



CONTRA COSTA  
MENTAL HEALTH  
COMMISSION

1340 Arnold Drive, Suite 200  
Martinez, CA 94553

Ph (925) 313-9553

Fax (925) 957-5156

[cchealth.org/mentalhealth/mhc](http://cchealth.org/mentalhealth/mhc)

**Mental Health Commission  
Quality of Care Committee Meeting  
Thursday, December 16<sup>th</sup>, 2021, 3:30-5:30 pm**

**Via: Zoom Teleconference:**

**<https://cchealth.zoom.us/j/6094136195>**

**Meeting number: 609 413 6195**

**Join by phone:**

**1 646 518 9805 US**

**Access code: 609 413 6195**

**AGENDA**

- I. Call to order/Introductions**
- II. Public comments**
- III. Commissioner comments**
- IV. Chair comments**
- V. APPROVE minutes from November 18<sup>th</sup>, 2021 Quality of Care meeting.**
- VI. DISCUSS Site Visit plans for January, 2022 – March 2022**
  - Sites to visit and participants
  - Administrating site visits
- VII. CONSOLIDATE knowledge regarding Behavioral Health Services (BHS) current placement system.**
  - Identify gaps in knowledge
  - Specify questions to ask in short term and longer term
- VIII. DISCUSS research, discussion topics, needed action and guests for January 2022--March 2022**
- IX. DISCUSS potential 2022 budget needs for improving BHS's placement system, including data collection/tracking, and a possible placement optimization study**
- X. Adjourn**



The Contra Costa County Mental Health Commission is appointed by the Board of Supervisors to advise them on all matters related to the county's mental health system, in accordance with mandates set forth in the California State Welfare & Institutions Code, Sections 5604 (a)(1)-5605.5. Any comments or recommendations made by the Mental Health Commission or its individual members do not represent the official position of the county or any of its officers. The Commission is pleased to make special accommodations, if needed, please call ahead at (925) 313-9553 to arrange.

# **SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH**

Behavioral Health Bed Optimization Project

Analysis and Recommendations for Improving Patient Flow

June 2020

Dr. Anton Nigusse Bland, Director of Mental Health Reform

Lauren Brunner, MPH, Program Coordinator, Mental Health Reform

## Executive Summary

The San Francisco Department of Public Health (DPH), like most other health systems in the world, is challenged to consistently match its behavioral health bed supply with the demand for services across the spectrum of care. The advantages of a system with optimized bed capacity are significant; patients get the care they need when they need it, the system benefits when resources are used efficiently, and investments have the greatest impact.

In early 2020, through the financial support of Tipping Point Community, the DPH Mental Health Reform team engaged a simulation modeling vendor, Mosimtec, to answer this most pressing question: *How many beds are needed in each behavioral health bed category to maintain consistent patient flow for adult clients in San Francisco with zero wait time?*

Through an in-depth analysis of patient placements in nearly 1,000 beds in the DPH behavioral health system of care in Fiscal Year 2018-2019, bed simulation modeling offered quantitative recommendations for improving patient flow. Furthermore, the Mental Health Reform team, through discussions with subject matter experts, contemplated additional considerations for behavioral health bed investments.

### Summary Recommendations:

1. Invest in **additional bed capacity** in the following categories of care:
  - a. Locked Subacute Treatment
  - b. Psychiatric Skilled Nursing Facilities
  - c. Residential Care Facilities, aka Board and Care
  - d. Residential Care Facilities for the Elderly
  - e. Mental Health Residential Treatment (12-month programs)
2. Complement all **behavioral health bed investments one-to-one with long-term housing placements** such as Permanent Supportive Housing or Residential Care Facilities, to better serve the high volume of people experiencing homelessness who use the system.
3. **Address the unique needs of specialized populations** who commonly encounter longer wait times, including but not limited to monolingual non-English speakers, people with criminal justice involvement, and patients who are non-ambulatory.
4. Create a **robust wait time and patient placement data-tracking system** to better understand the impact of operational barriers on patient wait time.
5. Invest in facilities with **fixed beds dedicated for use by DPH clients** rather than shared with other health systems. Currently DPH does not have fixed beds set aside for its patients at a number of facilities, challenging its exercise to plan and place patients in a timely manner.
6. **Repeat bed simulation annually** to understand trends and inform long-term planning, mitigate data limitations encountered in this project, and explore other interventions that would improve patient experience.

## Background

Managing behavioral health beds – how many a system of care needs to serve its clients – is a consistent challenge for healthcare systems worldwide. A mismatch of bed capacity to demand has significant implications for both client health outcomes and a healthcare system’s bottom line. A system with capacity that matches demand is one that provides optimal patient “flow.” In an optimized system, patients flow freely between levels of care according to their clinical health needs rather than system constraints. In San Francisco, where the Department of Public Health (DPH) serves nearly 30,000 behavioral health clients per year, highly variable bed demand, persistent bed constraints, and inconsistent data collection prevent DPH from comprehensively understanding bed capacity needs and optimizing patient flow.

In Fiscal Year 2018-2019 (FY1819), DPH provided behavioral health care to people in more than 2,000 beds across a continuum from high acuity (e.g. Acute Inpatient Psychiatry) to low acuity (e.g. Hummingbird Psychiatric Respite).<sup>1</sup> As the behavioral health needs of the population shift with time, the demand for services similarly shifts, further complicating the need to appropriately finance and provide services for clients. Various previous reports evaluating DPH’s behavioral health system, including the *BHS Performance Audit* (BLA, 2018) and *Homelessness and Behavioral Health* (JSI-Tipping Point, 2019), have called for improvements in patient wait times, investments in additional beds, and data to quantify and qualify capacity needs.

In early 2020, the Mental Health Reform team identified an innovative solution to its behavioral health bed optimization challenge: bed simulation modeling. Bed simulation modeling has been used internationally as a risk-free strategy for quantifying demand and identifying the impact of novel allocations of treatment beds on patient flow. Recent studies have concluded that using historical, operational data in a simulation model can help identify the appropriate type and number of beds required in public behavioral health systems.<sup>2</sup>

## Methods

Through the financial support of Tipping Point Community, DPH engaged an experienced simulation modeling vendor, Mosimtec, to produce a mathematical model that would answer the key question: *How many beds are needed in each behavioral health bed category to maintain consistent patient flow for adult clients in San Francisco with zero wait time?* To answer this question, the model used FY1819 billing data of more than 25,000 admissions to mental health and substance use residential programs (greater than 24-hour stays) and urgent care settings (Psychiatric Emergency Services at Zuckerberg San Francisco General, Psychiatric Urgent Care, and Sobering Center). The data incorporated the demographics of the patients admitted to these care settings, including gender, age, race and ethnicity, and housing status. The analysis also considered the transitions of individuals across the behavioral health care continuum. The analysis

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<sup>1</sup>An overview of the bed categories and counts is provided in the Appendix. A subset of 1,000 of these beds was included in the analysis due to data availability.

