



Report II

State Psychiatric Hospital Admission Delays in North Carolina

Update for July-September 2010

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Abstract: Results show that more people are waiting and they are waiting for a longer time. This document is a review of state hospital admission delay data collected by the NC Division of State Operated Healthcare Facilities during July –September 2010. Where possible, these data are analyzed together with data reported previously for the first months of 2010. Findings show that during the 3 month period, an additional 1,900 people were wait-listed and, on average, they waited 2.8 days for admission, an increase of .2 days. Eighty-two percent of patients waited in hospital Emergency Departments (ED) or Crisis Units. A significant number of people experienced extreme delays of several days to weeks. Again, delays were most pronounced in the Central Region of the state. There is some indication that the addition of community beds and implementation of the 7 day hold statute (G.S. 122C-263(d)(2)) are having some effect, although the effect is overshadowed by the increasing numbers of severe mentally ill patients needing hospitalization. EDs and Crisis Units are not a therapeutic environment for paranoia, out of control thoughts, emotions, and personal nightmares. As a civilized society, we must come together and solve this problem.

ADMISSIONS DELAY UPDATE JULY-SEPTEMBER 2010

The goal of this report is to update the findings reported by NAMI Wake County, "State Psychiatric Hospital Admission Delays in North Carolina: January-June 2010." This report focuses on the most recently available data from the Division of State Operated Healthcare Facilities (DSOHF) for the period July-September 2010. Wherever possible, contrasts with the previous six months data are provided.

Data Evaluation

The parameters of interest are the *number* of people waiting for a bed in a state hospital and the *amount of time waiting* for a bed. Most data are presented according to the state hospital where the patient is wait-listed, not where the patient is waiting. So in the following discussion, if the table heading shows Broughton Hospital, people are waiting for admission to a psychiatric bed at Broughton, the state facility primarily serving the western part of the state. Similarly, Dix and Central facilities serve the central portion of the state, and Cherry serves the eastern portion of the state. On a population (2009 estimate), the western region is home to 3.55 million people; the central region is home to 3.85 million; and the eastern region is home to 1.98 million.

Several state facilities also experienced delays but were not included in this analysis, including ADATC, Broughton, Central Regional, Dorothea Dix, and RJ Blackley, because they involved internal transfer of patients from one state facility to another. This resulted in 10 individuals being excluded. Another 7 individuals waited at hospitals that were not uniquely identifiable in the data provided, e.g., Daymark. These 17 individuals were not counted in any of the totals or included in any of the data summaries.

Table 1 shows that 1917 people waited for a bed assignment to one of the four hospitals during the three month period. On average, there were 639 people waiting each month in some hospital ED, crisis center or community psychiatric unit for transfer to a state facility, an average increase of 14.2% over the previous 6 month average. The average wait time during this 3 month period was 2.77 days, an increase in wait time of 0.17 days (4 hours) over the first six months of the year. The average monthly wait time is longest for a bed at Broughton (4.0 days) with the lowest wait experienced at Cherry of 1.7 days.

Table 1 also shows that the Central Region (Central Regional and Dix) experience the largest number of people waiting for a bed, 921 of the total 1917 who waited, or 48% of the total. In contrast, Broughton (Western Region) only had 338 people who waited, or 17.6% of the total. But they had the longest wait time.

Table 1. Delays by Hospital by Month, July-September, 2010

Hospital	Month	No. Waiting	Average Wait time (Days)	Total No. Waiting	Avg. Monthly Wait (Days)
Broughton	July	106	3.1	338	4.0
	August	112	3.8		
	September	120	5.0		
Central	July	165	3.6	537	3.5
	August	160	3.1		
	September	212	3.7		
Cherry	July	201	2.0	658	1.7
	August	201	1.5		
	September	255	1.8		
Dix	July	152	2.9	384	2.4
	August	112	2.5		
	September	120	1.7		
Total	July	624	2.4	1917	2.77
	August	586	3.0		
	September	707	2.9		
Average		639	2.77		

Most patients (82%) waited in hospital emergency rooms (emergency departments) as presented in Figure 1. Another 8% waited in medical beds in hospitals or other locations where non-psychiatric services were provided. The remainder, 10%, were held in hospitals with psychiatric beds. These patients generally have behavioral and/or medical conditions that require treatment in a more specialized facility that can accommodate the individual's needs.

Figure 2 shows the number of patients waiting greater or equal to 2 days but less than or equal to 7 days. Figure 3 shows the number of patients waiting 8 days or more. These figures compare the most recent three month data with the first six months for the number of patients waiting for beds by the number of days they had to wait for a bed. Because the time intervals are not the same (3 months versus 6 months), the white bar provides a comparison for a six month interval by doubling the 3 month number. For example, Figure 2 shows that 229 people waited 2 days during the July-September period (shown in blue) compared with 394 people who had to wait 2 days for a bed during the first six month period of 2010 (shown in red). Doubling the 229 value (shown in white) results in a value of 458, which means that more people waited during the past 3 months (458 is greater than 394). In fact, for all time periods shown on the x-axis in Figures 2 and 3, only "day 5" and "14 or more days" show a reduction. Note that the y axis in Figure 2 is different from Figure 3.

