

# Health care disparities for incarcerated adults after a suicide attempt

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## Abstract

**Objective:** Incarcerated adults have high rates of fatal and nonfatal suicidal behaviors. Suicide prevention recommendations stress the need for the provision of health care for incarcerated adults after suicide attempts, yet prison policies and practices often focus instead on punitive responses to suicidal behaviors. Existing research is limited regarding factors that predict the provision of health care to incarcerated adults post-suicide attempt. The current study examined individual, incident, and institutional factors as predictors of health care to incarcerated adults post-suicide attempt.

**Method:** We used data from critical incidents reports for suicide attempts ( $N = 495$ ) to conduct mixed-effects logistical regression models.

**Results:** Staff responded to suicide attempts by placing incarcerated adults under direct observation (with no care) or in segregation at odds two and three times higher than of providing health care, particularly in prisons for men. Race was a significant factor; incidents involving Black men were less likely than incidents involving white men to include staff requesting health care, and incidents involving Black women were less likely than incidents involving white women to include requesting and providing health care.

**Conclusions:** This study's findings highlight factors predicting health care responses to suicide attempts and the need to address and prevent health care disparities in prisons.

## KEYWORDS

health care, prison, race, racial disparities, suicide, suicide attempts

## INTRODUCTION

Suicide is a leading cause of death in United States' (U.S.) prisons (Carson & Cowhig, 2020). The national suicide rate for incarcerated adults is estimated as three times the rate of suicide for adults in the community (Hayes, 2010). The rate of suicides within prisons is not fully reflective of suicidal behavior, which is defined by the Centers for Disease Control and Prevention as acts of self-directed violence that are fatal and nonfatal suicide attempts (Crosby et al., 2011). Incarcerated adults also have a high rate of engaging

in suicidal behaviors within prisons (Fazel et al., 2011); for example, in a study reviewing prison-based medical records, 3.4 percent of 10,000 incarcerated adults had a diagnosis code of suicide attempts while incarcerated (Gates et al., 2017). Suicide attempts are a major risk factor for death by suicide during incarceration (Fazel et al., 2008) as over 40 percent of incarcerated adults who die by suicide have histories of prior attempts while incarcerated (Daniel & Fleming, 2006; Hawton et al., 2014).

International and U.S. standards recommend providing incarcerated adults who attempt suicide with health

care to treat injuries and prevent future deaths by suicide (Konrad et al., 2007; Stone et al., 2017). The quality of health care in correctional settings varies within facilities and commonly correctional institutions rely on health care in the community for treatment of serious health concerns (Gates et al., 2014). Despite recommendations to provide health care post-suicide attempt, correctional policies often specify punitive responses, such as placing incarcerated adults in segregated housing, after a suicide attempt (DeHart et al., 2009; Doty et al., 2012; Konrad et al., 2007). Punitive responses in practice can be detrimental as a study of completed suicides in California prisons found that over 60 percent of suicides were preventable if correctional staff had responded to prior suicidal behaviors with treatment rather than punitive responses (e.g., placement in segregated housing; Patterson & Hughes, 2008). Research is needed that examines the care that incarcerated adults receive post-suicide attempts and identifies factors predicting the provision of health care.

Risk factors for suicidal behaviors may influence the provision of health care post-attempt, as these factors guide recommendations for correctional responses (Barker et al., 2014; Fazel et al., 2011). Risk factors for suicidal behaviors are commonly framed within two theories: deprivation theory and importation theory. Deprivation theory posits that restrictive institutional conditions, such as high security-levels, the use of restricted housing, and length of sentence, contribute to suicidal behaviors (Dye, 2010; Huey & McNulty, 2005; Sharkey, 2010). Completed suicides commonly occur within single-cell placements (e.g., segregated housing and mental health care units; Daniel, 2006; Daniel & Fleming, 2006; Fazel et al., 2008; Patterson & Hughes, 2008). Incarcerated adults are most likely to attempt suicide during the first year in prison and a long-term sentence also increases the risk for suicidal behaviors (Daniel, 2006; Fazel et al., 2008).

