

**Long Term & Behavioral Health Committee
Agency Report
Adjusted Need Petition to
Create 24 Adult Inpatient Psychiatric Beds
For the Treatment of Eating Disorders in Durham LME-MCO
Proposed 2014 State Medical Facilities Plan**

Petitioner:

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Request:

The petitioner requests an adjusted need determination for 24 adult inpatient psychiatric beds in the Durham Local Management Entity-Managed Care Organization earmarked for the treatment of adults with eating disorders in the Proposed 2014 State Medical Facilities Plan.

Background Information:

Chapter 2 of the State Medical Facilities Plan (SMFP) describes the purpose and process for submitting petitions to amend the SMFP during its development. Petitions may be sent to the Medical Facilities Planning Branch twice during the course of plan development. Early in the planning year petitions related to basic SMFP policies and methodologies that have a statewide impact may be submitted. The SMFP defines changes with the potential for a statewide impact as “the addition, deletion, and revision of policies and revision of the projection methodologies.”

Later in the planning cycle when need projections are identified in the Proposed SMFP, petitions seeking adjustments to the projected need determination in any service area may be submitted if the petitioner believes the needs of a service area are not fully addressed by the standard methodology.

Need for adult inpatient psychiatric beds is determined by applying actual patient days from the previous year to the projected population for the age group (18 years and older) two years out to determine days of care (DoC) two years in advance within each of the 16 local management entity-managed care organizations (LME-MCOs). The amount of need per service area is then established based on the size of the service area’s projected surplus or deficit when the projected

utilization is compared to the inventory of existing and approved beds using the assumption of a 75% occupancy rate.

Applying the standard methodology to Durham LME-MCO's current inventory of adult inpatient psychiatric beds results in a 16 bed surplus.

Analysis/Implications:

The petition seeks an adjusted need determination for 24 adult inpatient psychiatric beds in Durham LME to serve as a statewide resource for eating disorder (ED) patients and provides four reasons why these beds are needed: (1) ED patients require specialized care that is rarely available in general inpatient psychiatric units, given the collaborative partnerships required (psychiatrist, physicians, dietitians, etc.) and the needs for continuity of care; (2) Recent changes to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-V) criteria have expanded the criteria for previously identified EDs and denotes two newly identified EDs that will result in an increase in the number of people diagnosed; (3) UNC, in Cardinal Innovations 2 LME-MCO, has a 10 bed program, but it is overburdened and cannot meet the needs of all patients referred; (4) Using prevalence data from The National Co-morbidity Survey Replication Study, the petition identifies a need for 24 adult beds that is not detected using the standard methodology.

It should be noted that the petition does not provide a statement of adverse effects in the event the request is not granted nor does it provide a statement of alternatives that were considered and deemed not feasible. Additionally, it does not address safety and quality, access or value.

Need for specialized care, including continuity of care, for eating disorder patients. The petition asserts that “due to an exceedingly high mortality risk, these [eating disorder] patients have unique needs necessitating specialized intervention at higher levels of care” and that continuity of care is an essential component of care, producing better outcomes for ED patients. *The Practice Guideline for the Treatment of Patients with Eating Disorders, Third Edition* (Yager et al. 2006) states that “there is evidence to suggest that patients with eating disorders have better outcomes when treated on inpatient units specializing in the treatment of these disorders than when treated in general outpatient settings where staff lack expertise and experience in treating eating disorders” (p. 14). The *Practice Guidelines* also support the petition's assertion that continuity of care and remaining in the same setting with the same providers is crucial to ED patients' success (p. 36). Additionally, the *Practice Guidelines* acknowledge that “because specialized programs are not available in all geographical areas and financial considerations are often significant, access to these programs may be difficult” (p.35).

Impact of changes to DSM-V criteria. The petition also asserts that recent changes to the American Psychiatric Association's (APA) DSM-V has expanded the criteria for previously identified EDs and includes newly identified EDs. The petition expects that these changes will result in an increase in the number of people diagnosed. There are no data about the impact of these changes, but given the expansion of the clinical profiles of EDs, it is anticipated that more individuals will qualify for an ED diagnosis under the new DSM criteria.

Existing eating disorder programs within the state. The North Carolina Neurosciences Hospital at UNC possesses the only dedicated inpatient ED beds in the state with a total capacity of 10 beds. Utilization data for UNC's inpatient ED program was not available to the agency for analysis since UNC does not report data on these beds separately from the hospital's other 48 adult inpatient psychiatric beds not dedicated to ED patients on its annual license renewal application.

