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IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF CALIFORNIA

SACRAMENTO DIVISION

RALPH COLEMAN, et al.,

Plaintiffs,

v.

GAVIN NEWSOM, et al.,

Defendants.

Case No. 2:90-cv-00520 KJM-DB (PC)

DEFENDANTS' RESPONSE TO MARCH 29, 2021 ORDER REQUIRING DEFENDANTS FILE REPORT ON THE LESSONS LEARNED FROM THE COVID-19 PANDEMIC

Judge: Hon. Kimberly J. Mueller

On March 29, 2021, the Court ordered Defendants to file "a report on lessons learned from management of mental health care during the COVID-19 pandemic, including the use of telehealth, decreased movement and continuity of care[.]" (ECF No. 7112.) On May 12, 2021, the Court approved the parties' stipulated request to extend the filing deadline to June 14, 2021. (ECF No. 7159.)

Attached as Exhibit A is the California Department of Corrections and Rehabilitation, Statewide Mental Health Program's report *Lessons Learned During the COVID-19 Pandemic.*

CERTIFICATION

Defendants' counsel certifies that they reviewed the following orders relevant to this filing: ECF Nos. 7112 and 7159.

Dated: June 14, 2021

Respectfully submitted,

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Supervising Deputy Attorney General

By: ***/s/ Elise Owens Thorn***
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DATED: June 14, 2021

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Exhibit A

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June 14, 2021

Damon McClain, Esq.
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VIA EMAIL ONLY

RE: Lessons Learned During the COVID-19 Pandemic

Dear Mr. McClain and Ms. Thorn:

Attached please find CDCR's report entitled "Lessons Learned During the COVID-19 Pandemic: Management of Mental Health Care through Expanded Use of Telehealth Services, Decreased Movement, and Continuity of Care."

Respectfully,

/s/ Melissa C. Bentz

Melissa C. Bentz
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Office of Legal Affairs
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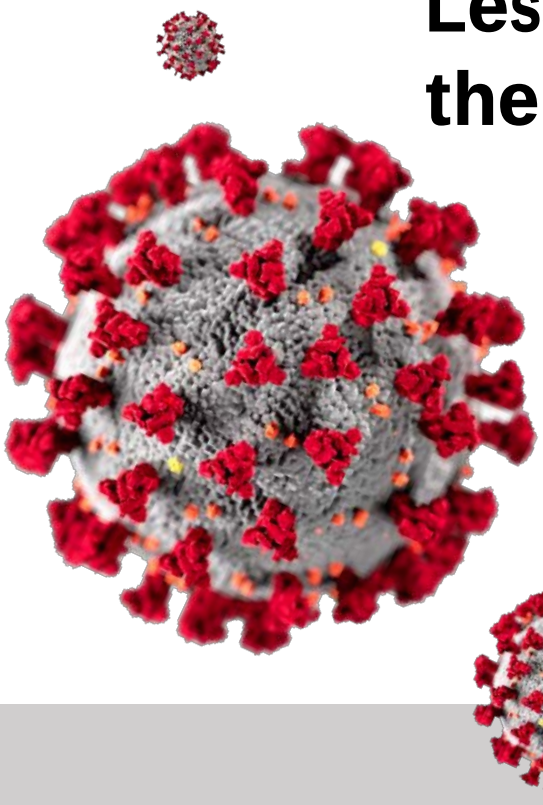
STATEWIDE MENTAL HEALTH PROGRAM

California Department of Corrections and Rehabilitation
Division of Health Care Services

Lessons Learned During the COVID-19 Pandemic



Management of Mental Health Care through Expanded Use of Telehealth Services, Decreased Movement, and Continuity of Care

June 2021

Selected Abbreviations Used in This Report	
CCCMS	Correctional Clinical Case Management System
CCHCS	California Correctional Health Care Services
CDC	Center for Disease Control
CDCR	California Department of Corrections and Rehabilitation
CDPH	California Department of Public Health
CI	Confidence Interval
EOP	Enhanced Outpatient Program
GP	General Population
HIPAA	Health Insurance Portability and Accountability Act
HLOC	Higher Level of Care
HQ	Headquarters
IDTT	Interdisciplinary Treatment Team
IEX	Incident Exposure
ISUDT	Integrated Substance Use Disorder Treatment program
LOC	Level of Care
MH	Mental Health
MHCB	Mental Health Crisis Bed
MHSDS	Mental Health Services Delivery System
OSM	Office of the Special Master
PHQ9	Patient Health Questionnaire 9
PIP	Psychiatric Inpatient Program
PPE	Personal Protective Equipment
PTSD	Post-Traumatic Stress Disorder
RMHA	Regional Mental Health Administrator
RVR	Rules Violation Reports
SUD	Substance Use Disorder
TMHU	Temporary Mental Health Units
UOF	Use of Force

CONTENTS

I. EXECUTIVE SUMMARY

On January 21, 2020, the first case of COVID-19 was identified in the United States,[1] and the first confirmed COVID-19 death in California occurred just 38 days later.[2] That same day, February 28, 2020, a statewide emergency was declared,[3] sparking a series of public health measures to prevent and reduce the spread of COVID-19 within the California Department of Corrections and Rehabilitation (CDCR). The contagiousness and lethality of the virus required significant changes to the delivery of mental health (MH) services. Traditional approaches to services like group treatment were redesigned to mitigate the spread of the virus and meet then current and evolving public health guidance. Plaintiffs in *Coleman v. Newsom*, the ongoing class action related to the provision of prison MH care services in California, CDCR and California Correctional Health Care Services (CCHCS) were required to think differently about delivering treatment services. The pandemic, and subsequent collaborative measures to abate the spread of COVID-19 with the Special Master's team and the *Coleman* Plaintiffs' counsel, challenged assumptions about telehealth services, the impact of reduced movement, and the importance of continuity of care.

1. Telehealth Expanded to Provide Access to MH Services during COVID-19

With the established infrastructure and experience of the telepsychiatry department, CDCR quickly and effectively rolled out widespread telehealth solutions in line with community and public health standards to respond to a rapidly evolving pandemic. Telehealth proved to be an effective way of maintaining quality patient care while protecting both staff and patients and preserving limited quantities of essential Personal Protective Equipment (PPE). Patients could be treated in place at multiple levels of care, including at desert institutions that do not have MH missions, when public health restrictions prevented patient movement.

Response to the COVID-19 pandemic forced innovation to treat patients safely despite environmental and staffing challenges, and some regulatory barriers were removed to facilitate the use of telehealth. Innovative use of digital technologies present continued opportunities for augmentation of onsite treatment and recreation for MH patients and will be beneficial to solve staffing and space challenges that may arise in the future.

In addition to expanding CDCR's telepsychiatry services, telehealth options for psychologists and social workers were initiated. Psychologists and social workers were authorized to provide telehealth services on an emergency basis on May 22, 2020. Quarantine and transfer restrictions increased demand for MH services as patients were "treated in place" while

[1] Taylor, D. B. (2021, March 17). A Timeline of the Coronavirus Pandemic. The New York Times. https://www.nytimes.com/article/coronavirus-timeline.html.
[2] Johns Hopkins University & Medicine. (2021, May 2). Coronavirus Resource Center. Johns Hopkins Coronavirus Resource Center. https://coronavirus.jhu.edu/.
[3] California, S. of. (2020, March 5). Governor Newsom Declares State of Emergency to Help State Prepare for Broader Spread of COVID-19. California Governor. https://www.gov.ca.gov/2020/03/04/governor-newsom-declares-state-of-emergency-to-help-state-prepare-for-broader-spread-of-covid-19/.

awaiting transfer to a facility with an MH mission for their assigned level of care (LOC). On-site staffing was further impacted by social distancing requirements and high-risk criteria that applied to certain staff, making telework safer in many circumstances. Telehealth was well received with very few patient appointment refusals. CDCR's analysis shows that, excluding unavoidable restrictions on groups provided for Enhanced Outpatient Program (EOP) patients necessitated by public health mitigation efforts, telehealth has allowed many institutions broadly to maintain Program Guide-equivalent care with no known major deficiencies.

Lessons Learned

- Expansion of Telehealth is an Effective Response to the COVID-19 Pandemic: Based on CDCR's and other health care organizations' experiences and preliminary outcome measures discussed in more detail in the "Decreased Movement and Maintaining Continuity of Care" section, expansion of telehealth was an effective way to provide treatment during the COVID-19 pandemic.
- Cross-Coverage Between Institutions Increased Treatment Services: Psychologists and social workers from other institutions successfully provided telehealth services to desert institutions, which were experiencing significant staffing shortages and increased patient need resulting from transfer restrictions. This allowed more MH care to be delivered to patients in need to prevent MH crises and stress related to the COVID-19 pandemic.
- Telework from Home Increased Provider Retention: By allowing onsite and hub providers the ability to work from home, CDCR ultimately retained more civil service psychiatrists and telepsychiatrists during the COVID-19 pandemic.
- Telehealth Did Not Reduce Patient Satisfaction while Enhancing Staff Satisfaction, Recruitment, and Retention: Staff and patients appear to be generally satisfied with telehealth, which aligns with trends reported in the community. Telework contributed to the quality of life, job satisfaction, recruitment, and retention of providers in CDCR's system.
- Antidepressant, Mood Stabilizer, and Antipsychotic Medications Can Be Successfully Monitored via Telehealth: Preliminary data shows that CDCR MH Services Delivery System (MHSDS) patients on neuroleptic medications received appropriate diagnostic monitoring consistent with clinical guidelines and that psychiatrists effectively monitored their patients while teleworking.
- Strategic Deployment of Telehealth is Key: By targeting telehealth services toward more routine, non-urgent services, onsite staff were able to focus on more acute and intensive needs at the institutions.
- Diverse Telepresenter Classifications Should be Considered for Resource Allocation: COVID-19 created unique demands for nursing, who were tasked with monitoring quarantined and isolated patients and coordinating testing. This critically strained typically available resources. Competing demands on identified telepresenter classifications should be considered to ensure onsite availability to support service

delivery. Having a diversity of classifications trained to telepresent can be invaluable during critical incidents.

- Provider Location Is an Important Consideration: There are a wide variety of available options for telework, including CDCR offices located at different units within the institutions or in remote hubs. However, services from home can also be provided safely and effectively when clear standards are enforced, and secure, functional equipment is deployed.

2. Effects of Decreased Movement on Maintaining Continuity of Care

While CDCR's population decreased significantly in 2020, the composition of the population (age, gender, race, custody level, MH LOC, and proportion of patients identified with developmental disabilities) remained consistent with pre-pandemic levels (± 2%). During this same time, intakes from other prisons or the community decreased by 65%, and transfers within programs at the same prison decreased by 51%.

Movement was considerably restricted due to transfer restrictions adopted to slow the spread of COVID-19. However, this in no way changed the need to deliver treatment services to CDCR's MH population. Continuity of care is largely focused on the quality of care over time. While there is general agreement that continuity of care is a complex concept, it is considered by patients and clinicians alike as an essential feature of good quality care in long-term disorders. During a time of significant changes to the delivery of MH services, emerging research on continuity of care was reviewed. The goal was to better understand this important component of treatment. Additionally, by pairing significant research findings with CDCR's experience and internal data analysis, a deeper understanding of the MH program was achieved.

The significant reduction in movement (both within CDCR and from county jails or returning parolees) afforded an opportunity to evaluate various outcomes in more stable populations. With that in mind, CDCR gathered internal data to examine psychiatric and behavioral health outcomes during the COVID-19 pandemic including data related to demand for MH services, rules violations, overdoses, self-injury, and suicide. The analysis controlled for the significant changes in CDCR's population (size and composition).

Peer reviewed research has found statistically significant relationships between continuity of care and successful inpatient discharge to outpatient LOC, quality of life, service satisfaction, symptom severity, social and community functioning, and hospitalization.. However, due to research limitations, it is inherently difficult to draw definitive conclusions about which aspects of such relationships are the most beneficial to patients because there are so many relevant factors. Limitations may also result from inherent difficulties in comparing care continuity and patient care outcomes utilizing studies that use different definitions and measure care continuity and patient outcomes differently.

Our findings suggest that with increased treatment and environmental stability, there was a co-occurring decrease in negative outcomes including less crime, depression, illegal drug use, self-harm, and suicide.

Lessons Learned

- Referrals to Change Levels of Care Decreased During COVID-19: This is consistent with other internal findings and research.
- Length of Time Between Individual Contacts: This increased for psychiatrists, psychologists, and social workers, highlighting a reduced ability to deliver some MH contacts on time. However, the percentage of patient contacts with the most frequent provider over six months (at the EOP level of care) increased, a measure of continuity of care.
- Treatment Hours Offered and Refused Both Decreased During COVID-19: Patients attended a higher percentage of the treatment offered during COVID-19, though less hours of treatment were offered overall. This was after CDCR adjusted to new public health guidelines, which allowed treatment of fewer patients in large spaces.
- Violent and Drug-Related Rules Violation Reports Decreased: This unexpected shift may be related to decreased means and opportunity to commit such offenses during COVID-19, which may explain why Indecent Exposure (IEX) behavior remained essentially unchanged.
- Emergent, Urgent, and Routine Mental Health Referrals Decreased During COVID-19: Emergent, Urgent, and Routine MH referrals all decreased during COVID-19, which is consistent with other research and findings. Parallel trends in community settings are discussed below.
- Symptoms of Depression and Hospitalization for Overdose Decreased During COVID-19: Hospitalizations due to overdose and patients' self-reported symptoms of depression both decreased. Movement restrictions likely played a role in this decrease, but so did the lack of drugs in the prisons; the main vector of drugs being brought into the prisons—visitation—paused in March 2020.
- Suicide and Self-Injury (Serious, Lethal, and with Intent to Die) Decreased During COVID-19: Suicides decreased significantly during COVID-19 (35%). Most other types of self-injury (severe, lethal method used, with intent to die) also decreased during COVID-19. While a reduction of suicide and self-injurious behavior is a positive sign, the reason for the decline is not fully understood. These findings echo other research and findings that demonstrate a reduced need for MH services in other settings during COVID-19.

3. Effects of Decreased Demand for Mental Health Services During COVID-19

Despite the increased stress and social disruption caused by the pandemic, various community settings including the Veterans Health Administration documented a decrease in utilization of MH services. Within CDCR, there was also an unexpected decrease in referrals to inpatient levels of care shortly after movement restrictions were implemented. While necessary steps were taken to augment the delivery of treatment services under public health guidelines, it was

equally important to monitor how those changes influenced the MHSDS and the patients it served. Traditional efforts aimed at establishing and reinforcing referral expectations, such as new policies, monitoring, and direct communication, were utilized, but the unexpected decrease in referrals continued. In response, in order to assess whether referrals were being made appropriately, CDCR compared Sustainable Process Audit results, systematically reviewed recent LOC decisions, and consulted emerging research to better understand any changes observed during COVID-19.

The primary objective of the Sustainable Self-Monitoring Process is to ensure that patients are at the right LOC, receiving the MH treatment they need and are being evaluated for and referred to higher levels of care when clinically indicated. An additional objective is to maintain a sustainable, internally monitored quality improvement process. The quality improvement objective is designed to support the primary objective, while simultaneously providing feedback to refine existing policies and procedures, improve data management systems, enhance ongoing training of institutional staff, and take appropriate corrective action when warranted. While comprehensive, the Sustainable Process is not perfect. It is possible that external forces, variables, issues, and factors prevalent in 2020 were not considered in earlier analyses. For example, clinicians also knew that it was often more difficult to have patients transferred to be treated at the Mental Health Crisis Bed (MHCB) LOC due to quarantines and thus they could have chosen to refer more sparingly.

