

Analysis of Length of Stay for Austin State Hospital

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Purpose:

This paper seeks to analyze the growing length of stay at ASH, to clarify factors that might be contributing to it, and to identify strategies that might reduce it.

Sources of Data:

1. Some of the following data were taken from the Decision Support Performance Indicators Sharepoint site¹.
2. Much of the data below was pulled from DSS tables with a single crystal report².
3. Data regarding competency of patients were extracted from fields added to the Person Centered Recovery Plan (PCRP) in the fall of 2015³.
4. Some data were taken from the ASH Regional Planning report, a comprehensive document that is produced quarterly⁴.
5. The ≥ 365 day list submitted to Central Office was used as a source of qualitative data about barriers to discharge⁵.

Findings from the Data:

1. The extent to which average lengths of stay (ALOS) have increased at ASH over the past several years is readily apparent in Sharepoint data. The graph below shows that ALOS for individuals discharged from ASH over the past 6 years has increased around 400%, while it has increased by about 70% statewide. Over the past year or two the ASH ALOS has converged with the statewide ALOS.

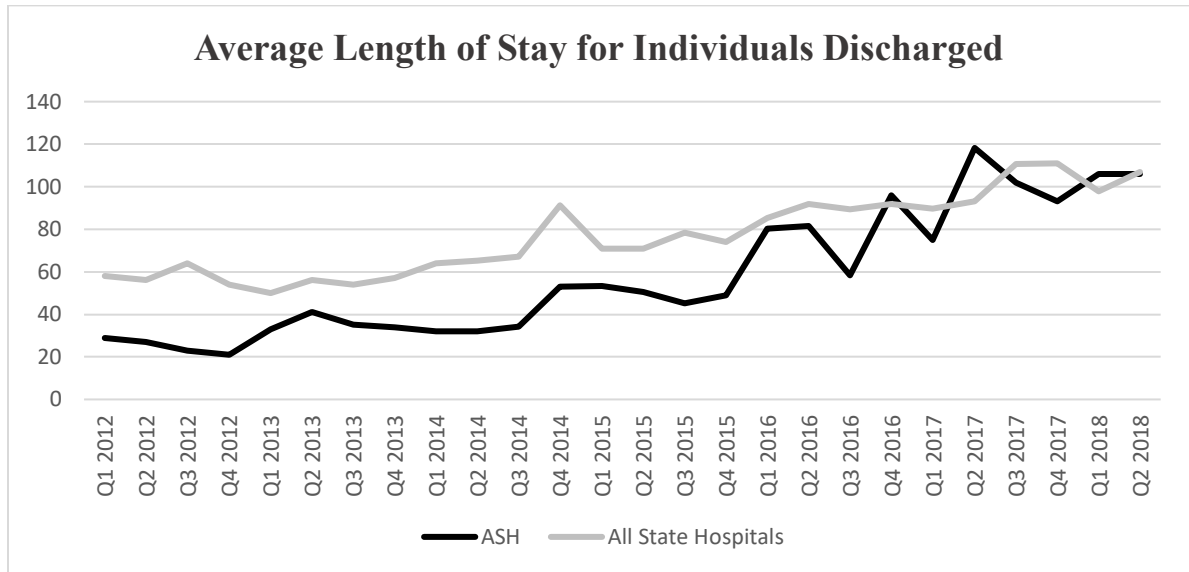


Figure 1: Data from Sharepoint

2. Trends over the past 5 years indicate a notable drop in the number of civil commitments discharged from ASH, accompanied by a more modest increase in the number of forensic commitments discharged. In any given quarter the number of civil and forensic admissions is essentially identical to the number of civil and forensic discharges.

