

BEHAVIORAL HEALTHCARE PERFORMANCE MEASUREMENT SYSTEM™

A Pioneer in Performance Measurement

The foundation of a common language that is uniformly applied to a diverse group of over 220 hospitals nationwide in 49 states and territories offering:

- The Joint Commission listed ORYX® services
- A network with a broad range of facilities
- Technical support on data use and infrastructure
- Secure electronic submission
- An Annual Users Conference
- Stratified reports for targeted populations
- Robust benchmarking capacity
- Access to online reports
- Low annual fee

Overview

The National Association for State Mental Health Program Directors Research Institute, Inc (NRI) developed the Behavioral Healthcare Performance Measurement System (BHPMS) to assist states in meeting the requirements of the ORYX® Initiative, a set of performance and outcome measurement requirements developed by The Joint Commission (TJC). The BHPMS has been operational since 1998 and met the criteria for inclusion in the accreditation process and has been included on TJC's list of acceptable systems since 1999 (ID: 0426-01). The BHPMS complies with all standards set by TJC for listed systems and successfully completed an audit by TJC. In addition, the system offers enhanced technical assistance, data quality reviews, and specialized reports for psychiatric facilities.

Currently NRI's BHPMS serves over 220 state psychiatric facilities in 48 states. The BHPMS also provides services for private psychiatric hospitals that are required to comply with TJC's ORYX® initiative. The facilities served range in size from under 50 beds to over



NRI BHPMS Office Building

1,500 beds and provide services to diverse client populations.

The NRI has continued to develop new performance measures and enhance the BHPMS to address emerging needs of facilities in the areas of reports, measures, and instruments. The BHPMS continues to be informed by a standing technical workgroup. In addition, ad hoc expert workgroups are formed to address specific issues. The focus of these activities is to improve measures and reports relevant to quality improvement processes within and across state psychiatric hospitals.



Using Data,
Changing Practice™

Special points of interest:

- Joint Commission listed for ORYX®
- 18 performance measures from which facilities can select
- Supports Quality Improvement
- HBIPS Core Measure Set
- Secure website

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Our Services

NRI utilizes state-of-the-art computer systems, web-based technologies, and secure servers to process data and generate reports.

The BHPMS has 18 non-core measures and 1 core measure set from which facilities can select; all measures include standardized definitions to allow facilities to compare performance rates with national benchmarks. The specifications for the data, reports and the measure calculations are provided to all facilities. Such consistent measurement facilitates benchmarking critical measures of performance and outcomes.

NRI may include data from facilities in statistical computations, which result in aggregate comparison groups. NRI uses such comparison groups to create national and regional reports showing performance measurement data. Select reports are publicly available.

Technical support:

NRI BHPMS is not a “software system”, the data received from facilities are submitted via convenient “flat text files” that meet the specifications of the file layout provided. Given the large and diverse group of facilities, it is the most efficient method to assist all facilities. Facilities with electronic medical record (EMR) systems need to develop an extract process to create the flat text files accepted by NRI.

Each facility is assigned an NRI liaison to provide assistance on both technical and non-technical issues. The staff performs electronic review of all data submissions. Facilities are provided with monthly electronic Data Quality Report that indicates file status (accepted or rejected), lists errors, provides summary information, and shows calculated measures.

The **Implementation Guide © 1999-2009** is provided to all participating organizations and contains: 1) instructions for electronic data transmission, 2) complete definitions of each measure

[including specific guidelines for population identification and examples of methods for addressing common issues], 3) file formats, and 4) detailed data element definitions.

Data Processing:

The primary objective of data processing is the generation and transmission of accurate quarterly performance indicator values for all participating facilities. These values and associated data are transmitted to TJC in a manner that meets TJC requirements. Within five working days of the monthly data submission, NRI provides an electronic data quality report to the facilities via a secure website. Once quality standards have been met, the BHPMS performs the appropriate analysis and provides the facilities with a report of the performance indicator results for the month.

