DEPARTMENT OF HEALTH AND HUMAN SERVICES

INDIAN HEALTH SERVICE

Inpatient Mental Health Assessment

March 17, 2011

EXECUTIVE SUMMARY

This assessment is in response to the requirements set forth in the Patient Protection and Affordable Care Act (PUBLIC LAW 111–148), Part III, the Reauthorization of the Indian Health Care Improvement Act (S. 1790) Section 702 and Section 709, that not later than one year after enactment an assessment be made of the need for inpatient mental health care among American Indians and Alaska Natives (AI/AN). It includes a general assessment and discussion of psychiatric inpatient needs for the Indian Health Service (IHS [Federal], Tribal, and Urban Indian Health Programs), the availability and cost of existing psychiatric inpatient services within the Indian Health System, what existing medical/surgical beds, if any, might be available for conversion, and gives an array of possible actions to address inpatient psychiatric needs.

The IHS and Tribes provide primary medical care and community health services to AI/ANs. These services are mostly located in small, rural communities numbering over 670 locations in 36 States. Only a few of the 45 IHS and Tribal hospitals provide secondary medical services, and only one has an average daily census of greater than 35 patients, and none provide inpatient psychiatric services.

ASSESSMENT RESULTS

- Calendar Year (CY) 2009 IHS Contract Health Service (CHS) data identified 1,061 inpatient psychiatric admissions at an average length of stay of 5.62 days and an average cost of $4,757 per stay[1] (this includes only admissions paid through CHS only and not those funded by third party payors).
- Using available data and adapted planning assumptions, inpatient psychiatric bed requirement is projected to be 950 inpatient psychiatric beds for CY 2013.
- Unmet inpatient psychiatric bed needs cannot be determined with available resources, due largely to the wide variation in the design and structure of State and regional systems of care in which IHS participates, however the need may be substantial in light of provider ratings of poor access across most IHS Areas.
- Estimated professional/clinical staffing cost for a 10 bed psychiatric inpatient unit with 24 hour admission and care capabilities is $2,518,591 per year at current average clinical salaries for required specialties.
- Determining the cost of room conversion and or new construction requires a more in-depth study to update the IHS planning tools to correctly predict the need and reflect the costs to provide inpatient psychiatric rooms and/or to convert general medical/surgical rooms to inpatient psychiatric care.

DISCUSSION

Determining the best means to meet the need for inpatient psychiatric care is a complex and multidimensional question. It involves, in large part, a broader understanding of what a desirable mental health system includes and what types of services, supports, and structures are required to support such a system. There is no single answer for all 12 Areas of the IHS, as each faces

[1] IHS/CHS Inpatient Psychiatric Care Survey CY 2007-2009.

different challenges, service gaps, levels of State cooperation, and coordination between existing Federal and Tribal programs. There are, however, significant opportunities that should be considered as additional treatment approaches such as telehealth and digital networks, intensive outpatient mental health treatment, and fostering more regional collaboration among psychiatric service systems that offer acute inpatient psychiatric care.

RECOMMENDATIONS

Based on the available information, the following are recommendations and options for inpatient psychiatric services that appear most promising and cost effective:

1. If new appropriations become available conduct a more detailed examination of the current psychiatric system of care and need for inpatient mental health care that includes consultation with all Tribal, Urban Indian health, regional, and State partners as well as consumers. The examination would include an update to the current IHS Division of Facilities Planning and Construction Health Systems Planning (HSP) psychiatric services planning document to accurately reflect current conditions;
2. Rather than building IHS/Tribal facilities and/or converting existing medical/surgical beds in IHS hospitals, focus on procuring services from external providers if new appropriations become available, thereby establishing regional systems of care. This partnership-based system will provide better access to psychiatric inpatient care that is culturally appropriate;
3. Expand behavioral health services in partnership within Tribal and Urban Indian health programs and existing local, State, and regional providers to keep patients in their community;
4. Capitalize on the growing availability of clinical technologies such as telehealth. Strengthen partnerships with local Service Units and Tribal programs as well as other regional entities to enhance training collaborative and provide telehealth consultation;
5. Pilot intensive case management models of care (example: VHA Mental Health Intensive Case Management program) to improve continuity of care and provide comprehensive coordination of care which will help prevent unnecessary and preventable admissions; and
6. Expand the availability of lower level crisis respite and non-traditional acute care alternatives (example: peer managed non-hospital emergency respite options).

INTRODUCTION

This assessment is in response to the requirements set forth in the Patient Protection and Affordable Care Act (PUBLIC LAW 111–148), Part III, the Reauthorization of the Indian Health Care Improvement Act (S. 1790) Section 702 and Section 709.

> SEC. 702 (f) MENTAL HEALTH CARE NEED ASSESSMENT—
> Not later than 1 year after the date of enactment of the Indian Health Care Improvement Reauthorization and Extension Act of 2009, the Secretary, acting through the Service, shall make an assessment of the need for inpatient mental health care among Indians and the availability and cost of inpatient mental health facilities which can meet such need. In making such assessment, the Secretary shall consider the possible conversion of existing, underused Service hospital beds into psychiatric units to meet such need.
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> SEC 709 INPATIENT AND COMMUNITY-BASED MENTAL HEALTH FACILITIES DESIGN, CONSTRUCTION AND STAFFING—
> Not later than 1 year after the date of enactment of the Indian Health Care Improvement Reauthorization and Extension Act of 2009, the Secretary, acting through the Service, may provide, in each area of the Service not less than 1 inpatient mental health care facility, or the equivalent, for Indians with behavioral health problems. For the purposes of this subsection, California shall be considered 2 area offices, 1 office whose location shall be considered to encompass the northern area of the State of California and 1 office whose jurisdiction shall be considered to encompass the remainder of the State of California. The Secretary shall consider the possible conversion of existing, underused Service hospital beds into psychiatric units to meet such need.