Determination of need. The petition provides data from the National Comorbidity Survey Replication study as published in the journal *Biological Psychiatry* within "The Prevalence and Correlates of Eating Disorders in the National Comorbidity Survey Replication" (Hudson, et al 2006) to determine adult inpatient bed need for ED patients. However, an erratum was published in 2012 providing revised treatment rates that are substantially lower (Hudson, et al 2012). The national prevalence rates reported by Hudson are as follows: anorexia, .90% for females and .3% for males; bulimia, 1.5% for females and .5% for males; binge eating, 3.5% for females and 2% for males. The revised treatment rates provided in Hudson's erratum are 10.3% for bulimia and 6.4% for binge eating. No treatment rate was given for anorexia.

The agency conducted an analysis of need based on the prevalence rates and revised treatment rates contained in Hudson's published data, population data provided by North Carolina Office of State Budget and Management's (OSBM), inpatient referral rates for adult ED patients provided by Duke University Medical Center (DUMC), and an average length of stay (ALOS) determined by an agency survey of published online ALOS for inpatient ED centers nationwide. Prevalence rates and treatment rates based on the Hudson study were selected because the study provided the most recent data based on a national sample funded by the National Institute of Mental Health and was most-cited within the peer-reviewed literature searched. OSBM's population data is used in the standard methodology. Adult inpatient referral data provided by DUMC was used because it was the sole source of this data available to the agency at the time of the analysis.

While the standard methodology provides a framework for assessing need based on DoC, it does not provide an approach for deriving estimates of inpatient psychiatric bed derived from national prevalence rates for a specific diagnosis. To determine this, the agency used the following approach for assessing need for Durham LME-MCO and for the entire state: For each sex, (1) population counts were multiplied by the sex-specific national prevalence rate for each ED to determine the estimated prevalence; (2) the prevalence rate was then multiplied by the treatment rate for each disorder to determine the estimated number of treatment seekers; (3) this estimate was multiplied by the inpatient referral rate to determine the projected number of adults requiring inpatient treatment. The sex-specific projections for adults requiring inpatient treatment were then combined and multiplied by the average length of inpatient stay for ED patients to determine DoC. Following the standard methodology, DoC were divided by 366 (the number of days in 2012) to arrive at the projected number of adult inpatient psychiatric beds needed for ED patients. This number was not divided by 75% since there is no set optimal occupancy for adult inpatient psychiatric beds needed for ED patients. Therefore, the resulting bed need is presented at 100% occupancy. It must also be noted that bed need in this analysis is not projected forward, but represents need in 2013 based on population and utilization data for 2012 provided to the agency.

Table 1 provides the population counts used in the analysis of adult inpatient psychiatric bed need for ED patients. The results of this analysis are shown in Tables 2 through 5 below.

Table 1. Estimated Inpatient Counts for Females Statewide and for Durham LME-MCO

2012 Female Population Ages 18+		2012 Male Population Ages 18+	
State	3,947,692	State	3,630,833
Durham	121,351	Durham	101,865

Table 2. Estimated Inpatient Counts for Females Statewide and for Durham LME-MCO

	Durham LME-MCO			Statewide			National Prevalence Rate	Treatment Rate
	Estimated Prevalence	Estimated Treatment Seekers	Estimated Inpatient (5.5%)	Estimated Prevalence	Estimated Treatment Seekers	Estimated Inpatient (5.5%)		
Anorexia	1,092			35,529			0.90%	*
Bulimia	1,820	187	9	59,215	6,099	335	1.50%	10.30%
Binge	4,247	272	15	138,169	8,843	486	3.50%	6.40%
TOTAL	7,160	459	24	232,914	14,942	822		

* Treatment rates were not provided for patients diagnosed with anorexia.

Table 3. Estimated Inpatient Counts for Males Statewide and for Durham LME-MCO

	Durham LME-MCO			Statewide			National Prevalence Rate	Treatment Rate
	Estimated Prevalence	Estimated Treatment Seekers	Estimated Inpatient (5.5%)	Estimated Prevalence	Estimated Treatment Seekers	Estimated Inpatient (5.5%)		
Anorexia	306			10,892			0.30%	*
Bulimia	509	52	3	18,154	1,870	103	0.50%	10.30%
Binge	2,037	130	7	72,617	4,647	256	2.00%	6.40%
TOTAL	2,852	183	10	101,663	6,517	358		

* Treatment rates were not provided for patients diagnosed with anorexia.

