Evaluation of the April-May 2020 COVID-19 Outbreak at California Men's Colony

Report | July 20, 2020

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AMEND CHANGING CORRECTIONAL CULTURE
Berkeley Public Health

Note on Report

In summer 2020, a multidisciplinary team of academics and health professionals conducted an on-site evaluation of the April-May 2020 Novel Coronavirus (COVID-19) outbreak at California Men's Colony (CMC), located in San Luis Obispo (SLO) County, California. A part of Amend's Covid in California Prisons Program, the multidisciplinary team from the University of California, Berkeley has expertise in clinical medicine, public health, epidemiology, health economics, infectious disease, and health systems.

This document describes the on-site evaluation and provides recommendations for the Federal Receiver, CMC, and the California Department of Corrections and Rehabilitation (CDCR) on necessary next steps to address pressing concerns related to COVID-19 and the long-term health of incarcerated people and staff.

This report is based on the most updated research as of July 20, 2020 to reflect our rapidly evolving understanding of the novel SARS-CoV-2 virus and disease (COVID-19). Continued engagement with the public health and medical community regarding how best to implement these recommendations is critical.

Source: Amend's Covid in California Prisons Program. https://amend.us/amends-covid-in-california-prisons-program/

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Purpose of this Assessment

Our goal is to describe and recommend policies that protect and promote physical and mental health among people who are currently incarcerated, including the prevention and control of COVID-19.

We achieve this through the following guiding questions:

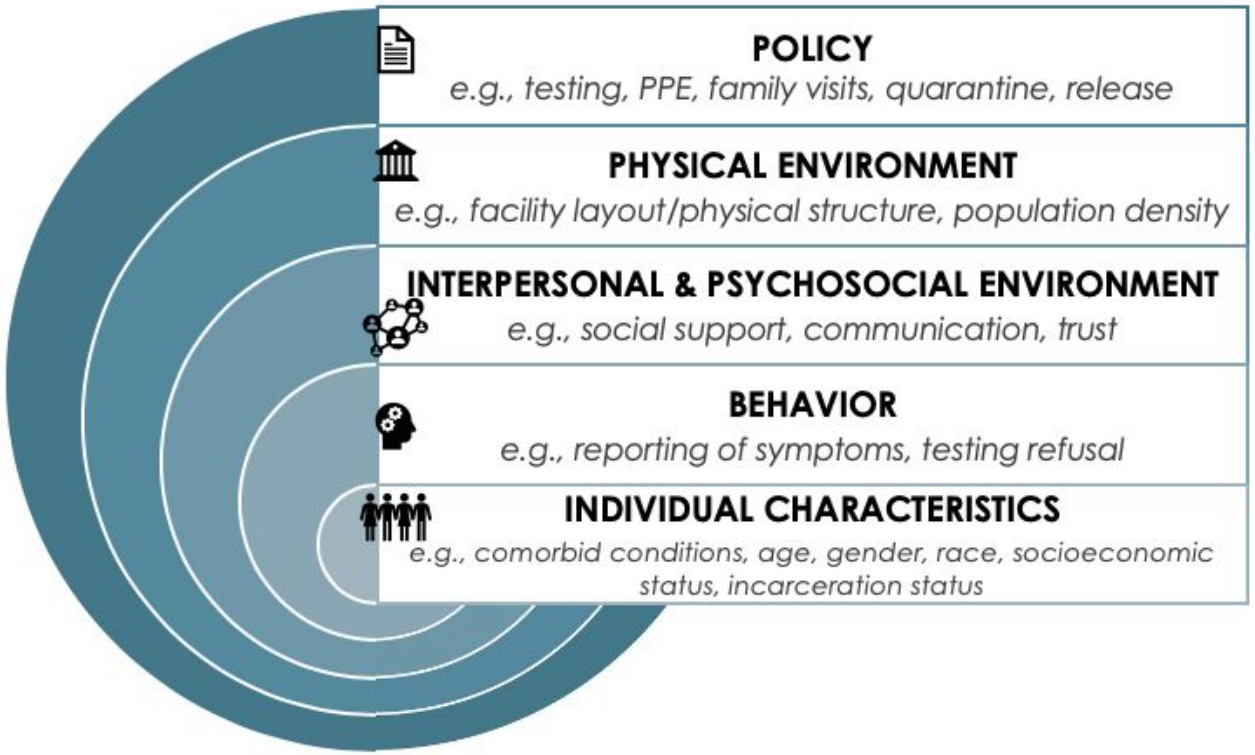
1. How was the April-May 2020 COVID-19 outbreak at California Men's Colony (CMC) contained?

- What factors contributed to containment of the April-May outbreak?
    - To what extent were these factors a function of **planning**, **responsiveness**, or **luck**?
- What factors might contribute to successful mitigation of future outbreaks?
- In which areas do vulnerabilities to future COVID-19 outbreaks remain at CMC?

2. What lessons might be transferable to other settings and how are these lessons translated to policy?

Background: Guiding Health Framework

A guiding framework serves to inform both the health scientists conducting the analysis, as well as readers of the findings, about the overall approach and underlying assumptions guiding the assessment.



Adapted from: Dahlgren, G. and Whitehead, M. (1991). Policies and Strategies to Promote Social Equity in Health. Stockholm, Sweden: Institute for Futures Studies.

Approach: We use an adapted social determinants of health framework to examine the complexity of COVID-19 determinants and risk factors operating at multiple levels in prisons and jails. This helps us to understand how individual characteristics, for example, biological risk factors (e.g., comorbid conditions, age) or social factors (e.g., discrimination on the basis of gender, race, incarceration status) place particular populations at increased risk for COVID-19. Further, it illustrates how that individual-level risk itself is influenced by each of the outer layers in which it is nested (e.g., physical environment, policy). We use this framework to evaluate the outbreak response and inform ongoing prevention and control.

NOTE: This framework has been adapted for application within prisons. It is critical to note that it does not include structural determinants (e.g., legal policy) that shape likelihood of incarceration. That certain populations are disproportionately affected by incarceration, and that prisons and jails are particularly vulnerable to COVID-19 will have implications for statewide inequity in COVID-19-related harm.

Background: Incarceration and Health

People incarcerated in US jails and prisons already experience a higher disease burden than the general population.

Incarcerated persons are at increased risk for:

- **Mental health conditions** (e.g., depression, trauma)
- **Substance Use disorders**
- **Self-harm** (e.g., suicide)
- **Chronic conditions** (e.g., hypertension, diabetes, heart disease, asthma, cancer, arthritis)
- **Infectious Disease** (e.g., HIV, hepatitis C, tuberculosis, chlamydia, gonorrhea, syphilis)

Sources:
Massoglia, M., & Remster, B. (2019). Linkages between incarceration and health. *Public Health Reports*, *134*(1_suppl), 8S-14S.
Incarceration and health: A family medicine perspective. American Academy of Family Physicians. (April 2017)[Accessible at: https://www.aafp.org/about/policies/all/incarcerationandhealth.html#statistics]

Condition	Population in State/Federal Prisons	Population in Jails	US Population
Hypertension	30.2	26.3	18.1
Heart-Related Problems	9.8	10.4	2.9
Diabetes	9.0	7.2	6.5
Asthma	14.9	20.1	10.2
Stroke	1.8	2.3	0.7
Any Chronic Condition	43.9	44.7	31.0

Values are %. On the basis of data from the National Inmate Survey 2011 to 2013 (NIS-3), a survey of randomly selected people incarcerated in state prisons (N=3,833) and jails (N=5,494). General population estimates are from a community-based survey, the National Survey on Drug Use and Health, 2009 to 2012.

Source: Wang, E. A., Redmond, N., Himmelfarb, C. R. D., Pettit, B., Stern, M., Chen, J., ... & Roux, A. V. D. (2017). Cardiovascular disease in incarcerated populations. *Journal of the American College of Cardiology*, *69*(24), 2967-2976.

Existing health conditions must be centered when making public health recommendations to address COVID-19 in prisons and jails given that:

- Comorbid conditions increase risk for severe COVID-19-related illness and death
- Some COVID-19 mitigation efforts within prisons and jails may increase risk for adverse short- and long-term physical and mental health outcomes

Background: Incarceration and COVID-19 in US

Prisons and jails are highly vulnerable to infectious disease outbreaks, placing incarcerated people at higher risk of acquiring COVID-19 as well as severe illness and death compared to the general population in the US.

CASES CONNECTED TO	▼CASES
Marion Correctional Institution — Marion, Ohio	2,440
San Quentin State Prison — San Quentin, Calif.	2,319
Pickaway Correctional Institution — Scioto Township, Ohio	1,794
Harris County jail — Houston, Texas	1,723
Trousdale Turner Correctional Center — Hartsville, Tenn.	1,382
North County jail — Castaic, Calif.	1,368
Ouachita River Unit prison — Malvern, Ark.	1,276
Cummins Unit prison — Grady, Ark.	1,131
California Institution for Men — Chino, Calif.	1,120
Chuckawalla Valley State Prison — Blythe, Calif.	1,116
Cook County jail — Chicago, Ill.	1,093
Avenal State Prison — Avenal, Calif.	1,056

Figure 2: Of the 12 COVID-19 clusters in the US exceeding 1000 cases, all are in prisons and jails

Source: New York Times COVID-19 Dashboard [Accessible at: https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html#clusters]

Between March 31-June 6, 2020:

The COVID-19 case rate for people incarcerated in the US was 5.5 times higher than the US general population

Age and sex adjusted rate of death for people incarcerated in the US was 3.0 times higher than in the US general population

NOTE: These estimates are based on known COVID-19 cases to-date among people in prisons and the general population. Comparisons should be interpreted with caution as COVID-19 case rates depend upon testing coverage and frequency - characteristics that may vary within and across carceral institutions and states.

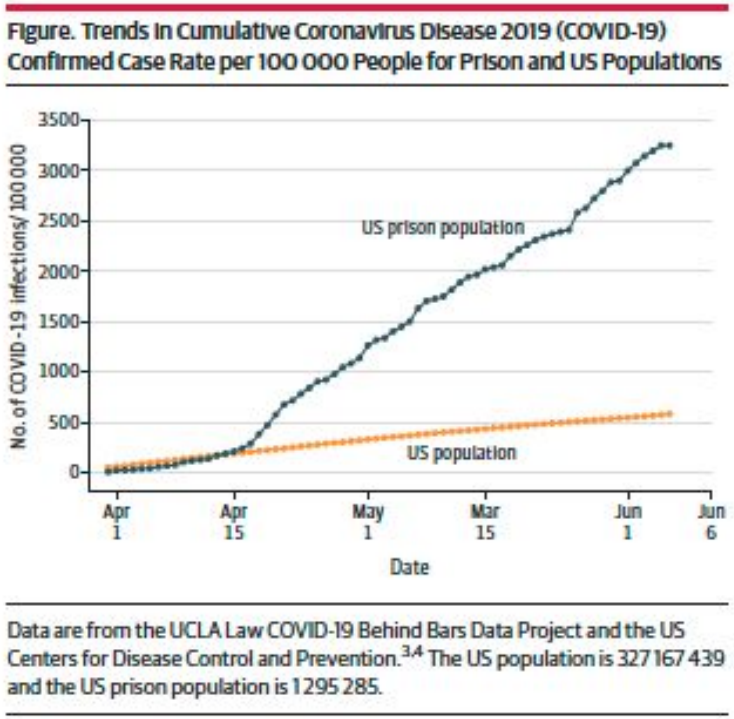


Figure 3: COVID-19 risk was initially lower in prisons but surpassed the US population on April 14, 2020. The mean daily case growth was 8.3% per day in prisons and 3.4% per day in the US population.

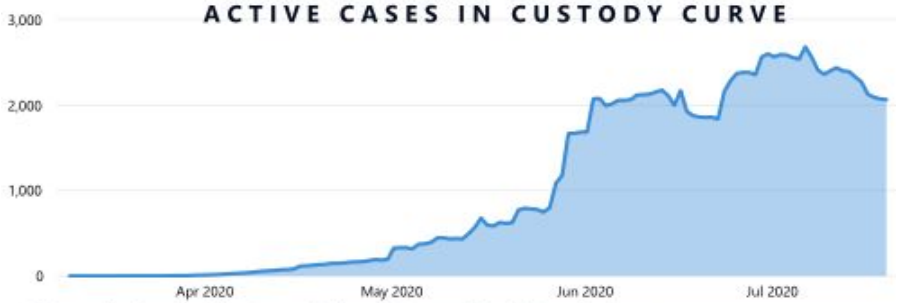
Source: Saloner, B., Parish, K., Ward, J. A., DiLaura, G., & Dolovich, S. COVID-19 Cases and Deaths in Federal and State Prisons. *JAMA*.

Background: Incarceration and COVID-19 in CA

Prisons and jails are highly vulnerable to infectious disease outbreaks, placing incarcerated people at higher risk of acquiring COVID-19 as well as severe illness and death compared to the general population in California.

CONFIRMED CASES: Cumulative Count

NEW IN LAST 14 DAYS	ACTIVE		RESOLVED	DEATHS
	CUSTODY	RELEASED		
1,322	2,058	185	4,683	39



*Patients who released while active, resolved, or died are not included in graph above.
Active case count by date may be delayed 2-3 days while awaiting test results.

On July 20, 2020:

The COVID-19 case rate for people incarcerated in CDCR was 13.6 times higher than the California general population.

