HSRI

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Executive Summary

Key Findings

This report, developed for the North Dakota Department of Human Services (DHS) by the Human Services Research Institute (HSRI), addresses the overall question of the proper balance of inpatient residential and community services with a particular focus on the appropriate capacity of a new facility that will replace the North Dakota State Hospital in Jamestown. The report, which builds on the 2018 HSRI North Dakota Behavioral Health System Study, is organized around the five study questions presented by DHS:

1. The size and use of the state hospital;
2. The potential need for state-operated or private acute facilities in areas of the state outside the city of Jamestown;
3. The potential to expand private providers' offering of acute psychiatric care and residential care to fulfill the identified need, including how the implementation of services authorized by the 66th Legislative Assembly affects the balance of inpatient, residential, and community-based services;
4. The impact of department efforts to adjust crisis services and other behavioral health services provided by the regional human service centers; and
5. The potential use of available Medicaid authorities, including waivers or plan amendments.

To address these questions, we reviewed secondary data, including that collected for the 2018 North Dakota Behavioral Health System Study, reviewed documents, and conducted interviews with select key informants.

Study Question 1: Size and use of the State Hospital

The state hospital, for purposes of this discussion, is the part of the facility at Jamestown that provides acute inpatient care and currently consists of 100 beds (thus excluding residential and sexual offender treatment programs). It is distinguished from other inpatient psychiatric facilities in the state by two functions: it accepts transfers of individuals whose behavior cannot be managed adequately in those other facilities and transfers of individuals who require a longer inpatient stay before discharge than those other facilities are able to provide. It also serves a small forensic population.

A state hospital facility with 75 to 85 beds, replacing the current 100-bed facility, would be adequate to meet the needs of the North Dakota population. To promote regional access to care, the state may want to also consider adding a small number (6 to 10) of additional beds in the western part of the state. This configuration would be adequate for the current use of the state hospital, which is to provide backup for private inpatient facilities by accepting individuals who require more intensive management and/or longer stays.

There is no single formula or consensus, such as number of beds per capita, for estimating and planning for inpatient capacity; instead, individual systems vary based on the adequacy of their community-based service systems, and states vary widely in the ratios of beds to population and admissions to population. Our recommendation is based on several considerations: 1) North Dakota is already at the higher end of the national range in terms of inpatient beds; 2) common indicators of need for more inpatient capacity, such as emergency department overcrowding and boarding, are not significant problems in North Dakota; and 3) most importantly, the state has recently launched, or is planning, a host of initiatives that have been shown by research and models elsewhere to reduce demand for inpatient treatment—including the 1915(i) state plan amendment to provide a range of home and community-based supports for people with behavioral health disorders and the statewide expansion of crisis services.

Study Question 2: Need for state-operated or private acute facilities in areas of the state outside Jamestown

Based on admissions to the North Dakota State Hospital by county of residence, we recommend establishing 6 to 10 beds in the western part of the state to facilitate relationships with family and community providers, which are integral to successful return to community functioning. Optimally these beds would be procured through contracting with an existing provider, possibly one of the critical access hospitals (CHAs) in the region.

Study Question 3: Potential for expansion of private providers of acute psychiatric and residential care; how the implementation of newly authorized services affects the balance of inpatient, residential, and community-based services

As noted, the only recommended expansion of inpatient capacity is a small number of beds in the western regions. DHS has had exploratory discussions with several providers about the possibility of operating some inpatient beds, and it will pursue this possibility more actively based on this recommendation. Regarding residential programming, as discussed in the recommendations that follow, our assessment indicates that the need is not for more capacity but rather for more appropriate and efficient use of that which exists.

Study Question 4: The impact of department efforts to adjust crisis services and other behavioral health services provided by the regional human service centers

DHS has launched or is planning a host of system expansions and enhancements that will greatly increase the effectiveness and capacity of regional human service centers (HSCs) to respond to the needs of individuals with behavioral health disorders. While many of these are too recent to assess their eventual impact, some, such as the transition to an Open Access model for outpatient services, are already having a beneficial effect on accessibility. The 1915(i) state plan amendment will provide HSCs with a significant expansion in the types of services that support community stability for people with behavioral health disorders. The expansion of crisis services, which includes the implementation of a dedicated statewide call center, establishment of mobile crisis teams and modification of existing crisis units to serve a more acute behavioral health population, are important additions and enhancements that will serve as diversion from inpatient treatment. The expansion and better coordination of targeted case management and the development of a peer specialist workforce will provide additional support for alternatives to inpatient admissions.

Study Question 5: The potential use of available Medicaid authorities, including waivers or plan amendments

As noted, the 1915(i) plan amendment will be a major addition to the array of behavioral health services and supports. In addition, the Centers for Medicare and Medicaid Services (CMS) has provided extensive guidance and technical assistance on ways in which covered Medicaid services can be leveraged to enhance behavioral health systems, such as first episode psychosis programs, outreach and engagement, coordination and continuity of care, and the development of data systems.

One waiver that has received considerable attention and has been adopted by a number of states in recent years is the IMD exclusion waiver. We do not recommend that North Dakota pursue this option for the reasons that are presented throughout this report: a) North Dakota already has sufficient inpatient capacity pending planned expansion of community-based services; b) adding inpatient capacity runs counter to

the thrust of these initiatives, which focus on community stability for people with behavioral health disorders; and c) the option is likely to produce an increase in inappropriate and avoidable use of inpatient facilities.

Recommendations

Many of the recommendations in this report reflect those offered in the 2018 North Dakota Behavioral Health System Study; here we focus on those activities that have the most direct impact on system capacity. These are briefly summarized here, but the main body of the report spells out the recommendations in much greater detail and presents numerous suggested actions for each recommendation.

Study Recommendations

RECOMMENDATION
Reduce the capacity of the state hospital to a range of 75 to 85 beds, with an additional 6 to 10 beds contracted in the western part of the state
Increase the availability of partial hospital programs to provide step-up and step-down alternatives to inpatient treatment
Integrate community health centers and critical access hospitals more closely, especially to promote integration of behavioral health and primary care for persons with serious mental illness
Address the increased need for workforce capacity related to expansion of services; continue to support the North Dakota Behavioral Health Workforce Development project at the University of North Dakota Center for Rural Health
Review, on an ongoing basis, opportunities to expand the supply of evidence-based practices that reduce the need for health care services, psychiatric inpatient care, and ED utilization
Improve coordination and efficiency, especially to insure appropriate use of levels of care throughout the continuum

With respect to the last recommendation in the list above, there are a number of activities we recommend that can aid in coordination and efficiency, including:

- Review eligibility criteria and admissions criteria at all levels of care

- Work toward transitioning individuals who are in more intensive levels of care than needed
- Monitor housing availability and assignments to insure these transitions do not increase the risk of homelessness
- Enhance data systems to more effectively monitor utilization, outcomes, and cross-sector involvement
- Explore the potential for developing bed registries and for implementing "air traffic control systems" for better management of crisis and more efficiency
- Work to improve the appropriateness of referrals for inpatient admissions from community providers and nursing homes

Service System Overview

Building on the 2018 HSRI North Dakota Behavioral Health System Study, the Human Services Research Institute (HSRI) is pleased to submit this report for a statewide plan for North Dakota to address the following key issues:

1. The size and use of its state hospital;
2. The potential need for state-operated or private acute facilities in areas of the state outside the city of Jamestown;
3. The potential to expand private providers' offering of acute psychiatric care and residential care to fulfill the identified need, including how the implementation of services authorized by the 66th Legislative Assembly affects the balance of inpatient, residential, and community-based services;
4. The impact of department efforts to adjust crisis services and other behavioral health services provided by the regional human service centers; and
5. The potential use of available Medicaid authorities, including waivers or plan amendments.

In brief, we recommend that a state hospital facility with 75 to 85 beds would be adequate to meet the needs of the North Dakota population, with the possibility of an additional small number of beds (6 to 10) in the western part of the state to improve access rather than increase capacity. Preferably these beds would be established by

means of contracting. These recommendations, however, are contingent on the implementation of a number of community service enhancements and expansions (many of which are already in process) and on some improvement in processes to eliminate bottlenecks that currently affect inpatient capacity. Our rationale for these recommendations is presented in detailed responses to the study questions. And our assessment—which is based on interviews with key informants and review of documents and available data—builds on HSRI's 2018 North Dakota Behavioral Health System Study but focuses more narrowly on the specific issue of the balance between community-based services and inpatient capacity.

To address the study questions, we use a conceptual framework that defines the adequacy of a service system along six dimensions:

1. Availability: Does the service exist at all?
2. Accessibility: Are there barriers to obtaining existing services such as distance, transportation, eligibility restrictions, cost, etc.?
3. Capacity: Are there adequate staff and treatment slots to meet the need?
4. Quality: Is the service effective?
5. Appropriateness: Are the right people receiving the right service?
6. Efficiency: Are resources allocated in a way to produce the best possible results?

This report builds on HSRI's 2018 North Dakota System Study and incorporates some of the material in that report but is more focused on specific questions related to needs for balancing or expanding the service system, especially in relation to the functions of the state hospital. This report consists of three main sections. This first section presents information obtained from interviews with key informants in the course of two site visits. The information is organized according to the open-ended interview protocol that asked about factors that bear on the appropriate balance of services across the continuum of care:

- **Context**. What external factors impact the ND behavioral health system?
- **Services**. Is the array, quality and capacity of behavioral health services adequate, and if not, what are the major shortcomings that should be addressed by the plan?
- **Subgroups**. Are all subpopulations as defined by demographic or clinical characteristics receiving equivalent services; if not, which groups are not receiving equivalent services, and which services are not equivalent?
- **Policies**. Are there policies, regulations, or legislation that are problematic and should be changed?
- **Collaboration**. Is there adequate cross-system and interagency collaboration and communication; if not what is the need for improvement?

Section II presents information relevant to the key issues represented by the five study questions specified above.

Section III consists of a set of recommendations that address the key issues.

Introduction

Behavioral health systems are complex with many components, some of which interact closely while others may be quite removed from one another. For this reason, HSRI typically endeavors to obtain the broadest possible range of perspectives from those involved in the system in various capacities. When interpreting key informant feedback, it is important to keep in mind that it differs from the results of a formal survey, which may be designed to produce an exhaustive and completely objective account of the behavioral health system:

- With key informant interviewing, it is impossible to obtain input from every perspective on the system, such as survey methods aim for with a representative sample; therefore, "key" stakeholders are chosen to provide input.
- Few individuals are in a position to be intimately familiar with the workings of more than a few components of the overall complex system; therefore, their accounts represent a particular perspective that is applicable to their place and role in the system but may or may not be applicable to the system as a whole. In fact, it is not uncommon for individuals to have misperceptions about aspects of the system.
- Key informants vary in their values and priorities. This is often most apparent in differing priorities for addressing gaps in the service system.

An additional challenge in interpreting key informant feedback is to determine the magnitude of an issue. An example from these interviews is that individuals with traumatic brain injury are often difficult to place from inpatient treatment; while the accuracy of this assertion is not in question, it is not possible, without further investigation, to establish the priority of this issue relative to other concerns.

For these reasons, we do not attempt to assess the broad validity or applicability of individual statements; instead, we review them for themes that we consider in relation to quantitative data, documents, research in the field, and expert opinion. (Note: In most projects, we insure the representation of consumers and advocates among the key informants; given the short timeframe and narrower focus of this project—primarily to support policy decisions about the distribution of inpatient beds—we limited the input to interviews conducted on two site visits with individuals involved in the operations of the behavioral health system. For an in-depth account of consumers' experience of care in the North Dakota behavioral health system, we refer readers to our 2018 Behavioral Health System Study.[1] In the implementation of

[1] Available at https://www.behavioralhealth.nd.gov/sites/www/files/images/ND_FinalReport_042318.pdf

policies following from this report, we encourage the inclusion of consumer and advocate perspectives.)

Policy Context

"Context" refers to factors impacting the behavioral health system that policy cannot alter but must nonetheless take into account. Recommendations for system change must also take these factors into account. The following contextual factors were discussed with key informants.

Geography

A major contextual factor for North Dakota's behavioral health system, discussed by many informants, is the rural nature of North Dakota and its thinly dispersed population. This is a fact that cannot be altered by policy and planning but must be addressed.

Rural environment and population distribution have implications for five of the dimensions of system adequacy: availability, accessibility, capacity, quality, and efficiency. Definitions of and distinctions related to the term rural may vary; some are based on formal criteria such as that of the Census Bureau, while others may be informal and ad hoc, including distinctions such as rural vs. frontier, rural vs. suburban, etc. The Census Bureau employs a relatively simple distinction between urban and rural, whereby urban consists of "Urbanized Areas," which have a population of 50,000 or more, and "Urban Clusters," which have a population of at least 2,500 and less than 50,000, and rural is simply "any population, housing, or territory NOT in an urban area." This basic distinction, however, is not adequate for understanding the variety of complex social and economic ties that may exist between urban and rural areas; consequently, the Office of Management and Budget (OMB) has developed a more refined classification system consisting of 12 categories.

The criteria for the OMB criteria go beyond population density to consider commuting flows as indicators of economic and social relationships between areas of different population density and characterize relationships among areas of different types in functional terms. The relevance of these categories for the location of inpatient facilities is discussed in the Recommendations section.

Workforce

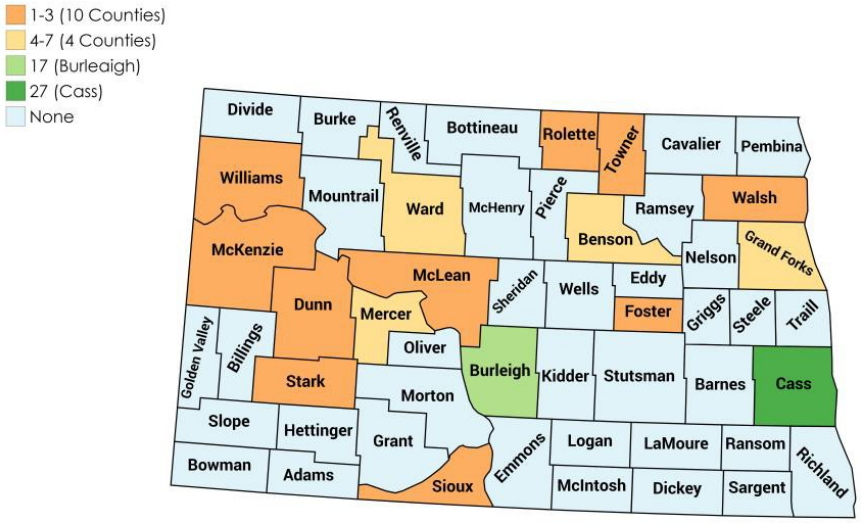
North Dakota, like most rural areas, is challenged by a workforce shortage, which affects availability, capacity, and quality. However, the rural nature of the state may also be contributing to a maldistribution of the workforce. For example, there is wide variation among North Dakota counties in the rate of nurse practitioners per 100,000 population—ranging from 221.43 per 100K in one county to 0 per 100K in five counties. (Notably though, only three counties in the state have more than a total of five nurse practitioners.[2]) The uneven distribution within a general shortage applies also to medication-assisted treatment (MAT), where the preponderance of providers

[2] According to https://data.hrsa.gov/topics/health-workforce/ahrf

are located in two counties—Cass and Burleigh—whereas approximately two-thirds of the counties have none (Exhibit 1).