This report includes a general assessment and discussion of psychiatric inpatient needs for the IHS, the availability and cost of existing psychiatric inpatient services, and what beds might be made available by conversion of existing medical/surgical inpatient beds to inpatient psychiatric care. The report concludes with a brief list of recommendations to address the inadequacy of inpatient psychiatric services for AI/AN people.

BACKGROUND

The IHS, in partnership with Tribes and Urban Indian health programs, provides essential medical and mental health services for approximately 2 million eligible AI/ANs. These services include medical and surgical inpatient care, emergency care, ambulatory care, mental health and substance abuse treatment and prevention, and medical support services such as laboratory, pharmacy, nutrition, diagnostic imaging, medical records, and physical therapy. Other services include public and community health programs such as diabetes; maternal and child health; communicable diseases such as influenza, HIV/AIDS, tuberculosis, and hepatitis; suicide prevention; substance abuse prevention; women's and elders' health; domestic violence prevention and treatment; and most recently the development of regional trauma/emergency medical delivery systems.

Slightly more than one-half of the Hospital and Clinic, and Mental Health budgets, and over 80% of the Alcohol and Substance Abuse budget, are transferred under P.L. 93-638 contracts or compacts to Tribal governments or Tribal organizations that design and manage the delivery of health programs in their communities. Most of the remaining programs are managed through the Federal system. In addition, there are 34 Urban Indian health programs serving approximately 600,000 AI/ANs.

For purposes of this report, attention is drawn to the nature of current IHS and Tribal inpatient psychiatric services, specifically services provided in small, rural hospitals. Most specialty services, and especially inpatient psychiatric care, are provided exclusively by State, county, or local governments and the private sector. The IHS and Tribal health programs consist mainly of primary medical care and community health services. These small, rural programs rely on the private sector to provide much of the secondary and all of the tertiary medical care to IHS beneficiaries. Of the 45 IHS and Tribal hospitals, only one has an average daily census of greater than 35 patients. Only nineteen of these 45 hospitals have the staff and capability of providing surgical services. There are currently no inpatient psychiatric services provided within an IHS, Urban, or Tribally operated facility.

IHS Inpatient Psychiatric Care

The IHS typically provides inpatient psychiatric care to patients through direct referrals to public and private facilities in the geographic region, as well as through linkages with State Medicaid and mental health systems. Such referrals may be paid for with Contract Health Service (CHS) funds, private insurance, or Medicaid/Medicare dollars. Access to such care varies by region and is related to the relative lack or availability of such services within that region. Regional psychiatric bed shortages directly affect the access of AI/AN populations to care, as does proximity. Accessing care of any kind in remote and rural settings is challenging and involves the engagement of multiple systems. Mental health services are particularly complicated in this regard, as transportation to appropriate facilities often occurs through systems other than the traditional medical transport systems. Police and public safety officers are often required, particularly when transporting involuntarily detained or committed patients. Many reservations have very limited police resources. Transports may require multiple hand-offs and cover hundreds of miles in very remote parts of the country. Many accepting agencies, including the Department of Veterans Affairs (VA), will insist on re-assessment of patients on arrival at the referral site, resulting in patients being discharged immediately if there are differences in clinical judgments made about severity. These and similar issues are all barriers to accessing inpatient psychiatric care even when they are generally available.[2]

The IHS has, in the past, provided some inpatient psychiatric care services. An acute inpatient psychiatric unit existed until the early 1990's at Gallup Indian Medical Center and until 2007 at the Rapid City Service Unit Sioux San Hospital. The Rapid City inpatient psychiatric unit is slated to re-open later this year but is already faced with significant staff recruitment issues. Both units were closed due to a range of issues including difficulty recruiting and retaining qualified staff, difficulty maintaining adequate patient occupancy, and a shift in the type of care patients

[2] Communication with Peter Stuart, MD, IHS National Psychiatry Program Consultant, March 6, 2011.

required to that of long term supervised care.[3] For these and other reasons, the vast majority of acute inpatient psychiatric care for AI/ANs has been provided by State and private regional psychiatric facilities. In response to a particularly urgent need for adolescent psychiatric care, an inpatient unit was established as part of the new Fort Defiance Indian Hospital in 2004. Due to ongoing difficulties in recruiting and retaining qualified staff, the unit did not open for several years and has since shifted to that of a 60 day intensive dual diagnosis program.[4]

State Inpatient Psychiatric Care

In 2011, the National Association of State Mental Health Program Directors conducted a nationwide survey showing that between FY 2009 and 2011 States have been forced to cut mental health care funding by $2.2 billion. At the same time, almost 60% of States reported an increased demand for community-based mental health care and crisis services. Nationwide, States have closed nearly 4,000 public psychiatric hospital beds resulting in a shortage of beds to meet the need.[5] As a result of budget reductions, many States have been forced to reduce funding for a wide array of these services including targeted case management, prescription medications, and outpatient clinics. These types of services support individuals and families in keeping those with mental illness out of more expensive psychiatric hospitals, emergency rooms, nursing facilities, and jails.