Prison staff responses to suicidal behaviors may differ in prisons designated for men and prisons designated for women. Prisons operate with forms of gendered social control based on gendered perceptions of incarcerated adults (Zaitzow & Thomas, 2001). Correctional staff may perceive and respond to men's suicidal behaviors as high-risk concerns requiring health care and may not respond as urgently to women's suicidal behaviors, as these behaviors are perceived as less threatening and severe than men's behaviors (DeHart et al., 2009; Tartaro, 2019). Based on gendered differences in prison dynamics and staff's treatment of incarcerated adults, research needs to consider prisons for men only, for women only, or mixed-gender prisons to understand prison-based responses to suicidal behaviors (Dye, 2010, 2011).

Importation theory frames suicidal behaviors as having individual-level risk factors that adults have "imported" into the prison environment (Dye, 2010). Researchers have

identified "at-risk populations" with mental health concerns, trauma histories, and substance abuse (Fazel et al., 2008). Individual-level factors such as age and race have been linked to suicidal behaviors (Daniel & Fleming, 2006). Younger age (Daniel & Fleming, 2006; Rivlin et al., 2012; Way et al., 2005) and older age (Stoliker, 2018) have both been found to be significant risk factors for suicidal behaviors. White incarcerated adults have higher rates of suicidal behaviors than incarcerated adults with other racial identities, and they are commonly framed as a population at risk of suicide in prison (e.g. Fazel et al., 2008; Stoliker, 2018; Way et al., 2005).

The lethality of the method used may also influence health care decisions. Methods of suicidal behaviors in prisons include hanging, swallowing razors and harmful substances, head banging, and cutting and drug overdose (Daniel & Fleming, 2006; Hawton et al., 2014). The method of hanging is often more lethal in comparison with cutting and overdose (Daniel & Fleming, 2005). History of prior attempts may also be influential as incarcerated adults who attempt suicide with moderate or severe lethal means are more likely to complete suicides in the future (Hawton et al., 2014). However, existing research has not yet investigated which method-related factors predict the provision of health care post-suicide attempt in prisons.

## Current study

Research is lacking that investigates the provision of health care to incarcerated adults post-suicide attempt. Researchers stress the need to integrate factors from both deprivation and importation theories in relation to suicidal behaviors in prisons (Dye, 2010; Stoliker, 2018), and this type of synthesis has not yet been used to examine correctional responses to suicidal behaviors. Therefore, the current study addressed this critical gap in the literature by investigating individual, incident, and institutional predictors of the provision of health care post-suicide attempt for incarcerated adults.

## METHODS

This study was based on administrative data derived from critical incident reports for suicide attempts ( $N = 495$ ) that occurred over five years (2006–2011) within five prisons (three prisons for men, two prisons for women) in one Midwestern state. All incidents were identified and labeled as "suicide attempts" within the institution by the prison staff. Of these incidents, 345 incidents occurred in prisons for men and 150 incidents occurred in prisons for women. University institutional review board approval was given for analysis of the administrative data. Sample demographic information is available in Table 1.

**TABLE 1** Descriptive statistics of suicide attempts (*N* = 495)

	Incidents in prisons for men (345 incidents) <i>n</i> (%)	Incidents in prisons for women (150 incidents) <i>n</i> (%)
<b>Individual factors</b>		
Age		
17–29 years old	204 (59.13%)	61 (40.67%)
30–62 years old	141 (40.87%)	89 (59.33%)
Race		
White	177 (51.75%)	87 (59.59%)
Black	165 (48.25%)	59 (40.41%)
Max sentence (Years)		
1–15 years	46 (13.33%)	20 (13.33%)
6–10 years	53 (15.36%)	16 (10.67%)
11–20 years	146 (42.32%)	61 (40.67%)
21+ years	100 (28.99%)	53 (35.33%)
Years served		
0–5 years	211 (61.34%)	89 (59.33%)
6+ years	133 (38.66%)	61 (40.67%)
Years to release		
Overdue to leave	15 (4.37%)	22 (14.67%)
0–5 years	85 (24.78%)	24 (16.00%)
6–10 years	51 (14.87%)	27 (18.00%)
11–20 years	111 (32.36%)	36 (24.00%)
21 or more years	81 (23.62%)	41 (27.33%)
<b>Incident factors</b>		
Method		
Cutting	131 (37.97%)	33 (22.00%)
Hanging	109 (31.59%)	52 (34.67%)
Swallowing	84 (24.35%)	52 (34.67%)
Other	21 (6.09%)	13 (8.67%)
History of attempts		
Single incident	144 (41.74%)	63 (42.00%)
History of several incidents	201 (58.26%)	87 (58.00%)
Institutional		
General housing unit	90 (26.09%)	71 (47.33%)
Mental health care unit	81 (23.48%)	36 (24.00%)
Segregation	174 (50.43%)	43 (28.67%)
Staff responses		
Request community health care	168 (48.70%)	75 (50.00%)
Provide community health care	72 (20.87%)	34 (22.67%)
Direct observation (No Care)	217 (62.90%)	86 (57.33%)