Exhibit 1

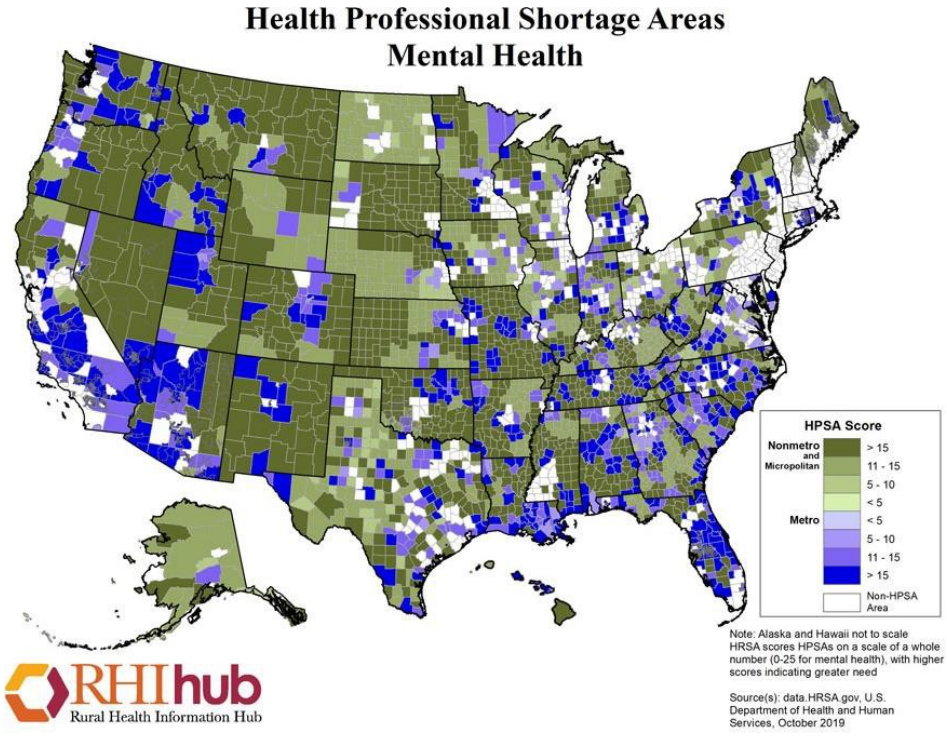
Buprenorphine Providers by County



Created with mapchart.net

As with bed supply, it is important to consider the relative scale of workforce needs. As indicated below in the map of Health Professional Shortage Areas (HPSAs) using Health Resources & Services Administration (HRSA) data, mental health workforce shortages are less severe in North Dakota than in many other large areas of the country including all three neighboring states; as calculated by HRSA, there are several North Dakota counties in which there is no shortage.

Exhibit 2



Economy

Another contextual factor that is especially important in North Dakota is the state's economy. The economy impacts all behavioral health systems in that it is outside the influence of policy and planning but has a direct effect on behavioral health services need and supply—on need as a major social determinant of health and on supply determining the availability of resources. The economy also has many indirect effects, such as the availability of housing, the balance of public and private insurance, and shifts in the size and distribution of the population.

Notable in North Dakota was the oil boom, which began in 2006, and its subsequent decline a decade later. While this resulted in a large increase in state revenues, it created numerous social problems—in particular the increases in substance use and the cost of housing—that placed demands on the behavioral health system. The oil boom and decline has had several residual effects: People continue to migrate into the state based on its reputation as a land of opportunity, only to find the opportunity has diminished and they are unemployed; and the cost of housing, driven up by the demand during the boom, remains high, which is widely cited as a challenge for people with mental illness and substance use disorders.

Population

A third contextual factor, which exists for all behavioral health systems, is the characteristics of the population: sociodemographic features such as age and income distribution, and prevalence of disorders. North Dakota is notable for its relatively large Native American population. Despite the overrepresentation of Native Americans in the behavioral health system, however, this was not widely cited by key informants as a challenge. Relationships with the tribes were cited as "not bad," with some variability depending on the tribe, and these relationships have been improved by the recent change in policy of redirecting from the state Medicaid agency to the tribes CMS reimbursement of excess Medicaid payments.

Another population contextual factor that favors North Dakota compared to some other rural regions is the relative homogeneity of the population, with the important exception of the large American Indian population. For example, because of the types of crops that predominate in North Dakota, the state has a relatively small migrant farmworker population; in other agricultural areas within the US, migrant farmworker populations place strains on social services and present other humanitarian challenges.

Between 2010 and 2018 North Dakota's population increased by 13%, a rate exceeded only by five other states.[3] Presumably much of this growth was attributable to the oil boom—the populations of counties in the western part of the state increased while those in the east decreased—therefore it is unlikely to contribute significantly to the behavioral health workforce; on the contrary, according to a number of key

[3] According to https://data.ers.usda.gov/reports.aspx?ID=17827

informants it had the opposite effect of creating additional demand for behavioral health services.

Market

A fourth contextual factor is the dynamics of the health care market, which impacts hybrid public-private behavioral health systems. This impact is amplified by the fact that the behavioral health market, especially for inpatient facilities, tends to be volatile, presenting challenges for planning. For example, in 1992 after a period of explosive nationwide growth, two thirds of all psychiatric hospitals and half of all inpatient beds were in private facilities. Ten years later, the number of private psychiatric hospitals and beds had declined by nearly half. The expansion was largely driven by policies such as the increased availability of Medicaid and the relaxation of the IMD exclusion for people under 21. The subsequent contraction was primarily driven by the introduction of managed care. Much of the growth consisted of inpatient facilities for adolescents, which were heavily marketed, and the subsequent retrenchment likely contributed to the shortage of adolescent facilities noted by a number of informants.

Services

As noted, the question of whether services of any kind are adequate involves the six dimensions of availability, accessibility, capacity, quality, appropriateness, and efficiency. Implementing a new service, especially one requiring considerable capital investment such as inpatient facilities, without first considering all of these dimensions would be unwise.

The 2018 North Dakota Behavioral Health System Study provided detailed reflections from a wide range of stakeholders on service-by-service availability, accessibility, capacity, and quality. For this project we drew upon a more concentrated group of informants and focused more narrowly on service-related issues that affect behavioral health inpatient need and capacity. We do not attempt to present every comment, observation, and opinion that was offered; instead, we distilled the most salient points to complement the analyses conducted for this project as well as the preceding 2018 System Study.

The ongoing national debate over the right number of inpatient beds hinges on the question of the extent to which need for beds is contingent on the availability, accessibility, capacity, quality, and efficiency of outpatient services—that is, whether the more appropriate investment is to expand the supply of inpatient beds to address a need or to improve the system of outpatient services, which would have the effect of reducing the demand for beds.

State Hospital Capacity

The state hospital is licensed for 120 beds; however, only 100 are utilized due to staffing constraints. A perception in some quarters is that it is excessively difficult to obtain admissions to the state hospital as well as to private hospitals, and this

contributes to a belief by some that more beds are needed. This may be, in part, an instance of how an individual's perceptions are shaped by their perspective from one facet of the system. A variety of factors may influence facilities' admissions decisions, and these may change on a daily basis. For example, admissions to the state hospital are prioritized according to level of acuity. Depending on the characteristics of other, concurrent referrals, an individual who might be admitted immediately on one day might be placed on the waiting list on a different day. These decisions are even more variable on the part of private facilities, where actual capacity may vary on a daily basis for a number of reasons: a temporary staff shortage due to illness or vacations may prompt a restriction on new admissions; with a shared room configuration, the presence of a highly agitated or assaultive patient prevents the availability of the room for a second person. A provider who is unaware of these circumstances is likely to see admissions criteria as being arbitrary and inconsistent and to see adding capacity as a means of increasing flexibility.

Capacity may also be constrained to some extent by inappropriate transfers from community hospitals—for example, transferring of a person who is refusing medication rather than working to address treatment resistance. Similarly, crisis centers may on some occasions react too quickly in sending someone to the hospital, and the crisis is resolved by the time the individual is admitted. Furthermore, a major difference between the state hospital and community inpatient facilities is the ability to provide longer stays for rehabilitation following acute treatment, and it may be the rehabilitation function rather than acute treatment that drives some of the demand for state hospital beds. The state hospital has been working on reducing length of stay and increasing admission rates, as well as improving the screening process to reduce inappropriate admissions and identify when alternatives are possible.

Boarding in emergency departments is apparently not as common in North Dakota as in some other locales, but there is a burden related to long waits pending disposition from the emergency department, especially for law enforcement. While the problem may be identified as a shortage of inpatient beds, the strain is more likely due to a general imbalance throughout the system and lack of alternatives to hospitalization.

An additional inefficiency in bed availability occurs when individuals are hospitalized from the emergency department for detox without further need for hospitalization—a problem that is exacerbated by the number of repeat admissions. Additional outpatient detoxification capacity, especially for complex cases and medication assisted treatment, may be a more pressing need than inpatient beds.

Some hospitals have made greater use of social workers in emergency departments to expedite the disposition process. Other solutions that have been suggested include a systemwide online dashboard to identify available beds and the implementation of better tools to guide disposition decisions.

Outpatient addictions treatment is perceived as a particularly pressing capacity constraint, resulting in long waits of perhaps several weeks. Consequently, when a person is referred for addictions treatment from the emergency department, the motivation prompted by the crisis is gone by the time there is an opening.

Community health centers are generally not perceived as adding a great deal to the capacity of outpatient behavioral health treatment, though the HSCs do make referral of individuals with less severe behavioral health issues.

Level of Care Appropriateness

Among those we interviewed there is a widespread perception that admissions criteria are not well defined across the continuum of care in North Dakota. The perceived result of this is that many people are placed in an inappropriate level care. this typically takes the form of a person being placed in a treatment setting that is more intensive than needed, the reverse is also seen as occurring; for example, if medical necessity criteria for inpatient care is overly restrictive as some suggest. An example of where medical necessity criteria are loosely observed may be Transitional Living programs, where some individuals have remained much longer than what the program is designed for (probably as a consequence of the shortage of affordable housing). Another example suggested by some is a reluctance of Psychiatric Residential Treatment Facilities (PRTF) to accept more challenging cases, which results in otherwise avoidable out-of-state placement in facilities that are more willing to accept challenging behavior. These restrictive admissions policies also create the potential for avoidable inpatient admissions of youth. To ascertain the validity of these perceptions and assess the magnitude of the problem would require a case review process that was beyond the scope of this study; however, we do address this in the Recommendations section of this report. Inpatient admissions criteria are especially undeveloped for adolescents.[4]

Quality

Compared to concerns about the availability and accessibility of services such as detox, outpatient addictions treatment, and crisis services, there was relatively little concern about the quality of those services that do exist. Perhaps the most prominent quality issue involved case management services, where there is a perceived need for reorienting the service and providing the necessary training to shift from merely facilitating appointments and referrals to more active intervention, especially to support adherence and intervene to resolve potential crises.

Consumer Subgroups

American Indians

The 2018 System Study dealt at length with issues related to North Dakota's American Indian population, drawn from interviews with members of tribal nations and analysis of utilization data. Among these findings is the fact that the proportion of behavioral health service users that are American Indian exceeds the proportion of the general population. On the one hand this may indicate that access to services is

[4] Evans, N. and D. Edwards (2018). "Admission and discharge criteria for adolescents requiring inpatient or residential mental healthcare: a scoping review protocol." JBI Database System Rev Implement Rep 16(10): 1906-1911.

not a problem for this population, but on the other hand it demonstrates the importance of attending to relevant cultural elements of care and suggests a need for more prevention and promotion. This was not a major focus of this project, however, and as noted we did not interview any service recipients as this was done extensively for the 2018 North Dakota Behavioral Health System Study. Our general impression was that relationships between the behavioral health system and tribes were considered to be an important issue but not a crisis; one administrator who is in a position to have a broad overview of the system described the relationship as "not poor" and noted that it varied to some degree depending on the tribe.

One finding from the analysis in the 2018 System Study that concerns inpatient bed needs is the difference between American Indian and white service recipients in the balance of outpatient vs. crisis and inpatient services (Exhibit 3). Whereas the proportion of whites receiving adult outpatient services is much greater than the proportion visiting emergency rooms (accounting for 83% of adult outpatients vs. 67% of emergency room visits), for American Indians this ratio is reversed (only 12% of outpatient but 25% of emergency room visits). This difference between the two groups also holds in the ratio of outpatient treatment to more-intensive crisis-related services—albeit less extremely. Although more detailed analysis, such as unduplicated counts and disambiguation of children and adults, would be necessary before drawing definitive conclusions, this imbalance between the two groups in the distribution of service types suggests the possibility of some limitations on access to outpatient treatment and possible overuse of more intensive modalities.

Exhibit 3

Extract from Table 10 (p. 157) in the 2018 System Study

	American Indian		Black or African American		White	
Service Type	N	%	N	%	N	%
Adult MH Outpatient (n=17,662)	2,088	12.1%	508	3.0%	14,275	82.9%
Youth MH Outpatient (n=8,017)	1,800	22.7%	402	5.1%	5,459	68.9%
Emergency Rooms (n=1,427)	348	25.1%	75	5.4%	921	66.5%
MH Inpatient (n=1,979)	328	17.7%	81	4.4%	1,400	75.4%
SUD Inpatient (n=358)	98	31.4%	8	2.6%	199	63.8%

Older Adults

Geriatric patients as a group present several challenges that affect inpatient capacity. First, nursing homes that refer elders often refuse to take them back, resulting in delays for appropriate disposition-- or worse, some inpatient facilities now refuse to accept referrals from nursing homes, with the result of increasing NDSH demand. This problem is exacerbated by nursing homes' unwillingness or lack of expertise to manage behavioral disturbances related to dementia or other medical conditions. Second, patient mix may limit capacity: if the current census consists of many younger patients that may be more agitated or possibly assaultive, especially when units consist of shared rooms, hospitals are unwilling to admit frail elderly.

