Delivering high quality care at Utah State Hospital: an analysis of the future bed needs and wider system support

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Purpose

63M-7-303

(l)

study the long-term need for adult patient staffed beds at the state hospital, including:

(i) the total number of staffed beds currently in use at the state hospital;

(ii) the current staffed bed capacity at the state hospital;

(iii) the projected total number of staffed beds needed in the adult general psychiatric unit of the state hospital over the next three, five, and 10 years based on:

(A) the state's current and projected population growth;

(B) current access to mental health resources in the community; and

(C) any other factors the council finds relevant to projecting the total number of staffed beds; and

(iv) the cost associated with the projected total number of staffed beds described in Subsection (1)(l)(iii); and

(m) each year report on whether the pay of the state hospital's employees is adequate based on market conditions.

Executive summary

This report focuses on the performance of the Utah State Hospital (USH) and the wider system post-Covid and highlights recommendations to ensure the ongoing provision of high-quality care both within USH and the wider mental health system over the next five years. This analysis has shown that ongoing improvement in performance in both the forensic and civil units has been achieved. Access performance is now also being monitored and further improvements can be achieved in both the urban and rural environments with improvements in co-ordination of care between and across the system.

However, it is important to highlight that access issues are exacerbated firstly by ongoing delays in discharge of patients and, secondly, by patients who are more suited to a Sub-Acute Step Down Facility. Both consume constrained USH capacity and are blocking timely admissions for new patients. With recent upgrades the measurement of system-wide performance is now possible, facilitating better analysis of the system wide changes that are required to achieve the next level of performance breakthrough. This will require improved levels of engagement across the wider mental health system and targeted improvement efforts driven by the analysis that is now possible.

Report related to directive outlined in UCA 63M-7-303

(i)   There are currently 152 Adult Civil Beds and 124 Forensic Beds in use at the Utah State Hospital.

(ii)   The current bed capacity at the state hospital is 152 Adult Civil and 154 Forensic Beds. 30 Forensic beds are funded and will become operational shortly when critical staffing levels are achieved;

(iii)(A) The state's current and projected population growth: Utah had a growth rate of 2.44% in 2020, 1.72% in 2021,1.25% in 2022 and a projected 1.64% in 2023 which ranks 4th in the country.

 (B)   The legislature and county mental health authorities have worked with community stakeholders diligently to increase funding and resources for current access to mental health resources. Notable increases include residential service capacity, outreach teams, receiving centers, homeless services and suicide prevention services. While these increases have helped markedly, ongoing community assessment still indicates significant gaps in services as well as delays in discharge at the Utah State Hospital. The Gardner institute, under the direction of the Utah Hospital Association has provided the community a detailed report of community gaps in services for the mental health continuum of services in Utah. Updated in July of 2020, See:
https://gardner.utah.edu/wp-content/uploads/MentalHealthReportAug2019.pdf

(C)   Other factors the Forensic Mental Health Coordinating Council finds relevant to projecting the total number of beds include unknown variables in the future related to proposed changes to both the civil commitment and Forensic mental health laws in this and future legislative sessions. There are efforts to increase access to diversion

opportunities in the judicial system to help people access mental health care before adjudication, including increasing supportive housing and residential services. This could increase the need for both community and inpatient mental health services outside of jails and prisons.

(iv)   Currently the operational cost of a 30-bed unit is $5 million. 306 beds are currently funded. Once the final 30 beds are open this will manage growth for 4 years. By 2027 another 30 beds will be needed. The cost of an additional 30 beds will be another $5 million plus inflation, unless a Sub-Acute Step Down Facility is built which is anticipated to cost 10%-15% less operationally.

Recommendations

1. Based on this study the most cost-effective solution to managing demand and ensuring timely access of care of both forensic and civil patients over the next five-to-ten years is the creation of a Sub-Acute Step Down Facility. There are currently 28 patients who would benefit from such a facility.

