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How to Use Administrative Data to Measure and Interpret Racial, Ethnic, and Gender Disparities in Military Justice Outcomes

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Abstract

The Office of the Executive Director for Force Resiliency within the Office of the Under Secretary of Defense for Personnel and Readiness asked CNA to address an FY 2020 NDAA mandate to establish criteria for determining when to review data indicating that racial, ethnic, and gender (REG) disparities in military justice outcomes may exist and provide guidance for how conduct that review. This report combines emerging best practices from the civilian criminal justice system with a review of the military justice system (MJS) to create guidance for data collection, analysis, and reporting that will allow the services to use administrative data to conduct meaningful assessments of how members of all REG groups are treated within the MJS. The guidance is summarized in a 6-step iterative process for conducting ongoing assessments on set schedules to detect and address outcome disparities before they become widespread or persistent.
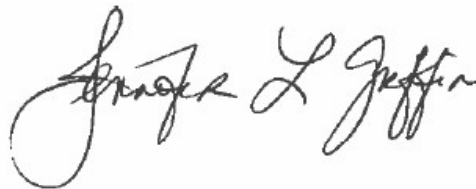
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Executive Summary

This study was sponsored by the Office of the Executive Director for Force Resiliency within the Office of the Under Secretary of Defense for Personnel and Readiness to address two taskings from the FY 2020 National Defense Authorization Act (NDAA):

1. Establish criteria for determining when to review data indicating that racial, ethnic, and gender (REG) disparities in military justice outcomes may exist and provide guidance for how conduct that review

2. Conduct an evaluation to identify the causes of identified REG disparities and take steps to address them

To address the first tasking, the study team combined emerging best practices from the civilian criminal justice system (CCJS) with a review of the military justice system (MJS) to create guidance for data collection, analysis, and reporting that will allow the services to use administrative data to conduct ongoing assessments of how members of all REG groups are treated within the MJS. To address the second tasking, the team used multivariate statistical techniques to analyze available data with the goal of measuring REG disparities in MJS outcomes, holding constant other relevant factors. This report addresses the first tasking; the second tasking is addressed in a companion report titled, *Exploring Racial, Ethnic, and Gender Disparities in the Military Justice System*.

Guiding concepts

To guide our approach to addressing the NDAA tasking, we drew on four concepts related to justice and bias and considered their implications for data collection and analysis.

Distributive versus procedural justice

Distributive justice relates to the distribution of outcomes within a community. In the MJS context, distributive justice relates directly to REG outcome disparities and suggests that the services should collect data to determine whether people who are the same except for their REG characteristics experience the same MJS outcomes. Procedural justice relates to the system that generates the outcomes. Procedural justice is defined in terms of the rules of the system and the extent to which they are applied consistently and impartially and communicated clearly. To assess procedural justice in the MJS, it is necessary to collect and analyze data on underlying processes, not just final outcomes. It is possible for procedural

injustices to occur without generating outcome disparities, and it is possible for a system to be procedurally fair but to generate different outcomes for members of different REG groups. Thus, on their own, average outcome disparities are not complete indicators of bias.

Individual versus institutional bias

Generally, bias is defined as prejudice for or against one person or group of people, especially in a way considered to be unfair. To cause MJS outcome disparities, such prejudices must be turned into biased actions, which can occur at the individual or institutional level. In the context of the MJS, individual bias is exercised by individual actors within the system through their individual decision-making discretion. It can be both explicit and implicit. Because individual bias is exercised through discretionary decision-making, finding evidence of it in data calls for identifying places in the system where individual discretion matters most to see if this is where disparities occur. Institutional bias is present when the policies, procedures, and practices that define a system consistently create positive or negative outcomes based an individual's REG status. It can be intentional or unintentional. To identify the presence of institutional bias in the MJS, it is necessary to collect and analyze data that reflect outcomes that are guided by regulation or policy.

Concerns about bias in the MJS

Bias in the MJS—both real and perceived—can decrease the effectiveness of the MJS and thereby degrade good order and discipline and reduce warfighting readiness. There are widespread and persistent perceptions that the MJS is biased, and these perceptions exist both inside the military, especially among members of color, and outside the military, among the American public and members of Congress.

The broader social context in which concerns about bias are formed matters. Although the services have their own justice system and control over how that system is implemented, their members are drawn from the American population and public support is necessary for continued recruiting and funding. Thus, concerns about REG bias in the MJS will ebb and flow as they ebb and flow in the national culture and they may arise from within or without.

The quality and presentation of data and data analysis also matter. Over the years, analyses of MJS data have done little to alleviate concerns about bias. Given the persistence of these concerns, it makes sense to create a robust system for data collection, rigorous analysis, and appropriate reporting to enable detailed assessments of MJS outcomes and the policies and practices that produce them.

The MJS

To identify points in the MJS where institutions and individuals apply discretion, as well as important MJS outcomes to study, we created a chart that maps how a case flows through four phases of the MJS—incident processing, pre-trial/pre-hearing, adjudication and sentencing, and post-trial/post-hearing—and identified key steps in each phase.

A main source of institutional discretion in the MJS lies outside the system. Given that servicemembers can enter the system if they are accused of disobeying a regulation, institutional choices about the nature and design of regulations will affect MJS outcomes. Individual discretion is more likely to be applied within the MJS, at different points by different actors. The most individual discretion rests with commanding officers during the incident processing phase and, in later phases, along the disciplinary path and the summary court-martial branch of the judicial path. Once a case is referred to special or general court-martial, discretion is spread across more people. Actors with significant discretionary power on the judicial path include convening authorities, who are military commanders with little or no legal training, and judge advocates, who are legal professionals serving as military judges and trial and defense counsels.

As a whole, the flowchart highlights the importance of considering the full range of outcomes because movement through the system is determined by the outcome at each successive step along the relevant path. The steps within each phase identify the important outcomes.

Addressing MJS bias with administrative data

The primary benefit of using administrative data to measure REG disparities in MJS outcomes is that it creates an evidence-based picture of MJS outcomes that distinguishes between isolated incidents and widespread problems. To generate meaningful measures of these disparities, it is necessary to use multivariate analytical techniques that allow researchers to measure REG outcome disparities while accounting for other factors that affect MJS outcomes. The more relevant other factors that can be included in the model, the more likely it is to hold "all else" equal. If REG disparities still exist after accounting for other factors, it is likely that the outcome differences are directly related to REG. Such a finding does not prove that bias exists, but it takes the other factors off the table.

The multivariate techniques we identified range in technical sophistication and resource requirements. Disaggregating raw data by multiple outcomes and factors is the easiest of the four approaches we identified, and it can be done by agency staff. While not as conclusive as approaches that control for multiple factors simultaneously, disaggregation provides a more complete picture than bivariate analysis and helps agency staff make informed decisions about where to focus more technical analyses and scarce analytical resources. Used together

and on a regular basis, disaggregation and the more complicated approaches provide the basis for ongoing monitoring of REG outcomes to identify and address disparities before they become persistent or systemic. Existing MJS and other reporting requirements provide a natural schedule for conducting assessments and reporting their results.

Application of valid multivariate techniques requires detailed data. Current Department of Defense guidance directs the services to collect nearly all the desired data elements, so if the guidance is implemented, they should be well positioned to conduct meaningful assessments of MJS outcomes. There are two caveats to this conclusion. First, there may be gaps for information on investigations and disciplinary outcomes. Second, the services may not have the resources to implement the data collection guidance. It may be an unfunded mandate.

Finally, the tasking from the FY 2020 NDAA asked for criteria to determine when to further review data indicating that REG disparities in MJS outcomes may exist. There is no scientific or social consensus about which criterion to use or what level of disparity equates to bias. Therefore, the services should work with internal and external stakeholders to select multiple criteria based on the absolute size of a disparity, its statistical significance, and the number of people it affects.

Recommendations to address the NDAA tasking

We recommend that the services do not conduct detailed assessments of MJS data only in response to disparities measured by bivariate metrics. Instead, assessments should be conducted regularly using the blueprint provided by lessons learned from the CCJS:

Step 1. Work with internal and external stakeholders to identify issues of concern, set priorities, and develop decision-making criteria

Step 2. Create an analysis plan based on the concerns and priorities identified in Step 1

Step 3. Collect data on MJS outcomes (including nonjudicial outcomes) and relevant control variables in easy-to-use electronic records management systems and ensure they are regularly updated

Step 4. Execute the analysis plan from Step 2 using appropriate quantitative and/or qualitative methods

Step 5. Regularly and transparently report assessment results to all the stakeholders as appropriate

Step 6. Make policy decisions about how to address REG outcome disparities based on the established priorities and criteria

Contents

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Introduction

The Fiscal Year 2020 National Defense Authorization Act (FY 2020 NDAA) became law on December 20, 2019 [1]. In response to recommendations from a study by the Government Accountability Office (GAO) [2], Section 540I, subsection (b) contained provisions requiring the secretary of defense (SECDEF), in consultation with the secretaries of the military departments (MILDEPS) and the secretary of homeland security (SECHS), to take three actions to improve their abilities to detect racial, ethnic, and/or gender (REG)[1] disparities in the military justice system (MJS):

1. Record the REG of the victim and the accused and include this information in the annual military justice reports of the Armed Forces

2. Issue guidance that establishes criteria to determine when data indicating possible REG disparities in the military justice process should be further reviewed and describes how such a review should be conducted

3. Conduct an evaluation to identify the causes of any REG disparities identified in the MJS and take steps to address the causes of any such disparities, as appropriate [1]

Action (1) of section 5401(b) was addressed in June 2020 and the FY 2020 military justice reports included tables breaking out numbers of CMs by type and by REG category [3]. This study was sponsored by the Office of the Executive Director for Force Resiliency within the Office of the Under Secretary of Defense for Personnel and Readiness to address actions (2) and (3) of section 5401(b).

The underlying problems

There are two implicit questions associated with the NDAA tasking. The first question is whether REG disparities in MJS outcomes result from some fundamental unfairness in the MJS: Are they the result of policies and practices that define the MJS or are they the result of bias on the part of the individual actors within it, or both? The second question is: how can the administrative and case data collected by the services be used to not only answer the first question, but also aid in developing appropriate policy responses? To lay the foundations for

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[1] Throughout this document, we use REG to stand for both "racial, ethnic, and/or gender" and "race, ethnicity, and/or gender."

answering these questions, we identify two separate problems currently faced by the Department of Defense (DOD), the Department of Homeland Security, and the services.

The policy problem

Studies showing REG disparities in average MJS outcomes, combined with issues related to how the MJS handles sexual assault (SA) and sexual harassment (SH), have created concerns about the fairness of the MJS. For a variety of technical reasons that will be discussed throughout this report, studies that show disparities in MJS outcomes have neither determined why the disparities exist nor provided conclusive evidence that there is bias in the system. As a result, there is some debate about whether there is any problem at all.

Nevertheless, the concerns themselves present a problem because even perceptions of unfairness and bias in the MJS impose meaningful costs for the United States' all-volunteer military forces. Thus, it is imperative that the services address both perception and reality when it comes to MJS bias.

The analytical problem

Two fundamental analytical problems make it difficult to establish reality as it relates to the fairness of the MJS.

The first and most fundamental problem is that two key factors related to the issue are inherently unobservable. We cannot distinguish between offenders and non-offenders in military populations. Some offenses are never reported and, although guilt or innocence may be clearly proven in some cases, justice systems exist to determine whether the accused person should be held legally accountable for the offense with which he or she has been charged. From an analytical standpoint, this means that it is very difficult to make accurate REG comparisons: because we cannot identify the offending (or non-offending) population with certainty, we cannot determine whether offenders (or non-offenders) from different REG groups experience different outcomes.

Nor can we objectively observe bias or measure its extent. This problem applies to bias in any organization or system, so researchers have developed multiple approaches for addressing it. These approaches vary in their technical sophistication, but those based on administrative data typically include capturing as many relevant features of a system as possible to separate the effects of REG from the effects of other factors. For the MJS, this involves explaining—as much as possible—the variation in any given outcome with other characteristics of the accused individual or with characteristics of the case. Any difference still attributed to REG constitutes evidence of outcome disparities but does not prove the existence of bias.

This methodological solution for identifying bias leads to the second analytical problem for this issue: the MJS is very complex, so identifying and controlling for all the other factors that might determine its outcomes is, at best, conceptually and technically difficult, and at worst, effectively impossible. It also requires a very rich set of data, the assembly of which may not be feasible.

Study scope and approach

To address NDAA action (2), we look to the civilian criminal justice system (CCJS), where many efforts have been undertaken to examine racial and ethnic bias using administrative data collected by police departments and, to a far lesser extent, prosecutor's offices. Using reports from these efforts, as well as reports on empirical studies of bias in both the CCJS and the MJS, we develop guidance for data collection, analysis, and reporting that will allow the services to use their administrative data to conduct meaningful assessments of how members of all REG groups are treated within the MJS. Broadly speaking, the guidance is an MJS adaptation of guides and emerging best practices for CCJS agencies that accounts for relevant differences between the two systems. This report documents the guidance and the information used to develop it.

To address NDAA action (3), we use appropriate statistical techniques to analyze available MJS administrative data with the goal of measuring REG outcome disparities that isolate the effects of REG from the effects of as many relevant other factors as the data allow. To the extent REG disparities remain even after accounting for the other factors, we use pre-specified criteria to consider whether they may be the result of bias. The data analysis effort also serves as a means of assessing the services' existing data for use in disparity analysis and as an example of how to implement some of the steps described in the guidance. The results of the data analysis are reported in a companion document, *Exploring Racial, Ethnic, and Gender Disparities in the Military Justice System* [4].

Because there are longstanding concerns about bias in the MJS, the broader goal of the study is to support DOD, the MILDEPs, and the Coast Guard in making high-quality, long-term investments in processes that ensure that the MJS is not only fair (and perceived as fair), but that it operates effectively and efficiently. This goal is consistent with strategic efforts to make DOD a data-centric organization [5].

Guiding concepts

To guide our approach to solving the underlying policy and analytical problems, we draw on four concepts related to justice and bias and consider their implications for data collection and analysis.

Distributive versus procedural justice

We first consider two concepts of justice that are studied in the social science (not necessarily legal) literature.

Distributive justice relates to the distribution of outcomes or allocation of goods within an organization or community. Depending on the context, what is considered a fair allocation can be based on the relative needs or merits of the recipients or their relative happiness with the final distribution. In the present context, distributive justice relates directly to REG disparities in MJS outcomes and suggests that the services should collect data to determine whether people who are the same except for their REG characteristics experience the same MJS outcomes. The challenge here is to collect enough data to completely capture sameness across individuals and their cases.

Procedural justice, in contrast, relates to the process or system that generates outcomes or allocates goods across an organization or community. In general, procedural justice is defined in terms of not only the fairness of the rules and other defining features of the system, but also the extent to which the rules are applied consistently and impartially by the people who enforce them and clearly communicated to those impacted by them. Thus, to assess procedural justice in the MJS, it is necessary to collect and analyze data on underlying processes, not just final outcomes.

Distinguishing between distributive and procedural justice matters because focusing on one or the other not only suggests collecting different data, but also has important implications for interpreting analytical results derived from the data. In particular, it is possible for procedural injustices to occur without generating outcome disparities. A 1997 article in *Armed Forces and Society* [6] provides the following example: in cases when sentencing guidelines are relatively inflexible, accused individuals may experience procedural injustice in the form of less competent counsel or more intense scrutiny by investigators, but receive the same sentence as a person not so treated. Likewise, it is possible for a system to be procedurally fair but to generate different outcomes for members of different REG groups if those outcomes result from factors generated outside the system—that is, if people from different REG groups are generally not the same on other dimensions.

Thus, a primary takeaway is that average outcome disparities are not, on their own, complete indicators of bias. There is already a good understanding of the fact that REG disparities that control for no other factors may not be the result of bias. This discussion shows, however, that the converse is also true: it is possible that bias or unfairness exists, even if there are no differences in average outcomes.[2]

Individual versus institutional bias

Next, we define bias and identify two sources of bias that can contribute to REG disparities in MJS outcomes. These notions of bias are distinct from the more general notion of impartiality within any legal system, including the MJS, as well as from a strict legal definition of unlawful discrimination.

Generally, we define *bias* in dictionary terms: "prejudice in favor of or against one thing, person, or group compared with another, usually in a way considered to be unfair." [10]. To cause MJS outcome disparities, prejudices must be turned into actions, which can occur at the individual or institutional level.

In the context of the MJS, individual REG bias is bias on the part of individual actors within the system that is exercised through their individual decision-making discretion. It is important to note that individual bias can be both explicit and implicit. Decisions based on explicit bias are intentional and done with the purpose of disadvantaging (or advantaging) a person or group of people based on REG. Explicit bias is also called conscious bias; it is what we typically associate with overt racism or sexism. Decisions based on implicit—or unconscious—bias are not intentional, but if they happen frequently enough, they still result in REG outcome disparities. Implicit bias is often associated with REG stereotypes. Because individual bias is exercised through discretionary decision-making, finding evidence of it in data calls for identifying places in the system where individual discretion matters most to see if this is where disparities occur. This can be done at the level of the organization, the unit, or the individual decision-maker.

Also known as systemic bias, institutional REG bias is present when the policies, procedures, and practices that define a system consistently create positive or negative outcomes for affected individuals based on their REG status. As with individual bias, institutional bias can be intentional or unintentional. Unintentional institutional bias occurs when policies that were expected to be neutral end up having disparate, especially negative, effects on members of a particular REG group. In contrast, intentional institutional bias occurs when a particular policy or procedure was adopted to create advantage or disadvantage for members of a particular

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[2] For more on these concepts of justice, see references [7-9].

REG group. But, even in the case of intentional institutional bias, it is not correct to infer that all decision-makers within the system are individually biased—those responsible for implementing the biased policy may not be aware of or support the biased intention. To identify the presence of institutional bias in the MJS, it is necessary to collect and analyze data that reflect the outcomes of actions that are guided by regulation or policy, rather than individual discretion. For example, within the MJS, this includes policies that define what constitutes a disciplinary infraction (e.g., non-compliance with grooming standards) or that determine which more serious offenses are targeted for investigation.

Distinguishing between individual and institutional bias is helpful because it highlights both what parts of the MJS to study and what case-related factors should be considered when trying to isolate the effect of REG on a particular MJS outcome. It is also helpful for drawing policy conclusions. Evidence of individual bias suggests the need for a review of training curricula at the organization level or potential corrective action at the individual level. Evidence of institutional bias suggests the need for a review of policies that create MJS disparities to understand how they are implemented and to evaluate their operational legitimacy—either in terms military effectiveness or the effectiveness of the MJS itself.

This report

This report has four main sections:

- A summary of current concerns about bias in the MJS and why they matter
- Lessons learned from efforts to use administrative data to assess bias concerns in CCJS agencies
- A description of the MJS to serve as an analytical framework for identifying high-discretion points in the system and analyzing outcome disparities
- An assessment of the services' current ability to carry out an effective analysis plan

To help readers focus on topics of particular interest, each section is designed to stand on its own or as part of the overall narrative, and each section has a summary at the end. The report concludes with recommendations for addressing NDAA action (2).

Concerns about Bias in the MJS

In the early 1970s, the civil rights movement increased general awareness of racial justice issues, and the Vietnam War created political and civil unrest that exacerbated existing racial tensions in both US society and the military [11-12]. Within this context and in response to specific concerns about bias in the MJS raised by the Congressional Black Caucus and the National Association for the Advancement of Colored People (NAACP), in 1972, SECDEF Melvin Laird appointed the DOD Task Force on the Administration of Military Justice in the Armed Forces [13]. Taking as fact that observed racial and ethnic disparities in MJS outcomes reflected the existence of racial and ethnic discrimination within the system, the 1972 Task Force identified sources of discrimination within the MJS and made recommendations to eliminate them. Particularly relevant to this study, it also recommended that racial and ethnic identity codes be updated and a uniform system of data gathering be established to support analyses of REG disparities in MJS outcomes [13].

Roughly 20 years later, in 1991, these concerns resurfaced in response to a report by Arthur Fletcher, then-chairman of the US Commission on Civil Rights (USCCR), documenting complaints of discrimination, including unfair disciplinary treatment, by Black servicemembers stationed in Europe [12, 14-17]. The Fletcher Report was immediately followed by an investigative series on MJS inequities published in the *Dallas Morning News* [18-20], which prompted calls by the Congressional Black Caucus for a review of racial and ethnic disparities in the MJS and in other military career outcomes. Such a review was conducted over the next three years [20-24]. As in the early 1970s, concerns about MJS bias in the 1990s developed in the context of race-related events occurring in the broader US society. Specifically, in 1991 and 1992, as chairman of the USCCR, Fletcher was overseeing a study of factors contributing to increased racial and ethnic tensions in the country. In May 1992, the USCCR conducted a two-day National Perspectives Hearing on multiple topics, including the CCJS [25]. These hearings took place just two months after the Los Angeles riots that occurred in response to the acquittal of three police officers for the beating of Rodney King.

Recent events, both inside and outside the military, have renewed concerns about MJS bias. In this section, we describe the sources of these contemporary concerns. We begin, however, by explaining why concerns about MJS bias matter. Throughout this section, we make distinctions between perceptions and reality when it comes to MJS bias and explain why both are important.

Why concerns about MJS bias matter

To demonstrate why concerns about bias in the MJS matter, we start with the following characterization of the purpose of military law provided in the 2015 report of the Military Justice Review Group (MJRG), which conducted a two-year, "comprehensive and holistic" review of the Uniform Code of Military Justice (UCMJ) and its application in the MJS:

> The current structure and practice of the UCMJ embodies a single overarching principle based on more than 225 years of experience: a system of military law can only achieve and maintain a highly disciplined force if it is fair and just, and is recognized as such both by members of the armed forces and by the American public. [26]

We then break this statement down into the following component propositions and use statements by several generations of MJS legal experts to support them:

- An effective MJS promotes good order and discipline
- The MJS must be fair and just to be effective
- The MJS must be perceived as fair and just to be effective
- The MJS must be perceived as fair and just to ensure public support

To the extent that these propositions hold true, the concerns about MJS bias described in the following sections—whether they are based on reality or perception and whether they are held by servicemembers or members of the public—have important implications for military readiness.

An effective MJS promotes good order and discipline

Underlying the establishment of a justice system that is specific to the military is the idea that maintaining good order and discipline is integral to maintaining combat effectiveness and warfighting readiness [26-28]. Thus, a 1960 review of the UCMJ—conducted by a committee of Army judge advocates and other senior leaders and known as the Powell Report—defined an effective MJS as one that not only fosters "good order and discipline at all times and places," but also "supports the mission of the Armed Forces both in war and in peace" and contributes to "the maintenance of armed forces in instant readiness during periods of nominal peace and international tension" [29].

So, what exactly is good order and discipline? Even though maintaining it is cited as a primary purpose and defining feature of the MJS, there is no formal definition in either the UCMJ or DOD policy [30]. Therefore, we must rely on practitioners' interpretation of the term. The Powell Report defined military discipline as "an attitude of respect for authority developed by precept

and by training" that is "not characteristic of a civilian community" [29]. More recently, a 2010 essay by members of the Air Force Legal Operations Agency provided this definition: "Combat forces are required to overcome both any natural reluctance to use lethal force and to place themselves in harm's way. Discipline is the impetus that ensures our forces engage the enemy"[31]. In a separate essay in the same journal, the then-Air Force Judge Advocate General (JAG) said simply, "Without discipline, a fighting force is little more than a dangerous mob" [32].[3]

The MJS must be fair and just to be effective

Although there may not exist a precise definition of good order and discipline, there has been broad agreement over the years that the MJS must be fair to achieve it. In terms of the guiding principles defined at the beginning of this report, the MJS must deliver procedural justice to be effective.

For example, in 1960, the authors of the Powell Report asserted their belief that "in all aspects of our judicial procedures and the handling of allegations against soldiers, any deviation from traditional American concepts of fair play and justice would be damaging to the maintenance of discipline" [29]. Twelve years later, when directly addressing the issue of racial and ethnic discrimination in the MJS, the 1972 Task Force took as given the idea that any discriminatory "patterns or practices" in the implementation of the MJS would have an adverse effect on the respect for law and authority that provide the foundations of good order and discipline. The connection, they said, was "presumed" [13]. Finally, writing in 2010, the Air Force legal experts put it more succinctly: "To be an effective disciplinary tool, punishment administered under the UCMJ needs to be fair and timely" [31].