Adolescents

The system of care for adolescents, particularly for more intensive forms of treatment, is distressed. Too frequently adolescents are sent out of state for residential placement, either because they are not accepted by in-state PRTF's or because they are being referred unnecessarily for an inappropriate level of care. treatment. It is uncertain, however, the extent to which this indicates a need for more in-state beds or the need for an expansion and better use of less-intensive services. Adolescents in many locations are especially prone to inpatient hospitalization, as behavioral issues are often improperly treated as psychiatric conditions. Moreover, key informants have indicated that there is a perception by some that PRTFs resist accepting more challenging cases, and that many PRTF beds are occupied by individuals who do not require that level of care. The admissions criteria for PRTF treatment, as defined byper CFR 441.152 and ND Administrative Code 75-02-02-10.1 specify a high level of severity such that "proper treatment of the recipient's psychiatric condition requires an inpatient basis under the direction of a physician" and that appropriate treatment cannot be provided in a ales restrictive setting. To the extent that PRTFs serve individuals whose needs could be met by ambulatory services, these slots are blocked for those with more severe conditions. Furthermore the admission criteria include various form of severe behavioral disturbance including assaultiveness and suicidal behavior, which however are causes for exclusion by PRTF, requiring out of state placement in facilities willing to manage these behaviiora.

Homelessness

Although homelessness was mentioned by key informants and is discussed at some length in the 2018 System Study, it was not identified as an especially high priority by our informants. This is consistent with the fact that North Dakota's rate of homelessness at 7 people per 10,000 is relatively low compared to the national rate of 17 per 10,000, and especially to rates in some cities such as Boston with 101.8 per 10,000. The relative low rate of homelessness is further supported by data from SAMHSA's Uniform Reporting System (URS), which indicated in 2018 that of the population receiving services in the public behavioral health system, 2.2% are homeless or in shelters compared to 4.5% for the nation as a whole (though this is an increase in the state rate from 1.8% in 2017).

The relatively low rate of homelessness is somewhat inconsistent with our April 2018 study, which noted widespread concern about homelessness; the difference, however, may be a matter of interpretation. Informants in the 2018 System Study discussed homelessness primarily as one of a variety of factors that negatively impact behavioral health generally and did not specify the relative magnitude of the problem. Homelessness certainly affects the wellbeing of people with mental illness, but that may be a relatively small subset of the population. Also, informants in 2018 suggested that the high cost of housing was contributing to an increase in homelessness. Though it may seem incontrovertible that high housing costs would contribute to homelessness, the 2018 System Study noted the lack of data to assess this assumption, and research has shown that rates of homelessness are not always

related to the availability of affordable housing but may be influenced more by a variety of other factors such as climate, laws regulating public behavior, and public tolerance of sleeping in the streets.[5]

It may be that the behavioral health system has limited the effect of the housing shortage on homelessness by utilizing residential programs, a possibility supported by the observation that many slots are occupied by individuals who do not require this level of care, thus crowding out more appropriate utilization. This possibility is further supported by data from HUD showing that homelessness rates in North Dakota are lower than those of other states with population per square mile rates nearest to that of North Dakota. This possibility is discussed in the Recommendations section of this report.

Traumatic Brain Injury (TBI):

The 2018 North Dakota Behavioral Health System Study includes extensive discussion of services for persons with TBI. As noted previously, this group was identified as presenting challenges for disposition from inpatient facilities. It would require further investigation to assess the magnitude of this problem, such as how many with this diagnosis are included in inpatient populations and how many bed days are lost due to placement delays. A challenge for such investigations, however, would be the lack of reliable data for the population of persons with TBI, as documented in a 2016 needs assessment conducted by the North Dakota Center for Persons with Disability.[6]

Policies, Procedures, and Regulations

The 2018 System Study provides extensive discussion of various policy and procedural issues related to the behavioral health system. Here we highlight those identified by key informants that are particularly relevant for the adequacy of behavioral health services, especially those that negatively impact the capacity, efficiency, and quality of inpatient treatment.

As in many locales, North Dakota providers have experienced system problems with medical clearance for inpatient admissions. This is especially the case for substance use treatment when there are differences of opinion about the timing of the medical clearance, leaving law enforcement "caught in the middle." This conflict has been somewhat alleviated, however, by development of a common protocol. In certain circumstances when law enforcement is called, a full commitment is required even though the individual is willing to be transported voluntarily, thus creating unnecessary additional burden and a negative experience for the individual.

Other policy and regulation obstacles are the following:

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[5] Council of Economic Advisers (2019). The State of Homelessness in America.
[6] North Dakota Brain Injury Needs Assessment: Final Report June 2016. Retrieved from: https://www.ndbin.org/pdf/2016-nd-brain-injury-needs-assessment.pdf

- Chemical dependency evaluation to determine ASAM level of care requires a licensed addictions counselor (LAC), even if there is an addictions psychiatrist on staff, causing additional delays when an LAC is not immediately available.
- There is a need for a more consistent process for determining disposition from the ER to the appropriate level of care, such as a standard assessment tool or consultation from a behavioral health specialist.
- Inaccurate representation in referrals to inpatient facilities by community providers and nursing homes (when crisis resolution at the site or a less intensive level of care would be a more appropriate response) is a common occurrence.
- Nursing homes going back on an agreement to take a geriatric patient back from an inpatient unit is common. Some informants recommend regulations requiring nursing homes to take patients back after inpatient treatment.
- While some referrals for inpatient treatment involve individuals who could be treated in less intensive settings, other cases involve individuals who need acute inpatient care but are denied it by commercial insurers that are imposing overly restrictive definitions of medical necessity.
- There is also a perception by some that law enforcement in some cases applies involuntary holds inappropriately, with some inconsistency among regions of the state.
- The Medicaid cap of 21 days of inpatient treatment can frustrate providers, in part because some feel it is too restrictive and also because it is difficult to ascertain how much remains for an individual.

Collaboration, Coordination, and Integration

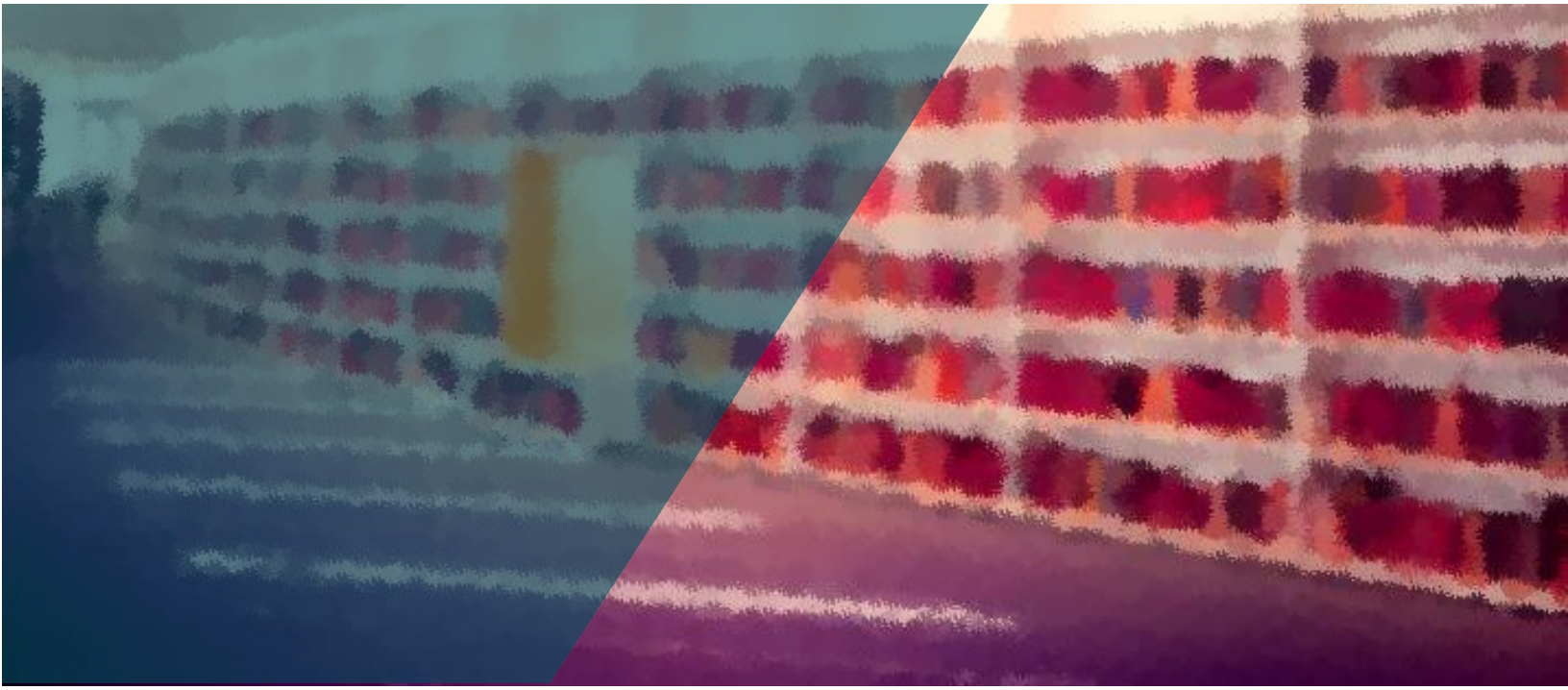
Compared to many other locales and with a few exceptions, North Dakota appears to be less hampered by system silos and inter-system conflict—and this level of cooperation appears to be maintained without a great deal of participation in formal collaborations and coalitions. (An exception is substance use prevention, where collaboration is a strategy explicitly promoted by SAMHSA, such as the SAMHSA-funded State Epidemiological Outcomes Workgroup.)

One area where there is some systemic disconnect is the relationship between law enforcement and hospital emergency departments. This is a nearly universal issue, however, and does not nearly reach the level of conflict experienced in other locales. In North Dakota it manifests primarily in the burden on sheriff's departments for transporting individuals between ERs and inpatient units. It is likely, however, that these issues will be mitigated to some extent by the expansion of mobile crisis services across the state.

A second area of system disconnect is between psychiatric inpatient facilities and referral sources in the community and long-term care facilities. This manifests in two

forms: 1) a sense on the part of inpatient providers that some number of referrals from both sources are inappropriate and misrepresented; and 2) a sense that nursing homes renege on commitments to accept patients back. The dynamic of inappropriate referrals occurs also in transfers from community hospitals to the North Dakota State Hospital.

Study Questions



The following study questions were presented by DHS to be addressed in this report.

1. Size and use of the state hospital

The state hospital, for purposes of this discussion, is the part of the facility at Jamestown that provides acute inpatient care and currently consists of 100 beds (thus excluding residential and sexual offender treatment programs). It is distinguished from other inpatient psychiatric facilities in the state by two functions: it accepts transfers of individuals whose behavior cannot be managed adequately in those other facilities and transfers of individuals who require a longer inpatient stay before discharge than those other facilities are able to provide.

This is an important point for consideration in the question of whether additional state hospital beds are needed, as decisions about inpatient capacity hinge only on these two functions rather than other system needs that may be important but should be addressed in ways other than expansion of the state hospital.

North Dakota Hospital Utilization

Table 7 from the 2018 North Dakota System Study (shown below) indicates that the number of individuals receiving treatment in the state hospital was fairly stable over the preceding 5 years, averaging about 1,150 discharges per year. The average length

of stay has been decreasing, however, while the median length of stay has remained consistent, suggesting the decline in length of stay is due to a reduction in long-stay patients.

Exhibit 4

State hospital discharges and lengths of stay (Table 7 from 2018 System Study)

	Discharges	Length of Stay (in days)	
		Average	Median
FY 13	1077	66	28
FY 14	1179	50	24
FY 15	1186	52	28
FY 16	1143	52	27
FY 17	1172	48	27

Source: AIMS data

According to the SAMHSA Universal Reporting System (URS), North Dakota's utilization rate for the state hospital is higher than that for the nation as a whole, with 0.61 per 100,000 population versus the US rate of 0.40 per 100,000.[7] Notably, the state's utilization rate for other psychiatric inpatient facilities is also considerably higher, more than twice that of the 39 states reporting this information, at 3.95versus 1.61 per 100,000. While there are many reports citing a bed shortage "crisis" across the nation, North Dakota's higher-than-average rate suggests that if there is a shortage of beds in the state, it is considerably less severe than in other areas.

A possible positive interpretation of these differences is the widely asserted national shortage of inpatient beds: perhaps North Dakota has a more adequate inpatient capacity. However, comparative data on utilization of community-based services suggests that the difference is due to overuse of inpatient services. For example, utilization of community-based services generally in North Dakota in 2017 was 18.46 per 1,000 population versus the national rate of 22.37 per 1,000. Recent data on the percentage of consumers receiving evidence-based practices in North Dakota is available for only two of the seven EBPs identified by SAMHSA: supported employment is slightly higher than the national rate (2.1% vs. 2%) and integrated dual diagnosis treatment is considerably lower than the national rate (6.2% vs. 11.6%).

The National Mental Health Services Survey (N-MHSS), conducted by SAMHSA, provides a comparison of North Dakota inpatient capacity and utilization with that of the US. The N-MHSS collects data on the location, characteristics, services offered, and number of clients in treatment at mental public and private health treatment facilities. As shown in Exhibit 5, inpatient and residential programs in North Dakota account for higher proportions of services and utilization than for the US as a whole, and inpatient and residential clients account for a higher proportion of all clients.

