Characteristics of Inmates Who Initiate Hunger Strikes

Rusty Reeves, MD, Anthony C. Tamburello, MD, Jennifer Platt, DO, Drew Tepper, MD, and Kerri Edelman, PsyD

A hunger strike is a common, expensive, and potentially lethal event within a correctional institution. In this study, we describe the characteristics of inmates who initiated hunger strikes in a state prison system. Electronic medical records for a state prison system were reviewed for documentation of hunger strikes from January 2005 through September 2015. There were 292 hunger strikes during the study period. Most (71%) lasted three or fewer days. When weight data were available, only 12.9 percent of the hunger strikes resulted in a weight loss >10 percent. Mental health patients were disproportionately represented in the sample (45%), although diagnoses of personality disorders (48%) rather than mood (17%) or psychotic (10%) disorders accounted for most of these cases. Nearly 75 percent of inmates who initiated hunger strikes did so while residing in disciplinary housing. In more than 80 percent of the strikes, the reason for stopping the strike was unknown. When the reasons were known, custody intervention rather than mental health intervention was the most common reason for the ending of a strike. Improving communication with custody administration and mitigating unnecessarily aversive housing environments are likely to reduce the incidence of hunger strikes.

J Am Acad Psychiatry Law 45:302–10, 2017

A hunger strike may create serious health risks for an inmate and is a vexing problem for facility administrators and health care staff. The World Medical Association (WMA) and federal regulations define a hunger strike as voluntary total fasting (taking only water) for at least 72 hours as a means of protest or demand.[1,2] Dry hunger strikes (no food or water) are rare, as the body cannot survive more than a few days without water, which is insufficient time to generate pressure and publicity for the striker's cause. There is no known record of a hunger striker dying as a result of a dry strike. A partial hunger strike, which represents most such actions, consists of consumption of some form of nourishment, such as sugar. A healthy, normally nourished adult is typically able to fast totally for 48 to 72 hours before the onset of ketosis; death occurs between 6 and 10 weeks of total fasting.[3]

Researchers have differentiated genuine hunger strikers from "food refusers." The latter represent most so-called hunger strikers. Food refusers have been described as reactive, complaining, unserious, petty in their demands, often repetitive in their refusals of food, and harboring no intention of endangering their health.[1,3,4] Genuine hunger strikers, in contrast, are generally prepared to undergo a long fast and not to back down unless their goal is attained. They are typically willing to risk their health and their lives for their cause.

In 1991, and again in 2006, the WMA adopted the Declaration of Malta for the ethical management of hunger strikes.[5] In the Declaration, the WMA held that a physician evaluating an individual refusing food must determine whether mental illness has rendered the inmate incompetent to engage in a hunger strike. If mental illness is present and capacity to understand the risks and benefits of refusing food is impaired, the individual requires psychiatric treatment and should not be allowed to engage in a hunger strike.

The Declaration of Malta further maintains that it is never ethically acceptable for physicians to force-

Dr. Reeves is Professor and Training Director in Forensic Psychiatry, Dr. Tamburello is Clinical Associate Professor, and Dr. Platt is Clincial Assistant Professor, Rutgers University–Robert Wood Johnson Medical School, New Brunswick, NJ. Dr. Reeves is Director of Psychiatry, Dr. Tamburello is Associate Director of Psychiatry, Dr. Tepper is Staff Psychiatrist, and Dr. Edelman is Staff Psychologist, Rutgers University–Correctional Health Care, Trenton, NJ. Address correspondence to: Rusty Reeves, MD, UCHC c/o NJDOC, Bates Building, 2nd floor, Box 863, Stuyvesant Avenue and Whittlesey Road, Trenton, NJ 08625. E-mail: rusty.reeves@rutgers.edu.

Disclosures of financial or other potential conflicts of interest: None.

feed competent hunger strikers and states: "It is ethical to allow a determined hunger striker to die in dignity rather than submit that person to repeated interventions against his or her will."[5] The American Medical Association (AMA) has endorsed the WMA's position against force-feeding competent prisoners and detainees,[6] and the International Committee of the Red Cross has expressed a similar position.[7]