## Measures

### Individual factors

For individual factors, each critical incident report included the name, identification number, and date of birth of the

incarcerated adult involved in the incident. We looked up additional individual data for each critical incident report via the state's public database of all incarcerated adults and recorded each person's race (as identified per the department of corrections), the number of years served at the time of the incident, length of sentence, and number of years needed to

serve for the earliest release. Individual factors included were age (0 = 17 to 29 years old; 1 = 30 to 62 years old), racial identity (0 = white; 1 = Black/African American), maximum length of sentence, number of years incarcerated (0 = 5 years or less; 1 = more than 5 years), and number of years to release (0 = overdue for release; 1 = within 5 years; 2 = 6 to 10 years; 3 = 11 to 20 years; 4 = 21 or more years).

## Incident factors

Within each critical incident report, prison staff provided a detailed summary of the event in a section entitled “Incident Description.” Staff included information about the incident, including location of incident, method of attempt, and prison staff actions. Research staff reviewed each incident description to identify the method involved for each incident and added this information to the database; incidents were reviewed by multiple research staff in order to ensure accuracy of recording. The range of methods included hanging or suffocation, swallowing a harmful item (e.g., a razor) or an excessive amount of a substance (e.g., taking several pills), cutting, and other methods (e.g., head banging). Dichotomous variables were created for each method, with a coding of “1” indicating the method was used and “0” indicating the method not used in the incident. Cutting was the reference group for analyses. Within the five years of administrative data, if a person had a prior attempt, the incident was coded for being an incident in which the incarcerated adult had a history of prior attempts. A dichotomous variable of a history of multiple attempts in the five-year period was also created (0 = single attempt; 1 = attempted multiple times).

## Institutional factors

All prisons were multi-security unit facilities and had housing units for segregated housing, mental health treatment, and the general population. Within the incident report, prison staff had to identify where the incident occurred by naming the exact housing unit (e.g., “acute care unit,” “segregation,” general population housing unit). Dichotomous variables were created for each type of location with a coding of “1” indicating the specific location (i.e., general housing unit, segregated housing, mental health care treatment unit) was where the incident occurred and “0” indicating it did not occur on this unit. General population housing unit was the reference group.

## Staff responses

Within each critical incident report, staff had to indicate what their immediate responses were in a section entitled “Action

Taken by Staff at Time of Incident.” This section allowed for staff to check all types of actions that they took, including “contraband confiscated,” “firearm drawn,” “misconduct report written,” and “physical restraint used.” For the purposes of this study’s research questions, we examined staff responses of requesting “medical assistance-civilian hospital” in order to examine factors predicting staff requesting this health care. Dichotomous variables were created for each type (1 = occurred; 0 = did not occur).

Each critical incident report also had a section entitled “Final Disposition” in which staff had to select what final actions they took and the resulting location of the incarcerated adult. These options included “offender placed in segregation” and “offender placed in own cell/room/dorm.” For our specific research questions, we examined factors that predicted the final actions of “offender placed in direct observation” and “offender placed in civilian hospital.” Dichotomous variables were created for each type (1 = occurred; 0 = did not occur).

## Analysis

We explored the descriptive statistics of suicide attempts within prisons for men and prisons for women, as reported in Table 1. We examined unconditional bivariate relationships between each of the explanatory variables (i.e., individual, incident, and institutional factors) and the staff responses. We tested models using multilevel effects and mixed effects and examined the intraclass correlation (ICC) across models. Based on a higher ICC for mixed effects versus multilevel models (i.e., 0.52 vs. 0.35), we used mixed effects logistic regression to incorporate the exploratory variables describing each incident (e.g., method, location) and variables describing each adult (e.g., age, race) and we retrieved robust standard errors for each model. Analyses were conducted with Stata software (StataCorp, 2019). Results are presented in odds ratios (OR) with 95% confidence intervals (CI) for bivariate models, and adjusted odds ratios (aOR) with 95% CIs for multivariate models.