All four Regional MH teams reviewed a sample of recent Master Treatment Plans and Self-Harm forms and the LOC decisions that followed to evaluate whether referral considerations were appropriate.

Lessons Learned

- Mental Health Visits Also Decreased in Many Other Settings During COVID-19: Several studies have observed a similar decrease in community MH visits during the COVID-19 pandemic. None identified reliable causes for the decrease.
- Increased Resilience is Common After Mass Traumatic Events: Research indicates that resilience (the ability to recover from and adapt to adversity) is more common than pathological outcomes. However, for some populations, it is not uncommon for anxiety and depression symptoms to have a higher prevalence after mass traumatic events. Keeping these somewhat differing findings in mind, the MH program must continue to be responsive to the changing needs of our population.
- The Relationship Between Suicide Rates and Mass Traumatic Events is Unclear in the Literature: According to relevant research, suicidal ideation, plans, and attempts may decrease and then later increase after mass traumatic events. As such, initial signs of reduced self-harm and suicide may be temporary.
- The Need for Higher Levels of Care Decreased During COVID-19: Patients' clinical teams, using approved clinical factors to detect patients' need for higher level of care (HLOC) consideration, identified fewer patients needing HLOC during COVID-19. This suggests fewer patients displayed known indicators for inpatient services (as measured by the

Sustainable Process audits). Additionally, audits indicated that when known indicators were present, clinical teams referred patients to HLOC more often, and referrals were more accurate with higher quality documentation than before COVID-19.

- Level of Care Decisions Followed Established Policies, Standards, and Expectations of Due Diligence: The Regional review found 95% of the reviews resulted in an agreement with the treatment team's LOC decision. No systematic or significant deviation from referral procedures were detected.

4. Next Steps

Telemental health must continue to be taken more seriously as a safe, effective, and viable alternative to more traditional methods for delivery of care. There was never a clear data-focused justification for the imposed limitations, and now the case for harm by lack of acceptance is stronger. The relative priority of "continuity of care" has been elevated as a greater benefit to patients than previously considered. The classification of providers in the Electronic Healthcare Records System (EHRS) needs fundamental changes to be able to automatically parse and provide data on outcomes for different types of care delivery. Consideration should be given to the more creative use of telemental health, such as by MH classifications other than psychiatry, the creation of telemental health critical response teams, and the delivery of speciality services statewide by telemental health alone, similar to the Integrated Substance Use Disorder Treatment (ISUDT) program (e.g., Dialectical Behavioral Therapy, cognitive processing therapies for trauma, etc.). The effectiveness of high quality telemental health delivered from the providers' homes has also been demonstrated.

Video visits for inmates and their families has a long history of political difficulties, but it has now been shown that it is possible to implement. Audio only or text only options are also possible. If the functionality is made available to a wider range of hardware, the use of tablets can be expanded greatly with even greater benefits to the patients. Other treatment options could piggy-back on this success, such as MH treatment modules, direct messaging between patients and their doctors, and complementary services like education and skill-building courses. Use of such tablets also decrease the space needs in an institution, with multiple obvious benefits.

Many questions remain, and further research and analysis of collected data is critical. Causative links must be established between the independent variables and the dependent outcome measures. Measurement must continue into the recovery phase in order to track whether gains are lost by returning to older methods, and if so, when. Non-emergency changes to policies are much slower and more difficult, but it is critically important to carry these lessons forward nonetheless. Factors that must be considered include broader availability of EOP programs at more facilities, reduced institutional movement when changing LOCs, and transitional groups or other ways to create continuity on both sides of a change in LOC. Questioning the assumptions underlying past delivery of care is an important lesson from the experience of the COVID-19 pandemic.

II. CDCR'S EXPANSION OF TELEHEALTH TO PROVIDE CARE DURING COVID-19

CDCR started the telepsychiatry program in 2013 to improve access to psychiatric care and to help reach the court-mandated 90 percent fill rate among the allocated psychiatry positions statewide. Over the span of 7 years, CDCR telepsychiatry has offered remote services to 29 out of 35 institutions. It has grown to approximately 90 individual telepsychiatrists.

Before 2020, the use of telehealth within CDCR was limited to the official telepsychiatry and telemedicine programs. On March 19, 2020, the Governor ordered Californians to stay at home to reduce transmission of COVID-19, resulting in state workers immediately and unexpectedly transitioning to telework from home.[4] Overall MH staffing was severely impacted across the system during the COVID-19 pandemic due to staff infections, public health-mandated quarantine and isolation, and providers in high-risk populations unable to enter the institutions to deliver care safely. Even in the case of essential workers, limiting the number of people coming into prisons and particular units was crucial to reduce the risk of introducing or spreading COVID-19.

As a result, CDCR created COVID-19 policies to expand the use of telehealth. At the discretion of the Chief Executive Officers (CEOs), institutions were able to transition onsite psychiatrists who were in a high-risk category to telework from home, independent from the telepsychiatry program or structure. Many institutions, such as San Quentin, also instituted intra-institutional telehealth programs to limit the number of individuals going in and out of affected units and to preserve PPE resources. The CDCR telepsychiatry department transitioned telepsychiatrists who met certain criteria to work from home instead of coming into the hub buildings and risking exposure. As the COVID-19 pandemic progressed, telehealth was expanded to include limited telepsychology and telesocial-work. This was a decentralized use of telehealth that was assisted —but in no way managed, by—the telepsychiatry department.

1. Research Related to the Expansion of Telehealth Utilized by Health Care Systems Outside of CDCR

A rapid global expansion of the use of telehealth occurred at the beginning of the COVID-19 pandemic. Many healthcare systems moved quickly to implement remote conferencing technologies to facilitate the continuation of care while observing social distancing, isolation, and other risk mitigation strategies. These technologies spanned the continuum from phone calls to video encounters with both the patient and provider in their respective homes, along with administrative services also becoming partially or fully remote.

[4] Executive Department, State of California, Executive Order N-33-20. https://www.gov.ca.gov/wp-content/uploads/2020/03/3.19.20-attested-EO-N-33-20-COVID-19-HEALTH-ORDER.pdf

Telepsychiatry had already been established as an effective and reliable method of treatment.[5] [6] [7] [8] [9] [10] [11] [12] [13] [14] Numerous articles were published about best practices and guidelines for the implementation and expansion of telepsychiatry services.[15] [16] [17] [18] [19] Telepsychiatry was also a focus at many professional conferences and webinars this past year, sharing the benefits of delivering care through this modality.[20]

The American Psychiatric Association (APA) published a survey showing that after COVID-19 struck, an overwhelming majority of psychiatrists began seeing all or most of their patients via telehealth, whereas most had not used telehealth at all previously.[21] The APA notes that telehealth can be adopted quickly to treat psychiatric and substance use disorders and that most barriers to doing so in the first place may have been regulatory in nature. The survey also noted a significant increase in patients keeping appointments when those appointments had the added convenience of a telehealth option. Additionally, the survey found that of the patients who were seen for the first time via telehealth, a large majority (85%) were either somewhat satisfied or satisfied with their treatment experience. The APA made several policy recommendations in support of the permanent expansion of telehealth regulations after COVID-19, and later released several guidance publications. One, titled "The Impact of COVID-

[5] American Psychiatric Association. American Psychiatric Association telepsychiatry toolkit. Accessed April 25, 2021. https://www.psychiatry.org/psychiatrists/practice/telepsychiatry/toolkit
[6] Myers, K., Valentine, J., Morganthaler, R., & Melzer, S. (2006). Telepsychiatry with incarcerated youth. *Journal of Adolescent Health*, *38*(6), 643-648.
[7] Lexcen, F. J., Hawk, G. L., Herrick, S., & Blank, M. B. (2006). Use of video conferencing for psychiatric and forensic evaluations. *Psychiatric Services*, *57*(5), 713-715.
[8] Brodey, B. B., Claypoole, K. H., Motto, J., Arias, R. G., & Goss, R. (2000). Satisfaction of forensic psychiatric patients with remote telepsychiatric evaluation. *Psychiatric Services*, *51*(10), 1305-1307.
[9] Hubley, S., Lynch, S. B., Schneck, C., Thomas, M., & Shore, J. (2016). Review of key telepsychiatry outcomes. *World journal of psychiatry*, *6*(2), 269.
[10] Shore, J. H., Yellowlees, P., Caudill, R., Johnston, B., Turvey, C., Mishkind, M., ... & Hilty, D. (2018). Best practices in videoconferencing-based telemental health April 2018. *Telemedicine and e-Health*, *24*(11), 827-832.
[11] Bashshur, R. L., Shannon, G. W., Bashshur, N., & Yellowlees, P. M. (2016). The empirical evidence for telemedicine interventions in mental disorders. *Telemedicine and e-Health*, *22*(2), 87-113.
[12] Morland, L. A., Mackintosh, M. A., Greene, C. J., Rosen, C. S., Chard, K. M., Resick, P., & Frueh, B. C. (2014). Cognitive processing therapy for posttraumatic stress disorder delivered to rural veterans via telemental health: A randomized noninferiority clinical trial. The Journal of Clinical Psychiatry, 75(5), 470–476. https://doi.org/10.4088/JCP.13m08842
[13] Aboujaoude, E., Salame, W., & Naim, L. (2015). Telemental health: a status update. *World psychiatry*, *14*(2), 223-230.
[14] Yellowlees P, Shore JH. Telepsychiatry and Health Technologies: A Guide for Mental Health Professionals. Washington, DC: American Psychiatric Assoc Pub; 2018.
[15] Shore, J. H., Schneck, C. D., & Mishkind, M. C. (2020). Telepsychiatry and the coronavirus disease 2019 pandemic—current and future outcomes of the rapid virtualization of psychiatric care. *JAMA psychiatry*, *77*(12), 1211-1212.
[16] Smith, A. C., Thomas, E., Snoswell, C. L., Haydon, H., Mehrotra, A., Clemensen, J., & Caffery, L. J. (2020). Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *Journal of telemedicine and telecare*, *26*(5), 309-313.
[17] Smith, K., Ostinelli, E., Macdonald, O., & Cipriani, A. (2020). Covid-19 and telepsychiatry: development of evidence-based guidance for clinicians. *JMIR mental health*, *7*(8), e21108.
[18] Shore, J. H. (2020). Managing virtual hybrid psychiatrist-patient relationships in a digital world. *JAMA psychiatry*, *77*(5), 541-542.
[19] Torous, J., & Wykes, T. (2020). Opportunities from the coronavirus disease 2019 pandemic for transforming psychiatric care with telehealth. *JAMA psychiatry*, *77*(12), 1205-1206.
[20] American Psychiatric Association (APA) Annual Meeting 2020 and upcoming 2021; American Telehealth Association (ATA) Annual Meeting 2020 and upcoming 2021; Psych Congress 2020; The Joint Commission – Demonstrating Quality Care in Tele-Behavioral Health webinar; Advancing the Use of Teleheath Through Education and Advocacy – APA webinar; Telepsychiatry in the Era of COVID-19 – APA webinar
[21] "Support for Permanent Expansion of Telehealth Regulations after COVID-19," American Psychiatric Association, 2020.

19 on Incarcerated Persons with Mental Illness," included a recommendation for the treatment of incarcerated people with mental illness, to "coordinate care within facilities and significantly expand telehealth wherever possible and clinically appropriate" and "allow visitation via video visits, including professional visits for court-ordered psychiatric evaluations."[22]

Previous barriers to widespread implementation and acceptance of telepsychiatry, such as federal and state regulatory barriers, system inertia, and resistance to change associated with new technology or healthcare practice have diminished during COVID-19. Many early adopters of telepsychiatry, such as the federal Veterans Health Administration system, were in a unique position to scale up telemental health treatment rapidly. Within weeks of the start of the pandemic, telemental health became the primary means by which psychiatry, therapy, and groups were delivered to maintain continuity of care.[23] Traditionally Before the pandemic, full establishment of telemental health, especially in large organizations, could take months to years. Patients, providers, and the health care system quickly adapted to telemental health as rapid virtualization spread across organizations by way of people realizing the full potential of telemental health[24] [25]

All articles reviewed demonstrated positive or no change to outcomes associated with the rapid expansion of telehealth services during COVID-19, though some did note concerns or uncertainty regarding the use of telepsychiatry with special patient populations, such as those at higher levels of care. Use of telepsychiatry in inpatient settings within CDCR is already limited to situations when there is no onsite psychiatrist available to be assigned to the program.

One article, a meta-analysis of English-language guidelines for telemental health from many countries and systems, suggested a hybrid system combined with in-person services and other digital technologies may be the best solution post-COVID-19. This is in line with CDCR's use of telepsychiatry, and targeted use of telepsychology and tele-social work in combination with onsite MH services, augmented by other emerging digital services.

2. CDCR's Successful Expansion of Telemental Health

CDCR's experience with the expansion of telemental health echoes the broader practices discussed above. While other organizations were determining and sharing best practices and guidance for setting up de novo telehealth systems, CDCR was able to capitalize on the structure it already had in place before the COVID-19 pandemic, modeled on established best practices and already set in statewide and local policy. Given the CDCR telepsychiatry department's experience with remotely providing care within CDCR, the unit's leadership staff were well positioned to assist with the rapid expansion of providing remote MH care via

[22] COVID-19 Pandemic Guidance Document, "The Impact of COVID-19 on Incarcerated Persons with Mental Illness," American Psychiatric Association, 2020.
[23] Myers, U. S., Birks, A., Grubaugh, A. L., & Axon, R. N. (2020). Flattening the curve by getting ahead of it: How the VA healthcare system is leveraging telehealth to provide continued access to care for rural veterans. *The Journal of Rural Health*.
[24] Madigan, S., Racine, N., Cooke, J. E., & Korczak, D. J. (2020). COVID-19 and telemental health: Benefits, challenges, and future directions. *Canadian Psychology/Psychologie canadienne*.
[25] Torous, J., Myrick, K. J., Rauseo-Ricupero, N., & Firth, J. (2020). Digital mental health and COVID-19: using technology today to accelerate the curve on access and quality tomorrow. *JMIR mental health*, *7*(3), e18848.

telework across the institutions. The IT infrastructure already in place could be scaled up rapidly to adapt to work from home without a need to scramble for resources. Similarly, CDCR already had a framework for telepresenters and standards for how to conduct remote visits and manage difficult situations encountered in telepsychiatry. Remote services were expanded to include targeted use of telepsychology and telesocial-work, as well as other remote services to complement one-on-one treatment. CDCR's expansion of telemental health is discussed in the following section.

A. Existing Information Technology Infrastructure Expanded and Telework from Home

Prior to the COVID-19 pandemic, telepsychiatry utilized a secure platform that was only accessible from internal CDCR networks. After the COVID-19 pandemic struck, the IT department worked quickly to implement a new Health Insurance Portability and Accountability Act (HIPAA) compliant platform that could be securely accessed from both CDCR's internal network and external networks at home. Several options were considered, including industry standards such as WebEx, Zoom, Teams, FaceTime, and Skype. IT worked closely with telepsychiatry and telemedicine to examine the pros and cons of each. Once a platform was selected, tutorials and trainings were created and disseminated to providers and institutions. IT was also able to internally manage the chosen platform, WebEx, allowing them to internally test levels of encryption to ensure proper security and to monitor and swiftly respond to issues as they arose without needing to rely on external assistance.