Despite opposition by professional organizations and the United States Supreme Court's ruling in *Cruzan v. Director*[8] that competent adults have the right to refuse force-feeding, even if death will result, case law, legislation, and regulations in the United States have supported force-feeding of hunger-striking inmates. In 2012, the Connecticut Supreme Court in *Commissioner v. Coleman*[9] held that the Department of Correction could lawfully force-feed a prisoner on a hunger strike. The court found that the state's interest in a prisoner's health and the safety of the institution outweighed the prisoner's common law right to bodily integrity, that force-feeding did not violate the prisoner's First and Fourteenth Amendment rights to free speech and privacy, and that the weight of international authority did not prohibit medically necessary force-feeding. Similar rulings were made by the New York Court of Appeals in *Bezio v. Dorsey*,[10] the Seventh Circuit Court in *Owens v. Hinsley*,[11] and a U.S. district judge in a 2013 hunger strike involving dozens of inmates in California.[12] In 2012, in response to an inmate's starving to death, the State of Utah signed into law H.B. 194,[13] which allows involuntary feeding and hydration of inmates.

Since 2002, force-feeding of hunger-striking detainees has been a common practice at the Guantánamo Bay detention camp. In reversing a restraining order to allow the resumption of force-feeding of detainee Abu Wa'el Dhiab, the U.S. district court judge expressed strong criticism about the practice, but said, ". . . the Court simply cannot let Mr. Dhiab die."[14] The Federal Bureau of Prisons' policy on hunger strikes provides for administration of involuntary medical treatment if an inmate's life or health is threatened by a hunger strike.[15] Although medical staff in federal prisons are to notify legal counsel, involuntary treatment (i.e., force-feeding) is not to be delayed if there is an immediate threat to the inmate's life or a risk of permanent damage to the inmate's health.

The New Jersey Department of Corrections (NJDOC), where the current study was conducted, by policy allows an inmate to engage in a hunger strike. The NJDOC policy on hunger strikes defines a hunger strike as inmates' "stating that they are refusing to take in nourishment for the purpose of making a political statement." An inmate who declares a hunger strike is immediately medically evaluated, which includes a determination of whether the inmate is "grossly incompetent" and a potential referral to mental health. After three days (72 hours) without food, an inmate is moved to an infirmary and examined daily by health care staff for as long as the inmate is on a strike. The inmate is assessed by mental health staff for capacity to refuse nourishment. As a practical matter in the NJDOC, if an inmate is incompetent to engage in a hunger strike because of a psychotic or major depressive mental illness, Rutgers-University Correctional Health Care (UCHC), the health care vendor to the NJDOC, will hospitalize the person and petition for involuntary antipsychotic medication. The inmate is allowed to refuse nourishment until it is determined that he no longer has the capacity to do so, or presents an imminent danger to himself from complications of malnourishment. According to NJDOC policy, an inmate is on a hunger strike if the inmate declares it to be so. Thus, an inmate can engage in a partial hunger strike (i.e., consume liquid or solid food in addition to water) and still be on a hunger strike. Unlike the scientific literature on hunger strikes in corrections, NJDOC policy does not differentiate between the above-mentioned genuine hunger strikers and food refusers.

Until March 18, 2016, the NJDOC had never petitioned a New Jersey court to force-feed an inmate on a hunger strike.[16] On that date, a New Jersey court granted the NJDOC's request for permission to force-feed an inmate. The judge, ruling that the inmate's hunger strike "amounts to a suicidal act," found that the NJDOC's duty to preserve life outweighed the inmate's right to harm himself or protest. The judge cited rulings in other states where prisons can force-feed inmates. Thus, in the matter of prison hunger strikes in New Jersey, on the competing principles of autonomy (i.e., a competent person's right to decide what to do with his body, including choosing to risk dying) versus beneficence (i.e., the state's interest in preserving life), a state court has again sided with the latter principle.

Although the legal and ethics challenges of force-feeding competent inmates engaged in hunger strikes have generated substantial attention in both the legal and medical literature, such conundrums are not the focus of this article. Inmates who engage in hunger strikes may place themselves at grave physical risk. Hunger strikers also represent a drain on the health care and custody resources of correctional facilities as they require frequent and, in New Jersey, daily monitoring by a health care professional. Aside from the abovementioned differentiation of food refusers from hunger strikers, little has been written about the characteristics of these inmates (e.g., their psychiatric diagnoses and reasons for striking, among others). Attention to these characteristics may provide guidance for both medical and correctional authorities on how to decrease both the frequency and the duration of hunger strikes in prison. Toward this end, UCHC investigators, in cooperation with the NJDOC, conducted a retrospective chart review of inmates who initiated hunger strikes in the NJDOC.