Data Submission and Reporting:

NRI transmits to TJC, on a quarterly basis, the monthly performance measures calculated for each facility and for the relevant comparison groups. Comparison Chart Reports and Control Chart Reports, as specified by TJC, are also

produced monthly for facilities displaying monthly measure calculations. The BHPMS also provides various comparison reports to assist facilities in their benchmarking activities.

Data Integrity Reviews (DIR):

To further verify the quality of data submitted to the BHPMS, annual onsite and off-site Data Integrity Reviews are conducted by NRI for random selection of facilities.

Each fiscal year a 10% random sample of participating facilities is selected for a DIR. A small team of reviewers conduct the one-day DIR. The DIR Team reviews policies and procedures, interviews staff and reviews client and administrative records to ensure data sources support the validity of data reported to the BHPMS. The Team also



“Assisting hospitals in improving the care of persons with mental illness “

Our Services (continued)

looks for evidence of a stable data transmission system. The review is designed to be mutually beneficial as NRI learns about the efforts of facilities to provide quality data and facilities learn more about their own systems and possible strategies to improve documentation and data systems.

Technical Work Group (TWG):

The TWG is comprised of up to 12 members from participating facilities and several key NRI staff. Through meetings and periodic conference calls, the TWG creates and oversees the key operational components of the measurement system including measure definitions, data specifications, reporting formats, and the data integrity review process.

User Group Conference:

The BHPMS invites all its participating hospitals to attend an annual User Group Conference. Presentations cover a diverse range of topics including: Core Measures, using data to improve practices, continuity of care between health and mental health, and obstacles in services with special populations. NRI staff is available to offer technical assistance. This is also an opportunity for facilities to share their experiences and network with each other.

NRI WebEx Services:

Enhancing the quality of service to facilities, NRI's BHPMS program currently employs Cisco's WebEx web-conferencing services. The web-based conferencing tool allows BHPMS staff and facility members to meet and interact on-line by combining real-time desktop sharing with phone conferencing so everyone sees the same page at the same time.

WebEx is a web-based service, it may be used from any computer (Windows, Mac, Linux, or Solaris). Participants are invited to join the meeting via email where they simply click a link in the invitation to join online. The NRI WebEx services provided include:

Live Monthly Educational Call: Each month the BHPMS offers a complementary educational conference call/webinar. These live web based conferences inform and educate users on a variety of relevant topics. Each Educational Call is recorded

and stored on the NRI WebEx website so that users may access the pre-recorded presentations at their convenience.

Audit conference calls: Prior to a site or desk audit, BHPMS staff and facility staff meet together for a live interactive pre-audit meeting. Facility forms are reviewed together with BHPMS reviewers to facilitate a more efficient and accurate audit.

User Group Conference and Special Webinars: As state travel restrictions continue, it has been a challenge for our clients to attend the annual User Group Conference. In lieu of meeting in person, the BHPMS program now provides live webinar presentations on topics that are timely and relevant to the industry.

Instant Meetings: BHPMS analysts have the ability to meet with facility staff instantaneously. BHPMS staff and facility users are now able to meet on-line and review the same document together resolving facility data issues in a timely and efficient manner.

Orientation and Training Presentations:

New users are quickly oriented to the BHPMS program via a live interactive web-based orientation to the BHPMS program. This live training provides a virtual walk-thru and hands on training of the BHPMS system allowing new facility staff to be quickly trained.

By employing the Cisco's WebEx conferencing tools, NRI BHPMS provides behavioral healthcare facilities with timely and productive services. Important to the healthcare industry, Cisco's WebEx web-conferencing services is also HIPAA compliant.

Other Services:

NRI File Layout: The NRI File Layout is a Microsoft Access tool that NRI created to assist facilities with their data submissions. The Access database includes macros to import and export raw data files used by the BHPMS. The function of the

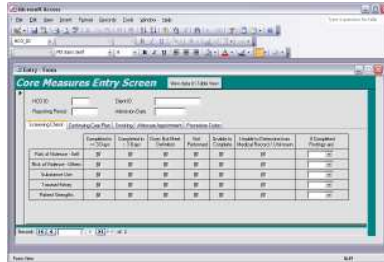


*NRI's BHPMS Program Employs
Cisco's WebEx Services*

Our Services (continued)

Access database is to provide a means to verify data completeness and accuracy before data are loaded into the SQL database.