Despite these blanket statements, it is sometimes argued that within the MJS, there must be a balance between discipline and justice. A 2020 report by the Congressional Research Service (CRS) explained this idea by comparing the fundamental goals of the CCJS to those of the MJS. Specifically, according to the CRS, basic objectives of the CCJS are to discover the truth in order to punish the guilty, acquit the innocent, and prevent and deter further crime.[4] The MJS, they

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[3] The 1972 Task Force on the Administration of Military Justice in the Armed Forces expanded on this theme: The fundamental need for discipline of the armed forces cannot be "ignored or glossed over. The services simply cannot function without it, and the country that fails to require its military forces to preserve discipline, that is, responsiveness and obedience to its lawful authority, will soon find itself defenseless, its forces turned into uncoordinated gangs and individuals. Apart from failure in its mission, the members could become a threat to the peace of the Republic they are sworn to defend" [13].

[4] In addition to these objectives, other sources note that an objective of the civilian corrections system, as one component of the CCJS, is to not only punish, but also rehabilitate, convicted offenders [33-35].

said, shares these objectives "in part," but also serves to enhance military discipline and, thereby, provide an effective national defense. Thus, according to the CRS, "the military justice system is designed to strike a balance between individual liberty and a unique need for discipline" [28].

The expert reviews conducted over many decades have, however, strongly rejected this argument as shown in the following excerpts from the 1960 Powell Report, the 1972 Task Force report, and the 2015 MJRG report, respectively:

> In the development of discipline, correction of individuals is indispensable; in correction, fairness or justice is indispensable. Thus, it is a mistake to talk of balancing discipline and justice—the two are inseparable. An unfair or unjust correction never promotes the development of discipline. [29]

> There can be no real and lasting discipline for American servicemen that does not rest upon a fair and just administration of our law as it impacts upon the individual. So no need is seen to consider the sacrifice of justice for the sake of discipline. The two are, for American servicemen, inextricable, and the latter cannot exist without the former....The achievement of a fair and just administration of law in the armed forces is, then, obviously a most difficult and delicate task. There is in it no room at all for discrimination, unfair treatment, by or upon any groups or individuals. [13]

> This Report's proposals are made with full recognition that the necessity for justice and the requirement for discipline are inseparable. [26]

The MJS must be perceived as fair and just to be effective

In all three of the UCMJ reviews that we have cited, the statements asserting that the MJS must *be* fair were accompanied by statements that it must also *be perceived as* fair. Specifically, underlying the statement from the MJRG report with which we began this section were two statements from the 1960 and 1972 reports. The Powell Report stated, "All correction must be fair; both officers and soldiers must believe that it is fair" [29]. The statement from the 1972 Task Force report was even stronger: perceptions of unfairness "are as corrosive an influence on the attitudes of servicemen toward the military justice system as its actual unfairness, and must be cured" [13].[5]

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[5] Although the authors of the Powell Report and the members of the 1972 Task Force agreed on the importance of perceptions, their own starting perceptions about the fairness of the MJS were quite different. In its discussion of commanders' corrective powers within the MJS, the committee of Army leaders responsible for drafting the Powell Report said:

Two additional sources expand on why perceptions matter from a behavioral perspective. In 1971, the NAACP released a publication that was a direct precursor to the 1972 Task Force. In that publication, the NAACP said that perceptions of the system are as real as the system itself because people "are prone to act and react on the basis of their perception…" [36]. More specifically, in their essay on why justice matters, the Air Force legal experts noted that research has shown that when people perceive a punishment as unfair, imposition of that punishment can "backfire," making it ineffective as a means of maintaining good order and discipline [31].

The MJS must be perceived as fair and just to ensure public support

Finally, the MJS must also be perceived as fair by members of the civilian population to ensure continued public support for the MJS and for the military as a whole. As were the previous three propositions, this proposition is supported not just by the motivating MJRG statement, but also by the authors of the Powell Report more than 50 years earlier. According to that group of senior Army leaders, yet another defining feature of an effective MJS is that it promotes the confidence not only of military personnel, but also of "the general public in the overall fairness of the system" [29].

A particularly important aspect of public support is congressional support because of Congress's constitutional responsibilities and authorities to support and regulate the armed forces.[6] Indeed, it was using this authority that Congress enacted the UCMJ in 1951 due to

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> Our recommendation is founded on these premises: officers who command units in our Army are fair; they are more interested in the welfare of members of their command than anyone else; they have the integrity and the discrimination to apply corrective measures justly; and they should have the widest possible authority and bear complete responsibility for their decisions. [29]

In contrast, when describing its basic tasking from the SECDEF, the 1972 Task Force members said:

> We were not asked to substantiate the existence of racial discrimination in the administration of justice in the armed forces. We believe its existence was assumed in the Secretary's charge. Neither were we asked to verify the disparity in punishment rates between majority and minority servicemen: that fact had already been established. [13]

These differences in starting assumptions could be based on multiple factors, including differences in the two groups' initial taskings, the racial and professional make-up of the group members, existing force demographics, and the broader social climate.

[6] Clauses 12 and 13 of Article 1, Section 8 of the US Constitution give Congress the power to raise and support armies and to provide and maintain a navy; Clause 14, in turn, gives Congress the power to govern and regulate land and naval forces [37]. Because of Clause 14, the MJS is based on Article I of the Constitution, not Article III, which governs the civilian judicial system [26, 28, 38].

widespread complaints that, during World War II, CMs "were wholly lacking in independence and their decisions were dictated in advance of the trial by the commanders who appointed them" [26]. Since then, although the UCMJ has been modified multiple times, perceptions that the MJS lacks complete judicial independence have persisted into the 21st century. In particular, concerns have focused on commanders' control over CMs in terms of both pre-trial referral decisions and post-trial clemency decisions.[7] It was in response to these concerns that Congress passed the Military Justice Act of 2016 (MJA 2016) and imposed additional restrictions on commanders' authority in the FY 2022 NDAA. These recent concerns are addressed next.

Sources of concern: REG disparities in MJS outcomes

Two recent reports reignited concern about fairness and bias in the MJS. Both studies were based on MJS data from the 2010s and, as such, constituted efforts to establish facts about REG disparities in MJS outcomes. In other words, they were intended to define reality.

The first report [39] was released in 2017. It was conducted by Protect Our Defenders (POD), a non-profit advocacy organization "dedicated to ending sexual violence, victim retaliation, misogyny, sexual prejudice, and racism in the military and combating a culture that has allowed it to persist" [39].

The second report [2], released almost exactly two years later, in 2019, was a response to the first. It was conducted by the GAO, which is headed by the United States Comptroller General and provides Congress, the heads of executive agencies, and the public with fact-based, nonpartisan information to improve public policy and government operations.

The POD report

In the course of their work as former military members or as advocates for current military members, POD staff believed they had seen indicators of racial disparities in the MJS. To look for objective evidence of such disparities, POD submitted to each military service a Freedom of Information Act (FOIA) request for demographic information on military justice and disciplinary proceedings.

Using the data provided by each service and the formulas shown in equations (1) and (2) below, POD created disparity indexes to determine how much more or less likely non-White

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[7] For more on the history of the UCMJ, see [26, 38]. For more on the MJA 2016, see [28].

servicemembers were than White servicemembers to face CMs or nonjudicial punishment (NJP) proceedings.[8] POD calculated that, depending on the service and type of disciplinary or judicial action, Black servicemembers were 1.3 to 2.6 times more likely than White servicemembers to have an action taken against them in an average year. Although they did not provide any objective criteria for determining whether a particular index value represents a large or small difference, POD characterized these results as indicating that, for every year reported and across all service branches, Black servicemembers were "substantially" more likely than White servicemembers to face military justice or disciplinary actions. The findings for other race and ethnicity groups varied, with some evidence that non-Black people of color may have had higher military justice or disciplinary involvement than White servicemembers.

$$Rate\ per\ thousand\ (RPT) = \frac{Number\ of\ justice\ or\ disciplinary\ actions}{Total\ number\ of\ servicemembers} \times 1{,}000 \qquad (1)$$

$$Disparity\ Index = \frac{RPT\ for\ servicemembers\ of\ color}{RPT\ for\ White\ servicemembers} \times 1{,}000 \qquad (2)$$

Although their methodology did not control for any factors other than service and race or ethnicity, the POD researchers considered military membership, in general, to be an equalizing factor. Specifically, they hypothesized that selection for military service based on aptitude, education level, and lack of prior criminal behavior, in addition to the regular employment and steady income provided by military service, should cover many of the socioeconomic factors that have been shown to be correlated with involvement in the CCJS. As a result, they interpreted their findings as evidence that racial bias or discrimination "may exist" among decision-makers in the MJS.

The GAO report

The July 2017 House Report that accompanied the FY 2018 NDAA directed the US Comptroller General to submit to Congress a "report on race data" in the MJS that would include both an assessment of the quality of data being collected by the services and an analysis of those data to determine whether there are REG disparities in the prosecution of cases under the UCMJ [40]. To fulfill this tasking, the GAO collected personnel, investigations, and military justice data from each armed service for FY 2013 through FY 2017. The GAO's findings and

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[8] This metric is more commonly known as a disproportionality index; *disparity index* is the term used in the POD report.

recommendations related primarily to data collection and analysis; they are very similar to those of the 1972 Task Force.[9]

Data quality

To assess the quality of the services' data, the GAO compared their systems and procedures for collecting data to DOD and service guidance and relevant federal internal control standards. In particular, the GAO researchers reviewed user manuals and other documentation to determine what REG data should be collected and maintained, analyzed the data they received to determine the completeness of the information, and interviewed agency officials who manage and use the databases for their insights about the reliability of the data. Following these steps, the GAO found multiple shortcomings and inconsistencies across the services. In addition, because each service uses a different database to collect and maintain information on personnel, investigations, CMs, and NJPs, the GAO found that there were also data inconsistencies within services across different databases.

Starting with REG data, the GAO found that the services were collecting gender information, but there were inconsistencies within and across services in whether unknown or unspecified gender was provided as an option. The Coast Guard's military justice database did not allow queries by gender. The services were also collecting information about race and ethnicity, but again, the information was inconsistent both within and across services. These inconsistencies existed despite the existence of long-established standards for the classification of federal data on race and ethnicity [42].[10]

The GAO team also found cross-service inconsistencies in data related to MJS outcomes themselves. Although all the services were collecting information about investigations conducted by military criminal investigative organizations (MCIOs), the Air Force database did not include information on investigations conducted by its military law enforcement units, and no service captured information about command-led investigations. Similarly, all the services collected complete information about special courts-martial (SPCMs) and general courts-martial (GCMs), but only the Air Force and Marine Corps collected complete information on summary courts-martial (SCMs) and NJPs. Finally, GAO also noted that there was no

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[9] See [2, 13, 41].

[10] The guidance on the collection and reporting of race and ethnicity data was issued by the Office of Management and Budget in 1997 and was to be adopted by all federal agencies no later than 2003 [42]. The services' lack of compliance with the guidance in their personnel data was noted by the Military Leadership Diversity Commission in 2011 [43]. As a result, the commission made the following recommendation: "To ensure compatibility across services, DOD shall establish a universal data collection system, and the analyses of the data should be based on common definitions of demographic groups, a common methodology, and a common reporting structure" [44].

requirement for reporting REG information about MJS outcomes or for determining when or how observed disparities should be addressed.

Based on these findings, GAO recommended that all the services consistently use the federal standards for collecting race and ethnicity information in all their databases and that the Army, Navy, and Coast Guard collect complete NJP data. They also recommended that SECDEF require the services to include demographic information in their annual military justice reports, as well as establish guidance that both specifies when demographic disparities in MJS outcomes should be further reviewed and describes the steps to conduct such reviews. The SECDEF recommendations were accepted and addressed in the FY 2020 NDAA.

Outcome disparities

To determine whether REG disparities exist, the GAO team used multivariate regression techniques to quantify the relationships between REG and MJS outcomes, holding rank and education level constant. Specifically, for all five of the then-existing forces[11], the GAO analyzed the likelihoods that an individual would be:

- The subject of a recorded investigation, defined as an investigation recorded by an MCIO[12]
- Tried in an SPCM or GCM, with or without a recorded investigation
- Convicted by an SPCM or GCM

For the Air Force and Marine Corps, the GAO also examined the likelihoods of being tried in an SCM or receiving an NJP.

The GAO analysis found that REG disparities did exist over the study period, and that they were more likely to be associated with actions that first brought servicemembers into the MJS. Specific results were as follows:

- Black, Hispanic, and male personnel were significantly more likely than White or female personnel to be the subjects of recorded MCIO investigations and to be tried by SPCM or GCM

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[11] The five forces studied by the GAO are the Army, Navy, Marine Corps, Air Force, and Coast Guard. The Space Force, which was created in 2019, did not exist during the GAO study and analysis period.

[12] More specifically, the GAO report [2] defined "recorded investigation" as follows: "Investigations are recorded in the MCIO databases when a servicemember is the subject of a criminal allegation; for purposes of this report, we say the servicemember had a 'recorded investigation' to describe these cases." For the Army, Navy, and Marine Corps, the data included cases investigated by both the relevant MCIO (i.e., Criminal Investigation Command and the Naval Criminal Investigative Service, respectively) and the military police. For the Air Force and Coast Guard, the data included investigations by the relevant MCIO only (i.e., Office of Special Investigations and Coast Guard Investigative Service).

- In most services, a recorded MCIO investigation decreased the size and statistical significance of REG disparities in the likelihoods of being tried by SPCM or GCM

- REG were not statistically significant factors in the likelihood of conviction in SPCMs or GCMs

- Compared with White personnel, non-White personnel were either less likely or equally likely to receive a more severe punishment

Although the GAO analysis controlled for a few additional factors beyond service and REG (e.g., age and education level), the authors explicitly stated that their results were "associational" and did not establish any causal relationships between REG and MJS outcomes. In particular, the GAO team could make no conclusions regarding the presence or absence of unlawful discrimination because, according to the GAO, "that is a legal determination that involves other corroborating information along with supporting statistics." More generally, the authors did not identify any causes for the disparities they identified or draw any conclusions about bias in the military justice process. Thus, the GAO recommended that SECDEF conduct an evaluation to identify the causes of REG disparities in the MJS and take appropriate steps to address them. Like the data-related recommendations to SECDEF, this recommendation was accepted and addressed in the FY 2020 NDAA.

Sources of concern: Perceptions of bias in the MJS

Perceptions about bias in the MJS are shaped not only by publicly available MJS data, but also by traditional media, social media, and broader social factors. Here, we consider three examples of how all these factors are influencing the current discussion: the media response to the POD and GAO reports, the ongoing debate about the treatment of military SA in the MJS, and the events of the summer of 2020. We also review the results of recent surveys to show the extent to which military personnel themselves perceive the MJS to be affected by bias, based on their personal service experiences.

The media response to the POD and GAO studies

Although both POD and the GAO were careful to say that their analyses did not provide conclusive evidence of bias in the MJS, we found multiple media stories that cited both reports as evidence that the MJS is indeed a biased system.[13] Three of these stories were accompanied

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[13] See references [45-51].

by attention-grabbing headlines that disregarded any caveats included in the reports themselves:

- "The Military Justice System Has A Race Problem, According to DOD Data," *Task & Purpose*, 2017 [45]
- "Implicit Bias Affects Military Justice," *Proceedings*, 2019 [46]
- "Military Discipline has a Racial Bias Problem that Threatens National Security," National Public Radio, 2021 [51]

In addition to these stories from the news media, the Black Veterans Project, a non-profit organization that advocates for military justice, used the POD and other findings to support the following statement on its website:

> Our nation's military has a shameful legacy of racial discrimination deeply entrenched within its justice system. Stark racial inequities in punishment strip Black service members of equal opportunity while racial bias in recruitment and career advancement continues, maintaining a systemic racial hierarchy across the rank and file. [52]

Combined, these outlets reach a wide range of military and non-military audiences and, regardless of what the data actually showed, have the potential to create a broad perception that the MJS is biased.

Treatment of sexual assault in the MJS

The Invisible War, a documentary released in January 2012, described problems associated with all five services' responses to SA within their ranks. Specifically, the film highlighted the lack of appropriate or timely response in a system in which the unit commander, who was then responsible for making key decisions about prosecuting reported assaults, may have been the alleged perpetrator or a friend of the alleged perpetrator. The film also raised issues about retaliation by presenting accounts of victims who believed they had to choose between speaking up and keeping their careers [53]. In addition, although the film was centered around the personal stories of recent victims, it also illustrated the persistence of the problem by recounting past high-profile SA cases, such as those occurring at the Navy's annual Tailhook Association conference in 1991, the Army's Aberdeen Proving Ground in 1996, and the Air Force Academy in 2002.[14]

Thus, the film heightened an existing perception that the treatment of SA cases in the MJS is open to bias because of the wide discretion held by commanders in making their disposition

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[14] For a summary of the SA cases between 1991 and 2012, see [54].

decisions.[15] Within this context, people perceive at least two types of potential bias. The first is institutional bias that is the product of a male-dominated culture in which SA is both prevalent and tolerated [55]. The second is individual bias due to inherent conflicts of interest that arise because the commander is likely to know parties involved in the case and/or because he or she may have an incentive to cover up illegal actions that occur under his or her leadership [54].

In response to the issues raised in *The Invisible War*, Senator Kirsten Gillibrand (D, New York), serving as chair of the Senate Armed Services Subcommittee on Personnel, presided over a senate hearing on military SA in March 2013. The hearing included testimony from SA survivors and written statements from victim advocates, who all called for reforms to increase judicial and investigative independence and limit the role of the commander in the handling of SA cases [57].[16] Following the hearing, Senator Gillibrand introduced the Military Justice Improvement Act (MJIA) of 2013, whose primary provisions removed decisions about SA cases from the military chain of command [58].

The MJIA was not enacted at the first attempt in 2013, nor were the multiple versions that were introduced between 2013 and 2020.[17] Over roughly the same period, reports of SA that occurred during military service increased substantially, and the estimated incidence of military SA remained essentially the same.[18] Combined, the lack of passage of the MJIA and the

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[15] For example, DOD and Congress had already sponsored several SA-related task forces, including the Defense Task Force on Care for Sexual Assault Victims and the DOD Task Force on Sexual Harassment & Violence at the Military Service Academies in 2004, and the Defense Task Force on Sexual Assault in the Military Services in 2005 [55]. Outside of the government, at least two non-profit organizations were already addressing the treatment of SA in the MJS. In addition to POD, which was founded in 2011, the Service Women's Action Network (SWAN) was founded in 2007 to hold sex offenders accountable in the MJS and eliminate barriers to disability claims for those who have experienced military sexual trauma [56].

[16] Testimony at the hearing also raised the issue of male SA victims. Although *The Invisible War* included some SA cases in which the victims were male, a second documentary, *Justice Denied*, focused on male victims of military SA was released in June 2013 [57]. This film highlighted the fact that, while the *incidence* of SA is higher among female servicemembers, the *numbers* of male and female victims are roughly the same because there are more men than women in the military. The film's narrative focused on why these male victims did not feel safe to report their attacks under current rules.

[17] Although the MJIA was not enacted, the FY2014 NDAA made several MJS reforms that were designed to limit commander discretion in SA cases. These included a requirement to review decisions not to refer sex-related offenses to CM, the removal of the character and military service of the accused from the things a commander should consider in deciding how to dispose of an offense, and a requirement for commanders to immediately forward reports of sex-related offenses to the responsible MCIO. In addition, in April 2012, SECDEF Leon Panetta issued a memo withholding initial disposition authority for penetrative sex offenses (rape and sexual assault) to commanders in the grade of O-6 or higher [59].

[18] See references [60-61].

lack of improvement in SA incidence perpetuated the perception that SA outcomes are affected by institutional and personal biases in the MJS.

The summer of 2020

At the end of a decade characterized by multiple calls for MJS reform, two unrelated events in the summer of 2020—the murders of Vanessa Guillén and George Floyd—not only brought the issue back to the forefront of public attention, but also linked the issue of racial and ethnic outcome disparities with the treatment of SA to create one overall indictment of the MJS. As a result, the FY 2022 NDAA contained provisions for substantial changes to the MJS and the UCMJ, as well as a requirement for all five services to evaluate and, if needed, reform their MCIOs [62].

Vanessa Guillén

Between April and July 2020, the Army's response to the disappearance and murder of Army Specialist Vanessa Guillén by a fellow soldier at Fort Hood sparked public outrage and protests. It also created the #IAmVanessaGuillén movement, in which military survivors of sexual trauma used social media with the hashtag #IAmVanessaGuillén to share their stories [63].

The #IamVanessaGuillén movement prompted the Army to initiate the Fort Hood Independent Review Committee (FHIRC) to assess the Fort Hood command climate and DOD to establish the Independent Review Commission on Sexual Assault (IRC) to assess the military's treatment of both SH and SA. The reports from the two assessments were released in November 2020 and July 2021, respectively [64-65]. Both identified one hypothesized source of MJS bias as existing not only at Fort Hood, but across all the services: military culture and command climates are permissive of both SH and SA. Both efforts also found that MCIOs lack sufficient numbers of qualified personnel to effectively accomplish their investigative missions [64-65]. The results and recommendations from both reports were widely reported in the news media.

In September 2020, as a direct response to the movement, the I Am Vanessa Guillén Act was introduced in both chambers of Congress [66-67]. As did the MJIA, the new bill called for removing decisions about prosecuting SA cases from the chain of command. In addition, it called for the establishment of an independent prosecutor's office within each military service to handle these cases, the provision and training of independent investigators outside of the chain of command, and the creation of a standalone punitive article for SH under the UCMJ. The act was not adopted initially, but it was reintroduced in May 2021 [68] and the major provisions listed here were included in the FY 2022 NDAA [62, 69-70].

George Floyd

The murder of George Floyd by Minneapolis police officers on May 25, 2020, sparked racial justice protests in cities across the nation and the world [71]. It also reignited the #Black Lives Matter (BLM) movement that was born in 2013 in response to the acquittal of George Zimmerman for the murder of Black teenager Trayvon Martin. Over the next year, the BLM slogan was claimed by the nation as calls for racial justice touched "seemingly every aspect of American life on a scale that historians say had not happened since the civil rights movement of the 1960s" [72].

From the beginning, military leaders understood that they must address racism in the military in the wake of both the murder and the protests. The first to speak out was Chief Master Sergeant of the Air Force Kaleth Wright who, on June 1, posted a statement on Twitter that began, ""Who am I? I am a Black man who happens to be Chief Master Sergeant of the Air Force. I am George Floyd..." [73]. By June 3, all members of the joint chiefs of staff, as well as many enlisted and civilian leaders, had made statements calling for renewed efforts to eliminate racial and ethnic discrimination within the services [74]. More specifically, Air Force leadership committed to conducting a review of its MJS [75] and, on June 30, the Navy announced the creation of Task Force One Navy (TF1N) to address systemic racism in the Navy, including racial differences in MJS outcomes [76].

Within this context, supporters of the MJIA[19] argued that decisions and investigations about all serious non-military UCMJ offenses—not just SA and SH—should be taken out of commanders' hands in order to address racial and ethnic bias in the system. Senator Gillibrand argued that expanding the MJIA provisions to cover all serious non-military offenses is necessary "because the current military justice system is simply not delivering justice, especially not to service members of color" [77]. Citing the findings of the 1972 Task Force, Congressman Anthony Brown (D, Maryland), who is a veteran and former Army JAG officer, noted that prosecutorial disparities in the military have existed for a long time [78], but the murder of George Floyd, "propelled many of us to say: 'Hey, this is a real opportunity here to fix these inequities and disparities'" [77].