<sup>2</sup>La et al. “Increasing Access to State Psychiatric Hospital Beds: Exploring Supply-Side Solutions.” *Psychiatric Services*, 67:5, May 2016, 523-528.  
Devapriya et al. “StratBAM: A Discrete-Event Simulation Model to Support Strategic Hospital Bed Capacity Decisions.” *J Med Syst*, 39:130, 2015, 130.  
Yin et al. “Applying Simulation Modeling to Quantify the Impact of Population Health and Capacity Interventions on Hospital Bed Demand” *Proceedings of the 2018 IISE Annual Conference*, 2018.

was not able to calculate “true” demand; that is, people who attempted to receive services but were unsuccessful in doing so. This limitation is considered in more detail in the Discussion section.

To ensure the input data would generate model results that accurately reflect the real-world system, the Mental Health Reform team worked closely with Mosimtec and City subject matter experts to verify that the data provided were complete and that preliminary outputs of the analysis were consistent with operational experience.

## Results

The results from the simulation model are presented as “input analysis” – detailed information about how DPH’s system of behavioral health beds operated in FY1819 – and “output analysis” showing how the system functions in hypothetical scenarios.

**Input Analysis:** The input analysis provides critical information about how and by whom the behavioral health system was utilized in FY1819. More than 7,000 individuals accounted for more than 25,000 admissions in the fiscal year at nearly 1,000 different bed placements. *Table 1* provides a summary analysis of the characteristics of the patients who used behavioral health beds in FY1819; people experiencing homelessness represent a significant share. Males experiencing homelessness were the most common patient demographic to admit to the

*Table 1: Characteristics of Patients Admitted to nearly 1,000 DPH Behavioral Health Beds FY1819*

Characteristic		Number of Unique Patients <sup>3</sup>	Percent of Total Unique Patients
Homelessness <sup>4</sup>	Yes	4,140	68%
	No	1,955	32%
Gender	Male	4,032	66%
	Female	1,763	29%
	Other	300	5%
Race/Ethnicity	White	2,015	33%
	Black/African American	1,434	24%
	Latino/a	720	12%
	Asian/Pacific Islander	359	6%
	Other/Not Stated	1,567	26%
<b>Total</b>		<b>6,095</b>	<b>100%</b>

system. A disproportionate share of Black/African Americans utilized the system, representing 24 percent compared to 6 percent of the population of San Francisco. In future reports, DPH will recommend ways to address the equity issues highlighted by this analysis.

The input analysis also helped visualize where the system is currently overburdened, by revealing the utilization of beds in each category (for programs with fixed bed counts).<sup>5</sup> Utilization is calculated as the ratio of bed days occupied, divided by bed days available.<sup>6</sup> Due to limitations in the input data, utilization

<sup>3</sup> An additional 1,387 identified clients did not have demographic information to include in this analysis.

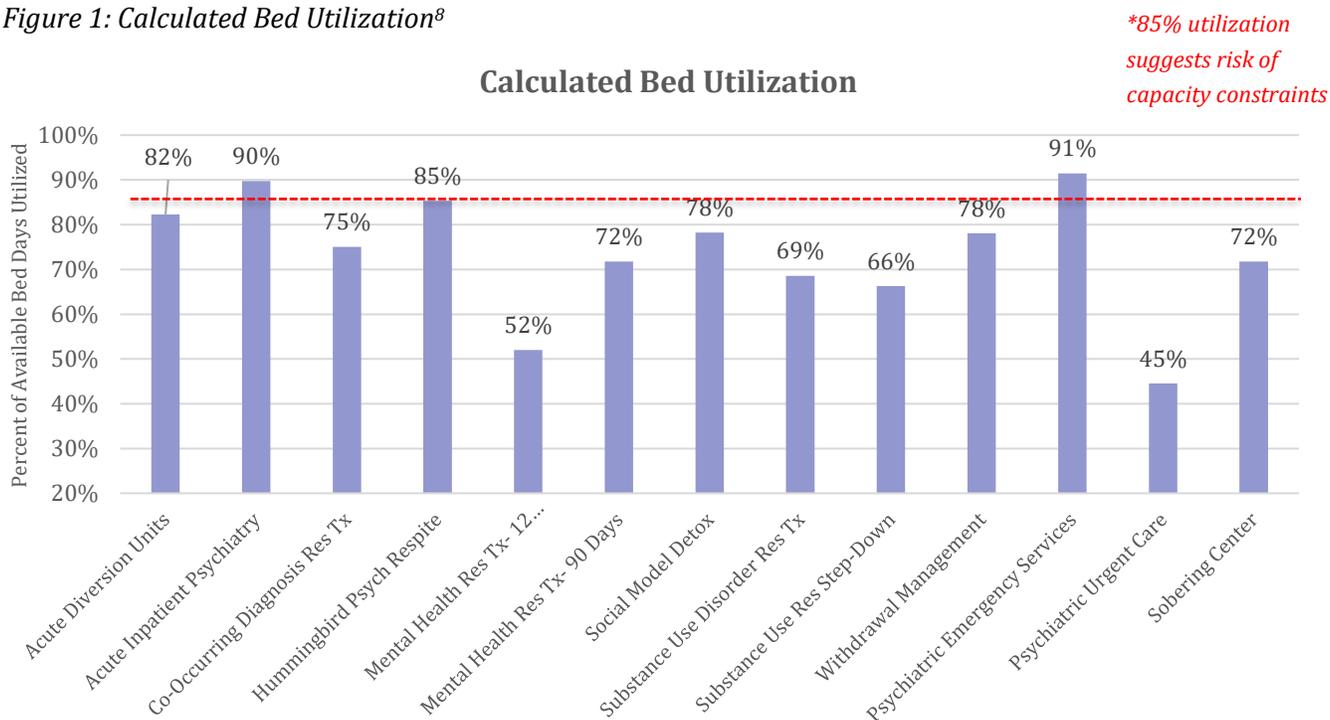
<sup>4</sup> Homelessness defined by DPH Coordinated Care Management System (CCMS). CCMS defines people as experiencing homelessness in the fiscal year if they either: 1) utilize a City service that indicates housing instability, for example, a City shelter, or 2) self-report homelessness while accessing health care services.

<sup>5</sup> Most of DPH-funded behavioral health beds are contracted annually at a “fixed” bed count. Other beds are purchased individually as needed and as budget and facilities allow.

<sup>6</sup> Bed utilization calculations relied on bed counts provided by the DPH Bed Inventory.

calculations for certain bed categories likely underrepresent the true demand on these services. These categories include Sobering Center, Psychiatric Urgent Care, and Mental Health Residential Treatment 12-month programs. These limitations are detailed, and adjusted as needed, in the Discussion section of this report. Utilization calculations of over 85 percent indicate a care setting that is at risk of being capacity-strained.<sup>7</sup> Using this rule, *Figure 1* demonstrates the categories with potential bed capacity shortages.