The COVID-19 case rate for people incarcerated in CDCR was 9.1 times higher than the US general population.

CONFIRMED CASES : Rate Comparison

Cumulative Per 1,000 People

CDCR	California	United States
63.7	4.7	7.0

NOTE: These estimates are based on known COVID-19 cases to-date among people in prisons and the general population. Comparisons should be interpreted with caution as COVID-19 case rates depend upon testing coverage and frequency - characteristics that may vary across and within carceral institutions and states.

CONFIRMED CASES - COMPARISON Per 1,000 People

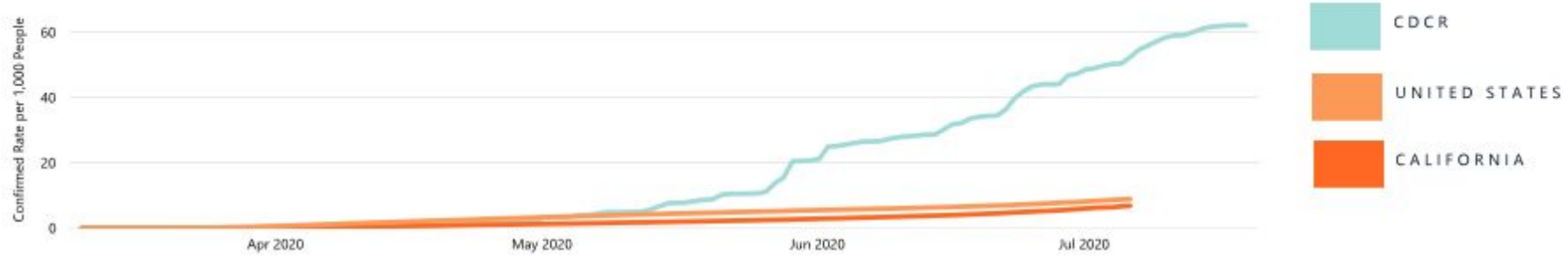


Figure 4: COVID-19 cases per 1,000 people incarcerated in CDCR far exceeds cases per 1,000 in the general California population as well as across the US

Source: California Department of Corrections and Rehabilitation Dashboard [Accessible at: https://www.cdcr.ca.gov/covid19/population-status-tracking/]

Background: Incarceration and COVID-19 Why is it so much worse?

What are specific issues in prisons and jails that place incarcerated people at increased risk of COVID-19 related harm?

- High prevalence of comorbid conditions
- Confined, densely populated conditions for prolonged periods of time
- Movement of custody/staff within and to/from prison, which can accelerate transmission
- Transfers of incarcerated people between and within facilities, which can introduce and transmit COVID-19
- Facilities themselves are not designed for health promotion, including but not limited to lacking in healthful spaces for quarantine & medical isolation
- People in prisons already deprived of liberty, exacerbating challenges associated with imposition of further restrictive measures and loss of privileges

Source: Preparedness, prevention, and control of COVID-19 in prisons and other places of detention: Interim guidance. World Health Organization. Regional Office for Europe. (March 15 2020)[Accessible at: https://www.euro.who.int/__data/assets/pdf_file/0019/434026/Preparedness-prevention-and-control-of-COVID-19-in-prisons.pdf?ua=1s]

Glossary: Key Terms & Critical Knowledge Gaps

The following key terms related to COVID-19 prevention and control are defined in subsequent slides. These terms are important for understanding identified assets and vulnerabilities at CMC to address urgent COVID-19 related mitigation and for informing future recommendations. Areas where there are critical knowledge gaps in the scientific literature are highlighted and discussed.

Active Case	Modes of Transmission	Social Distancing
Recovered Case	Tests	Quarantine
Contact	Contact Tracing	Medical Isolation

Key Terms: Case Classification

Term	Definition	Critical Knowledge Gaps as of July 20, 2020
Active Case		SARS-CoV-2 transmission from pre-symptomatic and asymptomatic cases makes clear the importance of implementing measures that prevent spread by people who may be infectious and not be aware of their infection without testing ("silent spreaders"). Critical knowledge gaps include: • The relative proportions of pre-symptomatic, asymptomatic, and symptomatic SARS-CoV-2 among new infections • The relative infectiousness of symptomatic, pre-symptomatic, and asymptomatic persons (likelihood that they will infect others) • Relative efficacy of public health interventions that prevent pre/asymptomatic transmission (e.g., if pandemic is driven by undetected asymptomatic SARS-CoV-2 infections, new techniques in disease detection/prevention – i.e., beyond contact tracing, mass testing, and isolation of asymptomatic contacts – may be needed)
Symptomatic case	SARS-CoV-2 detected with symptom onset	
Pre-symptomatic case	SARS-CoV-2 detected before symptom onset	
Asymptomatic case	SARS-CoV-2 detected but symptoms never develop	

Resolved Case	SARS-CoV-2 infection resolved as assessed through either a *test-based strategy* (e.g., serial negatives) or *symptom-based strategy* (e.g., 10 days since symptoms first appeared & 24+ hours have passed *since last* fever without the use of fever-reducing medications & symptoms have improved)	• Test-based strategy is contingent on the availability of ample testing supplies and laboratory capacity as well as convenient access to testing
		• Determination of the resolution of clinical COVID-19 disease via the symptom-based strategy does not provide information on the duration of infectiousness, which could theoretically extend past the symptomatic period.
		• Knowledge of SARS-CoV-2 immunity among previously infected persons is needed:
		  ○ How long does protective immunity last?
		  ○ Does asymptomatic or mild SARS-CoV-2 infection confer full or partial immunity?
		  ○ Is it possible to be immune from reinfection but still asymptomatically transmit SARS-CoV-2 while in a carrier state (i.e., resolved and infectious)?

Sources:
Furukawa NW, Brooks JT, Sobel J. Evidence supporting transmission of severe acute respiratory syndrome coronavirus 2 while presymptomatic or asymptomatic. Emerg Infect Dis. 2020 Jul 16. https://doi.org/10.3201/eid2607.201595.
Discontinuation of Isolation for Persons with COVID-19 Not in Healthcare Settings. Centers for Disease Control and Prevention. 2020 Jul 16. ttps://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html.
Note: *Information on this slide is dated as of July 20, 2020. Given the evolving knowledge of COVID-19, more accurate and up to date information may be available.*

Key Terms: Contact

Term	Definition	Critical Knowledge Gaps as of July 20, 2020
Contact: characterized by proximity and duration		
Physical contact	Direct person-to-person contact	• Relative importance of varying levels of contact given confluence of other factors (e.g., population density, duration of exposure, air exchange)
Close contact	Contact of less than 6 ft for approximately 15 minutes or greater	
Proximate contact	Contact of greater than 6 ft in the same room for an extended period of time	

Source: Public Health Guidance for Community-Related Exposure. Centers for Disease Control and Prevention. 2020 Jul 16. https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations.html

Note: *Information on this slide is dated as of July 20, 2020. Given the evolving knowledge of COVID-19, more accurate and up to date information may be available.*

Key Terms: Modes of SARS-CoV-2 Transmission

Term	Definition	Critical Knowledge Gaps as of July 20, 2020
Direct: an infectious agent is transferred from a reservoir to a susceptible host by direct contact or droplet spread.		• Relative importance of droplet vs. vehicle vs. airborne spread in SARS-CoV-2 transmission in various settings • The frequency of airborne transmission • How often and why superspreading events occur
Contact	Occurs through direct person-to-person contact	
Droplet	Spray with relatively large, short-range aerosols produced by sneezing, coughing, or even talking. Droplet spread is classified as direct because transmission is by direct spray over a few feet, before the droplets fall to the ground	
Indirect: refers to the transfer of an infectious agent from a reservoir to a host by suspended air particles or inanimate objects (vehicles)		
Airborne	Smaller, longer-range aerosols nuclei that remain suspended in the air for long periods of time and blow over greater distances	
Vehicles	Vehicles (food, objects) that may passively carry a pathogen	

Source: Principles of Epidemiology in Public Health Practice, Third Edition. An Introduction to Applied Epidemiology and Biostatistics. Centers for Disease Control and Prevention. 2020 Jul 16. https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section10.html

Note: *Information on this slide is dated as of July 20, 2020. Given the evolving knowledge of COVID-19, more accurate and up to date information may be available.*

Key Terms: Testing Approaches

Term	Definition	Critical Knowledge Gaps as of July 20, 2020
Tests		
Viral RNA Tests	Identifies active COVID-19 case by detecting SARS-CoV-2 viral RNA at the moment specimen was taken	• Under what circumstances is individual vs. pooled (combining patient specimens in order to clear the entire group with one negative test or subsequently test the entire group if pooled results are positive) testing preferred to speed up and reduce cost of testing in prison settings? • Viral antigen tests confer advantages in speed of testing, but have decreased accuracy relative to viral RNA tests - under what circumstances would each test be available/preferred? • While antibody tests identify previous COVID-19 disease, what is their accuracy over what period of time (recent data suggests that antibodies wane in many individuals within a couple of months of infection. Does prior infection confer immunity? And if so, for how long? • Data on false negative rates post-exposure for a given testing type are still emerging, which will help to elucidate how early after exposure a test can reliably detect a positive case
Viral Antigen Tests	Identifies active COVID-19 case by detecting presence of viral protein at the moment specimen was taken	
Antibody Tests	Detects antibodies a person's immune system has made in response to the virus, indicating whether a person had been previously infected with COVID-19	

Source: Contact Tracing. Centers for Disease Control and Prevention. 2020 Jul 16. https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/contact-tracing.html
Note: *Information on this slide is dated as of July 20, 2020. Given the evolving knowledge of COVID-19, more accurate and up to date information may be available.*

Key Terms: Prevention and Control

Term	Definition	Critical Knowledge Gaps as of July 20, 2020
Contact Tracing	Technique used by health professionals to prevent the spread of infectious disease. In general, contact tracing involves identifying people who have an infectious disease (cases) and their contacts (people who may have been exposed) and working with them to interrupt disease transmission.	• Relative proportion of pre-symptomatic and asymptomatic cases who may be infectious and not be aware absent testing.
Social Distancing	Limiting face-to-face contact by keeping adequate space (~6 ft) between oneself and other people who are not from your "household" in both indoor and outdoor spaces. Should be practiced in combination with other everyday preventive actions to reduce spread of COVID-19, including wearing masks, avoiding touching face with unwashed hands, and frequently washing hands with soap and water for 20+ seconds.	• How many people constitute a "household"? (e.g., to what extent is social distancing possible in various environments and what are the highest risk situations where social distancing would have the largest impact (e.g., cells, dorms, showers, commissary) • No evidence about how much physical distancing measures within a shared living environment (e.g., pods within a shared dormitory) confer protection
Quarantine	Separates and restricts movement of people with credible exposure to determine COVID-19 status for quarantine period of up to 14 days	• Effectiveness of quarantine relies on (1) timing and accuracy of quarantine period, (2) capacity to follow quarantine procedure (without significantly exacerbating risk for other adverse health outcomes), (3) ability to quarantine individually, and (4) if a group is in quarantine together, ability to rapidly detect and isolate any infectious individuals • Current evidence to inform quarantine is limited and COVID-19 infection trends raise critical questions regarding implementation effectiveness
Medical Isolation	Separates people who have tested positive of COVID-19 from those who have not	• Risk of spread from probable cases of COVID-19 absent testing • Accuracy/availability of testing to identify positive cases

Sources:

Social Distancing. Centers for Disease Control and Prevention. 2020 Jul 16. https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html
Is a 14-day quarantine effective against the spread of COVID-19?. The Centre for Evidence-Based Medicine. University of Oxford. 2020 Jul 20. https://www.cebm.net/covid-19/is-a-14-day-quarantine-effective-against-the-spread-of-covid-19/

Note: *Information on this slide is dated as of July 20, 2020. Given the evolving knowledge of COVID-19, more accurate and up to date information may be available.*

Pressing Takeaways and Why They Matter

Slides 11 through 15 highlight areas where, as of June 20, 2020, there remain critical knowledge gaps in the scientific literature. Those which we perceive to be most urgent for prisons include:

1. **What is the relative importance of different modes of transmission in prisons?**
   - The World Health Organization released a statement acknowledging airborne (aerosol) transmission
   - Airborne transmission is serious threat in prisons and jails for superspreader events
   - The greater the potential for airborne transmission in a prison, the more critical the need for decarceration

2. **What is the relative proportion of pre-symptomatic, asymptomatic, and symptomatic SARS-CoV-2 among new infections?**
   - Some evidence that pre-symptomatic and asymptomatic cases account for nearly half of active cases in prisons
   - If pandemic driven by undetected asymptomatic infections, then current practices (e.g., verbal symptom screening, contact tracing) - while necessary - will be entirely insufficient to prevent and control spread in prisons
   - Bolsters critical need for decarceration

3. **Can people who have recovered from COVID-19 experience re-infection?**
   - Some evidence suggests that people who have recovered from COVID-19 are testing positive again
   - Resolved cases may not have protective immunity, which means incarcerated people and staff/custody could be re-infected and continue to spread the virus
   - Bolsters critical need for regular testing and decarceration

Methods: Data Sources

1. **Literature Review**
   Best practices for COVID-19 prevention and control

2. **Interviews with key stakeholders**
   E.g., Warden, CDCR's Public Health Officer, Receiver

3. **Group discussions**
   San Luis Obispo (SLO) Public Health Department (June 10, 2020)
   CMC administration
   Inmates Councils (East and West)
   The Gold Coats Program

