

**RESEARCH ARTICLE**

# Gender Differences and the Effect of Copayments on the Utilization of Health Care in Prison

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## Abstract

This study examines differences in episodic health care utilization related to copayment fees in prison. Copayments in correctional institutions may affect men and women differently, as there are gender-specific health needs, differences in the frequencies men and women require medical services, and gendered differences in the financial resources at people's disposal inside the prison environment. Survey data and interviews from 140 males and females incarcerated across two prisons revealed copayments were a significant barrier for those seeking medical attention and reduced utilization. Results from content analysis and zero-inflated Poisson regression models demonstrated the copayments were a greater barrier to treatment for women compared to men, even when considering one's financial resources. Race and self-reported physical health were also significantly associated with avoiding care due to copayments.

**Keywords:** copayment, health care, fees-for-service, gender, prison

## Introduction

Over two million women and men are housed in state and federal prisons (Carson, 2018). This sizable population has coincided with extensive correctional costs and spending (Mai & Subramanian, 2017). Myriad factors contributed to correctional spending, including health care expenditures. Some estimates suggest that 10% to 30% of all state corrections costs are related to health care (Kinsella, 2004; Schaenman *et al.*, 2013). Simply stated, "health care costs are high in both prisons and jails" (Schaenman *et al.*, 2013, p. 3).

Mandated to provide adequate health care (Rold, 1996), federal and state correctional systems faced with sizable prison populations and declining revenues during the early 1990s introduced cost reduction strategies including the requirement of copayments for medical visits (Gipson & Pierce, 1996; Rold, 1996; Schaenman *et al.*, 2013; Weiland, 1996). Currently, most state and all U.S. federal prisons require non-indigent incarcerated individuals to pay \$2 to \$8 for self-initiated medical visits (Awofeso, 2005; Sawyer, 2017). The fees are intended

to generate revenue and reduce unnecessary requests to see medical professionals (Rold, 1996; Schaenman *et al.*, 2013; Weiland, 1996). However, mandating copayments to receive medical services has been found to reduce self-initiated medical care visits in both nonincarcerated (Brook *et al.*, 1984; Kiil & Houlberg, 2014) and incarcerated populations (for reviews see Glick *et al.*, 2017; Potter, 2010; Weiland, 1996). A consequence of copayments for medical care is how copayments can affect females and males differently.

Women have distinct health needs and may need to use medical services more than men (Owens, 2008). With this in mind, the goal of the current research is to provide a better understanding of the potentially complex relationship between utilization of correctional health care and mandatory copayments. Using data from 140 incarcerated individuals, the study examined whether there are gender-based differences in seeking medical care while incarcerated, as well as the potential role of one's financial income and assets in prison with regard to paying copayments for health care visits.

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### Background: Gender and Medical Care Utilization

It has been consistently found that women require more health care services compared to men (Fearn & Parker, 2005; Goldkuhle, 1999; Nowotny, 2016; Owens, 2008). These gender disparities extend to preventive care utilization, with men significantly less likely to be vaccinated against the influenza virus or to have their blood pressure and cholesterol levels checked (Vaidya *et al.*, 2012). A multitude of factors helps explain these gender differences in utilization. Biological factors related to reproductive functions or varying levels of health literacy might be related to differences in the use of health care and health-seeking behavior among women and men (Regitz-Zagrosek, 2012). Considerable research has focused on the role of the culturally dominant construction of traditional masculine behavior (Galdas *et al.*, 2005; O'Brien *et al.*, 2005). Being concerned with one's health aligns more with a feminine construction of health behavior; thus, some men might be reluctant to adopt proactive health-seeking behavior (Courtenay, 2000; Noone & Stephens, 2008).

Research in prisons also demonstrates women have a higher rate of health care utilization than men (Ingram-Fogel, 1991; Lindquist & Lindquist, 1999). After being admitted to prison, incarcerated women report higher rates of medical problems compared to men (Maruschak & Beck, 2001). Yet, medical staffing levels in prisons regularly neglect these documented differences (Ammar & Erez, 2000). Despite women's distinctive health concerns that may require additional medical services and their generally higher utilization of medical care in prison than men, they are often assessed the same copayment fee as men.