Figure 1: Calculated Bed Utilization<sup>8</sup>



**Output Analysis:** The model then created a hypothetical scenario to identify bed capacity adjustments that would improve patient flow by decreasing patient wait times. In general, waiting time experienced by patients in the system can be attributed to limited bed capacity and/or operational processing time (required health screenings, missed appointments, transportation, legal permissions, and other intake protocols). This analysis focused on quantifying wait time that occurs due to capacity constraints. The model considered the system holistically, identifying where patients currently wait prior to admission and then modeling the capacity needed to eliminate the observed wait times. Additionally, as outlined in the Appendix, the model considered a scenario specific to Psychiatric Emergency Services and Acute Inpatient Psychiatry.

The model carefully estimated current utilization in order to identify bed categories with wait times that occur due to capacity constraints. Then, the model simulated expansion scenarios that would reduce wait time to zero.

<sup>7</sup> Bagust A, Place M, Posnett JW. "Dynamics of bed use in accommodating emergency admissions: stochastic simulation model." *BMJ*. 1999; 319 (7203):155-158

<sup>8</sup> Locked Subacute Treatment, Residential Care Facilities, and Psychiatric Skilled Nursing do not have fixed bed counts and therefore do not have input data Bed-Day Utilization Calculations.

Table 2: Recommended Bed Counts to Decrease Patient Wait Due to Capacity Constraints

Bed Category	Average Wait Due to Capacity (Days) <sup>9</sup>	Recommended Bed Count Increase For Zero Wait	Bed Count Increase for 50% Wait Time Reduction
Locked Subacute Treatment	62	31	20
Psychiatric Skilled Nursing Facilities	121	13	8
Residential Care Facility aka Board and Care	60	31	13
Residential Care Facility for the Elderly	44	22	9

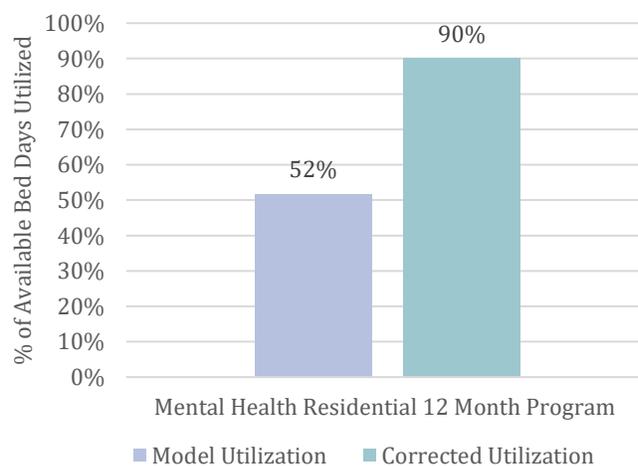
Table 2 displays the four bed categories the model identified as having wait times greater than one day. For each of these bed categories with wait times, the model then recommended a bed count increase that would reduce wait time to zero in order to create optimal flow. The table also provides an estimate for halving current waits.

## Discussion

The model results provide substantial information for improving operations and recommending investments. Because each recommendation to increase capacity in identified bed categories has a different impact on patient flow and budget, the model results must be carefully evaluated in collaboration with DPH’s clinical, operational, policy, and financial leadership. Funding priorities must be accompanied by strong policy recommendations. For example, the value of increasing capacity in Locked Subacute Treatment and Psychiatric Skilled Nursing Facilities is only achieved when matched with conservatorship policies that enable efficient patient placements. Furthermore, recommendations must be refined to target populations who historically encounter more challenges in finding appropriate placements, such as people with a history of criminal justice involvement, monolingual non-English speakers, and people who are non-ambulatory.

In reviewing the model results, the Mental Health Reform team found a significant limitation in the utilization calculation for Mental Health Residential Treatment, 12-month programs. Certain bed days were excluded from the input data due to the analysis’ inclusion criteria: admissions that occurred within the fiscal year. For Mental Health Residential Treatment, this unintentionally excluded many patients who occupied beds at the start of, and well into, the reporting period. To correct for this limitation, the Mental Health Reform team considered additional billed days that were originally excluded. This had a significant impact on results. The inclusion of the previously excluded data resulted in a report of 90 percent utilization of these beds, as

Figure 2: Adjusted Utilization Using All Billed Days



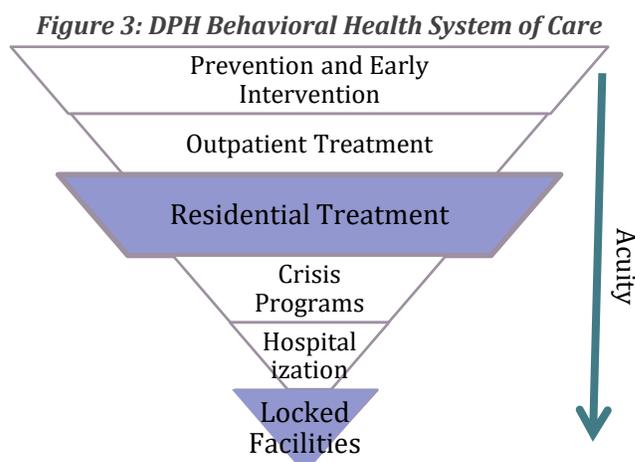
<sup>9</sup> The model identified wait directly associated with the patient arrivals per day against the bed capacity. The model is not able to account for waiting time associated with processing and other operational barriers that DPH clients often encounter.

demonstrated in *Figure 2*. Because utilization of over 85 percent suggests a need for additional capacity, and due to the recommended increase at the upstream category, Locked Subacute Treatment, an additional investment of 20 Mental Health Residential Treatment 12-month beds is recommended to improve flow.

The Mental Health Reform team recommends that all investments be directed toward facilities where DPH has a fixed number of beds that are dedicated for use by its clients. Currently, many counties share contracted facilities, which often leads to delays in client placement and a lack of transparency about the length of those delays for DPH clients.

The Mental Health Reform team also recommends that, because of the high volume of people experiencing homelessness utilizing the system, each behavioral health treatment investment be paired with a similar expansion of housing options for those clients. The benefits of treatment can quickly diminish if a client is discharged without adequate housing, and waits for housing can impede flow throughout the behavioral health system.

**Contextualizing the Recommendations:** The DPH Behavioral Health System of Care is represented in Figure 3. Services range from prevention and early intervention for low-acuity patients to intensive treatment, provided in locked facilities, for the most acute patients. This analysis focused on adult residential settings, which are the bottom four categories represented in Figure 3. The results highlight two broad categories that currently bottleneck the system: residential treatment and locked facilities. The specific categories include Mental Health Residential Treatment, Locked Subacute Treatment, Psychiatric Skilled Nursing Facilities, and Residential Care Facilities (for adults and older adults). Detail on these categories and the services provided are listed in *Table 3*. In addition to identifying categories that are overburdened, the model highlighted bed categories with utilization levels and capacity that sufficiently accommodate flow in current operations. These categories include Acute Diversion Units, Substance Use Residential Treatment, and Withdrawal Management programs.