4. **Direct observation and physical space assessment at CMC**
   Visit: June 11, 2020

5. **CDCR Administrative Reports & Records**

About California Men's Colony: Physical Infrastructure

East "cells" - Est. 1961

Five independent facilities: A,B,C,D,H

- A, B, C, D yards:
  - Quadrangles with 2 units, each with 3 solid-floor tiers
  - Each tier of 100 cells split into two halves/sides: each half had a grilled gate entrance, 1 TV room, 1 shower room, and 1 day room
  - Custody station and stairway between each half tier
  - Single-unit, closed door cells with window
- H (Est. 2013): stand-alone, 50-bed mental health crisis unit
- Security: Level III

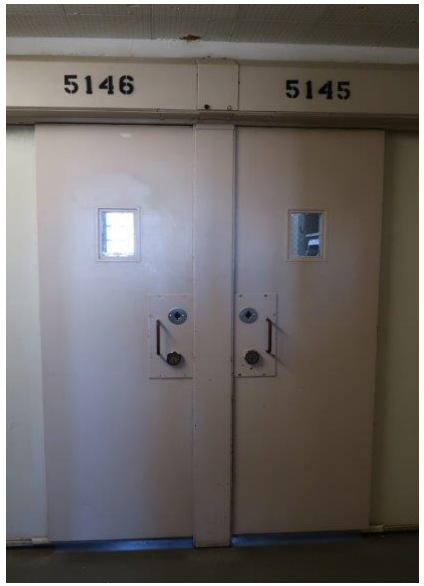


Figure. *Closed-door, single-unit cells in Medical Isolation area in Building C5*

West "dorms" - Est. 1954

Four independent facilities: E, F, G, M

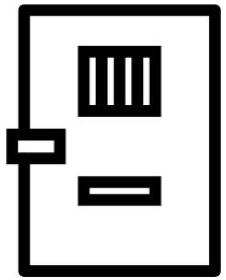
- Dormitories with approx. 30-50 individuals per unit with pods 6' apart comprised of max. 4 bunk beds each
- Security: Level I and II

Figure. *CMC facilities: East cells (E), West dorms (W)*

NOTE: ***Physical structures across the CDCR system are highly heterogeneous****. For example, they are built in different time periods and were designed for different levels of security.* ***Consequently, each structure poses unique challenges for COVID-19 prevention and control efforts.***

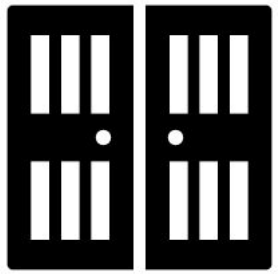
A Note on Physical Infrastructure in Prisons

Within jails and prisons, density in the form of close, prolonged contact is a critical risk factor for COVID-19 transmission, which is primarily influenced by *population density*, *shared air space*, and *unit type*. While all units pose some level of risk for COVID-19 transmission, particular types of units have higher transmission risk than others.



Single occupancy cells with solid doors which are located on solid-floor tiers

Single or double occupancy cells with grilled doors and windows, which are located on solid-floor tiers



Single or double occupancy cells with grilled doors and no windows, located on solid-floor tiers

Small dorms (<100 individuals)

Large dorms (>100 individuals)

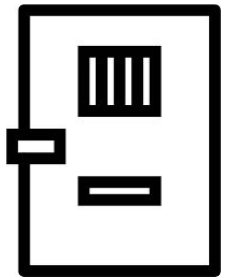
Multiple open tiers of cells with grilled or perforated metal doors and common airspace

Relative likelihood of onward COVID-19 transmission within the unit*

Note: *The risk of infection also increases with the number and proportion of positive cases. This slide does not consider important transmission routes outside the unit.*

About California Men's Colony: Physical Infrastructure

Within jails and prisons, density in the form of close, prolonged contact is a critical risk factor for COVID-19 transmission, which is primarily influenced by *population density*, *shared air space*, and *unit type*. While all units pose some level of risk for COVID-19 transmission, particular types of units have higher transmission risk than others.



An outbreak occurring in East cells vs. West dorms can have very different outcomes.

Single occupancy cells with solid doors which are located on solid-floor tiers

Small dorms (<100 individuals)

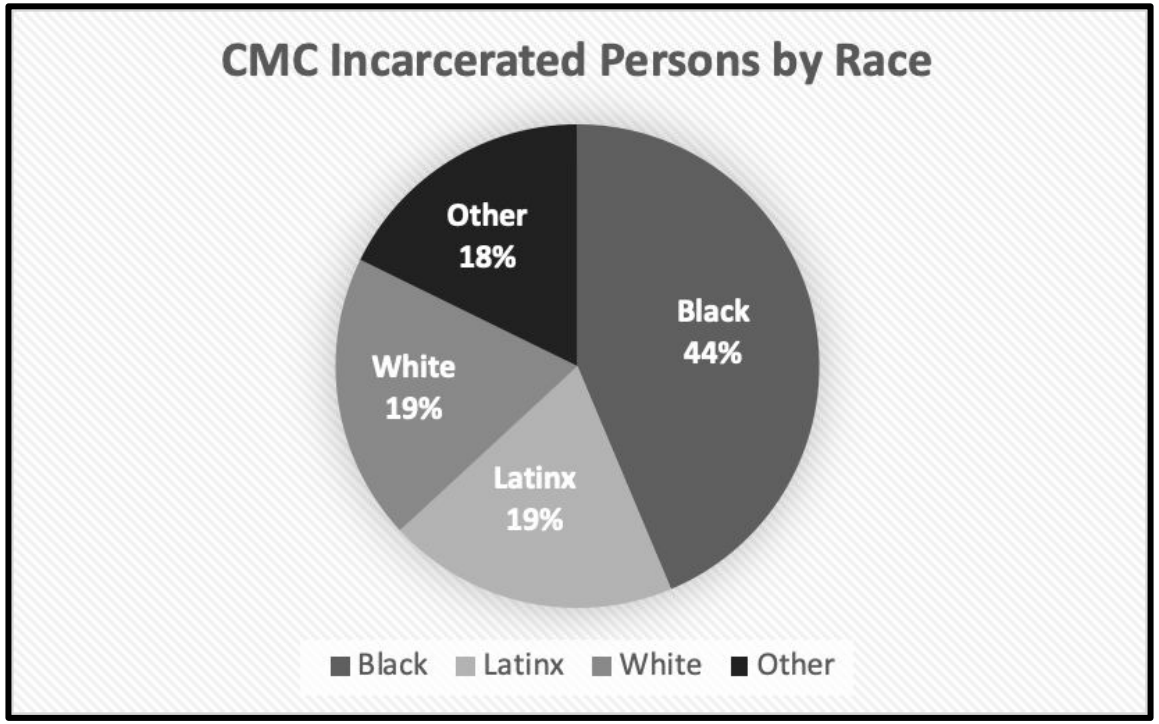
Relative likelihood of onward COVID-19 transmission within the unit*

Note: *The risk of infection also increases with the number and proportion of positive cases. This slide does not consider important transmission routes outside the unit.*

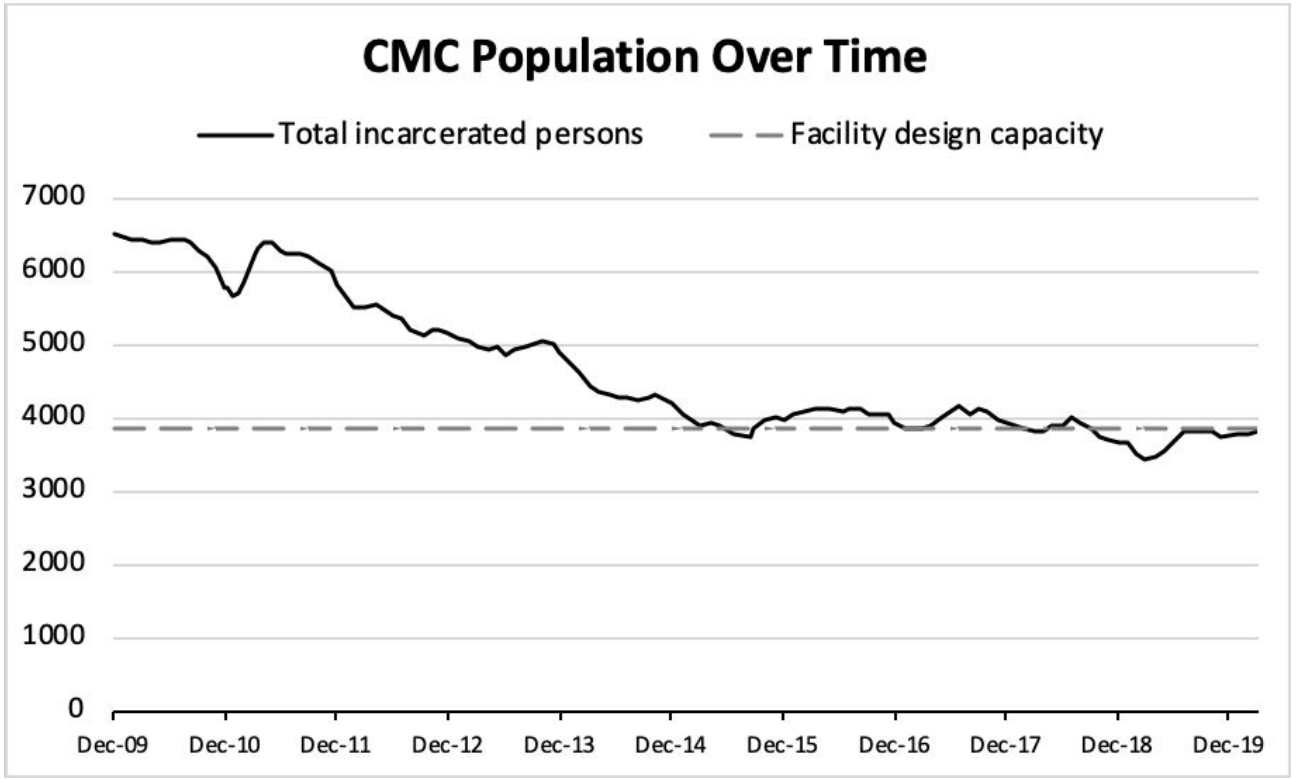
About California Men's Colony: Incarcerated People

Demographics of People Incarcerated at CMC:

On March 1, 2020: 3,782 people incarcerated at CMC
[98.5% of design capacity* (3,848)]



8.9% of people incarcerated at CMC have ADA-classified disability



***NOTE:** 'Facility design capacity' is an architectural definition that does not have salience for risk of COVID-19 infection (i.e., a prison can be below design capacity and still pose an insurmountable superspreader risk absent decarceration)*

About California Men's Colony: Incarcerated People

People incarcerated at CMC are of older age and have a higher burden of existing medical conditions compared to the CDCR average.

Characteristics of people incarcerated at CMC:

- **Age:** 38% are age 50 years or older (CDCR avg. 25%); 11% are age 65 years or older (2020)*
- **Specialty care referrals:** approximately 71 referrals per 1000 people incarcerated at CMC (CDCR avg. 53/1000)
- **Mental Health Enhanced Outpatient Program (EOP):** 13.8% are in a mental health outpatient program (CDCR avg. 5.4%)

Population General Medical Risk Profile

Risk Level	CMC	CDCR avg
High Risk 1 (trigger 2+ high risk selection criteria, below)	7.2%	5.9%
High Risk 2 (trigger 1 high risk selection criterion, below)	15.9%	8.8%
Medium Risk (trigger at least 1 chronic condition, below)	38%	34%
Low Risk (includes subset with well-managed stable conditions)	39%	52%

Notes: **High risk selection criteria** include i) diagnoses/conditions associated with current or future risk for adverse health event, ii) multiple higher level of care events in past 12 months, iii) prolonged medical bed stays, iv) patients on 10 or more medications, v) two or more high risk specialty consultations in past 6 months, vi) 65 years or older, vii) any comorbid medium risk diagnoses/conditions that may increase risks for future adverse health events; **Chronic conditions** constitute any that do not meet the selection criteria for high risk, including patients enrolled in mental health services delivery system and patients with permanent disabilities (ADA) affecting placement.

Source: CDCR Dashboard, October 2019
*CDCR internal reporting June 2020; Rates are subject to change.

About California Men's Colony: Incarcerated People

Individual-level 'Weighted COVID-19 Risk Score' shows West block has highest risk of disease severity

	All CMC		East Block		West Block		Other*	
Weighted Risk Score	**Count**	**% CMC**	**Count**	**% East**	**Count**	**% West**	**Count**	**% Other**
Risk score = 0	2,384	66%	1,189	72%	1,034	59%	161	72%
Risk score = 1	440	12%	213	13%	207	12%	20	9%
Risk score = 2	273	8%	111	7%	149	8%	13	6%
Risk score = 3	69	2%	19	1%	40	2%	10	4%
Risk score >= 4	463	13%	112	7%	**331**	**19%**	20	9%
Total	*3,629*	-	*1,644*	-	*1,761*	-	*224*	-

Risk score, developed by CCHCS Quality Management Unit, computed by summing scores **(score = #)** across all persons with the following:
Age 65+ **(score = 4)**; pregnant **(1)**; moderate-severe persistent asthma **(1)**; cancer **(2)**; diabetes **(1)**; high-risk diabetes **(1)**; heart disease **(1)**; high-risk heart disease **(1)**; HIV/AIDS **(1)**; poorly controlled HIV/AIDS **(1)**; immunocompromised **(2)**; BMI 40+ **(1)**; on hemodialysis **(1)**; advanced liver disease **(2)**; having any of the following chronic conditions [hypertension, coccidioidomycosis, connective tissue disorder, dementia/Parkinson's disease, endocrine disorder, MS, Myasthenia Gravis, neurologic disorder, vasculitis] **(1)**
Data from **July 10, 2020**

Note: *__Other__ includes Ad-Seg, CTC Medical, CTC Mental Health, Out-to-Court; Total population includes patients who are currently endorsed to CMC but "out-to-medical" or "-court" and were not physically at CMC when the analysis was run. Therefore, population count will differ from the CDCR population report as CDCR institution pop. definition excludes incarcerated people "out-to-medical" or"- court".