A limited number of studies have focused on women's health and copayments in prison or jail settings (Fisher & Hatton, 2010; Hatton *et al.*, 2006; Hyde & Brumfield, 2003; Perella & Ammar, 2007). The present study sought to add to the literature on copayments and medical care utilization in correctional settings by simultaneously examining gender-based differences and the financial income and assets one has while incarcerated.

### Method

This investigation was conducted in the summer of 2012 in two public state prisons on the East Coast. The women's prison, classified as a medium/maximum security facility, housed approximately 1,500 females and the men's prison was a maximum security facility and housed approximately 2,500 males. Both facilities subcontracted out medical care to private for-profit companies but also staffed a limited number of medical and correctional health care professionals.

In the state where this study took place, incarcerated individuals were required to pay \$5 for self-initiated health care requests. Colloquially referred to as "sick call," once seen by a medical professional, the patient can be charged \$5 for each related prescription, but this

fee is capped at \$10. Those with chronic conditions (e.g., cirrhosis of the liver, diabetes, cancer) receive semi-regular medical care related to their specific condition at no charge. Incarcerated people who do not have the required funds should not be denied service, but they will still be charged, creating a negative account balance. Future monies earned or received will be applied to this debt. To place the copayment fee in context, with few exceptions, the state caps paid work at 30 hours a week and incarcerated individuals who are able to work (e.g., medically able and without disciplinary custody status) can earn 19¢ to 42¢ an hour. Therefore, the cost of initiating a single medical care appointment can equate to working anywhere from 12 to over 25 hours. This financial incongruity occurs in most states that charge copayments, as fees in prison far exceed hourly wages paid to incarcerated people. If nonincarcerated minimum wage earners were expected to pay a similar proportion of their wages to initiate medical visits, the copayment in many cases would cost hundreds of dollars (Sawyer, 2017).

### Sample

Recruitment flyers that broadly described the research aims were posted in all housing units. Participation was voluntary and participants were not compensated for their time. In both locations, consent statements were provided in written form as well as verbally. The researchers did not ask for or record the names or identification numbers of participants. A structured survey was developed with the help of two formerly incarcerated individuals, one woman and one man. Survey questions asked about demographics, personal assets in prison, spending habits, and whether or not copayments had affected their use of medical visits over the prior 3 months. The survey concluded with an open-ended question that prompted participants to "describe [their] biggest financial stress in prison."

Male participants were interviewed individually by the first author, isolated from staff and other incarcerated individuals, in a prison cell that had been converted into a counselor's office. The female participants were also interviewed individually but in more of a communal or dormitory style open housing area. On average, interviews lasted 35 minutes. In total, 95 women and 45 men agreed to participate ( $n=140$ ). Sample characteristics can be found in Table 1.

### Analytic Strategy

This study used a mixed methods design. Utilizing both quantitative and qualitative approaches may provide clearer understanding of phenomena compared to a monomethod approach (Brent & Kraska, 2010; Creswell *et al.*, 2006).

### Quantitative Data Analyses

Zero-inflated Poisson (ZIP) regression was utilized in the quantitative portion of the analysis for three reasons. First, the variable of interest (how many times have you

**Table 1. Descriptive Statistics of Sample**

	<i>Female (n = 95) % or M (SD)</i>	<i>Male (n = 45) % or M (SD)</i>	<i>Total (N = 140) % or M (SD)</i>
Age	41.7 (12.8)	38.8 (11.0)	40.8 (12.3)
Race			
Non-White	36.8	73.2	52.2
White	63.2	26.8	47.8
Physical health (1 = awful; 10 = excellent)	6.8 (2.3)	7.3 (1.6)	6.94 (2.1)
Current balance in account*	\$78 (203.7)	\$68 (81.7)	\$75.3 (173.3)
Currently have prison job			
Yes	71.6	66.6	69.3
No	28.4	33.4	30.7