Methods

This study was a retrospective review of electronic medical record (EMR) data originally collected as part of a quality improvement project. The NJDOC uses General Electric's Centricity software for its EMR. After the decision was made to present our results to the scientific community, both the NJDOC's Departmental Research Review Board and Rutgers Robert Woods Johnson Medical School Institutional Review Board reviewed and approved this study. Informed consent of inmates was not required, as this was a retrospective chart review of deidentified data, and only aggregate results are presented.

Investigators used an EMR query to identify hunger strike incidents by searching for the word "hunger" in the summary (i.e., title) line of chart documents. Per policy, the NJDOC defines a hunger strike as "an inmate stating that they are refusing to take in nourishment for the purpose of making a political statement." In other words, the NJDOC acknowledges a hunger strike upon an inmate's declaration of such. This study followed NJDOC policy in the study's definition of a hunger strike. Investigators collected data on the start and end date of each hunger strike; demographics; weight at onset and end of the strike; special needs status (i.e., if designated a patient with a mental health history); psychiatric diagnoses; residence in disciplinary housing (i.e., detention or administrative segregation); documented reasons for initiating the strike, either stated by the inmate or apparent (e.g., psychiatric symptoms); and documented reason for ending the strike.

We counted the annual number of hunger strikes from January 2005 through September 2015, with the data for 2015 prorated. We compared the percentage of inmates on the special needs roster, the percentage in disciplinary housing, and the percentage with psychiatric diagnoses in the study sample (all hunger strikers from 2005 through 2015) and the inmate population in 2015. We also compared the prevalence of any personality disorder and antisocial personality disorder in the study sample to the prevalence in inmates in administrative segregation in 2015. We chose the year 2015 as a matter of convenience: the total inmate population was readily available for that year and was not available for all the years dating to 2005, and DOC disciplinary practice and mental health diagnostic practices had not changed over the years of the study. Thus, even though the total inmate population in New Jersey has decreased since at least 2011, the percentage (i.e., the prevalence) of inmates on the special needs roster, residing in disciplinary housing, or carrying psychiatric diagnoses should not have changed.

Linear regression with autoregressive error correction (SAS ver. 9.4 statistical software) established whether there were statistically significant trends over the years of the study period in the annual incidence of all hunger strikes, and the incidence of hunger strikes lasting more than three days. The chi-square test with Yates' correction (GraphPad QuickCalcs software) was used to compare categorical data. Statistical significance for all tests was set *a priori* at $p < .05$.

Results

There were 292 hunger strikes from January 2005 through September 2015, with an average of 26.5 strikes per year and a range of 12 to 44. The annual incidence of all hunger strikes and the incidence of hunger strikes greater than three days in duration were stable over the course of the study period, as year-to-year variations in both sorts of strikes were not statistically significant. There were 231 individuals identified as involved in one or more of the 292 hunger strikes over the study period. Eighty-six percent ($n = 199$) initiated only a single hunger strike, eight percent ($n = 19$) had two, and six percent ($n = 13$) had more than two (Fig. 1). The maximum num-

ber of hunger strikes by an individual was 11. There were no mass hunger strikes. Thus, as far as investigators could discern from the medical record, each inmate initiated the strike on his or her own, without coercion or organized effort from others.

The median age of hunger strikers was 37 years, compared with the median age of 35 years for the overall inmate population. The range of ages of the hunger strikers was 19 to 80 years. Only 2 (0.9%) of the 231 hunger-striking inmates were female, though 3.7 percent ($n = 774$) of the overall inmate population ($n = 21{,}486$) was female, a statistically significant difference ($p < .05$). The race/ethnicity (black, white, Hispanic, and Asian) of the hunger-striking inmates was not significantly different from the racial and ethnic composition of the overall inmate population.

Few hunger strikes continued beyond a few days (Fig. 2). Although the average length of a hunger strike was 10 days, the median was only 2 days, and 71 percent ($n = 206$) were three or fewer days in duration. Only five percent ($n = 15$) of the hunger strikes lasted more than 30 days. The longest was 395 days. Longer strikes invariably were partial, in which an inmate consumed some form of nutrition (e.g., a liquid nutritional supplement). Given the short duration of most strikes and some inmates' refusals to allow their weights to be taken during longer strikes, only 29 percent of cases (85 hunger strikes) had sufficient data to calculate a change in weight. Among these, in only 11 hunger strikes (involving nine inmates) was there a 10 percent or greater loss of body weight. None of the hunger strikes resulted in death. Of the 292 strikes, almost half (45%, $n = 130$) were initiated by hunger strikers on the mental health (MH) Special Needs roster, compared with 15 percent of the overall inmate population ($p < .001$; Table 1).