Although the FY 2022 NDAA transferred prosecutorial discretion for 11 specified offenses, including SA, murder, manslaughter, and kidnapping (as well as attempts, solicitations, and conspiracies to commit one of those 11 specified offenses) to independent special trial counsels, it left decisions about SH and all other serious crimes with commanders and, therefore, in the chain of command. Senator Gillibrand and others have characterized this

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[19] In April 2021, the MJIA was revised and renamed the Military Justice Improvement and Increased Prevention Act (MJIIPA).

narrow list of "covered offenses" as inadequate for addressing racial and ethnic disparities in MJS outcomes because it does not include offenses such as larceny and assault for which they say servicemembers who are racial minorities are disproportionately charged. Thus, for many in Congress, the issue remains unaddressed [50, 78-79].

Servicemembers' perceptions of bias in the MJS

In addition to understanding the public debate about bias in the MJS, it is also important to understand servicemembers' perceptions of the MJS based on their actual experiences in the military. Here, we review relevant results from the 2017 Workplace and Equal Opportunity Survey of Active Duty Members (WEOA), which is fielded to members of all five services, as well as publicly available results of service-specific surveys from the Air Force and Army and of focus groups from the Navy.

Workplace Equal Opportunity Survey of Active Duty Members

The WEOA is conducted every four years to assess "self-reported experiences of and the climate surrounding racial/ethnic harassment and discrimination in the military" [80].[20] The 2017 WEOA was the fourth to be conducted and it included a new question related to perceptions of the MJS:

> In the past 12 months, did someone from the military punish you unfairly because of your race/ethnicity? For example, were you disciplined more harshly for misconduct than someone from another race/ethnicity? [80]

Responses for DOD and each service are summarized in Table 1. Although the perceived incidence of unfair punishment is small overall—only 1.9 percent in DOD and only 0.8 percent in the Coast Guard—non-White servicemembers were more likely than White servicemembers to perceive that they experienced unfair punishment. Among non-White servicemembers, Black servicemembers were the most likely to perceive that they had been punished unfairly.

It is also noteworthy that, when describing features of the one situation of racial/ethnic harassment/discrimination in the last 12 months with the greatest effect, 53 percent of DOD respondents indicated that at least one alleged offender was someone in a leadership position. More specifically, 37 percent of DOD respondents indicated that the alleged offender was in their chain of command [80]. Although these results apply to any type of incident, not just

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[20] The WEOA is part of a quadrennial cycle of human relations surveys mandated by law. The other surveys in the cycle are the Armed Forces Workplace and Gender Relations of Active Duty Members (WGRA) and reserve-component versions of both the WEOA and the WGRA. At the completion of each survey, the law requires SECDEF and SECHS to submit reports on survey results to Congress [43].

incidents of unfair punishment, they are relevant for understanding bias in the MJS because of the commander's role in making disposition decisions.

Table 1.   Percentage of WEOA respondents indicating that someone in the military punished them unfairly in the last 12 months

2017	Total	White[a]	Total Minority[b]	Black[c]	Hispanic	Asian
DOD	1.9	0.9	3.3	5.5	2.3	2.6
Air Force	1.2	0.5	2.3	3.4	2.0	0.6
Army	2.5	1.0	4.2	5.8	3.8	3.8
Marine Corps	1.0	<0.1	2.3	6.8	0.4	3.8
Navy	2.4	1.6	3.4	6.3	1.7	2.3
Coast Guard	0.8	0.5	1.6	4.5	1.2	2.7

Sources: DOD, Air Force, Army, Marine Corps, and Navy data are from [80]; Coast Guard data are from [81].
[a] For DOD overall and in all DOD services except the Navy, White percentages are significantly lower than total percentages at the 1 percent level. Information on statistical significance was not available for the Coast Guard.
[b] Includes those who identified as Black, Hispanic, American Indian/Alaska Native (AIAN), Asian, Native Hawaiian/Pacific Islander (NHPI), or two or more races.
[c] For DOD overall and for the Marine Corps, Black percentages are significantly higher than total percentages at the 1 percent level. Information on statistical significance was not available for the Coast Guard.

Air Force Independent Racial Disparity Review

A report from the MJS review promised by the Air Force in June 2020 was submitted by the Inspector General of the Department of the Air Force (DAF-IG) in December of that year [82]. The Independent Racial Disparity Review (IRDR) focused primarily on disparities between Black and White members of the Air Force and Space Force. In addition to analyzing data on MJS outcomes, the study team also conducted an anonymous survey of more than 123,000 Airmen and Guardians to capture the voice of the force. Table 2 summarizes responses to the following statements about fair treatment within the DAF MJS:

- I believe racial bias (including potential unconscious bias) exists:
  - In the conduct of investigations
  - When my leadership takes the following actions:
    1. Informal feedback, mentoring, and formal verbal counseling
    2. Letters of Counseling, Letters of Admonishment, Letters of Reprimand
    3. Referral performance reports, unfavorable information files, and control roster
    4. Separations and discharges

5. Article 15s (i.e., NJPs) and CMs

- I believe black servicemembers are less likely to receive the benefit of the doubt in Air Force discipline.

Despite the small percentages of Air Force members who indicated on the 2017 WEOA that they had been punished unfairly in the last year, these data show that substantial shares of Black and other non-White IRDR survey respondents perceived that bias exists in the DAF MJS. In particular, a majority of Black respondents indicated that Black servicemembers are less likely to "receive the benefit of the doubt" in DAF discipline. Also of note are the substantial differences between Black and White respondents' perceptions, and the fact that most Black general officers believed that bias exists across the DAF MJS. In particular, 73 percent of Black general officers who responded to the survey believed that bias affects Article 15s and CMs.

Table 2. Percentage of IRDR survey respondents indicating their agreement with statements regarding bias in the DAF MJS

Question	Enlisted			Officers			General Officers	
	Black	White	Other	Black	White	Other	Black	White
I believe racial bias (including potential unconscious bias) exists in the conduct of investigations (CDE, EEO, IG, and OSI).[a]								
% agree	39	12	20	48	16	26	64	17
I believe racial bias (including potential unconscious bias) exists when my leadership takes the following actions:								
% agree action #1	46	11	23	54	14	28	64	18
% agree action #2	45	10	20	54	14	28	55	13
% agree action #3	41	9	18	43	9	19	55	9
% agree action #4	39	7	17	41	8	16	64	9
% agree action #5	36	7	15	54	14	28	73	9
I believe Black servicemembers are less likely to receive the benefit of the doubt in Air Force discipline.								
% agree	59	10	19	64	12	22	82	12

Source: Reference [82].
[a] The investigation types indicated are: CDE = Civilian Developmental Education; EEO = Equal Employment Opportunity; IG = Inspector General; and OSI = Office of Special Investigations.

The following paragraph summarizes the Air Force conclusions from the survey data and the results of other listening efforts. It provides an eloquent description of the potential gaps in knowledge that are not filled by analyses of MJS outcome data:

The survey data, interviews, and group discussions confirm that racial disparity in DAF discipline and developmental opportunities is deeper than the quantitative disparity numbers indicate....The quantitative disparity numbers are indicators, symptoms, or cues of how the AF discipline system works and how opportunities to succeed are distributed. When combined with personal experiences, that often begin before members join the AF, these cues act as amplifiers resulting in a significant percentage of all DAF service members believing black service members are unfairly treated in the military discipline process and not given the same opportunities to succeed as white service members. [82]

Department of the Army Career Engagement Survey

We did not find an Army survey dedicated to the issue of MJS bias. We did, however, find questions about the fairness of adverse actions in the Department of the Army Career Engagement Survey (DACES). The DACES is a "command surveillance instrument" designed to inform "Army Senior Leaders about retention trends as they weigh critical policy decisions" [83]. It was created by the Army Talent Management Task Force and was fielded for the first time over the year ending March 31, 2021. The report summarizing the first year of data was submitted in June 2021.

The DACES includes multiple questions in four topic areas: well-being, Army life, organizational climate, and concerns about discrimination or SA. The organizational climate section asked respondents to indicate, on a scale of 1 to 5, which of 13 items influenced their stated plans to leave or stay in the Army. Among the 13 items, two related to fairness in the MJS:

- The level of fairness in "Adverse actions" (for example, reprimand, UCMJ, or nonjudicial punishment) administered *to others*

- The level of fairness in "Adverse actions" (for example, reprimand, UCMJ, or nonjudicial punishment) administered *to me*

The responses to these items are summarized in Table 3. The data show that about 30 percent of respondents indicated that the level of fairness in adverse actions administered to themselves or others was an important reason to stay, while about 25 percent indicated that the level of fairness in adverse actions administered to others was an important reason to leave. Only 11 percent indicated that fairness in adverse actions administered to themselves was an important reason to leave.

As an assessment of bias in the Army's MJS, these data are difficult to read. In particular, the data in the report were not broken out by REG, so we cannot say whether there are demographic differences between respondents who considered fairness in adverse actions to be a driver of intentions to leave or stay. More generally, out of many reasons in each of the

four topic areas, the level of fairness in adverse actions was not a "top 5" extremely important reason to stay or leave [83]. Overall, though, the fact that one-quarter of respondents indicated that the level of fairness in adverse actions administered *to others* was a reason to leave suggests that a non-trivial portion of the Army population perceives some level of bias in the Army MJS and that this perception might affect their retention behavior.

Table 3. Percentage of DACES respondents indicating that the level of fairness in "adverse actions" influenced their plans to leave or stay in the Army

Fairness of adverse actions administered to:	Important reason to leave			Important reason to stay		
	Extremely	Somewhat	Combined	Extremely	Somewhat	Combined
Others	12.3	13.3	25.6	18.8	12.6	31.4
Me	6.6	4.9	11.4	15.7	14.0	29.6

Source: Reference [83].
Note: Respondents were asked to select the option that reflected the degree to which each item influenced their plans to leave or stay in the Army: 1 = extremely important reason to leave; 2 = somewhat important reason to leave; 3 = not an important reason to leave or stay; 4 = somewhat important reason to stay; 5 = extremely important reason to stay.

Task Force One Navy focus groups

To collect Sailors' perspectives on systemic racism and the needs of underserved communities in the Navy, a study team from TF1N conducted 285 focus groups with almost 900 servicemembers between August 13 and September 11, 2020 [84]. The focus group discussions covered five topic areas: recruiting and accession, career progression and development, retention, military justice, and strategies to address inequities and increase inclusion. On the topic of military justice, focus group participants were asked the following questions about commanders' implementation of disciplinary actions within the Navy's MJS:

- Please think about situations related to NJP ("Captain's Mast"). What are some instances that you have experienced or observed that interfered with the fairness of the process?

- What are some instances that you have experienced or observed where there were inequalities related to written counseling statements and disciplinary review boards?

To identify key themes from participants' responses to these questions, an independent analysis team from CNA applied natural language processing (NLP) to summary notes taken

by the facilitators of each focus group session.[21] In the military justice topic area, three themes were listed in the final report on the focus group analysis [84]. They are summarized as follows.

In general, most participants had not experienced or noticed inherent biases in the Navy's MJS processes. Some participants did, however, notice cases where different punishments were given for the same crime, which made them wonder whether gender and racial biases were at play. Other participants indicated that lack of transparency in Navy disciplinary processes created the opportunity for people to question whether REG or sexual orientation factor into punishment decisions. More specifically, citing the example of recent policy changes designed to address culture differences (e.g., changes in grooming standards), some participants indicated that it is difficult for commanders to recognize violations of regulations that do not apply to their own REG.

The focus group participants also voiced dissatisfaction with the way SH and SA are handled within the Navy's MJS. In particular, there were concerns that reported SH and SA cases "are not supported or followed up on" and, in cases where action is taken, there was a perception that the burden of relocation was not borne equally by victims and accused perpetrators [84].

The handling of SH and SA also came up in the topic areas of retention and career progression and development. Specifically, SH and SA and the "surrounding culture" were referenced as significant concerns when making retention decisions, and female participants indicated that their reputations suffer when they bring cases forward, while the men continue to receive career-enhancing opportunities.

Overall, these results do not indicate that the TF1N focus group participants considered bias in the MJS to be a pervasive problem. To the extent that there are issues, they appear to be related to individual commanders' implementation of the disciplinary process and an overall lack of transparency that allows concerns about bias to arise.

Summary

This section placed the current concerns about bias in the MJS into a larger historical context and highlighted the potential impacts of allowing them to remain unaddressed. The main takeaways from this narrative are as follows:

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[21] NLP is a set of techniques that combines computational analysis, machine learning, and linguistics to draw insights from unstructured text data by quantifying features of texts, such as types and frequencies of words, parts of speech, and phrase structures [84].

- Bias in the MJS—both real and perceived—can decrease the effectiveness of the MJS and thereby not only degrade good order and discipline, but also reduce warfighting readiness.

- There are widespread and persistent perceptions that the MJS is biased. The findings and recommendations of the 2019 GAO report were very similar to those of the 1972 Task Force [41]. These perceptions exist both inside the military, especially among members of color, and outside the military, among the American public and Congress.

- It is important to understand the broader social context in which concerns about bias are formed because the military services are in some ways separate and in other ways not separate from that context. The services are separate in that they have their own justice system and control over how the system is implemented. They are not separate in that their members are drawn from the American population and public support is necessary for continued recruiting and funding. Thus, concerns about REG bias in the military will ebb and flow as they ebb and flow in the national culture. Concerns about bias in the MJS may also arise from without or within.

- Finally, the quality and presentation of data and data analysis matter. Over the years, the analyses of MJS data have done little to alleviate concerns about bias. Given the persistence of these concerns, it makes sense to create a robust system for data collection, rigorous analysis, and appropriate reporting to enable detailed assessments of MJS outcomes and the policies and practices that produce them.

Addressing Bias Concerns with Administrative Data: Lessons from the CCJS

One of the objectives of this study is to develop guidance that will enable the services to create records management systems (RMSs) that support ongoing assessments of not only REG disparities, but also the effectiveness and efficiency of their law enforcement and legal operations.[22] To develop this guidance, we reviewed reports from similar efforts by CCJS agencies, as well as empirical research studies on REG disparities in CCJS and MJS outcomes. Based on this review, we gleaned one overarching lesson from past efforts: data collection on its own is not sufficient for either purpose; the data that are collected must be rigorously analyzed and the analytical results must be not only regularly and transparently reported, but also actually used to drive policy change.

Drawing primarily, but not exclusively, on seven guides for using administrative data to address concerns about bias in the CCJS, this section details additional lessons learned in six areas: the benefits of data collection and analysis; issues to be considered before the effort begins; appropriate analytical techniques; data requirements; data collection and storage; and when, how, and to whom to report results. The seven guides are:

- *A Resource Guide on Racial Profiling Data Collection: Promising Practices and Lessons Learned*, Ramirez et al., 2000 [85]

- *Racially Biased Policing: A Principled Response*, Fridell et al., 2001 [86]

- *How to Correctly Collect and Analyze Racial Profiling Data: Your Reputation Depends on it!* McMahon et al., 2002 [87]

- *By the Numbers: A Guide to Analyzing Race Data from Vehicle Stops*, Fridell, 2004 [88]

- *Reducing Racial Disparity in the Criminal Justice System: A Manual for Practitioners and Policymakers,* The Sentencing Project, 2008 [89]

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[22] Because of the FY 2022 NDAA tasking, this effort focuses on administrative data and RMSs to store them. Deeper understanding of MJS disparities and their causes can also be developed by going beyond the collection and analysis of the administrative data. Additional important activities include conducting policy reviews and using qualitative methods to engage with servicemembers and other key stakeholders regarding their perceptions and concerns.

- *A Prosecutor's Guide for Advancing Racial Equity*, The Vera Institute, 2014 [90]
- *Racial Disparities in Federal Prosecutions*, The Sentencing Project, 2019 [91][23]

The benefits of data collection and analysis

The primary benefit of collecting and analyzing administrative data is that it creates an evidence-based picture of CCJS outcomes that distinguishes between isolated incidents and widespread problems [86-87]. In particular, it provides the knowledge needed to identify institutional factors that may lead to disparate REG outcomes and to assess how actors in the system are applying their individual discretion [90]. These findings can, in turn, inform appropriate responses, such as changes in law enforcement or prosecutorial priorities and the development of training programs for police officers and prosecutors [85, 90]. In addition, when used as part of a comprehensive early intervention system, administrative data can help CCJS organizations detect and address outcome disparities to prevent systemic patterns or practices of discrimination from developing in the first place [85].

By focusing attention on the issue of REG bias, collecting and analyzing data can also improve community relations. Generally, data collection helps agencies convey a commitment to unbiased policing and prosecutions [86]. More specifically, if communities are involved in the research design process, it can make them feel heard, and working together can help build trust and mutual respect between CCJS agencies and the communities they serve [85, 87].

Finally, collecting administrative data for the purposes of identifying and understanding REG outcome disparities can also provide information about overall organizational effectiveness and help agencies to efficiently allocate and manage their resources [85-86, 91-92].

The Vera Institute guide summarizes these benefits as follows: prosecutors with whom they partnered have found that "changing an office's culture to one that values, systematically captures, and analyzes case data can improve organizational management, as well as enhance racial equity and the office's perceived legitimacy" [90].

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[23] The first four guides (references [85-88]) were sponsored by the US Department of Justice in the early 2000s to address concerns about racial profiling by police officers making traffic stops and in response to proposed legislation (i.e., the End Racial Profiling Act) to mandate data collection on racial profiling for agencies receiving federal funds. The other three guides ([89-91] were developed by private research and advocacy organizations to address REG disparities across the whole range of CCJS outcomes, from initial arrest through prosecution and sentencing. Of note, although the Vera Institute guide for prosecutor's offices [90] lists partnerships with several prosecutor's offices, it has not been widely adopted. Most of the attention on CCJS bias is aimed at law enforcement agencies.

Initial considerations

Prior to launching an assessment effort, the CCJS literature indicates that three issues must be considered to develop appropriate expectations and ensure that assessment objectives can be met: resource requirements and constraints; whom to involve in the effort; and how to manage initial communications with stakeholders.

Resource requirements and constraints

Systems for collecting and storing the electronic records needed to support analysis are costly to develop and maintain in terms of both computing infrastructure and manpower. In addition, even if RMSs are in place, it is expensive and time consuming to analyze data, issue reports, and communicate results to stakeholders [85]. Thus, it is critical to ensure that sufficient resources—both fiscal and human—are available to cover the full range of assessment activities. Otherwise, an agency may make significant investments in a data collection and storage system, only to discover that the kinds of analyses it envisioned cannot be implemented [88] or can only be implemented at the cost of other activities, such as direct efforts to address bias or the perception that it exists [86] or even primary operational duties [87].

This initial resource review should include identification of funding sources and a candid assessment of the agency's desire and ability to devote time and other needed resources to the effort. The CCJS literature identifies the following specific considerations:

- **Funding sources:** In a tight economic climate characterized by shrinking budgets for criminal justice services, funding new or innovative initiatives takes creativity and resourcefulness. This is especially true in the case of unfunded mandates—when data collection and analysis are mandated by an outside agency that does not provide funding to support them.

- **Existing data availability and storage capability:** Most agencies have some kind of RMS in place. Therefore, it makes sense to begin with an assessment of the current system and what capabilities need to be added to achieve the analytical objectives. In addition to comparing the content of existing datasets to what is required for data analysis, things to consider include whether the current system is capable of handling new data, the ease of entering new data elements, and whether the data outputs are in usable formats. A key indicator of existing data quality is whether the data are routinely used by agency staff.

- **Data management and analysis capabilities:** Data must be entered into the system initially and, to be useful for policy, they must be managed for quality and analyzed

with appropriate analytical techniques. This means that the agency must have staff in place who can do all these things with desired frequency and on required timelines. Alternatively, it may be necessary to contract these activities to outside organizations. For data analysis, agencies may partner with outside research organizations.

- **Office stability and priorities:** Useful analysis requires enough data to generate statistically meaningful results. If the data do not already exist, it takes time for them to be collected. High-quality analysis also takes time because it requires careful treatment of the data and consideration of all the relevant factors. Therefore, agencies should consider whether a sufficiently stable environment exists to support a protracted commitment to research, as well as potential subsequent activities, such as developing new policies and practices, training staff, and continued monitoring of these new efforts.

- **Commitment to project goals:** Finally, the agency must be committed to the project goals. Therefore, key decision-makers should ask themselves whether they believe in the value of the work—are they willing to ask difficult questions, use data to reach accurate conclusions, and address any bias issues that are identified?

Whom to involve

Guidelines from CCJS research offer two recommendations for whom to involve when developing plans to use data and analysis to address REG disparities. The first is to identify and include key stakeholders and the second is to consider partnering with professional social science researchers.

Key stakeholders

According to the CCJS guidelines, an important first step in addressing bias concerns is to form a task force or advisory committee of key stakeholders to define the assessment objectives [85, 87-88, 91]. In the CCJS, key stakeholders include not only a cross-section of agency personnel (i.e., police officers or prosecutors from different parts and levels of the relevant agency), but also community residents, particularly those representing the REG communities of interest, and members of the local government (e.g., city council members).

Involving key stakeholders in this manner increases the likelihood that the outcomes of the effort will be viewed as legitimate. Specifically, it can ensure that all perspectives are represented, help identify the needs of all the stakeholders within a particular jurisdiction, facilitate "buy-in" from those who will collect the data, and create a core group that can affirm analytic integrity and sound interpretation when reports are released [85, 88].

The CCJS guides also recommended that task force members receive training on the issues being studied and the methods for examining them. For example, members of a task force addressing racial profiling in policing should be trained on racial profiling, bias-based policing, police operations, and the complexities of data collection and analysis [87].

Professional researchers

The CCJS guidelines also recommend that agencies work with professional researchers to add credibility to the process and supplement the research skills of agency teams, since most agencies lack the needed in-house expertise [85, 87-88, 90]. The research partner (most likely associated with an academic institution or independent research firm) should have not only training in social science methods, but also a track record of working with government agencies and a reputation for neutrality and a nonpartisan approach [87-88, 90].

Collaboration with research partners may take many forms. Rather than doing the analysis for the agency, the Police Executive Research Forum recommends that the researchers partner with both the agency and the community to perform the analysis according to an agreed-upon data analysis plan [88]. A report published by the US Department of Justice (DOJ) Office of Community Oriented Policing Services (COPS), however, notes that there is limited research about which models most increase the scientific reliability of the research, are of greater use to law enforcement agencies (LEAs), or best address community concerns [87].

Whatever form the partnership takes, it is advisable to establish a memorandum of understanding (MOU) that outlines clear expectations. MOUs play a key role in articulating project goals, expectations, and restrictions on the work. The MOU should specify not only the roles and responsibilities of the parties, but also key project parameters, such as funding, timelines, data ownership, communication and confidentiality protocols, and ways to memorialize the process for the agency's institutional record [90].

Initial communications with stakeholders

CCJS research recommends that an agency undertaking a study for REG outcome disparities communicate with stakeholders before the effort begins to set expectations and establish a common understanding about the goals of the research. Using studies of racial profiling in traffic stops as an example, the civilian literature notes that the data will never prove or disprove racially biased policing nor distinguish between explicit and implicit bias. Thus, it is important to communicate to stakeholders at the outset that the research is being conducted in a sincere effort to determine whether and where REG disparities occur rather than to prove or disprove that bias exists. In addition, the agency should communicate that the ultimate goal—if disparities are found—is to implement corrective and preventive actions [88, 93].

These kinds of communications *may* take place in community forums and *should* occur within the stakeholder task force if there is one. In either context, it is important to allow both CCJS personnel and community stakeholders to express their experiences and concerns, either in separate sessions or together, with a facilitator ensuring that each group is heard while the other listens. The goals are to identify common concerns and expectations, develop trust, and identify the issues that the assessment should address [93].

Citizen (or similar stakeholder) concerns regarding REG bias should be gathered in a way that allows stakeholders to voice their perspectives without defensive responses by agency representatives, who may be inclined to "explain away" citizen concerns or who feel strongly that incidents described by citizens are race neutral. Even so, it is valuable for agency personnel to listen to and take seriously the concerns of citizens. Such discussions can help agency personnel understand the importance of dealing with perceptions of racial bias. Once citizen concerns are expressed, agency representatives should be invited to share their concerns related to accusations or perceptions that bias is influencing their decisions [93].