[7] Retrieved from https://www.samhsa.gov/data/report/2018-uniform-reporting-system-urs-output-tables

Exhibit 5

Inpatient and residential facilities as percent of all facilities, percent of clients using inpatient and residential as percent of all clients*

	North Dakota				US			
	Facilities (n=34)		Clients (n=12,902)		Facilities		Clients	
	N	%	N	%	N	%	N	%
24-hour hospital inpatient	7	20.6	293	2.3	1,920	16.4	129,115	3.1
24-hour residential	10	29.4	169	1.3	129,115	16.5	58,762	1.4

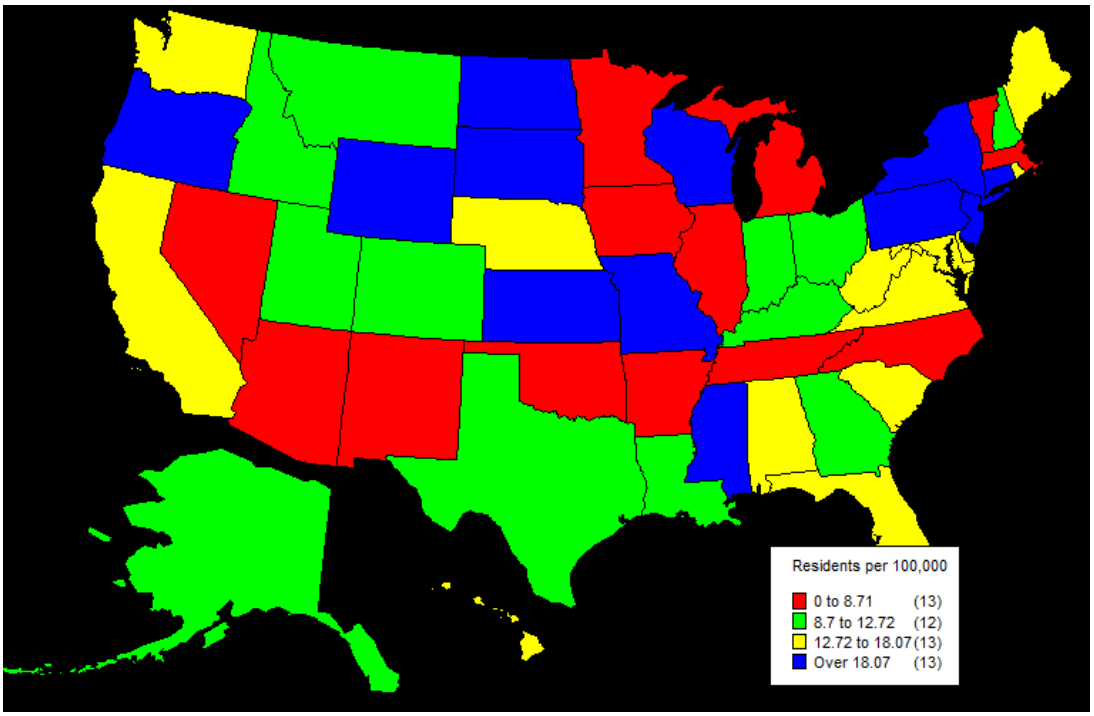
* Single day census (April 30, 2018)

Source: Substance Abuse and Mental Health Services Administration, National Mental Health Services Survey (N-MHSS): 2018. Data on Mental Health Treatment Facilities. Rockville, MD: SAMHSA, 2019

Exhibit 6, which compares states on the basis of state hospital residents per 100,000 population, indicates that North Dakota is among the top quartile of states. While this may be somewhat inflated by the fact that the state hospital also serves as the primary inpatient facility for the Southeast Region and may also include sex offender and SUD residential beds, it nonetheless suggests that North Dakota, relative to the national average, is in the higher range of state hospital beds.

Exhibit 6

State hospital residents per 100,000 population



Source: Ted Lutterman, Ron Manderscheid. NASMHPD Commissioners Meeting July 31, 2017.[8]

[8] Retrieved from https://www.nri-inc.org/media/1303/tim-knettler_nasmhpd-annual-meeting-nri-day.pdf

According to this report, in 2014 the rate of inpatient admissions ranged widely—from 59.6 per 100,000 population in Missouri to 16.0 per 100,000 in South Dakota (excluding Washington DC as an outlier). The rate of residents in state hospitals per 100,000 population for the nation also ranges widely—from New Mexico at 2.5/100K to Virginia at 33.3/100K—with a median of 11.1/100K (again excluding Washington DC as an outlier). This high degree of variability and lack of evident patterns (e.g., variability even among rural states) demonstrates a lack of consensus among policymakers as to what is the optimum number of state hospital beds and what is the appropriate use of them, and perhaps also differences among local markets that influence the number of private beds. It should be noted that there have been more technical approaches used to calculate bed needs, including the branch of mathematics known as "queuing theory," which models the number of individuals that are turned away or placed on waitlists in relation to capacity and occupancy rates. This would be challenging in the case of psychiatric admissions, however, due to the relative lack of clarity about what constitutes an appropriate and necessary admission when compared to other types of medical admissions (maternity hospitalization, for example).

One circumstance that is often considered an indicator of bed shortages is emergency room boarding, but this was not identified as a significant problem in North Dakota. Another indicator that is often cited is wait times to admission. Although some informants have identified this as an issue, it was not a prominent cause of concern and, as discussed in our Recommendations section, we believe this perception is due more to inefficiencies and lack of coordination than to a shortage of beds. In any case, adding beds as a solution to wait times is likely to be less efficient than a number of other actions. A simulation model conducted in North Carolina (which had a ratio of 11.7 state hospital beds per 100,000 population, roughly equivalent to North Dakota's ratio of 13.2 per 100,000) indicated that to reduce average wait times from the existing 3.5 days to 3.1 days would require an additional 24 beds, and to reduce wait times to under 2 days would require an additional 122 beds—a large investment for a relatively small gain.[9]

Supplier-Induced Demand

Complicating this issue is the extensive body of research demonstrating the effect of "supplier-induced demand" in some forms of health care. In a health context, this is the notion that utilization is determined not only by need but also by providers' ability to influence demand. This may be motivated by self-interest or by belief in the benefit for patients; in either case, however, the result is that adding beds will eventually result in hospitalization of people for whom there is no benefit in outcomes, which is inefficient at the system level and may be harmful at the individual level—an issue of appropriateness. For example, in a study of psychiatric admissions and bed supply in localities across three New England states (Vermont, New Hampshire, and Maine), Watts et al. (2011) found that the admission rate for psychiatric diagnosis varied

[9] La, E. M., K. H. Lich, et al. (2016). "Increasing Access to State Psychiatric Hospital Beds: Exploring Supply-Side Solutions." Psychiatr Serv 67(5): 523-528) .

considerably among local areas, with rates varying from 2.4 per 100,000 in Portsmouth, NH to 13.4 per 100,000 in Augusta, ME, with a positive correlation of 0.71 between areas' supply of beds and admission rates.[10]

Although the effect size of supplier-induced demand has been widely debated for many years (primarily due to methodological variation), the assumption that it occurs has been the basis for policies such as certificate of need requirements, and it must be taken into consideration for planning purposes.

We recommend that demand for beds at the North Dakota State Hospital be addressed not by increasing capacity (adding beds) but by actions to increase efficiency, which would have the additional benefit of providing more appropriate and less costly care. These actions, which are discussed in more detail in the Recommendations section of this report, include the following:

1. Transfers from other inpatient facilities: There are indications that some number of these might be avoided by the referring facilities implementing more proactive treatment approaches, such as addressing treatment resistance more effectively, thus reducing demand for this function. To the extent that these transfers are financially motivated (insurance limitations), there are likely more cost-effective solutions, as discussed in the Recommendations section.

2. Post-acute rehab: This function of the state hospital may be provided more efficiently by local partial hospital programs, also discussed in the Recommendations section.

3. The sexual offender program: We did not find evidence that the demand for beds at the North Dakota State Hospital was driven by a lack of capacity in this program as much as by the other functions of the hospital.

4. Supplier-induced demand: The fact that the North Dakota State Hospital already must contend with inappropriate referrals suggests that additional beds would add to this pressure, simply due to the dynamics of behavioral health systems (and wholly apart from treatment needs). Public inpatient facilities are particularly at risk for this form of overuse due to the fact that the population they serve includes many individuals who are both highly impaired and lacking in social supports and are not subject to managed care review.[11]

[10] Watts, B. V., B. Shiner, et al. (2011). "Supplier-induced demand for psychiatric admissions in Northern New England." BMC Psychiatry 11(1): 146.
[11] Davis, G. E. and W. E. Lowell (1999). "Using Artificial Neural Networks and the Gutenberg-Richter Power Law to "Rightsize" a Behavioral Health Care System." American Journal of Medical Quality 14(5): 216-228.

2. The potential need for state-operated or private acute facilities in areas besides Jamestown

This question hinges on the issue discussed above, as to whether a perceived need for more beds is due to unmet need for inpatient treatment versus shortcomings of various kinds in the community-based treatment system. Our analysis suggests that the greater unmet need is in the latter. As discussed under Study Question 3 and in the Recommendations section of this report, there are a variety of enhancements to community-based services—some of which are already underway, some of which are in the planning stages, and others for future consideration—that would alleviate much of the stress currently experienced in the system and attributed by some to a shortage of beds.

Exhibit 7 presents information on the current number, location, and ownership of inpatient psychiatric beds in North Dakota.

Exhibit 7

Inpatient psychiatric beds in North Dakota

	Location	Inpatient adult	Inpatient child/adolescent
Altru Hospital	Grand Forks	15	8
CHI St. Alexius	Bismarck	11	6
Prairie St. Johns[1]	Fargo	50	50[2]
Red River BH	Grand Forks	82	42
Sanford	Bismarck	18	0
Sanford	Fargo	20	
Trinity Hospital St Joseph's	Minot	18	8

1. Plan new 128-bed facility https://www.openminds.com/market-intelligence/bulletins/prairie-st-johns-to-open-new-behavioral-health-facility/

2. Total 100 adult/child/adolescent according to website

Although our assessment indicates that the overall supply of inpatient beds for the state is adequate, we find that the constraint is a matter of distribution—specifically the distance to inpatient facilities from the western part of the state. Because of the high fixed operating costs of inpatient facilities, larger centralized facilities offer the benefit of economies of scale; for North Dakota however, with its population thinly dispersed over a large geographical area, this benefit is offset by a number of disadvantages. Most important, for individuals whose residence is distant from the facility, it limits the possibilities for the face-to-face connection with families, informal supports, and community providers, which is important for assessment and in discharge planning for successful transition back to the community. Moreover, an extensive body of research has demonstrated that travel distance, as a barrier to access, is inversely related to use of both inpatient and outpatient services, a phenomenon known as "distance decay effect."[12]

[12] Shannon, G. W., R. L. Bashshur, et al. (1986). "Distance and the use of mental health services." Milbank Q 64(2): 302-330.

Exhibit 8 shows admissions to the state hospital by region (excluding admissions from Region VI related to the function of the state hospital as the primary inpatient facility for that Region.)

Exhibit 8

NDSH Admissions by HSC Region 2017
(n=681, adjusted for Region VI)

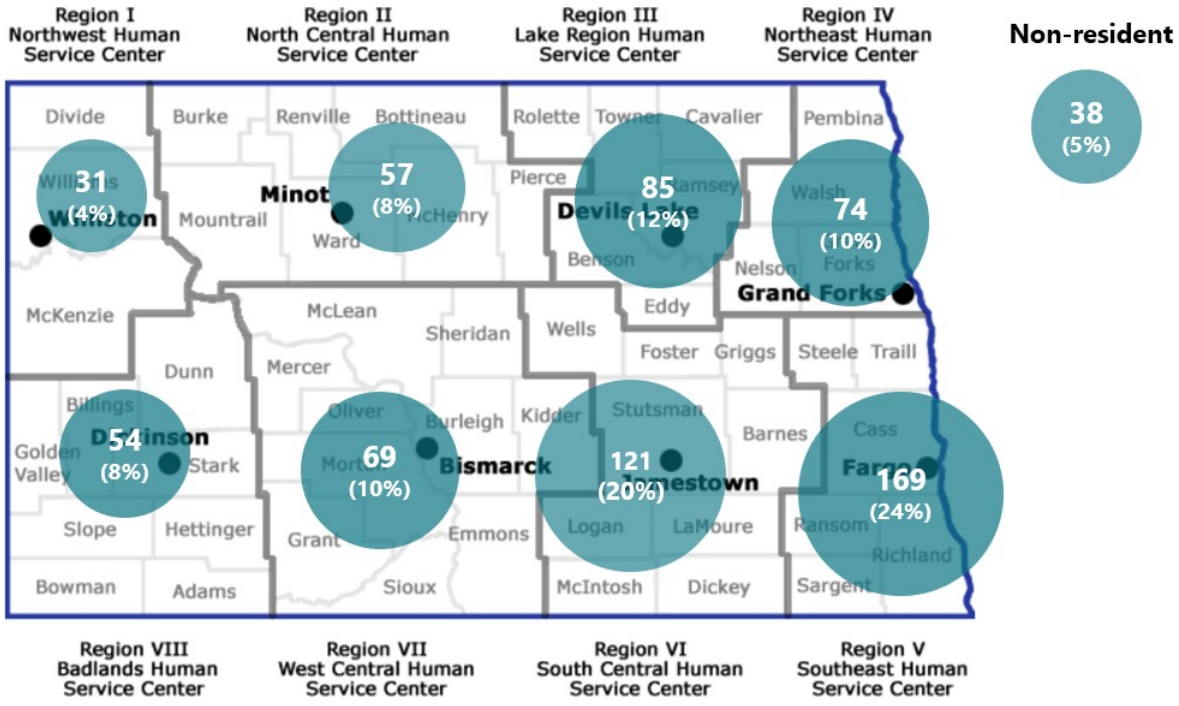
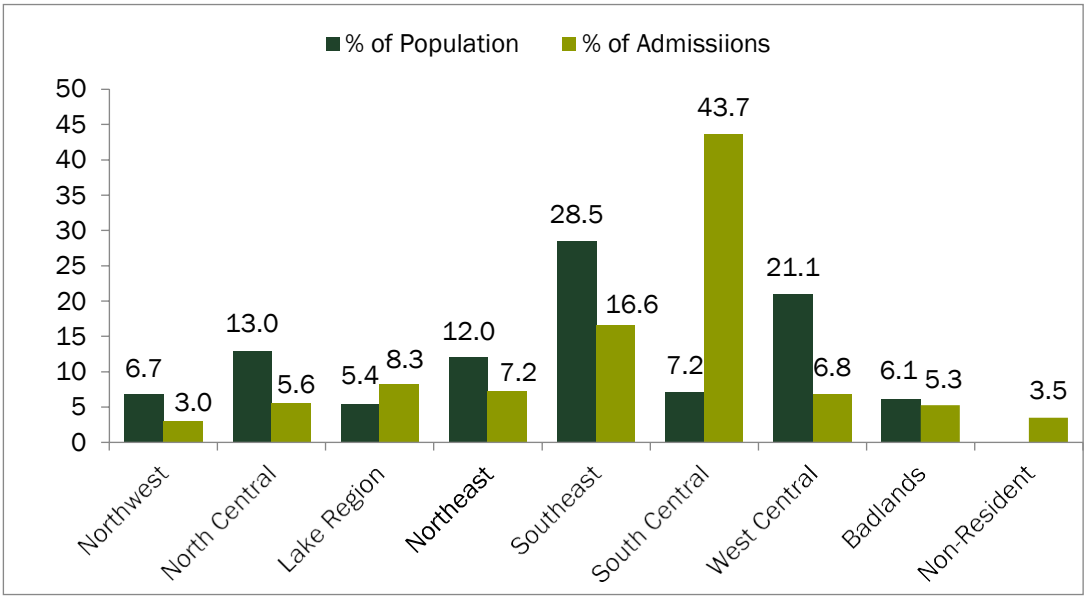


Exhibit 9, which shows the ratio between HSC region population and North Dakota State Hospital admissions, though not entirely consistent, indicates some evidence for a distance decay effect for western regions.