Figure 1

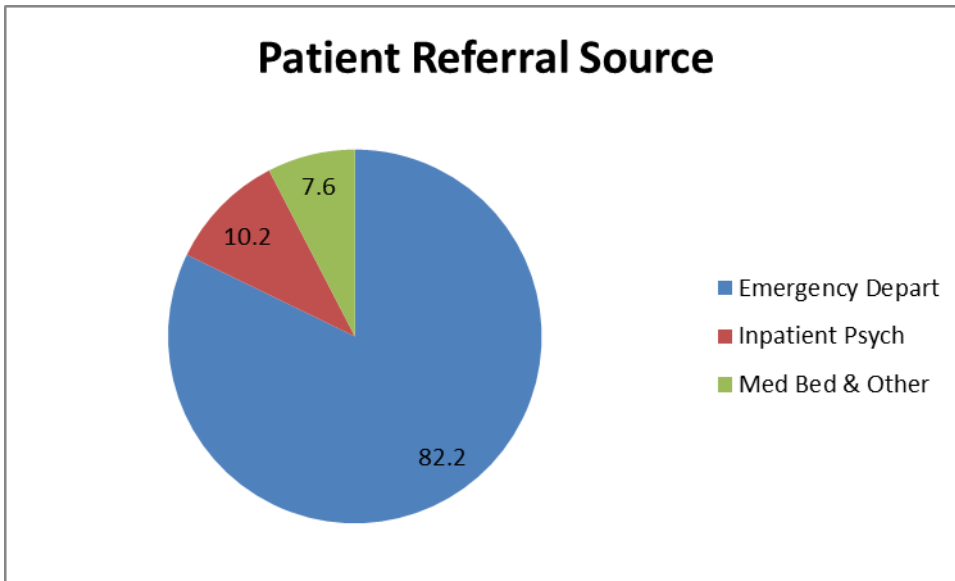


Figure 2.

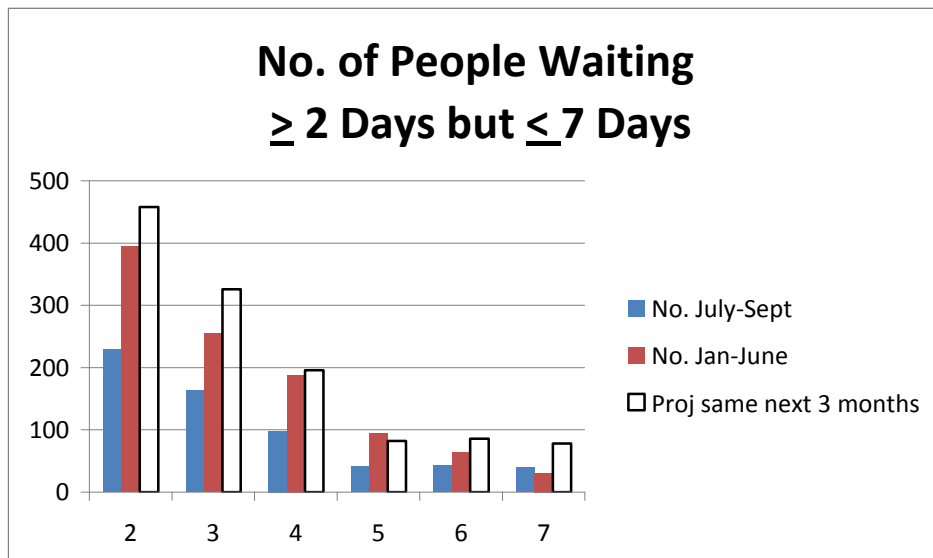
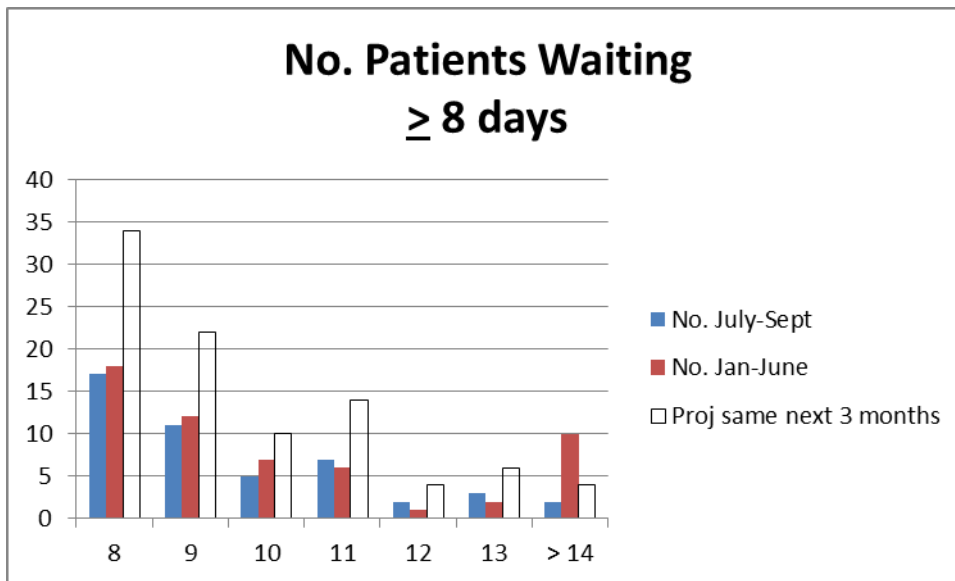


Figure 3.