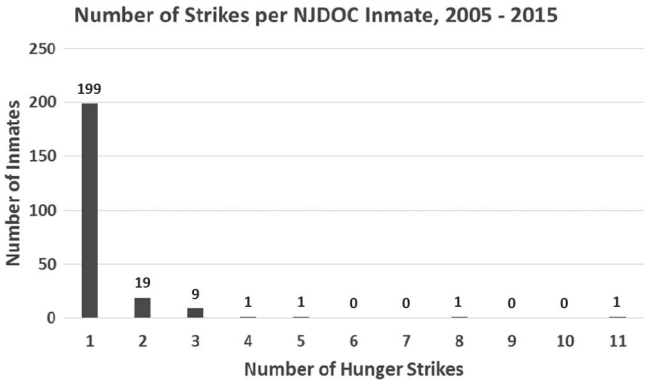

Figure 1. Frequency distribution of hunger strikes.

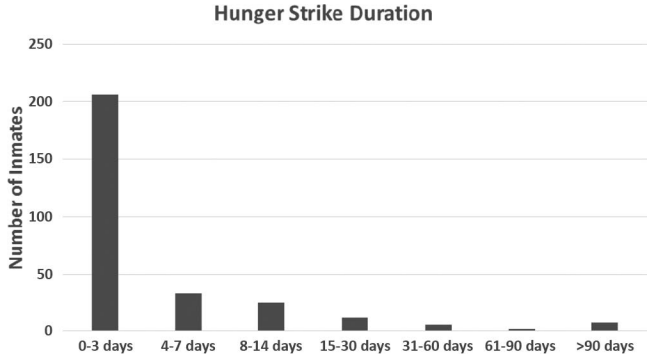

Figure 2. Frequency distribution of duration of hunger strikes.

No psychiatric diagnosis was listed for 31 percent ($n = 72$) of the 231 individual hunger strikers (Table 1). Most of the strikers with psychiatric diagnoses had multiple diagnoses. Personality disorders were the most frequently observed psychiatric diagnoses (48%, $n = 111$), with antisocial personality disorder being the most common specific personality disorder (26%, $n = 60$). The prevalence of any personality disorder or antisocial personality disorder among hunger strikers was not only significantly different from these rates in the current general inmate population (12%, $p < .001$; and 7%, $p < .001$, respectively), but were also significantly different from the percentages of inmates with these diagnoses in the administrative segregation population (22%, $p < .001$; and 14%, $p < .001$, respectively). Psychotic disorders (including schizophrenia, schizoaffective disorder, and psychotic disorder NOS), present in 10 percent ($n = 24$) of the hunger-striking inmates; bipolar disorder (4%, $n = 10$), impulse-disorders (including attention deficit hyperactivity disorder and impulse control disorder NOS; 8%, $n = 18$), and major depressive disorder (6%, $n = 13$) were significantly more frequent among the hunger-striking inmates than in the overall inmate population (4%, $p < .0001$; 3%, $p < .05$; 2%, $p < .01$; and 4%, $p < .01$, respectively). Malingering was identified in 21 percent ($n = 49$) of the inmates who went on a hunger strike, a prevalence that was significantly greater than the 3 percent of inmates with that problem in the overall inmate population ($p < .001$).

Three of four (74%, $n = 216$) of the hunger strikes were initiated by inmates in disciplinary housing (118 in detention; 98 in administrative segregation; Table 1). This percentage was significantly dif-

Table 1 Characteristics of Hunger Striking NJDOC Inmates

Feature	Hunger Strikers (%)	Total Inmate Population in 2015 (%)	Inmates in Admin. Segregation (%)
MH Special Needs designation	45	15*	
Residing in disciplinary housing	74	7*	100
No psychiatric diagnosis	31	26	
Any personality disorder	48	12*	22*
Antisocial personality disorder	26	7*	14*
Psychotic disorder	10	4*	
Bipolar disorder	4	2†	
Impulse control disorder or ADHD	8	4†	
Major depressive disorder	6	3‡	
Anxiety disorders	6	6	
Adjustment disorders	6	5	
Malingering	21	3*	

* $p < .0001$ versus the proportion of hunger strikers with the feature.
† $p < .01$ versus the proportion of hunger strikers with the feature.
‡ $p < .05$ versus the proportion of hunger strikers with the feature.

ferent from the seven percent of inmates in the total inmate population who were in disciplinary housing ($p < .001$).