In 2017, HSC Northwest Region I and Badlands Region VIII, neither of which contains an inpatient psychiatric bed, contributed 54 and 31 (5% and 3%) respectively to total admissions at the North Dakota State Hospital. Considering that the total population of the 11 counties that make up these two regions constitutes 12.8% of the North Dakota population, the relative proportion of admissions suggests a distance decay effect for these two regions. In contrast, South Central Region VI, where the North Dakota State Hospital is located, and to a lesser extent to the adjoining Lake Region III, represent the reverse: a higher proportion of total state admissions when compared to total population size. There are possible alternative explanations for these patterns—for example, policy reasons such as North Dakota State Hospital prioritizing admissions from Region VI—and the pattern is not entirely consistent.

Exhibit 9

Region population vs. NDSH admissions



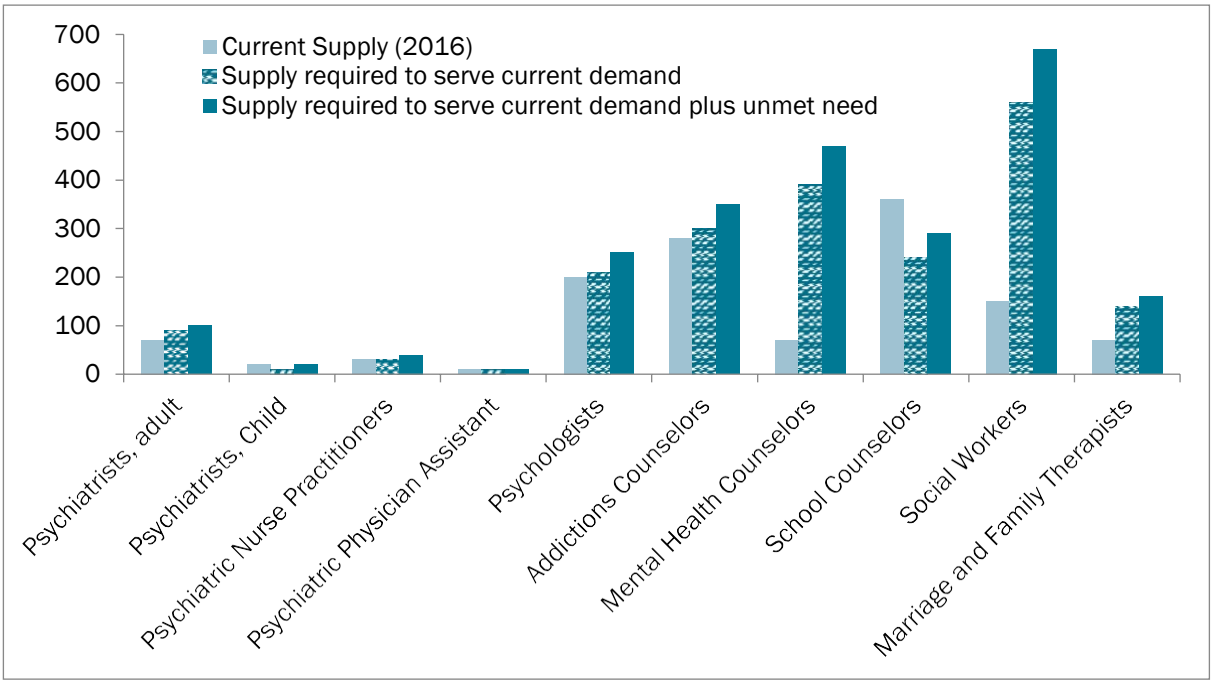
For the purpose of improving access (rather than addressing a capacity shortage), we recommend establishing a small number of inpatient beds (between 6 and 10) in the western part of the state. The suggested mechanism for accomplishing this is presented under Study Question 3 and in the Recommendations section of this report.

North Dakota Behavioral Health Workforce

We suggest that questions about the adequacy of the inpatient psychiatric bed supply should not be considered apart from questions about the behavioral health workforce supply for two reasons: First, a shortage of community-based workers likely adds to the demand for inpatient beds; in this case, building the workforce may be a more cost-effective strategy than adding beds. Second, it would be futile to add beds if the workforce is not sufficient to staff them. To provide context for this issue, Exhibit 10 presents the current supply of behavioral health specialists (as of 2016) and the number that would be needed to meet current utilization plus unmet need. This information is extracted from the HRSA workforce simulation model, which compares current workforce supply in each state with estimates of the supply required to meet current demand (i.e., service utilization) and the supply required to meet current demand plus unmet need.

Exhibit 10

Current North Dakota behavioral health workforce with supply required to meet current demand and unmet need, from HRSA



There is wide variation among the states and among the specialties within the states. It is noteworthy that in some states the supply actually exceeds demand. In terms of psychiatrists, for example, New York has a surplus of 2,240 FTEs, Massachusetts has a surplus of 930 FTEs, and California has a surplus of 720 FTEs; in fact, the supply in these states even exceeds what would be required to address both unmet and current need. As expected, however, shortages are much more the norm: for example, 37 states had an estimated shortage of psychiatrists given current demand, and 3 states have shortages of more than 700 FTEs (Texas, Florida, and Michigan). These shortages are obviously greater with the addition of unmet need. Presumably, a surplus supply of specialists suggests that some individuals are receiving more services than needed—for example, people may be having more frequent visits with psychiatrists than is necessary—or perhaps specialists in surplus areas on average are serving fewer people. A shortage on the other hand suggests that people are receiving less than they require—for example, people may be having less frequent contact with their social worker than they require.

It is noteworthy that in North Dakota the model indicates the number child psychiatrists in the state (70) is adequate to meet the need, as child psychiatrists are often identified as a critical shortage. Also noteworthy is that there is actually a surplus of school counselors required to meet the estimated need. Clearly, the gap is greater by far for counselors and social workers compared to other specialties.

It should be noted that the HRSA model did not use state licensure agencies as a source as these were not universally available, and the limited information provided

on the North Dakota Board of Social Work Examiners differs considerably from HRSA estimates. For example, the Board of Social Work Examiners indicates 400 Licensed Clinical Social Workers (Exhibit 11) versus HRSA's count of 150. Notably though, the HRSA figure represents FTEs, meaning that some number may be working part time or not practicing at all.

Exhibit 11

North Dakota social workers from Board of Social Work Examiners

Position	Number
Licensed Baccalaureate Social Worker	1560
Licensed Master Social Worker	371
Licensed Clinical Social Worker	400

The Behavioral Health Workforce Development Project initiated by DHS in August 2017 is a promising initiative designed to alleviate the workforce shortage in North Dakota, which will be essential for staffing the expanded service capacity.[13]

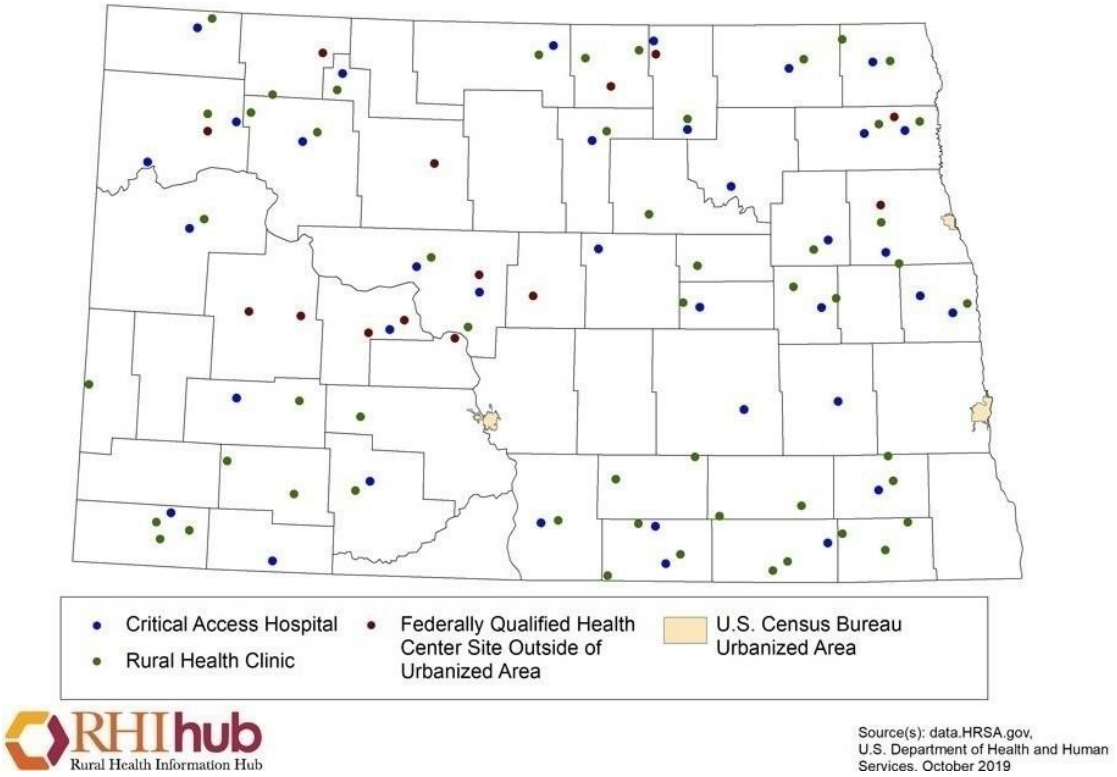
Federally Qualified Health Centers (FQHCs), Rural Health Clinics, and Critical Access Hospitals

Based our assessment, and that conducted for the 2018 Study, there are indications that federally funded health centers may be an untapped potential for expanding the availability of outpatient services in the western part of the state, which would serve as an additional source of diversion from inpatient treatment. Exhibit 12 represents the distribution of different types of rural health centers in North Dakota.

[13] https://ruralhealth.und.edu/projects/behavioral-health-workforce-development

Exhibit12

Selected Rural Healthcare Facilities in North Dakota[14]



FQHCs are required to provide mental health services, either directly or by arrangement with another provider. The Bureau of Primary Health Care supports this function of FQHCs by providing Service Expansion Grants, technical assistance, and educational resources. HRSA promotes the use of additional support services such as care coordination, health education, social, and other services, which have been shown to reduce the use of emergency departments and inpatient treatment.[15]

Additionally, Rural Health Centers have gained increased support from the federal government to expand behavioral health capacity, though to a less extent than FQHCs and development has been slower.[16]

3. Potential to expand private providers' offering of acute psychiatric care and residential care

According to the 2018 System Study, "Our findings indicate a need to reevaluate and restructure case management services in North Dakota and to incorporate additional

[14] Retrieved from https://www.ruralhealthinfo.org/states/images/north-dakota-rural-health-facilities.jpg?v=4

[15] T Pourat, N., X. Chen, et al. (2019). "Improving Outcomes of Care for HRSA-Funded Health Center Patients Who Have Mental Health Conditions and Substance Use Disorders." J Behav Health Serv Res

[16] John Gale, Stepenie Loux, et al. (2010). Encouraging Rural Health Clinics to Provide Mental Health Services: What are the Options?, Maine Rural Health Research Center, Muskie School of Public Service

rehabilitation-focused evidence-based and promising practices to behavioral health service coordination to meet the diverse needs of North Dakotans." This gap is rapidly being addressed by a number of recent initiatives authorized by the 66th Legislative Assembly SB 2012—all of which have been shown by research and models elsewhere to reduce the demand for inpatient treatment:

- Establishing a process for peer support certification – needed to ensure quality and effective services are provided.
- Expansion of Free Through Recovery to individuals NOT in the criminal justice system or DOCR custody.
- Creation of a mental health voucher program addressing system gaps for young adults between the ages of 17-25 with a serious mental illness.
- Continuing development of infrastructure for schools to address behavioral health, with expansion to include rural and tribal schools in next biennium.
- Expansion to include private providers among those authorized to provide targeted case management.
- Inclusion of withdrawal management as a covered service under the Medicaid state plan.
- Expansion of the Substance Use Disorder Voucher system to include age 14.
- Additional funding for Trauma Training.
- Funding for Prevention and Early Intervention.

These measures all create incentives for expanding community-based services by private providers. As discussed under Study Question 2, it is likely that the combination of services authorized by the 66th Legislative Assembly will significantly reduce the need for more intensive (i.e., inpatient and residential) levels of care throughout the state; therefore, with one exception, we do not support the need, suggested in the Study Question, to expand private providers' offerings of acute psychiatric care (understood as inpatient facilities) and residential care. The exception to this is our recommendation that the state procure 6 to 10 beds in the western part of the state, and the most advantageous mechanism for accomplishing this is through a contractual arrangement with some existing public or private facility. This approach is discussed in more detail in the Recommendations section.

4. Impact of department efforts to adjust crisis services and other behavioral health services provided by the Regional Human Service Centers

As stated in the 2018 System Study, "An overarching theme that emerged in our analysis is that North Dakota's behavioral health system—like many others throughout the country—pours a majority of its resources into residential, inpatient,

and other institution-based services with relatively fewer dollars invested in prevention and community-based services."

The following recent initiatives of DHS aim to redress the imbalance identified in the 2018 Study by increasing the capacity and accessibility of outpatient services. Based on research evidence and experience in other locales, each of these efforts is likely to have some level of impact to reduce the demand for inpatient treatment:

- Transition to an Open Access model for HSC outpatient service
- Expansion and improved fidelity of evidence-based services including Assertive Community Treatment (ACT) and Wraparound Case Management
- Improvement in the integration of suicide prevention with the behavioral health system
- Expansion of the Free through Recovery program to include individuals who are not involved in the criminal justice system
- Activities to support the development of a peer specialist workforce
- Membership in the new multi-agency Children's Cabinet for better coordination of children's services and funding
- Expansion and better coordination of targeted case management services
- Statewide expansion of Crisis Intervention Training (CIT) for law enforcement
- Application for a 1915(i) state plan amendment, which will significantly expand the availability of support services that are not currently covered by Medicaid

These initiatives are too recent—or still in the planning stages—to quantify the extent to which they will reduce the need for inpatient beds.

5. Potential use of available Medicaid authorities, including waivers or plan amendment

CMS initiatives to expand the capacity and quality of behavioral health services have been increasing in recent years and now take a variety of forms, including waivers and state plan amendments tailored to the needs of Medicaid recipients with behavioral health disorders. The Medicaid Innovative Accelerator Program provides technical assistance to states in four program areas, all of which are directly applicable to behavioral health: Reducing Substance Use Disorders, Improving Care for Medicaid Beneficiaries with Complex Care Needs and High Costs, Promoting Community Integration through Long-Term Services and Supports, Supporting Physical and Mental Health Integration (PMH). North Dakota has already taken advantage of the technical assistance offered by CMS in these areas and could continue to benefit from them, especially in promoting physical and mental health integration in the FQHCs,

rural health clinics, and critical access hospitals. Various opportunities for expanding and enhancing services with the support of Medicaid are described below.

