kidney Problems	0.9	10.7	27.9
Mental Impairment	1.3	6.2	19.3
Cancer	2.4	5.9	8.4
Cirrhosis	0.3	0.0	59.6
HIV	2.0	0.7	2.7

Table 2. Prevalence Rates of Background and Risk Factors by Health Class among Elderly Male Prisoners (n=1,160)

	Total	Healthy	Unhealthy	High Risk	p
Age (mean)	56.2	55.3	57.5	55.7	***
White	47.7	45.3	51.0	47.9	
Black	32.6	35.5	29.5	23.2	*
Hispanic	13.4	14.2	12.2	13.2	
Other Race	6.4	5.0	7.3	15.7	**
Never Married	17.3	19.5	14.4	16.4	
Separated/Divorced/Widowed	59.9	58.4	61.6	62.6	
Married	22.9	22.2	24.0	21.0	
High School Diploma	50.0	52.6	47.0	46.1	
Foreign Born	7.7	8.5	6.8	5.7	
Veteran	35.2	34.4	36.6	30.7	
Total Incarceration Episodes (mean)	1.6	1.6	1.4	2.9	***
Years Served (mean)	9.2	9.7	8.7	8.4	+
Serving a Life or Death Sentence	3.6	3.2	4.0	6.0	
Substance Use Dependence	29.7	28.4	28.7	54.8	***
Injecting Drug Use	22.7	23.5	18.1	54.0	***
Depression	14.8	10.0	19.5	31.5	***
Post Traumatic Stress Disorder	6.5	4.7	7.6	19.9	***
Internally Injured	13.8	13.0	14.5	18.9	
Accidentally Injured	20.3	16.8	25.2	19.3	**

Table 3: Odds Ratios (OR) and 95% Confidence Intervals (CI) from Logistic Regression Models Comparing Health Classes among Elderly Male Prisoners

	Model 1: Unhealthy to Healthy (n = 1,035)		Model 2: High Risk to Healthy (n=644)		Model 3: High Risk to Unhealthy (n=487)	
	OR	CI	OR	CI	OR	CI
Age	1.07	1.04, 1.09	1.05	0.98, 1.13	0.98	0.92, 1.04
Race (White referent)						
Black	0.96	0.69, 1.35	0.79	0.32, 1.91	0.62	0.25, 1.55
Hispanic	0.85	0.52, 1.40	0.87	0.31, 2.43	0.98	0.36, 2.72
Other Race	1.24	0.74, 2.08	2.89	1.23, 6.77	2.21	0.81, 6.05
Marital Status (Never Married referent)						
Separated/Divorced/Widowed	1.26	0.85, 1.87	1.31	0.50, 3.41	0.92	0.32, 2.67
Married	1.37	0.85, 2.20	1.06	0.32, 3.54	0.68	0.19, 2.40
High School Diploma	0.70	0.53, 0.93	0.60	0.33, 1.09	0.90	0.48, 1.71
Foreign Born	0.74	0.42, 1.30	1.08	0.35, 4.68	1.57	0.36, 6.88
Veteran	0.91	0.66, 1.26	0.61	0.26, 1.46	0.72	0.29, 1.81
Total Incarceration Episodes	0.98	0.93, 1.03	1.05	0.97, 1.12	1.07	0.95, 1.19
Years Served	0.98	0.96, 1.00	0.98	0.94, 1.02	1.01	0.96, 1.05
Serving a Life or Death Sentence	1.25	0.61, 2.58	1.38	0.37, 5.16	0.97	0.26, 3.69
Substance Use Dependence	1.26	0.90, 1.77	2.10	1.15, 3.81	1.24	0.62, 2.48
Injecting Drug Use	2.31	1.54, 3.45	2.22	0.94, 5.51	0.78	0.33, 1.89
Depression	0.74	0.51, 1.07	2.87	1.45, 5.69	4.45	1.80, 10.9
Post Traumatic Stress Disorder	1.24	0.65, 2.39	3.32	1.22, 9.01	2.62	0.90, 7.66
Internally Injured	1.24	0.83, 1.86	1.77	0.78, 4.03	1.32	0.55, 3.12
Accidentally Injured	1.81	1.29, 2.53	1.17	0.52, 2.65	0.44	0.21, 0.92