The inmate's stated or apparent reasons for the hunger strike were documented in the EMR in 70 percent ($n = 204$) of all the hunger strikes, in 71 percent ($n = 153$) of the strikes initiated within disciplinary housing, and in 67 percent ($n = 51$) of the strikes initiated within nondisciplinary housing (Table 2). The most common documented reasons for the strikes initiated in disciplinary housing, in descending rank, were protest of the disciplinary process, a desire for a housing change, and interpersonal difficulties with custody (Table 2). Taken together, these reasons were offered in more than half (56%) of the hunger strikes in disciplinary housing. In contrast, suspected psychiatric symptoms were the reason in only eight percent ($n = 17$) of the hunger strikes within disciplinary housing. The reasons for strikes and distribution of these reasons for inmates in nondisciplinary housing were similar to those in disciplinary housing, except that protest of the disciplinary process was a less frequent reason in the former group (Table 2).

In more than 80 percent of the strikes ($n = 241$), the reason for ending them was unknown (Table 3). The most common reason given for stopping was a DOC intervention that satisfied the inmate (8% of the strikes; $n = 24$). Mental health and medical intervention were thought to play a role in the cessation

Table 2 Documented Reasons for Start of a Hunger Strike

	Disciplinary Housing		Nondisciplinary Housing		All Housing	
Reason for Starting Strike	Number	%	Number	%	Number	%
Unknown	63	29	25	33	88	30
Protest discipline	47	22	5	7	52	18
Housing change	41	19	14	18	55	19
Conflict with custody	33	15	10	13	43	15
Suspected psychiatric symptoms	17	8	6	8	23	8
Legal	13	6	3	4	16	6
Property	10	5	3	4	13	5
Dietary	9	4	7	9	16	6
Medical issue	7	3	6	8	13	5
Conflict with inmates	5	2	4	5	9	3
Conditions of confinement	2	1	0	0	2	1
Lack of family contact	1	<1	0	0	1	<1
Political	1	<1	0	0	1	<1
Parole	0	0	3	4	3	1
Commissary	0	0	1	1	1	<1

Numbers and percentages total more than 292 hunger strikes and 100%, respectively, as more than one reason may have been identified.

Table 3 Reasons Documented for Stopping a Hunger Strike

Reason for Stopping	Number	%
Unknown	241	83
DOC intervention	24	8
Gave up	7	2
Mental health intervention	6	2
Denied hunger strike	6	2
Medical intervention	4	1
Moot (released or won court case)	3	1
Gave up after medical illness	2	1

Numbers total more than 292 hunger strikes, as more than one reason may have been identified.

of only two ($n = 6$) and one ($n = 4$) percent of the strikes, respectively. Successful medical interventions included examination by a physician and counseling about the medical risks of a hunger strike. Successful mental health interventions most commonly involved counseling on alternative ways to have one's wishes met. Additional mental health interventions included initiation of medication, working with custody administration to arrange a compromise, and transfer of the inmate to a prison inpatient unit. In only one case was treatment of severe mental illness (psychosis) clearly documented as the reason for the ending of the hunger strike.

Discussion

Hunger strikes in the NJDOC, although a frequent occurrence, have not increased over time. These incidents were typically brief (three or fewer days), and thus posed little, if any, risk to the health of the inmate. The few hunger strikes lasting longer than 90 days were partial hunger strikes. On only a single occasion over the course of this study did a hunger-striking inmate so endanger himself that the NJDOC felt obliged to petition a court to order permission for force-feeding. There were no mass strikes. None of the hunger strikes resulted in death.

Several features of NJDOC custodial practice are pertinent to the interpretation of the results of this study. In the NJDOC, both detention and administrative segregation are types of disciplinary housing. An inmate is moved to detention immediately after being charged with a disciplinary infraction and may reside in detention for up to 15 days. An inmate is moved to administrative segregation after having been found culpable of a disciplinary infraction in a hearing and may reside in administrative segregation for an extended period of time, from months to years. After this study was completed, the NJDOC changed its disciplinary practices, including abolishing detention, shortening or abolishing disciplinary stays for certain infractions, and changing the name of disciplinary housing to restrictive housing.