2. This latest post-covid analysis of improved performance is shared within USH and the County Local Mental Health Authorities (LHMAs). This highlights the improvements that have resulted from actions and increased focus to-date and summarizes the future actions to be agreed to resolve the latest causes of delay. Progress and improvement is monitored on a six-monthly basis. (Initial workshops planned for September 2023)

3. This analysis by LMHAs is shared with the LMHA Liaison Officers and Clinical Directors to seek improvement opportunities within each LMHA and to share best practice across LMHAs. Progress and improvement is monitored on a six-monthly basis. (Initial workshops planned for September 2023)

4. With the urban area of Salt Lake County specific attention is given to improving the internal and external processes that cause delayed discharges due to complex legal issues. (Initial discussions planned for September 2023)

5. Continuing the process of monitoring internal efficiencies within the forensic and adult civil units and extending this to further explore the effectiveness of treatment plans.

6. Establishing appropriate 'in community' capacity, primarily residential services, for patients waiting to be discharged from the adult civil units. This will ensure

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appropriate movement of certain patients from the forensic units to the adult civil units and ensure timely access to the adult civil beds from the local mental health authorities.

7. Targeted investment in more effective prevention and diversion programs. This is clearly worth further investigation but is outside the remit of this report.

Background

(For readers not acquainted with the role of USH and the wider mental health system)

Utah State Hospital (USH) provides the highest level of psychiatric inpatient care for adult and pediatric patients who have severe and persistent mental illness. The focus for adult civil patients is quality treatment that will allow the patient to better manage their illness while increase skills for them to return to the community. Competency restoration and assessment is the main area target for forensic patients. Six years of ongoing improvement in both the adult civil and forensic units has resulted in the hospital meeting all forensic access target levels within the timescales required. This would not have been possible without the coordinated improvement efforts across both the adult civil and forensic units, stakeholder support, increases in community residential and diversion services and increase resources provided by the legislature and multiple coordinated DHHS executive and division efforts over the past six years.

However, individuals served at USH still have longer than needed stays due to ongoing barriers with discharge. Often these barriers result from the lack of availability of transitional short term residential treatment programs, supported housing, skilled nursing facilities, residential substance use disorder treatment options, or Division Services for People with Disabilities (DSPD) services. To maintain low recidivism rates, it is imperative the individuals leaving USH receive adequate support with the transition from the hospital to the community. USH is a highly structured environment and it can be detrimental for individuals to go to an unstructured living situation with infrequent treatment interventions. Transitional short term residential programs are ideal discharge placements as they allow for individuals to gradually transition from the hospital to the community. However, despite increases in recent years in some areas, Utah still does not have enough of these programs to efficiently serve the Utahns in need. Similarly, there is a lack of residential programs to treat individuals who are dually diagnosed with mental illness and substance use disorders. Patients have waited over a year for placements in these settings due to the limited number of beds available in these programs.

There is a subset of patients at USH who would be best served in skilled nursing facilities; however, there are a variety of reasons individuals are not accepted by these nursing facilities. Often past aggressive behavior that leads to the hospitalization at USH becomes a barrier to getting people discharged to a skilled nursing facility; individuals will be placed on a 'do not admit list', which results in prolonged hospitalization at USH. In a similar vein, individuals may have past serious criminal charges that lead nursing facilities to not consider the individual for care.

Another unique placement barrier can involve the patients USH serves who are waiting for funding from DSPD although this has been improving. Due to limitations within DSPD, individuals are evaluated and placed on waitlist for services while they stay at USH often for longer than appropriate.