As noted, there has been a substantial decline in the availability of psychiatric inpatient services across the country, a result of de-institutionalization as a national policy. Between 1955 and 2000, the number of State hospital beds declined from 339/100,000 population to 22/100,000 population.[6] Furthermore, the Subcommittee on Acute Care for the New Freedom Commission appointed by President Bush noted that from 1990 to 2000 there was a 32% decline in beds in non-Federal general hospitals and a 43% decline in beds in private psychiatric hospitals.[7]

A 2008 article in the Journal of the American Academy of Psychiatry and the Law, notes that Oregon State had 19.2 beds per 100,000 population, placing Oregon in the Treatment Advocacy Center's category of having a severe bed shortage.[8] The Treatment Advocacy Center's expert panel recommended a minimum level of care of 50 beds per 100,000 population.[9] A number of other States with substantial AI/AN populations were identified as having severe bed shortages, including Nevada (5.1/100K), Arizona, (5.9/100K), Michigan (9.9/100K), Oklahoma (11/100K), Idaho (11.3/100K), and Alaska (11.3/100K).

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[3] Communication with Vickie Claymore-Lahammer, PhD, Deputy Director, Behavioral Health, Aberdeen Area Office, Indian Health Service, 2011.

[4] Communication with Michelle Kahn-John, Director of Behavioral Health, Fort Defiance Indian Health Board Inc., 2010.

[5] National Association of State Mental Health Program Directors, Senate Briefing, February 16, 2011.

[6] Lamb HR, Weinberger LE: The shift of psychiatric inpatient care from hospitals to jails and prisons. J Am Acad Psychiatry Law 33:529 –34, 2005.

[7] Torrey EF, Entsminger K, Geller J, *et al*: The shortage of public hospital beds for mentally ill persons: a report of the Treatment Advocacy Center. Available at http://www.treatmentadvocacycenter.org, accessed March 6, 2011.

[8] Bloom, J, Krishnan, B, Lockey, C: The Majority of Inpatient Psychiatric Beds Should Not Be Appropriated by the Forensic System. J Am Acad Psychiatry Law 36:438-42, 2008.

[9] Torrey EF, Entsminger K, Geller J, *et al*: The shortage of public hospital beds for mentally ill persons: a report of the Treatment Advocacy Center. Available at http://www.treatmentadvocacycenter.org, accessed March 6, 2011.

With the lack of State psychiatric facilities and community support, persons in psychiatric crisis often end up at the hospital emergency department (ED). Yet, there is little to no evidence to establish best practices for managing these ED patients. A hospital's approach to ED psychiatric emergencies tends to be largely influenced by its available resources and circumstances which is also the case in Indian Country.[10]

Cost of Care

The cost of care to treat mental disorders and related behavioral health issues (e.g., substance abuse and domestic violence) is significant. Mental disorders were one of the five most costly conditions in the United States in 2006, with care expenditures rising from $35.2 billion in 1996 to 57.5 billion in 2006. Treatment settings are also changing. For example, a growing number of children and adults are being diagnosed and treated for mental illness by primary care clinicians.[11] The cost of mental health care is also a burden to individuals and families seeking such care. For example, individuals nationwide spent an average of 10% of their family's annual income out-of-pocket for mental health and substance abuse treatment.[12]

Staffing

The shortage of qualified treatment providers is an important reason for the lack of access to inpatient mental health care. The distribution of mental health resources varies considerably from IHS Area to Area, as does the availability of mental health professionals trained to work with susceptible segments of the population, particularly children and adolescents. Moreover, providers generally prefer to practice in clinical settings where they can maintain skill competencies and opportunities for professional growth. Since Indian facilities are located in predominantly rural and often remote locations, the opportunity to maintain proficiencies and be exposed to best practices and new developments in the field is often limited. It can also be isolating for providers and their families. Providers often become overwhelmed by the continuous demand for services, particularly during suicide outbreaks, and even seasoned providers burn out. Also, there are situations where there are simply no appropriately trained healthcare professionals (e.g., psychiatrists, psychologists, social workers, etc.) to meet the behavioral health needs of the community. For example, across all of IHS there are only 16 allocated psychiatric nursing positions as indicated in the 2010 IHS Nurse Position Report. These are located in Alaska and Navajo Areas. The vacancy rate for these positions averaged 38% over CY 2010, demonstrating the difficulty in filling these positions.

Facilities

Health care services to AI/ANs are constrained by the limited capacities of existing IHS and Tribal health care facilities. Many IHS service units and Tribally operated health programs are in need of expanded or replacement facilities. Indian health care services are provided in over 670 IHS and Tribal health care facilities scattered throughout 36 states, mostly in rural and isolated

[10] Agency for Healthcare Research and Quality, Program Brief: Mental Health Research Findings, September 2009.
[11] *Ibid.*
[12] *Ibid.*

areas. To support health care services in these remote locations, the IHS operates over 2,300 staff quarters' units.