The information provided in Table 1 and Figures 2 & 3 shows that people waited for extremely long periods of time, primarily in Emergency Departments (EDs). Long delays in transferring patients to state psychiatric hospitals stresses the system of care in the community hospitals since these patients are utilizing resources that are unavailable to care for other patients in need of emergency care. The cost of providing minimal care for patients waiting in EDs to be transferred to state psychiatric beds is not billable to Medicaid and must be assumed by the hospital and covered by charges for services provided to other patients.

The two figures illustrate another characteristic of wait times, that being there is a general “exponential” drop over the time intervals. (The last interval is a collapse of many intervals, so it appears as an exception.) It is worthy of comment to mention that at day 7 there is a legal requirement for people still waiting on involuntary commitment orders to be reassessed to determine if the person still needs hospitalization. It would seem that there would be a noticeable blip in the curve if this legal requirement were in fact an effective requirement to reduce those unnecessarily waiting for hospital beds. Assuming this requirement is being implemented across the state, one interpretation is that only those in need for hospitalization are in fact waiting for a bed. This may suggest that the legal statute requiring the 7 day assessment is not really needed and is a waste of time and resources.

Figure 4 shows the total number of people waiting over the 9 month period, categorized into 3 groups: inpatient (blue bar), those waiting 24 hours or more in EDs (red bar), and all patients (green bar). Several results can be seen in this figure. First, March was an unusually “wait-listed” month. The categories of “all patients” and “waiting in EDs” are clearly increasing over the 9 month

period. The “inpatient” category is only increasing slightly, in fact the last three months are relatively flat. This may suggest that some EDs are developing new techniques or facilities to better attend to these patients’ needs. Note also that three of the four months with the most people waiting occurred in the last three months, July-September.

Figure 4

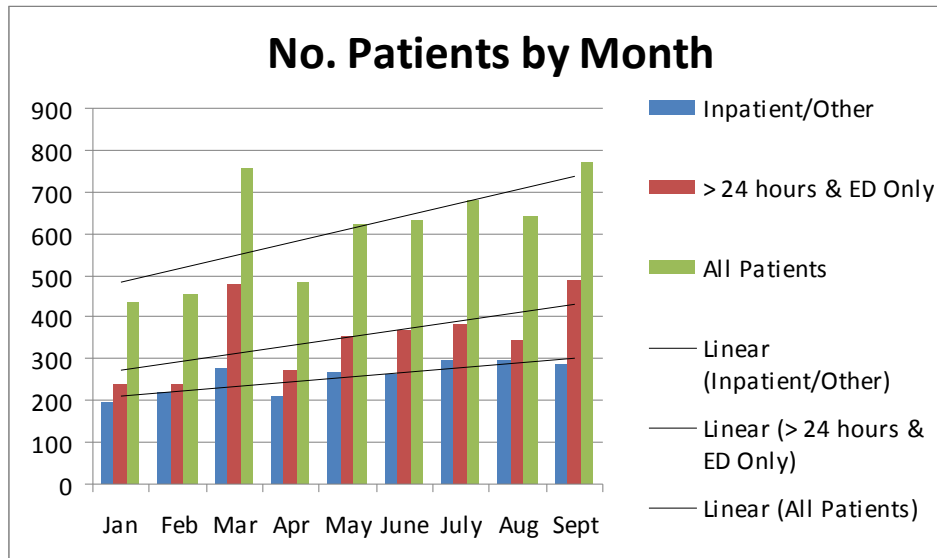
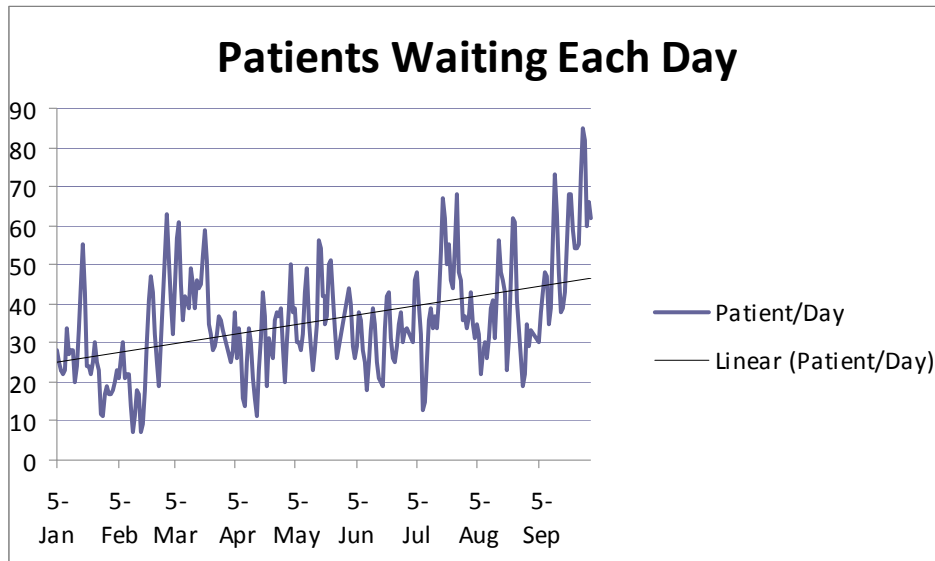