This study's definition of a hunger strike was broader than the WMA's definition which requires at least 72 hours of total fasting. If the hunger-striking inmates who fasted for only up to three days had been excluded from this study, the sample size would have been markedly smaller. On the other hand, the NJDOC acknowledges a hunger strike immediately upon an inmate's declaration of such a strike. NJDOC policy requires immediate involvement of medical staff for any individual who declares a hunger strike. The authors adapted their study to the demands of NJDOC policy. In a similar fashion, NJDOC policy does not distinguish between hunger strikers and food refusers. Thus, neither did this study. The large group of individuals who engaged in a hunger strike for up to three days may, almost by definition, be considered food refusers. In practice, the distinction between a genuine hunger striker and a food refuser was often hazy.

Hunger strikes were highly associated with placement in disciplinary housing, where social contact and privileges are more limited than they are in general population housing. The most commonly documented reasons for the strikes in disciplinary housing were protest of the disciplinary process, a desire for a housing change, and conflict with custody officers, all of which are well-known by the study's investigators as common complaints among inmates in disciplinary housing. The substantial minority (30%) of cases in which the reasons for the strike were unknown does not imply that no medical or mental health attention was provided to these inmates. Again, NJDOC policy requires immediate medical assessment when an inmate declares a hunger strike. That assessment includes a determination of gross impairment that may result in a mental health referral. Once a hunger strike reaches 72 hours, the inmate is placed in an infirmary where he is assessed by a mental health clinician for capacity to refuse nutrition.

Inmates on the mental health roster were more likely to initiate a hunger strike. However, personality disorders, and especially antisocial personality disorder, rather than mood or psychotic illnesses, were the most common psychiatric disorders among hunger-striking inmates. This unsurprising observation likely reflects the poor coping skills that led to disciplinary charges in the first place, which in

turn led to placement in disciplinary housing. The prevalence of personality disorders and, in particular, antisocial personality disorder, among hunger-striking inmates was even higher than the rates observed in all inmates in disciplinary housing settings. The discomfort associated with disciplinary housing appear to draw upon the maladaptive coping strategies associated with personality disorders. In contrast, symptomatic major mental illness such as psychosis or depression rarely played a role in a hunger strike.

The reasons that most inmates on a hunger strike resumed eating are unknown. Given the usual brevity of these incidents, we speculate that most inmates impulsively declared a hunger strike, then soon decided that hunger was more unpleasant than the reason for their protest. Traditional mental health and medical interventions infrequently played a direct role in the conclusion of a hunger strike. The results suggested that mental health and medical professionals can be helpful in occasionally ending strikes by counseling inmates about the risks of a hunger strike and helping them develop alternative, productive, and less risky ways of having their wishes met. An essential task of the mental health clinician is assessment of the reason for the strike, and an inmate's capacity to refuse nutrition. In rare cases, a hunger strike was associated with psychosis or major mental illness. Treatment of the illness can end the hunger strike.

When known, the most common reason for cessation of a strike was an NJDOC intervention that satisfied the inmate. This finding is logical when considering the above-mentioned typical reasons for initiating a hunger strike and that the NJDOC has direct authority in matters of inmate housing, discipline, and personnel. Medical and mental health clinicians, as well as custody administration therefore should be careful not to make a hunger strike a purely medical matter. Mental health clinicians, while being careful not to take sides, can serve as diplomats, conveying the reason for the hunger strike to the custody administration, and thereby potentially help the inmate and the administration reach a compromise, as long as that compromise is consistent with security and the orderly running of the institution.[3]

The limitations of this study include those relevant to any retrospective chart review. The comparison groups chosen may have included inmates on a current hunger strike and may have included inmates with a history of the same, although this strategy is biased toward the null hypothesis that there is no difference between hunger strikers and similarly situated peers. Our method of identifying hunger strikes based on the use of the word "hunger" in the title line of an EMR chart note may have missed some incidents of food refusal documented differently and does not include circumstances of which health care staff were unaware. As NJDOC policy requires medical evaluation for food refusal lasting more than three days, it is unlikely that any serious incidents of hunger strikes were missed. The diagnoses found in the EMR were arrived at clinically by professionals with various levels of training and experience and usually without the benefit of psychological testing. Although the reliability of these diagnoses is therefore unknown, they were made consistent with standard clinical practice. We are reporting findings from one state prison system only, and they may not generalize to other state and local correctional facilities.