Several facilities are severely overcrowded because of the lack of expansion at a pace commensurate with the increased number of staff required to meet increased patient care needs. Indian health facilities range in age from less than one year to more than 156 years with an average age of 31 years. In order to meet space requirements, when an Indian health facility is replaced, the replacement is typically three times the size of the old facility. While expansion provides space for some new services, much of it is to accommodate already existing staff and programs. At the current rate of Indian user population increases, the need for space will continue to outpace replacement.

Additionally, the current backlog of maintenance and improvement costs for IHS and Tribal facilities is an estimated $473 million. Maintaining reliable and efficient buildings is increasingly challenging as existing facilities age and additional space is added to real property inventory.

For a variety of reasons there has been a reduction in the number of staffed medical/surgical beds throughout the Indian Health System, with some unused inpatient rooms converted to other purposes, generally to meet outpatient or administrative needs. Unused medical/surgical rooms do not lend themselves to quick conversions to psychiatric beds; they require significant renovations to make the room safe and compliant with current standards for inpatient psychiatric patient care.

Behavioral Health Need

AI/AN people suffer significantly and disproportionately from mental health disparities and access to culturally appropriate care. Throughout Indian Country, the high incidence of alcohol and substance abuse, mental health disorders, suicide, violence, and behaviorally-related chronic diseases is well documented. Each of these serious behaviorally-related health issues has a profound impact on the health of individual, family, and community well being both on- and off-reservations. Historical trauma, exacerbated by re-traumatization of the community from the high rates of injury and death, continues to plague Indian communities. The AI/AN suicide rate (17.9 per 100,000 population) for the three year period 2002-2004 is 1.7 times that of U.S. all races rate (10.8 per 100,000 population). Suicide is the second leading cause of death behind unintentional injuries for Indian youth ages 15-24 residing in IHS service areas and is 3.5 times higher than the national average. Suicide is the sixth leading cause of death overall for males residing in IHS service areas and ranks ahead of homicide. AI/AN young people ages 15-34 comprise 64% of all suicides in Indian Country. Between 1999 and 2005, suicide mortality rates increased from 45.9 to 55.2 per 100,000 population in AI/AN youth ages 15-24. Overall, suicide mortality is 73% higher for the AI/AN population compared to U.S.-All races.[13]

The IHS National Data Warehouse (NDW) is a centralized database containing a rich array of clinical and service data. Surveying the most recent data submitted by IHS, Tribal, and Urban sites, there are a significant number of clients receiving services for serious mental disorders including moderate to severe major depression, psychoses, and post-traumatic stress disorder.

[13] Unpublished data, Office of Public Health Support, Indian Health Service.

Such diagnoses reflect a significant need for intensive mental health services including inpatient psychiatric care. In CY 2010, reporting sites identified over 42,000 patients across the IHS receiving services for the aforementioned diagnoses.[14] The vast majority of individuals with the selected diagnoses were 18 to 64 years of age and 14% of the user population identified as having a severe mental disorder was 17 years of age and under. The Oklahoma Area had the highest number of individuals with one or more of these diagnoses across all age categories (Table 1).

Table 1. Selected psychiatric morbidity by Area based on NDW data, CY 2010

CY	REGION_ABBR_CD	AGE_0_12	AGE_13_17	AGE_18_64	AGE_65_PLUS	AGE_TOTAL	% of Total
2010	ABR	124	303	2,311	139	2,877	7%
2010	AKA	192	347	2,886	184	3,609	9%
2010	ALB	106	173	1,445	143	1,867	4%
2010	BIL	127	212	1,779	116	2,234	5%
2010	BJI	243	271	2,684	164	3,362	8%
2010	CAO	274	325	3,832	228	4,659	11%
2010	NAV	182	333	2,376	331	3,222	8%
2010	NSA	94	149	1,568	151	1,962	5%
2010	OKC	380	436	7,735	543	9,094	22%
2010	PHX	354	419	2,678	185	3,636	9%
2010	POR	183	296	3,782	283	4,544	11%
2010	TUC	155	134	741	26	1,056	3%
2010	**National Total**	**2,414**	**3,398**	**33,817**	**2,493**	**42,122**	100%
	% of National	6%	8%	80%	6%	100%	

These data should not be taken as the full measure of psychiatric morbidity since they are based on a user population of 1.281 million, a subset of the Indian Health System user population currently exported to the NDW. Moreover, AI/AN patients receive services from multiple sources including State and local Medicaid programs, private insurance or managed care organizations, or other governmental programs such as the VA. The level of use of these programs is not currently well understood.

PSYCHIATRIC INPATIENT NEED DETERMINATION

The primary care mission of the IHS prompted the development of a comprehensive healthcare facilities planning methodology in 1989 that was subsequently transitioned to a computerized model in 1998. Periodically, the model has been updated, but psychiatric inpatient care has been an out-of-template service, meaning that it is not standardized within the normal facilities planning and development process as are general medical facilities. Consequently, the current IHS planning document on psychiatric services is dated and would require significant resources

[14] IHS NDW Data CY-2010: De-duplicated patient count of patients receiving the following diagnoses: 295.00-299.90, 309.81 and excluding 296.21 and 296.31.

and research to update appropriately. Furthermore, there are no currently available federal standards to assess psychiatric bed needs.