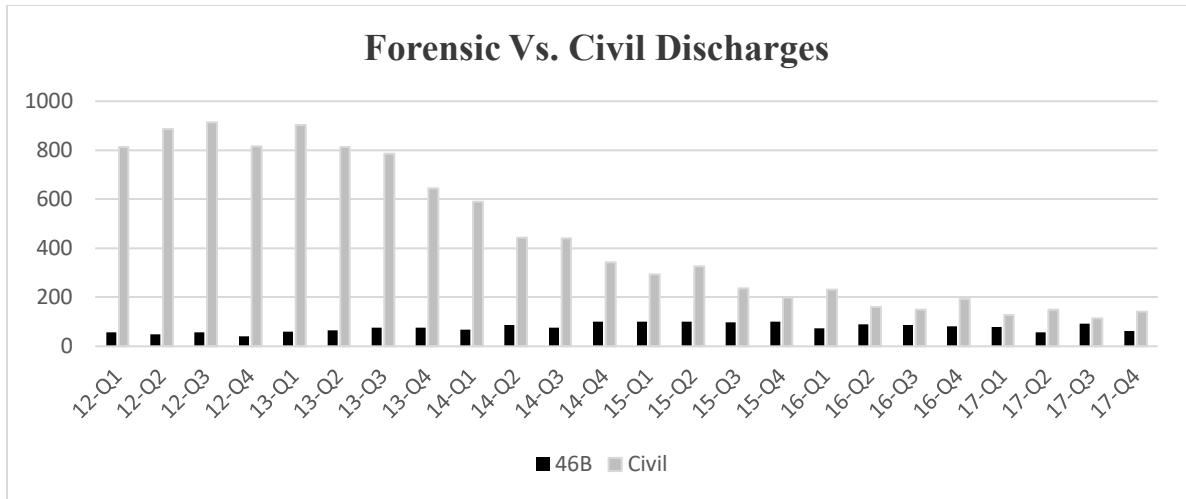


Figure 2: Data from DSS Crystal Report

- The average length of stay for Civil Commitments has increased dramatically. One theory for this is the addition of several private psychiatric facilities in recent years. These facilities appear to be taking the individuals from the community who are higher functioning, have insurance, and often have support systems – all factors that contribute to shorter lengths of stay. ASH very rarely has walk-in admissions anymore, and instead, has an increasing number of transfer requests from other hospitals. These individuals are being referred to ASH because they run out of funding, have pervasive mental health symptoms, refractory illnesses, and multiple barriers to discharge.

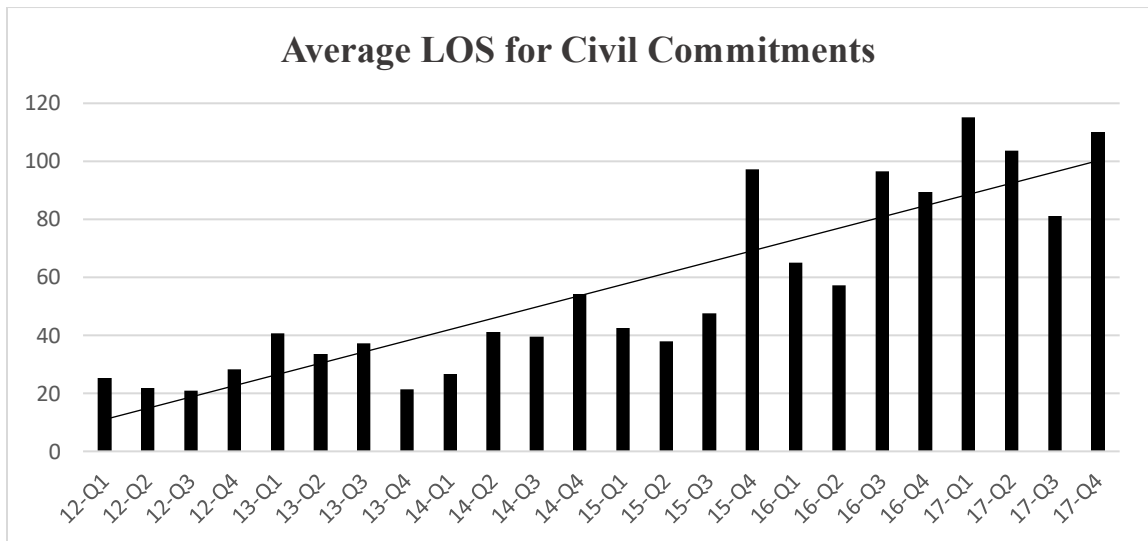


Figure 3: Data from DSS Crystal Report

- An increase in the average length of stay for forensic commitments is evident but less dramatic. Hypotheses about this trend include the tendency for some courts to leave

patients at ASH for longer periods of time. ASH has little ability to influence the LOS for forensic patients.