*Table 3: Programmatic Detail on Categories with Recommended Capacity Increase*

Bed Category	Description	FY1819 Bed Count <sup>10</sup>	Example Facilities
Mental Health Residential Treatment, 12-month	Residential group living program that provides treatment for managing life with mental illness, building life skills and social skills, developing positive coping strategies, pre-vocational/vocational skills, medication adherence and wellness recovery stabilization. Twelve-month programs are commonly used for patients discharging from Locked Subacute Treatment.	30	Progress Foundation Clay Street and Dorine Loso Houses

<sup>10</sup> Bed count based on FY1819 contracts for Mental Health Residential Treatment Programs (12-month) and the patient census as of April 30, 2019 for all other categories.

Bed Category	Description	FY1819 Bed Count <sup>10</sup>	Example Facilities
Locked Subacute Treatment – aka Mental Health Rehabilitation Center (MHRC) and Institute of Mental Disease (IMD)	These facilities are for clients placed on a Lanterman-Petris-Short (LPS) Conservatorship due to grave disability or on a forensic court-ordered hold. These programs provide psychosocial rehabilitation to stabilize mental illness impact on daily functioning, establish medication adherence, improve life and social skills, develop positive coping strategies, and stabilize wellness and recovery.	132	MHRC at SF Behavioral Health Center, Crestwood (SF Healing Center, Canyon Manor, Vallejo)
Psychiatric Skilled Nursing Facility	A licensed health facility, or a distinct part of a hospital, providing 24-hour inpatient care that includes physician, skilled nursing, dietary, and pharmaceutical services, and an activity program. The Psychiatric SNF specializes in treating patients with severe psychiatric disorders who cannot be safely managed in other settings. This setting can be locked or unlocked.	160	Idylwood Care Center, Crestwood (Fremont, Stevenson, Stockton), Medical Hill
Residential Care Facilities (RCF)– also known as Board and Care	RCFs offer group living for people with disabilities (either medical or psychiatric) who need help with meal preparation, medication monitoring, and personal care, but do not need daily acute medical care. Individual RCFs may specialize in certain clinical areas such as mental health rehabilitation and geriatrics.	305	United Family Home Care, South Van Ness Manor, BMB Sunshine Residential Care
Residential Care Facilities for the Elderly (RCFE)	RCFEs generally offer group living for seniors (with either medical or psychiatric needs) who need help with meal preparation, medication monitoring, and personal care, but do not need daily acute medical care. Individual RCFEs may specialize in certain clinical areas such as mental health rehabilitation and geriatrics.	267	Crestwood Hope, Victoria Manor, Country Place Assisted Living

When conducting the cost-benefit analysis of adding beds at different levels of care, it is important to understand how the system functions dynamically as a continuum. Investments at each level of care impact not only that bed category, but also the upstream and downstream bed categories. For example, if DPH follows the recommendation to increase bed capacity in Locked Subacute Treatment, the upstream bed categories Acute Inpatient Psychiatry and Psychiatric Emergency Services will be able to release the patients waiting for that downstream category. Furthermore, choosing to increase capacity only at Locked Subacute Treatment could result in a new bottleneck if housing or step-down programs are not secured for patients discharging from that care level.

Because of the high volume of people experiencing homelessness utilizing the system, all temporary placement investments (e.g. Locked Subacute Treatment) should be complemented one-to-one by investments in permanent placements such as Permanent Supportive Housing or Residential Care Facilities. Without a pathway to reliable housing upon discharge, patients who are experiencing homelessness will struggle to maintain the benefits of treatment.

**Cost Analysis:** DPH should identify which sequence of investments would have the biggest impact on health outcomes and budget, while maintaining focus on what is operationally feasible. The Mental Health Reform team will work with DPH operational subject matter experts and the Controller’s Office, which

completed a flow analysis project for DPH in 2019, to create a decision-making framework for prioritizing investments. Once prioritized and sequenced, these recommendations should be incorporated into San Francisco’s budgeting and planning processes, including in the allocation of 2,000 placements that Mayor London Breed has committed to create for people experiencing homelessness and behavioral health issues.

Because the system is financially constrained, the prioritization process must consider the marginal cost benefit of adding a bed to one category versus another. *Table 4* outlines the associated operating costs for the bed increases suggested by the model. An additional cost would be associated with any start-up required, such as building acquisition.

*Table 4: Cost of Recommended Bed Investments*

Bed Category	Annualized Median Cost Per Bed	Recommended Bed Increase	Annual Cost Recommended Bed Increase
Locked Subacute Treatment	\$177,208	31	\$5,493,433
Psychiatric Skilled Nursing Facility	\$106,580	13	\$1,385,540
Residential Care Facilities aka Board and Care	\$31,390	31	\$973,090
Residential Care Facilities for Elderly	\$38,873	22	\$855,195
Mental Health Residential Treatment (12-month)	\$97,127	20	\$1,942,530
<b>Total</b>	<b>N/A</b>	<b>117</b>	<b>\$10,649,788</b>

It is important to also consider the anticipated cost savings that result from relieving the bottlenecks occurring in high-cost care settings. For every patient who spends “extra” time – beyond what is clinically necessary – in Acute Inpatient Psychiatry while waiting for a lower level of care, DPH is unable to bill Medi-Cal for the service. These days spent waiting are therefore a burden for both the client’s recovery and for the financial health of the organization. By calculating the annual revenue potential lost due to this issue, we can balance the cost of the bed investments against the revenue gained by using Acute Inpatient Psychiatry resources for patients who clinically need the service. *Table 5* demonstrates the potential revenue recovery and net difference from the recommended investment using this model.

*Table 5: Potential Revenue Recovery and Net Cost Difference*

Bed Category	Admin Days Inpatient Psychiatry	Potential Revenue Recovery*	Annual Cost Recommended Bed Increase	Annual Net Cost Difference
Locked Subacute Treatment	4,131	\$4,361,964	\$5,493,433	(\$1,131,469)
Psychiatric Skilled Nursing Facility	1,060	\$1,694,060	\$1,385,540	\$308,520
Residential Care Facilities aka Board and Care	1,351	\$2,159,128	\$973,090	\$1,186,038
Residential Care Facilities for Elderly	289	\$461,871	\$855,195	(\$393,324)
Mental Health Residential Treatment (12-month)	531	\$858,217	\$1,942,530	(\$1,084,313)

\*DPH receives \$1,598.17 per day for acute level patients at ZSFG Acute Inpatient Psychiatry. The revenue recovery calculation assumes the non-billable days in FY1819 convert to acute patient bed days. For patients waiting for Locked Subacute Treatment, DPH can bill Medi-Cal for administrative days at \$542.26 per day, making the revenue recovery per day \$1,055.91. For patients waiting for other bed categories listed, DPH receives no reimbursement from Medi-Cal.