\*The median account balances were \$30 for females, \$26 for males, and \$28 overall. Participants were asked how much money they have in their account, and then whether this total was "more than normal, less than normal, or average." The majority of participants indicated the amount reported was average.

not gone to medical in the past 3 months because of the co-pay fee?) is a count variable (Long & Freese, 2006; Osgood, 2000). Second, this variable was not normally distributed and contained a high prevalence of zeros. Third, multiple processes could lead one to report a zero for this outcome. For example, an individual might not have been sick in the prior 3 month period and thereby not need to seek medical services whether or not they had the necessary funds. Another person might have been sick and decided they would pay the copayment and see a medical professional. The zero-inflated model can help separate these two processes but a standard Poisson cannot (Introduction to SAS, 2016). Subsequent Bayesian information criterion (BIC) and Akaike information criterion (AIC) test results confirmed ZIP models as the most appropriate with which to analyze these data.

### Qualitative Data Analyses

Recording devices were not allowed inside either institution. Therefore, all responses to the open-ended questions

were written out by the first and second authors and later transcribed. The responses to these open-ended questions were analyzed manually via conventional content analysis (Hsieh & Shannon, 2005).

### Results

Sixty-four percent of women (61/95) in the sample and 71% of men (32/45) indicated not going to medical at least once in the prior 3 months due to the \$5 copayment fee. Of the women who reported avoiding medical in the prior 3 months responses ranged from 1 time to 10 times. Responses by men who indicated avoiding seeing a medical professional due to the fee ranged from 1 to 6. Overall, respondents reported not going to medical due to the copayment an average of two times over the prior 3 month period.

### ZIP Regression Results

The ZIP regression model predicting the number of times incarcerated individuals avoided seeking medical attention in the prior 3 months was significantly better than the null model ( $p < .01$ ). The full results are presented in Table 2. For ease of interpretation, the exponentiated coefficient, or incident rate ratio (IRR), for each predictor is presented. An IRR above 1.0 signifies an increased likelihood in the count of the dependent variable for each unit change in the predictor, while IRR values below 1.0 indicate that the likelihood of count of the dependent variable will decrease for each unit increase for that predictor.

As expected, incarcerated women were more likely than men to report more incidences of avoiding medical care due to the copayment (IRR = 1.50,  $p < .05$ ), indicating that females experience a 50% increased likelihood of avoiding medical care. Other statistically significant results include the effects of being nonwhite (IRR = 1.36,  $p < .05$ ) to increase the likelihood of increased counts of avoiding medical care, while increased self-rated physical health (IRR = 0.83,  $p < .001$ ) is related to the likelihood of decreased counts of avoiding medical care.

**Table 2. ZIP Regression Analyses Predicting the Number of Times Incarcerated Individuals Avoided Seeking Medical Attention in the Prior 3 Months Due to Copayment Fee**

	<i>Count Model</i>		<i>Zero-Inflated Model</i>	
	<i>IRR</i>	<i>95% CI</i>	<i>IRR</i>	<i>95% CI</i>
Gender (male = 0; female = 1)	1.50*	[1.06, 2.12]	1.71	[-1.99, 5.42]
Age	1.00	[0.99, 1.01]	0.04	[-0.01, 0.09]
Race (White = 0; non-White = 1)	1.36*	[1.02, 1.80]	-0.35	[-1.60, 0.90]
Physical health (1 = awful; 10 = excellent)	0.83***	[0.76, 0.90]	0.16	[-0.16, 0.48]
Current balance in account	1.00	[1.00, 1.00]	0.00	[0.00, 0.00]
Currently have prison job (no = 0; yes = 1)	0.93	[0.67, 1.30]	-1.54*	[-3.01, -0.08]
Log likelihood	-229.52			
X <sup>2</sup>	31.56***			

IRR = incidence rate ratio; CI = confidence interval. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

In terms of predicting the excess zeros, only the predictor representing whether one currently had a prison job was statistically significant.

