

# COVID-19 Action Newsletter

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## The Situation: U.S. Confirmed Cases Exceed Two Million and Post-Memorial Day Resurgence Is Hitting Now

In the world as of June 12, 2020, 7,547,702 cases of Covid-19 and 422,062 deaths have been confirmed. In the United States, there have been 2,094,207 cases, the most in the world followed in order by Brazil, Russia, India, the United Kingdom, Spain, Italy, Peru, France, Germany, Iran, Turkey, Chile, Mexico, Pakistan, Saudi Arabia, Canada and China.<sup>1</sup> Deaths in the U.S. through June 12 have been estimated at 116,132.<sup>2</sup>

From March 10 through June 11, there have been 13,257 confirmed cases of Covid-19 reported from Dallas County with 277 confirmed deaths, over one-third of these from long-term care facilities.<sup>3</sup> Of hospitalized cases in Dallas County, more than two-thirds have been under 65 years of age, and about half have not had any high risk chronic health conditions. Diabetes mellitus has been seen in about one-third of all hospitalized patients. More men than women have died. The age-adjusted rates of confirmed Covid-19 cases in non-hospitalized patients have been highest among Hispanics (667.4 per 100,000), Asians (187.4 per 100,000) and Blacks (136.4 per 100,000). These rates have been higher than Whites (43.8 per 100,000). Over 60% of overall Covid-19 cases to date have been Hispanic.<sup>3</sup>

Late last week, June 4 or 5, several of the hospitals across Dallas County began seeing increasing numbers of admissions of very ill patients testing positive for Covid-19. The increase began about 4 days after the Memorial Day holiday weekend when, following several weeks of loosening precautions, large numbers of people gathered in celebrations without masking or distancing. The increased rate of admissions has continued for a week but does not yet appear to have increased the ICU census appreciably, although we may be near seeing the first of these new patients starting to decline toward ICU transfer. Reports from several hospitals suggest that the resurgence is heavily concentrated in Hispanic areas, but whether it will develop into a full-scale wave or fizzle remains to be seen. Similar increasing trends are being reported from other large cities in Texas and several other states. Everyone should assume that this is a time of heightened danger in our community and take precautions accordingly.

### References:

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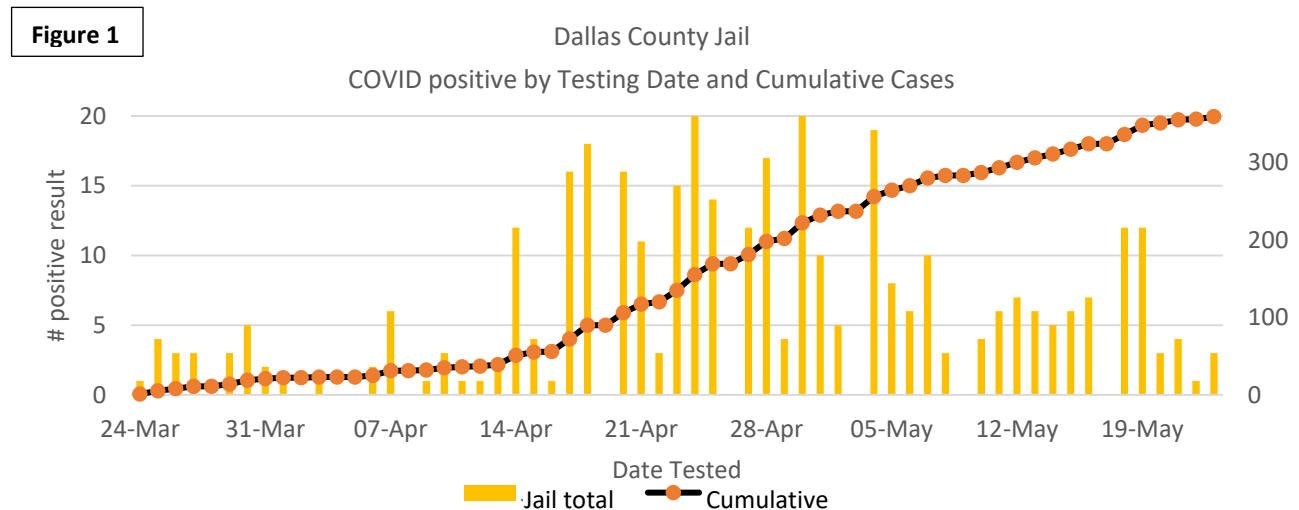
## Feature Article

# Covid-19 in Jails and Prisons

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### The Dallas County Jail Experience

Healthcare at the Dallas County Jail (DCJ) is provided by Parkland Health and Hospital Systems. Beginning in February, medical staff at the DCJ began screening all incoming detainees for history of travel, contact with known Covid-positive individuals and symptoms of disease. Protocols were developed at DCJ for an expedited intake process for anyone with affirmative answers to these questions, who were then housed in isolation for monitoring and Covid-19 testing if indicated. The first case of Covid-19 at DCJ was identified on March 25, in a hospitalized patient. Contact tracing, screening and quarantining of this patient's original jail housing unit identified 20 more symptomatic Covid-19 cases over the next week. Subsequently, additional cases were identified in housing units within the same tower, including among officers, with a gradual increase in the number of housing units affected. By mid-April, cases started to increase more dramatically (**Figure 1**), at which point all three towers of the jail had active cases, with 15-20 new cases identified each day.