**Limitations:** The information used for this analysis is limited by two main factors. First, DPH does not have a centralized data system to capture admissions for all 2,000 of its behavioral health beds. In order to include the full continuum of care in the study, a significant effort was made to unify the data. However, the project was limited by the source data systems and their disparate methods for data management. Second, DPH used only one fiscal year of admissions to these beds. The decision to use one year of data balanced the advantage of relying on recent data and fixed bed counts against the disadvantage of undercounting information related to programs with long lengths of stay (e.g. 12-month Mental Health Residential Treatment, Residential Care Facilities, Psychiatric Skilled Nursing Facilities, Substance Use Residential Step-Down). The Mental Health Reform team worked with the DPH subject matter experts and Mosimtec to mitigate the impact of these limitations on the results of the project. As shown earlier in the discussion section, the limitation affiliated with long-stay programs was corrected in the case of Mental Health Residential Treatment through post-modeling analysis.

Furthermore, while the model can estimate wait times based on input data, this wait-time calculation is limited and not fully representative of reality. For example, in the real system, certain patients may be redirected or choose alternative care settings when wait times are not tolerated by the system or the patient. In this way, it is likely that wait times, and therefore capacity needs, are underrepresented in this exercise. Additionally, the model failed to identify wait times in bed categories where clients are known to wait in practice, for example, Mental Health Residential Treatment. This result is attributable to a few factors; there is no data system concretely tracking wait time, and wait time in the current system could be fully due to processing time and operational barriers rather than capacity shortages. These possibilities and limitations will be fully evaluated by the Mental Health Reform team in collaboration with Behavioral Health Services as a follow-up to this report. Critical to this follow-up is the development of a robust wait time and patient placement data-tracking system. This system will enable a better understanding of the impact of operational barriers on patient wait time.

## Conclusion

The Behavioral Health Bed Optimization Project offers new and important insights for expanding the current capacity and improving the flow of behavioral health beds in San Francisco. In addition to recommendations for bed investments, the model illuminates who uses the complex system of care, and how. It also shows the limitations of current data systems. In summary, the final recommendations from this project include:

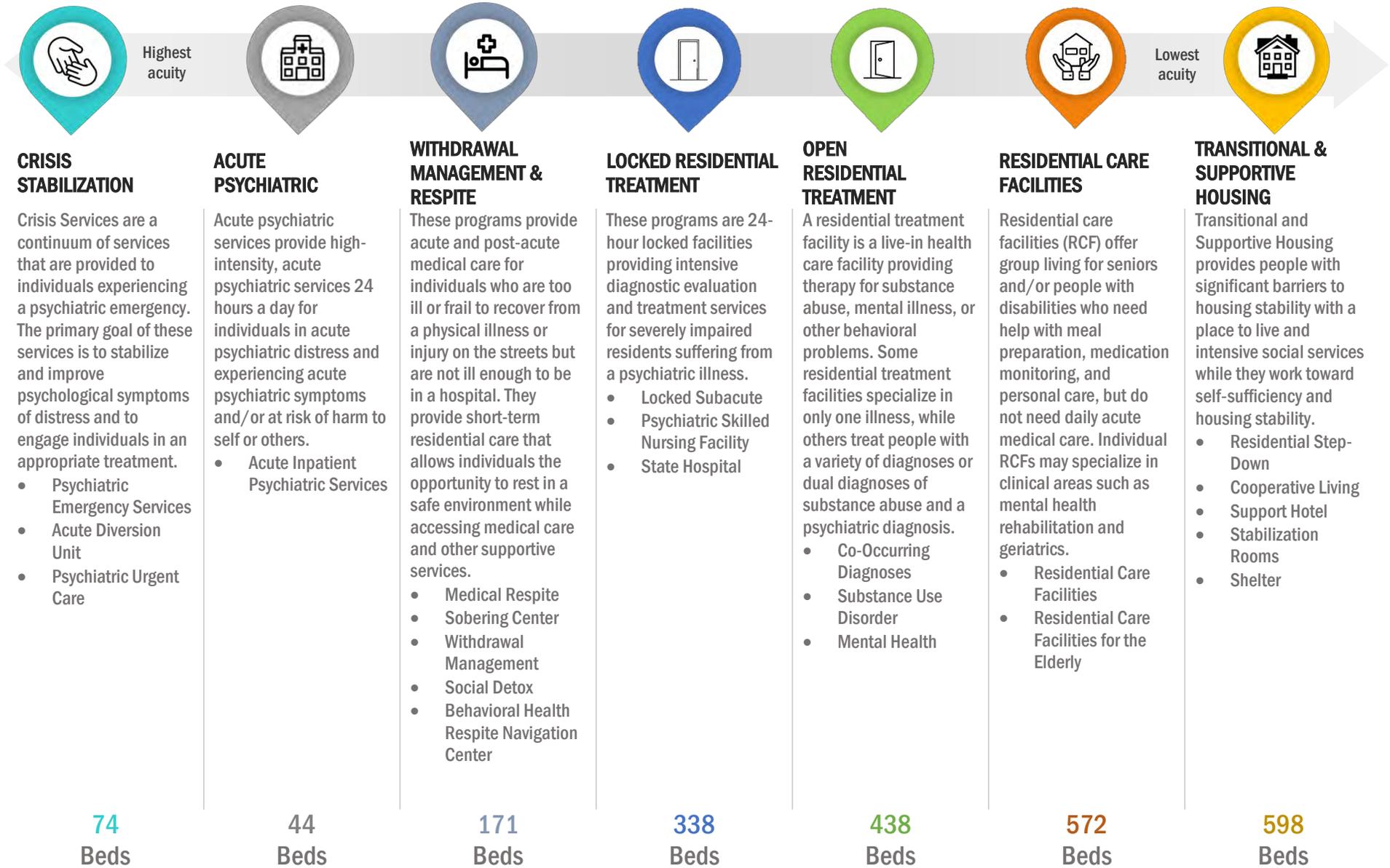
1. Invest in **additional bed capacity** in the following categories of care:
  - a. Locked Subacute Treatment
  - b. Psychiatric Skilled Nursing Facilities
  - c. Residential Care Facilities, aka Board and Care
  - d. Residential Care Facilities for the Elderly
  - e. Mental Health Residential Treatment (12-month programs)
2. Complement all **behavioral health bed investments one-to-one with long-term housing placements** such as Permanent Supportive Housing or Residential Care Facilities, to better serve the high volume of people experiencing homelessness who use the system.

3. **Address the unique needs of specialized populations** who commonly encounter longer wait times, including but not limited to monolingual non-English speakers, people with criminal justice involvement, and patients who are non-ambulatory.
4. Create a **robust wait time and patient placement data-tracking system** to better understand the impact of operational barriers on patient wait time.
5. Invest in facilities with **fixed beds dedicated for use by DPH clients** rather than shared with other health systems. Currently DPH does not have fixed beds set aside for its patients at a number of facilities, challenging its exercise to plan and place patients in a timely manner.
6. **Repeat bed simulation annually** to understand trends and inform long term planning, mitigate data limitations encountered in this project, and explore other interventions that would improve patient experience.