Analysis of administrative data

An issue with initial data-based assessment efforts in the CCJS—especially attempts to use traffic stop data to determine whether police departments were engaged in racial profiling—was that the analyses were too simplistic to overcome the analytical problems identified in the introduction to this report.[24] As a result, they did not enable researchers or policy-makers to develop appropriate responses to bias concerns. Several of the guides we reference in this section were, in fact, developed to identify and overcome these methodological weaknesses. Here, we describe the strengths and weaknesses of different analytical methods, as well as the types of criteria that may be applied to determine what analytical results indicate about the existence and extent of bias.

The lessons from the CCJS experience indicate the following:

- Compared to bivariate analytical techniques, multivariate techniques provide better indicators of REG disparities in CCJS outcomes
- Criteria that are used to interpret the results of multivariate analyses should be set before the analysis is done and in collaboration with all stakeholders

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[24] Although most driving violations are not classified as criminal offenses, they are relevant to this effort because they represent one of the most common types of citizen-police interaction. In addition, traffic stops sometimes lead to criminal investigations and/or criminal charges. Thus, they may be considered analogous to disciplinary infractions in the MJS.

- When both practices are followed, the conclusions that agencies draw from their analyses are more likely to be perceived as legitimate by both internal and external audiences

Bivariate analytical techniques

Bivariate approaches to data analysis examine the relationship between two variables only—the CCJS outcome of interest and the REG indicator. Thus, they implicitly assume that the REG indicator is the only factor that determines whether the outcome occurs:

$$\text{Race, ethnicity, or gender} \Rightarrow \text{Outcome}$$

For example, if the outcome is being stopped by the police for speeding and the indictor is gender, the underlying assumption is that the only factor that determines whether a car is pulled over is whether the driver is male or female. Although this is clearly unrealistic—not just because it does not account for whether the driver was exceeding the speed limit—it is the operating assumption underlying simple comparisons between average CCJS outcomes for members of different REG groups.

Typical applications of this approach are based on the following disparity metrics, which require the use of an external benchmark population as a proxy for the true violator population:

- **Disproportionate representation metric (DRM):** The difference between a group's share of people experiencing a particular CCJS outcome and the group's share of the benchmark population. A value greater (or less) than zero is said to indicate negative (or positive) bias. A value of zero is interpreted as an indicator of no bias.
- **Disproportionality index (DI):** The rate at which one group experiences the outcome divided by the rate at which the other group experiences the outcome, where the rates are calculated based on the size of the group-specific benchmark population. A value greater (or less) than one indicates possible negative (or positive) bias. A value of one indicates no bias. (See equations 1 and 2 on page 13.)

The trouble with this approach is that it is very difficult to find a benchmark population that accurately reflects the unknown violator population and, if the REG distribution of the violator population is different than that of the benchmark population, these metrics may not be good indicators of bias. In particular, if a group's share of the true violator population is smaller than its share of the benchmark population, these metrics can mask bias.

To see this point, consider the example shown in Table 4, in which the benchmark population overestimates Group 1's share of the true violator population and underestimates Group 2's share of the true violator population. The result is that the disparity metrics based on the

benchmark population indicate no disparities, while the metrics based on the true violator population indicate large disparities: members of Group 1 are stopped more frequently than their violations rates suggest they should be and, therefore, may be the victims of bias.

Table 4.   Hypothetical comparison between disparity metrics based on benchmark versus true violator populations[a]

Inputs and disparity metrics	Group 1	Group 2	Total
Share experiencing CCJS outcome	**20.0%**	**80.0%**	**100.0%**
Bias assessment based on the benchmark population			
Inputs			
Share in benchmark population	20.0%	80.0%	100.0%
Group's outcome rate	5.0%	5.0%	5.0%
Disparity metrics			
DRM[b]	0	0	--
DI[c]	1.000		
Bias assessment based on the true violator population			
Inputs			
Share in true violator population	8.3%	91.7%	100.0%
Group's outcome rate	200.0%	72.7%	5.0%
Disparity metrics			
DRM[b]	**11.7**	**-11.7**	
DI[c]	**2.8**		

Source: CNA calculations.
[a] The benchmark population overestimates Group 1's share of the true violator population and underestimates Group 2's share of the violator population.
[b] DRM = (the group's outcome share – the group's population share) x 100
[c] DI = Group 1's outcome rate/Group 2's outcome rate.

In practice, the most common external benchmarks are derived using census data for the population under the jurisdiction of the agency, such as the driving-age population of the city, county, or state served by an LEA. Benchmarks may also be based on LEA data sources, such as the data produced by "blind" enforcement mechanisms like red light cameras, radar, and air patrols. Research has shown that census-based benchmarks typically produce higher estimates of bias, while benchmarks based on LEA data typically produce lower estimates of bias [94]. Therefore, it is considered desirable to use multiple baselines to provide plausible boundaries within which the true disparity value is likely to fall. For a more detailed discussion of the challenges associated with external benchmarking and how to calculate disparity indicators, see [85, 88, 94].

Regardless of which benchmark is chosen, the main weakness of bivariate analytical approaches to analyzing administrative data is that they are too simplistic to capture all the factors that contribute to CCJS outcomes. As a result, they are unlikely to produce accurate measures of outcome disparities and, therefore, can lead to incorrect conclusions. There are, however, also some benefits to bivariate approaches, which explains why they are so frequently used. Creating these disparity metrics does not require advanced technical training, and they are also easy to display and understand. The data requirements for bivariate approaches are also relatively modest, both in terms of the number of data elements and sample sizes.

Multivariate analytical techniques

Multivariate approaches to data analysis examine the relationships between many variables and the CCJS outcome—not only the REG indicator, but also a range of other factors that provide more information about the alleged offender, the nature and circumstances of the offense, and/or the CCJS actor making the decision. Thus, multivariate approaches attempt to account for the complexity of the underlying processes that lead to CCJS outcomes by modeling them as the result of as many of the relevant variables as possible:

$$\left.\begin{array}{r} \text{REG of the alleged offender} \\ \text{Other characteristics of the alleged offender} \\ \text{Type of offense} \\ \text{Circumstances of the offense} \\ \text{REG of CCJS decision makers} \\ \text{Other characteristics of CCJS decision-makers} \end{array}\right\} \Rightarrow \text{Outcome}$$
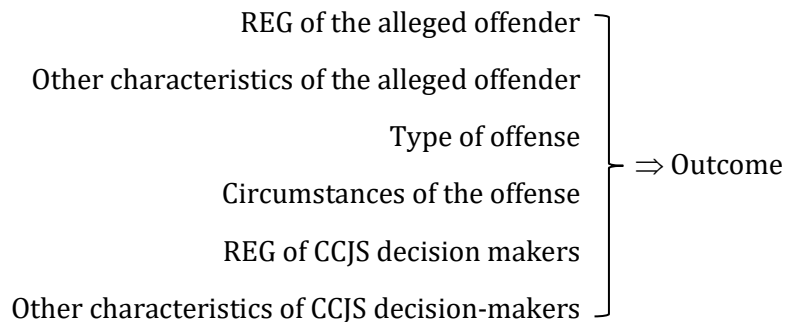
Multivariate approaches include disaggregating data by factors other than REG, as well as different kinds of statistical regression models that control for multiple factors simultaneously.

Disaggregation is the easiest multivariate approach to implement because it does not require training in social science research methods. For example, data on traffic stops can be disaggregated first by race *and* gender, then more finely by the type of stop. If stop types vary in terms of the amount of discretion employed by the officer making the stop, then different REG outcomes for different stop types suggest that these outcomes should be investigated more closely [85, 92]. More generally, by considering more than one outcome, this type of disaggregation begins to paint a more complete picture of the underlying CCJS process being studied. Disaggregation is also a good starting point for more sophisticated approaches

because it can help identify what to include in a regression model and provide an intuitive understanding of modeling results.[25]

Traditional multivariate regression models estimate the effects of REG holding constant the other factors in the model. They generate measures of the size, direction, and statistical significance of the correlation between REG and the outcome of interest.[26] If large and/or significant REG effects remain even after controlling for other factors, this is taken as an indicator that REG have an impact on the outcome of interest. Some multivariate approaches also attempt to measure or test for bias directly. These approaches will be described in more detail when we discuss their potential application to the MJS.

The main strength of multivariate approaches is that they begin to account for the fact that CCJS outcomes are the result of multiple factors and complex underlying processes. Thus, they are more likely than bivariate approaches to generate useful information about the existence and size of REG outcome disparities. The main drawbacks of multivariate approaches are that, compared to bivariate approaches, they require both more technical expertise and more data—both more variables and larger sample sizes.

Criteria for interpreting analytical results

Whichever analytical approach is used, it is necessary to establish guidelines for interpreting the results. There are, however, no generally agreed-upon, scientifically established criteria for answering the question, at what level does disparity equal bias [87-88]? For example, there is no agreed-upon value at which either the DRM or the DI is considered to indicate that bias exists. And research shows that different criteria (e.g., statistical significance versus size of disparity) can lead to different conclusions about bias from the same data and the same metric [87]. More generally, in her 2004 guide, Fridell describes the problem as follows: "Important for the researcher to understand is that setting a cut-off point is rather arbitrary. The researcher is guessing at the unknowable" [88].

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[25] Disaggregation is also known as internal benchmarking because it creates comparisons based on benchmarks that come from within the dataset. In the traffic stop example, the internal benchmarking population is the population of stopped drivers. Other types of internal benchmarks compare organizational outcomes over time to identify changes or trends across units (or across people within the same unit) to identify outliers. These internal benchmarks can be especially useful for setting expectations for and managing the behavior of groups or individuals within the organization. See [85, 88, 92] for more on internal benchmarking.

[26] Depending on the issue being addressed, the outcome may be measured as a probability (e.g., the likelihood that a convicted offender will receive a maximum sentence) or as an actual number (e.g., the number of traffic stops in a particular police district or census tract).

The 2002 guide from McMahon et al. [87] also notes that many of the commonly used metrics for indicating the existence or size of outcome disparities (e.g., percentages, DIs, statistical significance, proportion of explained variance) do not convey information about the effects of those disparities in terms of the numbers of people they ultimately affect. Specifically, they do not tell us how many people from a given REG group would not have experienced the outcome of interest if the disparity did not exist. Consider the two scenarios in Table 5. The only difference between them is that, in the first scenario, the outcome of interest occurs 550 times in the study period and, in the second, it occurs 55 times in the study period. In particular, the DI is the same in both cases. Because of the difference in outcome frequency, however, the number of people affected in the first scenario is 50, but the number affected in the second scenario is only 5. Although deciding whether either difference is large is still a value judgement, this information may be more meaningful to non-technical stakeholders. It may also help with setting priorities about what disparity to address.

Table 5. Hypothetical scenarios indicating different numbers of people affected by the same outcome disparity

Input	Group 1	Group 2	Total
Scenario #1			
Number in benchmark population	2,000	8,000	10,000
Number experiencing outcome	150	400	550
Stop rate	7.5%	5.0%	5.5%
Outcome disparity: DI			1.5
Number experiencing outcome at the Group 2 rate	100		
Group 1 members affected	**50**		
Scenario #2			
Number in benchmark population	2,000	8,000	10,000
Number experiencing outcome	15	40	55
Stop rate	0.75%	0.50%	0.55%
Outcome disparity: DI			1.5
Number experiencing outcome at the Group 2 rate	10		
Group 1 members affected	**5**		

Source: CNA.

With all of this in mind, the CCJS guides make the following recommendations regarding the selection and application of criteria for establishing the existence or extent of bias:

- If such criteria are used, they should be selected before the analysis takes place and in collaboration with all the key stakeholders [87-88]

- If time and resources allow, researchers should generate and report results using several different criteria [87-88]

The CCJS guides also suggest, however, that researchers and agencies should not focus on trying to establish the existence or amount of bias. Instead, the guides provide the following more general recommendations for interpreting the results of data analysis:

- Acknowledge community concerns about bias and use the data to distinguish between isolated incidents and widespread problems
- Focus on identifying aspects of police or prosecutor behavior that appear to be most and least problematic [87-90]

Required data elements

All the guides we reviewed frame their recommendations about required data elements in terms of what CCJS agencies need to assess how their organizations and the people within them use their discretion. The following quotations illustrate why discretion should be at the center of an administrative RMS:

> Discretion is an important component of the criminal justice system and is necessary for efficient system flow. It is neither desirable nor possible to eliminate discretion throughout the criminal justice system; professional judgment is a core component of making day-to-day operations manageable. Nevertheless, individual discretion can lead to racial injustices. These can be safeguarded if discretion is well-informed and monitored. [89]

> By collecting information on the nature, character, and demographics of police enforcement practices, we enhance our ability to assess the appropriate application of the authority and broad discretion entrusted to law enforcement. [85]

> Data collected and analyzed in partnership with a research team can teach prosecutors many things. Through rigorous research, prosecutors gain the knowledge they need to: identify institutional factors that may lead to disparate racial outcomes [and] assess how prosecutors are applying their discretion. [90]

Some of the CCJS guides (especially [90] and [92]) provide detailed lists of the data elements that should be collected to support the analyses they recommend undertaking. Here, we describe categories of data rather than specific elements. We begin with categories whose elements would be common to both LEAs and prosecutor's offices; we then move to categories

for which the specific data elements will vary depending on whether the data apply to traffic stops, arrests, and investigations or to prosecution and adjudication.[27]

Required elements for all RMSs

The guides indicate that all RMSs should include four types of data:

- Unique incident identifiers
- Unique individual identifiers for everyone involved with the incident
- Information about all involved individuals
- Information about agency personnel

To be able to track cases through each system (and potentially across systems) a unique identifier should be assigned to each incident and to each involved individual. These individuals include not only accused offenders, victims, and agency personnel (e.g., police officer or prosecutor), but also witnesses and other complainants. The identifiers for individual people should be constant across incidents so incidents can be linked over time.[28]

RMSs should also collect basic information about accused offenders, victims, and other individuals associated with an incident. For both accused offenders and victims, this information should include REG and date of birth. The system should also capture the relationship between the accused offender and the victim. Additional background information should also be collected about the accused offender, such as address, educational level, employment status, and source and level of income. It is also desirable to have information about an accused offender's past interaction with the CCJS, such as records of driving infractions or actual criminal history. This information should, however, be available from other records in the system via the individual identifier.

Information about agency decision-makers should also be available by linking the individual identifier to other records. For example, information about an officer's or prosecutor's past decision-making behavior should be linked to other records within the system and information about an officer's or prosecutor's career (e.g., tenure, assignment, division, and any history of complaints or disciplinary issues) should be linked to agency personnel data.

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[27] An LEA outcome of substantial recent interest is use of force.

[28] Reference [90] also recommends creating unique case-defendant identifiers.

Required elements that depend on the CCJS agency

The RMS should enable agencies to analyze the outcome of each important decision at each step in the processing of an incident or a case. Since LEAs and prosecutor's offices are active at different points in the CCJS, their data will capture different decisions with different potential outcomes and different pieces of contextual information. The guides identify three data categories whose individual elements will differ depending on which CCJS agency is collecting and using the data:

- Decisions and their outcomes
- Characteristics of the incident or case
- Procedural elements

Decisions and their outcomes

A high-level view of the decision points that CCJS agencies face is provided in Figure 1, which illustrates the flow of an incident through the CCJS. LEAs make decisions related to accused offenders' entry into the system and have the main investigative responsibilities. Prosecutor's offices are the key decision-makers when it comes to pre-trial services and prosecutions, but they also contribute to police decisions about charges and arrests in the entry phase, and work with other CCJS actors to affect decisions during the adjudication and sentencing stages. There are too many decisions and potential outcomes to list here, but there is one important takeaway from the guides: each agency's RMS should include the full range of possible outcomes for each decision to enable decision- or outcome-specific comparisons across similar incidents in each system.[29]

Incident/case characteristics

RMSs should also track information that defines the nature of each incident or case. For example, if the incident was a traffic stop, what was the specific violation? And, for criminal cases, what was the charge? For this information to be useful for analysis, it is vital that it be standardized based on the local, state, or federal legislative codes that apply to the agency.

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[29] In the CCJS, RMSs are not typically shared across agencies of different types or in different jurisdictions. For example, within jurisdictions, LEAs and prosecutor's offices maintain separate systems, and across jurisdictions, LEAs (or prosecutor's offices) maintain separate systems.

Figure 1.   How a case flows through the CCJS

What is the sequence of events in the criminal justice system?

Note: This chart gives a simplified view of caseflow through the criminal justice system. Procedures vary among jurisdictions. The weights of the lines are not intended to show actual size of caseloads.

Source: Adapted from *The challenge of crime in a free society*. President's Commission on Law Enforcement and Administration of Justice, 1967. This revision, a result of the Symposium on the 30th Anniversary of the President's Commission, was prepared by the Bureau of Justice Statistics in 1997.

Source: The US Bureau of Justice Statistics, https://bjs.ojp.gov/media/image/45506

An example of a standard set of offense codes is the codes for person and property crimes that are the basis of the National Incident-Based Reporting System (NIBRS), which was developed by the DOJ to capture all reported criminal incidents that occur in every US jurisdiction and, thereby, support national-level analyses of crime trends [95]. To submit their data to NIBRS, LEAs map their local legislative codes to the NIBRS offense codes.

In addition to classifying the incident type, RMSs should also capture relevant contextual information. For traffic stops, this might include the age and make of the car, the duration of the stop, the time of day when the stop occurred, and the location where the stop occurred [92]. For criminal cases, contextual information might include the strength of the evidence, whether there were witnesses, and any other mitigating or aggravating circumstances [90].

Procedural elements

Finally, the guides indicate that RMSs should capture information about procedural elements that define the nature and boundaries of individual discretion.

For example, according to Ramirez et al. [85], actions taken by CCJS agents can be viewed on a continuum from low-discretion actions, in which an officer's or prosecutor's range of choices is limited, to high-discretion actions, in which the choice of action is based on the officer's or prosecutor's judgement given the specifics of the situation combined with his or her own experiences and incentives. In the traffic context, examples of low-discretion stops include reckless driving or running a red light, while examples of high-discretion stops include checks for underinflated tires, safety belt warnings, and other minor vehicle code and nonmoving violations [85].

Similarly, for prosecutors, the Vera Institute [90] emphasizes the need to distinguish between case outcomes that entail prosecutorial judgement and those that do not. In terms of data elements, this means that the system must capture not only the actual outcome a defendant experienced, but also all the potential outcomes for which the defendant was eligible—either under the law or according to internal office policies. To illustrate this point, the Vera Institute guide provides the following example: if the system records whether a case received deferred prosecution or diversion, it should also include variables to flag all cases that are eligible to receive such outcomes [90].

McMahon et al. [87] also emphasize the importance of incorporating information that captures the role of organization-level decisions and policies. For example, both the geographic distribution of officers across a city and the operational assignments of those officers are likely to affect the REG distribution of stopped citizens. To illustrate this point, they cited the following data from an actual LEA: a traffic unit of roughly 100 officers makes about the same number of stops for moving violations as the nearly 1,000 officers in the patrol division [87].

The officers in the traffic unit are assigned to locations based on citizen complaints about traffic problems and their mandate is to maintain traffic safety. In contrast, the officers in the patrol division are assigned to locations based on crimes called in by the public, and their mandate is to enforce laws related to drug, property, and violent crimes.

RMSs for administrative data

To be useful for analysis, administrative data need to be stored in reliable electronic RMSs. The CCJS guides we reviewed do not provide detailed instructions for RMS design, but they do provide some basic information to keep in mind when developing new—or updating existing—RMSs. We sorted this information into three categories—required resources, design objectives, and key features—and summarize it below.

As a starting point, we note that the Vera Institute guide for prosecutor's offices provides the most detailed information about RMS design with the stated goal of "maximizing the capacity of [an] office's system to capture data that reflects discretionary decisions and management practices" [90].

Required resources

The main resources required for developing and maintaining a reliable electronic RMS are appropriate information technology and qualified personnel. Both resources, in turn, require funding.

Regarding technology requirements, the guides focus more on lack of appropriate technology as a barrier to RMS development than on specific needs. For example, the LEAs that participated in the study documented in the McMahon et al. guide identified inadequate computer facilities and network-based systems that were not user-friendly as impediments to data collection and analysis [87]. McMahon and her team also identified lack of integration across systems as a problem. For example, for one police department, the fact that its two main databases—its RMS and its computer-aided dispatch system (CADS)—could not be linked was considered a major barrier [87]. Of course, the McMahon et al. guide is from 2002, and CCJS RMSs have probably evolved substantially in the intervening decades. More recent studies, however, indicate that storing relevant data elements across disconnected systems remains a problem for today's LEAs [96-97]. In addition, the Vera Institute noted that, even as late as 2014, many prosecutor's offices still did not have electronic RMSs in place [90] and, in 2019, the Brenan Center for Justice indicated that state and federal prosecutor's agencies have limited capacity to track data on practices that produce outcome disparities [91].

Regarding personnel requirements, after RMSs have been developed, data must be continuously entered and checked for quality, then must be extracted in formats that are appropriate for analysis. Some data entry will be done by the police officers and prosecutors themselves. For example, data on traffic stops can be entered in real time using mobile data terminals (MDTs), if they are available. Some traffic stops and other police-civilian interactions may now also be captured on body-worn cameras [98]. But dedicated, specialist staff will likely be needed to provide the technical skills and handle the workloads associated with system maintenance and quality control.

We do not have estimates of the monetary costs of these technology and human resource requirements, but the Vera Institute noted that building an RMS "from scratch is a major undertaking" [90]. In addition, McMahon et al. noted that participating LEAs viewed requirements for data collection as "unfunded mandates" and reported that they lacked "the resources and expertise needed to support a robust data collection and analysis effort" [87].

Design objectives and features to achieve them

Reviewing the guides, we identified three general design objectives for effective RMSs:

- Minimize the data entry burden
- Maximize usability for data retrieval and analysis
- Ensure data accuracy

We also identified eight system features that support one or more of the design objectives. Table 6 maps the features to the design objectives and we briefly describe each feature below.

Table 6.   RMS design objectives and associated key features recommended by CCJS guides

System features	Design objectives		
	Minimize data entry burden	Maximize usability	Ensure data accuracy
Develop data entry protocols and training	✓	✓	✓
Create flexible data structures		✓	
Use standardized codes when possible	✓	✓	✓
Use dropdown menus	✓	✓	✓
Make data fields mutually exclusive		✓	✓
Do not overwrite data			✓
Avoid duplication	✓		✓
Link multiple RMSs within the agency	✓		✓

Source: CNA summary from references [85, 87, 90, 93].

First and foremost, agencies should develop standard data entry protocols and related training for all staff who will be responsible for data entry. The Vera Institute drives this home with the following statement: "Because any system is only as good as those who use it, you should standardize your office's data entry protocols and train your staff in their thorough and consistent use" [90].

Generally, RMSs should be based on flexible data structures that make data queries easy. With this in mind, the Vera Institute suggests using a defendant-within-case (D-C) construct as the basic unit of count for case tracking in RMSs for prosecutor's offices [90]. The D-C construct assigns a unique tracking number to each D-C by combining unique identifiers for each case and each defendant. This allows records to be summarized by defendants in a case or by different record types for one defendant (e.g., prior arrests or convictions) across cases.

To minimize the data entry burden, maximize data accuracy, and support consistent interpretation of data, the guides also suggest using standardized codes for violations and charges, as well as dropdown menus rather than hand entry whenever possible. The options in dropdown menus should reflect all potential choices or outcomes and they should be mutually exclusive. The Vera Institute guide provides the following examples:

> [R]ace and ethnicity should either be coded as separate attributes, or, if they are combined, they should be defined such that only one category applies to a given person (for example, Hispanic, non-Hispanic white, or non-Hispanic black—not simply Hispanic, white, or black). Similarly, if crime type of top charge is entered, the crime types should be defined in a way that a specific crime could not correctly be classified in more than one category. [90]

It is also important to avoid overwriting data on case status as a case evolves. Instead, RMSs should record case status at the initial screening stage and separately at each later stage. According to the Vera Institute, this is important because "[r]ecording case status at each discretionary stage in the case-processing continuum yields invaluable information for researchers and for the organizational record" [90].