### Jail Epidemiology: Clinical Cases

As of June 4, 2020, 433 cases of Covid-19 have been diagnosed at DCJ, including 42 cases diagnosed within the preceding 7 days, 67 convalescent patients (within 7-21 days of diagnosis), 257 recovered Covid-19 patients (diagnosed >21 days prior), and 67 released patients. Overall, 17 patients have required hospitalization, including 2 for non-Covid-related causes. None of these patients have needed intensive care or required intubation. The reason for this relatively low rate of complications (compared to other similarly-sized jail systems such as in New York City and Chicago) is unknown. It may be related to the relatively steady number of cases (rather than large surges seen in other systems) and routine monitoring of patients. Multiple patients who were subsequently hospitalized with Covid-19 pneumonitis were found to be hypoxic (oxygen saturation of <92% on room air) prior to developing shortness of breath. Beginning in May, Covid-19 testing at DCJ was expanded to include asymptomatic patients, focused on groups who were beginning quarantine after an exposure in their housing unit, and very high proportions (50-75%) have tested positive.

### Innovations and Adaptability

Managing Covid-19 in a jail with a constantly changing population and rapidly evolving epidemic has required frequent revisions to protocol and flexibility. Monitoring patients under quarantine or in isolation—up to 900 people at a time, some twice daily—has been a huge undertaking for jail health staff and the Sheriff's department. Successful innovations have included preserving PPE by obtaining vital signs through the "feeder

port” (rectangular opening in cell doors) and maximizing available isolation cells by cohorting clinically stable positive Covid-19 patients together in “convalescent” housing. As the Covid-19 pandemic continues to evolve, the ongoing partnerships with Dallas County Health and Human Services, Parkland Health and Hospital System, and the Sheriff’s department are critical to controlling the virus.

**The National Picture**

The United States has the highest incarceration rate in the world and currently around 2.1 million people are housed in U.S. jails and prisons.<sup>1</sup> Jails and prisons are congregate settings in which people live in close, crowded spaces and therefore can amplify contagious infectious diseases. Many facilities, jails in particular, have frequent new admissions and releases, with large groups of people moving in and out on a daily basis, including large numbers of custody staff. In a Marion County, Ohio prison, 1,828 cases of Covid-19 were identified among prisoners (75% of population), as well as 109 Covid-19-positive staff members. In May 2020, the U.S. Centers for Disease Control and Prevention reported that of 420 correctional facilities, 86% reported cases of Covid-19, including 4,893 incarcerated persons and 2,778 staff members, resulting in 88 and 15 deaths, respectively.<sup>2</sup> More recent and widespread national data suggest that >34,000 prisoners have been infected with Covid-19, though this varies widely by state and by the local approach to testing in correctional facilities.<sup>3</sup>

**Medical Risk among Prisoners**

Overall, incarcerated individuals are less healthy than the general population. They have high rates of chronic disease, including asthma, high blood pressure and diabetes and are disproportionately affected by infections such as HIV, hepatitis C and tuberculosis. In addition, the prevalence of substance use is as high as 85%<sup>4</sup> and over 25% have been diagnosed with a mental illness.<sup>5</sup> Furthermore, the incarcerated population continues to age, and the number of prisoners over 55 (the “geriatric age” threshold for incarcerated people based on health risk and disability) has tripled in recent years.<sup>6</sup> These factors make this group of individuals especially vulnerable to complications of Covid-19. To compound this issue, there are high rates of medical mistrust and limited re-entry services at the time of release result in poor continuity of medical care.

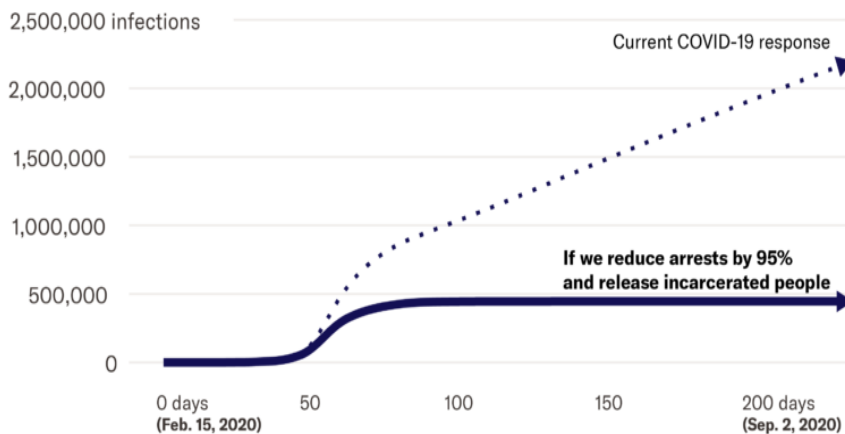
**Approach to Mitigating Covid-19 in Jails and Prisons**