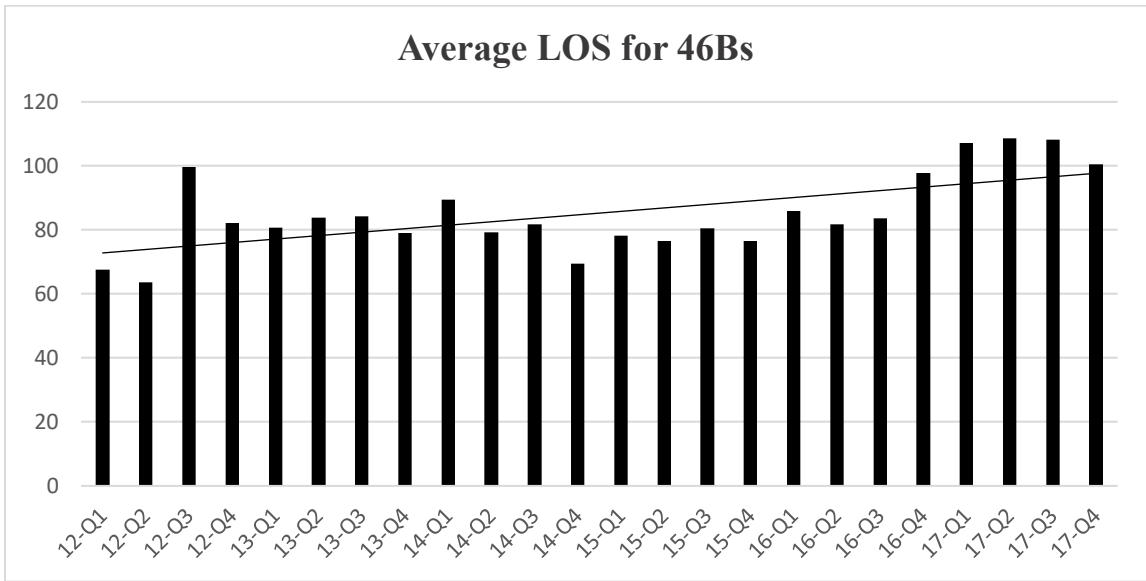


Figure 4: Data from DSS Crystal Report

- There is a difference in the ALOS for forensic clients on felony charges vs. misdemeanor charges. The overall ALOS for felony charges (104) is greater than the overall ALOS for misdemeanor charges (72), but ALOS for felony commitments has increased by around 100% over 5 years, while the increase for misdemeanors has been more modest.