Finally, RMSs should be designed to avoid duplication of data entry and facilitate quality control. As noted by Ramirez et al., "Any opportunity to streamline data collection efforts should be seized" [85]. Within a given system, this means that, to the extent possible, any specific piece of information should need to be entered only once and RMSs should be designed to automatically copy that information if it needs to be captured elsewhere in the system [90]. Likewise, agencies' different RMSs should be linked. For example, both the Ramirez [85] and McMahon [87] teams reported that linking CADS data with the RMS data on traffic stops can help validate the officer-entered data in the latter. In addition, linking incident- and case-related RMSs with RMSs that store personnel information is especially helpful for supporting

analyses to capture the personal characteristics and career histories of agency actors who are using discretion to make decisions.

Reporting results

Finally, given that the guides all recommend that RMSs for administrative data should support the ongoing monitoring and analysis of CCJS outcomes, they also recommend that analytical results be reported on a regular basis to both internal and external stakeholders. For example, the Sentencing Project recommends that CCJS agencies produce an annual statistical report for each stage of the system [89]. In addition, McMahon et al. warn against waiting until negative publicity occurs. Instead, they recommend that CCJS agencies engage proactively with their communities and the media in the following ways:

- Conduct business with openness and transparency
- Create relationships with the media to help foster understanding of issues, strategies, and processes
- Serve as an educator for the community and the media [87]

Here, we summarize additional recommendations for reporting to internal, external, and academic audiences.

Internal audiences

Results should be shared with internal audiences throughout the project to help internal stakeholders understand the data and interpretations, and to obtain buy-in to the results when they are shared with external audiences. Studies of racial profiling in traffic stops, for example, stress the importance of discussing the results with police personnel before publishing them. The discussion will help the researchers better understand what factors might be producing the results—not to "explain away" any disparity that has been identified [88]. In addition, the Vera Institute's guide to prosecutors notes that regular briefings between prosecutors and the research team can help pave the way for acceptance of findings on racial disparity and eventual corrective action [90].

Another internal audience is the stakeholder task force, which should "conduct a qualitative review of the quantitative data" throughout the data analysis period [88]. The purpose of this review is to bring stakeholder perspectives to bear on a discussion of factors other than bias that might account in whole or in part for findings of disparity (or lack thereof)—not to determine whether the agency "passed" or "failed" a racial bias test. Before reviewing the data,

task force members should be informed about what can and cannot be understood from the data analysis [88].

External audiences

Civilian research emphasizes that CCJS agencies need guidelines on how to interface with the community regarding interpretations of the data and on how data should be released and presented to the community [87]. In the CCJS context, the community audience includes residents of a particular police or prosecutorial jurisdiction (which may go beyond the geographical boundaries of its municipality and include commuters, tourists, businesspeople, and so forth), as well as members of local governments (e.g., city councils) and of other CCJS agencies [88].

When sharing research results with external audiences, it is important to provide information about agency operations that is relevant to the incidents of concern, but which may not be well understood by the public. This information will provide a foundation for the data analysis and interpretation of its findings. In policing studies, for example, such information may include the number of patrol officers, which units or officers are given primary responsibility for the incidents of focus, where officers are assigned, and departmental policies and legal criteria for making stops and searches [87].

Ideally, the public should be engaged during the assessment process through interviews and community listening sessions to provide input prior to the report being drafted. Later, they should have the opportunity to review a preliminary report and provide comments [99]. Community members can provide information about the jurisdiction that adds perspective and context to the numbers produced by the researcher. Discussions between police and residents about racially biased policing can also help heal the divide and provide direction for joint reform efforts [88].

At the same time, the research team should take precautions to protect the privacy and confidentiality of individual law enforcement or justice officials in public-facing reports. In policing studies, for example, providing the identification numbers of officers who exhibit disparate treatment of Black drivers could make it possible to identify the officers by name, exposing them to safety and privacy risks [99].

Research/academic audiences

The agency and research partner may also consider whether to disseminate findings more widely to research or academic audiences. Doing so can help advance broad understanding of issues surrounding racial disparities and bias. For example, results from a Milwaukee, Wisconsin study of potential biases at the prosecution phase were—with approval of the

district attorney—disseminated widely through articles and at national conferences and professional meetings [90]. Research partnerships may also wish to build into the MOU a plan to disseminate findings to research or academic audiences, which would likely require modifying the public report.

Summary

This section identified for application to the MJS lessons learned in the CCJS for using administrative data to address bias concerns. As noted from the start, the primary lesson is that data collection on its own cannot identify either problems or solutions. To be of policy use, the data must be analyzed and the analytical results must be interpreted, reported, and acted on. More specific lessons are summarized as follows.

To yield appropriate policy conclusions that are perceived as legitimate by both internal and external stakeholders, data collection and analysis efforts should involve those stakeholders from the beginning and the analytical team should transparently communicate progress and results on a regular basis, not just in a final report. Part of the initial work with stakeholders should also include setting realistic expectations about what data analysis can show and setting guidelines for interpreting analytical results. Administrative data cannot prove the existence of bias or measure its extent, so this should not be the stated purpose of a research effort. Instead, agencies should acknowledge stakeholders' concerns about bias and use data to distinguish between isolated incidents and widespread problems and to identify aspects of police or prosecutor behavior that appear to be most and least problematic. To interpret the implications of outcome disparities, it is best to use multiple disparity metrics and technical criteria for evaluating their size, rather than arbitrarily selecting one metric and one cutoff value.

The methods used to analyze administrative data should account for important features of the system being studied and as many potential outcome determinants as possible. To do this, it is useful to map citizens' interactions with LEAs and prosecutors to high- and low-discretion outcomes as an incident or case flows through the CCJS. In this process, it is vital to incorporate knowledge of agencies' procedures and practices to consider whether application of discretion is operationally valid or could represent individual or institutional bias.

Finally, data collection and analysis efforts should be designed to support ongoing monitoring of REG disparities in CCJS outcomes. This requires substantial funding to acquire not only the technological resources needed for the development of a reliable electronic RMS, but also the human resources needed to maintain the RMS, analyze the data it stores, and report results.

The Military Justice System

In this section, we provide a high-level description of the MJS as it applies to all the services. It is based on our review of relevant literature and policy documents, as well as discussions with subject matter experts (SMEs) from the military legal establishment. The section begins with an overview of the MJS that focuses on the punitive articles and the system's dual disciplinary and judicial functions. The overview is followed by a brief history that focuses on recent legislative reforms to ensure that the MJS is independent, professional, and fair. The remainder of the section maps servicemembers' interaction with the MJS to important outcomes as their cases flow through the disciplinary and judicial paths of the system. The goals of this section are to identify points in the MJS where institutional and individual discretion are applied and to highlight the full range of outcomes that should be analyzed for REG disparities.

Overview

The purpose of the MJS is to "promote justice, assist in maintaining good order and discipline in the Armed Forces, promote efficiency and effectiveness in the military establishment, and thereby strengthen the national security of the United States" [27]. The MJS is codified in US law as the UCMJ [100], which contains not only the punitive articles that define the offenses addressed by the MJS, but also many of the procedural laws governing its implementation. Throughout the remainder of this document, quotations from the UCMJ come from Appendix 2 of the 2019 edition of the United States Manual for Courts-Martial (MCM), which includes UCMJ updates from the FY 2018, 2019, and 2020 NDAAs [27].

Punitive articles

As of 2019, the UCMJ included 84 punitive articles that define chargeable offenses.[30] The number and wording of the punitive articles have evolved over time as the military establishment has evolved. Some of the articles are specific and narrow and, therefore, not particularly open to interpretation. For example, Article 125, *Kidnapping*, reads as follows:

> Any person subject to this chapter who wrongfully—(1) seizes, confines, inveigles, decoys, or carries away another person; and (2) holds the other

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[30] The punitive articles include an additional five articles (Articles 77-81), which define overarching concepts related to the offenses defined in the remaining articles.

person against that person's will; shall be punished as a court-martial may direct. [27]

Other articles are general and broad and are, therefore, potentially open to individual interpretation. For example, Article 133, *Conduct unbecoming an officer and a gentleman*, simply states, "Any commissioned officer, cadet, or midshipman who is convicted of conduct unbecoming an officer and a gentleman shall be punished as a court-martial may direct" [27]. The UCMJ does not, however, provide a specific definition or description of what unbecoming conduct entails.

For considering the role of institutional discretion in determining MJS outcomes, an important punitive article is Article 92, *Failure to obey order or regulation*. Based on this punitive article, outcome disparities may arise from regulations set at the service level, rather than from any procedures or practices within the MJS itself.

Offenses under the UCMJ range in severity, from malingering and disrespect at the low end to murder and treason at the high end. According to the 2019 MCM, the severity of an offense depends on its nature and the circumstances surrounding its commission, as well as on the accused offender's age, rank, duty assignment, record, and experience. The most straightforward guidelines for determining the severity of an offense are based on the potential punishments for it. If an offense could not result in a punitive discharge or more than one year's confinement if tried by a GCM, it is generally considered to be a minor offense. Anything else is considered to be a major offense [27].

Actors with discretionary power in the MJS

There are two categories of military personnel who have significant discretionary decision-making authority in the MJS. The first category is commissioned officers, whose authority is based on their positions as commanders. The second category is judge advocates, whose authority is based on their legal training and expertise.

Commanders

For MJS purposes, commanders or commanding officers (COs) are commissioned or warrant officers who, by virtue of rank and assignment, exercise primary command authority over a military organization or prescribed territorial area that, under pertinent official directives, is recognized as a command [27]. Some commanders are also convening authorities, who are legally empowered to refer charges to, convene, and take action after each type of CM. These authorities will be described in more detail later in this section.

Judge advocates

Judge advocates are officers in the Judge Advocate General's Corps of the Army, Navy, and the Air Force, and officers who have been designated as judge advocates in the Marine Corps and Coast Guard. Generally, judge advocates must have graduated from a fully accredited law school and belong to a state bar. Judge advocates may serve as either trial or defense counsel in an SPCM or GCM. Two additional roles are also important. First, judge advocates general (JAGs) are the highest-ranking judge advocates in each MILDEP and they serve as the principal advisors to the department secretaries. Second, staff judge advocates (SJAs) are the principal legal advisors to commanders at various levels [27].

MJS procedures

The procedural rules and punishments for UCMJ violations are defined in the MCM, which is updated to reflect changes in the laws whenever they occur [27]. The UCMJ provides four options for addressing offenses:

- **NJPs** (nonjudicial punishments) handle minor offenses requiring immediate corrective action. NJP hearings are conducted by commanders and, although accused members may present witnesses, NJP hearings are not "mini-trials" in that they are non-adversarial and most rules of evidence do not apply, although privilege rules do.

- **SCMs** (summary courts-martial) also handle minor offenses. They are for enlisted personnel only and a single officer presides over the hearing. The accused has no right to counsel but may hire an attorney.

- **SPCMs** (special courts-martial) handle intermediate-level offenses. They are composed of a military judge alone or four members and a judge. Enlisted personnel may ask that at least one-third of the members be enlisted. There is both a prosecutor and a defense counsel. In addition, the accused may hire a civilian counsel or request a specific military counsel.

- **GCMs** (general courts-martial) handle the most serious crimes, equivalent to felonies in the CCJS. Only GCMs have jurisdiction over penetrative SA offenses [27-28]. A GCM in a case that is not referred capitally consists of either a military judge alone or a military judge and eight members, though that number may drop to seven or six post-empanelment. A GCM in a case that is referred capitally consists of a military judge and twelve members. The accused may elect trial by judge alone in all except capital cases and enlisted personnel may request at least one-third enlisted membership.

Thus, to accomplish the stated purposes of military justice, the MJS addresses both minor disciplinary offenses and major criminal offenses. The judicial processes for handing criminal

offenses are conceptually quite similar to those of the CCJS, and include presumption of innocence until proven guilty, defense counsel, investigations, pre-trial hearings, an adjudication process akin to a trial, post-trial review activities, and appeals. Although the disciplinary offenses addressed by nonjudicial processes are often similar to workplace human resources issues and non-criminal interpersonal disputes, nonjudicial processes still include many of the protections afforded to more serious offenses and can progress through steps similar to criminal proceedings. Figure 2 lists some of the major activities that take place along the judicial and disciplinary paths of the MJS.

Figure 2.   The judicial and disciplinary paths of the MJS

Pre-trial/hearing matters	Adjudication & Sentencing		Post trial/hearing matters
Judicial path			
Pre-trial matters	**CM procedure & sentencing[b]**		**Post-trial procedures, appeals & reviews**

• Disposition of charges
• Preliminary hearing
• Pretrial advice
• Information collection: discovery; depositions; production of witnesses and evidence
• Immunity and plea agreements
• Inquiry into the mental capacity or mental responsibility of the accused
	• Accused's elections on composition of CM
	• Arraignment and initial plea
	• Motions
	• Pleas
	• Impaneling of CM members
	• Presentation of the case
	• Production of statements of witnesses
	• Findings
	• Deliberations and voting on findings
	• Announcement of findings
		• Presentation by trial (defense) counsel of aggravating (mitigating) circumstances
		• Sentencing forum election
		• Instructions on sentence
		• Deliberation and voting on sentence
		• Announcement of sentence
		• Impeachment of sentence
		• Reconsideration of sentence
		• Notice concerning post-trial and appellate rights
		• Adjournment
			• Post-trial motions and proceedings
			• Matters submitted by the accused and crime victim
			• Action by the CA
			• Entry of judgment
			• Appeal of sentence by the United States
			• Review by:
			  ▪ The Judge Advocate General
			  ▪ A Court of Criminal Appeals
			  ▪ The Court of Appeals for the Armed Forces
			  ▪ The Supreme Court

Disciplinary path			
Pre-hearing matters	**NJP proceeding/hearing & punishment**		**Procedures, appeals & reviews**
• Notification to accused • Accused accepts NJP proceeding and requests or waives personal appearance • Accused requests trial by CM ⇒ CO decides whether to forward or refer charges	• Hearing may be open or closed • Accused presents arguments in his defense, either in person or in writing • Rules of evidence do not apply • NJP authority makes a decision	• NJP authority imposes punishment allowed by Article 15 • Maximum punishment depends on the ranks of the members receiving and imposing the punishment	• Suspension, mitigation, remission, and setting aside • Appeals • Legal review • Action by superior authority • Records of NJP

Source: CNA, based on [27] and discussions with SMEs.

MJS history

The UCMJ, as a law enacted by Congress, became effective on May 31, 1951 [101]. Here, we briefly describe the early history of the MJS and recent MJS reforms. The early history tells us that the MJS was always intended to apply to both disciplinary and criminal offenses and that, even at that stage, there was an acknowledgement that MJS decision-makers could fail to be impartial. The recent reforms, and the stated reasons for them, indicate that the MJS continues to evolve to ensure that it is both independent and fair.

Articles of War

Prior to the codification of the UCMJ and its punitive articles, the MJS operated under the Articles of War, which were first established by the Second Continental Congress in 1775.[31] They were updated in 1806 and not substantially revised until the 1910s [102]. The first "Manual for Courts-Martial and Of Procedure Under Military Law" was published in 1898 [101]. It included 128 Articles of War and described four types of military jurisdiction: military law, the law of hostile occupation, martial law at home, and martial law applied to the Army [103]. For the purposes of this study, the relevant jurisdiction is military law, which the 1898 MCM described as follows:

> [T]he legal system that regulates the government of the military establishment. It is a branch of the municipal law, and in the United States derives its existence from special constitutional grants of power. [103]

The 1898 MCM further identified two relevant types of military tribunals.[32] The first was CMs "for the trial of offenders against military law," which derived "their existence solely from the acts of Congress" and whose jurisdiction was "limited to the purpose of the maintenance of military discipline" [103].

The second relevant type of tribunal was courts of inquiry "for examining transactions of, or accusations or imputations against, officers or soldiers" and which were provided for in Article 115 of the Articles of War. Article 115 read as follows:

> A court of inquiry to examine into the nature of any transaction of, or accusation or imputation against, any officer or soldier, may be ordered by the President or by any commanding officer but, as courts of inquiry may be perverted to dishonorable purposes, and may be employed, in the hands of weak and envious commandants, as engines for the destruction of military merit, they shall never be ordered by any commanding officer except upon a demand by the officer or soldier whose conduct is to be inquired of. [103]

The 1898 Articles of War also included an early version of today's general article 134:

> ART. 62. All crimes not capital, and all disorders and neglects, which officers and soldiers may be guilty of, to the prejudice of good order and military discipline, though not mentioned in the foregoing Articles of War, are to be taken cognizance of by a general, or a regimental, garrison, or field officers'

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[31] The Navy had an entirely different disciplinary system before the UCMJ took effect in 1951; Navy personnel and Marines were subject to the Articles for the Government of the Navy.

[32] A third type of tribunal is also listed: "Military Commissions, for the trial of offenders against the laws of war and under martial law founded in necessity" [103].

court-martial, according to the nature and degree of the offense, and punished at the discretion of such court. [103]

The Military Justice Act of 2016

The most recent comprehensive reform to the modern UCMJ came with the Military Justice Act of 2016 (MJA 2016) as part of the FY 2017 NDAA [104]. The law was passed in 2016 and was scheduled to take effect January 1, 2019 (thus, any changes in outcomes that result from the new provisions will only be reflected in data from calendar year 2019 forward). Prior to passage of the MJA 2016, the SECDEF directed the DOD general counsel to conduct a holistic review of the UCMJ and issue recommendations for reform. The review was conducted by the MJRG; the findings and recommendations were documented in a final report released in December 2015 [26]. The MJA 2016 addressed many of the MJRG's recommendations. Although the rationale behind the law change was not articulated in the NDAA, in a report to Congress, the CRS described it as follows:

> Proponents of reform have for decades advocated changes relating to military jurisdiction; pre-trial, trial, and post-trial process; over charging; court-martial panel selection; and appellate review. A perennial concern has been the perception of a lack of complete judicial independence, as well as commander's control over courts-martial, in part by choosing which charges to prefer against whom[33] and by exercising post-trial clemency. One major recent concern has been the handling of sexual assault cases as well as domestic and intimate partner violence in the military. [28]

Although the word "fairness" was not used in the CRS description, the concerns it lists are all related to aspects or perceptions of fairness. Below is a list of some of the changes included in the MJA 2016, each of which can be construed as addressing issues of fairness in the UCMJ:

- Fixing the number of panel members for SPCMs and GCMs

- Reducing the severity of punishments allowable in NJPs (e.g., no longer allowing confinement with only bread and water) and establishing a new type of judge-alone SPCM with limited sentencing powers (e.g., not able to impose a bad-conduct discharge, confinement of more than six months, or forfeiture of pay for more than six months) for common offenses that are serious enough to warrant a SPCM, but are still relatively minor

- Requiring that legal training be provided to all officers, with additional training for commanders with authority to take disciplinary actions under the UCMJ

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[33] In addition to the commander, anyone subject to the UCMJ may prefer charges [27].

- Adding four new offenses—related to prohibited activities with a recruit or trainee by persons of special trust, the fraudulent use of credit/debit cards, offenses concerning government computers, and retaliation—that were previously generally charged under Article 134

- Limiting the types of CM findings on which convening authorities may act and the types of sentences they may reduce, commute, or suspend [28]

Thus, the MJA 2016 curtailed some of the discretion of commanders and convening authorities and professionalized the process by enhancing the roles of those with legal training. However, commanders still retain considerable discretion during the incident processing phase of the MJS (e.g., determining if charges should be referred and the appropriate CM forum) and convening authorities still retain considerable discretion at later stages of the MJS (e.g., assignment of court members, conducting post-trial review, and, where authorized, acting on CM findings).

FY 2022 MJS revisions

Passed by Congress on December 15, 2021, after much debate, the FY 2022 NDAA made several additional substantial revisions to the MJS [62]. Here, we highlight three provisions of the new law that are relevant to the issues addressed in this study.

First, Section 539D requires the President to issue regulations to include SH as a standalone offense punishable under Article 134, *General article*.

Second, several new provisions (Sections 531–539C) remove the decision to prosecute serious crimes (including murder, rape, domestic violence, and SA) from the chain of command and require these crimes to be prosecuted by trained, independent military prosecutors called special trial counsels. Proponents of this reform argue that it is necessary to remove the decisions to try servicemembers for these crimes from the commander because the commander is not a legal expert and has an inherent conflict of interest due to a supervisory relationship with the accused person [105]. Proponents of the reform also argue that, to retain their independence, it is critical that the special victims legal experts who try the cases report to the service secretaries, not through the chain of command [105].

Finally, Section 549C requires DOD and the Department of Homeland Security (DHS) to evaluate the MCIOs to ensure that each is capable of "professionally investigating criminal misconduct under its jurisdiction" [62] and that each has "the personnel, equipment, and capabilities necessary to conduct high quality, timely criminal investigations" [68]. More specifically, the FY 2022 NDAA requires the evaluations to assess whether the functions of

MCIOs would be better supported by civilian rather than military leadership.[34] According to Representative Jackie Speier (D, California), the investigative failures associated with the Vanessa Guillén case were a primary motivation for including this requirement [68].[35]

Framework for conceptualizing the MJS

To address the two fundamental analytical problems identified in the introduction to this report—unobservable factors and system complexity—we use the structure of the MJS itself as a guiding framework. Specifically, following the lessons from the CCJS, we illustrate the MJS structure with the flowchart in Figure 3, which maps the steps that a case or an accused servicemember takes between entry to and exit from the system. The sequence of events illustrated in Figure 3 is based on the key laws and policies that defined the MJS as of 2019 and are described in the 2019 MCM [27], as well as additional literature and discussions with MJS SMEs from the JAG offices of each service and DOD. Although we know there are service-specific differences in how the UCMJ is implemented, the overall framework is designed to capture the system as it applies to all services.

The black banner at the top of Figure 3 identifies four primary phases in the MJS—incident processing, pre-trial/hearing, adjudication and sentencing, and post-trial/hearing—and the gray boxes represent specific steps within each phase. When accused of a UCMJ violation, individuals from the military population enter the incident processing phase of the MJS. This is where reports are made (either to a military law enforcement organization or directly to a CO) and investigations are conducted. At the end of that phase, COs use their discretion (sometimes in consultation with a higher disposition authority or a legal advisor) to determine whether the case will proceed to the pre-trial/hearing phase and, if so, whether that next step will be on the disciplinary or judicial path. In each phase on each path, there are some outcomes that

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[34] Currently, the Naval Criminal Investigative Service (NCIS) is the only MCIO whose leadership is entirely civilian—its director is a civilian who reports directly to the secretary of the Navy and its deputy directors are also civilians [106-107]. At the other end of the spectrum, the Air Force Office of Special Investigations (AFOSI) is the only MCIO whose leadership is entirely military [108]. The other two MCIOs— the Coast Guard Criminal Investigative Service (CGIS) and the Army's Criminal Investigation Division (CID)—have a mix of civilian and military leadership. CGIS is headed by a civilian deputy director who reports to the vice commandant of the Coast Guard [109]. In September 2021, the Army appointed the first civilian CID director who reports directly to the undersecretary of the Army. (The position was previously held by a brigadier general.) CID's deputy director and other leadership positions are, however, still held by military personnel [110-111]. The change in CID leadership was made in conjunction with a desire to "clearly establish CID as an elite federal law enforcement agency that operates within and in support of the Department of the Army" [112].

[35] See the reports from the Fort Hood Independent Review Committee [64] and the Independent Review Commission on Sexual Assault in the Military [65] for issues associated with MCIO effectiveness.

send the case to the next step on the path and some outcomes that allow the case to move to a different path or to exit the system.