Figure 5 is a visual presentation of the daily extent of the problem. This is a continuous graph of the number of people waiting each day in the **EDs**. It excludes those people who waited less than 24 hours, and those who were waiting in hospitals as an inpatient, medical facility or assessment center. The effect of excluding the inpatient waits is to reduce the average wait time, as well as the longest waits. This figure captures both the number of people waiting each day, and the duration of the wait as a continual time sequence. For example, if a person began waiting for a state psychiatric bed on July 1, and a bed did not become available until 5 days later, the person would be counted on each of the days he/she waited, from July 2 through July 6. The most obvious observation for this figure is that there is a positive upward trend. More people are waiting for state psychiatric beds.

Figure 5.



Extreme Delays

Figure 6 illustrates the number of extreme waits by month. For each month there are six bars. The first two bars represent the number of patients waiting in inpatient facilities; those waiting 3 or more days and those waiting 6 or more days. The second set of two bars represents the numbers waiting in EDs and other facilities, again, according to waits of 3 or more days and those waiting 6 or more days. The third set of two bars represents a combination of the first two sets (patients waiting in inpatient facilities plus those waiting in EDs and other facilities). The two lines at the top of the bars show the trend line for all patients waiting 3 or more days (top line) and those waiting 6 or more days (2nd line from top). The bottom two lines show the trend line for all patients waiting in other than inpatient facilities, both for patients waiting 3 or more days (2nd from the bottom) and waiting 6 or more days (bottom line). Clearly the number of patients experiencing extreme waits (3 or more days, or 6 or more days) is increasing over the nine month period. It also shows that most of the extreme waits (as categorized) are coming from EDs and not inpatient facilities.

Figure 6

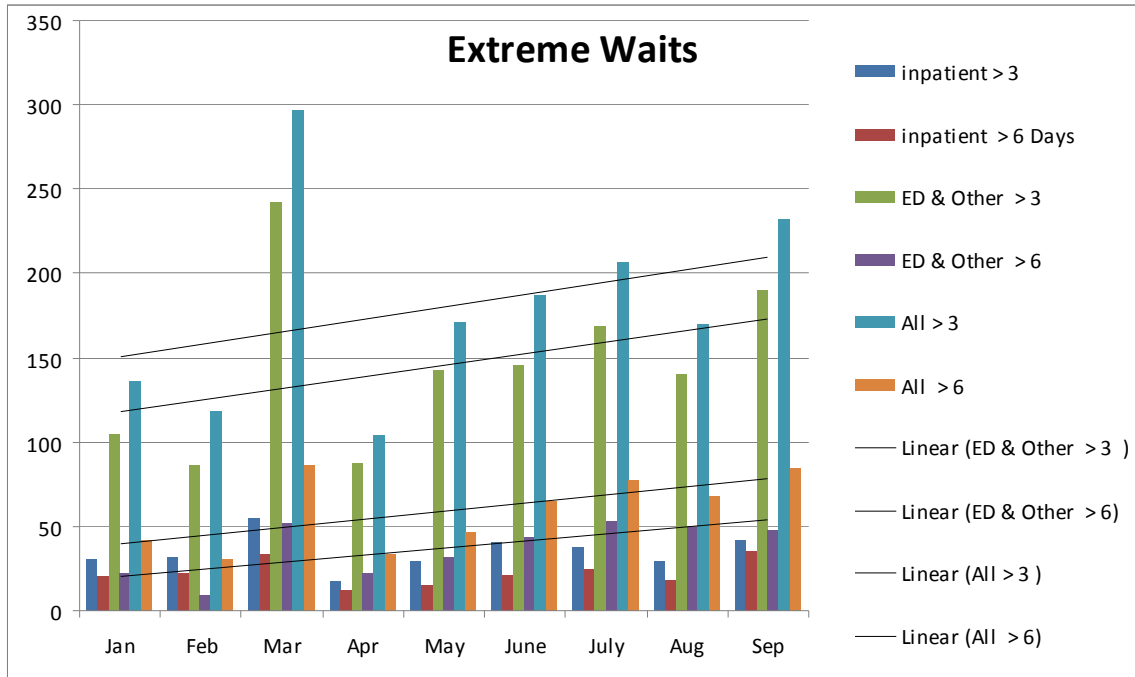
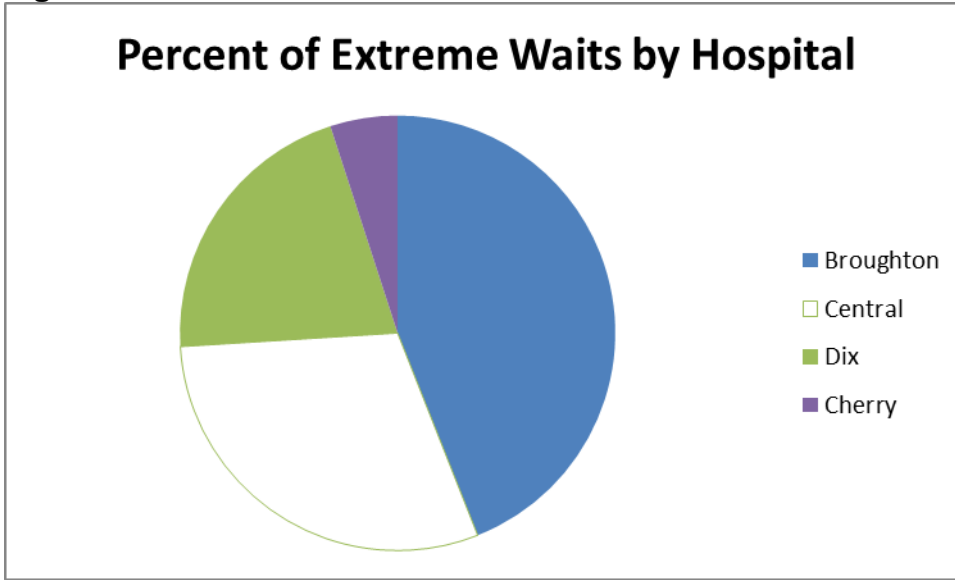