Social distancing is nearly impossible in jails and prisons. Few facilities have the capacity to house detainees separately and many rely on dorm-style settings, in which dozens of people share bunk beds, lavatories and communal space for eating, phone calls and recreation. If facilities have adequate space, a 14-day single cell quarantine upon entry is recommended followed by housing which allows for adequate distancing.<sup>7</sup> Soap is typically provided though alcohol-based sanitizing solutions are considered contraband in most facilities. Universal masking of detainees and staff is recommended, though may be limited by supply.

Another key component to Covid-19 prevention is decarceration, i.e. reducing the

**COVID-19 INFECTIONS IN JAILS UNDER CURRENT RESPONSE**

Jails could see more infections, hospitalizations, and deaths under the current response. These higher infection rates could spill over into the broader community.



**Note:** Estimates of infections are cumulative, and jail staff are included in count. “Current response” refers to the shelter in place orders in effect as of April 13, 2020. We recommend stopping 95% of arrests – all but the most serious crimes – and doubling the rate of release for those currently detained.

**Figure 2**

incarcerated population. Some jails and prisons (e.g. New York, California) have dramatically decreased their populations by 50% or more by releasing large groups; whereas, others, including Texas, have had smaller declines. Many police departments have temporarily changed policies around arrests for low level offenses, resulting in fewer people being booked into jails. However, recent civil unrest and protests have led to a reversal of this trend. The American Civil Liberties Union (ACLU) and others have argued that without de-carceration (particularly for people at high risk who cannot afford bail or who have low level charges), Covid-19 will continue to increase in jails and prisons, impacting the community at large (**Figure 2**).<sup>8</sup> Many physicians and researchers in correctional health have advocated for criminal justice reform in the setting of Covid-19.<sup>9-12</sup>

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## Epi Corner

### **Automated Contact Tracing by QR Code on Your Smartphone**

As everyone is starting to realize that we are going to be contending with Covid-19 for some time, we need to start scaling up measures to thwart transmission of the virus. Along with universal masking, social distancing and testing of symptomatic or high risk people, identifying and tracing the contacts who have been exposed to infected people is a time-honored method used by public health authorities to suppress, and even eradicate, epidemics of such threats as smallpox, tuberculosis, meningococcal meningitis and pertussis. For a highly contagious and widespread disease like Covid-19 transmitted by people who are pre-symptomatic or asymptomatic, identifying all the potentially exposed contacts from interviewing patients in the early stage of a Covid-19 illness obviously misses many contacts the patients may not be aware of. A potential solution to this dilemma has emerged in the form of a free, open-source smartphone app called *TrackCOVID* that uses tracking by QR code scanning.

A QR (Quick Response) code is the familiar two-dimensional adaptation of the one-dimensional barcode, also called a matrix barcode (**see picture**). The idea was invented for the Japanese automobile industry in the early 1990s by an engineer who realized that many times more information can be stored in a two-dimensional image that can be read both horizontally and vertically by a visual scanner.



The *TrackCOVID* app, designed by a biomedical engineer in the UC Irvine MD/PhD joint medical scientist training program and soon-to-be neurosurgery resident at UC San Diego, allows a person to scan a QR code logging their presence with their smartphone. When other people visit the location near the same time and scan the same QR code, their interactions are anonymously linked. For example, if you were having a party, the first person to show up would register and receive a unique QR code, and as others arrive, they scan the same QR code. Alternatively, a business could post its QR code at the door for people to scan as they enter. Later a person who tests positive for Covid-19 would enter this into *TrackCOVID*, and it would anonymously inform all others who scanned the same QR code during the period of potential infectiousness along with instructions for how to self-quarantine and monitor for symptoms.

Of course, the usefulness of this application for contact tracing on a wide scale, like universal masking and distancing, depends on a high level of adoption by the public. This might seem unlikely until you project a few months into the future when the economy remains dangerously depressed and people become desperate for solutions that would save us from a repeat of the Great Depression. Think about it.

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## **From the Editors**

The editors thank Dr. Nijhawan for her insightful article on Covid-19 in jails and prisons.

The aim of this weekly newsletter is to serve as a source of information for the UT Southwestern community which can lead to better understanding and control of a new disease (Covid-19) caused by the pandemic spread of an emerging viral pathogen (SARS-CoV-2). We welcome questions, comments, and suggestions for topics and authors.