About California Men's Colony: Staff/Custody

More than 1 in every 3 CMC staff/custody are age 50 and older. Several commute from surrounding communities and towns via vanpools.

On March 1, 2020: 1,719 total employees at CMC

Characteristics of CMC Staff/Custody:

- **Age:** 38.9% are age 50 years or older (range 20-83 years); 3% are age 65 years or older

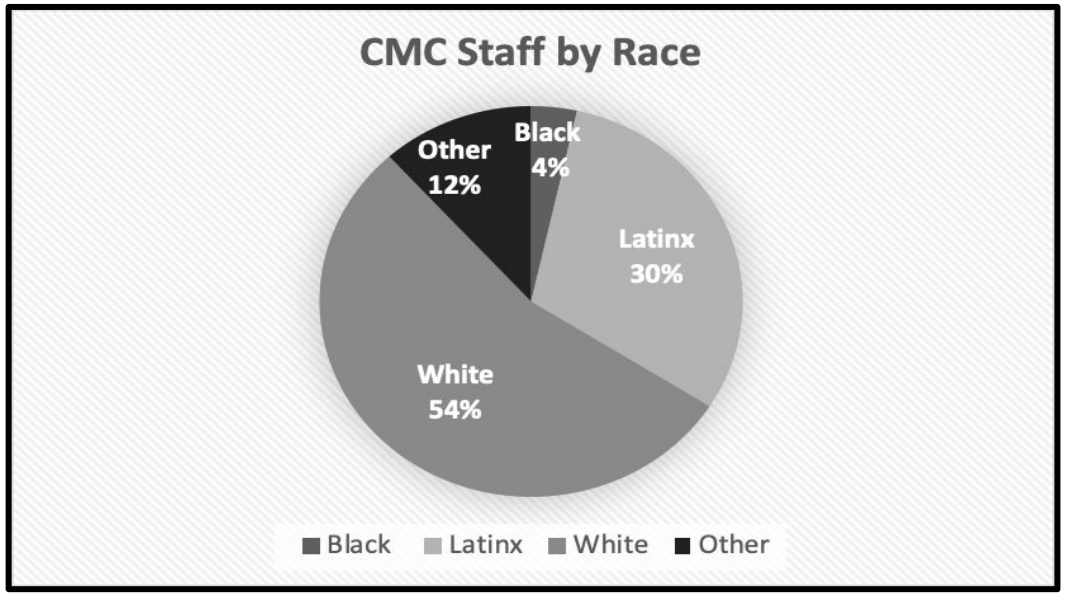


Figure. *CMC staff racial breakdown*

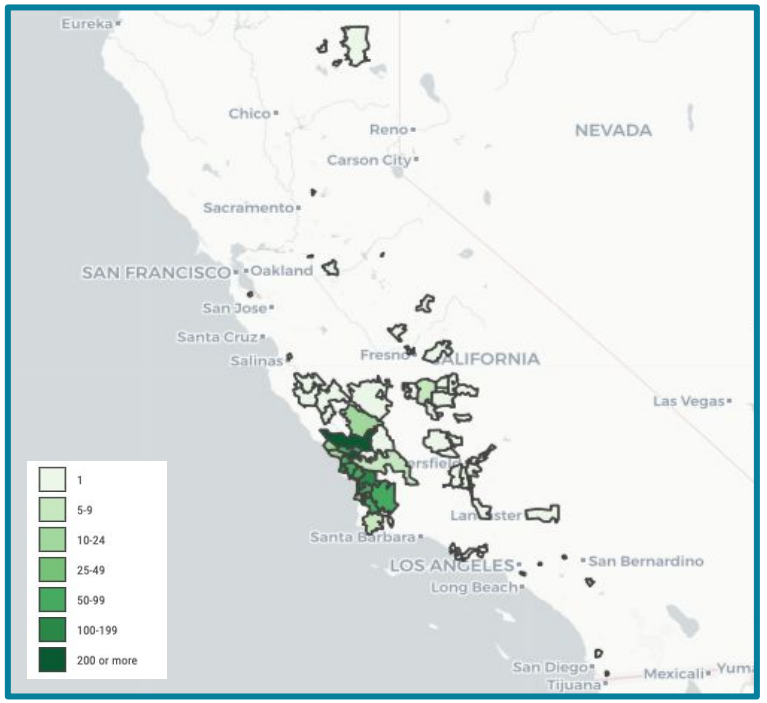


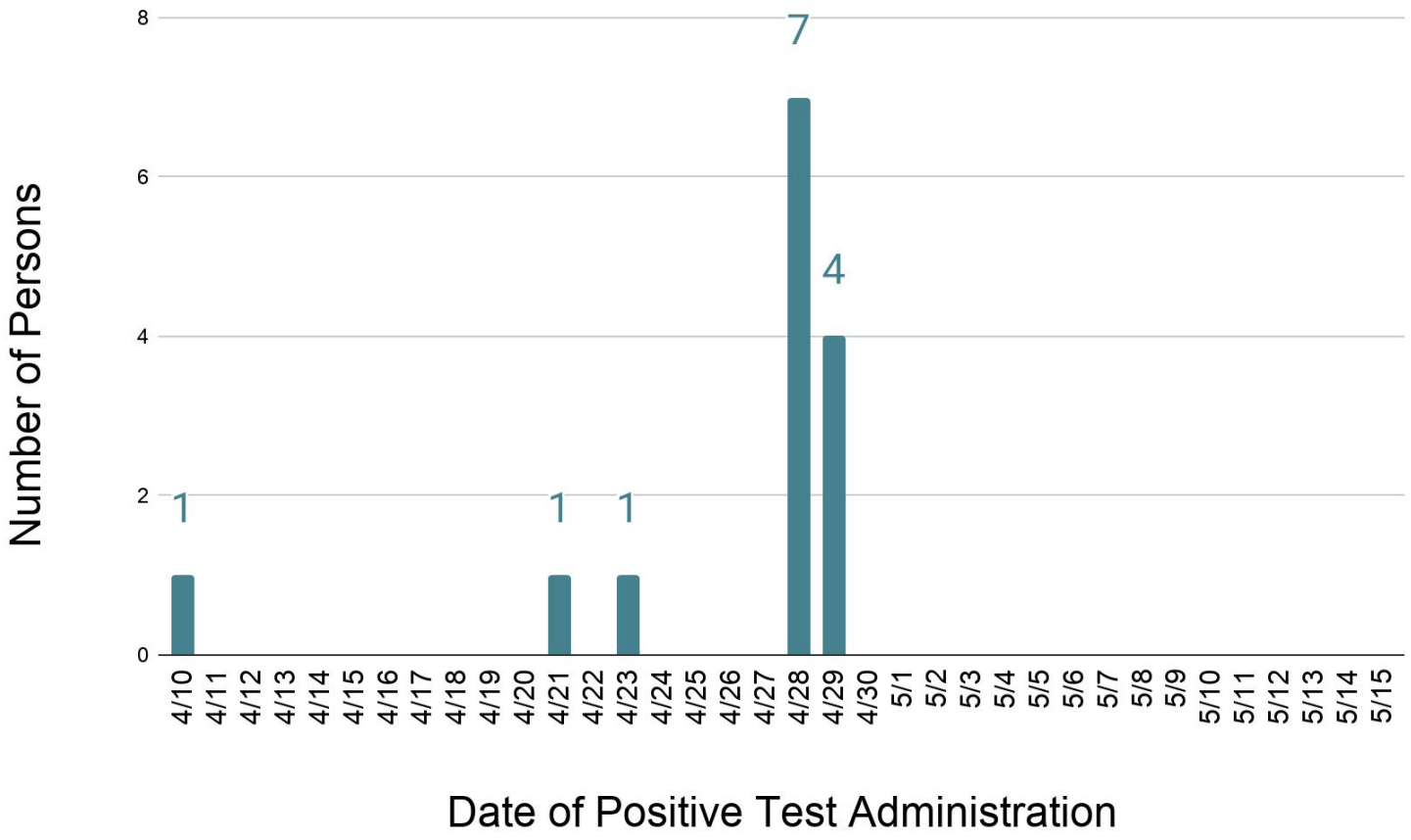
Figure. *Concentration of CMC staff by county of residence*

Staff/custody live and commute from various counties

- **Majority live within 30 miles** *(e.g., SLO, Paso Robles, Atascadero, Arroyo Grande)*
- **Small number commute from much further** *(e.g., Fresno 141 miles from CMC)*
- **Commute with each other in 'vanpools' and/or often stay at nearby hotels during shift days**

Note: Data not available on the number or percent of staff with other COVID-19 risk comorbidities

Outbreak Characterization: Epidemic Curve



During CMC's April/May outbreak, a total of 14 cases were reported:
11 among incarcerated persons
3 among custody/staff

Figure: These 14 cases first tested positive at different points over the month of April 2020. The first test that would later be returned as positive for COVID-19 occurred on April 10, with the second on April 21, and the third on April 23. On April 28, seven of the specimens would later be returned as positive for COVID-19, with four additional positive tests collected the following day.

NOTE: *Typically, epidemic curves illustrate date of illness onset. However, this figure depicts date on which first positive nasopharyngeal swab specimen was collected. This figure should be interpreted with caution given variation in - and delays between - illness onset, symptom presentation, and first positive test. Still, this* ***does*** *reflect the timing of test administration that guided subsequent decisions.*

Source: San Luis Obispo County Department of Public Health

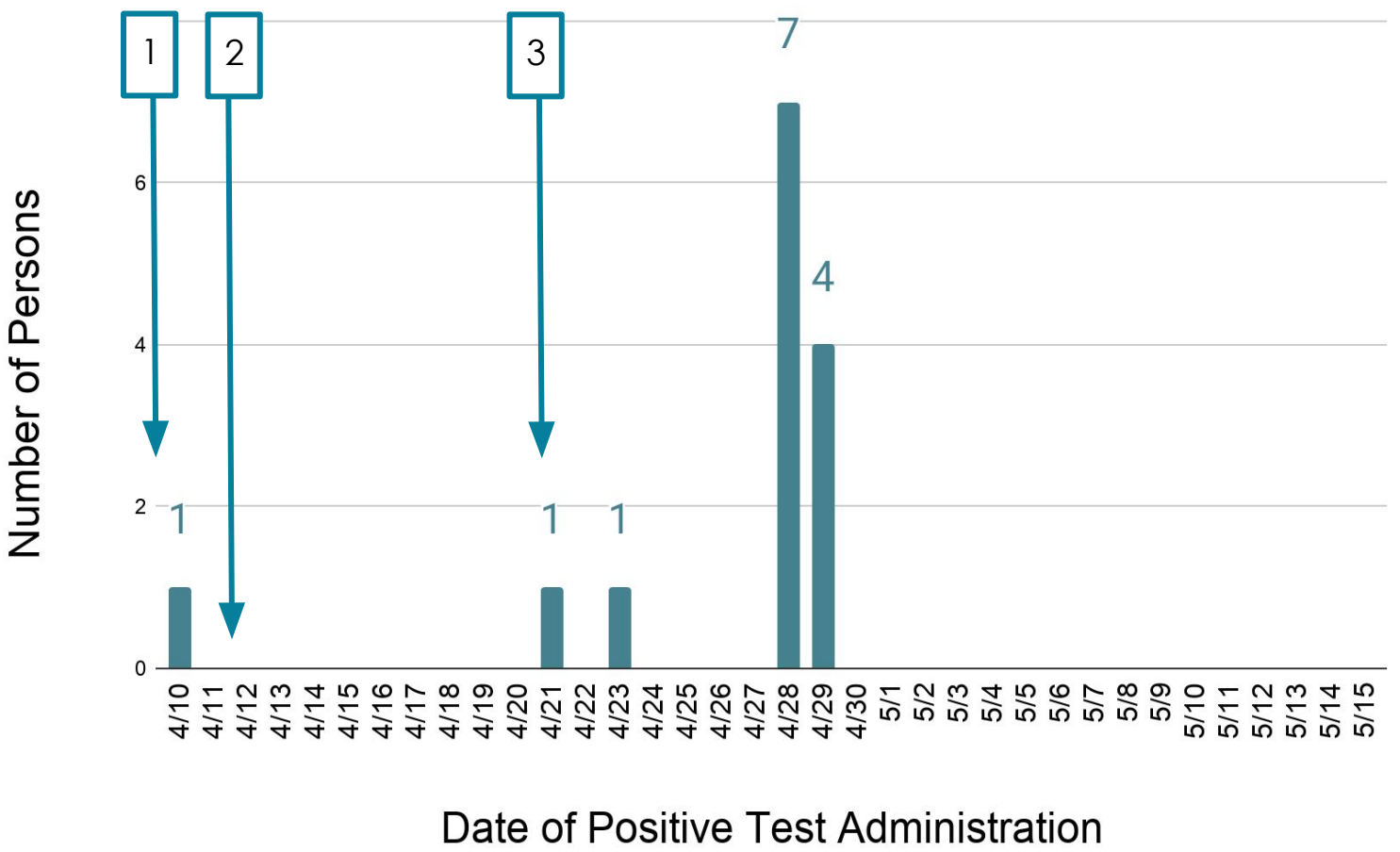
Outbreak Characterization: Introductions