Figure 7 illustrates the number of people waiting in hospital emergency departments for **seven or more days by hospital**. This chart shows that there are more patients referred for admission to Dix and Central Regional hospitals with extreme waits, 51% total. However, when considered as percent of total patients waiting at least 1 day, 15.7% of those waiting to be admitted to Broughton had to wait 7 or more days, in comparison to 6.9%, 6.5% and 0.9% for Central, Dix and Cherry, respectively.

Figure 7



Hospitals generally have one state psychiatric hospital that they call when trying to admit a patient. So, for example, if a hospital were located in the western part of the state, the hospital staff would call Broughton for a bed. During this period, Dix and Central Regional hospitals both served the Central Region. However, during this period some of the hospitals that previously used Dix or Central were directed to other hospitals. Previously Betsy Johnson in Harnett County referred patients to Dix/Central Regional. During this reporting period, they referred patients to Cherry. Also, Randolph referred patients to Dix, but during this reporting period they referred patients to Broughton. Table 2 provides information about which hospitals had the highest number of patients who had to wait at least 7 days or longer. As can be seen, the most patients waiting 7 days or longer were in the central region of the state (29/56).

Table 2: EDs with at least four waits of 7 days or longer

Hospital	No. Patients	Region
WakeMed NBA	13	Central
CMC Randolph	11	Western
Mission/St. Joseph	8	Western
Guilford Center	7	Central
Forsyth Medical	5	Central
Betsy Johnson	4	Eastern
Duke	4	Central
Presbyterian	4	Western
Total	56	

Where are the biggest problems?

Reviewing the data, one can quickly see that seven counties account for half of the delays. These counties are shown in Table 3. With the exception of Nash and Randolph counties, the other five are counties with a relatively large population. In the case of Wake County, there is no community general hospital with a psychiatric unit. Forsyth, Durham, Guilford and Randolph counties have at least two community general hospitals with psychiatric units.

Five of the seven counties with the most delays are in the central region, accounting for 38% of the total delayed admissions. Almost half of these delays come from one county, Wake 16.5%. Wake as mentioned above does not have a community general hospital with a psychiatric unit, nor has it received any of the 3-way contract beds. New Hanover and Randolph counties also do not have any of the 3-way contract beds. However, the other four counties shown in Table 3 have received contract beds.

**Table 3. Counties with largest number of delays
(ranked highest to lowest)**

County	Number of Delays	Percent of Total	Cumulative Percent
Wake	314	16.5	16.5
Forsyth ¹	125	6.6	23.0
New Hanover [*]	124	6.5	29.6
Durham ²	106	5.6	35.1
Nash ³ [*]	103	5.4	40.5
Guilford ⁴	94	4.9	45.4
Randolph	85	4.9	50.0
Total	951		

^{*} not in central region; ¹ 8 3-way contract beds; ² 2 3-way contract beds; ³ 8 3-way contract beds; ⁴ 4 3-way contract beds.

Disposition of those waiting for admission

DHHS captures detailed information pertaining to the disposition of people who were wait-listed. The information provided by DHHS is categorized below into 3 categories, those admitted to the state hospital, those sent to a community hospital, and those returned home. Note that there are several other categories, but these three categories capture 90% of the data. Note also that Dix reports only two categories: those admitted and those not admitted. Table 4 captures this information by hospital. It is important to note that often a person waiting for a psychiatric hospital bed is placed on both a community wait list and a state hospital wait list. The person is assigned to the first available bed that satisfies the requirements for the level of care required for the person.