Thus, the basic bed need for all psychiatric inpatient care for the IHS was calculated using a best case estimation algorithm taken from the work of an expert panel as reported in the 2005 Report titled "The Shortage of Public Hospital Beds for Mentally Ill Persons" from the Treatment Advocacy Center, a center devoted to eliminating barriers to the timely and effective treatment of severe mental illnesses.[15] Members of the board of the Treatment Advocacy Center include E. Fuller Torrey, MD, an acknowledged expert on public mental health care delivery and current Professor of Psychiatry at the Uniform Services University of Health Sciences, and Jeffrey Geller, MD, the Director of Public Sector Psychiatry at the University of Massachusetts, among others. In arriving at its suggested bed use, the panel considered a range of factors that included how potential candidates for hospitalization are defined, the number of patients with serious mental illnesses who would benefit from hospitalization, the varying length of stay in hospitals depending on their staffing and treatment approaches, differences between short term and long term use of psychiatric beds, whether or not States aggressively pursue outpatient commitments, how psychiatric admissions are financed, and variation in accessibility to community level mental health supports. The conclusion of the panel was that on average, 50 beds per 100,000 population could be expected to be the minimum needed for adequate access to psychiatric inpatient care. The actual need on a regional basis will vary depending on the adequacy of local and intermediate levels of care.

Using the most current available IHS user population figure of 1.9 million users, we calculated a total of 950 psychiatric beds to fully meet psychiatric inpatient needs.

Determination of Staffing Requirements

There are no standardized staffing requirements in the IHS planning manual for psychiatric inpatient services, but there are many existing recommendations for staffing levels, space, and equipment requirements, from which the following staffing per patient table was drawn (Table 2).

Table 2. Sample 10-bed inpatient psychiatric unit

Staff Position	Criteria for Authorization
Psychiatrist	1 per 10 patients
Psychologist	1 per 10 patients
Psychiatric Social Worker	1 per 15 patients
Occupational Therapist	1 per 15 patients
Registered Nurse	1 per 10 patients x 5 for 24 hr care
Mental Health Technician	1 per 10 patients x 5 for 24 hr care
Secretary/Clerk-Typist	1 per 10 patients

[15] The Shortage of Public Hospital Beds for Mentally Ill Persons, accessed March 10, 2011 at http://www.treatmentadvocacycenter.org/storage/tac/documents/the_shortage_of_publichospital_beds.pdf.

Three factors critical to determining the staffing (Full Time Equivalents [FTE]) needs of a unit are complexity of care, skill levels of staff, and infrastructure support of the hospital. Facilities need to have the flexibility to adjust for specialized staffing needed for those instances when the acuity and complexity is high. A one-to-one nurse-to-patient ratio is necessary for higher acuity patients such as suicidal patients or patients in acute withdrawal or psychosis. Reliance on temporary staffing agencies poses difficulties on the unit in providing a focused therapeutic milieu. In addition, unit space and staff for special patient mixes also needs to be considered in planning services for an inpatient unit focusing on a specific condition or age group (e.g., adult vs. child/adolescent). Table 3 provides estimates for the cost of operating a 10-bed inpatient psychiatric unit.

Table 3. Operating Cost Estimates – 10-bed inpatient psychiatric unit

Sample Inpatient 10-bed Facility: FY 2011				
Position	**Grade**	**FTEs**	**Average Salary**	**Total**
Clerk	4	1	$37,271.00	$37,271.00
Tech	6	5	$46,487.00	$232,435.00
Case Manager	11	1	$76,450.00	$76,450.00
Social Worker	11	1	$76,450.00	$76,450.00
Nurse	11	5	$100,057.00	$500,285.00
OT	12	1	$91,628.00	$91,628.00
MH Nurse Practitioner	13	2	$147,506.00	$295,012.00
Psychologist	14	1	$189,462.00	$189,462.00
Psychiatrist	15	1	$264,021.00	$264,021.00
Total Salaries				$1,763,014.00
Total with Operating Costs (utilities, etc.)*				$2,518,591.00

*Operating cost add-on according to IHS Facility Planning Operating Manual

Determination of Space Needs and Space Allocation

Since current IHS planning protocols have given priority to changes in the delivery of primary care, the existing inpatient psychiatric module is not consistent with current mental health systems and treatment modalities. With additional resources and research it would be possible to accurately determine the space needs to accommodate inpatient psychiatric beds. Once completed, the IHS would use industry standards unit costs for new and renovated construction to estimate the total inpatient psychiatric bed capital cost. This would address current regulatory standards including: construction codes, patient care standards, safety requirements, and design guidelines for the built environment which also must consider plans for the appropriate level of psychiatric and behavioral health services. Locality cost factors would be used to adjust for the variation in the geographical location of the construction. The eventual size of a psychiatric service program must also consider the minimum number of patients the program can safely

serve both in terms of developing a viable service and meeting the needs of staff. The staff needs adequate workloads to remain competent with care delivery skills.