Figure 3.   How a case flows through the MJS
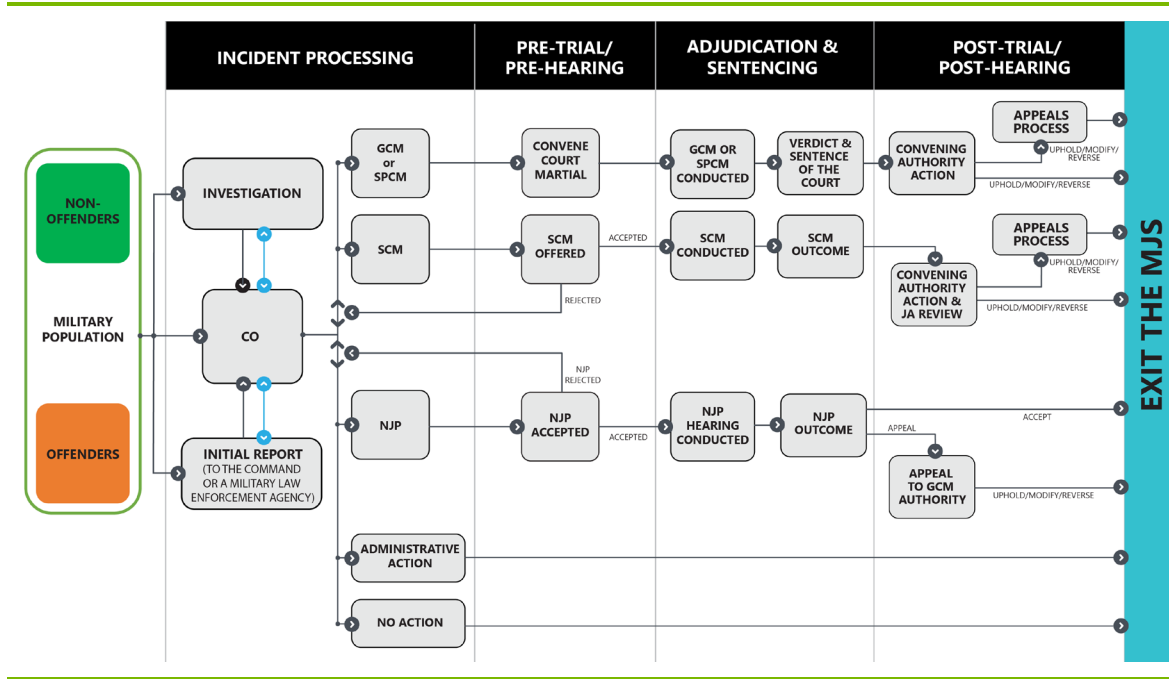
Source: CNA, based on the 2019 MCM [27] and SME discussions.
Notes:
- Arrows: black indicates movement of the accused/case through the MJS; blue indicates information flow.
- Abbreviations: CO = commanding officer; NJP = nonjudicial punishment; SCM = summary court-martial; SPCM = special court-martial; GCM = general court-martial; JA = judge advocate.

Although it is a high-level summary of the MJS, the flow chart in Figure 3 provides enough structure and detail to allow us to determine what data to collect, how to collect them, and how to analyze them by considering the following questions:

- What are the important steps in each phase?
- Where is discretion present in the process and who exercises it?
- What factors are likely to determine which outcomes will occur at each step?
- What information should be available at each step in the system?

Next, we describe the MJS steps in more detail to begin to answer these questions. The first phase, incident processing, is the same regardless of which path through the MJS a case will

take. The incident processing phase ends when the CO decides on that path. After discussing the incident processing phase, we describe the nonjudicial (disciplinary) and judicial (criminal) paths separately.

Incident processing phase

The incident processing phase is where the MJS process begins. According to the JAG office SMEs, the most common way incidents are reported is when the CO is made aware of a UCMJ violation through the chain of command, including from situation reports and other reporting functions. This is especially true for disciplinary infractions and minor offenses. Serious criminal infractions might be reported to the commander by investigative and judicial entities outside of the chain of command (e.g., civilian LEAs or MCIOs).

Investigation

The CO has a responsibility to investigate each reported incident and can do so through a command investigation or by working with the relevant MCIO or other military law enforcement organization (LEO). For major offenses (e.g., murder and SA accusations), an MCIO must conduct a formal investigation. For less serious offenses, the CO has considerable discretion in deciding how incidents are initially investigated [27]. In addition to gathering all relevant information, the CO is likely to consult with his or her SJA or other legal advisor to determine the strength of the evidence, appropriateness of preferring charges, and the appropriate disposition options based on the facts of the case. At that point, the CO will make his or her disposition decision and the case will progress through the MJS.

Commander's disposition decision

The role of the CO is central to the MJS, and the CO's initial disposition decision is a point of considerable discretion. COs are responsible for good order and discipline in their commands. Generally, this should be achieved through effective leadership, but when a command member commits, or is accused of committing, a UCMJ violation, the CO must decide how to dispose of the accusation. When making that decision, the CO has several options:

- Take no action or dismiss preferred charges if the preliminary inquiry indicates that the accused is innocent, if there is insufficient or only inadmissible evidence, or if he or she believes there are other valid reasons not to proceed

- Take administrative action, which is considered to be corrective rather than punitive, and includes counseling, criticism, withholding of privileges, and involuntary separation

- Choose NJP if he or she thinks that administrative measures are inadequate given the nature of the offense, the need for good order and discipline, and/or the record of the accused

- Forward the decision to a superior authority if he or she does not have the authority to take what he or she believes is the appropriate action, or to a subordinate if the appropriate action can be handled at a lower level

- Refer preferred charges to an SCM, SPCM, or GCM depending on the nature of the charge

According to the 2019 MCM [27], each commander in the chain of command has independent yet overlapping discretion to dispose of offenses within the limits of his or her authority. By policy, allegations of offenses should be disposed of at the lowest appropriate level. However, initial disposition authority for certain sex-related offenses is withheld from commanders who do not possess at least SPCM convening authority and who are not in the grade of O-6 or higher.

If charges are preferred, the disposition decision must be made by someone with the authority to administer NJP or convene CMs. These authorities are based on position rather than rank. The positions for officers with convening authority for GCM, SPCM, and SCM are listed in Articles 22, 23, and 24 of the UCMJ, respectively [27]. NJP authority is granted to any commissioned or warrant officer who has primary command authority over a military organization or area that is recognized as a command.

Typically, an Article 32 hearing is held before charges are referred to GCM, though this hearing can be waived in some cases. In an Article 32 hearing, evidence is presented and the accused can examine that evidence, cross-examine witnesses, and present arguments. Once the Article 32 hearing is complete, an SJA issues what is known as an Article 34 advice letter. The letter provides a formal, written recommendation regarding the referral of charges. If an SJA determines that a charge is not supported by probable cause, does not state an offense, or that there is no CM jurisdiction over the accused or offense, the convening authority cannot refer that charge for trial by GCM. Otherwise, the advice is not binding on the convening authority.

Ideal data elements for investigating REG outcome disparities in the incident processing phase include how the incident was first reported (and by whom), what investigation activities took place, the extent to which the CO consulted legal advisors, whether the CO acted in concurrence with the SJA's recommendation (where applicable), and any other potentially mitigating information the CO knew before making his or her disposition decision.

Nonjudicial punishment

The NJP disciplinary option provides commanders with an "essential and prompt means of maintaining good order and discipline and to promote positive behavior changes in servicemembers without the stigma of a court-martial" [27]. The range of NJPs is narrower, and the maximum NJP is less severe, than the punishments that may be imposed by CMs. If the CO decides to pursue the NJP path, the accused is notified of that decision.

Once the disciplinary path is chosen, the case proceeds to the pre-hearing phase. In this phase, the accused may reject NJP proceedings, which would cause the case to revert back to the CO for reconsideration of the disposition decision.[36] Theoretically, the CO can still choose one of the other three primary paths (take no action, take administrative action, or proceed to CM). Taking no action and taking administrative action are notionally less severe consequences than the original decision to send the case along the NJP path.[37] More likely, the CO will decide to initiate SPCM proceedings.

If the accused accepts the NJP decision, the case proceeds to the adjudication and sentencing phase and the NJP (or Article 15) hearing is held. NJP hearings include discussions of evidence and other facts of the case. Accused members do not have legal counsel assigned for NJP hearings, but they can speak for themselves with the CO. After the NJP hearing, the case moves to the next phases. In the sentencing phase, the CO decides the outcome and any NJPs to be levied. In the post-hearing phase, the accused can appeal if he or she does not accept the outcome of the NJP hearing.

Of the four main paths, the NJP path is by far the most common. According to the services' Military Justice Annual Reports to Congress for FY 2020 [3], the number of cases where NJP was imposed ranged from 13 per 1,000 in the Air Force to 43 per 1,000 in the Army. In contrast, the number of CMs tried was less than 1 per 1,000 for all three types of CM in all four of the DOD services for which data were reported.[38]

Ideal data elements for investigating REG disparities in NJP outcomes include which articles were charged, what type of investigation was conducted, what evidence and facts about the case were available at the hearing, what mitigating circumstances were offered in the NJP

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[36] This would not be the case if the vessel exemption is employed. For more on this UCMJ exemption, see https://www.militarytimes.com/opinion/commentary/2020/10/22/end-the-navys-vessel-exception-give-sailors-and-marines-the-due-process-afforded-to-every-other-us-service-member/.

[37] This characterization may not always hold. For example, one available administrative action would be to initiate separation proceedings, perhaps seeking an other-than-honorable service characterization.

[38] For a given FY, the rates per 1,000 are calculated by dividing the number of cases or CMs by the average endstrength and multiplying by 1,000. Space Force data were not included in the DAF FY2020 annual report.

hearing, and the range of punishments considered as possible outcomes. It is also important to know whether an NJP was offered and rejected by the accused and the subsequent action the CO took.

Summary courts-martial

SCMs are used for the least severe offenses adjudicated by CM and are the least common of the three CM types.[39] The SCM's function is to "promptly adjudicate minor offenses under a simple procedure" for enlisted personnel [27]. They have been described as a "non-criminal forum without a civilian analog" [28]. SCMs are led by commissioned officers who do not have to have extensive legal training. A "guilty" finding from an SCM does not result in a criminal conviction [27]. If an accused enlisted person rejects an NJP, the CO might refer him or her to an SCM. Like rejecting an NJP, an accused can also reject an SCM. In those cases, the CO would take a different action that could include no further action, administrative action, initiation of NJP proceedings, or, more likely, referring the case to SPCM for which the accused's consent is not required.

If the SCM is accepted, the case proceeds through the remaining three MJS phases—pre-trial activities, adjudication and sentencing, and post-trial activities, which includes the possibility of appeal. There are, however, several key process elements that make SCMs unique:

- Composed of one officer who is probably not a lawyer

- Applicable to enlisted personnel only

- Applicable to minor offenses only

- Not allowed to impose a punitive discharge

- A guilty finding does not result in a criminal conviction

Ideal data elements for investigating REG disparities in SCM outcomes include the legal training and REG characteristics of the officer conducting the SCM and all information about charges and sentencing options considered. It would also be useful to know any changes resulting from the JA review of SCM guilty findings.

Special and general courts-martial

As described in the overview of the MJS, SPCMs and GCMs differ in terms of the severity of the offenses they address, their composition (judges and panel members), and punishment options

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[39] According to reference [3], in FY 2020 and across the four DOD services (the Space Force was not included), the numbers of SCMs per 1,000 ranged from 0.07 to 0.3, while the numbers of SPCMs and GCMs ranged from 0.23 to 0.75.

available upon a guilty finding. However, the general steps through which they are conducted are very similar. Thus, we describe them together in this section, though we note some differences in discretion and other factors that could lead to disparate outcomes.

Pre-trial phase

For both SPCM and GCM, there are multiple pre-trial activities including convening the CM, detailing personnel to the CM, and determining any pre-trial confinements or restrictions. The CM convening authority details members and legal professionals to participate in the CM. SPCMs consist of 4 members unless the accused requests a trial by a military judge alone or the convening authority refers the charges to a judge-only SPCM, which may be done without the accused's consent. GCMs for non-capital cases consist of 8 members unless the accused requests a trial by judge alone or if the CM is impaneled with 8 jurors and 1 or 2 are removed post empanelment with no alternates available [27-28]. All capital cases are tried by 12-member panels. Panel members must be those whom the convening authority believes are best qualified for the assignment. Any officer can serve as a court member, but warrant officers can only serve if the accused is not a commissioned officer and enlisted personnel can only serve if the accused is enlisted.

During the pre-trial phase, counsel is assigned. For both GCM and SPCM, the accused has the right to counsel. For GCM, both trial (prosecutor) and defense counsel must be members of the bar of a federal court or the highest court in a state and be determined competent by the JAG. However, for SPCM, only the defense counsel must meet those credentials; the trial counsel can be any commissioned officer selected by the JAG and determined to be competent.

Additionally, during the pre-trial phase (and any time before CM findings are announced), the accused can enter into a plea agreement that could specify the specific charges referred or set sentencing limits.

Adjudication and sentencing phase

Once a GCM or SPCM commences, the military judge arraigns the accused and the charges are read. Next, the court members are selected. This process is like the civilian process of voir dire and potential court members can be challenged. Once the challenges are complete, the military judge randomly selects the required number from the remaining possible court members [28]. Each side presents its case and evidence. This process is generally consistent with civilian trial practices.

The trial concludes when all evidence has been presented and the judge has ruled on all questions of law. The conclusions of CMs are called "findings" (rather than "verdicts," as in civilian trials). In non-capital CMs with a military judge alone, that judge decides the findings and the sentence. In non-capital CMs involving court members, three-fourths of the court

members must agree to find the accused guilty, otherwise, the accused is acquitted. When the panel does reach a guilty finding, three-fourths of the panel must agree on sentencing. In capital cases, court members participate in sentencing and a unanimous guilty finding is required for a death sentence.

The UCMJ and MCM define the minimum and maximum punishments that each type of CM can impose for each offense. SPCMs and GCMs can both impose punitive discharges. GCMs can impose bad-conduct and dishonorable discharges for enlisted personnel and dismissals for officers. SPCMs may not impose officer dismissals or dishonorable discharges, but most SPCMs may impose bad-conduct discharges [28].[40] Within these guidelines, the CM judge and members can award any authorized punishment, but they are instructed that the sentence should be "sufficient, but not greater than necessary, to promote justice and to maintain good order and discipline in the armed forces" [27]. This guidance and the range of possible punishments gives considerable discretion to those with authority to adjudge SPCM and GCM sentences.

Post-trial phase

Once the CM is complete, the findings and sentence are forwarded to the convening authority for action. Before the MJA 2016, the convening authority had more discretion to act on findings in a way that diverged from the CM's output. However, now the convening authority is not authorized to disapprove (or set aside) findings in which (i) the authorized maximum confinement exceeds two years; (ii) the sentence includes dismissal or a dishonorable or bad-conduct discharge, (iii) consecutive confinement is more than six months, or (iv) if the accused was convicted of one of several sexual offenses. Nor can the convening authority suspend a mandatory minimum sentence. In circumstances other than those described above, the convening authority may review the findings and the SJA recommendations and act to disapprove a finding or conviction, suspend all or part of a sentence, or reduce a sentence.

CM findings and sentences may also be reviewed by a service's court of criminal appeals. Automatic appellate review occurs if the CM sentence includes confinement for two years or longer, a bad-conduct or dishonorable discharge, or a dismissal in the case of a commissioned officer, cadet, or midshipman. Appeal is mandatory if the sentence includes death.

Finally, if the CM result is not subject to automatic appellate review, the servicemember can ask that their case be reviewed by the JAG, who may modify or set aside the findings and

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[40] The exception is the military-judge-alone SPCM created by the MJA 2016 [28].

sentence from a CM or forward the case for review by the court of criminal appeals.[41] The accused also may petition the relevant court of criminal appeals for discretionary review.

Ideal data elements for measuring REG disparities in SPCM and GCM outcomes across all three phases include the composition of the court members including their own REG characteristics, the training and REG characteristics of the counsel, the extent to which lesser offenses were charged and considered, the original findings and sentence, and all actions taken by the convening authority.

Summary

This section identified points in the MJS where institutions and individual actors apply discretion, as well as important MJS outcomes to study. To do this, we created a chart that maps how a case flows through four phases of the MJS—incident processing, pre-trial/pre-hearing, adjudication and sentencing, and post-trial/post-hearing—and identified key steps in each phase.

A main source of institutional discretion in the MJS lies outside the system. Specifically, given that servicemembers can enter the system if they are accused of disobeying a regulation, institutional choices about the nature and design of regulations will affect MJS outcomes.

Individual discretion, in contrast, is more likely to be applied within the MJS. In response to the past decade's concerns about MJS bias, Congress has made several changes to the UCMJ to increase the overall independence and fairness of the system and to limit the discretion of commanders and convening authorities at certain procedural points. Considerable individual discretion still remains, however, and as in the CCJS, it occurs at different points for different actors:

- The most individual discretion exists during the incident processing phase. In this phase, COs decide whether to investigate (except in cases in which an MCIO investigation is mandatory) and *may* determine whether and what charges to prefer. Most importantly, COs choose whether to dispose of dispose of incidents that occur in their commands with administrative or nonjudicial processes or refer them to CM.

- Substantial CO discretion also exists during both the pre-hearing and adjudication and sentencing phases along the NJP disciplinary path. For the less serious offenses to which NJP applies, COs with little or no legal training decide whether to impose pre-

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[41] For more information, see Article 60a of the UCMJ and rule for CM 1107 in the 2019 MCM [27], as well as the 2020 Congressional Research Service report describing the 2016 MJA [28].

hearing confinement, determine whether the accused is guilty and, if so, choose what punishments to apply. Accused servicemembers can, however, reject NJP (unless the vessel exemption is employed) or appeal their outcomes.

- Once a case is referred to SPCM or GCM, discretion is spread across more people and those people are more likely to be legal professionals. . In particular, the military judge and the trial and defense counsels, who all contribute to decisions about plea agreements in the pre-trial phase and about CM findings and sentences in the adjudication and sentencing phase, must be members of the bar of a federal court or the highest court in a state, and be determined competent by the JAG.

- Finally, in the post-trial phase, discretion is exercised by convening authorities and service JAGs. While the MJA 2016 limited the convening authority's power, he or she can still alter CM findings or sentences for some cases.

Turning to important outcomes, the flowchart highlights the importance of considering the full range of outcomes because movement through the system is determined by the outcome at each successive step along the relevant disciplinary or judicial path. The steps within each phase identify the important outcomes. We will address these steps in more detail in the discussion of data requirements in the next section.

Addressing MJS Bias Concerns with Administrative Data: Applying the CCJS Lessons

This section applies to the MJS lessons from the CCJS for using administrative data to conduct ongoing assessments of REG disparities in MJS outcomes. Following the same structure as the section on lessons from the CCJS, we use our understandings of how cases flow through the MJS and of existing MJS data management guidance to assess the services' current ability to implement the CCJS lessons regarding initial considerations, data analysis, data requirements, and reporting.

Initial considerations

The CCJS lessons indicate that three issues must be considered to develop appropriate expectations and ensure that assessment objectives can be met: resource requirements and constraints; whom to involve in the effort; and how to manage initial communications with stakeholders.

Resources: Existing data availability and funding

Of course, an important resource consideration when planning to use administrative data to assess REG disparities in MJS outcomes is existing data availability and storage capability. All the services have existing RMSs that capture data on investigations conducted by their MCIOs and/or other LEOs[42] and on reported incidents that are dealt with by the disciplinary (NJP) and/or judicial (CM) processes of the MJS. The RMSs that the services identified for this study are listed in Table 7.

Later in this section and in the companion document on the results of data analysis [4], we address the completeness of these RMSs and the quality of the data they contain. Here, we describe some of the guidance for developing and maintaining them, as well as publicly available information about funding constraints.

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[42] For example, military police (Army and Marine Corps), security forces (Air Force), and masters-at-arms (Navy).

Table 7.   Existing MJS RMSs

Function	Air Force[a]	Army	Marine Corps	Navy	Coast Guard
Investigation					
MCIO	Investigative Information Management System (I2MS)	Army Law Enforcement Reporting and Tracking System (ALERTS)	Consolidated Law Enforcement Operations Center (CLEOC)		Field Activity Tracking System (FACTS)[c]
Other LEO	Security Forces Management Information System[b]				-N/A-[d]
Disciplinary and judicial					
NJP/SCM	Automated Military Justice Analysis and Management System (AMJAMS)	Military Justice Online (MJO)	Total Force Data Warehouse (TFDW) Legal Action D66 NJP	Quarterly Criminal Activity Report (QCAR)[e]	Human Capital Production (HCPRD)
SPCM/GCM		Army Courts-Martial Information System (ACMIS)	Case Management System-Judge Advocate Division (CMS-JA)/ Wolverine[f]		

Source: Based on data and information provided to CNA by the services.

[a] These RMSs are associated with the Air Force; we have no explicit information about whether they will also be used for the Space Force.

[b.] The Air Force is proposing to change this system name from the Security Forces Management Information System (SFMIS) to the Air Force Justice Information System (AFJIS).

[c] FACTS is currently being updated, so FACTS data are not available for this study.

[d] We were not able to collect information about this data system.

[e] FY2021 is the first year in which detailed information about NJPs and SCMs across the fleet has been collected; the system is still in development.

[f] CMS-JA is the legacy system for the Marine Corps and the Navy. Wolverine is the current system (introduced in FY 2020). The Coast Guard identified Wolverine as its current data system, but most of the data submitted for the project came from its legacy system, Law Manager.

RMSs maintained by JAG offices

In addition to the procedural MJS changes described in the previous section, the MJA 2016 added a new data-related article to the UCMJ:

> Article 140a. Case management; data collection and accessibility.
>
> (a) IN GENERAL.—The Secretary of Defense, in consultation with the Secretary of Homeland Security, shall prescribe uniform standards and criteria for conduct of each of the following functions at all stages of the military justice system (including with respect to the Coast Guard), including pretrial, trial, post-trial, and appellate processes, using, insofar as practicable, the best practices of Federal and State courts:
>
> (1) Collection and analysis of data concerning substantive offenses and procedural matters in a manner that facilitates case management and decision making within the military justice system, and that enhances the quality of periodic reviews under section 946 of this title (article 146).[43]
>
> (2) Case processing and management.
>
> (3) Timely, efficient, and accurate production and distribution of records of trial within the military justice system. [27][44]

To implement Article 140a, the DOD general counsel issued Uniform Standards and Criteria Required by Article 140a in 2018 (hereafter known as the 2018 Standards) [113]. Subsequently, in 2021, DOD issued a Systems of Record Notice (SORN) announcing the establishment of a new system of records covering all DoD components titled, *Military Justice and Civilian Criminal Case Records* (MJC3R) [114].

The 2018 Standards require each service to maintain and operate a military justice case processing and management system that tracks every case opened by military law enforcement in which a servicemember is identified as a subject until completion through the final disposition within the MJS, including direct appellate review [113]. The Standards also include guidance for collecting specific data elements based on uniform definitions. In addition to categories for the offender, the investigation, and victims of SA or domestic violence, the data elements fall into the following categories that roughly correspond to the steps on the judicial path of the MJS:

- Pre-trial restraint/confinement
- Preferral of charges
- Pre-referral judicial proceedings

- Action by chain of command
- Article 32 preliminary hearing
- SJA pre-trial advice

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[43] The Article 146 reviews will be discussed in the section on reporting.

[44] Article 140a was added in response to a recommendation from the MJRG to "enhance efficiency and oversight, as well as to increase transparency in the system and foster public access to releasable information" [26].

- Referral
- Plea agreement
- Enlisted separation or officer resignation in lieu of CM

- Inquiry into mental capacity/mental responsibility of the accused
- Trial sentence (if applicable)
- Post-trial [113]

DOD-wide SORNs support multiple DOD paper or electronic recordkeeping systems that are operated by more than one DOD component, but that maintain the same kind of information about individuals for the same purpose. Thus, as a system of records, the MJC3R "describes DOD's collection, use, and maintenance of records" for the administration of the UCMJ and disciplinary cases under its authority. It applies "enterprise-wide for the furtherance of good order and discipline," and it covers servicemembers and others identified in Article 2 of the UCMJ, as well as civilians who are accused of committing criminal acts on DOD properties [114]. The purposes of the MJC3R and, thus, the underlying service-specific RMSs, include supporting both case management[45] and data analysis and reporting.