## RESULTS

Staff responses to suicide attempts are provided in Table 1. In prisons for men, over half (62.9%) of incidents resulted in direct observation, versus only 20.87% of incidents resulting in the provision of health care. Similarly, in prisons for women, 57.33% of incidents resulted in direct observation, while only 22.67% of incidents resulted in the provision of health care. Almost half (40.87%) of incidents in men’s prisons and 34.67% of incidents in women’s prisons resulted in placement in segregation.

**TABLE 2** Bivariate relationships between individual, incident, and institutional factors and staff responses in prisons for men ( $n = 345$  incidents;  $n = 207$  men)

Factors	Request Community-Based Care			Community-Based Care Provided		
	Coefficient	<i>p</i>	Odds Ratio (CI)	Coefficient	<i>p</i>	Odds Ratio (CI)
<b>Individual</b>						
Age	0.69	<b>0.002</b>	2.00 (1.30, 3.10)	0.54	<b>0.04</b>	1.72 (1.02, 2.90)
Race (1 = Black)	-0.64	<b>0.003</b>	0.53 (0.34, 0.81)	-0.19	0.47	0.82 (0.49, 1.39)
Max Sentence	0.16	0.16	1.17 (0.94, 1.45)	0.16	0.26	1.17 (0.89, 1.54)
Years Served	0.07	0.75	1.07 (0.70, 1.66)	-0.11	0.69	0.90 (0.52, 1.54)
Years to Release	0.11	0.21	1.12 (0.94, 1.33)	0.10	0.36	1.11 (0.89, 1.38)
<b>Incident<sup>a</sup></b>						
Hanging	-0.86	<b>0.002</b>	0.42 (0.24, 0.73)	-1.24	<b>0.01</b>	0.29(0.11, 0.74)
Swallowing	2.32	<b>&lt;0.001</b>	10.17 (4.70, 22.02)	1.55	<b>&lt;0.001</b>	4.72 (2.52, 8.84)
Other	-0.72	0.16	0.49 (0.18, 1.34)	-0.19	0.77	0.83 (0.22, 3.05)
Several Incidents	-0.81	<b>&lt;0.001</b>	0.44 (0.34, 0.58)	-0.34	<b>0.04</b>	0.71 (0.51, 0.98)
<b>Institutional<sup>b</sup></b>						
MH Care Unit	-1.35	<b>&lt;0.001</b>	0.26 (0.14, 0.50)	-0.17	0.60	0.84 (0.44, 1.61)
Segregation	-1.02	<b>&lt;0.001</b>	0.23 (0.13, 0.41)	-1.47	<b>&lt;0.001</b>	0.23 (0.12, 0.44)

Note: CI = Confidence Interval at 95%. Statistically significant associations are in bold text.

<sup>a</sup>Reference group for Method is “Cutting”.

<sup>b</sup>Reference for group Location is “General Housing Unit”.

## Request for health care in prisons for men

In bivariate analyses shown in Table 2, multiple factors were significantly associated with staff requesting community-based health care. Age, OR = 2.00, 95% CI [1.30, 3.10], increased the odds for requests, as a method of swallowing a substance/item, OR = 10.17, 95% CI [4.70, 22.02], compared with cutting. In contrast, race, specifically being a Black man, OR = 0.53, 95% CI [0.34, 0.81] decreased the odds. The method of hanging, OR = 0.42, 95% CI [0.24, 0.73] and a history of multiple incidents, OR = 0.44, 95% CI [0.34, 0.58], significantly decreased the odds of a request for health care. Occurrence on a mental health care unit, OR = 0.26, 95% CI [0.14, 0.50], or in segregation, OR = 0.23, 95% CI [0.13, 0.41] decreased the odds of a request for health care, in comparison with incidents occurring on the general housing unit.

In multivariate mixed-effects regression models shown in Table 3, incident factors were significantly associated the request for community-based health care within men's facilities. The swallowing of a substance/item, aOR = 22.39, 95% CI [6.48, 77.36], significantly increased the odds of a health care request. A history of multiple incidents, aOR = 0.30, 95% CI [0.13, 0.71], significantly decreased the odds of a health care request.