Area-level Inpatient Psychiatric Needs Assessment

In addition to the Facilities Planning Approach to estimating inpatient psychiatric care need, a survey was developed and administered to Chief Medical Officers and Area-level statisticians to assess psychiatric referral frequencies, length of stay (LOS), cost per day for inpatient treatment, and provider ratings of availability and quality of inpatient psychiatric care. Responses have been broken down by the Area and age range of patient. The survey responses included a set of ordinal scales in addition to narrative responses allowing respondents to subjectively discuss their perceived levels of access to services, quality, and likelihood of success. The Area assessment is particularly important because the majority of data on referrals and admissions for psychiatric services are available only through Tribal health care programs and not captured through the CHS fiscal intermediary. Therefore, both survey data and psychiatric admissions data from the fiscal intermediary queried at the national level were included in the following tables. The specific aims were to determine: 1) referral frequency for inpatient psychiatric care; 2) access and quality of inpatient psychiatric services; and 3) average LOS and average day rate for inpatient psychiatric services.

Inpatient Referrals using CHS and Survey Data

The IHS CHS data identifies 1,061 funded psychiatric admissions at an average cost of $4,757 per stay and average LOS of 5.62 days.[16] The majority of psychiatric admissions were of patients between the ages of 18 and 64; over 10% of these admissions were patients ages 17 and younger.

Survey Data

Admissions and Referral Data

The survey data did not include CHS data, but rather included Area, Tribal, and other sources of mental health admission and referral information not readily available to IHS Headquarters. Given the decentralized and geographically dispersed structure of the Indian Health System, significant portions of the data are available at the local level through the local health records system. Survey results suggest significantly higher mental health admission rates than those captured via CHS. These data suggest that system-wide admission rates for psychiatric care are at least four times the CHS rates (Table 4).

[16] IHS/CHS Inpatient Psychiatric Care Survey CY 2007-2009.

Table 4. Admissions and Referral Data

Number of mental health inpatient admissions and referrals using CHS and survey data*	Aberdeen	Albuquerque	Bemidji	Billings	California	Nashville	Navajo	Oklahoma	Phoenix	Portland	Tucson	Total
Total number of CHS inpatient mental health admissions	276	26	24	334	38	424	53	56	94	1	29	1061
12 years of age and under	3	0	1	4	4	8	15	NP	1	NP	2	13
13-17 years of age	22	1	4	19	24	52	15	NP	21	NP	10	96
18-64 years of age	249	23	19	306	27	338	60	53	72	1	17	939
65 years and older	2	2	0	5		26	16	3	0	NP	0	13
Number of inpatient mental health referrals from survey	442	26	108	334	53	438	292	56	123	NP	63	4093
12 years of age and under	7	0	7	4	5	8	110	NP	0	NP	6	147
13-17 years of age	34	1	38	19	921	54	110	NP	26	NP	4	1207
18-64 years of age	124	23	67	306	1224	350	352	53	96	NP	51	2646
65 years and older	1	2	11	5	3	26	40	3	0	NP	2	93

Notes: ** Data from Alaska were not provided*
*** NP- not provided*

Length of Stay

Average length of stay (LOS) was determined by IHS Area and averaged to determine a national estimate. The averaged LOS as reported by Areas in the survey was compared with those data obtained from the CHS system. Overall, these data were similar except that the LOS for CHS-funded inpatient mental health services for children 12 years of age and under was significantly longer than the LOS reported in the survey. LOS for CHS-funded inpatient mental health services for patients 18-64 years of age was shorter than Area-level reported average length of stay (Table 5).

Table 5. Length of Stay

Average length of stay and cost per day for inpatient mental health referral*	Aberdeen	Albuquerque	Bemidji	Billings	California	Nashville Area	Navajo	Oklahoma	Phoenix	Portland	Tucson	Total	# Areas reporting	CHS
Average LOS for mental health inpatient services	4.76	4.35	3.88	5.18	4.5	15	4.49	4.07	7.8	2	8.31	5.9	11	7.7
12 years of age and under	4.33	NP	3	24	3	11.3	5	NP	4	NP	9.5	8	8	11.46
13-17 years of age	4.23	6	4.25	14	5	7.3	5.78	NP	7.29	NP	7.7	6.8	9	7.69
18-64 years of age	4.83	4.39	3.84	4.3	6	23	4.4	4.13	8	2	8.53	6.7	11	5.32
65 years and older	3.5	3	NP	9.8	12	7	NP	3	NP	NP	NP	6.4	6	6.31
Average cost per day rate for mental health inpatient services	737	1550	1252	909	1100	500	1182	966	823	1868	785	1061	11	1054
12 years of age and under	NP	NP	NP	NP	1100	450	NP	NP	NP	NP	NP	775	2	710
13-17 years of age	NP	NP	NP	NP	1000	500	NP	NP	NP	NP	NP	750	2	739
18-64 years of age	NP	NP	NP	NP	1000	597	NP	NP	NP	NP	NP	799	2	813
65 years and older	NP	NP	NP	NP	1300	500	NP	NP	NP	NP	NP	900	2	698

Notes: ** Data from Alaska were not provided*
*** NP- not provided*

Ratings of Access and Quality of Psychiatric Inpatient Services
Survey respondents were asked to rate the overall level of access for inpatient mental health services. Overall, Areas report a significant lack of access to inpatient psychiatric services, particularly within 24 hours of presentation (acute care presentation) (Table 6).