1915(i) State Plan Amendment

The 1915(i) state plan amendment will have a broad impact on the range of additional services and supports for children and adults with mental health and substance use problems. Among these new services and supports are many that directly address factors that contribute to avoidable psychiatric hospitalization and residential treatment. For youth, these include service coordination, respite, transitional supports, peer services, supported employment, supported education, housing supports, non-medical transportation, family training and supports, crisis stabilization, and in-home therapy. For adults, these include supports for housing, employment, education, transitions out of homelessness or institutional living, and peer support.

Medicaid Health Homes

Authorized under the ACA, Health Homes are targeted to individuals with multiple chronic conditions, including serious mental illness. Under this model, states cover care management and coordination services designed to integrate physical and behavioral health services, acute care and long-term services and supports, referrals to community-based social services, and support for improved care coordination following an inpatient stay.[17] As of November 2019, 20 states and the District of Columbia have a total of 35 approved Medicaid health home models, of which 23 are designed to serve some combination of SMI/SED/SUD populations.[18]

Institution for Mental Disease (IMD) exclusion waiver

A recent Medicaid option that has received considerable attention is the opportunity for states to obtain a waiver of the long-standing exclusion of IMDs from Medicaid eligibility. Waivers of the IMD exclusion may be obtained through four possible mechanisms: Section 1115 demonstration waivers, managed care "in lieu of" SUD authority, disproportionate share hospital payments, and, as of October 2019, provisions of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act. Section 1115 IMD exclusion waivers were initially authorized in response to the opioid crisis and covered only SUD; these were initiated in 2015 and revised in 2017. As of November 2019, 26 states had approved IMD exclusion waivers for SUD and another 3 states had waivers that were pending approval. The mental illness waiver was authorized more recently (November 2018); to date only Vermont has received an exclusion waiver for mental illness, though a number of states are reportedly considering adding mental illness to their SUD waivers.

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[17] Retrieved from http://files.kff.org/attachment/Issue-Brief-Medicaids-Role-in-Financing-Behavioral-Health-Services-for-Low-Income-Individuals

[18] Retrieved from https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-home-information-resource-center/downloads/hh-spa-overview.pdf

Although evaluation of the waivers is required, the results will not be available until 2024 or 2025; in the meantime, a few preliminary assessments by the states and a preliminary case study of three states, including Vermont, conducted by the Kaiser Family Foundation, have found that states reported generally positive results, though with some significant implementation challenges and considerable required effort. Some limitations and reservations identified thus far are the requirements for considerable expansion of outpatient services to support ready transition out of the IMD, temporary nature of the authority (typically 5 years until expiration), limitations on length of stay, and requirements for expansion of outpatient services that may not always coincide with current local needs and initiatives.[19]

Based on our assessment of North Dakota's needs, HSRI recommends against pursuing an IMD exclusion waiver at this time. The following considerations led us to this conclusion: a) as discussed in the 2018 North Dakota Behavioral Health System Study, North Dakota's utilization rates for inpatient and residential care are already relatively high; b) there is limited evidence of need for more beds in the form of ED boarding or long wait times for admission; c) expansion of inpatient capacity is only likely to result in increased utilization, counter to the thrust of current initiatives designed to divert individuals from more intensive levels of care; and d) as yet there is practically no evidence regarding risks and benefits, especially for mental health waivers.

Other Medicaid Opportunities

CMS has identified a number of ways in which Medicaid-covered services can be leveraged to enhance other non-covered services.[20]

Earlier identification and engagement in treatment

CMS has provided guidance to the states for designing benefit packages for evidence-based early intervention services for psychosis. These include services under several different Medicaid state plan 1905(a) benefit categories, including targeted case management, services of "other licensed practitioners," preventive and rehabilitative services, and case management services.[21]

Outreach, engagement and referral networks

States may be able to factor costs of some outreach activities, including patient engagement related to delivering a Medicaid covered service, which is not covered by Medicaid, into provider payment rates. More directly, activities by providers to improve coordination such as developing relationships with hospitals may be covered

[19] Kaiser Family Foundation (2019). State Options for Medicaid Coverage of Inpatient Behavioral Health Services.
[20] CMS Publication SMD # 18--011 RE: Opportunities to Design Innovative Service Delivery Systems for Adults with a Serious Mental Illness or Children with a Serious Emotional Disturbance Retrieved from https://www.medicaid.gov/sites/default/files/federal-policy-guidance/downloads/smd18011.pdf.
[21] CMCS Informational Bulletin, "Coverage of Early Intervention Services for First Episode Psychosis". Oct 2015. Retrieved from https://www.medicaid.gov/federal-policy-guidance/downloads/cib-10-16-2015.pdf

under the optional Health Home state plan benefit, which includes coverage for care coordination, transition care, and individual and family support services.

Data sharing

States may be able to access enhanced federal Medicaid matching funds for costs to state Medicaid agencies of implementing and operating technology to improve data-sharing capabilities as part of the Medicaid Information Technology Architecture (MITA), which is consistent with HSRI's recommendations for coordination of care across the system and with other sectors. For example, federal financial participation (FFP) could be available to support data-sharing capabilities between hospitals and community-based mental health providers.

Crisis call centers

Directly relevant to current initiatives in North Dakota, states may obtain administrative match for crisis call centers (which would require justifying how many callers are Medicaid beneficiaries in order to allocate costs to Medicaid). Additionally, enhanced administrative match may be available under MITA 3.0 to help states establish crisis call centers to connect beneficiaries with mental health treatment and to develop technologies to link mobile crisis units to beneficiaries coping with serious mental health conditions.

Community Behavioral Health Clinics

The Certified Community Behavioral Health Clinic (CCBHC) demonstration offers a model for providing comprehensive community-based behavioral health care. States may be able to adapt the CCBHC model of care using different authorities. For example, some CCBHC services may be authorized under the state plan and covered as clinic services with payment made using an encounter rate that pays for a bundle of behavioral health and primary care services.

Provider Registries

Another strategy strongly recommended by HSRI is the development of the capability to track which mental health providers are accepting Medicaid beneficiaries at different levels of care throughout the state. Costs could be reimbursed under MITA 3.0 at 90% of the development costs and 75% of the operational costs.[22]

Assertive Community Treatment (ACT): Coverable services in ACT programs could include assessment, medication, medication management, therapy/counseling, and case management.[23]

[22] https://www.medicaid.gov/medicaid/data-andsystems/mita/mita-30/index.htm
[23] CMS State Medicaid Director Letter on Assertive Community Treatment (June 1999). Retrieved from http://www.medicaid.gov/Federal-Policy-Guidance/downloads/SMD060799b.pdf .

Peer Support Services: Peer support services, including peer supports for parents and guardians of Medicaid-eligible children, may be covered.[24]

Transition after discharge

Also consistent with HSRI recommendations, CMS suggests that activities to follow up with community providers from inpatient and ED admissions, though not specifically covered as a Medicaid benefit, could be included in the rates that states set for inpatient and emergency room services.

Cognitive behavioral therapy (CBT)

CBT, which has been shown to be an effective EBP for persons with SMI, can be covered using the rehabilitative services benefit.

Supported employment and supportive housing

States can use existing Medicaid authorities, including 1915(c) Home and Community-Based Waivers and 1915(i) State Plan Amendments, to provide many of these supports. Where Medicaid does not cover the supportive service itself, it generally covers services to connect beneficiaries to the necessary supports. As North Dakota adjusts allocation to levels of care to generally less intensive settings across the system, supportive housing will be an important mechanism to insure that those transitioned from residential programs to community living are not placed at risk of homelessness. The proposed 1915(i) will be a key means for this effort.

Outreach and engagement

Lack of coverage of the costs of outreach to engage beneficiaries in treatment and develop referral networks can be a barrier to implementing these new integrated care models. However, states may be able to factor costs of some outreach activities, including patient engagement related to delivering a Medicaid-covered service, into provider payment rates even though those activities are generally not separately reimbursable unless specified under a service definition. The optional Health Home state plan benefit more specifically covers activities by providers to engage beneficiaries in treatment including by developing relationships with hospitals to improve coordination and transitions out of inpatient care.

School counseling

Behavioral health counseling could be covered under the rehabilitative services; however, EPSDT coverage for screening and behavioral health counseling does not require modification of the state plan. Other approaches to improving access to mental health services in schools include developing partnerships with FQHCs and rural health clinics.

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[24] CMS State Medicaid Director Letter on peer supports (Aug 2007). Retrieved from https://www.medicaid.gov/Federal-PolicyGuidance/downloads/SMD081507A.pd

Consultation

Another impediment to implementation of integrated care models is the lack of reimbursement for consultation and care coordination outside the presence of the patient; however, Medicaid may be able to reimburse for consultations between professionals regarding treatment for a patient and for care coordination by incorporating these into the rate a state pays a provider for a covered service for a beneficiary. Furthermore, Medicare covers payments to practitioners for behavioral health integration services, including the Collaborative Care Model, and has identified Current Procedural Terminology (CPT) codes for these payments.

Telehealth

Use of telehealth technologies to support provision of the Collaborative Care model is another important strategy for facilitating broader availability of integrated mental health care and primary care. States may be able to access enhanced match under MITA 3.0 for state development of telehealth-enabling technology to be used by Medicaid providers to coordinate care for beneficiaries.[25]

[25] CMS State Medicaid Director Letter #18-006, "Leveraging Medicaid Technology to Address the Opioid Crisis" (June 2018): https://www.medicaid.gov/federal-policy-guidance/downloads/smd18006.pdf

Recommendations

Many of the following recommendations echo those presented in the 2018 System Study report. However, they are presented here with a focus on how they relate to the study questions of this project—and specifically how they relate to the question of the appropriate size and functions of the state hospital within the overall behavioral health system.

Inpatient Capacity

As discussed under Study Question 3, it is our assessment that much of the pressure for access to inpatient beds could be alleviated first by enhancing community-based services and supports and second by some relatively simple system redesign measures to remove bottlenecks and facilitate the flow of consumers through the system.

Based on the qualitative and quantitative evidence that we were able to acquire in the scope of this project, we conclude that an appropriate size for the state hospital in Jamestown is a range of 75 to 85 beds. This is contingent, however, on a number of system enhancements and redesign activities, recommendations for which are presented in this section.

In addition to the facility in Jamestown, as discussed under Study Question 2, we recommend—for reasons of accessibility rather than capacity—considering the feasibility of establishing a small number of beds (6 to 10) in the western part of the state that would provide treatment for individuals who would otherwise be referred to the state hospital in Jamestown. These beds should be designated primarily for

adults, as the need for more intensive settings for youth can be addressed by more efficient use of PRTFs. Below we discuss mechanisms for how this might be accomplished.

Contracting for Additional Beds in the Western Counties

We recommend that the addition of psychiatric inpatient beds in the western part of the state be accomplished through contractual arrangements with existing provider organizations (as opposed to building a state-owned and state-run facility). As an example of this approach, North Carolina has established a model involving "three way contracts" between the state mental health authority, regional public managed care organizations, and private hospitals.[26] The primary purpose of this arrangement was to reduce the number of short-stay admissions to the state hospital in order to free up state hospital capacity to serve those needing longer-term treatment. The contracts allow adults needing inpatient psychiatric services to be treated for up to seven days and patients needing medical detoxification services for substance use to be treated for up to four days; those who are not ready for discharge within that timeframe may be transferred to the state hospital—a condition that was essential to private hospitals' participation. Contracts provide for two levels of acuity with tiered reimbursement rates. In addition to improving accessibility, this arrangement allows for flexibility in planning and adjustment based on need, while limiting exposure to the dynamics of the private health care market. Flexibility may be further enhanced, as in North Carolina, by contracting for bed days (rather than beds, which may not always be needed).

Alternatives to Inpatient Treatment

The following is a brief summary of evidence for the effectiveness of various programs and services in providing diversion from, or alternatives to, inpatient admissions. Many of these are recommended in the 2018 Study and are currently in place or planned; they are cited here as the rationale for the recommendation that reduced capacity of the state hospital would be adequate to meet the need in North Dakota.

Partial Hospitalization: Step-Up and Step-Down

Optimally, the addition of a small number of beds in the western part of the state would be accompanied by some number of partial hospitalization programs (PHPs) to provide the rehabilitation and step-down functions of the state hospital on an outpatient basis with the additional advantage of being covered by Medicaid. PHPs serve a subset of individuals who require the intensive level of service provided by an inpatient facility during the day, but who are deemed safe enough to spend the night in their home environment rather than in the inpatient setting (and have an adequate home environment); as such, they may also serve as step-up programs, providing

[26] North Carolina Department of Health and Human Services (2018). Funds for Local Inpatient Psychiatric Beds or Bed Days Purchased in State Fiscal Year 2017-2018 and Other Department Initiatives to Reduce State Psychiatric Hospital Use.

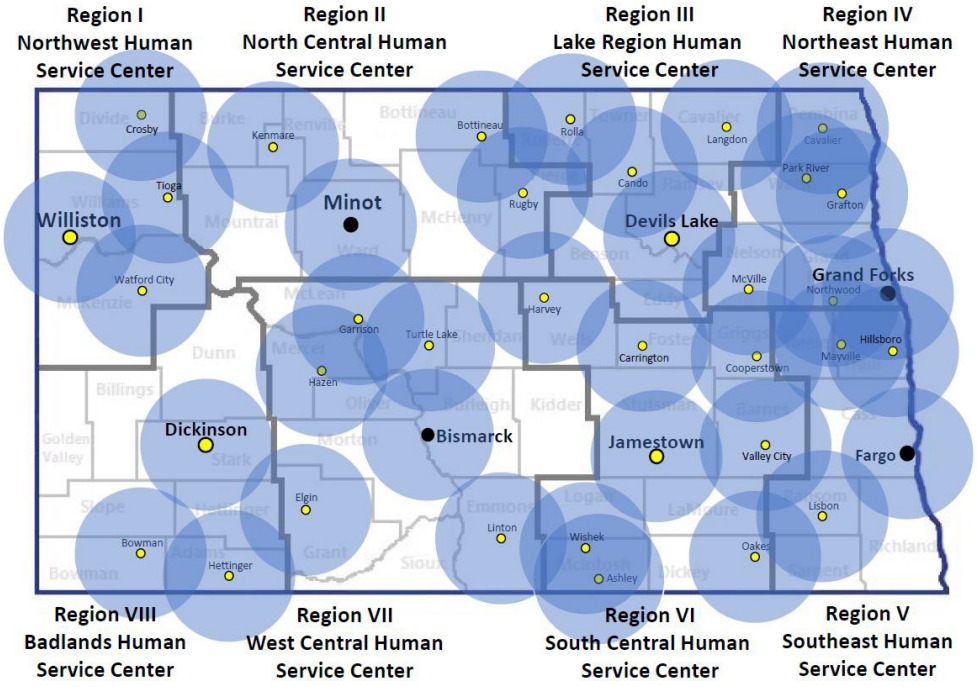
short-term acute treatment as an alternative to inpatient admission.[27] A Cochrane Review (meta-analysis) of studies comparing partial hospitalization with inpatient treatment concluded that "Caring for people in acute day hospitals is as effective as inpatient care in treating acutely ill psychiatric patients."[28]

The challenge for establishing programs such as partial hospitalization in a rural context is the opposite of that in urban areas: in the latter, the usual challenge is too many people for the available services, whereas the challenge in a rural area is not enough people to support a sustainable business model. Programs such as partial hospitals and outpatient clinics must be within a reasonable commuting distance but there must be enough people needing the service within commuting distance in order to sustain the program. Key informants indicated that this challenge is the primary reason for the relative scarcity of PHPs in North Dakota.