## Provision of health care in prisons for men

In bivariate analyses shown in Table 2, age was the only individual factor significantly associated with the provision

of community-based health care, OR = 1.72, 95% CI [1.02, 2.90]. For incident factors, the method of hanging, OR = 0.29, 95% CI [0.11, 0.74], and a history of multiple incidents, OR = 0.71, 95% CI [0.51, 0.98] significantly decreased the odds of the provision of care, and swallowing a substance/item significantly increased the odds of the provision of care, OR = 4.72, 95% CI [2.52, 8.84]. Institutionally, the occurrence on a segregation housing unit, OR = 0.23, 95% CI [0.12, 0.44], significantly decreased the odds of the provision of health care.

In multivariate mixed-effects regression models displayed in Table 3, swallowing a substance/item significantly increased the odds of the provision of health care, aOR = 8.25, 95% CI [2.77, 24.56]. The incident occurring on a segregation housing unit decreased the odds of the provision of health care, aOR = 0.37, 95% CI [0.05, 0.42].

## Request for health care in prisons for women

In bivariate analyses shown in Table 4, age, OR = 0.48, 95% CI [0.25, 0.94], and race, specifically being a Black woman, OR = 0.44, 95% CI [0.22, 0.87], significantly decreased the odds for the request for community-based health care. The maximum length of sentence, OR = 1.50, 95% CI [1.07, 2.10], significantly increased the odds for this type of request. For incident factors, swallowing a substance/item significantly increased the odds of a request for community-based health care, OR = 6.60, 95% CI [2.38, 18.27]. In contrast,

**TABLE 3** Multivariate mixed effects regression models of individual, incident, and institutional factors and staff responses in prisons for men ( $n = 345$  incidents;  $n = 207$  men)

<b>Requested community-based health care<sup>a,b</sup></b>			
	<b>Coefficient</b>	<b><i>p</i> value</b>	<b>Adjusted Odds Ratio (CI)</b>
Age	0.43	0.33	1.54 (0.64, 3.69)
Race (1 = Black)	-0.40	0.37	0.67 (0.28, 1.61)
Hanging	-0.95	0.07	0.39 (0.14, 1.09)
Swallowing	3.11	<b>&lt;0.001</b>	22.39 (6.48, 77.36)
Other Methods	-0.89	0.24	0.41 (0.09, 1.82)
Several Incidents	-1.21	<b>0.006</b>	0.30 (0.13, 0.71)
Mental Health Care Unit	-0.96	0.10	0.38 (0.12, 1.20)
Segregation Housing Unit	-0.69	0.19	0.50 (0.18, 1.40)
<b>Community-based health care provided<sup>a,b</sup></b>			
	<b>Coefficient</b>	<b><i>p</i> value</b>	<b>Odds Ratio (CI)</b>
Age	0.36	0.34	1.44 (0.68, 3.05)
Hanging	-0.82	0.14	0.44 (0.15, 1.32)
Swallowing	2.11	<b>&lt;0.001</b>	8.25 (2.77, 24.56)
Other Methods	0.36	0.64	1.43 (0.32, 6.40)
Several Incidents	-0.16	0.69	0.85 (0.39, 1.87)
Mental Health Care Unit	0.37	0.42	1.44 (0.59, 3.51)
Segregation Housing Unit	-0.99	<b>0.02</b>	0.37 (0.05, 0.42)

Note: CI = Confidence Interval at 95%. Statistically significant associations are in bold text.

<sup>a</sup>Reference group for Method is “Cutting”.

<sup>b</sup>Reference for group Location is “General Population Housing Unit”.

**TABLE 4** Bivariate relationships between individual, incident, and institutional factors and staff responses in prisons for women ( $n = 150$  incidents;  $n = 83$  women)