In recent decades, the use of disciplinary housing in correctional facilities has increased nationwide, drawing in the disorderly as well as the violent.[17–19] The degree of social isolation and other deprivation varies among systems and even among facilities, but common to almost all disciplinary housing is reduced social contact, limited privileges, and limited opportunities for recreation. Sentences can vary from weeks to years. The conditions of disciplinary housing have long been recognized in the psychiatric literature as a source of stress and deterioration for inmates.[20] Most of the studies claiming deleterious effects on the mental health of inmates were cross-sectional and unable to follow inmates over time; selection bias, nonexistent comparison groups, and other limitations also compromised most studies.[21] To our knowledge, though, no scholar in the modern era has argued that isolation is beneficial or otherwise harmless for inmates. Although a large, longitudinal study in a Colorado prison found that placement in administrative segregation did not cause psychological deterioration,[22] this finding may not generalize, because conditions in that setting were less adverse than disciplinary settings nationwide. Recent analyses of the literature on the disciplinary housing in prisons suggested that this practice is ineffective for behavioral change, is expensive, and may counterintuitively have a negative impact on safety.[18,19] A study of suicides in the NJDOC showed that placement in single-cell restrictive housing is associated with an elevated risk of suicide.[23] Contemporary scholars, advocacy organizations, and even the

popular press have called for the end, or at least strict curtailment, of solitary confinement.[18,19,24,25]

Popular pressure, legislation, and litigation have motivated some states and the federal government to address disciplinary housing in prisons.[26–28] The NJDOC in the latter part of 2015, independent of this study taking place at the time, made some nonviolent infractions ineligible for administrative segregation sanctions, limited the maximum length of sentences to 365 days, and increased therapeutic and recreational activities in this setting. Therefore, the incidence and duration of disciplinary housing is anticipated to decrease. To the extent the NJDOC wishes to decrease the incidence and duration of hunger strikes in its prisons, the results of this study support these reforms.

Conclusions

Hunger strikes in the NJDOC were most often brief (three days or fewer), not life threatening, and not driven by mental illness. They most often occurred in the context of disciplinary housing, by inmates with known maladaptive coping skills. When the reason for the resolution of the hunger strike was known, it was more often driven by an intervention by NJDOC staff, rather than by health care staff. The issue of force-feeding rarely arose. These findings argue against medicalizing a hunger strike. Correctional medical and mental health staff, in addition to providing medically necessary care for hunger strikers, should facilitate communication of the inmate's concerns with DOC personnel to help resolve the behavior as expeditiously as possible, consistent with the security and orderly running of the institution. In addition, amelioration of unnecessarily adverse housing environments may reduce the incidence of hunger strikes in the NJDOC. Future research is warranted to evaluate the effects of reforms on restrictive housing on the incidence and duration of hunger strikes in prisons.