### Content Analysis Results

The results of the content analysis highlighted frustration for incarcerated women and men regarding access to and the quality of the available medical services. The \$5 copayment was viewed as a hindrance to many seeking care and numerous participants were dissatisfied with having to pay for what was often perceived as mediocre or poor medical care. Women, however, indicated at a higher rate than men that the copayment fee to see a medical professional was their primary financial stressor and concern.

Overwhelmingly, women and men reported the lack of basic needs including toiletries, colloquially referred to as “hygiene,” “cosmetics,” or “personals,” as the source of their biggest financial stressor. Many female interviewees remarked they are not provided with a reasonable amount of toiletries to last a month. One female participant who did not receive outside financial support noted she is “always running out of things like soap, lotion, shampoo. It gets on my nerves, hate asking someone for things with a passion.” Likewise, one male participant, who had a job that he worked 30 hours a week and received financial support from those on the outside, summed up the sentiments of many others when he stated it was stressful “just trying to maintain things you need, getting the daily needs like toothpaste and soap.”

While women and men both considered the lack of basics their primary stressor, stress related to having to pay fees for medical care was the second most common response for women, whereas a small number of men mentioned money for post-conviction relief.<sup>1</sup> Two female respondents with prison jobs succinctly stated how the copayment was a barrier to health care when one said, “If I get sick, I avoid going to medical because of the copays,” and another stated, “I need to be seen but will not go because I can’t afford it.”

Multiple women noted that the difficulty to afford copayments for self-initiated medical care was compounded by their inability to acquire many basic items. For example, a recently incarcerated woman who was almost 60 years old stated her biggest financial stress was “medical, I cannot afford to go because I need my cosmetics and food.” The challenge of fees for service and lack of basic needs was shared by others. A 40-year-old female who does not have a prison job and relies exclusively on financial support from those on the outside

described having difficulty each month securing hygiene items and declared she refuses “to go to medical because there is not enough money.”

Although it might seem like an insignificant amount of money on the outside, the copayment is a significant disincentive for many incarcerated individuals to request medical care. One female participant who had been incarcerated for over 15 years placed the fee in context stating, “If you’re sick or need dental it costs \$5 plus medication cost.” For some this can account for over half their monthly pay. Another woman, who had been incarcerated for three years and did not receive financial support from those on the outside, summed it up, “\$5 is like \$500 to us.” The cost, coupled with the perceived poor quality of care, disturbed a considerable number of women. A 43-year-old woman who worked as a janitor explained that when you go to medical “they take your money and don’t even do vitals, you don’t really get examined.” Another participant, who indicated she was generally in very good physical health and had taken some college courses, described some of the health care professionals as “disrespectful” and added that “One doctor actually said to me he doesn’t care if I died or not.”

The difficulty for most was affording many basic needs, copayment fees for health care, or money related to post-conviction relief, and this was likely exacerbated by ever-increasing costs for necessary items coupled with low wages. The incongruence between pay and necessary expenses may lead to difficulty managing to pay for medical copayments. A 28-year-old woman who had been incarcerated for four years noted, “Commissary prices keep going up but pay isn’t going up.” Likewise, a male who indicated he was in excellent physical health commented, “Prices are high related to pay, you get torn between cable and commissary and sick call.”

Both women and men indicated financial stress and identified common sources of that stress. The combination of minimal pay, uptick in cost of goods, and services such as medical care likely contributed to many viewing copayments as cost prohibitive, and this appears more pronounced for women.

### Discussion

Medical care in correctional settings was developed, and often continues to be modeled after, the apparent needs of incarcerated males (Ingram-Fogel, 1991; Perella & Ammar, 2007). Uniform copayment policies ignore the health care needs of women by not taking into consideration their different gender-specific health needs, thus requiring more necessary self-initiated health requests. The copayment may unduly penalize women in terms of paying the copayment more often and/or enduring health problems, as they do not seek necessary care due to the fee.