Despite the limitations mentioned in this analysis that likely contribute to an underestimation of capacity needs, the Mental Health Reform team is confident that the bed categories identified are consistent with the greatest need. A series of investments that include increasing capacity in high-demand bed categories downstream from Acute Inpatient Psychiatry, coupled with Permanent Supportive Housing units for the high proportion of patients experiencing homelessness, will undoubtedly improve flow and decrease cost and bottlenecks at upstream bed categories. The bed simulation methodology should be replicated to further interrogate the information available, mitigate the data limitations, and explore other interventions that would improve patient experience. Because the health care system and client needs are in constant evolution, the methodology is most effective if used at least annually. The exercise should therefore become a standard operating procedure for DPH to consistently improve health outcomes and reap financial rewards.

# Appendix:

## SFDPH Behavioral Health Beds FY 2018-19



**Additional Model Results:**

**Scenario 2 Results:** In Scenario 2, the model adjusted historical data using the assumption that all patients who stay more than 24 hours in Psychiatric Emergency Services do so because of a lack of capacity in the “next stop” treatment location, Acute Inpatient Psychiatry, at Zuckerberg San Francisco General (ZSFG). Subsequently, the model calculated the number of beds needed to prevent this wait time. In this scenario, the model identified that in order to prevent bottlenecks at Psychiatric Emergency Services, the bed count at Acute Inpatient Psychiatry would need to be increased significantly (61 percent). However, because investments made in downstream bed categories have been proven to reduce or even eliminate bottlenecks upstream, DPH, in discussion with the experts at Mosimtec, decided against including this result as a final recommendation. This approach will be tested and analyzed when the bed simulation modeling exercise is repeated annually.

*Table 6: Scenario 2 Recommended Bed Counts*

Bed Category	Baseline Bed Count	Recommended Bed Count	Percent Increase
ZSFG Acute Inpatient Psychiatry	44	71	61%

**Validity Reports:** The following tables provide detail on the outputs of the model compared with historical input data. These reports support the conclusion that the model reflected reality within a reasonable degree of confidence.

*Table 7: Arrivals Per Day*

Category	Calculated Input	Scenario 1 Output	% Difference
Acute Diversion Units	2.91	2.92	0%
Acute Inpatient Psychiatric Services	3.42	3.40	(1%)
Co-Occurring Diagnosis Residential Treatment	0.75	0.75	0%
Hummingbird Psychiatric Respite	1.79	1.79	0%
Locked Subacute Treatment	0.54	0.54	0%
Mental Health Residential Treatment	0.88	0.88	0%
Option - St Francis	0.81	0.81	0%
Psychiatric Emergency Services	21.94	21.95	0%
Psychiatric Skilled Nursing Facilities	0.21	0.22	5%
Psychiatric Urgent Care	7.07	7.06	0%
Residential Care Facility aka Board and Care - In County	0.27	0.27	0%
Residential Care Facility aka Board and Care - Out of County	0.12	0.11	(8%)
Residential Care Facility for the Elderly - In County	0.23	0.23	0%

Category	Calculated Input	Scenario 1 Output	% Difference
Residential Care Facility for the Elderly - Out of County	0.16	0.16	0%
Sobering Center	18.03	18.03	0%
Social Model Detox	2.88	2.87	0%
Substance Use Disorder Residential Treatment	3.40	3.40	0%
Substance Use Residential Step-Down	0.65	0.65	0%
Withdrawal Management	2.12	2.12	0%

Table 8: Average Length of Stay (Days)

Category	Calculated Input	Scenario 1 Output	% Difference
Acute Diversion Units	13	12	(8%)
Acute Inpatient Psychiatric Services	12	11	(8%)
Co-Occurring Diagnosis Residential Treatment	52	51	(2%)
Hummingbird Psychiatric Respite	15	14	(7%)
Locked Subacute Treatment	205	203	(1%)
Mental Health Residential Treatment	65	64	(2%)
Option - St Francis	8	8	0%
Psychiatric Emergency Services	1	1	0%
Psychiatric Skilled Nursing Facilities	106	99	(7%)
Psychiatric Urgent Care	1	1	0%
Residential Care Facility aka Board and Care - In County	272	268	(1%)
Residential Care Facility aka Board and Care - Out of County	155	143	(8%)
Residential Care Facility for the Elderly - In County	195	185	(5%)
Residential Care Facility for the Elderly - Out of County	154	142	(8%)
Sobering Center	0	0	0%
Social Model Detox	6	6	0%
Substance Use Disorder Residential Treatment	51	50	(2%)
Substance Use Residential Step-Down	99	97	(2%)
Withdrawal Management	10	10	0%

Table 9: Bed Utilization

Category	Calculated Input	Scenario 1 Output	% Difference
Acute Diversion Units	82%	79%	(4%)
Acute Inpatient Psychiatric Services	90%	83%	(8%)
Co-Occurring Diagnosis Residential Treatment	75%	73%	(3%)
Hummingbird Psychiatric Respite	85%	84%	(1%)
Locked Subacute Treatment	*unknown	79%	NA
Mental Health Residential Treatment	60%	52%	(13%)
Psychiatric Emergency Services	91%	82%	(10%)
Psychiatric Skilled Nursing Facilities	*unknown	86%	NA
Psychiatric Urgent Care	45%	42%	(7%)
Residential Care Facility aka Board and Care - In County	*unknown	74%	NA
Residential Care Facility aka Board and Care - Out of County	*unknown	79%	NA
Residential Care Facility for the Elderly - In County	*unknown	75%	NA
Residential Care Facility for the Elderly - Out of County	*unknown	75%	NA
Sobering Center	72%	36%	(50%)
Social Model Detox	78%	72%	(8%)
Substance Use Disorder Residential Treatment	69%	64%	(7%)
Substance Use Residential Step-Down	66%	54%	(18%)
Withdrawal Management	78%	74%	(5%)

LA COUNTY  
DEPARTMENT OF MENTAL HEALTH (DMH)  
BOARD AND CARE INITIATIVES

PRESENTED BY MARIA FUNK, PH.D.  
DEPUTY DIRECTOR,  
HOUSING AND JOB DEVELOPMENT

# OVERVIEW OF PRESENTATION

DMH Enriched Residential Care Program (DMH-ERC)

LA County COVID-19 Response in Adult Residential Facilities (ARFs) and Residential Care Facilities for the Elderly (RCFEs)