One concern about lengthy wait times in the ED is that if the person is stabilized, taken off involuntary commitment and returned home, it is reasonable to assume that many will not be connected with community mental health

providers for follow-up care. In fact, in many locations, people are experiencing long waits for appointments for outpatient mental health treatment because of a shortage of providers. This makes it more likely that the patients may once again become a danger to themselves or others and be back in the ED.

Table 4: Disposition of “Potential Patients” awaiting State Hospital Beds

Hospital	Month	Admitted To State Hospital	Admitted To Comm. Hospital	Returned Home	Not Admitted
Broughton	July	43	41	13	1
	August	38	32	36	3
	September	39	27	42	1
	Total	120	100	91	5
Central	July	59	40	50	3
	August	67	45	38	0
	September	79	94	64	0
	Total	205	179	152	3
Cherry	July	55	78	43	0
	August	75	77	28	0
	September	75	90	45	0
	Total	205	245	116	0
Dix	July	55	NA	NA	98
	August	61	NA	NA	52
	September	71	NA	NA	49
	Total	187			199
Total	July	212	159	106	102
	August	241	154	102	55
	September	264	211	151	50
	Total	717	524	359	207
	Monthly Average	239	175	120	69

Is there any indication that the additional 3-way contract community hospital beds are providing any benefit?

As shown above in Table 3, the actual impact of contract psychiatric beds does not appear to offer much relief to the cities with the largest number of people waiting. In fact, it can be seen that demand for psychiatric beds is exceeding the supply and the trend is getting worse (Figure 6). However that does not necessarily mean that these beds are not providing benefits to the communities as well as relieving some of the stress on the state hospitals as the need for beds surges upward. The following analysis is an attempt to look at the possibility that community beds are serving to relieve some of the stress on the state system, and more importantly, on the patients who are waiting for help.

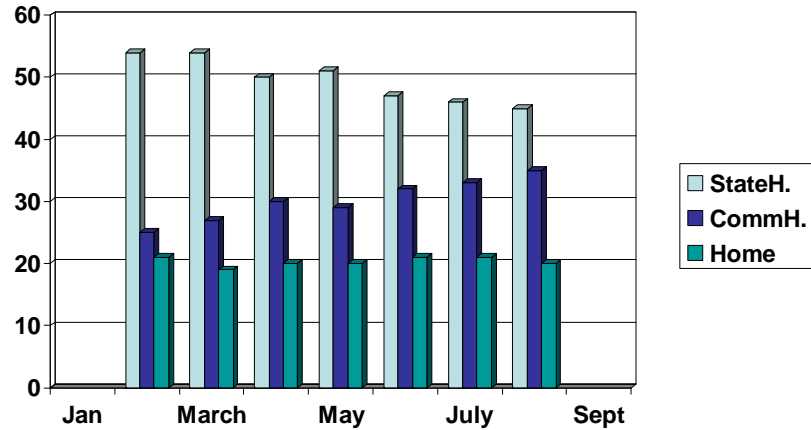
If there were any positive effect, the assumption is that it might be reflected in the percentage of people waiting for beds that end up being admitted to community hospitals. Note that there are many people who already are admitted to community hospitals, and state hospitals for that matter, that do not show up on the state's list of people waiting for beds, and as a consequence, are not reflected in this report. However, data for the people who are wait listed and end up in a community hospital are shown in Table 5. This table shows the percentage of community hospital admissions relative to the total of those who returned home or who were admitted to a state facility. Only patients waiting in EDs were included in this analysis. Therefore there are more state hospital admissions, in particular, that are not included. The monthly data are shown, together with the 3-month running average. It can be seen that the community hospital percentage (column 7) is **increasing** 10% over the 9 month period, while the percentage of those being admitted to the state system (column 10) is **decreasing 9%**. The percentage change for both is approximately the same (in opposite directions) because the percentage of those released to homes has remained relatively constant at 20.6%. Figure 8 shows the effect more clearly.

Table 5: Disposition Data by month, January – September 2010

Month	Numbers of Waiting Discharged to:				Percent of Numbers discharged to:				
	Comm Hosp.	Home	State Hosp	Total	Comm Hospital	Home	State Hospital		
Jan	107	67	209	383	23	3-month Avg.	22	54	3-month Avg.
Feb	78	76	222	376	21	25	20	59	54
March	85	81	198	364	31	27	21	48	54
April	141	118	254	513	28	30	17	55	50
May	199	131	306	636	31	29	21	48	51
June	157	107	244	508	27	32	23	50	47
July	146	79	195	420	37	33	20	43	46
Aug	138	73	158	369	35	35	19	46	45
Sept	154	104	224	482	32		22	46	

Figure 8: Disposition of Patients to Hospitals or Returned Home by Month.

Percent of Admissions to:



Has there been any effect related to "pre admission delays in the commitment process and the new 7 day hold statute G.S. 122C-263(d)(2)"?

To answer this question, one can look at the general pattern of delay data, such as the one shown as Figure 9. This shows a rather smooth exponential delay without any noticeable departures, or blimps, around the 7 day wait category. It can be seen that the decrease continues from 94, 64, 31, to 18 for days 5, 6, 7 and 8, respectively. This would suggest that implementation of this regulation has had little gross effect in the aggregate of all the people waiting for psych beds.