1. **Person returning from court, previously at LA County Jail (East)**
   - April 6: Entered CMC and placed in isolation on C5, L1
   - April 10: Symptom onset and test collected
   - April 11: First positive test
   - April 24: Second positive test collected (result on April 28)
   - No epidemiologically linked onward transmission, but cannot rule out this possibility

2. **Custody staff member (West)**
   - April 5: Last day prior to parental leave
   - April 12: After partner's diagnosis, tested in Santa Barbara County
   - April 22: Returned to CMC after case resolved (i.e., did not develop symptoms in 10 days following asymptomatic positive test)
   - No epidemiologically linked onward transmission at CMC, but cannot rule out this possibility
   - *NOTE: Not included in case counts*

3. **Symptomatic incarcerated person (East)**
   - Resided on C5, L3
   - April 21: Test collected
   - April 22: First positive test
   - Epidemiologically linked to 12 additional cases
     - 9 among incarcerated persons
     - 2 among custody
     - 1 among healthcare staff

There were two, possibly three, introductions of SARS-CoV-2 into CMC during the April-May 2020 outbreak



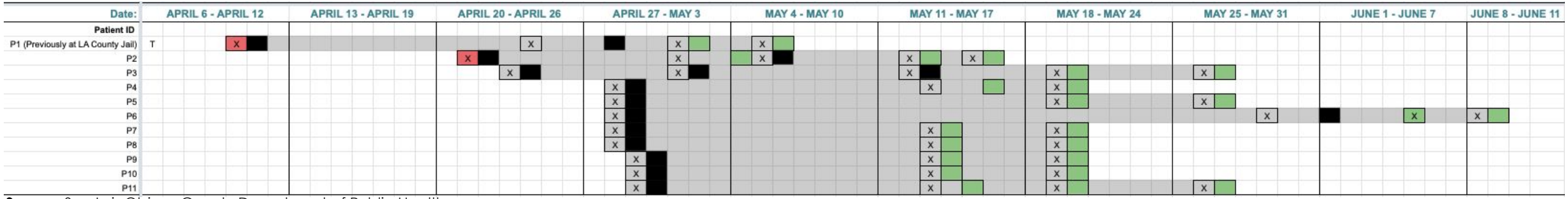
Outbreak Characterization: Testing Timeline for Positive Cases [April - June 2020]

Outbreak response involved inter-institutional coordination, facilitated faster testing turnaround time, and implemented standard outbreak investigation procedures.

- **Coordinated response:** San Luis Obispo (SLO) Public Health Department led investigation with CMC Medical
- **Rapid testing turnaround:** mean testing turnaround approximately 24 hours (range 0-4 days) using SLO Public Health Department labs (bypassing Quest)
- **Serial negative testing of positives:** after initial positive test, repeat testing until two consecutive negative results
- **Staff/custody tested:** Approximately 200 custody/staff tested with 50% refusal of second test
- **People incarcerated in building C5 and C6 tested:** Approximately 400 incarcerated persons tested with no refusals
- **Implemented standard outbreak investigation procedure:**
  - Concentric testing around first symptomatic case
  - Contact tracing identified custody person who crossed buildings C5 and C6
  - Mass testing on C5 and C6

Outbreak Characterization: Testing Timeline for Positive Cases [April - June 2020]

Outbreak response involved inter-institutional coordination, facilitated faster testing turnaround time, and implemented standard outbreak investigation procedures.



Source: San Luis Obispo County Department of Public Health

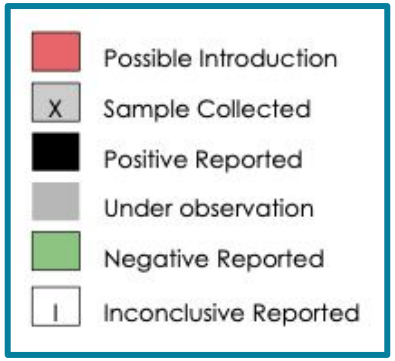


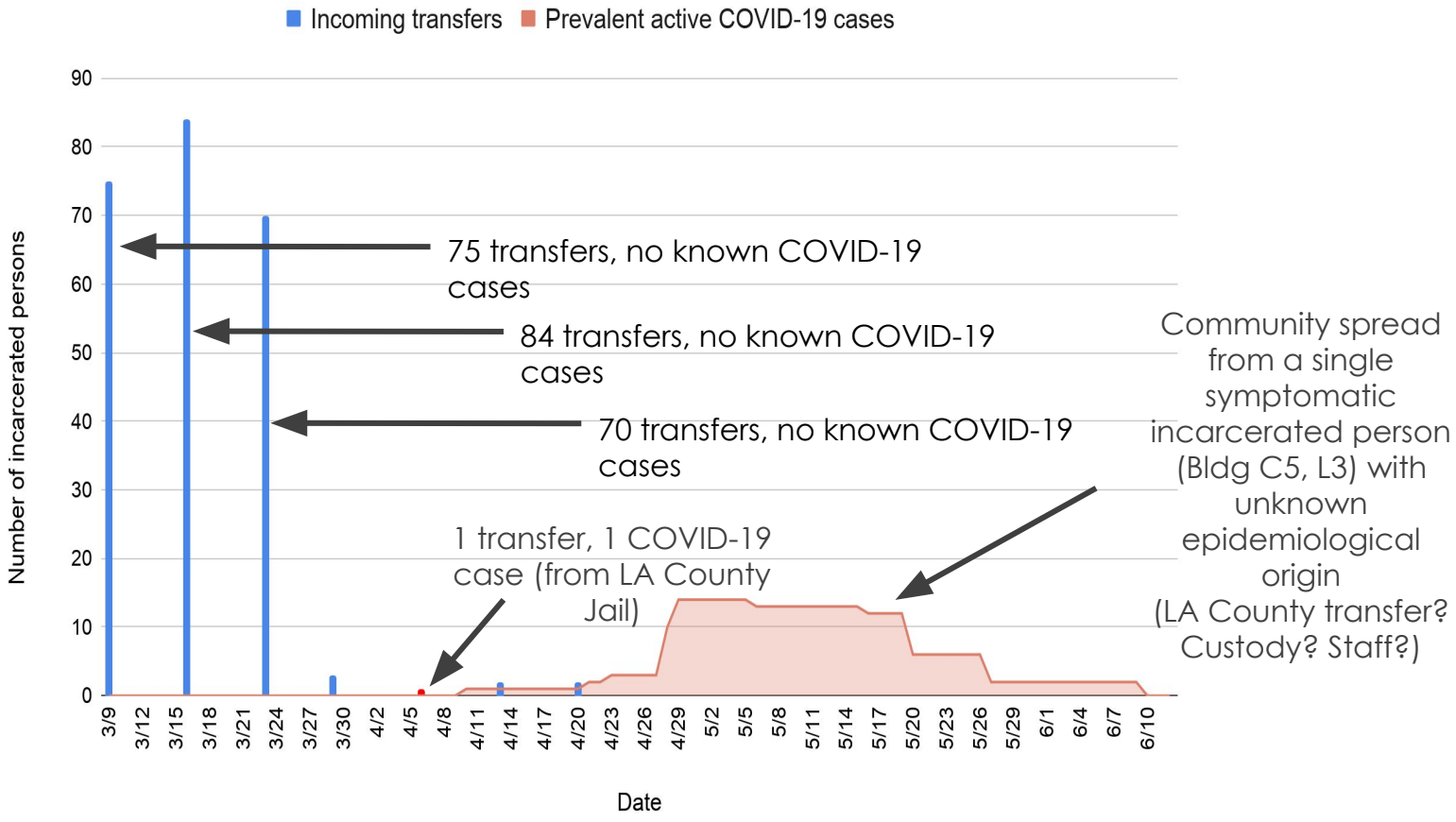
Figure: This timeline illustrates the testing process for positive cases among people incarcerated at CMC over the course of the outbreak. For example, row 1 documents the testing experience of the person returning from court and previously at LA County Jail. They arrived at CMC on April 6, 2020 and were first tested on April 10th. A positive test result was returned the following day. They were tested again on April 24th, and received a second positive result four days later. On May 1st, they were tested a third time, receiving a negative result the following day. Their last test was administered on May 5th, and it, too, was negative.

NOTE: *Testing data reflect 11 known positive cases among people incarcerated at CMC only; Staff/custody who tested positive and all individuals who tested negative are not shown on this slide.*

Onward Transmission with ~24 Hour Testing Turnaround

Figure: *The red shaded region illustrates known daily point prevalence of active COVID-19 cases. This includes new cases and those under observation who previously tested positive. This number can be impacted by several factors, including testing turnaround time, people being transferred from other jails and prisons, people being transferred within a prison (e.g., East to West at CMC), and onward transmission in the prison. For example, the longer the testing turnaround time, the longer quarantined individuals must remain under observation, and the greater the daily prevalence.*

At CMC, the policy to stop transfers was implemented around this time. Testing turnaround of approximately 24 hours meant that once COVID-19 cases resolved, people could be released from the conditions of quarantine. There were also, fortunately, no other new introductions at this time allowing for limited quarantine capacity to not be overwhelmed.

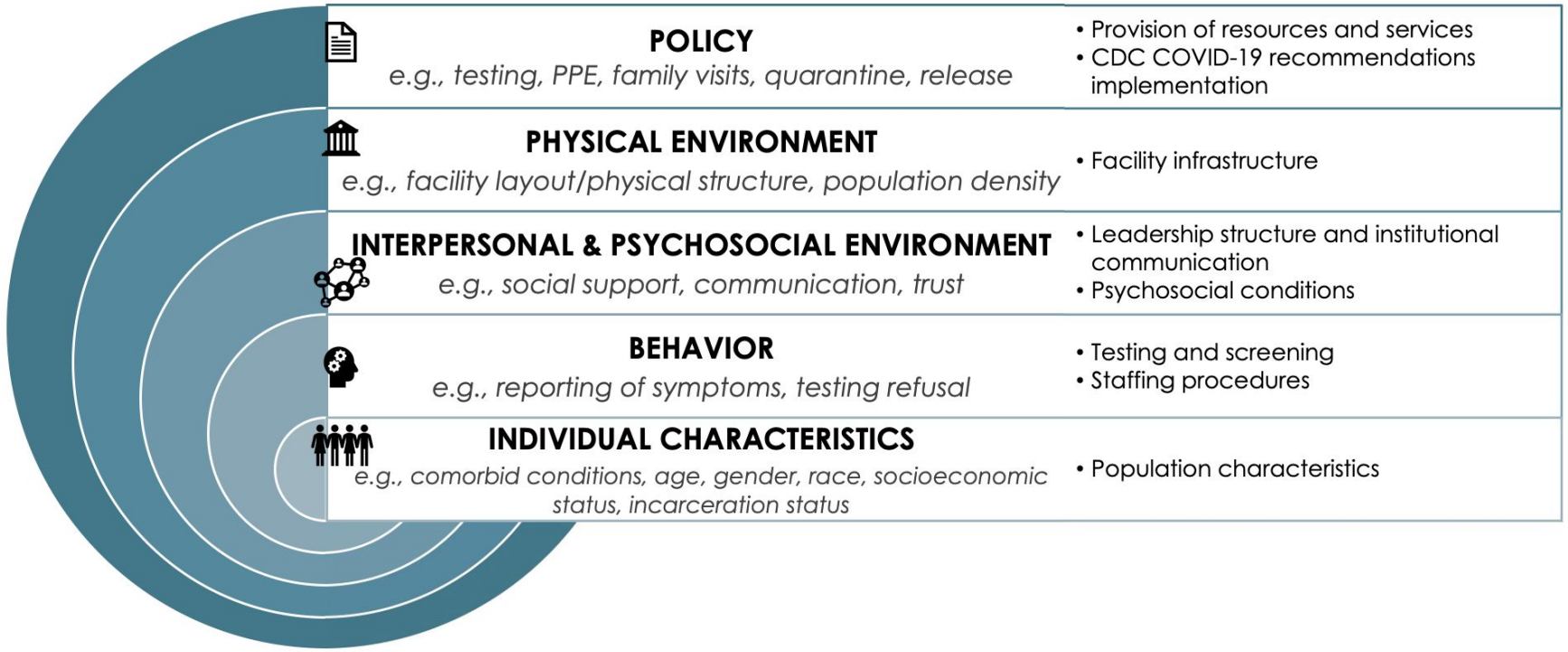


Source: CMC Medical

1. How was the April-May 2020 COVID-19 outbreak at CMC contained?

CMC Prevention and Control Efforts

In this section, we examine the outbreak in the context of the **eight dimensions** of our guiding framework to understand, '*How was the April-May 2020 COVID-19 outbreak at CMC contained?*'



These **eight dimensions** help us identify conditions that may have either **facilitated** or **hindered** prevention of COVID-19 introduction and/or control during the April-May 2020 COVID-19 outbreak and may affect future outbreaks at CMC.