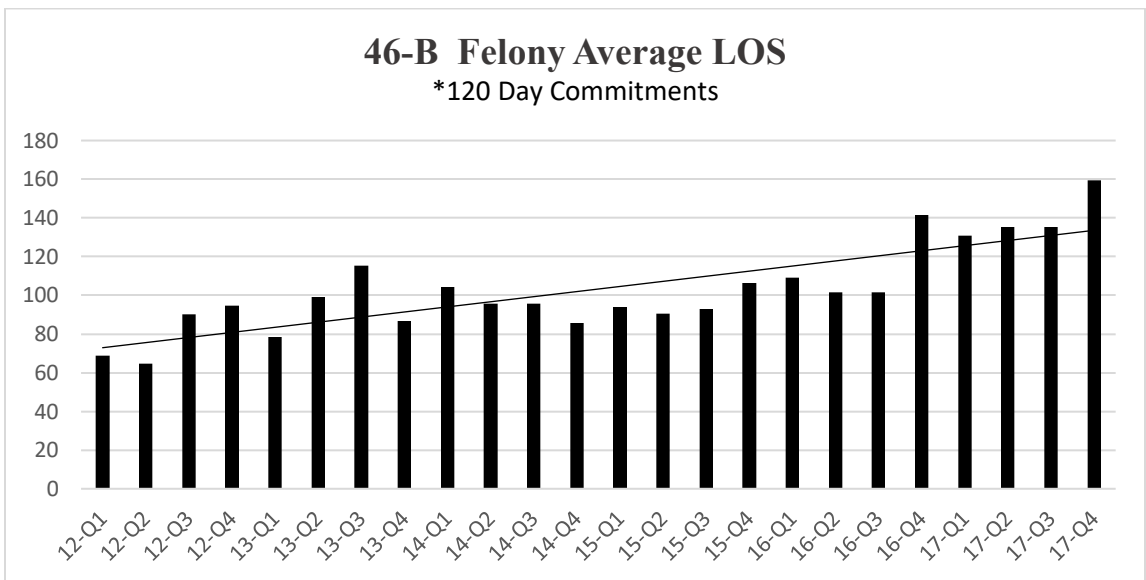


Figure 5: Data from DSS Crystal Report

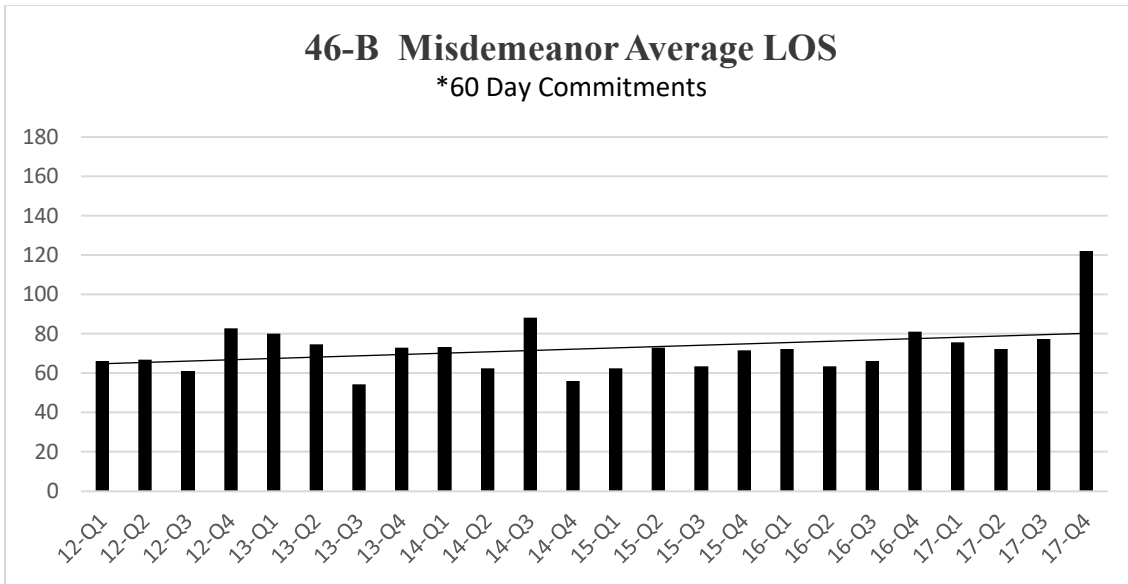


Figure 6: Data from DSS Crystal Report

- The total numbers of clients with felony charges (1062) was slightly greater than the number with misdemeanor charges (926), but there were no clear trends across time regarding the percentage of felony vs. misdemeanor commitments.

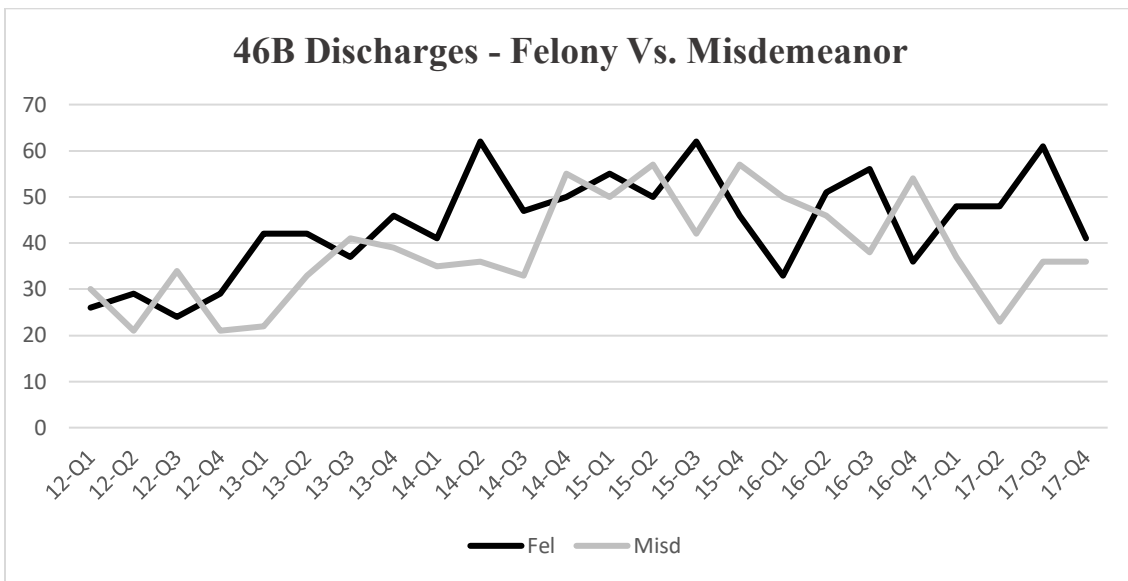


Figure 7: Data from DSS Crystal Report

- The number of individuals on the >365 list shows a steady increase over the past several years. This is another indicator of the extent to which an ever growing number of bed days are being devoted to a smaller number of patients with extended lengths of stay.