Table 6. Access to Acute Psychiatric Services

Ratings on the level of access to acute psychiatric services *	Aberdeen	Albuquerque	Bemidji	Billings	California	Nashville Area	Navajo	Oklahoma	Phoenix	Portland	Tucson	Total	# Areas reporting
Ratings of overall access to inpatient psychiatric services (4= Excellent; 3= Good; 2= Poor; 1= Very poor/No access)													
Acute Child Psychiatric Inpatient Care	2	2	2.5	3	1.12	2.3	2	3	1	NP	2.75	2.17	10
Acute Adolescent Psychiatric Inpatient Care	2	2	2.5	3	1.37	2.4	3	3	1	NP	2.75	2.30	10
Acute Adult Psychiatric Inpatient Care	3	2	2.5	3.3	1.62	3.0	2	2	1	NP	2.75	2.32	10
Ratings on the quality of available care (4= Excellent; 3= Good; 2= Poor; 1= Very poor/No access):													
Acute Child Psychiatric Inpatient Care	2	2	2.5	3.3	1.62	3.0	3	3	1	NP	3.5	2.49	10
Acute Adolescent Psychiatric Inpatient Care	2	2	2.5	3.3	1.62	3.0	3	3	1	NP	3.5	2.49	10
Acute Adult Psychiatric Inpatient Care	3	2	2.5	3.3	1.87	3.2	3	3	1	NP	3.5	2.64	10
Please rate your ability to find an available bed within 24 hours of presentation (4= Never a problem; 3= Sometimes a problem; 2= Often a problem; 1= Always a problem):													
Acute Child Psychiatric Inpatient Care	2	1	1.5	2.5	1.12	3.4	1	1	1	NP	2	1.65	10
Acute Adolescent Psychiatric Inpatient Care	2	1	2	2.5	1.37	3.1	1	1	1	NP	2.5	1.75	10
Acute Adult Psychiatric Inpatient Care	3	2	2	2.5	1.62	3.3	1	1	1	NP	2.5	1.99	10

*Notes: * Data from Alaska were not provided*

Emergency Department (ED) Statistics

Results from the survey also provided important Area-level information reflective of inpatient psychiatric need. Self-inflicted injuries were common clinical presentations to the ED with over 2,200 such visits reported in CY-2010.[17] In the same year, there were 801 admissions to IHS or

[17] IHS NDW Data CY2010: De-duplicated patient count of patients with a injury code of E950-E959 and identified as occurring during an Emergency Room Visit or Inpatient Admission.

Tribal hospitals that included a diagnosis of self-inflicted injury.[18] Alcohol and substance abuse was a common presentation with nearly 10,900 ED visits for alcohol and/or substance-related complaints. Suicide attempts accounted for more than 5,200 ED visits and 155 suicide completions were seen in the ED. Table 7 reports Area-level statistics for ED visits.

Table 7. Acute Psychiatric Patient Needs

Acute psychiatric patient needs*	Aberdeen	Alaska	Albuquerque	Bemidji	Billings	California	Nashville Area	Navajo	Oklahoma	Phoenix	Portland	Tucson	Total	# Areas reporting
Number of ER visits for self-inflicted injuries	422	469	36	177	72	7	152	481	100	245	3	100	2264	12
Number of ER visits for alcohol and/or substance abuse related complaints	973	NP	NP	30	NP	36	1718	7248	167	NP	NP	726	10898	7
Number of admissions with self-inflicted injury as primary POV	420	NP	NP	10	NP	0	15	308	21	NP	NP	27	801	7
# of suicide attempts	4725	NP	NP	92	NP	0	28	277	73	NP	NP	27	5222	7
# of suicide completions	115	NP	NP	7	NP	0	1	25	NP	NP	NP	7	155	6

*Notes: * Data from Alaska were not provided*
*** NP- not provided*

[18] IHS NDW Data CY2010: De-duplicated patient count of patients with a injury code of E950-E959 and identified as occurring during an Emergency Room Visit or Inpatient Admission.

DISCUSSION

Determining the need for inpatient psychiatric care is a complex and multi-dimensional question. Inpatient psychiatric needs hinge in large part on a comprehensive understanding of what a desirable mental health system includes and what types of services, supports, and structures are required to support such a system. Answering such a broad question for the IHS requires an appreciation of several factors relevant to the care provided by the Indian Health System:

1. The predominance of primary ambulatory care direct service provision by the Indian Health System;
2. The increasing integration with, and dependence on, State and regional care networks for provision of higher level, specialty care funded through mechanisms such as Medicaid and Medicare, as well as IHS CHS funds;
3. The increasing use of contracting and compacting options by Tribes to manage and provide behavioral health services. Over 50% of Tribes now contract behavioral health and mental health services; and
4. The diversity in how State mental health systems are structured, how well they are resourced, and how cooperatively and closely they interact with Tribal groups and nations.

There is no single answer for all 12 Areas of the IHS. Each Area faces different challenges, service gaps, levels of State cooperation, and coordination between existing Federal and Tribal programs. A recent article by the Center for Public Integrity notes the deterioration in overall mental health services across the U.S. including dramatic cuts in such services in States with high AI/AN populations – Alaska being noted to have reduced spending on mental health services between 2009 and 2011 by 35%, Arizona and Wisconsin by 22%, and Washington by 11% with another 15% cut anticipated in the 2011-2013 budget.[19] Such cuts directly impact the ability of local IHS sites to access services for their patients and reduce the availability of community level services that might prevent the need for hospitalization.