This is a tool that facilities may use for simple error checks prior to uploading files to NRI. The tool assists facilities in conducting quality checks and fixing errors by giving them a way to view their data elements separated into their proper fields. This is not designed as a storage tool; it is designed to create and manipulate text files for upload to NRI.



Website: The secure BHPMS website is password-enabled. Each facility designates a primary contact person to receive all reports and obtains a user account and password for the system and designates other users to also have access. The

website provides easy access to materials such as data quality reports and reference materials.

Inpatient Consumer Survey: The BHPMS has developed an Inpatient Consumer Survey tool to enable persons served in psychiatric facilities to provide feedback on services, interactions, and personal outcomes. The 28-item survey includes 5 domains: outcomes, dignity, rights, participation in treatment, and environment. The survey is available in English and Spanish.

Technical Notes: The BHPMS provides facilities with a monthly electronic newsletter. This provides facilities with monthly notices of systematic updates and changes.

Telephone assistance via a support line is available 5 days a week (Monday-Friday) for technical assistance and trouble-shooting is also provided to all users. Email box for general question is also available.

Performance Measures

Non-Core Measures:

- Elopement Rate
- 30 Day Readmission (Discharge Cohort)
- Client Injury Rate
- Staff Injury Rate
- Restraint Hours
- Percent of Clients Restrained
- Seclusion Hours
- Percent of Clients Secluded
- New Generation Antipsychotic Use
- Medication Error Rate
- Prevalence of Co-occurring Psychiatric and Substance Disorders
- Treatment of co-occurring substance abuse
- Inpatient Consumer Survey Results on Outcomes, Dignity, Rights, Participation, and Environment
- Brief Psychiatric Rating Scale (BPRS)
- Global Assessment of Functioning (GAF)

HBIPS Core Measure set :

- Screening for Risk of violence to Self, Risk of violence to Others, Substance Use, Psychological Trauma History, and Patient Strengths
- Restraint Hours
- Seclusion Hours
- Patients Discharged on Multiple Antipsychotic Medications
- Patients Discharged on Multiple Antipsychotic Medications with Appropriate Justification
- Post Discharge Continuing Care Plan Created
- Post Discharge Continuing Care Plan Transmitted

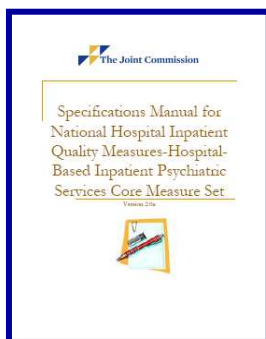
NRI strives to meet the needs of our users by continually developing new measures based upon facility requests and population needs. For more information on the measures currently available visit our website at

www.nri-inc.org/projects/bhpms/joining.cfm

Core Measure Set

HBIPS Core Measure Set:

A core measure set is a group of performance measures that address fundamental aspects of care. The final specifications for the Hospital Based Inpatient Psychiatric Services (HBIPS) core set were released by The Joint Commission (TJC) on May 30, 2008. The set is available for selection beginning with October 2008 discharges. Free-standing psychiatric hospitals have the option to report on either 9 non-core measures or the new HBIPS core set beginning in October to meet the ORYX® requirement.



The new HBIPS core measure set will become a requirement for free-standing psychiatric hospitals following National Quality Forum (NQF) endorsement and Hospital Quality Alliance (HQA) approval. Meanwhile, the HBIPS rate data are not displayed publicly during the “option” period.

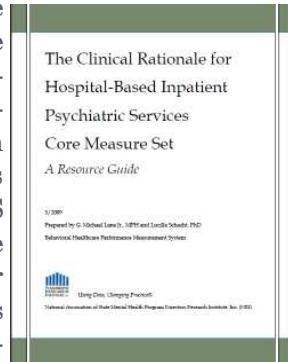
NRI was actively involved in the development of this first core measure test set designed for psychiatric hospitals that could be used to fulfill the ORYX® reporting requirement of TJC. The primary purpose of the HBIPS test set was to evaluate the utility of a core set of measures for inpatient psychiatric providers, including evaluating data requirements, definitions, and the relevance of the measures to the client populations.