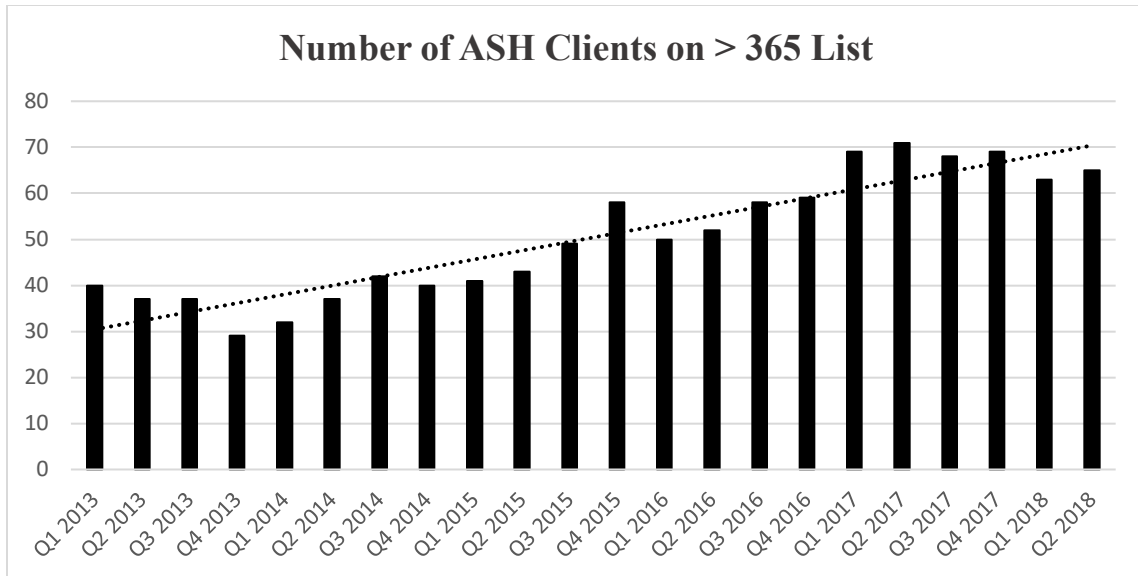


Figure 8: Data from Sharepoint

FY18 Q2 >365 list from ASH had 65 individuals on it. Of the individuals listed, 14 (22%) were on forensic commitments. ASH social workers identified patients on the 365 list as falling into the following categories:

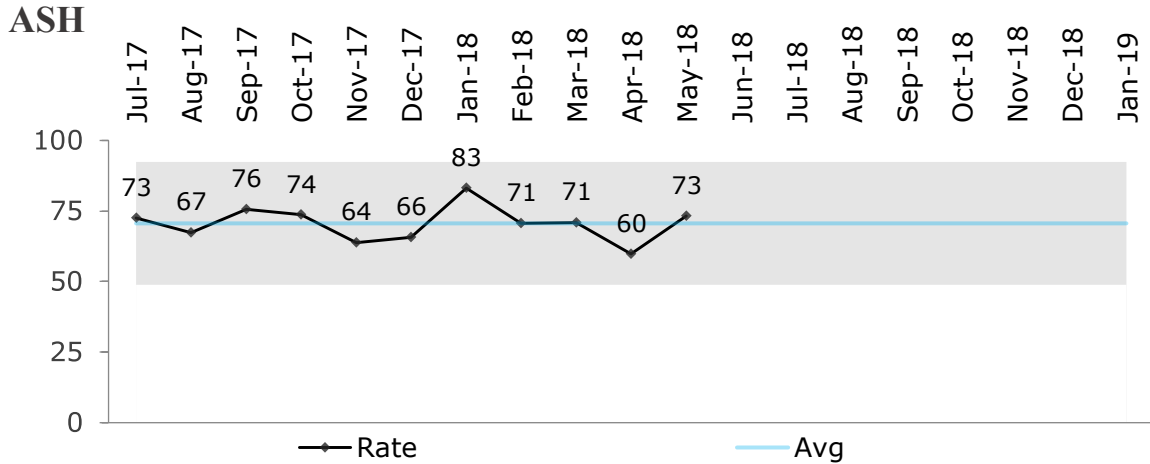
- 37 required continued hospitalization, either civil or forensic
- 7 have criminal court involvement, meaning they are on a forensic commitment and the team feels they no longer require continued hospitalization to stabilize or restore to competency
- 21 individuals have a barrier to placement

Barriers to placement are identified as the following. (Some individuals are identified as having multiple barriers, thus the numbers will not total 65.)