While discharges continue to be delayed, demand for all services continues to grow and there is no guarantee access levels can be sustained over the next five to ten years without sustaining the improved efficiencies within the hospital, changes to the wider mental health system and partners, alongside strategic investment in capacity at the hospital. The most efficient increase in capacity is the proposed Sub-Acute Step Down Facility

The basis of the 2023 analysis

This year has provided the opportunity to gain better insight into current performance of the hospital and the wider mental health system alongside future bed requirements because of:

- A more stable 18-months of data post-Covid. This has allowed a better understanding of underlying demand and discharge rates. (This analysis primarily covers January 2022 through to end of June 2023)

- Implementation of a new admissions recording module in the Pride and Joy solution. This has allowed analysis of when a bed was initially requested, when the admissions packet was completed, the time to admit or, if the patient was removed from the list, when this happened and the cause.

- Analysis of the performance of civil patients by LMHA and a comparison of urban and rural issues for civil patients.

- Deeper analysis of the impact of patients who would be better served by a Sub-Acute Step Down Facility on overall capacity requirements, bed availability, queue length and duration.

Summary of recent performance: USH Hospital 01/01/2022 through to 06/30/2023

The hospital discharged at total of 472 patients (Forensics 282 patients, Civil 130 patients, Pediatrics 60 patients). There is an extremely wide variation in the length of stay of patients leaving the hospital on any one day and plotting even a rolling average over time is a misleading measure of performance and levels of improvement. USH has adopted a much more relevant measure of what is called the 'active length of stay'. This is calculated by determining the average length of stay on any day of those patients that are still present at USH. This is a much better way of measuring ongoing performance, as the traditional measure of length of stay fluctuates wildly due to the smaller sample size on any day. A summary of performance improvement is given below:

- The overall forensic active length of stay has decreased by 18.4%, from 614 days to 501 days. Active length of stay excluding patients who have been deemed planned discharge date not applicable has decreased by 44%, from 333 days to 186 days.

- The overall civil active length of stay has decreased by 18.3% from 1116 days to 912 days. Active length of stay excluding patients who have been deemed planned discharge date not applicable has decreased by 29.7% from 821 days to 577 days.

- The overall pediatric average active length of stay remains unchanged at 226 days.

- The major causes of delays to discharge are the availability of appropriate placement options and resolution of complex legal issues. In the last 90 days to August 13th, this amounted to:

    – 1542 delayed days in Forensic

    – 1226 delayed days in Civil.

- There are currently 17 civil patients and 11 forensic patients who will occupy a bed at the hospital for an average of 29.4 further years. These could be better treated in a Sub-Acute Secure Step Down Facility. This classification of patients is

growing at a rate of 3 per year and, unaddressed, will consume more and more of the available capacity and reduce access.

- See detailed presentation, slides 7-9 for details

Summary of Urban LMHAs performance of Civil Patients

There are currently 117 urban patients (82% of all civil patients present) of which 17 are planned discharge date (PDD) not applicable

- The average number of days from referral to admission has been improving with a recent average of 16 days.

- Since April 2022, 47 out of 64 patients have been discharged to residential units in Salt Lake City, Wasatch, Weber and Davis County.

- The active length of stay of patients where a PDD was applicable has dropped from 538 days in Jan 2022 to 411 days by June 2023 representing a 24% reduction per year. Meanwhile for those patients where a PDD is not applicable then, as can be expected, the active length of stay has risen from 3227 days in Jan 2022 to 3424 days by June 2023 representing an increase of 6% per year. This highlights the excellent progress that has been made which continues to be dampened by the ever-rising active length of stay of those patients where a PDD is not applicable and who are more suited to a Sub-Acute Step Down Facility.

- There has also been excellent progress in reducing delay from 7250 delayed days to 2500 delayed days over the same time-period. A proportion of this is down to more effective use of the Pride and Joy system over the time period.

- However, the top tasks active after the patient was ready for discharge include: Resolution of complex legal issues; Availability of placement by LMHA Liaison; Awaiting a civil bed transfer from forensic status. Liaison. During this period, these delays resulted in over 4000 days of patient treatment maintenance in an 18-month period whilst the discharge was finalized.

- See detailed presentation, slides 11-13 for details.