<sup>1</sup>Approximately 40% of males interviewed had life sentences compared to only 20% of the women. Further, just over half of the females had only two years or less on minimum sentence. Thus, it might be expected that fewer females relative to males are focused on postconviction relief.

The findings may highlight how inequalities can be reproduced for those incarcerated (Novisky, 2018). Health care in correctional settings appears to be subject to similar disparities in health care administration that affect the health care system in general (Binswanger *et al.*, 2012). Just as research has demonstrated racial disparities in health care utilization in nonincarcerated populations (Bonito *et al.*, 2005), the current work found nonwhites avoiding medical care due to the copayment to a greater degree than whites. Racial and ethnic minorities generally have worse health in and out of prison (Binswanger *et al.*, 2012). This might be due in part to lower levels of health care access. Further, a historical lack of trust in medical research and the health care system (Boulware *et al.*, 2003), particularly within prison walls (Washington, 2006) likely deters some from seeking medical attention.

Interestingly, the ZIP model demonstrated that the amount of money one had in their prison bank account was not significantly related to whether one viewed the copayment as cost prohibitive. However, the qualitative results revealed a considerable number of individuals struggling to afford many basic needs as well as the copayment. First, men and women had a median balance in their account of approximately \$30. Five dollars (often more including prescriptions) is still a considerable proportion of one's savings and, for some, requires almost one week's salary.

Next, although some might feel they could afford the copayment, if they perceived the quality of service as poor, as many participants expressed, this could reduce both willingness to pay and overall usage. Unlike nonincarcerated individuals, those who are incarcerated do not have options to seek medical treatment elsewhere when they feel the quality of care is subpar (Robbins, 1999). Incarcerated individuals have little recourse beyond avoiding care if they feel there are cumbersome bureaucratic hurdles to receive treatment, if they are given generic drugs, or if they perceive serious problems related to the qualifications of the health care professionals and health care providers (Delgado & Humm-Delgado, 2009). Thus, an incarcerated person's inability or unwillingness to pay for self-initiated health care should be considered within the context of their economic assets, competing budgetary priorities including basic hygiene items and keeping in touch with loved ones, and the perceived value of the health care services.

### Limitations and Policy

Given the research design and reliance on two convenience samples, caution should be used in generalizing results. Likewise, our findings might not be generalizable to prisons that do not contract out prison medical care or prisons that are served by a different for-profit company.

Additionally, since men housed in one institution were compared with women housed in another institution, differences observed regarding how, and to what degree, individuals view copayments as a disincentive to seek care might, in part, be attributed to institutional effects.

Considering that over the last four decades women's prison populations have increased significantly (Sawyer, 2018), future work needs to determine the health impacts of reduced health care utilization related to copayments in correctional settings, particularly in relation to women's experiences. In general, it appears prisons and jails should adapt to the gender-specific medical needs of women and the development and delivery of gender-responsive services (Covington & Bloom, 2007). Additionally, if fees for services are to be continued, research needs to determine if a fee structure exists that can reduce unnecessary use of medical services but not act as a disincentive to those who seek necessary care. Considering incarcerated persons earn on average less than \$1 an hour, considerably lowering copayments fees could still dissuade unnecessary health care usage but might be less burdensome to those seeking necessary care.

### Conclusion

The majority of individuals stated they had not sought medical attention for treatment in the prior 3 months due to the \$5 copayment. As expected, women's experiences in prison were both qualitatively and quantitatively different from their male counterparts. The copayment fee was a greater barrier to treatment for women, nonwhites, and those with lower self-rated physical health. Women in particular expressed financial stress related to paying for medical care.

Copayments as currently constructed might be increasing health care spending in the long run. Reducing utilization of health care might intensify the spread of illness and disease, prompting worse health care outcomes among those incarcerated and increased government health care spending for incarcerated people. A systematic approach to health care in prisons that focuses on health promotion and disease prevention instead of on reducing the volume of medical visits could ultimately save money and benefit the individual, the larger correctional population, and the communities to which many incarcerated persons will one day return (Freudenberg, 2001; Ramaswamy & Freudenberg, 2007).

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