Comparing the 2018 Standards to the data-related recommendations from the 2019 GAO report, we note the following. First, the required data elements in the offender and victim categories include REG. Specifically, there are two options for gender—male and female—and the options for race and ethnicity are consistent with the definitions specified in both the GAO report [2] and the existing federal guidance [42]. Second, the original version of the 2018 Standards did not include "imposition of NJP" in the options for pre-referral actions by the chain of command (i.e., data points 37, 38, and 39) [113].. Imposition of NJP was, however, added as a possible pre-referral action when a revision to the 2018 Standards was issued in January 2021 [115], thus making them consistent with the GAO recommendation to collect complete information on NJPs and SCMs. As shown in Table 7, all the services except the Air Force keep NJP information in separate RMSs.

Since the 2018 guidance was issued, the services have been working to ensure that the RMSs maintained by their JAG offices are compliant. All but the Army reported progress on these efforts in their annual reports on military justice for FY 2020 [3].[46] The Navy, Marine Corps, and Air Force also, however, indicated that funding constraints may impede future progress:

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[45] Specifically, the notice announcing the SORN for the MJC3R lists (among others) the following purposes: to "support adjudication and litigation by military judges, convening authorities, prosecutors, and defense counsel of disciplinary cases, hearings, courts-martial and adverse administrative actions under the UCMJ" and to "manage disciplinary case processes, reviews and appeals, from the complaint filing through adjudication, review, and when applicable, appeals; including tracking, managing, and storing case-related information and documents; facilitating case research and reporting; and creating statistics on key business functions and metrics" [114].

[46] During FY 2020, as the Space Force was being stood up, the DAF Military Justice Law and Policy Division was developing policies to help ensure proper administration of military justice for the Space Force. For this report, however, we refer mainly to the Air Force only for expositional simplicity.

Navy: The Navy and Marine Corps continued efforts to develop a new case management system (Naval Court-Martial Reporting System (NCORS)) to more efficiently collect required data….While initial funding to develop a six-month NCORS pilot product has been approved for FY21, significant additional funding and resources will be needed before the Navy is able to develop and maintain a modern case management system. [3]

Air Force: In FY20, the Air Force contracted for the replacement program for AMJAMS. The Disciplinary Case Management System (DCMS) will begin replacing AMJAMS in FY21 through a phased plan. The JAG Corps secured funding for the first year of the contract but is still working on full funding for follow-on years. Failure to fully fund this program through the Future Year Defense Program could negatively impact the timely implementation of DCMS and the ability to meet all Section 140a requirements. [3]

RMSs maintained by investigative organizations

MCIOs and other military LEOs investigate reported crimes when the target of the investigation is subject to the UCMJ,[47] and they maintain RMSs that keep records on their investigations. Table 7 shows that sometimes the RMSs for the services' different investigative organizations are integrated and sometimes they are not.

The investigative RMSs are not covered by the 2018 Standards. They are, however, the basis for the services' inputs to the Defense Incident-Based Reporting System (DIBRS), which is designed to allow DOD to meet congressionally mandated requirements for reporting law enforcement statistics, including (but not limited to) the NIBRS requirements that come from the Uniform Federal Crime Reporting Act of 1988, as amended, and the requirements from the Brady Handgun Violence Prevention Act of 1993 for purposes of prohibiting firearm purchases by people with certain criminal backgrounds [117].

In addition to meeting these statutory requirements, DIBRS also serves the following departmental purposes:

- Allow DOD to respond to requests based on a standard data system that can track a criminal incident from initial allegation to final disposition

- Allow DOD to account for cases that are processed administratively through separation or other actions

- Provide the flexibility to track non-criminal incidents or incidents that are hard to identify from the name of the offense, which is often the case with SH

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[47] More broadly, defense criminal investigative organizations initiate criminal investigations when a "DOD nexus" is identified based on a reasonable likelihood that: the crime occurred on a DOD location; DOD resources were used in the commission of the crime; a DOD entity, civilian employee, servicemember, or military dependent was the victim of the crime; or the subject of the investigation is or was affiliated with the DOD at the time of the offense. See [116].

- Ensure that overall law enforcement data compilations using inputs from the various functional areas are based on consistent data definitions and data collection requirements
- Enable the DOD components and organizations involved in law enforcement to transfer information electronically between the functional areas [117]

According to DOD policy, both MCIOs and other LEOs must provide monthly inputs to DIBRS that include data elements in the following categories based on specific formats and codes:

- NIBRS requirements:
  - Administrative segment
  - Offense segment
  - Property segment
  - Victim segment
  - Offender/arrestee segment

- DIBRS requirements:
  - Commander's report of action taken segment
  - Results of trial segment
  - Corrections segment

The NIBRS requirements are those mandated by the Uniform Federal Crime Reporting Act of 1988, as amended. The DIBRS requirements are additional requirements for military personnel on active duty only. For specific data elements in each category, see DOD Manual 7730.47, volumes 1 and 2 [117-118].

The DIBRS reporting process is triggered when an MCIO or military LEO responds to a "credible" report of a criminal incident, and it is the responsibility of the lead investigative organization to fulfill the combined NIBRS and DIBRS requirements. However, other MJS actors also have DIBRS reporting requirements, as indicated by the three DIBRS-specific categories. Commanders must initiate DIBRS reporting when a military law enforcement activity is not involved, but they have "reasonable" grounds to believe an offense has been committed and that the accused person committed it. Even when the DIBRS entry is initiated by an MCIO or LEO, commanders must report their final disposition decisions to whatever activity is designated as the central collection point for DIBRS (i.e., the functional consolidating activity). In addition, when cases are referred to CM, those with judicial functions must report trial results, and when CM sentences impose imprisonment, confinement facility officials are responsible for entering DIBRS data on their prisoners.[48]

Both the stated purposes of DIBRS and the DIBRS standards suggest that DIBRS data should provide a good basis for analyzing the outcomes of potentially criminal cases at each phase of

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[48] For more information see the section on "Functional areas with DIBRS reporting responsibilities" in [115].

the MJS and along both the disciplinary and judicial paths. We note, however, that GAO found that the services' investigative RMSs do not generally include records of command investigations that lead to CM. Specifically, GAO found that, over the study period, as many as 25 to 35 percent of SPCMs and GCMs were not preceded by an investigation that was captured in the services' investigative databases [2].[49] In addition, it is not clear whether DIBRS captures minor disciplinary incidents, the handling of which could produce perceptions of either procedural or distributive bias.

Finally, we did not identify current funding issues associated with the maintenance of the services' investigative RMSs, but a 2014 evaluation of DIBRS reporting and reporting accuracy found that lack of resources—both human and technological—contributed to a finding that DOD was not reporting criminal incident data to the Federal Bureau of Investigation, as required by law, and had not completed the requirements for DIBRS system certification [119]. In general, DIBRS reporting seemed to be viewed as an unfunded mandate. We do not know whether or how this has changed.

Whom to include and initial communications

The CCJS literature identified two broad groups of people to include in data collection and analysis efforts—key stakeholders and professional researchers. The main benefits of including professional researchers are that they add credibility to the process and supplement the skills of the agency's team. Although MJS agencies may not have in-house research capability, they do have access to many potential research partners, including research organizations in each service (e.g., Army Research Institute, Naval Postgraduate School), in DOD (e.g., Office of People Analytics, Defense Equal Opportunity Management Institute), in Congressional watchdog agencies (e.g., GAO), and in the federally funded research and development centers (e.g., CNA). Therefore, we focus here on key stakeholders in four main groups: MJS decision-makers; servicemembers; oversight agencies; and the public.[50] We also consider issues related to initial communications with each group.

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[49] Some of the variation was due to differences in whether the investigation data included investigations by MCIOs only or by MCIOs and other LEOs.

[50] For this study, we collected SME input from JAG offices only. Project constraints (including funding, the timeline, and regulations governing human subjects research) meant that we could not engage with individual defense or trial counsel, investigators, commanders, or servicemembers. We were not tasked or authorized to engage with the public.

MJS decision-makers

This stakeholder group includes people who exercise individual discretion during each phase of an incident's progress through the MJS—investigators, commanders, and members of the military legal establishment.

Many of these individual decision-makers are included in data collection and analysis efforts by mandate because they are expected to enter data into RMSs. It is also advisable, however, to include them in RMS design efforts to get their insights on input efficiency and output requirements and usability. Including members of these groups during the analysis process is also beneficial. Their expertise can inform analytical design, interpretation of results, and appropriate policy responses. For example, they can identify important control factors at the beginning of an analysis, as well as policy solutions that reflect on-the-ground realities when analytical results are complete.

Initial collaboration with this group of stakeholders also helps build support for, and cooperation with, assessment efforts by helping its members understand the value of the extra effort associated with data entry and/or changes in laws and practices. In particular, it will help members of this group understand that the goal is to improve MJS processes and outcomes, not label them as biased, racist, or sexist.

Servicemembers

This stakeholder group includes servicemembers and their immediate families. These are the people who experience the MJS, especially its disciplinary function, as part of their daily lives. Members of this group can provide valuable insight into what is and is not working if researchers (and agency staff) listen dispassionately and with an ear toward improving the system for everyone. In particular, they can help researchers decide where in the system to place analytical focus.

When it comes to addressing potential bias in the MJS, perception is as important as reality, and procedural justice is as important as distributive justice. Thus, it is vital that members of this stakeholder group trust that data analysis efforts are objective and that results will be transparently reported. They must also understand the limits of what data analysis can show: it cannot prove that bias exists, but it can show whether outcome disparities are widespread or occur at particular points in the system.

Oversight agencies

This stakeholder group includes Congress, as well as internal DOD, DHS, and service-specific agencies (e.g., inspectors general at each level). Although members of these groups have the power to require the services to collect and analyze data, initial collaboration with them can help create realistic expectations for the outcomes of such efforts. In particular, these agencies must understand the resource requirements in terms of technology, personnel, time, and, of

course, funding. Lessons from the CCJS clearly demonstrate that unfunded data collection and analysis mandates do not generate high-quality results.

Like the servicemembers themselves, members of this group must believe that data analysis efforts are objective and complete, and they must understand the limits of what data analysis can show. Unlike servicemembers, these stakeholders must also provide the required resources or allow something else to go undone.

The public

This stakeholder group includes the media, advocacy groups, and individual citizens—voters, potential military recruits, and the parents and influencers of potential recruits. Oversight agencies, especially Congress, respond to public concerns about bias in the MJS. As early as 1972, the media and advocacy groups have raised these concerns in response to reports from individual servicemembers. More recently, journalists and advocates have used FOIA requests to gain access not only to internal reports based on the services' MJS data, but also the actual data.[51] Proactive engagement with these groups can help ensure that they, like members of the other stakeholder groups, trust the objectivity and results of service-conducted analyses.

Data analysis

With the initial considerations in mind, the next step is to create an analysis plan that acknowledges existing resource limitations, including data availability and agency resources. To support the development of such a plan, we next describe four multivariate approaches that differ in terms of the questions they can answer and the skills and data required to use them. We then discuss criteria for interpreting analytical results.

Appropriate analytical techniques

In previous sections of this report, we explained that bias cannot be objectively observed or directly measured, so researchers must use statistical tools to make inferences about whether it exists. To do this, they focus on the following question: all else equal, do people from different REG groups experience the same outcomes? The multivariate approaches we describe here represent the main ways that social science researchers use administrative data to make "all else equal" in cases where they do not have the ability to design randomized control trials.

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[51] In addition to the original POD report that was a primary motivator for this study [39], see: reference [120] regarding POD legal efforts to gain access to Air Force MJS data; reference [121], which describes how Associated Press reporters used FOIA requests to gain access to Navy climate survey data; and references [122-123], which highlight delays in releasing the results of the 2017 WEOA survey and the fact that DOD denied Reuters' FOIA requests for the survey data or a report based on it.

Ultimately, the value of all these approaches depends on the extent to which the extra variables they incorporate effectively capture all the factors (other than REG) that affect the outcomes of interest.

Data disaggregation by outcome or factor

Disaggregating or cross-tabulating data to analyze outcomes experienced not only by entire groups, but also by specifically defined subgroups, can help us understand the correlations between different variables and how those correlations change from one variable grouping to another.

Consider the following example from the 2019 GAO report [2]. The GAO researchers compared the overall likelihoods of trial by CM for White and Black servicemembers, as well as the likelihoods of trial by CM for those with and without a recorded investigation. Using the count data provided in the GAO report, we calculated the following Black-White DIs for the large group defined by all those who experienced trial by CM and the two subgroups defined by those experiencing CM with and without a recorded investigation:

- DI for all CMs = 1.86
- DI for CMS with recorded investigations = 1.01
- DI for CMS without recorded investigations = 1.81[52]

Looking at the DI for all CMs indicates the existence of a large Black-White disparity for this outcome. Disaggregating the data into CMs that were and were not preceded by a recorded investigation, however, tells a different story: the disparity is much smaller for cases that included a recorded investigation than for those that did not.[53] This result suggests that the investigation phase of the MJS merits further study and that more complete information about investigations should be collected.

Thus, while the disaggregation approach cannot identify causal relationships or estimate the impact of REG on a particular outcome, it is a relatively low-cost way to identify trends, patterns, and probabilities in raw data that not only suggest where to focus additional research

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[52] We calculated these DIs from the Army data in Table 11 of the 2019 GAO report [2]. Looking at data for all the services and controlling for rank and education, the GAO reported finding "fewer statistically significant racial and gender disparities in most of the military services in general and special courts-martial that were preceded by a recorded investigation" [2].

[53] Note that the three DIs are based on conditional outcomes, which means that the Black-White DI for all CMs is not a weighted average of the other two DIs, and its value need not fall in between their values. More specifically, the three DIs are calculated using different denominators: the CM DI is based on the total personnel inventory; the DI for CMs with investigations is based on the number of personnel who went to CM and had a reported investigation; and the DI for CMs without an investigation is based on the number of personnel who went to CM without an investigation.

efforts and scarce resources, but also support the design and interpretation of other approaches.

Binary dependent variable probability models

Binary dependent variable probability models (e.g., logit and probit models) are a common multivariate approach for using individual-level data to estimate the effects of REG on a given outcome while holding the effects of other factors constant. As the name implies, these models explain a binary outcome (it either occurred or it did not) as a function of several independent variables that are hypothesized to be related to that outcome. Continuing with examples from the 2019 GAO study, we note that the GAO researchers used logistic regression models to estimate the probabilities of several MJS outcomes as a function of not only REG, but also rank and education. Consider the results for CMs. The GAO models estimated that, after controlling for rank and education, Black servicemembers in the Army, Navy, and Marine Corps were twice as likely as White, non-Hispanic servicemembers to face trial by CM [2]. These results indicate that something other than rank and education was driving the fact that Black servicemembers were significantly more likely to experience this outcome. It does not prove that bias in the system exists, but it does eliminate two potential drivers.

The GAO model is an example of a very simple logistic model. It is more usual (and more insightful) to include a wider range of explanatory variables to come closer to the "all else equal" ideal. For example, the differences in results for those going to CM with and without a recorded investigation suggest an indicator for investigation should be included as an independent variable in a CM model. Including more variables, however, requires collecting more data, and generating statistically significant results requires larger sample sizes. Since the sample sizes available for MJS analysis vary substantially across outcomes and across services, this should be considered when selecting an analytical approach. For example, the sample sizes for recorded investigations in the GAO study ranged from a high of 50,547 for the Army to a low of 1,437 for the Coast Guard [2]. In addition, beyond the investigation phase, the Coast Guard sample sizes were too small to support logistic modeling even with a limited number of independent variables.

Propensity score matching

Propensity score matching (PSM) is another powerful tool for examining outcome disparities because it allows researchers to correct for the selection bias issues that are commonly associated with these research questions. PSM is considered the "gold standard" for measuring disparities in CCJS outcomes [97, 124-125].

The PSM approach "matches" the condition-of-interest sample to a control sample defined in terms of all other variables in the data, then compares outcomes from the two samples. For example, if we are interested in Black-White differences in GCM conviction rates, PSM would compare the conviction rate of Black servicemembers who go to GCM to a sample of White

servicemembers who go to GCM *and* who look very similar to the Black GCM servicemembers on all other characteristics in the data. By matching the two samples, PSM is controlling for any outcome differences that might be explained by the different characteristics of the two groups. If outcome differences remain after the matching, it is an indicator that race-related outcome disparities exist.

Kitagawa-Blinder-Oaxaca decomposition

Kitagawa-Blinder-Oaxaca (KBO) decomposition is a multivariate analytical technique that was designed to measure bias in individual-level data. The KBO approach decomposes any observed outcome differences into (i) differences that can be explained by differences in group characteristics and (ii) differences that remain after controlling for differences in group characteristics. Thinking in terms of an MJS example, data may show that, compared to Black servicemembers, White servicemembers in the sample are more likely to be older, have waivers, and come from certain occupations. Using the KBO technique, a researcher can calculate that these characteristics explain 40 percent of the observed Black-White outcome difference. The remaining 60 percent of the outcome difference is considered unexplained and, therefore, potentially the result of unobserved bias. Although KBO decomposition is most famous for its application to wage disparities (e.g., gender wage gaps), it has been applied to racial differences in criminal justice outcomes, such as disproportionate minority contact in juvenile justice [126].

Appropriate criteria for interpreting analytical results

The analytical techniques described above are for calculating the directions and sizes of REG disparities. To use these calculations, it is necessary to define criteria for determining how they will guide decisions. Thus, we repeat two fundamental lessons from the CCJS. First, there are no generally agreed-upon, scientifically established criteria for identifying a level of disparity that equates to bias, so any cut-off point is, to some extent, arbitrary and based on judgement. Second, judgements about the importance of measured disparities should be developed with input from both internal and external stakeholders.

Criteria for deeper analysis

The tasking from the FY 2020 NDAA was to identify criteria for undertaking additional analysis when disparities are found. This guidance seems to assume that the analysis plan is to begin with bivariate metrics, then investigate further only if a measured disparity is sufficiently large; otherwise, do nothing more. We have shown, however, that bivariate metrics can both overestimate *and* underestimate outcome disparities, so this is not an appropriate use of bivariate disparity metrics.

Instead, we recommend conducting both simple and detailed analyses on a regular basis. Calculating disparities using bivariate techniques and disaggregation requires less time, less technical training, and fewer resources than calculations based on multivariate approaches, so it does make sense to use the simpler techniques more frequently. However, MJS agencies should also plan to regularly conduct detailed multivariate analyses, regardless of the results of the simpler, more frequent calculations. The frequency of these detailed analyses should be based on the organization's resources, as well as the size of the organization and the frequency of its relevant outcomes, both of which determine sample sizes. We provide some options for MJS agencies in the section on reporting results.

Criteria for inference and meaning

Disparity metrics can be evaluated in terms of absolute size, statistical significance, and number of people affected. If a pre-specified threshold is set for any of these criteria, it is possible (even likely) that the same metric does not satisfy them all. Therefore, the best approach is to apply all three evaluation criteria and consider whether a disparity is meaningful given organization-specific factors, including concerns and issues raised by both internal and external stakeholders.

It is also appropriate to consider the relative sizes of different metrics generated by the same agency, then act based on the disparities that stakeholders agree are most problematic. For example, agencies should calculate multiple metrics to identify different kinds of outliers by looking:

- Across outcomes (i.e., places in the MJS) to find the largest, most significant, and most impactful disparities
- At the same outcome for different:
  - Locations or units to determine whether some have larger disparities than others
  - Discretionary decision-makers at the same point in the MJS to determine whether any decision-maker stands out from his or her peers
- At the same disparities over multiple years to determine whether they are persistent, increasing, or decreasing

Desired data elements

Next, we identify specific data elements to support analyses using the analytical methods described above. Specifically, we identify data elements in three categories:

- Case and individual identifiers

- Outcomes of interest during the incident processing phase of the MJS and at each successive step along the disciplinary and judicial paths of the MJS

- Control variables to hold all else equal in multivariate analyses

The elements in each category are based on lessons learned from the CCJS, our understanding of the MJS, and our technical expertise. The lists are not comprehensive and could be revised or amended by SMEs from different services and different parts of the MJS based on their knowledge of the system and how it is implemented in their agencies.

In addition to identifying specific data elements, we also indicate whether and where each one is expected to be found in existing RMSs given the guidance from the 2018 Standards [113] and the DIBRS manual [117]. This allows us to assess whether the services are well positioned to make meaningful assessments of REG disparities in MJS outcomes. As part of this assessment, we note the following caveats. First, several elements in the incident processing phase are fundamentally unobservable and cannot be captured in data. Second, we acknowledge that the services' RMSs are in flux as they work to implement the 2018 guidelines. Thus, some of the data elements that are covered by existing guidance were not available for use in this study. We address these data gaps in the companion report on data analysis [4]. Finally, we also acknowledge that some data elements are currently captured in different systems and that there will be variations across services. In particular, as noted in Table 7, some of the services keep NJP data in their personnel data systems.

Case and individual identifiers

To generate data that are usable for analysis, RMSs must include unique identifiers for each incident and each accused individual. The CCJS literature also emphasized the importance of designing RMSs to minimize data entry requirements. To do this, it is ideal for these identifiers to be common across mergeable systems rather than requiring the same data elements to be entered separately in multiple systems. For analyzing MJS outcomes, it is especially important for the individual identifier to be the same as that used in the personnel databases that house many of the desired control variables.

The 2018 Standards specify that accused individuals be identified by Social Security Number (SSN) or DOD identification number, while the only incident identifier appears to be an investigation number [113]. Having two options for individual identifiers could create data issues if the individual identifier used is not consistent within a given RMS. The DIBRS manual, in turn, specifies that each accused individual be identified by SSN and that each incident be assigned a unique 12-digit incident number [117]. The lack of common incident identifier indicates that it is unlikely that data from these two systems could be merged.

Outcomes of interest

We used the MJS framework illustrated in Figure 3 to identify MJS outcomes that determine how a case will flow through the system and/or are the result of discretionary decisions by key MJS actors. To identify the data elements needed to create metrics for these outcomes of interest, we first identified the populations that need to be observed, then determined how those populations can be used to define the metrics.

Specifically, for outcomes in the incident processing phase of the MJS, then in each subsequent phase along the disciplinary and judicial paths of the MJS, we present two types of tables with the following information:

- Table type 1 includes populations to observe; whether data collection guidance indicates the population should be tracked in an existing RMS; if so, in which RMS; and if not, why not.

- Table type 2 includes outcomes of interest; outcome metric definitions (population x/population y); and whether the metric should be captured in either DIBRS or the services' RMSs.

In both types of tables, for simplicity, we refer to the services' RMSs using the umbrella label, MJC3R, which is associated with the DOD-wide SORN that covers military investigation and justice records for all DOD components.

We also note two additional points. First, for each outcome, the populations should also be disaggregated by REG group and offense type; the latter is included in the list of control variables. Second, it is important to calculate and report outcome metrics for each service, not in aggregate for DOD. Aggregate DOD metrics are likely to miss cultural or other idiosyncratic aspects of how each service implements the MJS.

Incident processing phase

The incident processing phase includes initial entry into the MJS, investigations, and the commander's disposition of the case.

Table 8 describes the populations to observe during this phase. Beginning with initial entry into the system, the first important population is those who are eligible to enter. Article 2 of the UCMJ defines several groups of people who are subject to its provisions. For the purposes of this study, the relevant group is all active duty servicemembers; this population is tracked in personnel data. Among this total population, it would be ideal to observe the true populations of offenders and non-offenders, but this is not possible. It is this impossibility that creates the primary analytical problem associated with this study. We can, however, observe

many of those who are accused of UCMJ violations if the underlying incidents are tracked in DIBRS or the services' RMSs (.i.e., MJC3R).[54]

Table 8. Populations to observe during the incident processing phase of the MJS

Populations	If should be tracked, where? If not, why not?
Initial entry	
All servicemembers	Personnel data
All offenders	Not possible
All non-offenders	Not possible
All accused who have MJS records	DIBRS and/or MJC3R
Investigation and disposition	
Accused who are investigated	MJC3R: if the incident was investigated by military law enforcement or resulted in judicial proceedings
Accused by final disposition decision	DIBRS: if the incident is reportable
Accused by initial disposition decision	Not clearly required: DIBRS/MJC3R guidance does not clearly distinguish between initial and final dispositions
Accused who rejected initial disposition of NJP or SCM	

Source: CNA, based on our interpretations of the 2018 Standards [113], the MJC3R SORN [114], and the DIBRS manual [117].