CDCR confronted several technological challenges while attempting to expand telework. Establishing priority on the network allowed for the significantly increased load of video applications without crowding out other critical bandwidth uses. Virtual Private Network (VPN) use from home, necessary to facilitate secure connection to medical charts and other essential applications, also added unplanned burdens to the system and had to be accommodated by recommending providers use two separate devices, one exclusively for video and one for accessing the electronic medical chart via VPN.

The Chief of Telepsychiatry worked with IT to set up telework resources on the intranet with training about HIPAA-compliant videoconferencing software, provided orientation to new telepresenters, including appropriate PPE procedures, and assisted institutional leadership in demystifying this method of treatment. Telepsychiatry was also familiar with and able to provide guidance about preparing the environment, integration with the onsite team, contingencies for emergency situations, and how to address concerns such as patients who may not be appropriate for telehealth, those who repeatedly refuse remote encounters, or those who may need in-person follow-up. These protocols were already in place in local operating procedures with many of the institutions.

To maintain a high standard of audiovisual quality, the telepsychiatry department sent the same audiovisual equipment utilized in the hubs, Cisco DX80 monitors, to telepsychiatrists teleworking from home. The telepsychiatry program continued to make efforts to improve the quality of connection with institutions via purchases of new teleconferencing equipment. Cisco

Room Kits were deployed to several institutions, enabling telepsychiatrists to better integrate with onsite Interdisciplinary Treatment Teams (IDTT). Additional monitors and mobile carts equipped with monitors were also shipped to institutions to facilitate telepsychiatric encounters. Onsite, webcams and video-capable laptops with both built-in and external speakers were quality-tested and used extensively for teleworking providers.

B. Expansion of Telepresenter Pool

The availability of telepresenters is often a challenge faced by CDCR telepsychiatry, and was even more so with the staff shortages caused by the COVID-19 pandemic at the same time as the expansion of telehealth. The telepsychiatry policy outlines a number of clinical designations that can serve as telepresenters under normal circumstances. Those designations were temporarily expanded during the COVID-19 pandemic, to make use of staff who could not continue their typical work during the COVID-19 pandemic, such as dental assistants due to the closure of dental clinics, recreational therapists whose groups were canceled, and office technicians whose programs were temporarily impaired during the COVID-19 pandemic. Given the increased need for telepresenters, the pool of possible telepresenters was allowed to expand temporarily to utilize the staff who would otherwise not have any work to perform. The aforementioned telepresenter orientation and policy specifically highlighted several facets of safety precautions, considering that many new telepresenters may not have worked with MH patients before. This included detailed instructions for donning and doffing PPE and other infection control measures, precautions for physical safety while working with acutely mentally ill patients, and guidance and support to maintain emotional safety given potential exposure to extreme behavior and unstable patients.

C. Adaptations to Services During COVID-19

As outbreaks spread through facilities, prompting quarantines, and staffing levels were reduced by illness and mandatory self-isolation protocols, regular clinic daily attendance schedules were impacted. Patients were visited by their teams daily at cell-side to ensure that they had continued access to providers and could have their MH needs addressed on time. Routine appointments and referrals were seen in confidential settings when possible, with sanitation measures taken between patients, and at cell-side when a confidential setting was not feasible. Patients reported they were seen even more frequently than they would have requested and had no new issues to raise. Group time offered was significantly impacted, and when possible, patients were provided with in-cell activities. In some cases tablets were provided, and in many other cases patients were provided packet-based programming to mitigate the reduction of in-person groups being offered. Nursing-led therapeutic groups were also implemented to supplement in-person and remote treatment modalities.

Legal proceedings that had previously been held in person, such as involuntary medication hearings or Offenders with MH Disorder evaluations, quickly transitioned to being held via

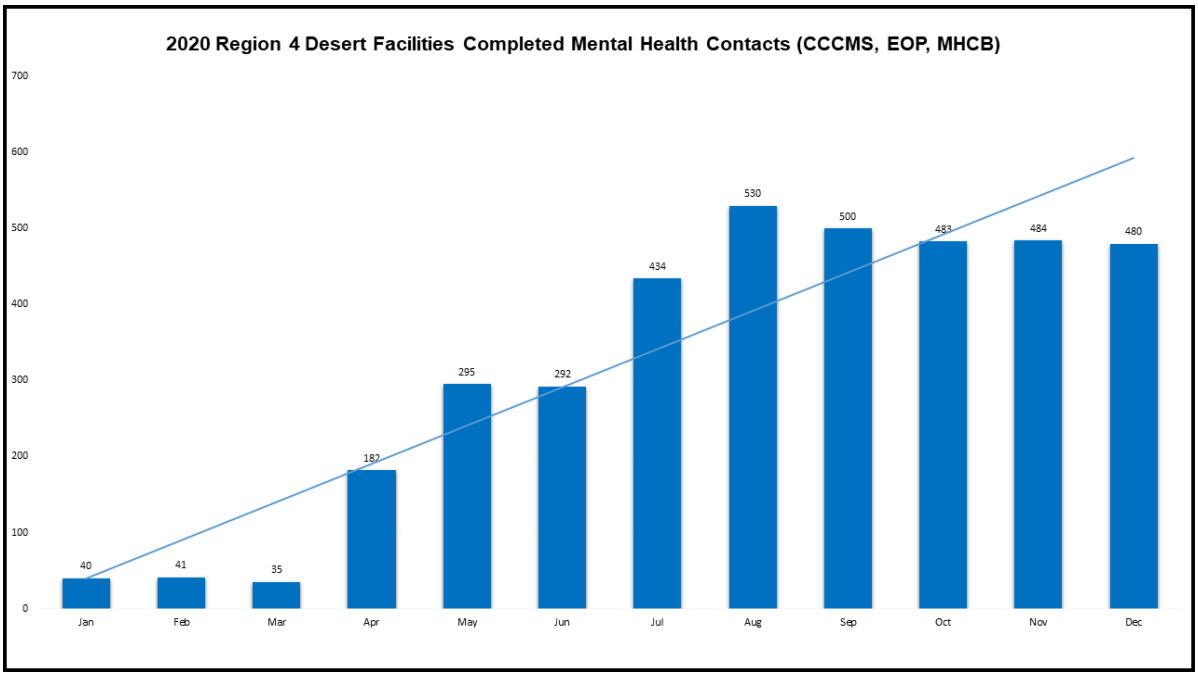
teleconference technology. Other proceedings that had in part been held remotely before COVID-19, such as parole hearings and other court cases, did so to an even greater degree.

D. Telehealth Services Expanded to Psychologists and Social Workers

Recruitment and retention of clinical staff at desert institutions (Calipatria State Prison (CAL), Centinela State Prison (CEN), Chuckawalla Valley State Prison (CVSP), and Ironwood State Prison (ISP)) has historically been challenging. Psychologist and social worker positions have been the most difficult to sustain. With a relatively small staff, any absences due to illness or disability can significantly impact care provision and crisis response. In the lead-up to the COVID-19 crisis, the desert institutions were already struggling to maintain adequate staffing levels. The staffing problem was notable at CAL. The additional strains placed upon the desert institutions by the COVID-19 pandemic imposed a critical need for alternative modes of service delivery.

Staffing at Calipatria on 3/25/2020		
Position	**Status**	**Percent Filled/Covered**
1.0 Psychiatrist	20 hours (2x 10 hour days) per week	0.5/1.0
1.0 Sr. Psychologist	Vacant	0.0/1.0
1.0 Psychologist	Vacant	0.0/1.0
1.0 Psychologist (Registry)	20 hours (2x 10 hour days) per week	0.5/1.0
1.0 Psychologist	Filled for 2 more weeks (pending transfer to ISP)	1.0/1.0
1.0 Psychologist	Functionally vacant (extended medical leave)	0.0/1.0
1.0 Licensed Clinical Social Worker	Functionally vacant (COVID-19 related medical leave)	0.0/1.0

When transfer restrictions were imposed due to COVID-19, these institutions were required to treat many patients in place, including providing acute care in Temporary Mental Health Units (TMHUs). Routine and urgent requests for MH services that would have typically resulted in expedient transfers to institutions with MH programs, instead required the institutions to mobilize commensurate programming. Pent up demand for MH services began to build, with limitations on space, social distancing requirements and quarantines critically affecting access to care. Treatment programming was rapidly mobilized to serve an increasing population at the desert institutions. Where there was no previous programming, Correctional Clinical Case Management System (CCCMS), EOP and MHCB LOCs were required for an expanding population. This expansion of services provided critical access to outpatient services, crisis intervention and acute psychiatric care. TMHU provided a means to safely provide care for acute patients while triaging emergent transfers for the most at risk patients with full COVID-19 protection and quarantine protocols. Many patients were able to resolve their crises in the TMHUs at the desert institutions and safely transferred to a lower level of care.



To reduce exposure risks and due to individual health vulnerabilities, many staff members began to telework. Emergency approval for psychologists and social workers to provide telehealth services was authorized in late March 2020. Statewide approval was issued on May 22, 2020. This rapid deployment of services prevented serious delays in access to care and mitigated associated risks to this vulnerable population.

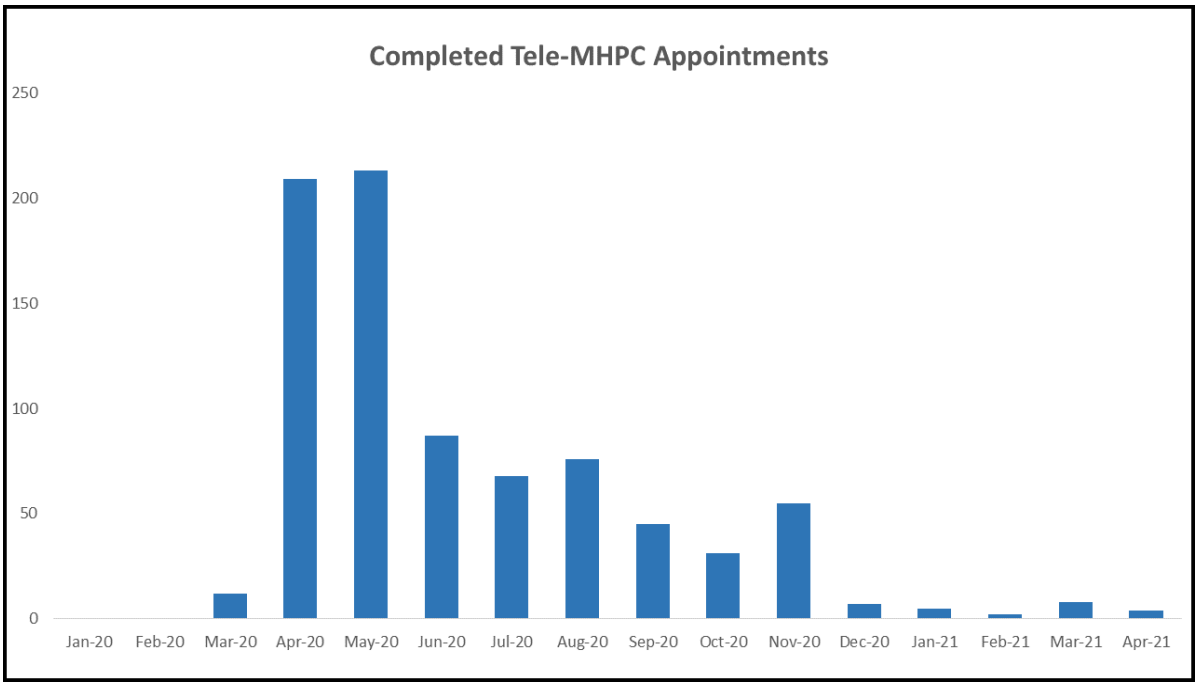
Provision of telehealth by psychologists and social workers was modeled upon existing telepsychiatry service delivery. The approach to the provision of telehealth services by psychologists and social workers was conservative, emphasizing routine outpatient services and consults. This allowed onsite resources to be directed toward more acute care. Onsite services provided for increased continuity of care and interdisciplinary coordination to manage acute care needs. Increased continuity of care and interdisciplinary coordination promote better patient outcomes and improved risk management.

The program was applied with strict adherence to community standards and current ethical guidelines for the provision of telehealth services. Providers were trained on guidelines and expectations. Documentation was monitored by the Region IV [26] team consisting of a Regional Mental Health Administrator (RMHA), Senior Psychologist, Specialists, and Health Care Analysts. Informed consent was provided at each encounter providing benefits and limitations of telehealth services. All patients were afforded the ability to request a face-to-face encounter within a reasonable timeframe. The Region IV team provided consultation and guidance throughout the implementation of the program.

[26] Region IV includes CAL, CEN, CVSP, ISP, California Institution for Men (CIM), California Institution for Women (CIW), California Rehabilitation Center (CRC), and Richard J. Donovan Correctional Facility (RJD)

Initially, providers from neighboring desert institutions provided the bulk of telehealth support. In October 2020, telehealth resources expanded to a non-desert institution where there were no staffing shortages. Services peaked early in implementation and began to diminish as staffing issues improved to include more onsite staff availability, outbreaks were contained, and COVID-19 protocols became less restrictive.

Approximately 800 telehealth appointments were provided by psychologists and social workers from April 2020 through April 2021 at Region IV desert institutions.[27] In addition to providing support for patients enrolled in the MHSDS, telehealth providers provided a significant amount of care and consultation to patients in General Population (GP). CDCR believes that care to the GP likely prevented MH crises and assisted the population in coping with the isolation and stress created by the COVID-19 crisis. Roughly 20% of telehealth appointments were provided to patients in restricted housing, providing critical access to those patients. Restricted housing is generally seen as a higher risk environment. Telehealth support in restricted housing undoubtedly helped mitigate risk and provided timely MH response in this difficult area.



E. Other Remote Technology Solutions

Division of Rehabilitative Programs provided tablets to inmates at pilot institutions. While they were not network capable, they provided static content designed by MH, such as anger management modules, which inmates could do in their cells and review with their clinicians at

[27] Given the rapid need to expand telehealth services, CDCR did not have a validated data metric to distinguish telehealth appointment from face to face encounters. Consequently, the data extracted was based on provider names known to be providing services to the desert institutions, and it does not include canceled appointments.

their next appointment. CDCR discussed future versions of this program that could include network-capable devices for inter-institutional groups, in-cell MH appointments, and a token economy-like system that provided direct rewards, including access to games, email time, video messaging, and so forth.

Visiting was shut down during the COVID-19 pandemic. CDCR adapted to the lack of visitation by creating a system to provide video visits to inmates and their families when in-person visits would have been an unacceptable public health risk.[28] As testing has improved and vaccines have become available, visits are being transitioned back to in-person. However, video visits served a key purpose for critical portions of CDCR's patient population by allowing patients to remain connected to their loved ones when in-person visits were not possible, and will continue to be considered in the future.

Innovative usages of digital technologies, combined with removing regulatory barriers to their use, present continued opportunities for augmentation of treatment and recreation for MH patients through the phases of the COVID-19 pandemic and into the "new normal."