Based on results from the test set, the final HBIPS set released in May 2008 includes 7 evidence-based, consensus-driven measures covering the course of an individual's hospitalization. Nationally standardized measures will improve benchmarking capabilities and identify opportunities for improvement.

Resource materials for implementing the HBIPS set are available on the NRI website.

The Clinical Rationale For HBIPS Core Measure Set Resource Guide:

The Resource Guide is the result of an extensive literature review and compilation of background information on the seven performance measures that comprise the HBIPS core Measure Set of The Joint Commission. For readability, the measures are grouped into four domains. The domains include screening and assessment, use of restraint and seclusion, prescribing of multiple antipsychotics, and continuity of care. This Resource Guide contains relevant and current information on the Core Measure Set as outlined by The Joint Commission. In addition, recent research (within the past 10 years) on the Core Measures is included for each of the performance measures. The measures are presented according to their domain classification, with the following common sections:



- **Introductory Background:** Foundation of the measure, test phase measure, and related measures used by some ORYX® vendors.
- **Statement of the Measure:** Measure as it is provided by The Joint Commission, interpretive guidance, clinical and performance measure documentation requirements.
- **What the Research Shows:** Current research on the measure, exploratory summary of research related to the measure, and relationship of the measure to quality outcomes.
- **Clinical Relevance and Justification:** Bulleted summary of the research.
- **Evaluating Resource:** Considerations when reviewing research findings and tools for potential adoption by a hospital.

This 48 page guide is made available to all participating members of the BHPMS. In addition to the Resource Guide, a monthly e-newsletter entitled “Technical Notes” is available which highlights the latest updates on the core measure set.

Our Reports

NRI continually produces not only monthly processing reports but also performance measurement reports, topical reports, white papers, and national reports. Brief descriptions of some reports are provided to highlight the range of information available.

Monthly Processing Reports:

Core Set Aberrant Data Points: This report indicates whether there were any potential data quality concerns (aberrant data) for each of the performance measures. Aberrant data points are based on comparing the facility's current data with the facility's historical data.

Core Set Potential Outliers: This report indicates whether there were any outlier data points. An outlier rate is defined as 3 standard deviations above or below the national mean.

Core Summary Report: Provides details for each of the discharge measures in relation to how cases were included or excluded from the measure calculations.

Data Quality Reports (various file types): Facilities are provided with monthly electronic Data Quality Report that indicates file status (accepted or rejected), lists errors, provides summary information, and shows calculated measures.

Performance Measurement Reports:

Comparison Chart (Monthly and Quarterly): A comparison of the facility's rates to the national aggregate mean for the time period. The report is designed to present the same information as the Comparison Charts produced by The Joint Commission for use in the facilities accreditation surveys.

Control Charts (Rates/Ratios, Continuous): Based upon data derived exclusively from the facility. This report is designed to present the same information as the Control Charts produced by The Joint Commission for use in facility accreditation surveys. The report is a tool that allows managers to evaluate the stability of a given process in the

facility. Its primary purpose is to identify 'special cause variation' that may contribute to unusually high or low rates for a given month.

HCO Rank by Measure: Provides facilities with their relative rank on any measure in relation to all other participating facilities. A percentile score is provided for every month and measure.

Risk Adjusted Reports: Facilities differ in the client populations served and the structure of the facility. To provide facilities with a comparison rate based on the characteristics of the clients and the structure of the facility, the NRI conducted analyses to determine factors related to clients and structures associated with higher and lower rates of the indicators. From these analyses, the NRI developed risk adjustment models for readmission rate and for rates of seclusion and restraint. These reports provide facilities with the mathematically expected rate given the characteristics of the facility.

Age Stratification Report: To assist facilities with utilizing comparison groups based on clients with similar characteristics at other facilities, age stratification reports display separate rates for six age groups: <12 years; 13-17 years; 18-24 years; 25-44 years; 45-64 years; >=65

years of age and older. Facilities that serve youth and/or elders have comparison rates based on clients of the same age group served in other facilities.