We recommend assessing the potential for sustainable PHPs in the western part of the state. This may take a relatively simple form of reviewing inpatient admissions from that area to determine how many may benefit from a PHP, either as a step-down or step-up, along with the location of their residence to identify locations that are within a feasible travel distance, then comparing with the location of potential facilities that might operate a PHP. Exhibit 13 shows a radius of 30 miles for critical access hospitals, which might serve as PHP providers, given adequate demand.

Exhibit 13

Critical Access Hospitals



[27] Horvitz-Lennon M, Normand SL, Gaccione P, Frank RG. Partial versus full hospitalization for adults in psychiatric distress: a systematic review of the published literature (1957-1997). Am J Psychiatry 2001;158:676-85.

[28] Marshall, M., R. Crowther, et al. (2011). "Day hospital versus admission for acute psychiatric disorders." Cochrane Database Syst Rev(12): CD004026.

Alternatively, more technical methods for locating programs are available, such Trade Area Analysis, which incorporates multiple variables such as travel distance, alternative options, geographic barriers and established commercial and employment connections to determine the optimum balance between serving a broad geographical area and attracting demand sufficient to support a business model. These analyses can vary from highly technical data analyses to relatively informal review of available information, public meetings, focus groups, etc. Though used primarily for commercial enterprises rather than human services, they have been used extensively in public sector economic development initiatives.

Critical Access Hospitals

Analysis of the capacity and functions of critical access hospitals (CAHs) was beyond the scope of this project, but we recommend investigating their potential for providing psychiatric inpatient treatment. Although it is our understanding that this function is not performed by North Dakota's critical access hospitals, as of 2003 CMS allows CAHs to set aside units of up to 10 beds each to be used exclusively for inpatient rehabilitation and psychiatric services for Medicare beneficiaries. These units would not count toward the CAH's 25-bed maximum, and they will be paid as if they were distinct parts of acute care hospitals. All CAHs are required to operate 24-hour emergency rooms and, according to a 2012 study, almost 10% of visits involved a mental health diagnosis; due to the lack of local resources, however, a significant proportion were discharged with no follow-up mental health services.[29]

Community Health Centers

Although the focus of this study was on the impact of behavioral health services provided by HSCs and their relationship to inpatient capacity, we recommend also reviewing opportunities for increasing utilization of behavioral health services provided by community health centers. Community health centers (CHCs) are non-profit, community-based clinics that provide primary and preventive care, including behavioral health among other clinical and social services, to all individuals regardless of insurance status or ability to pay. There are five CHC organizations in North Dakota, most of which operate clinics in several locations, for a total of 19 clinics, located in underserved and low-income urban and rural areas throughout the state.

HSRCs and CHCs do have bi-directional referral relationships, with HSRCs referring individuals with less severe behavioral health issues such as anxiety and depression to the CHCs, and the latter referring more severely ill persons to the HSRC behavioral health programs. While this is an efficient allocation of resources, it misses the opportunity for providing integrated behavioral health and primary care for persons with serious mental illness.

[29] Hartley, D., E. C. Ziller, et al. (2007). "Use of critical access hospital emergency rooms by patients with mental health symptoms." J Rural Health 23(2): 108-115.

The possibility that behavioral health services are underutilized or underdeveloped is supported by data: In 2018, the four CHCs with 26 sites in North Dakota served over 40,000 individuals, but mental health and substance use services accounted for only 17% and 2%, respectively, of the total volume of visits. And two of the four CHCs did not provide any substance use treatment.

Nationally, CHCs have succeeded in greatly increasing behavioral health staffing in recent years, in part because of federal emphasis on these services through service expansion grants as well as growth in patient volumes resulting from Medicaid expansions. From 2013 to 2017 the average number of behavioral health staff members in rural centers increased by 66%, from 0.186 to 0.308 FTEs per 1,000 patients. The pace of growth in National Health Service Corps (NHSC)-supported behavioral health staffing was even faster than that of overall growth. The number of NHSC-supported behavioral health staff FTEs per 1,000 patients grew by 96% in rural centers. Annually, in rural centers, each additional staff FTE was significantly associated with 411 more visits for substance use disorders, 539 more visits for depression, 466 more visits for anxiety, 151 more visits for attention deficit and disruptive behavior disorders, and 300 more visits for other mental disorders. Each additional NHSC behavioral health staff FTE in rural centers was associated with 1,037 more visits for depression and 1,005 more visits for anxiety annually.[30]

Emergency Departments

One factor that is often cited as indicating a need for increased inpatient beds is ED crowding or boarding. Though this is a widespread and challenging problem nationwide, it was not identified as a priority issue in North Dakota during our site visits. A 2008 national survey by the American College of Emergency Physicians lends support to the impression that this is a less pressing problem than elsewhere: all but six states reported that crowding was a problem, but eight others, including North Dakota, reported "few problems."[31] As the various behavioral health system initiatives progress, however, it will be important to monitor ED utilization as an indicator of the effectiveness of community supports and services.

Crisis Services

The planned expansion of mobile crisis services in coordination with implementation of a statewide 24-hour crisis hotline are the most important contributions to reducing demand for inpatient treatment. Critical to this benefit, however, will be proper implementation and adequate training and supervision. Crisis Now, a partnership led by the National Association of State Mental Health Program Directors with the National Action Alliance for Suicide Prevention, the National Suicide Prevention

[30] Han, X. and L. Ku (2019). "Enhancing Staffing In Rural Community Health Centers Can Help Improve Behavioral Health Care." Health Aff (Millwood) 38(12): 2061-2068.
[31] State and Local Efforts to Address Boarding and Crowding An information paper developed by the 2008-2009 ACEP State Legislative/Regulatory Committee, Ann Marie Garritano, MD, FACEP, primary author. Retrieved from https://www.acep.org/globalassets/uploads/uploaded-files/acep/advocacy/state-issues/crowding/state-and-local-efforts-to-address-boarding-and-crowding.pdf.

Lifeline, the National Council for Behavioral Health, and RI International offers a variety of resources and tools for the development of crisis service systems.[32]

Crisis response systems range in the degree of complexity and sophistication, and North Dakota could build on the basic foundation of mobile crisis teams and a crisis hotline to develop a more comprehensive and integrated system, depending on need, over time. An example of these more sophisticated systems is the "Air Traffic Control" Crisis Call Center Hub. These data systems track individuals in crisis in a way that is analogous to air traffic control, which operates on the basis of two principles: 1) always know where the aircraft is and 2) verify the hand-off has occurred and the airplane is safely in the hands of another controller. These systems address the frequent problem of a breakdown in the continuity of response and resolution of behavioral health crises. They also incorporate protocols to improve processes that frequently cause delays and disruption—such as service approval, transport, and medical clearance. The system gives crisis staff the capability to schedule appointments with outpatient services and provides metrics for assessing overall system performance. Examples of these systems are the Georgia Crisis & Access Line and the Massachusetts Emergency Services Program. The Georgia system includes a bed tracking component that shows the availability of beds in crisis stabilization programs and 23-hour observation beds, as well as private psychiatric hospitals.[33]

Home and Community-Based Services (HCBS)

The proposed 1915(i) state plan amendment is a key element in the rationale for the recommendation against expanding inpatient capacity. The 1915(i) will provide for a wide range of support services that are often critical for maintaining community stability for people with behavioral health disorders. The proposed services include supports for housing, employment, education, transitions out of homelessness or institutional living, and peer support—all of which may be expected to have a significant impact in reducing the demand for inpatient treatment. Housing supports, which include tenancy support services to help individuals access and maintain stable housing in the community, may be especially important for reducing demand for inpatient treatment as they will free up capacity across the entire continuum of care, thus allowing for diversion of some number to less-intensive levels of care.

Workforce

A critical factor in the success of the current initiatives to expand and enhance the behavioral health system will be the availability of workers to staff these new services. It was therefore a strategic decision by DHS to contract with the University of North Dakota Center for Rural Health to fund the North Dakota Behavioral Health

[32] https://crisisnow.com/about-crisis-now/
[33] Retrieved from https://www.innovations.harvard.edu/crisis-and-access-line

Workforce Development project. It will be important to closely monitor the activities of this program to insure that it achieves the intended results.

Assertive Community Treatment (ACT)

Because of the unavailability of data for contracted services, the 2018 Study was unable to assess the capacity of ACT in North Dakota. Given the demonstrated effectiveness of ACT in reducing inpatient demand, however, it would be important to assess the current ACT services to determine whether expansion and/or modification is indicated. It should be noted there is some controversy in the research literature as to whether ACT can still achieve the same results given that inpatient utilization is so much reduced compared to the past. In general, the research evidence indicates that ACT may still be effective for a targeted population of especially high users.[34] This issue is discussed further in connection with the case management system overall in the System Redesign section below.

Peer Specialists

The recent authorization of peer specialist certification and Medicaid reimbursement has the potential to provide an effective resource for diversion from inpatient treatment.[35] BHD has been actively promoting the use of peer specialists by private providers, and the success of these efforts will be important in the development of this resource.

Evidence-Based Practices

Additionally, we recommend that North Dakota consider a range of evidence-based services and programs that have been shown to reduce demand for inpatient treatment—and in many cases, produce cost benefits. In the state of Washington, for example, to promote evidence-based policymaking, the legislature supports the Washington State Institute for Public Policy (WSIPP).[36] WSIPP conducts sophisticated cost-benefit analyses based on the research literature for a range of social programs, including programs that address child and adult mental health and substance use disorders. To determine which programs in these areas work and which do not, WSIPP employs a three-step process. First, it conducts a systematic assessment of high-quality research reports to identify programs that have been found to achieve improvements in outcomes. Second, it determines how much it would cost taxpayers to produce the results identified in the research. And finally, it compares in dollar terms the benefits and costs of implementing the program in Washington. Exhibit 14 presents a list, drawn from the WSIPP database, of behavioral health programs shown to reduce inpatient and ED utilization.

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[34] Joseph P. Morrissey, Ph.D. ,, Marisa E. Domino, Ph.D. , and, et al. (2013). "Assessing the Effectiveness of Recovery-Oriented ACT in Reducing State Psychiatric Hospital Use." Psychiatric Services 64(4): 303-311

[35] Chinman, M., R. S. Oberman, et al. (2015). "A Cluster Randomized Trial of Adding Peer Specialists to Intensive Case Management Teams in the Veterans Health Administration." The Journal of Behavioral Health Services & Research 42(1): 109-121.

[36] https://www.wsipp.wa.gov/

Exhibit 14

Evidence-based programs and services found to reduce inpatient and ED utilization

Behavioral Health Service/Program	Impact on Utilization of Emergency Departments and Psychiatric and General Hospitals
Cognitive Behavioral Therapy For Schizophrenia	Health care associated with psychiatric hospitalization
Individual Placement And Support For Individuals With Serious Mental Illness	Health care associated with psychiatric hospitalization
Peer Support: Addition Of A Peer Specialist To The Treatment Team	Health care associated with psychiatric hospitalization
Primary Care In Integrated Settings	Health care associated with general hospitalization Health care associated with psychiatric hospitalization Health care associated with emergency department visits
Primary Care In Behavioral Health Settings (Community-Based Settings)	Health care associated with general hospitalization Health care associated with emergency department visits
Critical Time Intervention For Serious Mental Illness	Health care associated with psychiatric hospitalization
Supported Housing For Chronically Homeless Adults	Health care associated with general hospitalization Health care associated with psychiatric hospitalization Health care associated with emergency department visits
Mobile Crisis Response	Health care associated with psychiatric hospitalization
Assertive Community Treatment	Health care associated with general hospitalization Health care associated with psychiatric hospitalization Health care associated with emergency department visits

Coordination and Integration

Most of the strain on the system reported by key informants, and attributed by some to a shortage of inpatient beds, is more a consequence of a certain "looseness" throughout the system that results in a less efficient and effective system. The following recommendations are aimed at making North Dakota's behavioral health system more efficient and effective.

Behavioral health systems today are exceedingly more complex than in the past, primarily because of the hybrid public-private structure that has resulted from the increasing importance of Medicaid in financing services. Unquestionably, this has been beneficial in numerous ways; however, it has also created major challenges for government efforts to manage the more diverse entities that comprise the modern behavioral health system. Instead of the direct control that state and county governments were able to exert as primary payers and providers in the past, government functions now focus on efforts to foster what some management experts refer to as "systemness": coordinating and integrating the activities of multiple entities that operate according to diverse incentives and missions to insure they are meeting the needs of the public as efficiently as possible. To perform this function, government has three primary tools at its disposal: regulation, moral suasion, and the use of incentives. The following recommendations focus primarily on the latter.

Behavioral Health Data

The collection and analysis of data is essential to maximizing effectiveness and efficiency throughout the system. As stated in the 2016 BHD needs assessment, "Behavioral health epidemiological data and service data should be collected, monitored and communicated regularly to guide system and program decisions. In order for this to happen, authority and resources would need to be established. Individual agencies and programs typically track and monitor their own data. However, currently the data is not compiled to provide a picture of the broader behavioral health system."[37] A comprehensive system for reporting and analyzing data is key to most of the additional recommendations that follow.

Integrated cross-sector data systems

A challenge for identifying and meeting the needs of populations that are both vulnerable and high cost, which characterizes frequent ED users and inpatient admissions, is the lack of integrated data systems across health care and social service sectors. In addition to mental illness, this population is generally characterized by lack of social supports, dual mental health and substance use disorder, medical comorbidities, and difficulty adhering to treatment regimens. The data silos that are typical limit the capacity to respond to the complex needs of these individuals in a coordinated way.

While the establishment of an integrated system that can track services provided to this population and identify service gaps must overcome some formidable barriers, there are examples of such systems that have been implemented on various scales. A notable example is the pioneering Coordinated Care Management System implemented in 2007 by the San Francisco Department of Public Health. The system is capable of tracking utilization across multiple sectors to identify and develop a coordinated response to individuals with complex needs.[38] It also includes algorithms to identify levels of risk to facilitate targeting of services most effectively, and it provides a means of pinpointing gaps in the service system and "hotspots" where additional resources should be targeted.