3. Lessons Learned in the Expansion of Telemental Health

Expansion of telehealth is an effective response to the COVID-19 pandemic based on CDCR's and other health care organizations' experiences and preliminary outcome measures as discussed in more detail in the "Decreased Movement and Continuity of Care" section of this report. CDCR's success depended on using best practice guidelines, the rapid expansion of an already established telepsychiatry framework and expertise, enlargement of the telepresenter pool, and novel adaptation of telemental health to deliver care as well as to continue with legal proceedings and visitation. Psychologists and social workers from other institutions successfully provided telehealth services to desert institutions with significant staffing shortages and increased patient need related to transfer restrictions. This allowed more MH care to be delivered in order to prevent MH crises and stress related to the COVID-19 pandemic.

While some of the common barriers to the use of telepsychiatry in the community, such as insurance reimbursement and geographic restrictions related to licensure and prescribing, were not directly applicable to CDCR, other challenges unique to this environment were faced. Approval by court monitors was required for every incremental policy change. The physical realities of the institutions made social distancing difficult, as were hygiene and sanitizing efforts among the prison population. This led to fewer staff being able to use the space, while also complicating telepresenting. Many of CDCR's patients have psychiatric and medical comorbidities, substance use disorders, and carry socioeconomic risk factors such as poverty and housing insecurity that can confer a greater risk of morbidity and mortality during a pandemic.[29] [30] While early release, compassionate release, and expedited release were all used

[28] For more information on video visits: https://www.cdcr.ca.gov/visitors/visitation-faqs/#video
[29] Akiyama, M. J., Spaulding, A. C., & Rich, J. D. (2020). Flattening the curve for incarcerated populations—Covid-19 in jails and prisons. *New England Journal of Medicine*, *382*(22), 2075-2077.
[30] Hawks, L., Woolhandler, S., & McCormick, D. (2020). COVID-19 in prisons and jails in the United States. *JAMA internal medicine*, *180*(8), 1041-1042.

to manage the population, minimize crowding, and reduce the spread of disease, delivering services to patients that were notified of their release on very short time frames created more difficulties. Releasing patients to an uncertain community with strained resources and active shelter-in-place orders presented its own set of difficulties and complications.

CDCR's flexibility and willingness to accommodate the ability to work from home ultimately resulted in a retention of onsite providers while effectively recruiting more civil telepsychiatrists during the COVID-19 pandemic. Staff and patients appear to be generally satisfied with telehealth, which aligns with trends reported in other health care systems. Telework contributed to quality of life, job satisfaction, recruitment, and retention of providers in CDCR's system.

A. CDCR's Providers Share Their Experiences on the Expansion of Telepsychiatry

The established infrastructure and experience of the telepsychiatry department allowed CDCR to adopt new practices early in the COVID-19 pandemic, and several clinicians published open forum articles about their experiences, including in partnership with prestigious academic institutions such as University of California, San Francisco. Psychiatrists at San Quentin described their experience managing MH care during the COVID-19 pandemic in an article titled "Mental health services in a US prison during the COVID-19 pandemic." They noted that expanding access to telepsychiatry became a key feature of San Quentin's response to the pandemic and found that:

> "informal feedback from staff and patients has reflected relatively high overall satisfaction with telepsychiatry so far; staff have noted that they are often able to provide similar quality of services to patients over video as they are in person, and patients appreciate being able to meet with clinicians without coming into close contact with others. Clinics seem to run efficiently, as telepsychiatry reduces the time required for custody staff to escort patients from housing units to treatment areas. Waiting rooms appear less congested than before. Telepsychiatry methods have conserved the prison's PPE supply. In addition, trainees continue to participate in mental health services remotely; for instance, forensic psychiatry fellows evaluate patients and testify as expert witnesses in administrative court for involuntary medication hearings via video." [31]

The telepsychiatry program saw an increase in applicant interest during the COVID-19 pandemic. Telepsychiatry was opened to registry providers in 2019 to help meet the staffing needs of the state. An increase in hiring of both registry and civil service providers in late 2019 continued into the COVID-19 pandemic, with an increase in interest from civil service candidates. CDCR is in the process of replacing all registry telepsychiatry providers and will be

[31] Burton, P. R., Morris, N. P., & Hirschtritt, M. E. (2021). Mental health services in a US prison during the CoViD-19 pandemic. *Psychiatric services*.

fully staffed by civil service providers by summer 2021. Many applicants reported that they were not able to telework in their previous employment during the COVID-19 pandemic and worried about their personal health and that of their family, which is in part why they sought out telepsychiatry. The telepsychiatry department worked with institutional leadership to implement onsite teleworking whenever possible, and through these efforts, were able to retain several psychiatrists who may otherwise have left CDCR service. Supervisors sought ways to support and care for their providers as they continued to provide treatment to patients throughout the COVID-19 pandemic.

Despite the difficulties health care workers have faced during the COVID-19 pandemic, there was a slight decrease in the number of separations, defined as retirements or resignations, for civil service psychiatrists between 2019 and 2020, with an increase in the number of total hires. Telepsychiatry had a particularly strong year, growing by 52 providers in 2020, 25 of which were civil service hires. In combination with the reduced patient population and related allocation adjustments, CDCR has reached over 90% psychiatry staffing for the first time in decades.

Providers have expressed overall satisfaction with teleworking. Telepsychiatrists and administrative staff have overwhelmingly expressed a desire to continue teleworking, at least part-time, on a permanent basis. Teleworking telepsychiatrists have noted high audiovisual quality achieved from home, especially with the Cisco DX80s monitors.

B. The Effect of Telepsychiatry on Patient Care

In general, telepsychiatrists have continued their work much as before the COVID-19 pandemic, despite some working from home. Newly teleworking psychiatrists quickly adapted to the medium with the aid of the provided instructional materials. Interruptions to patient clinics were typically driven by onsite quarantines or staffing limitations that similarly impacted onsite providers. Technological disruptions have been rare and short-lived, though when psychiatrists faced prolonged outages at home, they would come back into the office as an alternative.

The percentage of MHSDS patients prescribed antidepressant, mood stabilizer and antipsychotic medications who received appropriate diagnostic monitoring consistent with clinical guidelines also held relatively stable during COVID-19 and statewide increase in psychiatrist teleworking. From March 1, 2019 through February 28, 2020, the average statewide compliance for this measure was 92%. By comparison, from March 2, 2020 through March 31, 2021, the average was 90%. Upon drilling down during the COVID-19 period, it appears there were focused dips in the months of July, September, and November through January, which correlate with upticks in COVID-19 cases within the CDCR population and may represent staffing shortages or reduced movement that impacted patients' ability to complete the testing in a timely manner. Overall, the measure was relatively stable, suggesting that psychiatrists can effectively monitor their patients while teleworking.

Telepsychiatrists serving the desert institutions reported that, despite the fact that these institutions do not have a MH mission and were not intended to maintain caseloads of patients, MH staff including telepsychiatry were able to manage sizeable outpatient caseloads, along

with numerous in-patient TMHU placements during the COVID-19 surge, when movement between institutions was restricted.

Telepsychiatry coordination between institutional staff, regional teams, and headquarters also enabled emergency exceptions to transfer patients to more appropriate treatment settings when clinically indicated. Similarly, when patients could be stabilized quickly in the TMHU, they could be discharged back to their previous yards at CCCMS or EOP LOC. Continuity of care was maintained, and patients received care consistent with that at institutions within the MHSDS. The data, as discussed in the decreased movement section below, demonstrates that telepsychiatry did not worsen patient outcomes and that there was a decrease in referrals to higher levels of care.

One prominent contrasting voice was that of the a single telepsychiatry "floater," who does not maintain a stable caseload of patients at one institution but instead fills in as needed behind provider absences or where there is otherwise an acute need. He reported that he felt the patients he saw while filling in during the COVID-19 pandemic were more psychiatrically acute and faring worse in terms of their MH. He attributed this to various reasons, including that patients were worried both about their own health, the well-being of their loved ones, and interruptions in normal services caused by the response to COVID-19. He noted that patients made it "crystal clear" that they were appreciative of the effort expended to continue to provide them psychiatric services. This telepsychiatrist's conflicting personal experience may be a function of his unique role, as he primarily sees urgent cases and referrals rather than routine follow-ups while filling in for primary psychiatrists and assumed this role during the course of the COVID-19 pandemic. However, it may also reflect a subset of patients who did fare worse for unknown reasons related to the COVID-19 pandemic. To determine this would require further research and analysis.

Many patients reported COVID-19-related concerns shared by the general population – concern for their own health and safety, worry about loved ones, and frustration and boredom from decreased recreational opportunities. Many of these same patients also refused to leave their cell due to fear of infection. However, CDCR's data suggest that MH patient outcomes did not suffer, as evidenced by observations discussed in more detail below such as a decrease in self-reported symptoms of depression, decreased hospitalizations for overdose, and decreased suicide and self-injury during COVID-19, which aligns with patterns seen in other systems.[32] [33] [34] These findings are discussed in more detail in the continuity of care section of this report. CDCR has also begun discussions with the authors of "Mental Health Treatment and the Role of Tele-Mental Health at the Veterans Health Administration During the COVID-19 Pandemic" to see if we can model our methodology to their study to see if we come up with similar results. They found decreases in counts of patients receiving MH treatment early in the pandemic ranged from 7% to 20% for on-going treatment, and 28% to 37% for new treatment. Telemental health rapidly expanded across VHA (Veterans Health Administration) becoming the primary means by

[32] Zhang, J., Boden, M., & Trafton, J. (2021). Mental health treatment and the role of tele-mental health at the veterans health administration during the COVID-19 pandemic. *Psychological Services*.
[33] Faust, J. S., Shah, S. B., Du, C., Li, S. X., Lin, Z., & Krumholz, H. M. (2021). Suicide deaths during the COVID-19 stay-at-home advisory in Massachusetts, March to May 2020. *JAMA network open*, *4*(1), e2034273-e2034273.
[34] Ahmad, F. B., & Anderson, R. N. (2021). The Leading Causes of Death in the US for 2020. *JAMA*.

which encounters were delivered. Counts of patients receiving on-going care for suicide attempts were stable, and for overdoses, decreased by 17%. Counts of patients initiating care for suicide attempts and overdoses decreased by 30% and 38%, respectively. Weekly prescriptions and medication on-hand for psychotropics ranged from a 2% decrease to a 4% increase. New patient prescribing decreased 21%–50%." Data specific to outcomes of care provided exclusively via telehealth are currently difficult to obtain in the EHRS tracking system. Telepsychiatrists have not had a separate identifier to distinguish them from onsite psychiatrists in EHRS, though this is currently in progress. Additionally, last year new check-out categories for patient appointments were added to reflect temporarily teleworking psychiatrists and clinicians. However, this information is not yet mapped to CDCR dashboards where it can be readily analyzed. This change is also in progress, and in the future CDCR will be able to more comprehensively assess outcomes in relation to telehealth.

It should be noted that face-to-face care was still used appropriately for specialized services such as responding to emergent patient issues such as suicidal behavior, aggression/assaultive behavior, Use of Force (UOF) incidents, and so forth.

C. Telehealth Services by Psychologists and Social Workers

The emergent activation of telehealth services by psychologists and social workers provided valuable lessons as to how this model of service delivery can be delivered at CDCR. This emergency activation revealed that CDCR can safely provide telehealth services with good acceptance by the patient population. Critical access to care was available during an acute staffing crisis at the desert institutions. The patients adapted well to this service delivery modality, with few refusals attributed to the telehealth format. CDCR has demonstrated that, with proper administration, telehealth can provide increased access to care for patients in difficult-to-staff locations.

As CDCR expanded telehealth options, determining which services to offer under this new program contributed to a strategic deployment. By targeting telehealth services toward routine, non-urgent services, onsite staff were able to focus on more acute and intensive services needs at the institution. However, telehealth cannot fully replace face-to-face care; onsite staff are still required to respond to emergent patient issues, such as suicidal behavior, aggression/assaultive behavior, UOF incidents, and other similar services.

CDCR found that the provider location is an important consideration. Telepsychology and tele-social work services from home can be provided safely and effectively when clear standards are enforced and secure, and functional equipment is deployed. CDCR found that telehealth can aid in staff retention. Telehealth can provide an important alternative retention tool for staff who might otherwise be required to take a leave of absence due to health or caregiving responsibilities.

III. DEMAND FOR MENTAL HEALTH SERVICES DECREASED DURING COVID-19

Efforts to mitigate the spread of COVID-19 required major adjustments to the delivery of MH services. Decreased movement was one of the most significant changes, since the traditional approach to changes in LOC relied on transporting the patient to new treatment locations. While necessary steps were taken to deliver treatment under public health guidelines, it was equally important to monitor how those changes may affect the MH program and the patients it serves.

Shortly after CDCR implemented a series of public health recommendations to reduce the spread of COVID-19, the number of inpatient referrals began to noticeably decrease. In response, CDCR took several steps to ensure patients requiring inpatient services were properly referred. In addition to confirming in writing the HLOC referral expectations required in the MHSDS Program Guide, 2018 revisions, CDCR did the following:

- Continued discussing the importance of referrals with regional and institutional leadership.
- Afforded opportunities for institutions to review new policies directly with HQ, ask questions, and voice concerns.
- Sent periodic statewide reminders that referrals must continue despite any transportation delays.
- Tracked referrals over time and reviewed the methodology, limits, and opportunities for improving dashboard indicators with the Special Master's Data Expert.

CDCR also reviewed four cases highlighted by *Coleman* Plaintiffs and the Special Master's team, which appeared to show clinical staff's hesitation to refer patients, instead taking action as needed to ensure patient safety, timely MH services, and adherence to policies and procedures. While three of the four cases were unsubstantiated, remedial training and increased supervision were immediately deployed to correct any misunderstandings related to inpatient referral expectations in the fourth case.

Despite these actions, a lowered rate of referrals to inpatient care for MHCB and Psychiatric Inpatient Program (PIP) continued compared to pre-COVID-19 pandemic referral rates. CDCR's commitment to providing ethical, professional, and effective MH services, requires an openness to continuously improve and demonstrate an ability to be a self-monitoring and self-correcting program. Accordingly, on October 13, 2020, CDCR began an in-depth review to assess whether there were MH referral barriers to inpatient care among the CDCR inmate population. CDCR has the authority, resources, and obligation to deliver MH services to patients. As a result, concurrent actions, both ongoing (Sustainable Process Review) and newly implemented and enhanced (Regional Review of LOC Decisions and a review of emerging research), were required to ensure MH services were available to meet the needs of patients.

1. Related Research

As part of CDCR's work to understand the impact of COVID-19 on the MH program, CDCR conducted a focused review of published articles, research, and other scholarly analysis to ensure a thorough understanding of potential factors affecting referrals to MH services. Additionally, CDCR recognized that related research could identify potential areas for exploratory analysis and identify knowledge gaps within the MH Program, leading to further investigation and program improvement. While COVID-19 is relatively new, every day in biomedicine, approximately 4,000 scientific papers are published[35] - and some already focus on researching the impacts of COVID-19 on MH. CDCR also recognized the opportunity to gain insights from similar research investigating other pandemics, natural disasters, and mass traumatic events.

A. Mental Health Visits Decreased in Many Settings during COVID-19

A handful of retrospective pre- and post-test studies researched decreasing MH visits during COVID-19. Individuals with a primary diagnosis of Mood Disorders appeared to represent the largest portion of patients utilize emergency MH services.[36] Additionally, researchers noticed a correlation between lower service utilization rates and decreased movement, suggesting increased social distancing requirements impacted patients' willingness to seek help for MH problems through in-person consultations.[37] However, many patients repeatedly emphasized that social distancing measures and isolation positively impacted them because all other people in the community are in the same position, which helps with the burden of social isolation due to mental illness.[38] While some findings underscored the threat to MH posed by the COVID-19 pandemic[39], others concluded mental illness and the personality characteristic of resilience are not directly linked, particularly if there is a good balance of protective factors and risk factors[40].