- 40 individuals have a history or current symptoms that prevent alternate placement
- 19 individuals need a guardian before they can be placed. 11 of these are pending referrals.
- 16 individuals require a nursing home
- 12 individuals require intensive residential services that are unavailable
- 9 individuals or their guardian refuse to leave the hospital or be involved in discharge plans
- 8 individuals have complex medical issues or are experiencing end of life issues
- 7 individuals are on extended forensic commitments and are not likely to regain competency but a less restrictive setting is not available

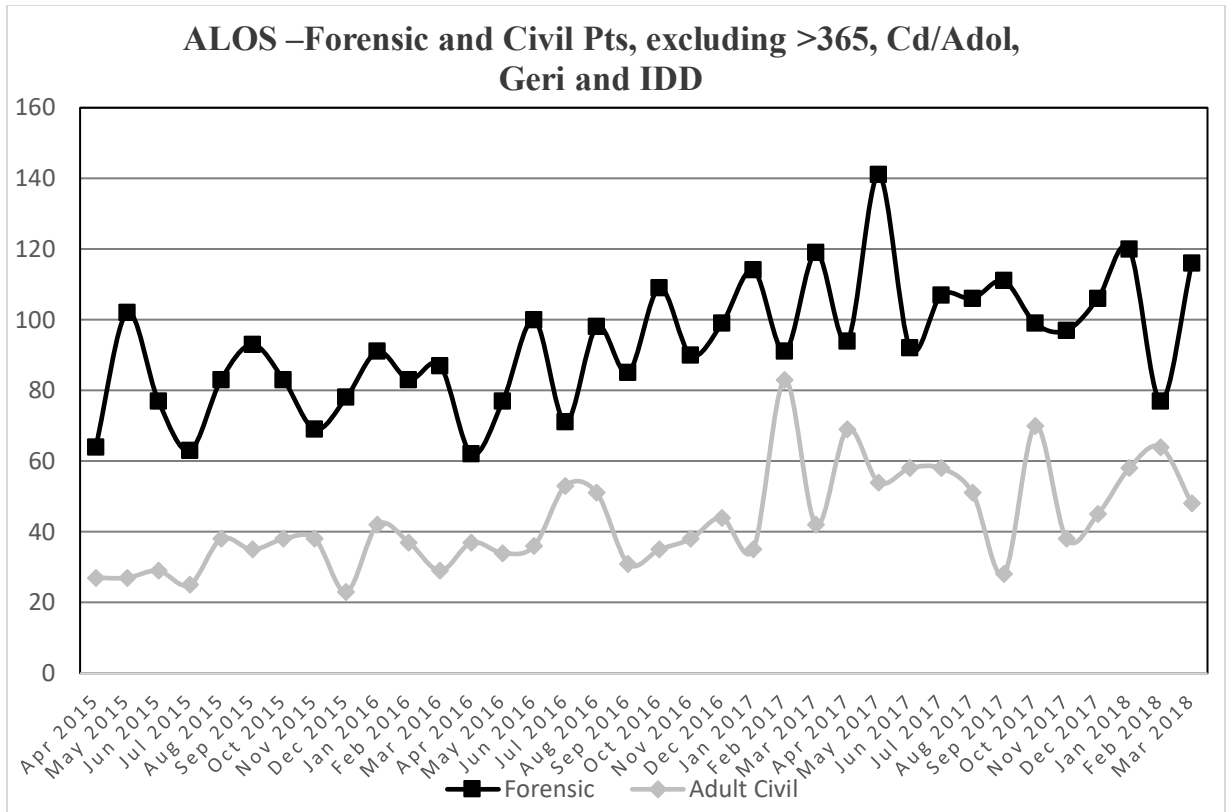
- 6 individuals need funding or benefits, including 1 who needs funding for TBI services and 4 individuals who have a citizenship status which prevents access to funding or benefits

8. Mr. Manlove recently introduced a new metric of LOS for Episodes of <365 Days, which will be used to measure progress toward the goal of reducing LOS.



Provided by Mr. Manlove

9. The graph below displays data from ASH Regional Planning covering two of the six categories: Forensic and Adult Civil. (The four categories excluded are Child/Adol, Geriatric, IDD, and >365.) Note that the ALOS for Adult Civil is around 50 days, as compared to the ALOS of Forensic clients of about 100 days. These findings are consistent with Mr. Manlove’s average of about 75 days, but illustrate how the 75 day figure is composed of two very different populations.