LA County DMH Board and Care Initiatives

- Bed Tracking System
- Membership Association
- Capital Improvements

Legislation in Action: Impacts of AB 1766

# LA COUNTY DMH ENRICHED RESIDENTIAL CARE (DMH-ERC)

- Program was created to provide funding for DMH clients diagnosed with Serious Mental Illness with higher acuity who would benefit from the higher level of care offered by Board and Care facilities such as care and supervision
- DMH-ERC provides funding to support clients living in Board and Care facilities including:
  - Paying the full Board and Care Rate of \$1,079.34 plus Personal and Incidental (P&I) funding of \$138 for clients who have no income at the time of referral
  - Providing an Enhanced Services Rate of \$1,000 on average designed to support clients with higher acuity who need additional services and/or have complex conditions that make it difficult to find housing without the additional funding
    - This rate may be adjusted higher for clients with specialized needs such as memory care, incontinence care or other more high-risk behavioral concerns
    - The Enhanced Services Rate also serves to support facilities that are struggling financially and need the additional funding in order to stay in business and continue serving our clients
- All clients are enrolled in ongoing mental health services through DMH, ensuring that facilities have clinical support around client challenges

# COVID-19 RESPONSE IN ARFs AND RCFEs

- In LA County, DMH, in collaboration with the LA County Department of Health Services (DHS), LA County Department of Public Health (DPH), Community Care Licensing Division (CCLD) and the Veterans Administration (VA), has been at the forefront of COVID-19 response in licensed facilities by providing training, technical assistance and telephonic response to outbreaks
- All licensed facilities in LA County were prioritized for vaccination through the Federal Pharmacy Partnership, which provided three onsite vaccination clinics through Walgreens and CVS Pharmacies
  - Based on a survey conducted by DPH, 80% of facility staff and 85% of facility residents have been vaccinated
  - With high vaccination rates, there has been a drastic reduction in COVID-19 outbreaks in facilities over the last few months
- Though there has been a decline in outbreaks, DMH continues to use a survey monitoring system to quickly address outbreaks and other COVID-19 related concerns as they arise
- Through this response system, bi-weekly webinars were developed
  - As COVID-19 has slowed, these webinars continue and have broadened in scope to cover a range of topics related to best practices
  - These webinars now provide free Continuing Education Units (CEUs) needed by administrators to maintain licensure

# LA COUNTY BOARD OF SUPERVISOR PRIORITIES

The ARF/RCFE closure crisis drew the attention of the LA County Board of Supervisors (LAC BOS)

LAC BOS has made preserving licensed facilities a Board priority and has passed several motions directing DMH and DHS to engage in work to preserve the system

This work was informed by a stakeholder process that helped the County better understand the needs of licensed facilities

Initiatives born out of this work include:

- Mental Health Resource Location Navigator (MHRLN) bed tracking tool
- A licensed residential facility membership association
- Capital Improvements Project

# MENTAL HEALTH RESOURCE LOCATION NAVIGATOR (MHRLN) BED TRACKING TOOL

- DMH developed a real-time bed tracking tool in collaboration with DHS that has real-time information about bed availability in licensed residential facilities
- MHRLN officially launched on June 10, 2021 and was introduced to service providers and administrators on that date through a joint training and demonstration
- Currently 186 facilities are included in MHRLN, 87 ARFs and 99 RCFEs
- 117 facility administrators have registered and have direct access to the system to update vacancy information in real time
- Approximately 300 case managers have registered and can use the system to find beds for clients
- Goal is to more easily find housing for clients looking for a licensed residential facility and to reduce income loss due to unfilled beds

# MEMBERSHIP ASSOCIATION

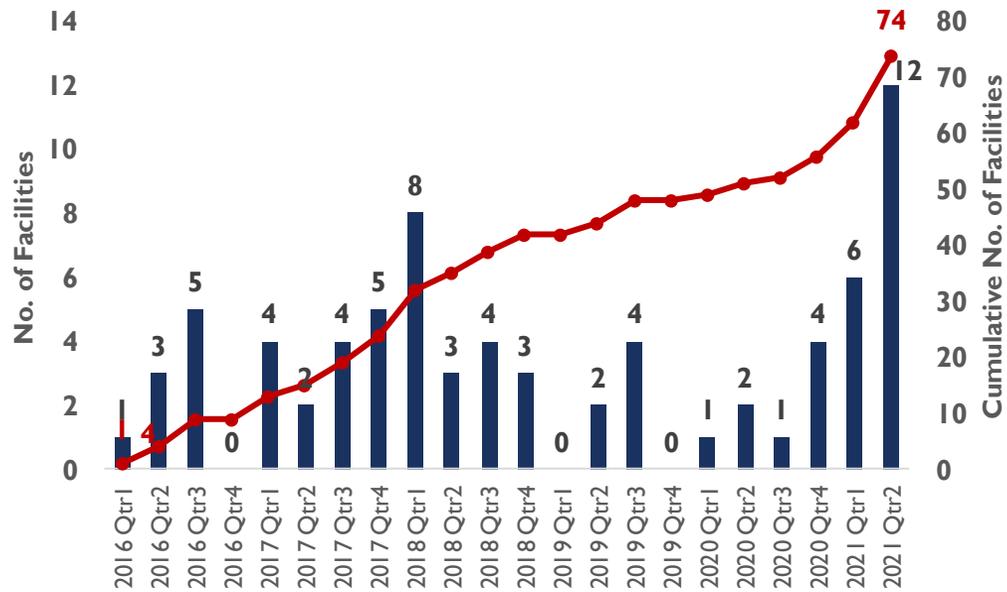
- DMH allocated \$500,000 to seed the first two years of a membership association for ARF/RCFE owners and administrators of facilities that accept low-income individuals with Serious Mental Illness, with the goal of it becoming self-sustaining by engaging facility operators to build its membership
- Association will:
  - Represent and advocate for the needs of its membership
  - Keep members up to date about legislation, funding opportunities, resources and other news related to licensed facilities
  - Host trainings and educational events free of cost for facility operators
- DMH released a Request for Proposals on February 4, 2021
- On July 27, 2021, the Board of Supervisors approved DMH's contract with the National Alliance on Mental Illness Greater Los Angeles County (NAMI GLAC) to implement the association
- NAMI GLAC developed a Steering Committee of experts/stakeholders to begin the implementation process including developing an association name, mission/vision and values, establishing an organizational structure and exploring strategies around membership recruitment
- DMH is collaborating with NAMI GLAC to encourage operators to find value in and join the association