Table 4. Estimated Inpatient for Females & Males Combined Statewide and for Durham LME-MCO

	Durham LME-MCO			Statewide		
	Estimated Prevalence	Estimated Treatment Seekers	Estimated Inpatient (5.5%)	Estimated Prevalence	Estimated Treatment Seekers	Estimated Inpatient (5.5%)
Anorexia	1,398			46,422		
Bulimia	2,330	240	12	77,370	7,969	438
Binge	6,285	402	22	210,786	13,490	742
TOTAL	10,012	642	34	334,577	21,459	1,180

Table 5. Bed Need Projections Statewide and for Durham LME-MCO

Durham LME-MCO			Statewide		
Estimated Patients	Estimated Days of Care	Projected Bed Need (DoC/366)	Estimated Patients	Estimated Days of Care	Projected Bed Need (DoC/366)
34	378	1	1,180	12,983	35

As shown in Table 5, Durham LME-MCO shows a need for one adult inpatient psychiatric bed for ED patients using this methodology; statewide, the determined need is 35 beds. Ten dedicated adult inpatient psychiatric beds for ED patients are currently in operation at the North Carolina Neurosciences Hospital at UNC. Taking this into account would reduce the deficit determined by this analysis to 25 beds statewide.

Impact of Bed Placement on Durham LME-MCO & the state. The petition provides no support for why the proposed need determination should be restricted to Durham LME-MCO, given that the beds are proposed as a statewide resource. Additionally, the agency's need determination analysis demonstrates a need for only one adult inpatient psychiatric bed for ED patients in Durham LME-MCO. Given that the other 24 beds would be occupied by patients from other LME-MCOs, there is no defined reason why the location of these beds should be restricted to a single LME-MCO.

The agency's analysis did not account for bed occupancy by out-of-state patients. Based on the data drawn from the 2013 Mental Health/Substance Abuse Hospital License Renewal Application (LRA) for Veritas Collaborative, 71% of adolescent ED patients admitted for inpatient treatment were from out-of-state and 73% of adolescent in-state patients were from outside the Durham LME in 2012. It should be noted that Veritas's LRA was reviewed for this purpose because it was the only source of patient origin data specific to ED patients in North Carolina available to the agency.

Development of adult inpatient ED beds will have an impact on the LME-MCO in which they are located. Need for adult inpatient psychiatric beds is determined by applying actual patient DoC from the previous year to the projected population for the age group two years out to determine days of care two years in advance within each of the LME-MCOs. These DoC are applied to patients' LME-MCO of origin, not the LME-MCO in which they receive care. Given that these beds would serve as a statewide resource, only a very small portion of the DoC generated by these beds would be attributed to the LME-MCO in which there are located, resulting in the appearance of a large surplus of adult inpatient psychiatric beds available for general use in this LME-MCO unless these beds are excluded from the SMFP's inventory.

Agency Recommendation:

The petitioner requests an adjusted need determination for 24 adult inpatient psychiatric beds in the LME-MCO earmarked for the treatment of adults with eating disorders in the 2014 State Medical Facilities Plan. Given the available information and comments submitted by the August

16, 2013, deadline and in consideration of factors discussed above, the agency recommends denying the petition based on the request that the need determination be restricted to Durham LME-MCO even though these beds would serve as a statewide resource. Additionally, the petition failed to meet the minimum criteria for review established by the State Health Coordinating Council as presented in the Proposed 2014 SMFP.

However, the agency acknowledges that the standard methodology does not provide a mechanism for projecting need for specialized care settings, which is the recommended treatment protocol for ED patients. The agency believes the basic principles governing the SHCC (safety and quality, access and value) would be preserved by considering the unique needs of eating disorder patients as represented by the recommendations for care presented in the APA's *Practice Guidelines*.

The agency's analysis of need for adult inpatient ED beds shows that an additional 25 beds are needed to serve the people of North Carolina. Based on the specialized needs of this population and the needs analysis conducted by the agency, the agency recommends that an adjusted need determination for 25 adult inpatient psychiatric beds for the treatment of eating disorders be added to the 2014 State Medical Facilities Plan and that due to the profound impact these beds could have on the LME-MCO where they are located, the agency further recommends that any beds awarded through this adjusted need determination should be excluded from the planning inventory used to project future need for individual LME-MCOs. The agency also recommends that the need determination for these adult inpatient psychiatric ED beds should be statewide.

Moreover, the agency recommends that the adjusted need determination include the following language: *The beds shall serve adults with a primary diagnosis of Eating Disorder as classified in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) or equivalent criteria in the International Criteria of Diseases and Related Health Problems, Ninth Edition (ICD-9), such as anorexia nervosa, bulimia nervosa, binge-eating disorder, or eating disorder not otherwise specified.*