To evaluate the CMC outbreak response, we begin by examining population characteristics at the individual level, including **biological factors (e.g., comorbid conditions, age) and social factors (e.g., discrimination/barriers on the basis of socioeconomic status, incarceration status)**. We then move outwards in our framework, assessing how each subsequent outer level acts on the more core levels. We end with an analysis of the **policy level.**

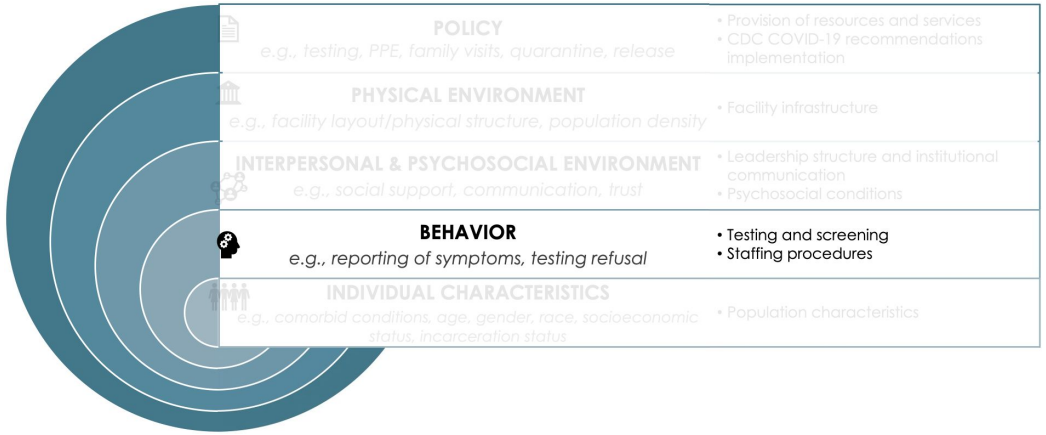
CMC Prevention and Control Efforts: Takeaways

Population Characteristics that hindered efforts:

- **Underlying comorbid conditions among staff/custody and people incarcerated at CMC increase risk for severe COVID-19 related illness and death**
  - ~40% of people incarcerated at CMC are aged ≥50 and ~40% of staff/custody are aged ≥50
  - In the presence of comorbidities, even those of younger age may be at increased risk for severe illness and death

- **Staff/custody commute to and from CMC daily and can propel COVID-19 spread to both people incarcerated at CMC as well as surrounding communities.**
  - Given high housing costs in San Luis Obispo County, several staff/custody reside outside the county, as far as 141 miles away, and commute together to work in 'vanpools'
  - As a result, if infected, they could introduce COVID-19 to people incarcerated at CMC, other staff/custody, as well as to their home communities.

CMC Prevention and Control Efforts: Takeaways



Testing & Screening factors that facilitated efforts:

- **The relationship with SLO Public Health Department, early and rapid COVID-19 testing, and existing internal procedures to respond to prior infectious disease outbreaks facilitated CMC's response in April-May**

Testing & Screening factors that hindered efforts:

- **At initial stages of the outbreak, there were challenges identifying resources and responsibilities**
  - SLO Public Health Department was not the primary agency for testing
  - CMC Medical requested PPE supplies from Headquarters, but none were initially available
  - Statewide institutional staff testing was not announced until July 3, 2020

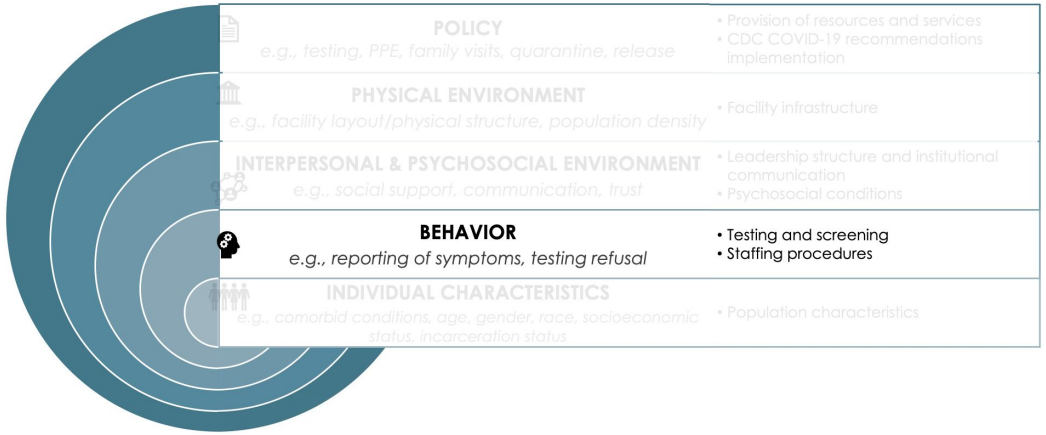
- **CMC's April-May strategy of symptom screening, contact tracing, and one-time testing (of negatives) are necessary but insufficient**
  - Symptom screening and contact tracing alone can identify those who are symptomatic, but will miss pre-symptomatic and asymptomatic individuals
  - One-time testing: Serial testing of negative cases may be needed since positive cases have been identified among those who previously test negative (false negatives, see box).

A MMWR report on COVID-19 in a Louisiana prison found:

45% *of positive cases were asymptomatic or pre-symptomatic*

25% *of positive cases were among those who previously tested negative*

CMC Prevention and Control Efforts: Takeaways



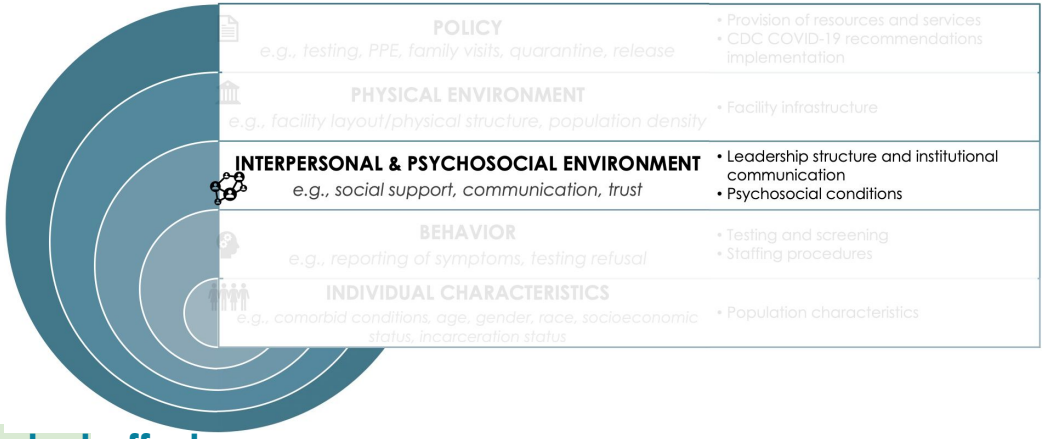
Staffing Procedures factors that facilitated efforts:

- **Some staff elected to remain on the same unit(s) which may have reduced COVID-19 transmission**
- **Some staff were aware of measures to mitigate *fomite/droplet/airborne* transmission**
  - Mask supplies and use appeared commonplace

Staffing Procedures factors that hindered efforts:

- **Many staff did not elect to remain in the same unit(s) leading to incomplete staff cohorting**
  - Union regulations on shift selection, seniority, and overtime prevented formal staff cohorting to reduce transmission
- **Staff leave during the Apr-May COVID-19 outbreak contributed to insufficient healthcare staffing**
  - Reports of "large numbers of staff taking leave" due to threat of COVID-19
  - This hindered efforts to conduct testing & maintain other critical healthcare services
- **Awareness of actions to mitigate *fomite/droplet/airborne* transmission appeared low among some staff**
  - Inefficient mask use and improper fit among staff/custody
  - Attitudes of "I'm strong enough to handle it" among some staff/custody reflected low perception of risk (including role of staff/custody as facilitators of introductions to prison and onward transmission)

CMC Prevention and Control Efforts: Takeaways



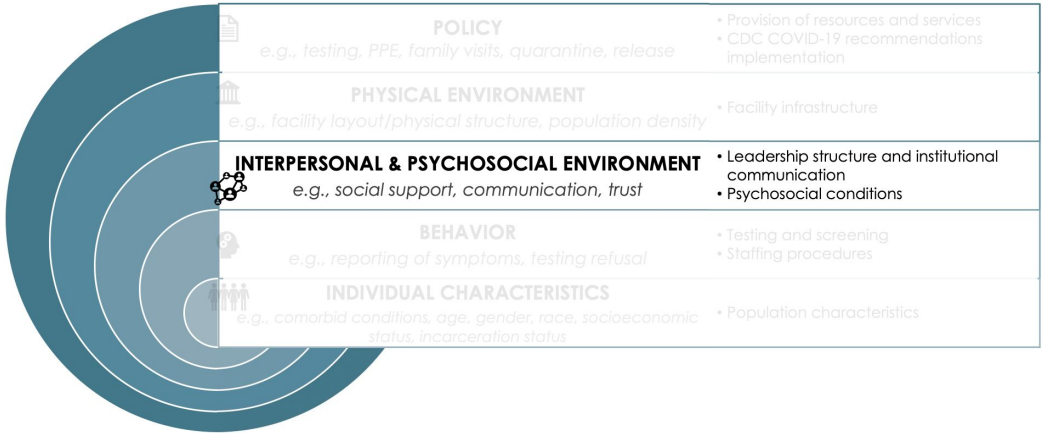
Leadership Structure & Institutional Communication factors that facilitated efforts:

- **CMC had working relationships with SLO Public Health Department and CCHCS**
  - Coordinated efforts, good rapport, and respect within and across teams
  - CMC leveraged and strengthened these relationships over time
- **Within CMC, pre-existing, effective working relationships**
  - Warden Gastelo widely respected by staff/custody and collaborated with Union Rep. and CEO Macias
  - Involvement and coordination by CEO Macias & organization by CME Dr. Haar during outbreak
  - Regular weekly and biweekly meetings at different levels for timely communication and action
  - Established grievance processes for staff/custody and people incarcerated at CMC

Leadership Structure & Institutional Communication factors that hindered efforts:

- **Statewide institutional staff testing was not announced until July 3, 2020**
- **Some communication breakdowns and access issues**
  - Reports of overwhelming amounts of information/data from multiple managers at initial stages of outbreak
  - Communication about COVID-19 transmission instilled fear and anxiety among some people incarcerated at CMC given restricted agency to implement recommendations
  - During Building C5 lockdown, no administration communication to people incarcerated in C5 for 2-3 weeks
  - Unknown extent to which CDCR policies regarding communications and program accessibility for people with disabilities or who do not speak English were effective/followed

CMC Prevention and Control Efforts: Takeaways



Psychosocial Conditions that facilitated efforts:

- **Despite the COVID-19 outbreak, CMC maintained some services that are essential for physical and mental health**
  - Many services switched to cell-side, including library and commissary services
  - Yard times, though reduced, were available (and re-opened for C yard)

Psychosocial Conditions that hindered efforts:

- **Ensuring mental health and care/treatment needs was challenging**
  - Need to socially distance undermined the ability to hold group therapy sessions
  - Staff reported being overworked, further exacerbating staff shortages
  - Incarcerated people reported communication lapses and loss of privileges, with potential mental health harms

- **The asymmetry of COVID-19 risk and power was noted by people incarcerated at CMC**
  - People incarcerated at CMC noted that once visitation was halted, the primary risk of virus introduction was from staff/custody
  - However, this risk was sometimes met with nonchalance by staff/custody (e.g., inconsistent mask use; ~50% re-testing refusal rate reported during April-May 2020 outbreak among staff, higher than re-testing refusal rates among incarcerated people)

CMC Prevention and Control Efforts: Takeaways

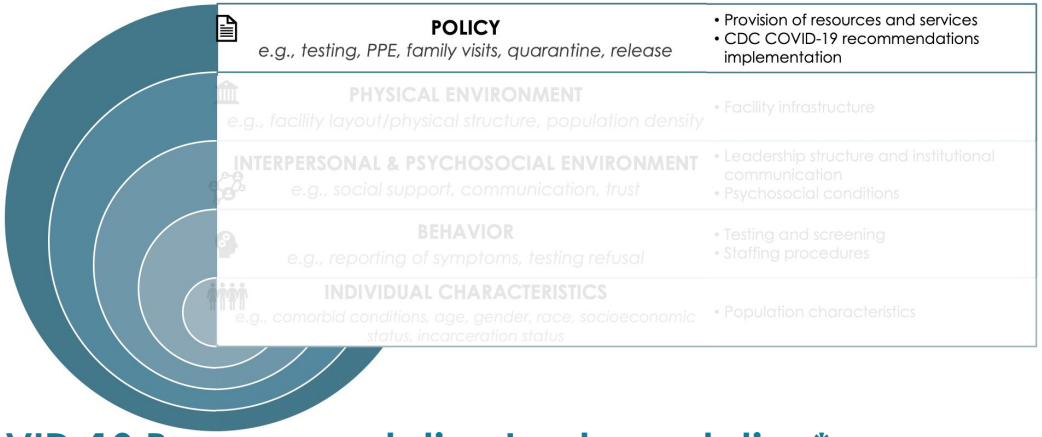
Facility Infrastructure factors that facilitated efforts:

- **CMC's April-May COVID-19 outbreak occurred in East Building C5, which CMC had pre-prepared for medical isolation**
  - C5, Tier 1 was designated for quarantine in other outbreaks (e.g., norovirus, chicken pox, flu) at CMC
  - Slow rate of spread partially attributed to unit type (solid-door units with solid-floor tiers) bought time to implement more precautions, access resources, and reinforce communication
  - CMC "isolated" C yard, prevented crossover to other yards, and provided cell-side services during this time
- **Low prevalence of COVID-19 in the county at large may have helped limit the risk of additional introductions to CMC**

Facility Infrastructure factors that hindered efforts:

- **While prisons, including CMC, are largely incompatible with COVID-19 mitigation measures, some additional precautions in different areas across CMC could have improved urgent transmission risks.**
  - Maximizing air exchange in common spaces had not yet been prioritized.
  - Due to incarcerated persons living in close, prolonged proximity and the close physical distance of dormitory pods, CMC's West dorms are primed for super-spreader events
    - No one in dormitory environment can quarantine properly
    - **A future outbreak could overwhelm C5 quarantine unit and restrict local health care capacity** (e.g., SLO county: 449 total beds)
  - Precautions were made for movement of objects across CMC, but the more worrisome risk of movement of staff/custody were not put into place because of challenges posed by union regulations

CMC Prevention and Control Efforts: Takeaways



Factors that facilitated the Provision of Resources/Services & CDC COVID-19 Recommendation Implementation*:

- **Coordination for PPE.** Headquarters' provision and coordination of PPE aided CMC, whose executive leadership formed a PPE committee to assess daily burn rates and distribute PPE across CMC areas.
- **For CDC COVID-19 recommendations, an awareness of reducing risks of fomite/droplet spread was exhibited** by:
  - Designation of C5 as quarantine unit, frequent cleaning and disinfection, good knowledge of mask/PPE use, ground markers in place for physical distancing, sanitizing products available for staff and incarcerated people

Factors that hindered the Provision of Resources/Services & CDC COVID-19 Recommendation Implementation*:

- **Across CDCR/Receivership System, several factors related to system-wide policies posed as risks, including:**
  - Halting transfers across CDCR was not comprehensive
  - Absence of strategies to reduce population via decarceration
  - Absence of systemwide policies until July 3, 2020 for ongoing staff testing for prisons (i) with and (ii) without positive cases
  - No emergency or central purchasing for masks, PPE, oxygen concentrators, and monitoring equipment
  - Any centralized coordination of resources was not connected to conditions on the ground (e.g., PPE was substandard quality or inadequate)
- **Strong need to clarify how staff/custody pose great risks to the safety and wellbeing of people incarcerated at CMC**
- **Strong need to maximize air exchange through ventilation to prevent airborne transmission**

***NOTE:** More details on CMC prevention and control efforts related to the CDC COVID-19 Recommendations are available in supplemental slides at the end of this presentation.*

Summary Messages, CMC COVID-19 Outbreak

CMC established policies and procedures before the outbreak:

- East building C5, Tier 1 designated as quarantine unit
- Established communication structure through trusted avenues like the Inmates Councils

Aided by SLO Public Health Department, CMC leadership made decisions that centered urgent health needs:

- Public health and medical decision-makers guided evidence-based, team-based response across entities and within CMC
- SLO Public Health Department provided testing kits and conducted testing (with rapid results) among staff/custody, using the SLO County lab

At the same time, CMC was lucky:

- Custody COVID-19 case on West was on parental leave, sparing the dorms from a superspreader event
- All remaining introductions were on East, not West
- COVID-19 risk score was lower on East than West
- SLO County had low COVID-19 prevalence (low risk of entry) during April-May 2020 outbreak (see Figure)
- Only 1 active case among people who transferred from other facilities
- CMC had space to use C5, Tier 1 for quarantine unit
- Despite barriers to staff/custody cohorting, spread beyond C5 to C6 did not occur. Some staff elected to stay in the same workstations.

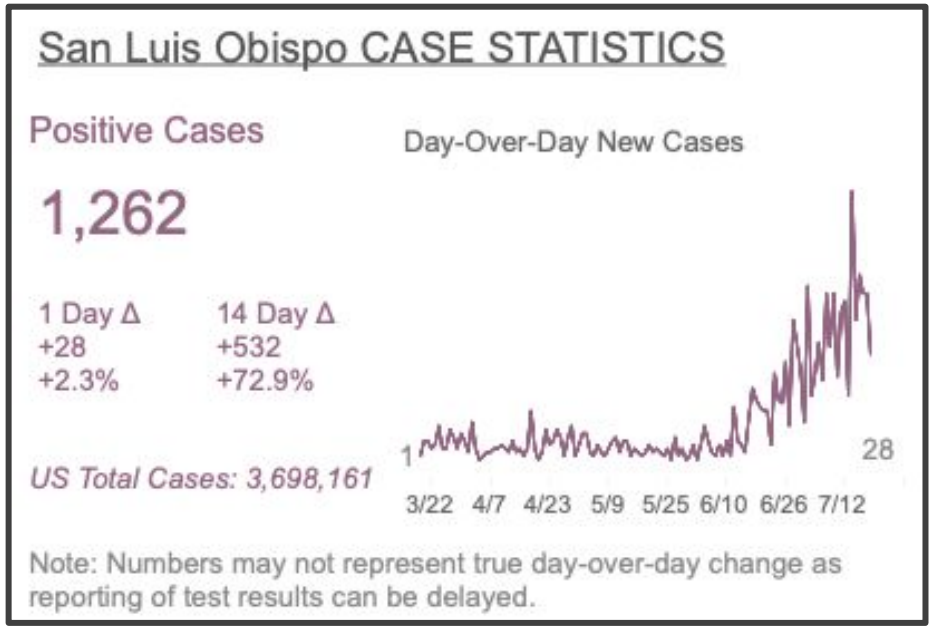


Figure: While prevalence of cases in SLO County was fortunately low during April-May outbreak, recent increases in prevalence since indicate higher risk of entry from the surrounding community. Similar concerns remain regarding COVID-19 prevalence in other counties from which custody/staff commute.

2. What lessons might be transferable to other settings and how are these lessons translated to policy?

Existing Guidance on COVID-19 Prevention and Control in Jails, Prisons, and Detention Centers

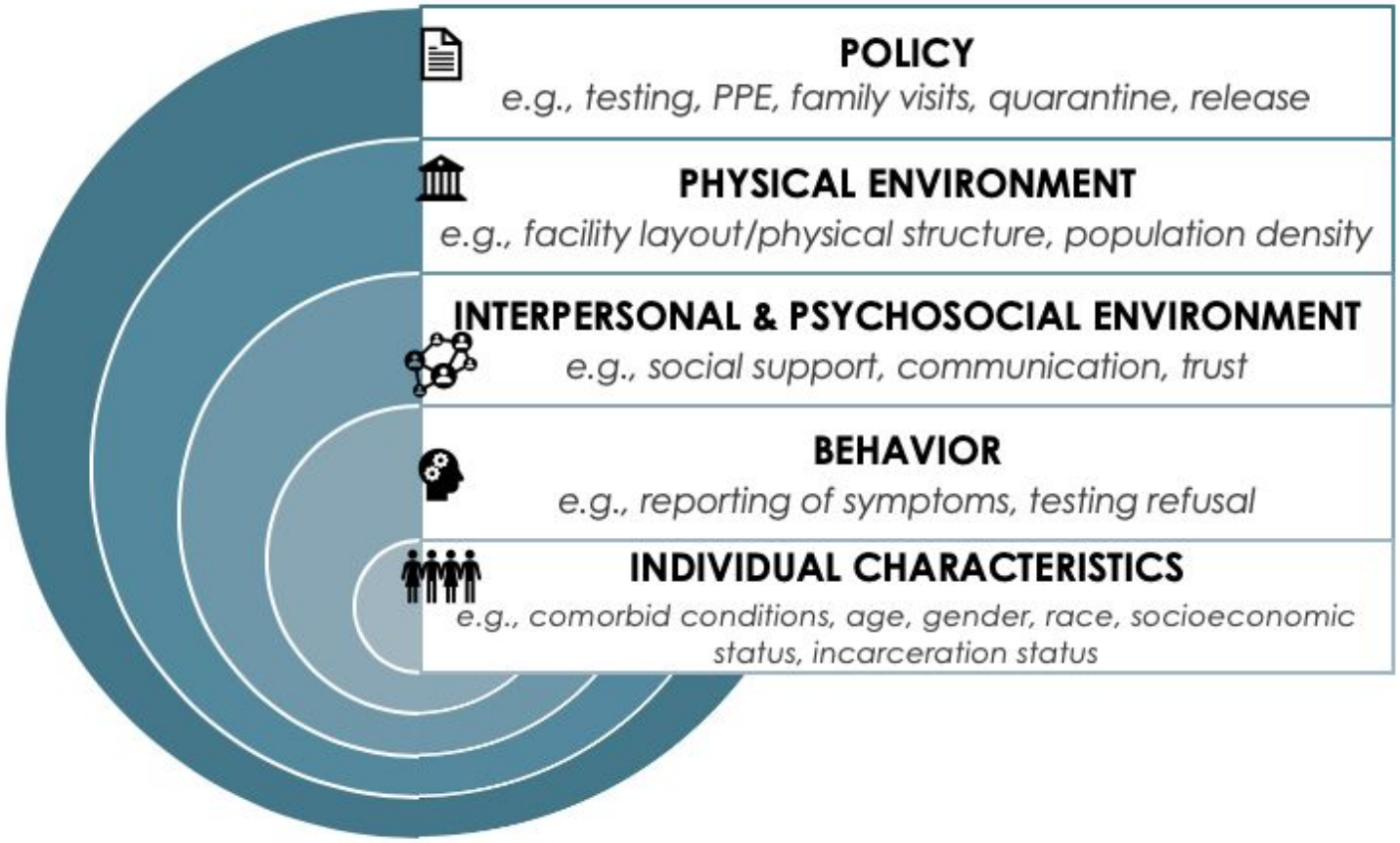
The U.S. Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), UCSF Amend, and others have issued recommendations for COVID-19 prevention and control in jails, prisons, and detention centers. For example, CDC recommends **PREPARE-PREVENT-MANAGE**:

Sample of Existing Guidance

- CDC Guidance for Jails, Prisons, Detention Facilities
- COVID-19 testing in high-density workplaces
- WHO Preparedness, prevention and control of COVID-19 in prisons
- AMEND Guidance: Release, Cohort, Test

Given this existing guidance, the following recommendations focus on evidence- based policies that are **poorly implemented** and/or areas where **existing guidance falls short.**

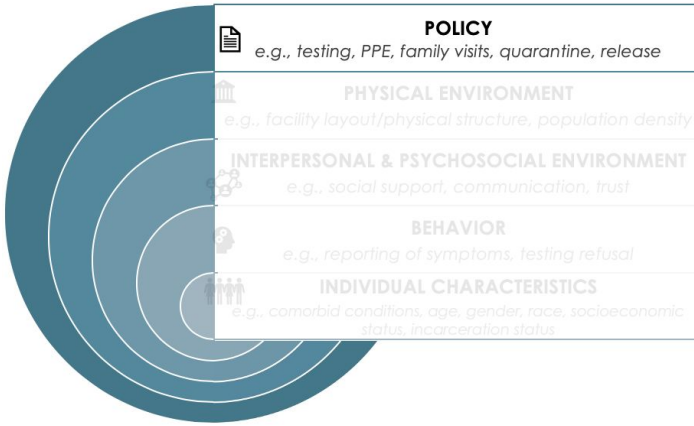
***New* and/or *Modified* Recommendations for COVID-19 Prevention:**
Based on CMC Assessment



To inform ongoing prevention and control based on our evaluation of the CMC outbreak and outbreak response, we provide **five new and/or modified recommendations for COVID-19 prevention**.

We begin with the outermost level - the **policy level** - in our framework and move through to the most granular levels on which it acts. However, each of these five recommendations reflect one or span multiple levels of this framework.

***New* and/or *Modified* Recommendations for COVID-19 Prevention:** Based on CMC Assessment



1. Decarceration is the single most effective strategy to prevent and reduce transmission.

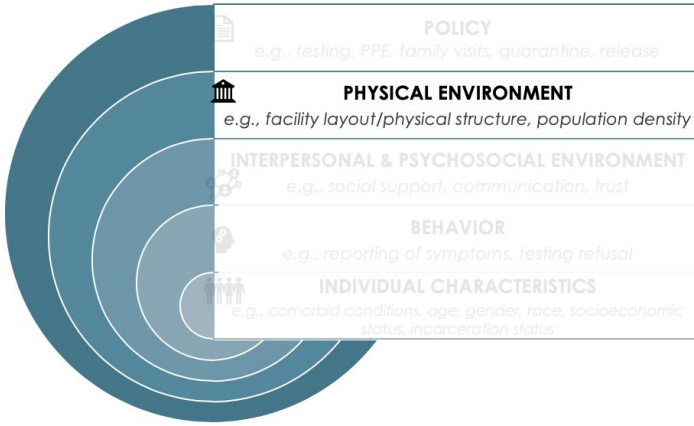
- **<u>Population density and overcrowding is a central issue.</u>**

  - ***Why is this important?*** Both population density and overcrowding influence the feasibility and effectiveness of every preparation, prevention, and management recommendation from CDC
  - Institutions must have capacity for quarantine and isolation
    - While Plata required a decrease in number of incarcerated persons to 137.5% of design capacity to be able to provide "ordinary level of care," this is insufficient to meet urgent level of care needs in response to COVID-19 *(e.g., a prison can even be below design capacity and still pose an insurmountable risk for superspreader events)*

  - ***How?*** *Urgently decarcerate population with support for re-entry.* May involve collaboration with local university dorms, hotels, etc. for quarantine prior to release.