Summary of Rural LMHA performance of Civil Patients

There are 25 patients (18% of all civil patients present) none of which are PDD not applicable

- The average wait time for admission is 17.5 days with a range from 4 to 28 days

- The active length of stay (Note: all patients are PDD applicable) has also dropped, from 351 to 312 days.

- Twelve out of eighteen patients were discharged to residential units in Bear River, South West, Central and Four Corners regions

- Delays in discharge have resulted in 1000 delayed days in an eighteen-month period. A further reduction in active length of stay would be possible with improved resource availability and discharge co-ordination.

- See detailed presentation, slides 15-16 for details.

Simulated peak bed requirements for forensic access within 14 days over the next five years

The simulation developed to calculate the future bed requirement under various scenarios has been rewritten and validated against current performance based on a better understanding of admission and discharge rates post-Covid. A summary of findings is given below:

- With the current demand and discharge rates, combined with the expected growth in long-term care requirements, the simulation suggests without the additional 30 beds that have been funded and are going to be available shortly 14 days access levels would rapidly drop to a worst case of 58% within a year and as low as 24% over the next five years.

- The simulation suggests that the decision to fund an additional 30 beds should deliver 14-day access for the next few years. This takes into account the current demand and discharge rates and the expected growth in long-term care requirements.

- To continue to achieve the 14-day access target the absolute maximum number of beds required will grow from the current 154 beds to 248 beds over the next 5

years. However, it is important to note that this is the maximum number of beds required to generate the 14-day access in 5 years' time. As an example, the maximum number of beds to achieve an 80% service level in 5 years would only require 171 beds and a 90% service level in 5 years would require 187 beds. This could be improved with additional community resources and better co-ordination.

- See detailed presentation, slides 19-20 for details.

Simulated mean queue length and wait times for civil access with no additional beds over the next five years

- With the current growth in civil demand and discharge rates, combined with the expected growth in patients with expected long-term lengths of stay, the simulation suggests a most likely scenario within the next 3 months of 23 patients (mean range of 13-35 patients) waiting to access the civil units and a wait time of 39 days (mean range of 20-50 days).

- With no additional civil capacity, the simulation suggests that over the next 5 years the above would grow to a most likely scenario of 80 patients (mean range of 35-130 patients) waiting 291 days (mean range of 250-750 days).

	Within three months	Within one year	Within two years	Within three years	Within four years	Within five years
Most likely mean queue length	23 patients	31 patients	43 patients	56 patients	69 patients	80 patients
Mean queue range	15-35 patients	11-56 patients	15-75 patients	20-95 patients	25-112 patients	35-130 patients
Most likely longest queue length	28 patients	48 patients	75 patients	95 patients	120 patients	146 patients
Longest queue range	17-43 patients	17-82 patients	20-120 patients	30-160 patients	50-195 patients	60-230 patients
Most likely mean waiting time	39 days	102 days	153 days	195 days	240 days	291 days
Mean wait range	20-50 days	50-150 days	50-250 days	70-300 days	90-375 days	120-450 days
Most likely longest wait time	88 days	163 days	250 days	330 days	415 days	513 days
Longest wait range	60-88 days	70—250 days	75-400 days	130-510 days	180-650 days	250-750 days

- See detailed presentation, slide 22 for details.

Analysis of capacity consumed by patients with long-term-care needs

- There are currently 17 civil patients who have a status of PDD not applicable as they are unsuitable for discharge. To date on average they have consumed 2.4 years each.

- There are currently 11 forensic patients who have a status of PDD not applicable as they are unsuitable for discharge. To date on average they have consumed 3.07 years each.

- Assuming an 80-year life expectancy, each forensic/civil patient will occupy a bed at the hospital for an average of 29.4 further years. This classification of patients is also growing at a rate of three per year and unaddressed will consume more and more of the available capacity.

- This growing usage of limited capacity year-on-year is not only costly but is also denying timely access for new patients to both the forensic and civil units. Unresolved, this will require the addition of more expensive civil and forensic beds.

- See detailed presentation, slide 24 for details.