<b>Factors</b>	<b>Requested community-based care</b>			<b>Provided community-based care</b>		
	<b>Coefficient</b>	<b><i>p</i></b>	<b>Odds ratio (CI)</b>	<b>Coefficient</b>	<b><i>p</i></b>	<b>Odds Ratio (CI)</b>
<b>Individual</b>						
Age	-0.73	<b>0.03</b>	0.48 (0.25, 0.94)	-0.49	0.21	0.61 (0.28, 1.32)
Race	-0.82	<b>0.02</b>	0.44 (0.22, 0.87)	-1.33	<b>0.01</b>	0.27 (0.10, 0.69)
Max Sentence	0.40	<b>0.02</b>	1.50 (1.07, 2.10)	0.37	0.09	1.44 (0.94, 2.21)
Years Served	0.17	0.62	1.18 (0.61, 2.27)	-0.46	0.26	0.63 (0.28, 1.41)
Years to Release	-0.03	0.82	0.97 (0.77, 1.22)	0.07	0.61	1.07 (0.82, 1.41)
<b>Incident<sup>a</sup></b>						
Hanging	-0.72	0.12	0.49 (0.20, 1.21)	1.54	0.06	4.65 (0.97, 22.32)
Swallowing	1.89	<b>&lt;0.001</b>	6.60 (2.38, 18.27)	2.27	<b>0.004</b>	9.69 (2.09, 44.97)
Other	-2.30	<b>0.04</b>	0.10 (0.01, 0.86)	-	-	-
Several Incidents	0.50	0.14	1.64 (0.85, 3.16)	0.36	0.37	1.44 (0.65, 3.18)
<b>Institutional<sup>b</sup></b>						
MH Care Unit	-1.12	<b>0.01</b>	0.33 (0.14, 0.75)	-0.82	0.14	0.44 (0.15, 1.30)
Segregation	-0.57	0.15	0.57 (0.26, 1.22)	-0.19	0.68	0.83 (0.34, 2.00)

Note: CI = Confidence Interval at 95%. Statistically significant associations are in bold text.

<sup>a</sup>Reference group for Method is “Cutting”.

<sup>b</sup>Reference for group Location is “General Population Housing Unit”.

**TABLE 5** Multivariate mixed effects regression models of individual, incident, and institutional factors and staff responses in prisons for women ( $n = 150$  incidents;  $n = 83$  women)

<b>Requested community-based health care<sup>a,b</sup></b>			
	<b>Coefficient</b>	<b><i>p</i> value</b>	<b>Adjusted Odds Ratio (CI)</b>
Age	-0.67	0.07	0.51 (0.25, 1.06)
Race	-0.31	0.46	0.73 (0.32, 1.66)
Maximum Length of Sentence	0.44	0.06	1.56 (0.99, 2.46)
Hanging	-0.61	0.24	0.54 (0.20, 1.50)
Swallowing	1.86	<b>0.001</b>	6.42 (2.23, 18.46)
Other Method	-2.19	0.053	0.11 (0.01, 1.03)
Mental Health Care Unit	-0.49	0.33	0.61 (0.23, 1.64)
Segregation	-0.50	0.30	0.60 (0.09, 2.32)
<b>Community-based health care provided<sup>*</sup></b>			
	<b>Coefficient</b>	<b><i>p</i> value</b>	<b>Odds Ratio (CI)</b>
Race	-1.54	<b>0.006</b>	0.21 (0.07, 0.64)
Hanging	2.02	<b>0.03</b>	7.83 (1.25, 49.10)
Swallowing	2.08	<b>0.005</b>	9.42 (1.98, 44.90)
Other Method	-	-	-

Note: CI = Confidence Interval at 95%. Statistically significant associations are in bold text.

<sup>a</sup>Reference group for Method is “Cutting”.

<sup>b</sup>Reference for group Location is “General Population Housing Unit”.

\*Other Method was omitted by STATA.

the use of an alternative method significantly decreased the odds of a request for care, OR = 0.10, 95% CI [0.01, 0.86], as did the occurrence of the incident on a mental health care unit, OR = 0.33, 95% CI [0.14, 0.75]. In multivariate mixed-effects regression models shown in Table 5, the only factor that remained significant in terms of increasing the odds of a community-based health care request was swallowing a substance/item (aOR = 6.42, 95% CI [2.23, 18.46]).

### Provision of health care in prisons for women

In bivariate analyses displayed in Table 4, race was the only individual factor significantly associated with the provision of health care; an incident involving an incarcerated Black woman decreased the odds of this care, OR = 0.27, 95% CI [0.10, 0.69]. For incident-level factors, swallowing a substance/item significantly increased the odds of the provision of health care, OR = 9.69, 95% CI [2.09, 44.97].