- **<u>All subsequent recommendations rely on decarceration for effective implementation.</u>**

***New* and/or *Modified* Recommendations for COVID-19 Prevention:**
Based on CMC Assessment



2. Maximize air exchange to the fullest extent possible in all housing units.

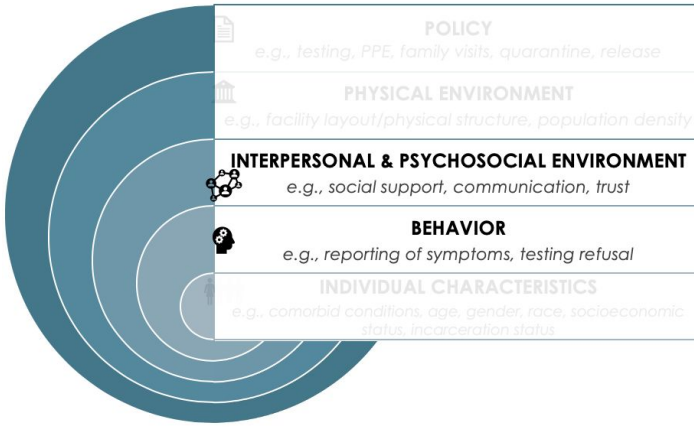
- **<u>The role of the physical space, including ventilation, in facilitating or preventing COVID-19 transmission has been dramatically underappreciated</u>**

  - ***Why is this important?*** Minimizing rebreathing of air to the maximum extent possible is essential to reduce the risk of direct and indirect COVID-19 transmission

  - ***How?***
    1. Implement decarceration strategy (slide 43)
    2. Categorize population density on basis of individuals in common air space (i.e., not separated by solid doors/walls w/ external ventilation)
    3. Channel air from the exterior through common areas then through cells/dorms to the exterior (seeking "positive pressure")
    4. Increase air exchange differentially to decrease rebreathing in least well ventilated units; Test all housing areas to determine level of rebreathing (CO_2 monitors)

- **<u>Ensure that new N95 masks (w/out one-way valves) are available and being used and frequently and effectively disinfected or replaced with new masks for both people who are incarcerated and staff/custody who have any contact with infected or exposed persons</u>**

***New* and/or *Modified* Recommendations for COVID-19 Prevention:** Based on CMC Assessment



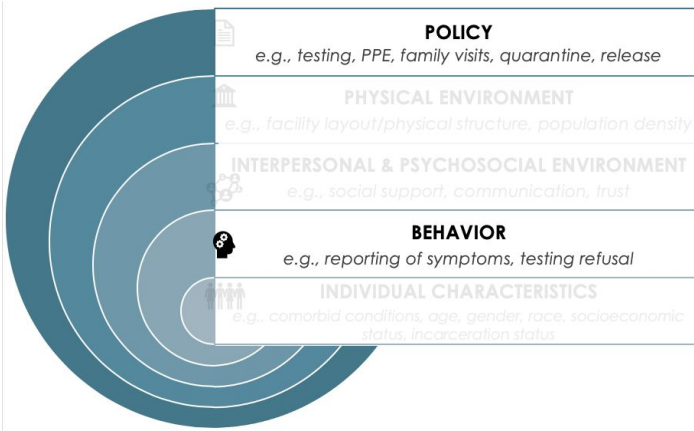
3. COVID-19 prevention/control among staff/custody must be prioritized.

- **<u>The great risk that staff/custody pose to the safety and wellbeing of incarcerated people must be clarified</u>**

  - ***Why is this important?*** Staff/custody play an outsized epidemiological role in transmission, exposing people incarcerated throughout CDCR to COVID-19 from surrounding communities and facilitating spread to other communities

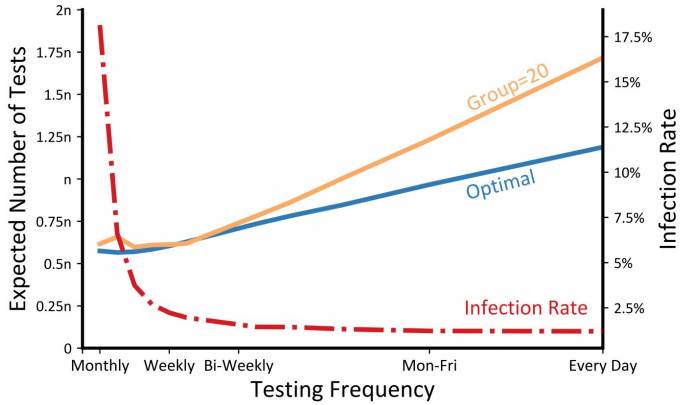
  - ***How?***
    1. Implement decarceration strategy (slide 43)
    2. Provide and require use of proper PPE and designated locations for quarantine/medical isolation (to protect incarcerated people, families of custody/staff, and surrounding communities)
    3. Minimize staff crossover between units as much as possible, *despite administrative & logistical constraints.* If crossover is unavoidable, a process of more frequent/rapid testing (prioritizing testing on the day of cross-over) should be triggered and those personnel should be closely monitored

***New* and/or *Modified* Recommendations for COVID-19 Prevention:**
Based on CMC Assessment



4. Frequent testing is the backbone of a successful response. This includes *diagnostic* testing of symptomatic individuals, *screening* of quarantined individuals, and widespread *surveillance* testing of staff/custody.

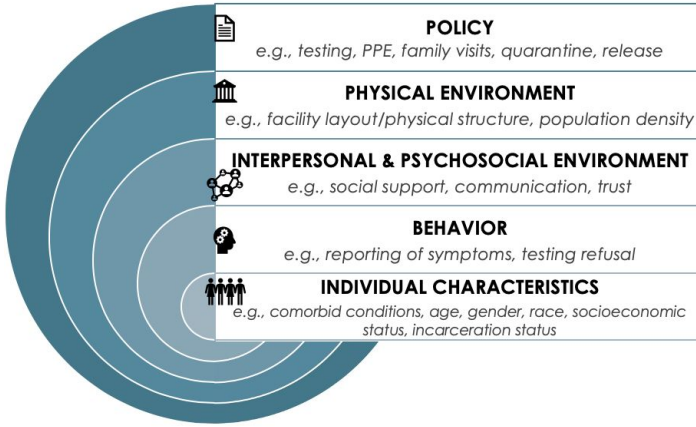
- ***Why is this important?*** Short turnaround times for results (≤24 hours) maximize efficiency, and CMC and SLO Public Health Department partnership on testing permitted evidence-based decision-making, minimizing onward COVID-19 transmission.
- ***How?***
  1. Implement decarceration strategy (slide 43).
  2. Implement system wide policies for *ongoing* staff testing for (i) prisons that have positive cases and (ii) prisons that do not have positive cases
     - Statewide institutional staff testing was announced July 3, 2020. This effort should not be one-time and must be ongoing with a frequency aligned with transmission risks.
     - For prisons that do *not* have positive cases, pooled testing offers (1) large efficiency gains when COVID-19 prevalence is low, and (2) an opportunity to rapidly detect an outbreak.
     - Implement sewage testing when possible
  3. Implement serial testing of negative and positive cases in high-density workplaces (CDC, June 13th, 3-day intervals). This has been critical to meet urgent need in other prison outbreaks (MMWR, July 3, w/ testing on days 1, 4, and 14).



NOTE: Increased frequency of testing lowers infections with fewer additional tests using pooled testing; however, this works best when COVID-19 prevalence is low. Expected numbers of tests needed are plotted based on testing frequency for a group size of n=20 (orange) and an optimal group size (blue). Rate of COVID-19 infections decreases when testing frequency is increased (red).

Source: Augenblick N, Kolstad JT, Obermeyer Z, Wang A. Group testing in a pandemic: The role of frequent testing, correlated risk, and machine learning. *NBER Working Paper No. 27457*.

New and/or *Modified* Recommendations for COVID-19 Prevention:
Based on CMC Assessment



5. Prioritize the health, wellbeing, and dignity of incarcerated persons through support for emotional and psychological needs and continuous communication through trusted avenues.

- ***Why is this important?*** People in prisons are already deprived of liberty, exacerbating health and wellbeing challenges associated with imposition of further restrictive measures and loss of privileges (e.g., related to COVID-19, as well as other physical and mental health outcomes).

- ***How?***
  1. Implement decarceration strategy (slide 43)
  2. Rely on people incarcerated throughout CDCR as thought partners by engaging directly through trusted avenues (Inmate Councils) regarding policy/procedural changes
  3. Formation of Family Councils to build trust and confidence and to review and advise on strategies
  4. Continuous provision of resources to support the health and well-being of people incarcerated throughout CDCR
     a. Maintain programming (e.g., regular healthcare provisions, library, educational programs, etc.)
     b. Given baseline restrictions of prison environment, if there is any hope to reduce adverse short- and long-term physical and mental health outcomes associated with quarantine or medical isolation provide access to personal effects and free phone calls, free access to personal tablets with movies, increased access to free canteen items, and daily opportunities for yard time

Sources: Amend's COVID in California Prisons Program. Urgent Memo, COVID-19: San Quentin Prison. https://amend.us/wp-content/uploads/2020/06/COVID19-Outbreak-SQ-Prison-6.15.2020.pdf
Preparedness, prevention, and control of COVID-19 in prisons and other places of detention: Interim guidance. World Health Organization. Regional Office for Europe. (March 15 2020)[Accessible at: https://www.euro.who.int/__data/assets/pdf_file/0019/434026/Preparedness-prevention-and-control-of-COVID-19-in-prisons.pdf?ua=1s]

Critical Areas of Uncertainty / Need for Future Work

- **Improve air exchange**: How can air exchange be maximized by improving ventilation, utilizing existing air flow systems, opening windows and doors, and leveraging other creative options?
    - Utilize CO_2 monitors in common spaces to identify where air exchange is poor

- **Cohorting**: Are there strategies that circumnavigate Union regulations and leadership hierarchies such that staffing plans can adhere to the cohorting model needed to reduce risk of transmission?
    - E.g., implementing decarceration strategy can also reduce risk of COVID-19 spread posed by (1) volume of staff entering prison daily; (2) staffing shortages; and (3) lack of staff cohorting

- **Quality of Life**: What are the associated physical/mental health consequences (and the relative transmission risks, if applicable) of various implementation models:
    - E.g., halting family visits, free video communication alternatives
    - E.g., halting outdoor time, organized sports, programming

- **Health Communication**: What are the best ways to engage with staff/custody to share COVID-19 information about their own health while simultaneously emphasizing their outsized epidemiologic role in bridging exposure risk between community and incarcerated populations?

- **Engagement**: How can people incarcerated throughout CDCR and their families be engaged as thought partners to provide expertise on their own healthcare needs, advise on implementation of COVID-19 prevention and control measures and distribute information?

Acknowledgments

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The Honorable Judge Jon Tigar

Berkeley Public Health

Evaluation of the April-May 2020 COVID-19 Outbreak at California Men's Colony

Appendix

AMEND
CHANGING CORRECTIONAL CULTURE

Berkeley Public Health

CMC Prevention and Control Efforts - Additional Details

CDC COVID-19 recommendation implementation (Behavior & Policy)

Modes of transmission	Facilitates prevention/control efforts	Hinders prevention/control efforts
Direct - Contact *Occurs through direct person-to-person contact*	➔ Frequent cleaning and disinfection; mask use ➔ Physically distinct buildings allowed reduced transmission risks across units within prison - enables potential for isolation and quarantine to mitigate transmission	➔ Dormitories and pods exacerbated risks because of close, prolonged contact ➔ Poor mask fit could be improved ➔ Some transfers between facilities continued ➔ Staff/custody cohorting could not be mandated ➔ Daily volume of staff/custody movement in and out of facility
Direct - Droplet *Spray with larger, short-range aerosols that travel > few feet, before droplets fall*	➔ Good knowledge of mask and PPE use ➔ Social distancing measures in place (e.g., ground markers)	➔ Poor mask fit; inconsistent mask use among staff/custody ➔ Some transfers between facilities continued ➔ Staff/custody cohorting could not be mandated ➔ Daily volume of staff/custody movement in and out of facility
Indirect - Airborne *Smaller, longer range droplet (aerosols) nuclei that can suspend in the air for long periods of time and blow over great distances*	➔ Good knowledge of mask and PPE use ➔ Ability to medically isolate and quarantine in Building C5	➔ Dormitory and pods exacerbated risks because of close, prolonged contact ➔ Lack of mitigation strategies to prevent airborne risks compared to other transmission routes; strong need to improve air exchange through better ventilation and to systematically measure CO_2 levels ➔ Staff/custody cohorting could not be mandated ➔ Daily volume of staff/custody movement in and out of facility
Indirect - Vehicles *Vehicles (food, fomites) that may passively carry a pathogen*	➔ Frequent cleaning of common spaces; soap and sanitizer available for staff and people incarcerated at CMC	➔ Shared common spaces, such as stairwells and staff/custody stations, on East exacerbated risks; similarly, dormitories, pods, and common spaces exacerbated risks on West.