In an editorial-style article, some researchers opined that fear of contracting COVID-19 and feelings that their problems were not severe enough, in comparison to those needing treatment for COVID-19, might also play a role in reduced referrals and admissions to inpatient psychiatric services.[39] Most studies agreed that more research was necessary and that tracking psychiatric visits may not directly correlate to a lower prevalence of MH distress.

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[35] C. (Ed.). (2021, January 11). Meta.org. Retrieved January 11, 2021, from http://www.meta.org/

[36] Gonçalves-Pinho, M., Mota, P., Ribeiro, J., Macedo, S., & Freitas, A. (2020). The impact of COVID-19 pandemic on psychiatric emergency department visits – a descriptive study. Psychiatric Quarterly, 1–11. https://doi.org/10.1007/s11126-020-09837-z

[37] Hoyer, C., Ebert, A., Szabo, K., Platten, M., Meyer-Lindenberg, A., & Kranaster, L. (2020). Decreased utilization of mental health emergency service during the COVID-19 pandemic. European Archives of Psychiatry and Clinical Neuroscience, 1–3. https://doi.org/10.1007/s00406-020-01151-w

[38] Kolar, D. (2020). Psychiatric emergency services and non-acute psychiatric services utilization during COVID-19 pandemic. European Archives of Psychiatry and Clinical Neuroscience, 1–2. https://doi.org/10.1007/s00406-020-01182-3

[39] Goldenberg, M. N., & Parwani, V. (2020). Psychiatric emergency department volume during Covid-19 pandemic. The American Journal of Emergency Medicine. https://doi.org/10.1016/j.ajem.2020.05.088

B. Anxiety and Depression Symptoms Have a Higher Prevalence After Mass Traumatic Events

In addition to studies aimed at researching the impact of COVID-19 on MH symptoms, other studies investigated MH symptoms following hurricanes, earthquakes, other pandemics, and mass traumatic events. In a systematic review of the potential impact of natural disasters, researchers concluded there is a clear need to continue monitoring MH and suicidal behaviors for several years after the traumatic events.[40]

A research article based on cohort studies found depression symptoms in the US increased three times more during COVID-19, than pre-COVID-19.[41] Moreover, in a study comparing pre- and post-Katrina surveys, authors concluded that the prevalence rate of severe mental illness in respondents post-Katrina was almost double – 11.3%, versus 6.1% for respondents pre-Katrina.[42] Other survey studies found similar increases in Post-Traumatic Stress Disorder (PTSD) after Hurricane Ike,[43] anxiety after the H1N1 pandemic,[44] and symptoms of PTSD and anxiety-depression after the 2014 – 2016 Ebola epidemic.[45]

C. Increased Resilience is More Common than Pathological Outcomes After Mass Traumatic Events

Resilience is the ability to recover from and adapt to adversity. A wide range of MH outcomes following mass traumatic events have been observed. Research finds that some factors, characteristics, and conditions may increase psychopathology risk, while others may promote adaptive adjustment and resilience. Chen and colleagues (2020) conducted a meta-analysis to examine the theoretical prevalence of individuals developing resilience versus psychopathology following natural disasters.[46] Their findings suggest that, overall, resilience is more common

[40] Kõlves, K., Kõlves, K. E., & De Leo, D. (2013). Natural disasters and suicidal behaviors: A systematic literature review. Journal of Affective Disorders, 146, 1–14. http://dx.doi.org/10.1016/j.jad.2012.07.037
[41] Ettman C.K., Abdalla S.M., Cohen G.H., Sampson L., Vivier P.M., & Galea S. (2020). Prevalence of Depression Symptoms in US Adults Before and During the COVID-19 Pandemic. JAMA Network Open. https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2770146
[42] Kessler, R. C., Galea, S., Jones, R. T., & Parker, H. A., on behalf of the Hurricane Katrina Community Advisory Group. (2006). Mental illness and suicidality after Hurricane Katrina. Bulletin of the World Health Organization, 84(12), 930–939.
[43] Pietrzak, R. H., Tracy, M. Galea, S., Kilpatrick, D. G., Ruggiero, K. J., Hamblen, J. L., Southwick, S. M., & Norris, F. H. (2012). Resilience in the face of disaster: Prevalence and longitudinal course of mental disorders following Hurricane Ike. PLOS One, 7(6), e38964, 1–14. http://10.1371/journal.pone.0038964
[44] Liao, Q., Cowling B.J., Lam W.T., Ng D. M.W., & Fielding, R. (2014). Anxiety, worry, and cognitive risk estimate in relation to protective behaviors during the 2009 influenze A/H1N1 pandemic in Hong Kong: ten cross-sectional surveys. BCM Infectious Diseases. https://link.springer.com/article/10.1186/1471-2334-14-169#citeas
[45] Jalloh M.F., Li W., Bunnell R.E., Ethier K.A., O'Leary, A., Hageman K.M., Sengeh P., Jalloh M.B., Morgan O., Hersey S., Marston B.J., Dafae F., & Redd J.T. (2017). Impact of Ebola experiences and risk perceptions on mental health in Sierra Leone, July 2015. BMJ Global Health. https://gh.bmj.com/content/bmjgh/3/2/e000471.full.pdf
[46] Chen, S., Bagrodia, R., Pfeffer, C. C., Meli, L., & Bonanno, G. A. (2020). Anxiety and resilience in the face of natural disasters associated with climate change: A review and methodological critique. Journal of Anxiety Disorders, 76, 1-16. https://doi.org/10.1016/j.janxdis.2020.102297

than pathological outcomes. Greater resilience was associated with a decrease in self-reported incidents of experiencing stressors, older adults, education, economic resources, employment, and social support.

Similarly, a recent cross-sectional study concluded that resilience is associated with having greater support systems, positive role models, and a sense of stability and community. Individual-level resilience may improve as resources are allocated towards building support systems, friend relationships, and role models.[47] The same study found that individuals with higher Adverse Childhood Experiences have lower resilience scores.

D. Developing Coping and Resilience Strategies are Effective Approaches to Mental Health Treatment During Mass Traumatic Events

In a case controlled study relying on retrospective data collection, researchers found that a treatment approach based on caring, empathy, generosity, sharing of experiences, and humanism can help develop coping and resilience strategies.[48] Another similarly designed study concluded that participants who engaged in action-based activities in their community immediately following the traumatic event reported more significant posttraumatic growth.[49] The same study encouraged public policy to create supportive spaces that allow interested patients opportunities to contribute to meaningful change following mass traumatic events.

Another article discussing the theory and literature on psychological distress, morbidity, and risk of suicide following the COVID-19 pandemic, noted that despite psychological distress increasing, resilience, grief recovery, posttraumatic growth, hope, and self-compassion were identified as strategies for navigating the negative impact of the COVID-19 crisis.[50] That same article suggested utilizing self-help resources based on psychological principles to help patients focus their behaviors towards those within their control (i.e., using good sleep hygiene, healthy eating, exercise, meditation, and outdoor activities). To mitigate the psychological impact of quarantine, researchers found the following to be beneficial: disease education, the reason for quarantine, adequate supplies, reduced boredom, and increased communication.

E. The Relationship Between Suicide Rates and Mass Traumatic Events is Unclear

Kõlves et al. (2013) found that suicide rates sometimes decreased, remained constant, or increased after natural disasters in a study of observational studies on suicidal activity after

[47] Daniel, R., Ring, K., Husbands, T., Marshall, H., Wang, J., Shah, A., & Chan, R. Y. (2020). Resilience in the setting of adverse childhood experiences: A cross-sectional study. Clinical Pediatrics, 59(4), 1296-1300. http://doi.org/10.1177/0009922820941633
[48] Cénat, J. M. Noorishad, P., Blais-Rochette, C., McIntee, S., Mukunzi, J. N., Darius, W. P., Broussard, C., Morse, C., Ukwu, G., Auguste, E., & Menelas, K. (2020). Together for hope and resilience: A humanistic experience by the Vulnerability, Trauma, Resilience, and Culture Lab members during the COVID-19 pandemic. Journal of Loss and Trauma, 25(8), 643-648. https://doi.org/10.1080/15325024.2020.1774704
[49] Jaramillo, N., & Felix, E. D. (2020). Psychosocial influences on posttraumatic growth among university students following a mass murder. American Journal of Orthopsychiatry, 1-9. http://dx.doi.org/10.1037/ort0000512
[50] Shakespeare-Finch, J., Bowen-Salter, H., Cashin, M., Badawi, A., Wells, R., Rosenbaum, S., & Steel, Z. (2020). COVID-19: An Australian perspective. Journal of Loss and Trauma, 25(8), 662-672. https://doi.org/10.1080/15325024.2020.1780748

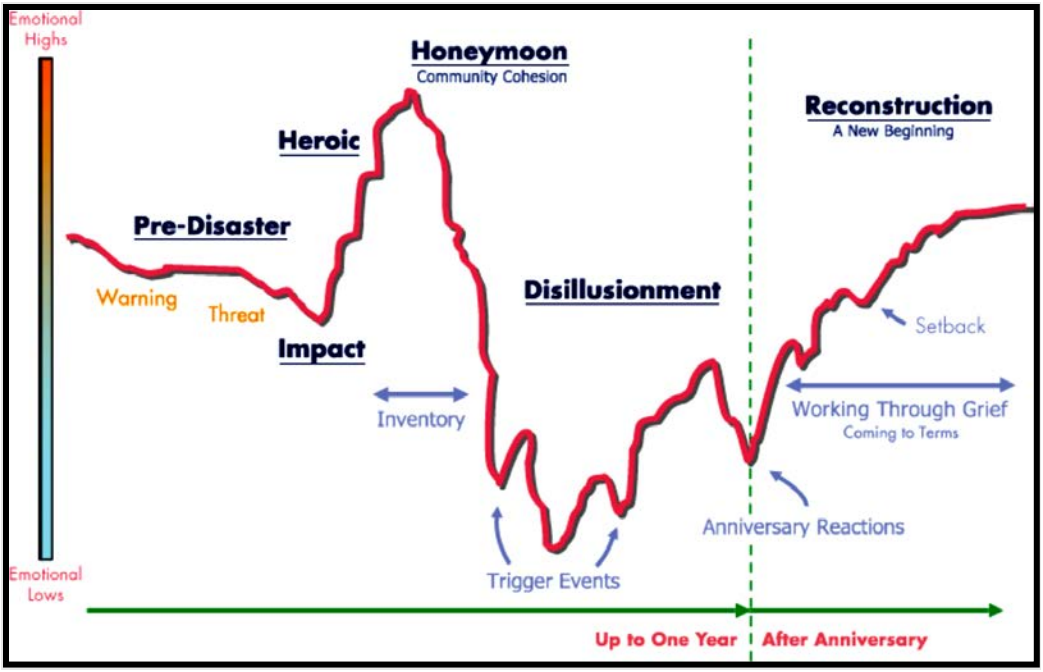
natural disasters across the globe. However, increases in suicide rates were usually confined to population subgroups (men after the 1999 Nantou earthquake in Taiwan, and youth in the United States, though not to a statistically significant extent, after Hurricane Andrew in 1992). Nevertheless, in the initial post-disaster timeframe, referred to as the honeymoon phase, there seems to be a decrease in non-fatal suicidal behaviors. In some studies, a delayed rise in suicidal conduct has been identified. However, other causes, such as previous and current MH conditions, have been reported to raise the likelihood of suicidal behavior following natural disasters. Contributing variables, such as economic conditions, should also be considered. In total, 19 papers analyzed suicide mortality and 23 non-fatal suicidal behaviors. The effects of earthquakes on suicidal behaviors are the most frequently studied among natural disasters (n = 20), followed by hurricanes (n = 11). Further, there were four papers about tsunamis, three about floods, three about heatwaves and drought, and one investigating the effects of multiple natural disasters.

F. Suicidal Ideation, Plans, and Attempts Initially Decrease, but Subsequently Increase After Mass Traumatic Events

Kessler et al. (2006) tested for anxiety and mood problems in their research, including some extreme psychiatric conditions and mild-moderate mental illnesses. While their research cited lower suicidal ideation prevalence between 5 and 8 months after Hurricane Katrina, subsequent research conducted as part of the same initiative found a substantial rise in suicidal ideation among approximately the same population, after the 8-month mark.

In three waves of interviews following Hurricane Ike, Pietrzak et al. (2012) measured the incidence of suicidality and psychiatric illness of people who had lived in the region impacted by the catastrophe for at least one month prior to the hurricane. Researchers found a prevalence of PTSD associated with trauma other than Hurricane Ike, but depression, panic disorder, and suicidality remained reasonably consistent throughout the evaluations. Later, Hurricane Ike-related PTSD and generalized anxiety disorder decreased in the second-wave review and stabilized in the third, while suicidality frequency rose from the second wave of assessment to the third.

The traditional stages of psychological responses to disasters may help explain patterns in suicidality in research. Zunin and Myers initially identified these stages. Emotions improve in a heroic phase, in which individuals are inclined to try to contribute to the disaster response, followed by a honeymoon phase when community cohesion peaks. However, after the honeymoon, is disillusionment, sometimes spurred by disappointment in the slower-than-expected pace of disaster recovery. Disillusionment typically occurs in the second half of the year after the disaster. After the disaster's first anniversary, it is generally followed by reconstruction, as survivors come to terms with their "new normal" after the disaster.



(*Adapted from Zunin & Myers as cited in DeWolfe, 2000*[51])

2. Sustainable Process

The Sustainable Self-Monitoring Process's primary objective is to ensure that patients are treated at the appropriate LOC, and deemed clinically necessary, are timely referred and transferred to a psychiatric inpatient program. An additional objective is to develop a sustainable, internally monitored quality improvement process by providing feedback to refine existing policies and procedures, improve data management systems, enhance ongoing training of institutional staff, and take appropriate corrective action when warranted.

The Sustainable Process includes an assessment of clinicians' documentation of their higher LOC considerations on the MH referral form, as well as extensive patient record reviews each quarter. The HLOC considerations documentation is subjective and objective, meant to be a catchall for all areas of concern. The combined efforts from the institution, Regional teams, and Headquarters, demonstrate CDCR's collective commitment to and success in ensuring patients are placed in the appropriate LOC, and CDCR's ability to self-monitor.

A. Methodology

CDCR uses multiple procedures to self-monitor the referral process. These procedures consist of three broad categories of review: monthly procedures, quarterly procedures, and semi-

[51] DeWolfe, D. J. (2000). Training manual for mental health and human service workers in major disasters (2nd ed., HHS Publication No. ADM 90-538). Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

annual procedures. Headquarters, RMHAs, and the local Inpatient Coordinators utilize multiple tools to track and monitor referrals and non-referrals, most central being the On Demand Referral and Non-Referral Logs. The institutional, Regional, and HQ actions related to the Sustainable Self-Monitoring Process have continued throughout the COVID-19 pandemic.

Institutions complete monthly audits using the HLOC Document audit tool (formerly CDCR Form7388-MH-B). The HLOC document is used to guide the IDTT in determining a patient's LOC based on assessing the patient's behaviors and symptoms and the potential benefit to the patient of a different LOC. The HLOC document is completed electronically at a frequency consistent with the MHSDS Program Guide requirements. Before completing the form, clinicians must answer seven yes/no questions and enter an explanation as necessary. The seven questions include three subjective questions and four objective questions, summarized below.