Recommendation: DHS should explore the opportunity discussed under Study Question 5 of enhanced federal Medicaid matching funds for costs to state Medicaid agencies of implementing and operating technology to improve data-sharing capabilities as part of the Medicaid Information Technology Architecture (MITA).

[37] North Dakota Department of Human Services Behavioral Health Division (2016). North Dakota Behavioral Health Assessment: Gaps and Recommendations. Retrieved from: https://www.nd.gov/dhs/info/pubs/docs/mhsa/nd-behavioral-health-assessment.pdf.
[38] http://caph.org/wp-content/uploads/2014/12/Whole-Person-Care_Target-Population_Martinez_PPT-and-Handout.pdf.

Appropriateness

A common theme throughout our interviews with key informants is that levels of care are not being assigned appropriately or systematically. As discussed in reference to Study Question 3, there is a widespread view from diverse perspectives among key informants that some service slots—transitional residential programs were cited as an example by many—are occupied by individuals who do not require that level of service intensity. The implication for inpatient bed capacity is that this situation has a "blocking" effect, in that discharges from inpatient treatment are delayed because slots in step-down options are occupied. Another example of this is the reduced capacity to provide intensive residential treatment such as withdrawal because slots are occupied by individuals who could be served in less intensive settings, such as recovery homes, if they were available.

There are also consequences in the other direction. For example, if ACT slots are occupied by some who do not require that level of service, limiting access for those who do require it, the result may be inpatient admissions that otherwise may have been avoided. This perception is supported by the findings of the 2018 North Dakota Behavioral Health System Study; for example, the 2018 report cites a 2007 study of North Dakota children in treatment foster care and residential treatment facilities that found no correlation between mental health symptom severity and level of care, inconsistency among providers regarding the appropriateness of placements for children and youth, and a significant number of children held at a level of care that was inconsistent with the severity of their mental health symptoms.

Recommendation: Review existing screening tools and level of care criteria and refine as needed to adequately differentiate appropriateness of inpatient, outpatient, intensive outpatient, residential, partial hospital, and crisis stabilization. Guidance should be provided in the form of examples for each level of care along multiple dimensions such as dangerousness (suicidal and homicidal intent), functional impairment, psychosocial factors, etc.

There is a question as to whether assignment to inappropriate levels of care is a simply a result of looseness in the system or a consequence of programs avoiding challenging, complex cases. For example, some have suggested that adolescents who are hospitalized or placed in residential programs out of state could be adequately served instead by PRTFs if these were willing to accept individuals with more behavioral problems and a higher level of acuity.

Recommendation: It was not within the scope of this project to test the validity of this perception; however, we recommend reviewing and, if needed, revising contractual requirements for these programs.

The ASAM Levels of Care Criteria have been an enormous benefit for the field of substance use treatment by providing clearly defined standards for determining the appropriate level of intensity depending on the clinical status of the individual, and they have been widely adopted for that purpose. North Dakota has adapted the ASAM criteria to behavioral health generally (not just SUD) and mapped it to systems for

adult and youth level of care determination. However, it may be that insuring assignment to appropriate levels care can be improved by more thorough utilization review.

Recommendation: We recommend that any existing methods of assigning treatment be reviewed, and improved as necessary, and that eligibility criteria for various services be defined and applied consistently across the system through a process of utilization review. These mechanisms should be embedded in contracts with providers.

Housing

As discussed in the section on subpopulations above, it will be important to ensure that any more rigorous utilization review process or program eligibility criteria does not have the adverse effect of putting individuals at risk of homelessness. A number of stakeholders interviewed for the 2018 Study identified unstable housing and homelessness as a major problem, and a breakdown of statistics related to these issues suggests some nuances that have important implications for service planning. One important fact is that North Dakota's homeless population, both in absolute numbers and in per capita rate, is among the lowest in the nation. One factor possibly contributing to the perception of homelessness as a large-scale problem is that North Dakota underwent a very large spike in the homeless population in 2013 and 2014, nearly doubling from previous years, presumably related to the influx of population and shortage of housing during the oil boom. By 2018 the number had declined to approximately the levels of preceding years; however, there may be a lag in the public's perception of this reduction. This is not to say that homelessness is not a serious social problem, especially the continuing overrepresentation of Native Americans and African Americans; however, there is a further consideration in the relationship between the size of the homeless population and the issue of a tendency toward use of services that are higher intensity than necessary at all levels of the continuum of care. Specifically, it may be that inappropriate utilization such as long stays in transitional residential programs may be functioning as an alternative to homelessness. If that is the case, it will be important to insure that individuals transitioned out of inappropriate intensive settings are not placed at risk of being homeless, such that they may land in shelters. In 2018 there were 27 homeless persons with SMI who were sheltered and another 27 unsheltered, and 25 persons with chronic substance use, all of whom were sheltered.[39]

The most suitable alternative to prevent homelessness for persons transitioning out of higher intensity settings is supportive housing. The Corporation for Supportive Housing (CSH) estimates that 24% of people receiving services in mental health institutional and residential care settings and 2% of those in substance use care settings have needs consistent with supportive housing. CSH conducted a state-level assessment of need for supportive housing beds, which identified North Dakota as

[39] Retrieved from https://files.hudexchange.info/reports/published/CoC_Dash_CoC_ND-500-2018_ND_2018.pdf

47th among the states for absolute number of beds needed (2,312) but 16th in the number of beds needed per capita. This gap has been noted in previous reports such as the 2018 HSRI report and the North Dakota Behavioral Health Assessment Gaps and Recommendations report.[40]

Recommendation: With the implementation of a more rigorous utilization review strategy, it will be important to monitor the outcomes of transitions from higher levels of care very closely and to continuously review the supply of supportive housing.

Transitions

Transitions from one level of care to another are a primary focus of many service redesign initiatives. Inpatient demand can be reduced by preventing people from falling through the cracks when services are not adequately coordinated and integrated. Doing so requires well-designed protocols and adequate resources to ensure warm handoffs. Replacement of Money Follows the Person funding to support transitions from the state hospital, as requested by DHS's 2020-2021 Optional Adjustment Request (OAR), will be important for preventing readmissions. The Air Traffic Control model described above provides for smooth transitions from crisis services back to routine community care. As discussed under Study Question 5, Medicaid offers a number of opportunities to enhance transitions in connection with direct services.

Behavioral Health and Primary Care Integration

As a result of supplemental funding by the federal government, Federally Qualified Health Centers are increasingly a resource for behavioral health services, with the added benefits that these services are provided through integrated care models and are eligible for federal support for workforce recruitment. In FY2019, four FQHCs in North Dakota (Coal Country Community Health Center, Family Healthcare Center, Northland Health Partners Community, and Valley Community Health Centers) received funding to support the development of Integrated Behavioral Health Services models. We recommend that BHD maximize opportunities to coordinate and draw upon these resources for enhancing outpatient behavioral health treatment.

Emergency Department Flow

Some of the perceived need for more inpatient beds is a result of there being periods when ED utilization is especially heavy and the need for more rapid throughput is consequently more urgent. While ED crowding does not seem to be the problem in North Dakota as it is for other locales, some of the mechanisms that are being implemented to address crowding may have the benefit of reducing wait times for inpatient treatment. For example, some hospitals are smoothing patient flow by allowing for patients to make appointments online, which directs less acute admissions to periods of lower volume; also some hospitals post current wait times on

[40] Available at https://www.nd.gov/dhs/info/pubs/docs/mhsa/nd-behavioral-health-assessment.pdf.

their websites, thus creating a "self-triage" mechanism whereby individuals with less acute conditions enter when volume is lower.[41] For example, the Cambridge Health Alliance in Cambridge, Massachusetts posts the number of wait time minutes for each of its three hospital EDs, calculated as the average over the preceding four hours.[42]

Recommendation: BHD should work with private health systems to encourage adoption of these practices, demonstrating the benefit for their own operations and presenting models where these have been implemented.

Bed registries

A widely cited bottleneck in the North Dakota behavioral health system is the effort required to identify available inpatient beds. A recent report from the Office of the Assistant Secretary for Planning and Evaluation (ASPE) describes how some states have implemented bed tracking systems, also known as bed registries, for tracking and reporting on availability of behavioral health inpatient beds.[43] The ASPE report identifies 17 states with bed tracking systems. Of these, 5 states provide direct public access to bed tracking information; the remainder provide access to authorized users with a login. Requirements for hospital updating vary but typically are at least twice daily. Massachusetts, for example, provides publicly available information about a wide range of services but requires log-in for availability of inpatient beds; the state requires that hospitals update three times a day and includes this requirement in their Medicaid managed care performance contracts. Alaska's publicly accessible website provides the following information:

- Total number of beds/total capacity
- Number of beds occupied
- Number of beds available
- Number of people on the wait list
- Estimated days wait time for next available bed
- Date and time of last update

This type of system expedites patient flow—for example, by reducing the time an individual is boarded in an emergency room while staff seek out an open bed—and reduces staff burden and frees up staff time for example when meeting the requirement to determine that no PRTF bed is available in ND before out-of-state placement of an adolescent. In addition, archived data from the system allows for analyses of where there is a need for greater capacity, or perhaps underutilization.

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[41] American College of Emergency Physicians Emergency Medicine Practice Committee (2016). Emergency Department Crowding: High Impact Solutions. Retrieved from https://www.acep.org/globalassets/sites/acep/media/crowding/empc_crowding-ip_092016.pdf)

[42] Retrieved from https://www.challiance.org/

[43] Retrieved from https://aspe.hhs.gov/system/files/pdf/262216/IPBedTrack.pdf.

Recommendation: DHS should examine the approaches and advantages of bed registry systems in other states to determine the feasibility of implementing in North Dakota.

Inpatient Admissions From Nursing Homes

Researchers have identified a high prevalence of mental illness even excluding dementia among nursing home residents. For example, a study of new admissions in 2005 found that nearly 20% of admissions had a diagnosis of schizophrenia, bipolar disorder, depression, or anxiety disorder. Furthermore, researchers report that the amount and quality of behavioral health care in nursing homes, especially smaller rural facilities, is generally inadequate. With approximately 80 nursing homes in North Dakota, there is potentially a considerable population of elders with unmet needs for appropriate behavioral health treatment. Additionally, as noted in the 2018 Study, North Dakota's nursing home population includes a significant number of persons with serious mental illness who are under 65. Nursing home staff often lack the training to manage behavior that is related to behavioral disorders and to provide appropriate psychopharmacological treatment (often through misunderstanding of regulatory guidelines). This lack of in-house capacity inevitably leads to unnecessary inpatient admissions. Beyond the quality-of-care issues this raises, geriatric patients admitted from nursing homes strain inpatient capacity in variety of potentially avoidable ways, as we learned from inpatient staff in the private hospitals. First, some referrals to inpatient facilities from nursing homes could have been avoided by proper medication management in the nursing facility. Second, when there is a frail elderly patient on the unit, inpatient staff are reluctant to admit other patients who are more agitated and potentially assaultive, thus limiting capacity for those with the greatest need. Third, nursing homes on occasion will refuse to accept the return of the resident from the hospital, resulting in unnecessary delay while the hospital seeks an alternative disposition.

Several opportunities for mediating these issues are possible, among the most promising being telepsychiatry. Telepsychiatry for nursing homes has proven successful in several locations, including at a program operated by the University of Vermont Medical Center. Medicare will reimburse for telepsychiatry provided to nursing homes in medically underserved areas, making this potentially cost-effective as well as a means of reducing inappropriate inpatient utilization. Additionally, BHD could provide or advocate training on behavioral health issues for nursing home staff. Although there are some 40 training programs for certifying nursing aides in the state, it is likely that this more specialized training would need to target RN level staff. One possible partner for this effort is Quality Health Associates of North Dakota, which is involved in a variety of quality improvement activities in the state.

Recommendation: BHD should explore opportunities for increasing the use of telepsychiatry for consultation to nursing homes and promote increased training in psychopharmacology and behavioral management.

Hospital Ward Configuration

Key informants from private hospitals discussed the arrangement of psychiatric wards as being a factor in sometimes constraining bed availability; for example, a shared room may be unsuitable for disruptive or agitated behaviors, in which case the room may be occupied only by one person. One North Dakota hospital indicated plans to change this configuration to single rooms, which will reduce the number of beds but increase capacity by allowing more flexibility in assigning rooms. The trend in construction of all types of hospitals has been toward single room configurations, and some experts suggest that single rooms allow for higher occupancy rates.

A study by the American Hospital Association (in which the North Dakota State Hospital participated) recommended organizing units by diagnosis, age group, and gender to allow for peer to-peer patient support and diagnosis- and age-specific environments and therapy options tailored to the needs of each group. Examples cited in the report were a Child and Adolescent Eating Disorder Unit, Gender-Specific Emerging Adult Units, Co-occurring Substance Abuse and Depressive Disorder Unit.[44]

Recommendation: While the volume of hospital admissions in North Dakota may not justify a high degree of specialization, CHI St. Alexius' eating disorder unit is a local example. Enhancement of a behavioral health data system would allow for more precise estimates of potential demand for sub-groups such as persons with dual mental health and substance use disorders.

Pre-Admission Screening

According to some key informants, lack of transparency in admissions policy and criteria for both the state hospital and private facilities can be a constraint on availability of beds. On the other side, representatives of inpatient facilities state that inappropriate referrals (misrepresentation of issues that could be effectively addressed in a less intensive setting) can reduce the availability of beds for more appropriate admissions. HSCs, which are responsible for screening admissions to the state hospital, reportedly vary to some extent in the criteria they use. More effective screening procedures may be a way to reduce the number of inappropriate referrals.

Recommendation: A review of existing screening processes for the state hospital by HSCs might identify needs for improved clarification and standardization, perhaps supplemented by training or other forms of guidance. While the BHD does not control private hospital admissions, it might be able to facilitate a more standard process throughout the community through a taskforce, workgroup, or training event involving inpatient providers and major referral sources. Alternatively, this might be accomplished less formally through meetings among relevant parties, as we are told was the approach for resolving conflicts related to medical clearance.

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[44] American Hospital Association (2018). Delivering High Quality Behavioral Health Care: Practices and Innovations from Leading Organizations.

Conclusions

North Dakota continues to be progressive and resourceful in its effort to expand and enhance the system of services and supports at all levels for residents of the state. Many of the recommendations in the 2018 North Dakota Behavioral Health System Study are already being enacted, and an effective structure to guide implementation is in place. Two very important initiatives—expansion of the crisis service system and the 1915(i) state plan amendment—should have a significant impact on community stability for persons with behavioral health disorders. The chief challenges and tasks lying ahead are, first, to ensure adequate management structures, workforce recruitment, and training to support the implementation of these new initiatives, and second, to continue developing the coordination and integration processes and structures to maximize the benefit of these enhancements.