Beyond initial entry into the MJS, it is theoretically possible to observe all populations of interest, but it appears that some of the needed information for the incident processing phase may not be covered in the data collection guidance. For example, the 2018 Standards include data elements with information about investigations,[55] but they do no not appear to require tracking incidents that were not investigated by military law enforcement or did not result in judicial proceedings. In contrast, while DIBRS data may include incidents that were not investigated by military law enforcement or did not result in judicial proceedings, there appears to be no requirement to track information about investigations. Finally, DIBRS captures final disposition decisions for all incidents reported in the commander action segment, but some incidents may not be reported, and it does not appear that either DIBRS or

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[54] If a case is dismissed or diverted to an administrative process, those records may not exist in the services' RMS data because it would leave evidence that a person was charged with an offense and that person might be unfairly treated because of it.

[55] The investigation segment includes the following information: the investigating entity (chain of command, MCIO, military police, civilian, foreign, or N/A); an investigation number; and various dates associated with the investigation and the incident [113].

any service RMS tracks rejections of initial NJP dispositions or distinguishes between initial and final NJP dispositions.

The outcomes of interest during the incident processing phase are identified in Table 9. They are important on their own and they can serve as benchmarks for outcomes that occur in later phases of the MJS process.

Table 9.   Outcomes of interest during the incident processing phase of the MJS

Outcome	Definition (Population X/Population Y)	Captured by guidance
Initial entry		
% of servicemembers offending	$\dfrac{\text{\# offenders}}{\text{\# servicemembers}}$	No: numerator is unobservable
% of offenders who are accused	$\dfrac{\text{\# offenders accused}}{\text{\# of offenders}}$	No: numerator and denominator are unobservable
% of non-offenders accused	$\dfrac{\text{\# non-offenders accused}}{\text{\# non-offenders}}$	
% of accused who are non-offenders	$\dfrac{\text{\# of accused non-offenders}}{\text{\# of accused}}$	No: numerator is unobservable
% of servicemembers who are accused	$\dfrac{\text{\# of accused}}{\text{\# of servicemembers}}$	Yes: if the incident is captured in DIBRS or MJC3R
Investigation and disposition		
% of accused who are investigated	$\dfrac{\text{\# of accused investigated}}{\text{\# of accused}}$	Yes: if the incident is captured in MJC3R
% of investigations resulting in disposition X	$\dfrac{\text{\# receiving disposition X}}{\text{\# investigated}}$	Yes: if the incident is captured in DIBRS
% of accused receiving initial disposition X	$\dfrac{\text{\# of accused w/ 1st disposition X}}{\text{\# of accused}}$	Maybe: numerators not clearly required
% of accused who reject initial NJP or SCM disposition	$\dfrac{\text{\# rejecting 1st disposition X}}{\text{\# of accused}}$	
% of accused receiving final disposition X	$\dfrac{\text{\# of accused w/final disposition X}}{\text{\# of accused}}$	

Source: CNA, based on our interpretations of the 2018 Standards [113], the MJC3R SORN [114], and the DIBRS manual [117], and entries in Table 8.

Because the important entry populations are unobservable, the primary outcome metric for initial entry into the MJS is the percentage of servicemembers who are accused of a UCMJ violation. This is an imperfect measure of the true violation rate, but the number of accused is

also an important input (i.e., the denominator) for the outcome metrics for investigation and disposition. The percentage of accused who are investigated can be calculated for incidents tracked in the services' RMSs and the percentage of accused receiving each possible disposition decision can be calculated for incidents reported in DIBRs.[56]

Disciplinary path

Once the disposition decision is made, a case goes down either the disciplinary or judicial path of the MJS. The populations of offenders who *start down* each path are observed at the end of the incident processing phase.[57] For the disciplinary path, this is the numbers of accused servicemembers receiving final disposition decisions of administrative action or NJP.

The populations of interest *along* the disciplinary path are shown in Table 10. They are those who received different types of administrative actions and, among those who were subject to NJP, those who did not receive punishment, received different types of punishments, appealed their punishments, and experienced different appeal outcomes.

Table 10.   Populations to observe on the disciplinary path of the MJS

Population	If should be captured, where? If not, why?
Administrative action	
Accused by type of admin action	DIBRS: if the incident was subject to an official investigation, otherwise, not captured
NJP	
All subject to NJP who did not receive punishment	DIBRS: (i) if the incident was subject to an official investigation, otherwise, not captured; (ii) presence of an NJP record implies the NJP was accepted
All subject to NJP who received punishment, by punishment type	
All punished at NJP who appealed the punishment decision, by appeal outcome	

Source: CNA, based on our interpretations of the 2018 Standards [113], the MJC3R SORN [114], and the DIBRS manual [117].

Data on disciplinary incidents are primarily captured in the commander action segment of DIBRS and it appears to track all the desired populations. Specifically, the DIBRS manual [117] lists the following required elements:

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[56] The disposition options in the DIBRS data are no action taken, administrative, nonjudicial, and judicial [117].

[57] This is also true for offenders whose cases result in no action and, thus, exit the MJS.

- 10 sanction types (e.g., withholding of privileges, adverse performance evaluation, withholding of promotion, non-punitive admonition, administrative separation in lieu of trial)
- An action appealed date
- Grades reduced
- Discharge type (i.e., honorable, under honorable conditions, uncharacterized, or under other than honorable conditions)

To the extent that DIBRS data capture most disciplinary incidents, we can calculate metrics for the outcomes of interest. These are shown in Table 11.

Table 11.   Outcomes of interest on the disciplinary path of the MJS

Outcome	Definition (Population X/Population Y)	Captured by guidance
Admin action		
% of admin action by type	$\frac{\text{\# receiving admin action X}}{\text{\# receiving admin action}}$	Maybe: Only if incident is recorded in DIBRS
NJP		
% of subject to NJP who received punishment	$\frac{\text{\# receiving punishment}}{\text{\# subject to NJP}}$	
% receiving NJP punishment by punishment type	$\frac{\text{\# receiving punishment X}}{\text{\# receiving punishment}}$	Maybe: Only if incident is recorded in DIBRS
% receiving NJP punishment who appeal	$\frac{\text{\# who appeal}}{\text{\# receiving punishment}}$	
% NJP appealers by appeal outcome	$\frac{\text{\# NJP appeals with outcome X}}{\text{\# of NJP appealers}}$	

Source: CNA, based on our interpretations of the 2018 Standards [113], the MJC3R SORN [114], and the DIBRS manual [117], and entries in Table 10.

Judicial path

The populations of offenders who start down the judicial path are those who received a disposition decision referring their cases to CM—either SCM, SPCM, or GCM. The populations of interest along the judicial path are shown in Table 12. They are those who were referred to different types of CM and, by CM type, those who: were found guilty and not guilty; were found guilty and received more and less severe sentences; appealed the CM findings or sentence; and experienced different appeal outcomes. Based on the 2018 Standards, data on judicial outcomes should be comprehensively tracked in services' RMSs. In fact, the 2018 Standards

provide guidance to track all the populations listed in the Table 12, which should allow the metrics for all the outcomes listed in Table 13 to be calculated.[58]

Table 12.   Populations to observe on the judicial path of the MJS

Population	If should be captured, where? If not, why?
All referred to CM, by CM type	DIBRS/MJC3R
CM defendants who are found not guilty, by CM type	DIBRS/MJC3R
CM defendants who are found guilty by CM type and by sentence imposed	DIBRS/MJC3R
CM defendants who appeal CM findings or sentence	MJ3CR
CM appealers by appeal outcome	MJ3CR

Source: CNA, based on our interpretations of the 2018 Standards [113], the MJC3R SORN [114], and the DIBRS manual [117].

Table 13.   Outcomes of interest on the judicial path of the MJS

Outcome	Definition (Population X/Population Y)	Captured by guidance
% of CM defendants found not guilty, by CM type	$\dfrac{\text{\# of CM defendants not guilty}}{\text{\# of CM defendants}}$	Yes
% of SCM defendants found guilty, by CM type and by sentence imposed	$\dfrac{\text{\# of CM defendants guilty}}{\text{\# of CM defendants}}$	Yes
% of CM defendants who appeal CM findings or sentence	$\dfrac{\text{\# of CM defendants who appeal}}{\text{\# of CM defendants found guilty}}$	Yes
% NJP appealers by appeal outcome	$\dfrac{\text{\# of CM appeals with outcome X}}{\text{\# of CM appealers}}$	Yes

Source: CNA, based on our interpretations of the 2018 Standards [113], the MJC3R SORN [114], and the DIBRS manual [117], and entries in Table 12.

Control variables

Multivariate analysis of outcome disparities requires control variables to "hold all else equal" (for binary dependent variable probability models) or compare "like to like" (for PSM). These variables should be chosen based on underlying knowledge of the system and what affects its outcomes. Table 14 lists three categories of control variables for MJS analysis—information

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[58] The one piece of information that does not appear to be tracked is whether an accused offender rejects an initial offer of SCM. So few SCMs are conducted each year, however, that this is not likely to be a factor.

about the accused offender, information about the incident, and procedural information—and indicates the RMS (or RMSs) where each variable should be found based on the existing guidance. The list is not exhaustive, but with only one exception, all variables on it can be found in either the personnel, DIBRS, or services' RMSs. The question is whether the systems can be merged to create usable datasets.

Table 14.   Control variables to use in multivariate analytical approaches

Variable name	If should be captured, where?
Information about the accused offender	
Enlisted vs. officer indicator	DIBRS/MJC3R/Personnel
Paygrade	MJC3R/Personnel
Military occupation	Personnel
Family status (marital and parental)	Personnel
Education level	Personnel
Accession waivers	Personnel
Performance history (e.g., FITREPs, Pro/Cons, etc.)	Personnel
Disciplinary history	DIBRS/MJC3R/Personnel
Medical/mental health history	Health
Information about the incident	
Offense type	DIBRS/MJC3R
Location where incident occurred	DIBRS/Personnel
Date of incident	Investigations/MJCPMS
Procedural information	
Method of entry into the MJS	Not required
Type of investigation	MJC3R
The amount and quality of evidence	Not required
Whether a plea bargain was made	MJC3R
The composition of the CM	MJC3R
Demographic characteristics of actors making discretionary decisions in the case (e.g., commander, investigators, convening authority, court members)	DIBRS/MJC3R/Personnel

Source: CNA, based on our interpretations of the 2018 Standards [113], the MJC3R SORN [114], and the DIBRS manual [117], and our knowledge of personnel databases.

Reporting

The CCJS literature recommends that data analysis occur on an ongoing basis and that analytical results be reported regularly to both internal and external stakeholders. It also warns against waiting until negative publicity occurs. Based on existing requirements for MJS

reporting and reviews, as well as for assessments of individual commanders, we use this section to highlight opportunities for regular analysis of MJS data and reporting of MJS disparities.

Annual Article 146a requirements

UCMJ Article 146a, *Annual reports*, requires the JAGs of the Air Force, Army, Navy, and Coast Guard, and the SJA to the commandant of the Marine Corps, to report, no later than December 31 of each year, data on the number and status of completed and pending CMs held in the previous fiscal year [27].[59] The FY 2020 NDAA further specified that these data must include CM counts by the REG of both accused offenders and victims [1]. Article 146a does not, however, require any analysis of the data that are reported, nor does it cover other MJS outcomes, such as NJPs or results of investigations.

Depending on available resources, the services could conduct basic analyses (e.g., calculate relevant DIs) of the data that are generated for these annual reports and the results could be presented in reports to Congress and/or each service's MJS establishment. Such efforts could be the basis for an ongoing monitoring and assessment process.

Periodic reviews of the UCMJ

The MJA 2016 required the establishment of a 13-member "Civilian Military Justice Review Panel" to conduct two types of regularly occurring periodic reviews of the UCMJ and the MCM [104].[60] The first type is comprehensive periodic reviews that cover all aspects of the UCMJ and the MCM. These reviews will begin in FY 2024 and occur every eight years thereafter. The second type is periodic interim reviews to address specific issues selected by the panel. These reviews will begin in FY 2028 and occur every eight years thereafter. Finally, the SECDEF may

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[59] Article 146a reporting requirements also include information on the appellate review process, explanations of measures implemented to ensure the ability of judge advocates to fulfill various roles, and the independent views of each JAG and of the SJA to the commandant of the Marine Corps regarding the sufficiency of resources available to execute their missions [27]. Before the passage of the MJA 2016, these requirements were included in Article 146, *Code committee* [127].

[60] The law describes the following qualifications for panel members: "The members of the Panel shall be appointed from among private United States citizens with expertise in criminal law, as well as appropriate and diverse experience in investigation, prosecution, defense, victim representation, or adjudication with respect to courts-martial, Federal civilian courts, or State courts" [27, 104]. Additionally, the law stipulates that each panel member is appointed for an eight-year term, and no member may serve more than one term. The membership of the first panel was announced in a memo from the SECDEF to the DOD general counsel dated December 7, 2020. Of these initially appointed members, 10 are retired military personnel, 2 are civilian judges, and 1 is a civilian academic [128].

also ask the panel to conduct additional reviews on specific matters at any time. Thus, based on this schedule, the UCMJ and the MCM will be reviewed at least every four years.

The frequency of the periodic UCMJ reviews is good for executing ongoing data-based assessments of MJS outcomes. Four years likely provides enough time for analyzable amounts of new data to be generated and for the results of policy changes to take effect, but it is not too frequent for the resources of the MJS agencies. The audience for reports based on such regular assessments would include all stakeholders.

Command climate assessments

Current DOD policy requires all commanders of military commands to conduct command climate assessments (CCAs) within 120 calendar days of assuming command and annually thereafter [129]. These CCAs provide an opportunity to assess MJS outcomes for individual commanders on a regular basis and for use as part of an early intervention system. For example, assessments could be done in association with each CCA and reported to the commander and his or her immediate superior to identify disparities that are outliers when compared with relevant peer groups. The goal of such an exercise is not to label individual commanders as biased, but to coach them to understand how they are applying their discretion and to prevent the establishment of undesired behavior patterns. Properly conducting this type of assessment requires setting clear expectations about the purpose from the start. It also requires that RMSs be up to date, accurate, and easy to use.

Summary

This section applied to the MJS CCJS lessons for using administrative data to conduct ongoing assessments of REG disparities in MJS outcomes. It also assessed the extent to which the services are currently well positioned to do such assessments using appropriate analytical techniques.

Multivariate techniques are the appropriate techniques for REG assessments—bivariate techniques on their own are unlikely to add to what is already known and will not move the discussion ahead. Multivariate techniques allow researchers to measure REG outcome disparities while accounting for other factors that experts expect to affect MJS outcomes. The more relevant variables that are included, the more likely the model is to hold "all else" equal. If REG disparities still exist after accounting for these other factors, it is likely that the outcome differences are directly related to REG. Such a finding does not prove that bias exists, but it takes the other factors off the table.

The four multivariate techniques we identified range in technical sophistication and resource requirements so, given resource constraints, it does not make sense to use all of them for every

assessment. Disaggregating raw data by multiple outcomes and factors is the easiest of the four approaches we identified, and it can be done by agency staff. While it is not as conclusive as approaches that control for multiple factors simultaneously, disaggregation provides a more complete picture than bivariate analysis and helps agency staff understand their data and make informed decisions about where to focus more technical analyses and scarce analytical resources.

Used together and on a regular basis, disaggregation and the more complicated approaches provide the basis for ongoing monitoring of REG outcomes to identify and address disparities before they become persistent or systemic. Existing MJS and other reporting requirements provide a natural schedule for conducting assessments and reporting their results. DOD-wide assessments based on data disaggregation can be done on an annual basis as part of fulfilling the Article 146a reporting requirements, while assessments based on more technical statistical approaches can be done in conjunction with the periodic UCMJ reviews that will occur every four years starting in FY 2024. Individual-level assessments associated with CCAs can be used as part of an early intervention system to ensure that commanders understand the effects of their discretionary decisions.

In addition to describing how and when to conduct assessments of REG disparities in MJS outcomes, we also identified the data needed to do those analyses and assessed the likelihood that the services have these data given guidance from the 2018 Standards and DIBRS manuals. The combined guidance directs the services to collect nearly all the desired data elements. Therefore, if the guidance is implemented, the services should be well positioned to conduct meaningful assessments. There are, however, two caveats to this conclusion. First, there may be gaps for information on investigations and disciplinary outcomes. Second, there is some indication that the services do not have the technology or other resources to implement the data-collection guidance. The guidance may, in fact, constitute an unfunded mandate.

Finally, the tasking from the FY 2020 NDAA asked for criteria to determine when to further review data indicating that REG disparities in MJS outcomes may exist. The nature of the problem means that it is technically inappropriate to select a single criterion for detailed investigation—any such choice would be arbitrary. Instead, the services should work with internal and external stakeholders to select multiple criteria based on the absolute size of a disparity, its statistical significance, and the number of people it affects. Furthermore, these criteria should be applied to disparities measured using multivariate analyses done on a regular, recurring basis.

Conclusion

This report addressed three basic questions:

- Why do REG disparities in MJS outcomes matter?
- How should the services use administrative data to identify REG disparities in MJS outcomes?
- How can the services decide whether a measured disparity is meaningful?

To conclude the report, we summarize the answers to these questions and provide recommendations that respond directly to the FY 2020 NDAA tasking to establish criteria for determining when to review data indicating that REG disparities in MJS outcomes may exist and to provide guidance for how to conduct that review.

Why do REG disparities in MJS outcomes matter?

The MJS has two practical military purposes—to maintain good order and discipline and to promote efficiency and effectiveness in the military establishment. Multiple generations of military experts agree that to be effective, the MJS must not only be fair and just, but also be perceived as fair and just. Thus, REG disparities in MJS outcomes that result from bias or create the perception of bias decrease the effectiveness of the MJS and, ultimately, reduce readiness. History and recent events indicate that perceptions of MJS bias are both persistent and widespread, existing inside the services, especially among members of color, and outside the services, among the American public and in Congress.

How should the services use administrative data to identify REG disparities in MJS outcomes?

Multiple studies across multiple decades have tried to determine whether there are REG disparities in MJS outcomes. So far, there is, however, no consensus about whether disparities exist because the studies have been based on limited data and simple analytical techniques or because they have been conducted too infrequently to establish patterns or in limited contexts that are not considered generalizable.

To create results that are broadly accepted by both internal and external stakeholders, the services should conduct regular, ongoing assessments of MJS outcomes to distinguish between isolated incidents and widespread problems and identify points in the system that are most problematic. The assessments should address all MJS outcomes—not just CMs, which affect relatively few servicemembers—and they should be based on multivariate analytical techniques that control for other factors that are expected to matter, especially those related to agency procedures and practices. More frequent assessments (e.g., in conjunction with annual Article 146a reporting requirements and CCAs) can be based on simple techniques like data disaggregation and they can include limited numbers of control variables. Less frequent assessments (e.g., in conjunction with the periodic UCMJ reviews) should be based on more sophisticated techniques, like binary dependent variable probability models or propensity score matching, and they should incorporate the full range of relevant control variables.

Application of multivariate techniques requires detailed data that capture not only important MJS outcomes, but also all the relevant control variables. These data should be stored in easy-to-use electronic RMSs, which should be designed to merge with other data systems, especially personnel data systems. The services are currently working to improve and expand their existing investigative and legal RMSs in response to the 2018 Standards that support the Article 146a reporting requirements, as well as the recommendations from the 2019 GAO study. If updated according to the revised 2018 Standards, the services' RMSs, plus DIBRS, should contain the data required to conduct meaningful, scientifically valid MJS assessments, although there may still be gaps for data related to some outcomes and processes. Updates and improvements to the services' RMSs may, however, be hampered by funding constraints.

How can the services decide whether a measured disparity is meaningful?

Disparity metrics can be evaluated in terms of absolute size, statistical significance, and number of people affected. Because of the analytical problems identified in the introduction and addressed throughout this report, there are no generally agreed-upon, scientifically established criteria for choosing which evaluation approach to use or for identifying a level of disparity that equates to bias. Therefore, the best approach is to apply all three evaluation criteria and consider whether a disparity is meaningful given organization-specific factors, including concerns and issues raised by both internal and external stakeholders. It is also appropriate to consider the relative sizes of different metrics generated by the same agency, then set priorities based on the disparities that stakeholders agree are most problematic.

Recommendations to address the FY NDAA tasking

We recommend that the services do not conduct detailed assessments of MJS data only in response to disparities measured by bivariate metrics. Instead, assessments should be conducted regularly using the blueprint provided by lessons learned from the CCJS:

Step 1. Work with internal and external stakeholders (i.e., MJS decision-makers, servicemembers, oversight agencies, and the public) to identify issues of concern, set priorities, and develop decision-making criteria

Step 2. Create an analysis plan based on the concerns and priorities identified in Step 1

Step 3. Collect data on MJS outcomes (including nonjudicial outcomes) and relevant control variables in easy-to-use electronic records management systems and ensure they are regularly updated

Step 4. Execute the analysis plan from Step 2 using appropriate quantitative and/or qualitative methods

Step 5. Regularly and transparently report assessment results to all the stakeholders as appropriate

Step 6. Make policy decisions about how to address REG outcome disparities based on the established priorities and criteria

Figures

Tables

Abbreviations

ACMIS	Army Courts-Martial Information System
AFJIS	Air Force Justice Information System
AIAN	American Indian/Alaska Native
ALERTS	Army Law Enforcement Reporting and Tracking System
AMJAMS	Automated Military Justice Analysis and Management System
BLM	Black Lives Matter
CADS	computer-aided dispatch system
CCA	command climate assessment
CCJS	civilian criminal justice system
CLEOC	Consolidated Law Enforcement Operations Center
CM	court-martial
CMS-JA	Case Management System-Judge Advocate Division
CO	commanding officer
COPS	Office of Community Oriented Policing Services
CRS	Congressional Research Service
DACES	Department of the Army Career Engagement Survey
DAF-IG	Department of the Air Force Inspector General
D-C	defendant-within-case
DCMS	Disciplinary Case Management System
DI	disproportionality index
DIBRS	Defense Incident-Based Reporting System
DOD	Department of Defense
DOJ	Department of Justice
DRM	disproportionate representation metric
FACTS	Field Activity Tracking System
FHIRC	Fort Hood Independent Review Committee
GAO	Government Accountability Office
GCM	general court-martial
HCPRD	Human Capital Production
I2MS	Investigative Information Management System
IRC	Independent Review Commission
IRDR	Independent Racial Disparity Review
JAG	judge advocate general
KBO	Kitagawa-Blinder-Oaxaca decomposition
LEA	law enforcement agency

LEO	law enforcement organization
MCIO	military criminal investigative organization
MCM	United States Manual for Courts-Martial
MDT	mobile data terminal
MILDEPS	military departments
MJA	Military Justice Act
MJC3R	Military Justice and Civilian Criminal Case Records
MJIA	Military Justice Improvement Act
MJO	Military Justice Online
MJRG	Military Justice Review Group
MJS	military justice system
MOU	memorandum of understanding
NAACP	National Association for the Advancement of Colored People
NCORS	Naval Court-Martial Reporting System
NDAA	National Defense Authorization Act
NHPI	Native Hawaiian/Pacific Islander
NJP	nonjudicial punishment
NLP	natural language processing
POD	Protect Our Defenders
PSM	propensity score matching
QCAR	Quarterly Criminal Activity Report
REG	race, ethnicity, and gender
RMS	records management system
SA	sexual assault
SCM	summary court-martial
SECHS	secretary of homeland security
SH	sexual harassment
SJA	staff judge advocates
SPCM	special court-martial
SSN	Social Security number
TF1N	Task Force One Navy
TFDW	Total Force Data Warehouse
UCMJ	Uniform Code of Military Justice
USCCR	US Commission on Civil Rights
WEOA	Workplace and Equal Opportunity Survey of Active Duty Members

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