In multivariate mixed-effects regression models shown in Table 5, race, specifically being a Black woman, significantly decreased the odds of the provision of health care, aOR = 0.21, 95% CI [0.07, 0.64]. A method of hanging significantly increased the odds of the provision of health care, aOR = 7.83, 95% CI [1.25, 49.10], as did swallowing a substance/item, aOR = 9.42, 95% CI [1.98, 44.90].

## DISCUSSION

Suicide prevention in prisons should be more than preventing death during suicide watch (Hayes, 2013). However, our results illustrate that incarcerated adults are not consistently receiving health care post-suicide attempt. Examining suicide attempts over a five-year period, this study found that placing incarcerated adults under direct observation (with no care) or in segregation occurred at two and three higher rates than the rates of the provision of health care, particularly in prisons for men. These responses serve security-based priorities for prisons but may exacerbate suicide risk for incarcerated adults and are not in accordance with recommended prevention strategies (Stone et al., 2017). As few studies have captured health care decisions after suicide attempts in prison, this study highlighted factors predicting health care responses (i.e., requests and provision of community-based health care) and the need for identifying, addressing, and preventing racial disparities in health care responses.

In this study, some factors were consistently significant across models, for example, placement in a segregated housing unit, a method of hanging, and a history of multiple attempts, and these factors were associated with lower odds for staff requesting and providing health care post-suicide attempt. However, these factors are considered major risk factors for death by suicide in prisons (Daniel, 2006; Fazel et al.,

2008). Predictors of health care post-suicide attempt within prisons for men and prisons for women also differed in this current study. In prisons for men, an older age increased the likelihood of care, whereas, in prisons for women, an older age decreased the likelihood of health care being requested. Existing studies have found that incarcerated men and women who are younger have a higher likelihood of death by suicide (Way et al., 2005) and that age is not a significant factor differentiating those who attempt suicide from those who die by suicide in prisons (Rivlin et al., 2012).

The gap in health care provision was concerning especially for Black incarcerated adults. Incidents involving Black men were less likely than incidents involving white men to involve staff requesting health care, and incidents involving Black women were less likely than incidents involving white women to include requesting and actually providing health care. One perspective on race and suicide in correctional settings has emphasized that white incarcerated adults are viewed by correctional staff as more susceptible to pain and in need of help than Black incarcerated adults, contributing to dehumanizing treatment, the invalidation of Black incarcerated adults' pain, and punitive responses by staff (Haycock, 1989). Similarly, a study of incarcerated adults in New York jails found that Black adults were more likely to receive segregated housing placements than mental health treatment and received mental health diagnoses later than white adults (Kaba et al., 2015). Given that this current study found that Black incarcerated adults are less likely to be connected to health care by prison staff than white incarcerated adults, future research may examine the role of racial bias and racism within prisons and racialized treatment trajectories for incarcerated adults.

Although this study illuminated critical findings around the provision of health care post-suicide attempt in prisons, this study was not without limitations. First, this study captured only five years of data and was not able to examine incidents prior to and after this five-year time period. Longitudinal research is needed that includes incarcerated adults' experiences during their complete duration of time in prison. Second, this study had a sample comprised of incarcerated adults identified as white or Black by the department of corrections; future research needs to include adults with a greater diversity of racial identities. Qualitative research may explore how suicidal behaviors and staff responses are racialized and examine incarcerated adults' experiences of racism. In addition, gender was limited to binary categories, and future research should include a plethora of identity domains and factors related to corresponding power dynamics. Third, this study did not capture the quality of health care received. Fourth, these data did not have information about additional common risk factors, such as mental health concerns for incarcerated adults and each prison's overcrowding levels.

The current study utilized one of the suggested best practices for suicide prevention in correctional settings:

reviewing critical incident reports. This type of administrative data is key for understanding real-time decisions occurring within prisons; however, it is notoriously difficult to acquire, requiring researchers to use limited, often older data, such as the use of 2003–2004 national correctional data in recent studies of suicidal behaviors (Favril et al., 2020; Stoliker et al., 2020). Future researchers should consider continuing to examine these reports but may also benefit from reviewing multiple forms of administrative and primary data.

This study used critical incident reports to examine how prison staff decisions around the provision of health care. The findings indicate a health care disparity and highlight the need to investigate, address, and prevent health care disparities for Black incarcerated adults experiencing suicidal behaviors.

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