However, if one were to look only at those patients who were discharged to "home," which is what we might expect if their condition became more stable, then the pattern may look differently. Figure 10 illustrates that there is in fact an effect related to this regulatory change. Without any effect of the regulation, one would expect that the bar plotted as day 6 would be less than day 5 and more than day 7.

Figure 9.

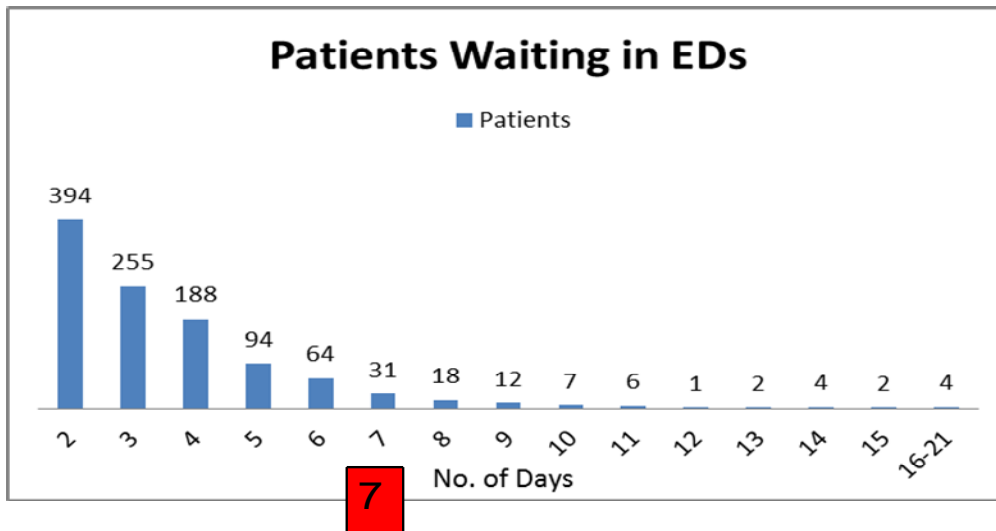
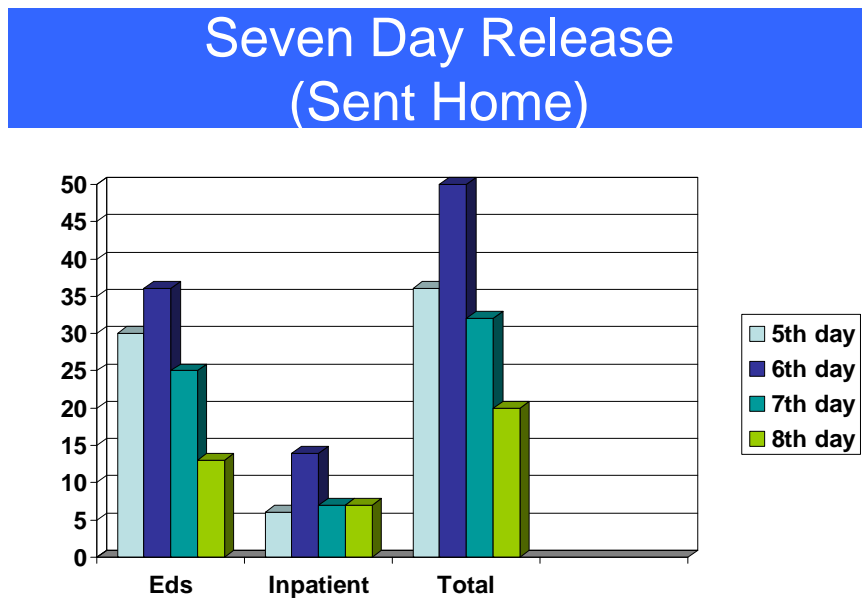


Figure 10. Seven Day Hold Statute, G.S. 122C-263(d)(2)



Limitations

The Division of State Operated Healthcare Facilities provided all the raw data used in this report. In the data transmission to NAMI Wake County, they offered several caveats that are important for proper interpretation of any results or observations. These are listed below:

“The data DOES NOT indicate:

1. The exact day/time a patient presented at the ED.
2. ***The exact amount of time each patient waited;** (Some ending times are entered when the state hospital has a bed and calls the referring facility back and are told by the referring facility that the patient is “gone”; referred elsewhere; sent home, etc. So, the patient did not necessarily wait as long as documented.)
3. The final disposition of each patient; when a state hospital staff member calls the community hospital to indicate a bed is available, the patient may be gone and the staff on that particular shift may have no information as to where the patient was sent. When this occurs, “unknown” is indicated.
4. The type or quality of treatment the patient receives if referred elsewhere and taken off the State delay list.
5. How long a non-State operated facility will treat the patient if admitted.
6. The payer type of the patient.
7. The reason for which a patient is being treated in a medical bed at the time of the referral.
8. If mobile crisis was involved with the ED in the placement process.
9. If the LME was involved with the ED in the placement process.
10. What the level of acuity is that the patient is demonstrating in their clinical presentation at the time of referral.
11. If another patient was prioritized by the State hospital due to extreme violence.
12. If the referring facility has inpatient bed availability but chooses not to accept the patient to their own facility.
13. If any other facility was contacted for a bed prior to referring to the State hospital.
14. If a patient is a veteran but was not referred to the VA or if the patient was referred but the VA had no beds.
15. ***Those patients that did not wait on delay such as voluntary patients or those brought from jail on a judge’s order or taken in immediately through the front door, despite the delay .**

*These two bullets are the most critical to understand. Since referring hospitals rarely ever call state hospitals back to rescind a referral, state hospitals often have some people on the waiting list who are no longer waiting to check the status of the patient waiting on the bed. State hospital admissions staff try to call daily to EDs to ensure the patients on the wait list are still in need of a bed. Additionally, there are always patients that are brought through the front door that cannot be turned away due to the EMTALA law. Those always supersede patients on the wait list.”