References

1. World Medical Association: WMA Declaration of Malta: a background paper on the ethical management of hunger strikes. World Med J 52:36–43, 2006
2. 28 C.F.R. § 549.61 (2015)
3. Reyes H, Allen SA, Annas GJ: Physicians and hunger strikes in prison: confrontation, manipulation, medicalization and medical ethics (part 1). World Med J 59:27–36, 2013
4. Reyes H: Medical and ethical aspects of hunger strikes in custody and the issue of torture. Geneva: International Committee of the Red Cross, January 1, 1998. Available at: https://www.icrc.org/eng/resources/documents/article/other/health-article-010198.htm/. Accessed February 13, 2016
5. World Medical Association: WMA Declaration of Malta on Hunger Strikers. Ferney-Voltaire, France: WMA, October, 2006. Available at: http://www.wma.net/en/30publications/10policies/h31/. Accessed February 13, 2016
6. Lazarus JA: Letter to Chuck Hagel, Secretary of Defense. Chicago, IL: AMA, April 25, 2013. Available at: http://humanrights.ucdavis.edu/reports/folder-2013-guantanamo-hunger-strike/AMA%20Hunger%20Strikes%20Letter.pdf/. Accessed February 13, 2016
7. International Committee of the Red Cross (ICRC): Hunger strikes in prison: the ICRC's position. Geneva: ICRC, January 31, 2013. Available at: https://www.icrc.org/eng/resources/documents/faq/hunger-strike-icrc-position.htm/. Accessed February 13, 2016
8. Cruzan v. Director, Missouri Dept. of Health, 497 U.S. 261 (1990)
9. Commissioner of Correction v. Coleman, 38 A.3d 84 (Conn. 2012)
10. Bezio v. Dorsey, 989 N.E.2d 942 (N.Y. 2013)
11. Owens v. Hinsley, 635 F.3d 950 (7th Cir. 2011)
12. Thompson D: California prisons can force-feed inmates on hunger strike, rules federal judge. Roland Martin Reports, August 20, 2013. Available at: http://rolandmartinreports.com/blog/2013/08/california-prisons-can-force-feed-inmates-on-hunger-strike-rules-federal-judge/. Accessed July 19, 2017
13. H.B. 194: Involuntary feeding and hydration of inmates. 2012 General Session of the 59th Legislature, State of Utah (2012)
14. Lamothe D: U.S. judge permits Pentagon to force-feed Guantanamo prisoner but issues rebuke. Washington Post. May 23, 2014. Available at: https://www.washingtonpost.com/world/national-security/us-judge-permits-pentagon-to-force-feed-guantanamo-prisoner-says-pain-possible/2014/05/23/a385cf72-e290-11e3-8dcc-d6b7fede081a_story.html/. Accessed February 17, 2016
15. Federal Bureau of Prisons: Hunger strikes. Available at: https://www.bop.gov/PublicInfo/execute/policysearch?todo=query/. Washington DC: Department of Justice, Federal Bureau of Prisons, July 29, 2005. Accessed February 13, 2016
16. Augenstein S: Ending "suicidal act," judge rules to force feed dying inmate. Forensic Magazine. March 18, 2016. Available at: http://www.forensicmag.com/article/2016/03/ending-%E2%80%98suicidal-act%E2%80%99-judge-rules-force-feed-dying-inmate/. Accessed June 10, 2016
17. Browne A, Cambier A, Agha S: Prisons within prisons: the use of segregation in the United States. Fed. Sent'g Rep. 24:46–9, 2011
18. Shames A, Wilcox J. Subramanian R: Solitary confinement: common misconception and emerging safe alternatives. New York: Vera Institute of Justice, May 12, 2015. Available at: http://www.vera.org/pubs/solitary-confinement-misconceptions-safe-alternatives/. Accessed February 13, 2016
19. Appelbaum K: American psychiatry should join the call to abolish solitary confinement. J Am Acad Psychiatry Law 43:406–15, 2015
20. Haney C: Mental health issues in long-term solitary and "supermax" confinement. Crime & Delinq 49:124–56, 2003
21. Perrien M, O'Keefe ML: Disciplinary infractions and restricted housing, in Oxford Textbook of Correctional Psychiatry. Edited by Trestman R, Appelbaum K, Metzner J. Oxford, UK: Oxford University Press, 2015, pp 71–5
22. O'Keefe ML, Klebe KJ, Metzner J, *et al*: A longitudinal study of administrative segregation. J Am Acad Psychiatry Law 41:49–60, 2013
23. Reeves R, Tamburello A: Single cells, segregated housing, and suicide in the New Jersey Department of Corrections. J Am Acad Psychiatry Law 42:484–8, 2014
24. Metzner JL, Fellner J: Solitary confinement and mental illness in U.S. prisons: a challenge for medical ethics. J Am Acad Psychiatry Law 38:104–8, 2010

25. Gawande A: Hellhole. The New Yorker. March 30, 2009. Available at: http://www.newyorker.com/magazine/2009/03/30/hellhole/. Accessed February 16, 2016
26. Eilperin J: Obama bans solitary confinement for juveniles in federal prison. The Washington Post. January 26, 2016. Available at: https://www.washingtonpost.com/politics/obama-bans-solitary-confinement-for-juveniles-in-federal-prisons/2016/01/25/056e14b2-c3a2-11e5-9693-933a4d31bcc8_story.html/. Accessed February 13, 2016
27. Hager E, Rich G: Solitary confinement reforms by states, 1998–2014. New York: The Marshall Project. December 23, 2014. Available at: https://www.themarshallproject.org/2014/12/23/shifting-away-from-solitary#.j3gXzpNvA/. Accessed February 13, 2016
28. New York Civil Liberties Union: Historic settlement overhauls solitary confinement in New York. New York: NYCLU. December 16, 2015. Available at: http://www.nyclu.org/news/historic-settlement-overhauls-solitary-confinement-new-york/. Accessed February 13, 2016