Subjective Questions
1. Unable to function at current LOC
2. Patient requires highly structured inpatient
3. Unresponsive psychiatric symptoms in the last 6 months

Objective Questions
4. MHCB for at least 10 days
5. Three or more MHCB Referrals in the last 180 days
6. Three or more RVRs in the last 90 days
7. Participating in less than 50% Treatment

Data from the Sustainable Process results were collected and compared for two periods of review. "Pre-COVID-19" data was collected from April 2019 – December 2019, and "COVID-19" data was collected from April 2020 – December 2020.

B. Findings From Sustainable Process Audits

Findings indicate that the referrals stemming from Sustainable Process considerations were more accurate with higher quality documentation during COVID-19. After controlling for changes in population size, the average monthly number of patients with one or more "yes" to the seven questions above decreased approximately 25% during COVID-19 (M = 1,639), compared to pre-COVID-19 (M = 2,199). In general, the decrease in patients identified for referral consideration can be accounted for by decreased movement, decreased opportunity for programming and assessment, and related distress. This is particularly evident in the reduced potential for answering "yes" to question #7 (participating in less than 50% of structured treatment hours), which corresponds with reduced opportunity for refusal due to reduced programming offered and participation parameters that allow for easier compliance (in-cell programming). Similarly, question #6 (three or more Rules Violation Reports (RVRs) in the last 90 days) may correlate with reduced distress or opportunity for altercations or rules

violations. With a reduction in patients identified for referral questions (both subjective and objective) during IDTT, it is reasonable to conclude that there would also be a reduction in referrals made during IDTT.

The Sustainable Process also reviews the list of patients who were considered for referral to a higher level of care but ultimately were not referred. These "non-referrals" also decreased during COVID-19. Controlling for population changes, the average monthly number of non-referrals decreased by approximately 14% during COVID-19 (M = 1,263), compared to pre-COVID-19 (M = 1,468). This finding indicates that while the Sustainable Process did find fewer patients for HLOC, identified patients were more likely to be referred during COVID-19.

The Sustainable Process audit also includes measures of quality and accuracy. The quarterly review measures the percentage of HLOC consideration documentation identified as "good." The process involves selecting a sample of cases for review, and determining if the documentation is accurate and meets quality standards. Comparing the quarterly reviews measured during the pre-COVID-19 and COVID-19 timeframes, the portion of "good" cases identified increased approximately 15% during COVID-19.

3. Regional Review of Level of Care Decisions

CDCR is committed to demonstrating its ability to monitor and improve the MH program independently. On October 19, 2020, all four Regional teams, consisting of MH clinicians with extensive experience in treating inmates with mental illness, were directed by the MH Administrators to review a sample of recent Master Treatment Plans (MTPs) and Self-Harm forms and the LOC decisions that followed. No systematic deviation in referral procedures was detected. IDTTs appeared to follow established policies, standards, and expectations of due diligence. While this review was somewhat similar to the Sustainable Process audits and aimed to achieve similar insights, there were some key differences:

- 100 MTPs were randomly chosen from all 8,297 MTPs issued between September 18 and October 18, 2020 (from all non-PIP LOC), including ones that were referred to HLOC.
    - The Sustainable Process only reviews MTPs generated for patients at an EOP LOC. This review included MTPs from MHCB, EOP, and CCCMS.
    - Randomness was achieved by assigning a random number greater than or equal to zero and less than one, evenly distributed using the Microsoft Excel 2016 RAND function. Since Excel 2010, Excel uses the Mersenne Twister algorithm (MT19937)[52] to generate random numbers. All 8,297 MTP were rank-ordered by an assigned random number (smallest to largest), and the first 100 MTPs were selected for review.

[52] The Mersenne Twister is a pseudorandom number generator (PRNG). It is by far the most widely used general-purpose PRNG. Its name derives from the fact that its period length is chosen to be a Mersenne prime. The most commonly used version of the Mersenne Twister algorithm is based on the Mersenne prime 219937−1. The standard implementation of that, MT19937, uses a 32-bit word length.

- 50 Self-Harm forms were randomly selected from all 610 forms issued during the same time period (from all LOC).
    - The Sustainable Process does not include a review of Self-Harm forms.
    - Randomness was achieved by assigning a random number greater than or equal to zero and less than one, evenly distributed using the Microsoft Excel 2016 RAND function. Since Excel 2010, Excel uses the Mersenne Twister algorithm (MT19937) to generate random numbers. All 610 Self-Harm forms were rank-ordered by an assigned random number (smallest to largest), and the first 50 Self-Harm forms were selected for review.

A list of 145 unique patients were assigned by region for review (5 patients appeared on both lists but were only counted on the Self-Harm group). Regional teams were directed to review each patient's chart and report if they agreed with the subsequent decision to refer (or not refer) to a HLOC.

Region	MTP	Self-Harm Forms	Regional Agreement with Subsequent LOC decision
I	40	23	92% (58/63)
II	16	17	94% (31/33)
III	26	1	100% (27/27)
IV	13	9	96% (21/22)
Total	**95**	**50**	**95% (137/145)**

The results of the Regional review identified eight instances of LOC disagreement. Five out of the eight disagreements were related to CCCMS or EOP LOC – the Regional team determined four LOC decisions should have been EOP instead of CCCMS, and one LOC decision should have been CCCMS instead of GP. The other three were associated with MCHB and Acute LOC – the Regional team determined two LOC decisions should have been Acute Psychiatric Program instead of Intermediate Care Facility, and one LOC decision should have continued to be MHCB instead of an MHCB rescission. The Regional teams took steps to resolve any LOC concerns with the institutions and IDTTs. While 95% of the reviews resulted in an agreement with the treatment teams' LOC decision, these results do not appear to help explain observations of fewer inpatient referrals during COVID-19.

4. Lessons Learned From Delivering Mental Health Services During a Pandemic

During the COVID-19 pandemic, there was an unexpected decrease in referrals to inpatient levels of care. Traditional efforts aimed at establishing and reinforcing referral expectations, such as new policies, monitoring, and direct communication, were utilized, but the unexpected

decrease in referrals continued. In order to better understand this phenomenon, CDCR independently took steps to review emerging research, investigate the effectiveness of established monitoring tools during COVID-19, and expand the scope of quality assurance to ensure adherence to policies, standards, and expectations of due diligence. Clinicians may also have understood that due to limitations on patient movement due to COVID-19 pandemic restrictions, quarantines, and institutional lockdowns, their patients would be less likely to have been moved and hence they chose to treat the patient in place.

Several research studies have observed a decrease in MH visits during the COVID-19 pandemic across different settings. This was consistent with CDCR data indicating lower than expected inpatient referrals. Regrettably, none of the reviewed articles identified reliable causes for the decrease, instead offering survey results (e.g., fear of infection or a sense of community), observed correlations (e.g., social distancing practices and patients with mood disorders most likely to decrease MH services), and theories from experts on resilience as a personality factor. Most studies agree that more research is necessary and that tracking psychiatric visits may not directly correlate to a reduction in MH distress, which could explain the disconnect between CDCR's decreasing referral numbers despite audits demonstrating a high quality Sustainable Process.

The Sustainable Process includes a robust scope of review, and there is significant overlap between its objectives and CDCR's concerns related to the frequency of inpatient referrals. The comprehensive nature of the Sustainable Process was likely to reveal important information related to referral trends. Accordingly, reviewing recent Sustainable Process audit results to understand why there may be lower than expected referrals was a logical step. However, recent results did not reveal any apparent patterns or issues indicating a sudden drop in Sustainable Process compliance. Instead, the results indicate that the Sustainable Process identified fewer patients in need of HLOC consideration, and the patients that were identified were more likely to be referred during COVID-19, with increased accuracy and quality documentation. This may reflect that the clinicians knew the patients better because of less patient movement. Despite clinicians knowing that many patients would not have been as likely to be moved to higher levels of care, o, observational reports from CDCR's MH regional teams indicated that staff continued to complete reviews and audits, and there was no evidence of an increased number of cases that should have been referred to HLOC, but were not.

Taking a broader view of research related to MH symptoms following mass traumatic events revealed several key insights. The prevalence of depression, anxiety, and PTSD tends to increase in the months following mass traumatic events – though most individuals develop coping and resilience strategies naturally. Treatment activities targeting action-based activities, improving patient education, and focusing behaviors towards those within their control (i.e., utilizing good sleep hygiene, healthy eating, exercise, meditation, and outdoor activities) are found to be most beneficial. The role of resilience repeatedly appeared in research, indicating mental illness does not necessarily affect resilience as a personality characteristic, particularly if there is a good balance of protective factors and risk factors. Overall, resilience is more common than pathological outcomes following a mass traumatic event. Increased resilience is associated with lower self-reported stressors, older adults, education, economic resources, employment, and social support. Moreover, resilience is linked to having greater support systems, positive role

models, and a sense of stability and community. An encouraging finding is that individual-level resilience may improve as resources are allocated towards building support systems, friend relationships, and role models.

The relationship between suicide rates and mass traumatic events is unreliable. Increases in suicide rates, however, were usually confined to specific population subgroups. In the initial post-disaster timeframe, there seems to be a decrease in non-fatal suicidal behaviors. The traditional stages of psychological responses to disasters may help explain shifting patterns of suicidal ideation, plans, and attempts in research. In this model, improved MH and community cohesion is followed by discouragement over the slower-than-expected pace of disaster recovery.

IV. DECREASED MOVEMENT AND MAINTAINING CONTINUITY OF CARE

The movement of patients both within CDCR institutions and between them, as well as the total amount of time individuals spent outside of their cells, was restricted based on recommendations from the Center for Disease Control (CDC) and California Department of Public Health (CDPH). CDCR's goal was to maximize staff and patient safety by restricting the spread of COVID-19 within CDCR institutions, while simultaneously ensuring that CDCR's MH patient population continued to receive appropriate care.

To achieve these goals, CDCR developed alternative housing and treatment options for *Coleman* class members. CDCR's efforts included increasing in-cell rounding/monitoring and access to in-cell reading and writing therapeutic materials. TMHUs were activated and used for patients who required inpatient MH care services while awaiting transfers to PIPs and MHCBs.

In response to the necessary changes to the delivery of MH services, CDCR reviewed the emerging body of research related to continuity of care to gain a better understanding of this critical component of treatment. This research was then paired with CDCR's experience and internal data to better understand impacts from COVID-19 on the MH program. CDCR analyzed how restricted movement restriction of movement in light of the COVID-19 pandemic impacted programming changes, the prevalence of various types of events (i.e., incidents of self-harm, suicide, RVRs, inter- and intra-facility moves), and the amount of out-of-cell treatment provided.

1. Research Related to the Continuity of Care

Continuity of care is largely focused on the quality of care over time. While there is general agreement that it is a complex concept, it is considered by patients and clinicians alike as an essential feature of good quality care for long-term disorders.[53] Within integrated systems of care where patients' health care needs can rarely be met by a single professional, the goal is often a combination of two ideal conditions: a continuous caring relationship with an identified health care professional, and the delivery of a "seamless service" through integration, coordination and the sharing of information between different providers.[54]

Peer reviewed research has found statistically significant relationships between care continuity, successful inpatient discharge to outpatient care, quality of life, service satisfaction, symptom

[53] Burns, T., Catty, J., White, S., Clement, S., Ellis, G., Jones, I., ... Wykes, T. (2009). Continuity of care in mental health: Understanding and measuring a complex phenomenon. Psychological Medicine, 39(2), 313-323. doi:10.1017/S0033291708003747

[54] Gulliford, M., Naithani, S., & Morgan, M. (2006). What is 'continuity of care'? Journal of Health Services Research & Policy, 11(4), 248–250. https://doi.org/10.1258/135581906778476490

severity, social and community functioning, and hospitalization trends.[55] [56] [57] [58] However, a common issue many researchers find is that there is no accepted definition or measure against which to test policies or interventions designed to improve continuity. Consequently, research on this topic has had many limitations, including low sample sizes, differences in the definition and measurement of the involved variables, sampling bias, difficulty with generalizing the outcomes across treatment settings, and the challenge of teasing out differences in impact (on patient outcomes) of visit frequency versus visit continuity. CDCR agrees with the broad consensus that continuity of care is an important component in MH treatment, but also recognizes it is inherently difficult to draw definitive conclusions about the comparative value because there are so many relevant factors. Regardless, CDCR found positive relationships between continuity of care and outcomes after gathering the following types of internal data and examining behavioral health outcomes during the COVID-19 pandemic: the demand for MH services, rule violations, overdoses, self-injury, and suicide. This also included data to control for the significant changes in CDCR's population size and composition. CDCR defines Continuity of Care as the percentage of Primary Clinician (MHPC) and Psychiatrist (MHMD) contacts seen by the most frequent provider during a six-month period for any EOP patient who has remained in the same housing program at the same institution without interruption for the entirety of the past six months. CDCR's review of patients who remained in an EOP for a full six months found that the same provider saw those patients more often during COVID-19 than the same period prior to COVID-19, which indicates that CDCR increased continuity of care through the COVID-19 pandemic.

2. Methodology

The observation period for this analysis was split into equal and consecutive timeframes: "Pre-COVID-19", spanning from May 3, 2019 through March 30, 2020; and "COVID-19", spanning from April 1, 2020 through February 28, 2021. The frequency of various events both before and during the COVID-19 period will be presented here. These events were analyzed using both descriptive and inferential statistics to arrive at a set of general conclusions and hypotheses regarding the lessons learned about the population, the response to the emergence of COVID-19, and how changes in movement and access to care interacted during this period. However, this analysis was not designed to determine which factors caused which changes.

CDCR calculated the impact of the COVID-19 pandemic on each behavioral outcome as the observed rate of each outcome divided by its expected rate minus 1. Similarly, CDCR calculated

[55] Adair, C.E, McDougal, G.M., Mitton, C.R., Joyce, A.S., Wild, T.C., Gordon, A., Costigan, N., Kowalsky, N., Pasmeny, G., and Beckie, A. Continuity of Care and Health Outcomes Among Persons with Severe Mental Illness. Psychiatry Services 56: 1061-1069, 2005.

[56] Puntis, S., Rugkasa, J., Polit, C., Forrest, A., Mitchell, A., and Burns, T. Associations Between Continuity of Care and Patient Outcomes in Mental Health Care: A Systematic Review. Psychiatric Services 66: 354-363, 2015.