Although these limitations suggest that the data do not accurately reflect all the conditions that surround any specific individual placed on the wait list and the exact amount of time waited, the limitations do not seriously impact the trends and patterns analyzed from the data. This is because the limitations noted apply to all the data and not just a portion thereof which would be the case

if changes had occurred in the reporting procedures during the 9 month period. Also, even though the exact amount of time waiting may not be perfect (limitation #2), there is additional waiting time experienced in the ED prior to even contacting the state hospital for a bed. In some cases this may be days and not just hours, depending on the number and types of medical procedures that need to be administered, the availability of the staff to do the psychological assessments, contacting other hospitals for availability, etc. So it could be argued that the actual wait time on average is under-reported by the numbers provided by the DSOHF.

Recommendations

The NC Department of Health and Human Services provided a list of all 3-way contracts awarded at the beginning of SFY2010. It is a compilation of beds that have been gradually added to various communities since 2009-2010 with \$20M allocated by the State Legislature. Forty one beds were awarded to the western region, 29 to the central region, and 26 to the eastern region, for a total of 96 beds. Additional funds were appropriated to add more 3-way contract beds during 2011. Based on analysis of these data, it appears that allocation of more 3-way hospital contracts in the central region of the state would provide some help in decreasing waiting times; however, the amount of funds available for allocation is inadequate to solve the problem.

According to people who work in emergency departments, one type psychiatric bed is not equivalent to another. There are many people who need specialized units—medical plus psychiatric, care for dementia, violence and other high clinical management needs. Some hospitals, like UNC, are more likely to be in a position to care for some of these patients, but even UNC needs to have state hospital beds available where they can refer some of these very difficult patients. More community psychiatric hospital beds are needed, especially in the central region, available to treat people who have a combination of medical and psychiatric illness. More hospitals need to have units with trained staff to accommodate patients with a history of violence or other behavioral difficulties in sufficient numbers to handle more difficult patients. More beds are also needed in close proximity to Wake County to care for Medicaid patients. Wake County is the most populous and fastest growing region of the state, but it does not have a psychiatric unit within a general medical hospital to treat people with co-occurring disorders or one that is authorized to bill for Medicaid adults. State hospital beds should be reserved for the most severely mentally ill patients who cannot be treated outside a state hospital.

One potential solution is for the state to build a regional psychiatric unit in a community hospital with a location accessible to the majority of the people needing care. This approach would enable the hospital to bill Medicaid and private insurance rather than placing the entire burden of care on the state. The hospital could be built and staffed to care for high acuity patients which would reduce the impact on the state budget as well as overburdened state hospitals. If this facility were operated by a university (e.g., UNC), there may be an opportunity to obtain funds beyond the standard Medicaid rates, making

treatment of those with mental illness more cost effective, rather than cost prohibitive as it is now.

Some people may stress the importance of community treatment over the need for more hospital beds. They will stress the need to invest in housing, more outpatient care, and recovery-based options. Community treatment, housing and employment help make recovery possible for those not in crisis. These services are needed in addition to hospital beds. The hospital beds serve those in need of critical care, while they are gaining the skills and confidence to return to the community. It is shown that there is a growing magnitude and duration of time for those waiting for a psychiatric bed. Therefore, a rapid solution needs to be found. The cost impact is a tremendous burden on our hospital emergency departments. Using a conservative estimate of \$1,000 per day to keep people on involuntary commitment in the ED, private hospitals have spent \$11,494,872 (3339 + 1917 patients x .81 percent from EDs x 2.7 days x \$1,000/day) in the first 9 months of 2010. Some hospitals have taken extraordinary steps to accommodate people with psychiatric illness, and their efforts should be recognized by the state. However, the really important cost is to the people who are suffering these unimaginable delays, sometimes in deplorable conditions. Many are handcuffed or otherwise restrained with ties. They are watched 24/7 by strangers, often by law enforcement officers. They are often kept in hallways on stretchers or in small cubicles or sitting in chairs. They are physically uncomfortable and most have been judged to be a danger to self or others. There is a history of law enforcement officers using tasers to restrain patients in some EDs. This is not a therapeutic environment for paranoia, out of control thoughts, emotions, and personal nightmares. If they ever recover from such a traumatic event, it is plausible that they will go to extreme measures to avoid another such experience, perhaps leading to a very costly mistake to themselves or others. As a civilized society, we must come together and solve this problem.