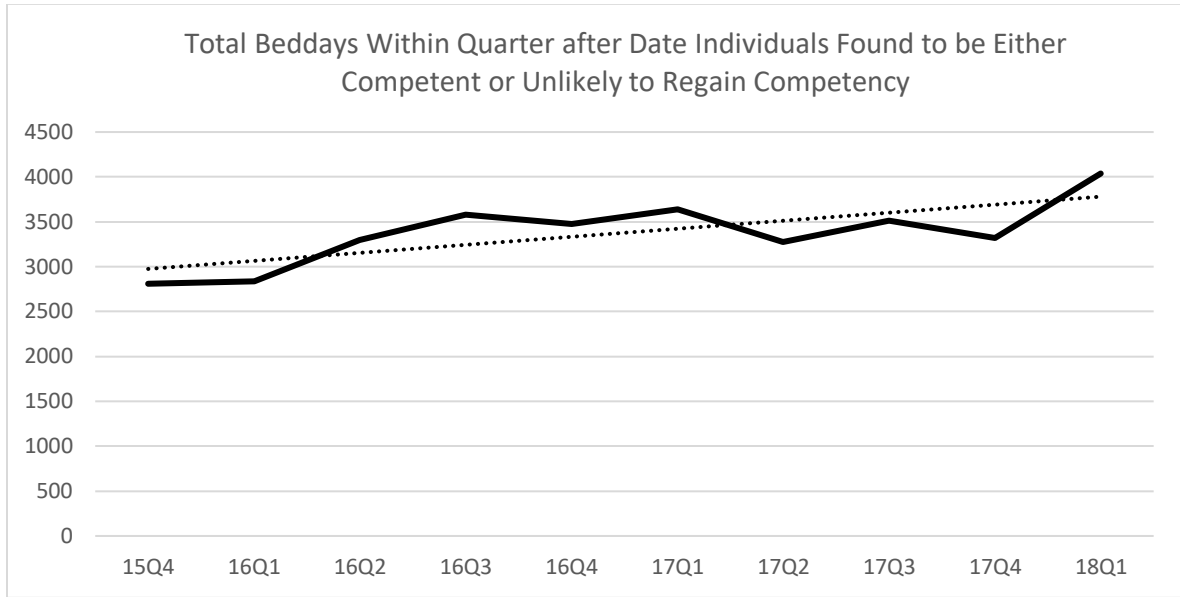
Data from ASH Regional Planning

10. To clarify the impact of considering only patients with LOS <365, the following table of ASH average daily census for May 2018 was constructed. If Child/Adolescent and LOS>365 categories are excluded, then about 64% of available beds are currently forensic $102 / (102+58) * 100 = 63.75\%$

Category	ASH Average Daily Census
Child/Adolescent	24
LOS>365	66
Forensic	102
Civil	58

11. Data from the PCRPs were used to construct a simple measure of days in the hospital after competency was determined. For each individual on whom the competency restoration field was completed in the PCRPs, the total number of days in the hospital after which they were either found to be competent or were considered unlikely to regain competency was summarized. The total number of such days occurring within each quarter is graphed below. For 2018 Q1, 41% of forensic bed days occurred after the

competency determination was completed (4039 days after competency / 9879 total forensic bed days * 100 = 40.88%)



Data from Person Centered Recovery Plans

Analysis:

1. The client population at ASH has evolved dramatically over the past few years. The number of patients on brief civil commitments has plummeted, and beds have been filled with a combination of forensic patients and civil patients with numerous barriers to discharge and longer ALS. The overall forensic population and civil population have similar ALOS, both averaging around 100 days. There is notably more variance in the civil population, which includes both the vast majority of very long LOS patients and also some remnant of relatively brief LOS civil treatments, which were previously the mainstay of ASH services provided.
2. The total number of individuals who remain at ASH >365 days has doubled over the past 5 years and continues to increase. Factors that can result in extended stays include: a) current or historical symptoms that prevent alternate placement, b) lack of guardians, c) lack of nursing homes willing to take individuals from psychiatric facilities, d) lack of suitable placement options that can handle special needs (e.g. persons with a history of arson), e) barriers to access to funding, f) complex medical issues or end-of-life issues, g) patients and/or guardians who refuse involvement in discharge planning.
3. A recent development that will undoubtedly put upward pressure on the >365 list is the admission of 46C patients (six over the past few months). Each of these patients is likely to remain in the hospital for years, effectively reducing beds available for other purposes.
4. When focusing attempts to reduce LOS on the <365 adult population, it should be noted that about 64% of these are forensic. ASH has remarkably little ability to influence LOS for forensic patients. Decisions regarding when forensic patients are discharged are essentially up to the court. Even though ASH may consider an individual ready to go, the court may extend their commitments and/or leave them at ASH for many more months. About 41% of bed days for forensic commitments occur after the individual is considered either competent or unlikely to regain competency. Some courts leave individuals at ASH in the absence of a clear legal status to do so. The stance of ASH legal counsel when this has occurred is that ASH has no legal recourse, again leaving us at the mercy of the committing court.
5. The exact point in time when an individual on a forensic commitment is considered competent or unlikely to regain competency is not accurately captured by the current input screens in the Person Centered Recovery Plan. More specific documentation is found in letters to the court and possibly in Avatar progress notes, but these are not electronically searchable.
6. Information regarding other barriers to discharge are also not readily searchable within Avatar. There are fields in the PCRCP designed for this function, but they currently do not hold meaningful data, and it is doubtful that treatment teams could ever be taught to use them in a manner that would allow for extraction of useful data.