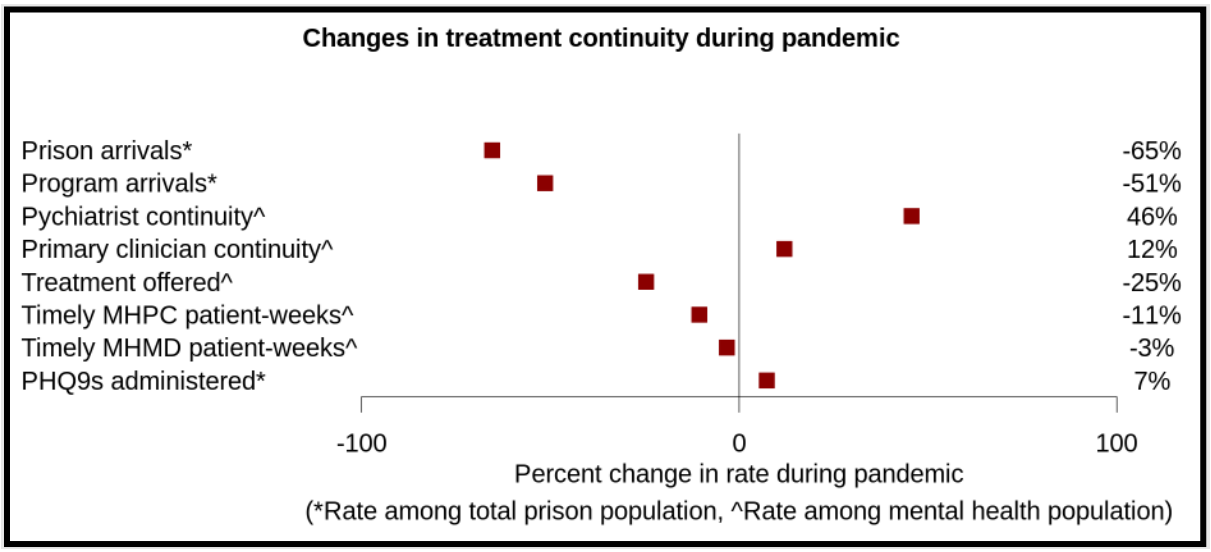
[57] Greenberg, G.A., Rosenheck, R.A. Continuity of Care and Clinical Outcomes in a National Health System. Psychiatric Services 56: 427-433, 2005

[58] Brekke, J.S., Ansel, M., Long, J., Slade, E., and Weinstein, M. Intensity and Continuity of Services and Functional Outcomes in the Rehabilitation of Persons with Schizophrenia. Psychiatric Services 50: 248-256, 1999).

changes in all continuity measures as the COVID-19 pandemic rate divided by the pre- COVID-19 pandemic rate minus 1. For example, the per capita prison arrival rate was 0.74 pre-COVID-19 and 0.26 during the COVID-19 pandemic, yielding a change in this rate of (0.26/0.74) - 1 = -0.65, or a decrease of 65%. Expected rates were calculated using a technique called indirect standardization based on age group and MH LOC.[59] These expected rates reflect what CDCR would have observed if nothing had changed during the COVID-19 pandemic other than the population size, proportions of age groups, and MH LOC.

3. Plain Language Summary of Methodology and Plot Graphs

During the pandemic, CDCR made several changes to the MH program and the broader operations within CDCR. The "Changes in Treatment Continuity during Pandemic" graph plots the various changes. Each item is plotted on a range (-100% to 100%). The red boxes (■) within that range indicate the degree to which these changes differ from pre-COVID-19 data and each other. The data to the right of each red box indicates the percent difference. For example, internal and external movement restrictions were significant and widespread during most of the pandemic. These changes to CDCR operations are plotted (Prison and Program Arrivals), and visualize the extent to which this change differs from before COVID-19 (-65% and -51% respectively). The 0% line indicates no measureable difference.



[59] Wildeman, C., Goldman, A. W., & Wang, E. A. (2019). Age-Standardized Mortality of Persons on Probation, in Jail, or in State Prison and the General Population, 2001-2012. Public health reports (Washington, D.C.: 1974), 134(6), 660–666. https://doi.org/10.1177/0033354919879732

Treatment Continuity during Pandemic Definitions	
Prison Arrivals	Inmates' movement into the prison system either from county jails or from those being returned from parole
Program Arrivals	Movement within an institution
Psychiatrist Continuity	Percentage of psychiatrist contacts seen by the most frequent provider (psychiatrists)
Primary Clinician Continuity	Percentage of primary clinician contacts seen by the most frequent provider (primary clinicians)
Treatment Offered	Percentage of patient-weeks during which offered treatment met or exceeded benchmarks
Timely MHPC Patient-Weeks	Percentage of time routine primary clinician contacts and initial primary clinician contact completed on time
Timely MHMD Patient Weeks	Percentage of time routine Psychiatrist Contacts and initial Psychiatrist Contact completed on time
PHQ9 Administered	Number of PHQ9s administered to patients in a given placement and institution. (The PHQ9 is a multipurpose instrument for screening, diagnosing, monitoring, and measuring the severity of depression)

In addition to the deliberate changes discussed above, there were population changes (size and demographics) that were outside of CDCRs control. Before analyzing how our patients reacted (outcomes) to the various changes during COVID-19, we analyzed various demographic changes (Age, Race, Gender, Custody Level, MH LOC, and Developmental Disability). This step highlights variables CDCR may need to control for in the outcome analysis. For example, while General Population (GP) comprised 70% of the total population in before the COVID-19 pandemic, they comprised 68% of the total population during the COVID-19 pandemic. While the population size reduced substantially during COVID-19, the demographics changes appear to be minor (1% - 2% differences). Consequently, we decided the outcome data should control for differences in population size, age, and MH LOC.

	Variables	PreCovid	Covid	Delta
Age	Under 30	23%	21%	-2%
	30 to 49	52%	52%	0%
	50 to 69	23%	25%	2%
	70 plus	2%	2%	0%
Race	Black	28%	29%	1%
	Hispanic	44%	45%	1%
	Other	7%	7%	0%
	White	21%	20%	-1%
Gender	Female	4%	4%	0%
	Male	96%	96%	0%
Custody Level	Custody Level I	12%	10%	-2%
	Custody Level II	48%	49%	1%
	Custody Level III	16%	16%	0%
	Custody Level IV	23%	25%	2%
MH Level of Care	CCCMS	22%	22%	0%
	EOP	5%	6%	1%
	GP	70%	68%	-2%
	Inpatient	1%	2%	1%
	Developmental Disability	1%	1%	0%

Given the variety of changes to the MH program during COVID-19, CDCR wanted to understand how these changes were impacting our patients. After analyzing the various changes patients experienced during COVID-19, CDCR compared behavioral outcome data before and during COVID-19. The method used (indirect standardization) is more precise than trend analysis, because allows us to control for more variables (e.g., population size and demographic changes).

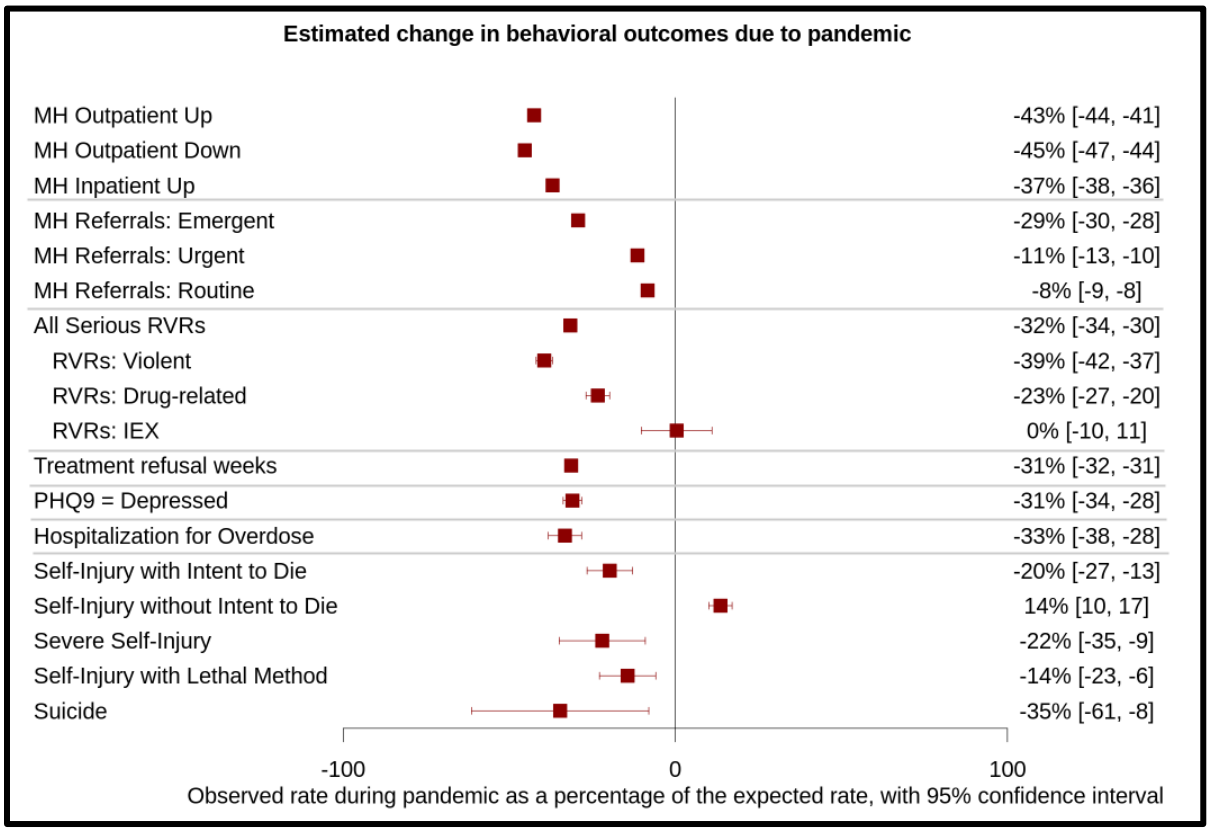
Similar to the "Changes in Treatment Continuity during Pandemic" graph, each behavioral outcome is plotted on a range (-100% to 100%). The red box (■) within that range indicate the difference between the expected rate (based on pre-COVID-19 data) and the observed rate (based on the data during COVID-19). The information to the right of each red box indicates the percent difference and the 95% Confidence Interval (CI) [60]. CDCR can assign a statistical probability to COVID-19 pandemic impact estimates in the form of 95% CI. These confidence intervals indicate the range of values between which CDCR can be 95% confident as to where the actual impact lies.[61] The CI range is visualized by the bars extending left and right of each

[60] Pan American Health Association. (2002). Standardization: a classic epidemiological method for the comparison of rates. Epidemiol Bull, 23(3), 9-12.

[61] Confidence Intervals (CI): A 95% confidence level indicates that, if you took 100 random samples from the population, the confidence intervals for approximately 95 of the samples would contain the mean response. CDCRs analysis uses a two-sided confidence interval to estimate both likely upper and lower values for the mean response.

red box). The 0% line indicates there were no differences between the two timeframes (e.g., RVR: IEX).

If a given outcome such as the rate of RVRs per capita differed between GPs and non-GPs, CDCR would expect that the change in the proportion of GPs would by itself lead to a change in the rate of RVRs. By calculating an expected RVR rate that adjusts for the change in the proportion of age groups and levels of care, and then comparing it to the RVR rate actually observed, CDCR can estimate how the COVID-19 pandemic impacted the RVR rate above and beyond the change in the proportion of GPs.



Behavioral Outcome Definitions	
MH Outpatient Up	Change from any lower outpatient level of care to any higher outpatient level of care
MH Outpatient Down	Change from any higher outpatient level of care to any lower outpatient level of care
MH Inpatient Up	Change from any outpatient level of care to any inpatient LOC, from MHCB to Acute/ICF, or from Acute to ICF
MH Referrals: Emergent	Percentage of Emergent MH Referrals resolved on time
MH Referrals: Urgent	Percentage of Urgent MH Referrals resolved on time
MH Referrals: Routine	Percentage of Routine MH Referrals resolved on time
All Serious RVRs	Combines RVR data for Violent, Drug-Related, and IEX behavior
RVRs: Violent	Assault, Attempted Murder, Murder, and Battery
RVRs: Drug-Related	Charges associated with various types of use, possession, and trafficking of drugs
RVRs: IEX	Specific charges associated with indecent exposure behavior
Treatment Refusal Weeks	Percentage of patient-weeks during which hours of treatment refused met or exceeded benchmarks (over 50% of all offered treatment was refused or no showed)
PHQ9 = Depressed	Average change in PHQ-9 scores per day in a given placement
Hospitalization for Overdose	Percentage hospitalizations due to overdose
Self-Injury without Intent to Die	Percentage of Self-Harm Forms indicating the patient did not intend to die as a result of the self-harm event
Self-Injury with Intent to Die	Percentage of Self-Harm Forms indicating the patient did intend to die as a result of the self-harm event
Severe Self-Injury	Percentage of Self-Harm Forms indicating the injuries required significant medical services
Self-Injury with Lethal Method	Percentage of Self-Harm Forms indicating the patient used a lethal method to inflict self-harm
Suicide	Percentage of Self-Harm Forms indicating the self-harm event resulted in death

Overall it appears that despite several changes CDCR made to programing and operations, after controlling for changes in population size, age, and MH LOC, most negative outcomes (e.g., Suicide, Self-Injury, RVRs) occurred less frequently than we expected. Each outcome is discussed in more detail below.

4. CDCR Findings

The demographic information about the population during the two observation periods provides some key insights. After adjusting for the overall decrease in incarcerated individuals during COVID-19, the demographic composition of the population did not markedly change. Only slight shifts were noted when comparing the two timeframes (pre-COVID-19 and COVID-19).

The proportion of 50 to 69 year-olds increased by 2%, the proportion of Black and Hispanic inmates increased by 1%, the proportion of Custody level II and IV inmates increased by 1% and

2%, respectively, and the proportion of EOPs and Inpatients both grew by 1%. Conversely, the proportion of under 30 year-olds fell by 2%, the proportion of inmates classified as White reduced by 1%, the proportion of Custody level I inmates decreased by 2%, and the GP population proportion fell 2%. Overall, however, the two groups (Pre-COVID-19 and COVID-19) appeared demographically similar from one period to the next.

A. Treatment Continuity and Access to Care During the COVID-19 Pandemic

The following information pertains to patient movement and different aspects associated with access to care, as well as continuity of care for patients at the mainline EOP LOC, compared across the two periods of time. These issues are grouped together because they represent factors associated with treatment and the stability of both the patient's living and treatment settings.

There was a 65% reduction in Prison arrivals (inmates' movement into the prison system either from county jails or from those being returned from parole). Similarly, there was a 51% total reduction in Program arrivals (movement within an institution). This is significant because it afforded an opportunity to evaluate various outcomes in a more stable population.

During this time, patient referrals higher levels of outpatient MH care (CCCMS and EOP) were 43% less than expected. Likewise, the referral and movement of patients from outpatient to inpatient MH care were 37% less than expected. Looking at the rate of movement to lower levels of outpatient care, a 45% fewer patients were referred than expected. While reduced referrals to higher levels of care may be a positive indicator of patients' MH (suggesting a reduced need for HLOC), that inference would need to explain a similar reduction found in reduced referrals to lower levels of care.

Timely access to MH appointments with Primary Clinicians and Psychiatrists decreased during COVID-19 (Timely MHPC patient-weeks -11% and Timely MHMD patient-weeks -3%). While this is concerning, as it suggests patients were being seen past the timeframes more often than they had been seen during the pre-COVID-19 period, it is not surprising considering the unusual circumstances created by COVID-19. This finding highlights a reduced ability to deliver some MH contacts on time. Additionally, an encouraging finding indicates continuity of MH care to the same population (mainline EOP) increased (Primary clinician continuity +12% and Psychiatrist continuity +46%).

Another concerning but not surprising finding was a 25% decrease in MH treatment hours offered to patients during COVID-19. During this time, several efforts to ensure staff and patient safety associated with slowing the COVID-19 pandemic spread within the institutions were implemented. Notably, CDCR halted all visiting, retained patients at their current institution regardless of changes in the MH LOC (except in emergency circumstances), and most out-of-cell activities were either halted or were severely restricted. While total hours of MH treatment being offered decreased, the total amount of treatment refused by patients was 31% less than expected.