This review and survey suggests, in its broadest interpretation, that there is a need for increased access to inpatient psychiatric care. The range of such need is quite broad and is difficult to quantify without a more in-depth study. Using the Treatment Advocacy Center recommendation of 50 public mental health beds per 100,000 population and an IHS user population of 1.9 million, 950 inpatient psychiatric beds would be needed across the IHS system. Using the same assumptions, only 1 out of 50 States currently has adequate inpatient psychiatric bed capacity. Given the reliance of Indian Health System providers on State and regional resources for inpatient psychiatric services, access to inpatient psychiatric services for IHS beneficiaries appears significantly limited in the majority of IHS Service Areas.

Conversion of existing medical/surgical beds, while appearing to be a reasonable option, poses a number of significant challenges. The total number of beds available for conversion to inpatient mental health is minimal. Most of the available beds are in rural and often remote communities, with existing barriers to recruitment and retention of basic hospital staff, not to mention

[19] "Despite Tucson and Rising Needs, Mental Health Takes a Back Budget Seat," published March 9, 2011, accessed March 10, 2011 at http://www.publicintegrity.org/articles/entry/3006/.

specialized staff such as those required for a functional acute psychiatric unit. Due to their remote locations and distance from urban travel hubs, regional use of such beds becomes expensive and complicated, reducing efficiencies available by scaling the units to the appropriate size. Prior experience with operating such units, even in relatively populated rural communities such as Gallup, New Mexico and Rapid City, South Dakota, suggests that maintaining services is challenging. Accreditation requirements, maintaining staff professional standards, and staffing costs are substantial making small scale operations very challenging and expensive to start and maintain. Given the lack of intermediate levels of mental health services (for example, residential, intensive day treatment and transitional care), programs may become functionally long-term care programs since the IHS frequently functions as the first and last resort for care in the communities it serves.

That is not to say that some IHS-specific beds would not be useful. An appropriately placed and structured unit or units would potentially be able to tap into efficiencies created by aggregating need at a regional level. Recruitment and retention concerns could be reduced by placing the unit in an urban setting attractive to specialized staff. Cultural competency would be easier to assure given the use of existing AI/AN preference hiring approaches. Such a unit or units could be tied into academic systems and provide a base for better understanding the needs and particular requirements for AI/AN patients with serious mental disorders. Supporting training of AI/AN-focused behavioral health professionals would be facilitated. The unit or units could potentially function as the core of a Service-wide support system for development of a broader array of mental health services and supports.

There are also significant opportunities for using modern approaches such as telehealth, internet, and telecommunications-based technologies as part of a network of services that improve access to inpatient psychiatric services. Such technologies could allow services to be aggregated together more effectively, reduce the barriers related to geographic distance, provide alternative vehicles of care delivery, and improve the ability of providers to network with and support each other if appropriately resourced at the regional and national levels.

In essence, the actual quantification of need remains tied very closely to regional systems of care. Answering the question "what are the psychiatric inpatient needs of the Indian Health Service" cannot be answered through simply applying an algorithm, but instead must be answered through the establishment of processes that allow a continuous adjustment of resources and relationships based on locally and regionally determined needs. "Recovery" as a service model which incorporates closely the desires and needs of the affected population requires ongoing consultation and collaboration with not only providers and the general community, but specifically the patients and families affected by serious mental illnesses.[20]

RECOMMENDATIONS

[20] http://coce.samhsa.gov/cod_resources/PDF/RecoveryasanOrganizing.pdf, accessed March 8, 2011.

Based on this assessment, IHS developed the following recommendations/options for inpatient services:

1. If new appropriations become available conduct a more detailed examination of the current psychiatric system of care and need for inpatient mental health care that includes consultation with all Tribal, Urban Indian health, regional, and State partners as well as consumers. The examination would include an update to the current IHS Division of Facilities Planning and Construction Health Systems Planning (HSP) psychiatric services planning document to accurately reflect current conditions;
2. Rather than building IHS/Tribal facilities and/or converting existing medical/surgical beds in IHS hospitals, focus on procuring services from external providers if new appropriations become available, thereby establishing regional systems of care. This partnership-based system will provide better access to psychiatric inpatient care that is culturally appropriate;
3. Expand behavioral health services in partnership within Tribal and Urban Indian health programs and existing local, State, and regional providers to keep patients in their community;
4. Capitalize on the growing availability of clinical technologies such as telehealth. Strengthen partnerships with local Service Units and Tribal programs as well as other regional entities to enhance training collaborative and provide telehealth consultation;
5. Pilot intensive case management models of care (example: VHA Mental Health Intensive Case Management program) to improve continuity of care and provide comprehensive coordination of care which will help prevent unnecessary and preventable admissions; and
6. Expand the availability of lower level crisis respite and non-traditional acute care alternatives (example: peer-managed non-hospital emergency respite options).

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[18] IHS NDW Data CY-2010: De-duplicated patient count of patients with a injury code of E950-E959 and identified as occurring during an Emergency Room Visit or Inpatient Admission.

[19] "Despite Tucson and Rising Needs, Mental Health Takes a Back Budget Seat," March 9, 2011, accessed March 10, 2011 at http://www.publicintegrity.org/articles/entry/3006/.

[20] http://coce.samhsa.gov/cod_resources/PDF/RecoveryasanOrganizing.pdf, accessed March 8, 2011.