# CAPITAL IMPROVEMENTS PROJECT

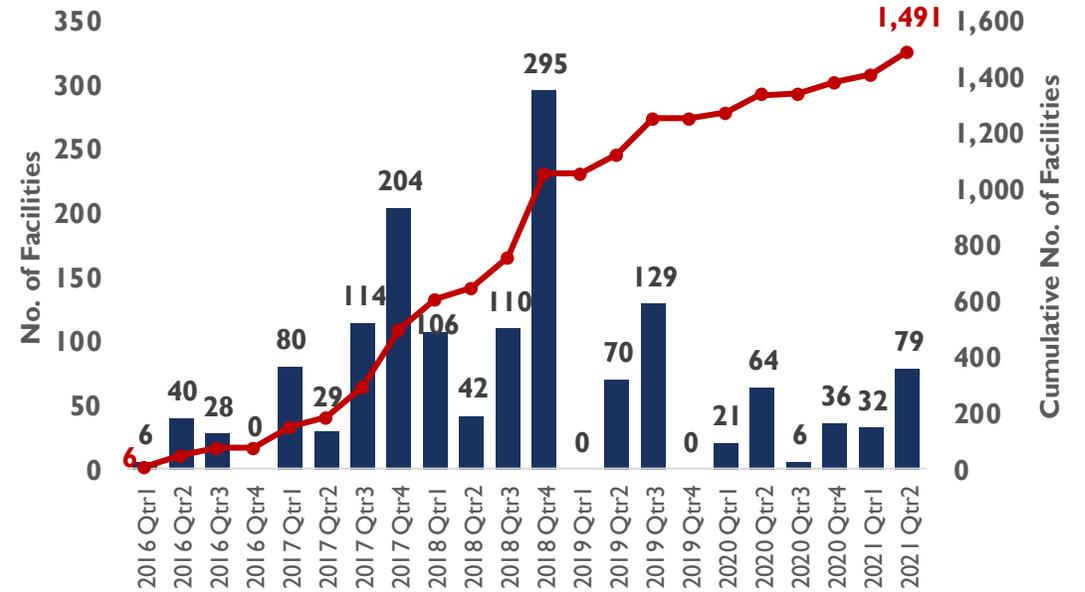
- \$11.2 million was allocated by DMH to address deferred maintenance and capital improvement needs in ARFs and RCFEs
- Additional resources of \$5 million were contributed by Cedars-Sinai and administered by California Community Foundation (CCF)
  - Funds will be used in part to provide physical needs assessments of prioritized facilities, which will identify the scope of the needed improvements and inform decisions on the allocation of the \$11.2 million
  - CCF hired Genesis LA as the project manager, and they are collaborating with Brilliant Corners to leverage their previous experience implementing alternative ownership structures for licensed facilities in the San Francisco Bay Area
  - DMH hopes to explore the potential of more sustainable operational structures for facilities in LA County
- This project, which had been on hold due to COVID-19, resumed this summer
- This work will prepare LA County for State funding for Community Care Expansion

# LA COUNTY FACILITY CLOSURES

**Figure 1. Number of Closures of Adult Residential Facilities Serving Residents with Mental Illness by Quarter - 2016 to Present**



**Figure 2. Number of Beds Lost in Adult Residential Facilities Serving Residents with Mental Illness by Quarter - 2016 to Present**



## LEGISLATION IN ACTION: AB 1766

- AB 1766 (Bloom) was co-sponsored by LA County and went into effect January 2021
  - Requires State Community Care Licensing Division (CCLD) to notify County when a facility closure occurs as well as provide a quarterly report detailing all closures
    - LA County officially started receiving these closure reports in June 2021
  - Requires CCLD to collect and provide data to Counties around which facilities accept clients with Serious Mental Illness as well as which facilities accept clients at the SSI rate
    - To date, CCLD has conducted two surveys of licensed facilities statewide

# AB 1766 DATA ANALYSIS

- This survey is required by state law and asks the following voluntary but vital questions:
  1. **“Do you or would you accept a client/resident with a serious mental disorder?”**
  2. **“Do you or would you accept a client/resident whose payment for care is the SSI/SSP Non-Medical Out-of-Home Care Payment Standard?”**
- DMH provided the most current state-mandated AB 1766 dataset to The Future Organization (TFO) who did an additional analysis on the following three slides. TFO is a consultant working with NAMI-GLAC.
- Thanks to The Future Organization for allowing us to use their slides/data

# SURVEY POPULATION AND METHODOLOGY

**CCLD surveyed 2,886 ARFs and RCFEs in Los Angeles County in multiple phases from February 2021 through July 2021.**

- The Future Organization manually filtered out survey responses from facilities that serve specific populations outside of DMH scope, such as facilities specially dedicated to clients of Regional Center and facilities serving children.
- It was discovered that CCLD had effectively conducted a **“randomized half-census”** of the Los Angeles County ARF and RCFE markets, an important statistical benchmark allowing for highly accurate estimation of the traits of the rest of the market’s populations
- CCLD’s survey attracted 593 Los Angeles County ARFs to participate, just short of 50% of the 1,203 ARFs in the County enabling high-quality statistical inference of the remaining ARF market population’s characteristics
- The CCLD survey attracted 645 Los Angeles County RCFEs to participate, just short of 45% of the 1,440 RCFEs in the County but a proportion also capable of enabling high-quality statistical inference for the rest of the market’s population

# ARF INSIGHTS EXTRAPOLATED FROM THE CCLD / ABI 766 DATASET

**Insight: How Many ARFs Do/Would Likely Accept a Resident with a Serious Mental Disorder?**  
(DMH-targeted ARFs / Los Angeles County only) (N=1,203) (Margin of error: +/- 2.9%)

**YES = 50.9%**  
**612 facilities**

**NO = 49.1%**  
**591 facilities**

**Insight: How Many ARFs Do/Would Likely Accept a Resident Whose Payment is SSI/SSP Non-Medical Out-of-Home Care Payment Standard?**  
(DMH-targeted ARFs / Los Angeles County only) (N=1,203) (Margin of error: +/- 2.9%)

**YES = 43.3%**  
**521 facilities**

**NO = 56.7%**  
**682 facilities**

# RCFE INSIGHTS EXTRAPOLATED FROM THE CCLD / ABI 766 DATASET

**Insight: How Many RCFEs Do/Would Likely Accept a Resident with a Serious Mental Disorder?**  
(DMH-targeted RCFEs / Los Angeles County only) (N=1,440) (Margin of error: +/- 2.9%)



**Insight: How Many RCFEs Do/Would Likely Accept a Resident Whose Payment is SSI/SSP Non-Medical Out-of-Home Care Payment Standard?**  
(DMH-targeted RCFEs / Los Angeles County only) (N=1,440) (Margin of error: +/- 2.9%)



## OTHER AB 1766 CONSIDERATIONS

- LA County DMH also analyzed the data and noticed:
  - Some DMH-ERC facilities were not included in the first round of surveys
  - Some facilities that participate in the DMH-ERC program answered that they would not accept clients with Serious Mental Illness or would not accept clients with SSI income
    - DMH-ERC staff followed up with these facilities and were informed that there was some confusion around the definition of Serious Mental Illness
    - Some facilities will only accept clients for which the county is paying an enhanced rate
  - These concerns were flagged for CCLD so that this can be addressed in future reports

## MOVING FORWARD

- There is still a lot of work to be done to stabilize the Board and Care System
- Primary solution is the increase of the monthly Board and Care rate to a level that would result in a sustainable business model
- The Community Care Expansion Program will bring new opportunities for these efforts
- Appreciation to the Board and Care administrators/operators that are dedicated to doing this work despite the low rates/payments, COVID-19 and other complexities that can make this work so difficult