B. Change in Behavioral Outcomes during COVID-19

CDCR reports changes in rates of MH outcomes during the COVID-19 pandemic as a percentage of the expected rate. Rates of MH outcomes are organized by category type: RVRs, MH Referrals, Depression, Hospitalization for Overdose, and Self-Injury and Suicide.

Rules Violation Reports (RVRs)

The rates of Serious RVRs were 32% less than expected CI [-34%, 30%]. The Serious RVRs analyzed fell into three sub-categories: Violent RVRs, Drug-Related RVRs, and Indecent Exposure (IEX). Violent RVRs include: Assault, Attempted Murder, Murder, and Battery. Drug-Related RVRs include 19 types of RVRs specific to drug-related charges associated with various types of use, possession, and trafficking. IEX RVRs are exclusive to the specific charges associated with IEX behavior. Two of the three RVR sub-categories showed lower than expected rates during the COVID-19 timeframe.

The largest difference was observed with Violent RVRs, which was 39% less than expected CI [-42%, -37%], while Drug-Related RVRs were 23% less than expected CI [-27%, -20%]. The only category of RVRs that essentially showed no difference between observed and expected was for IEXs (0% CI [-10%, +11%]). In general, this suggests a reduction in maladaptive behavior during COVID-19. However, the extent to which this is attributable to a shift towards pro-social behavior, positive decision-making, and other healthy or adaptive outcomes is unclear. The unexpected shift may be related to decreased means and opportunity during COVID-19, which may explain why IEX behavior remained essentially unchanged. Additionally, there may be a more complicated relationship between reduced patient movement, fewer RVRs, and the significant changes made to the delivery of MH services (e.g., expansion of telehealth and increased continuity of care). More analysis is needed to clarify the relationship, if any, between these variables.

Mental Health Referrals

Any inmate (including GP) can be referred for MH services at any time. All staff are encouraged to refer a patient if they have concerns about a patient's mental stability. A MH referral triggers an evaluation by a qualified MH clinician. The referrals fall within three categories: Emergent, Urgent, or Routine. The frequency of referrals during COVID-19 reduced significantly. Emergent MH Referrals were 29% less than expected CI [-30%, -28%], Urgent MH Referrals 11% less than expected CI [-13%, -10%], and Routine MH Referrals 8% less than expected CI [-9%, -8%].

Lower than expected MH referrals during COVID-19 appears to be consistent with other findings. Related research indicates MH visits decreased in many settings during COVID-19. While the cause is unclear, this finding is also consistent with related results found in the Sustainable Process audit and the Regional Review of LOC decisions analyzed during COVID-19. (Hoyer, C. et al., 2020, and Gonçalves-Pinho, M. et al., 2020). As discussed previously, daily rounding was initiated at several institutions during COVID-19 to ensure that patients had

continued access to providers and had their MH needs addressed. The increased frequency of patient contacts through daily rounding may have contributed to the reduced number of referrals, as symptoms could have been recognized and addressed earlier in the process.

Depression

The behavior outcome "PHQ9 = depressed" was measured by the Patient Health Questionnaire 9 (PHQ9). The PHQ9 is a multipurpose instrument for screening, diagnosing, monitoring, and measuring the severity of depression. The PHQ9 is used first as a baseline measure, typically at the start of MH treatment. Then the PHQ9 is periodically completed again by the patient and compared to the baseline measure, to measure treatment progress. During COVID-19, the frequency of PHQ9s completed by patients increased 7%, yet the number of patients assessed as "Depressed" by this instrument was 31% less than expected CI [-34%, -28%]. This finding is inconsistent with some research showing depression symptoms in the US increased 3-fold during COVID-19.[41] However, it is consistent with related research indicating resilience is more common than pathological outcomes during mass traumatic events. While this report can offer analysis showing self-reported symptoms of depression decreased during COVID-19, it cannot offer conclusive data to explain why it decreased.

Hospitalization for Overdose

Drug overdoses, as measured by hospitalization for overdose, were 33% less than expected CI [-38%, -28%] during COVID-19. Like other findings indicating a decrease in many negative outcomes during COVID-19, fewer hospitalizations for overdose may be related to decreased movement, reduced demand for MH services, cancelled in-person visitation (which had served as a primary entry point for illicit substances), and increased resilience during the COVID-19 pandemic. An additional variable to consider is the impact of the ISUDT program.

In the summer of 2019, CDCR and CCHCS implemented comprehensive enhancements to better treat substance use disorder (SUD) among the state's prison population. This program, which officially kicked off January 21, 2020, with the screening of eligible individuals, quickly exceeded first quarter goals. Accomplishments included providing quick-screen assessments to an established percentage of the population, increasing the number of participants receiving Medication Assisted Treatment (MAT), training counselors for revised Cognitive Behavioral Interventions (CBI) and bringing Methadone treatment in-house at certain qualifying institutions.

However, ISUDT was extremely impacted in early March due to the COVID-19 pandemic, as were all CDCR and CCHCS operations. Regardless, CDCR continued to roll out critical SUD treatment as safely as possible. Given the treatment population ISUDT aims to serve, additional research is needed to determine the relationship between this treatment program and reduced hospitalizations for overdose during COVID-19.

Suicide and Self-Injury

The frequency of suicide pre-COVID-19 versus COVID-19 was 35% less than expected CI [-61%, -8%]. The annual suicide rate in CDCR in 2020 was 27.3 deaths per 100,000 incarcerated individuals, based on 31 suicides. The 2020 rate was the first decrease after five straight years of increase. The rate reached 30.3 in 2019, the highest since 1985.

The category of self-injury encompasses four different types of self-injurious behavior, which include self-injury *with* intent to die, self-injury *without* intent to die, severe self-injury, and self-injury with lethal method.[62] Three self-injury categories had lower than expected rates during COVID-19 (Self-injury with intent to die -20% CI [-27%, -13%], Severe self-injury -22% CI [-35%, -9%], and Self-injury with a lethal method which -14% CI [-23%, -6%]). Of concern, the final category of self-injurious behavior without intent to die was 14% higher than expected CI [+10%, +17%] during COVID-19.

While a reduction of suicide and self-injurious behavior is a positive sign, the reason for the decline is not fully understood. Most of these findings echo other research and findings that suggest a reduced need for services during COVID-19. However, the increase in self-injurious behavior *without* intent to die raises questions. Is this increase measuring the patients that did not intend to die, but used self-injury to affect a change in physical environment? While reduced movement may be ideal for treatment, for some patients, being isolated or in an environment they dislike is a negative, and they could use self-injurious behaviors to try and get out of the environment. Alternatively, this increase could be highlighting another variable. Some patients are known to use self-injury (*without* intent to die) as a maladaptive tactic to control and provide relief from profound emotional distress. There is likely a complex correlation between decreased movement, types of self-injury, and suicide. A more specific analysis is needed to help CDCR understand why the most serious forms of self-injury and suicide decreased during COVID-19, while self-injury *without* intent to die increased.

5. Lessons Learned from Decreased Movement and Maintaining Continuity of Care

Decreases in patient movements of all types were noted during the COVID-19 pandemic. This resulted in a vastly more stable population, as individuals were not constantly being introduced to, or moved within, the system. In other words, individuals did not have to personally adjust to changes in their environments, and environments did not have to adjust to movements of individuals. The impact on the prison culture appears to have been significant.

Continuity of care increased for a small subset of the total prison population. However, there was a decrease in the actual amount of treatment hours offered and the timeliness with which providers saw their patients. At the same time, the subjective level of distress observed within the populations as reflected by patients being referred for MH emergencies, referrals to higher

[62] These categories are not mutually exclusive, since some acts of self-harm may include multiple categories. Accordingly, this is a known limitation of the current analysis, whereby substantial overlap may have skewed the results. Based on these findings, subsequent analysis should examine the extent of overlap for each variable.

levels of care, and measured levels of depression, observed occurrences of self-harm with intent to die, and suicide was less than expected.

As individuals and their environments remained stable, a co-occurring decrease in expected negative outcomes associated with crime, depression, drugs, self-harm, and suicide was also observed. The connection between a stable environment with consistent healthcare staff and positive outcomes seems logical. The outcome data from this report shows a number of promising findings to support that logic, but cannot conclusively prove a connection between reduced movement, continuity of care, and positive outcomes.

In short, a more stable population marked by less movement occurred during the same time that the population was less distressed in terms of both emotion and behavior. Perhaps the most promising indicator of this was that suicide was 35% less than expected.

Multiple factors may be relevant including that because of decreased visitation, there were likely decreased amounts of illicit drugs circulating in the prison. Perhaps there was also decreased opportunity for patients to exchange drugs with each other in the yard, and decreased opportunities for fighting because of less movement and reduced time outside of their cells. It is also possible that existential life-threats focused patients' attention on staying alive (rather than on their MH symptoms) given the literature about psychological changes following a mass traumatic event. No doubt there are multiple other possible factors, but it is also true that decreased movement created opportunities for beneficial continuity of care and the COVID-19 pandemic created opportunities to utilize telepsychiatry more efficiently.

V. NEXT STEPS

1. Telehealth

CDCR's recommendation to continue telework as appropriate is broadly supported by ongoing efforts to analyze the data collected during the COVID-19 pandemic, to define and examine patient outcome measures, to survey patient and staff satisfaction, and to measure potential limitations of the telehealth delivery of care. Fundamental changes in the identification of telepsychiatrists versus onsite psychiatrists are being built into the EHRS to help analyze outcome measures. Various data measures captured during the COVID-19 pandemic are currently in the lengthy process of being mapped and validated so they can be easily accessed and studied.

The overall success of the expansion of telehealth services to psychologists and social workers naturally leads CDCR and many other health care organizations to think about ways to expand telemental health services as appropriate and in areas that are needed. Perhaps a small telemental health response team can be coalesced for deployment to hot spots with critically low staffing. A response team can help avoid potential burn out of the remaining institutional staff by helping onsite recruitment and overall efficacy of patient care. Telemental health can expand to areas where CDCR does not currently provide these services, such as Fire Camps, which will allow stable MH patients the opportunity to participate in skill-building programs instead of being excluded as they currently are. Specialized treatments like Dialectical Behavioral Therapy and PTSD treatment have the potential to expand via telemental health services much like the Integrated Substance Use Disorder Treatment program.

The COVID-19 pandemic offered the opportunity to introduce video visits to inmates and their families and the development of anger management modules for a tablet pilot program. Beyond the COVID-19 pandemic, persistent staffing and space challenges may benefit from technological innovations to increase inmates' family involvement and inmate patients' access to MH care services such as inter-institutional groups and in-cell MH appointments for patients with limited mobility. Other innovative solutions such as tablet devices that enable direct messaging from patients to their doctors, completion of self-assessments and scales, and complementary services like learning materials, skill-building courses, and relaxation techniques may be beneficial additions to overall MH treatment.

Moving forward, CDCR, along with other health care systems, will have emergency plan for another pandemic, plan for what happens if the pandemic becomes controlled as well as what happens if it becomes episodic, resulting in a series of sporadic and regional quarantines. Health care systems are working on capturing data now to understand current lessons learned to be prepared for similar future situations. Telehealth services should not replace traditional in-person treatment. However, telehealth can provide quality access to care in locations that are typically difficult to staff. Continuity of care can be maintained as resources are less strained, and patients can access programming in areas that they would typically be unable to

participate in because of the lack of services at those locations. Therefore, the following are recommendations for CDCR's future use of telehealth:

- CDCR should allow telework from home for telepsychiatrists indefinitely.
- CDCR should develop an operating procedure for telehealth services provided by psychologists and social workers, which incorporates materials developed for implementation during the COVID-19 crisis.
- CDCR should assess other potential areas that could benefit from telehealth services (i.e., Fire Camps where trauma services and brief interventions are not currently offered, understaffed or inconsistently staffed institutions, and any future institutions suffering from an outbreak or other crisis).
- CDCR should consider tablets with built in skill building courses and relaxation programs that can augment the provision of one-on-one care by telehealth and onsite providers.
- Further outcome measures to gauge the efficacy of telehealth services could be beneficial to improving and providing quality care.

2. Continuity of Care Within Mental Health Services

While the current findings offer some promising insights, it also generates more questions for research. Benefitting from the current analysis, CDCR is now positioned to ask better questions. For example, this analysis was not designed to measure causative factors that could explain why MH outcomes did not seem to worsen. Some hypotheses may include possible decreased drug availability and drug use changes, decreased violence, decreased gang activity and patients less exposed to threat, patients maintaining in a stable peer group, and/or frequency of visits with the same psychiatrist, psychologist, custodial officer, nurse, and many others. Over time, relevant issues need to be researched, such as changes in drug use or availability, violence, or continuity of care in the prison setting. Many of these are difficult to measure, but may be relevant.

Moving forward, it will be important to compare data on relevant factors as movement opens and restrictions associated with COVID-19 ease. With the Roadmap to Reopening, CDCR will gradually return to pre-COVID-19 pandemic operations. Carefully monitoring this transition and replicating CDCR's analysis with a post-COVID-19 timeframe will offer important insights. Additionally, there is enough evidence to begin discussing ways to maintain stable environments within CDCR's systems. These discussions must reflect CDCR's emerging understanding of how movement within the system may be an inherently destabilizing force. To that end, it will be important to identify ways to facilitate therapeutic and rehabilitative efforts, while simultaneously maintaining the stability of the environments within which they occur. This is critical, not just for the individuals within those environments, but also for the environments themselves.

There are several possibile options to facilitate therapeutic and rehabilitative efforts, while maintaining the stability of patient environment. One would be to house EOP patients who

have demonstrated a pattern of positive programming behavior together. Another would be reducing the movement associated with changes in outpatient LOC (for example, when they are transferred to CCCMS). This should result in better outcomes for those patients. This may result in more facilities offering more LOCs, so that EOP patients could transition back and forth without total disruption of the non-MH aspects of their lives. Keeping EOP patients on the same yard as much as possible can provide stability for job assignments, peer groups, etc., but would require a potential increase in the number of EOP programs to accommodate the various housing requirements. A benefit of this would be to have transitional groups which carry the patient through a LOC change, creating continuity on both sides of the treatment programs. Since the goal is to improve overall individual stability and rehabilitation, it is incumbent upon CDCR to consider new ways such as these to achieve these goals.

3. Effecting Change

As with most large organizations, over the years CDCR has incorporated a series of assumptions into the best practices and improvement goals that they try to achieve. These assumptions are even more difficult to challenge or re-evaluate due to the involvement in the court system, where any change must be submitted through an extensive review process and multiple parties must come to a compromise. This often leads to existing beliefs becoming even more firmly cemented, as the standard for change is higher than the standard for setting the conjectures in the first instance. CDCR and the court system as a whole have assumed that all of the treatment choices made in the last few decades are responsible for any positive outcomes in the patient population. When CDCR was forced to make drastic changes to many operations and policies due to COVID-19, the expectation following that assumption would be that patient outcomes would drop precipitously; that did not occur. There are many specific changes to consider such as prioritizing continuity of care over other transfers to different facilities, a wider acceptance and use of telehealth services, and a more flexible approach to policy changes in general. This may require a fundamental re-think in the organization's approach, but the benefits to the patient population could be comparably immense.

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