Note about Queuing Theory:

1. The attempt to apply queuing theory as a method of reducing wait times is a laudable endeavor. It is important to understand how small reductions in LOS can have potentially sizeable impact on waiting times.
2. Assumptions of the queuing theory model includes three variables:
 - the arrival rate of new people in need of services
 - the LOS of people in treatment
 - the supply of beds available to receive people from the queue
3. It is unknown whether the arrival rate of people in need of services is stable, though it seems likely that it might be growing.
4. Evidence at ASH would suggest that the supply of beds cannot be considered stable. As the >365 list grows, beds are effectively removed from supply.
5. While small decreases in LOS can indeed produce significant decreases in wait time, it is equally true that small increases in demand for services and/or small reductions in bed availability can have equally dramatic impact upon wait times.

Recommendations:

Actions that can be undertaken by Austin State Hospital

1. Reinforce and adhere to ASH admission criteria in all situations where it is possible to do so.
2. Meet with our attorneys and the Courts to discuss the use and perceived misuse of Extended Commitments.
3. Meet with LMHAs to develop algorithms to follow regarding the transition from inpatient care to outpatient care with the goal of minimizing length of stay at ASH.
4. Develop programming that is more consistent with longer ALOS patient populations.
5. Petition Medical Records Advisory Committee (MRAC) for changes to Avatar that will allow more accurate tracking of: a) barriers to discharge, and b) the point in time when patients are considered ready for discharge and remain in the hospital only due to external circumstances.

External Resources needed:

1. Contract with existing providers or seek Legislative funding for Skilled Nursing Facility placements/facilities
2. Contract with existing providers or seek Legislative or Community based funded to expand the number of Group Homes
3. Development of competency restoration services outside of the state hospital system
4. If LOS is to be tracked as one component of a Queuing model, it will be important to also measure both new arrivals to the queue and the total number of beds "in play" for competency determination services across time.

Notes:

1. SharePoint>DSHS>MHSA>Decision Support>Performance Indicators. Data comparing ASH discharges to statewide averages was taken from “ALOS_AM1 – Copy”. Historical data regarding patients on the >365 list was taken from “Over365days_AMOS – Copy”.
2. The crystal report included three tables (SSview_Patient_Data, TX_Admission, and TX_Commitment). The report was used to pull about 12,000 records covering all discharges from ASH between 1/1/12 and 12/31/17. The data were exported into Excel and then manipulated using pivot tables to obtain views of the relationships among variables including length of stay, forensic status, unit, attending, county of residence, etc. Individuals were considered to be “Forensic” if their first commitment status was “46B” and “Civil” if otherwise.
3. When completing reviews in the PCRP, users are required to complete a field titled “Is the patient admitted for competency restoration”. If this field is marked “Yes”, a second field offering three options becomes required.

Is the patient admitted for competency restoration?

Yes No

For Forensic Patients (as applicable)

Patient is competent

Patient is expected to regain competency

Patient not likely to regain competency

These fields were incorporated into two versions of a crystal report. One displays the date on which all current residents admitted for competency restoration were first determined to be either “competent” or “not likely to regain competency” (see example of report in appendix). The other version of the crystal report measures the total number of days within date parameters that individuals were in the hospital after a determination that they were either considered competent or unlikely to regain competency.

4. The data analysis used for Regional Planning places each client into one of the following groups, based upon the first category for which they qualify: 1) Children/Adolescents, 2) Forensic commitment, 3) LOS > 365 Days, 4) IDD population, 5) Geriatric population, 6) All remaining (Adult Acute on Civil Commitments). This process allows an analysis of bed days devoted to various types of clients and changes in ALOS in these categories across time.
5. The >365 list is maintained by ASH Social Work Dept and submitted to Central Office on a quarterly basis (example in appendix). The primary contents are qualitative data regarding the barriers to discharge. Although barriers to discharge are supposed to be listed in the PCRP, the PCRP data are not detailed or useful in providing a meaningful understanding of actual barriers to discharge.

Appendices:

1. De-identified sample report titled "Competency Status Documented in PCR".
2. De-identified sample of Current >365 spreadsheet.