Forensic Stratification Report: Facilities that serve forensic clients, can compare performance measure rates for those clients with the aggregate for all clients on a forensic commitment and to clients not on a forensic commitment.

Inpatient Consumer Survey (ICS) Charts: This report facilitates use of the individual survey items in quality improvement activities. There are graphs that display the percent of clients that "agree" or "strongly agree" with each item on this survey. The initial five domains in the survey used as performance measures are presented first. The remaining questions are then grouped based on similarity in concept.



Our Reports (continued)

Co-occurring Substance Disorder: This report shows the prevalence of all clients served per month who are reported with co-occurring psychiatric and substance disorders (COPSD).

Seclusion and Restraint Measure charts: This report displays various rates based on a series of calculations from facility seclusion and restraint data.

System Wide Rates-All Measures: This summary report is provided for participating facilities. The report provides facilities with system wide rates for all measures.

Enrollment Information: These include a series of reports that provide basic information on the facility and its selected measures.

Topical Reports:

Shift Reports: A report on the use of restrictive interventions by shift. Restrictive interventions include seclusion, ambulatory restraint, non-ambulatory restraint, and manual hold. The purpose of the report is to provide an expanded view of the occurrence of these restrictive interventions.

Supplemental Reports: To facilitate the use of the performance measure reports, the NRI developed supplemental reports using other information available on clients and events. There are reports available on the Client Injury measure, the Elopement measure, Readmission Rate, and the Medication Error measure. In each report, monthly counts are provided for the facility, for the state, and for the total system. Facilities that do not participate in the measure may still access the report to obtain comparative information.

Diagnostic Profile of Clients Served: There is great diversity in the client populations served in state psychiatric facilities. To help understand the degrees of similarity and differences, the NRI developed a monthly report that provides the number and percent of clients in each diagnostic cluster. Separate tables are provided for youth and adults. In addition to the percentage for the facility, the report displays the inter-quartile range across all facilities (25th and 75th percentile). The proportion of the caseload with the specific disorder is within this range in half of the facilities. When this range is small, there is greater similarity in the state psychiatric facilities.

White Papers:

Periodic reports are released to explain indicators in further detail to aid in the quality improvement process and potentially identify areas for change. Some of these reports include:

Readmission Rate Risk Adjustment Summary: This report provides summary results for the most recent risk adjustment model for 30-day readmission rates. The report describes the process for constructing the model and applies the model to a hypothetical facility to demonstrate the impact of characteristics of client and facility structure on the expected rate.

Elopement Indicators and Actions: The elopement indicators report is designed to provide facilities with information to aid in the quality improvement process and potentially identify areas for change.

Seclusion and Restraint by Shift White Paper: The white paper report was developed to provide the national aggregate rate for restrictive interventions based on January 2003 data.

National Public Reports:

Aggregate reports based on measurement data collected from a number of state psychiatric hospitals nationwide. Reports include National Public Rates, Age Stratification for Seclusion and Restraint, Race/Ethnicity of Clients Served, Use of New generation Antipsychotic, and Smoking Policy and Practices.

NRI strives to meet the needs of our users by continually developing new reports based upon facility requests and population needs. For more information on the reports currently available or to view our sample reports visit our website at www.nri-inc.org/projects/bhpms/joining.cfm

Getting Started

In order to establish a successful performance measurement program for each facility that includes data management and reporting services, the NRI BHPMS is implemented in a step-wise manner. These steps include contract signing; onsite or web-based training; system set-up that includes selection of measures, user access, and start date; monthly monitoring, follow-up, and support; and quarterly TJC file submission (accredited facilities only).

Orientation Manual:

Comprehensive manual provided to new and existing facilities with the BHPMS. The manual provides facilities with a step by step process from set-up and measure selection to file creation and data integrity reviews.

Measure Selection:

Coincidental to contract review, facilities should begin review of the available measures. Facilities are encouraged to select measures that not only meet their needs but have implication for quality improvement. Specific measure definitions are provided to assist facilities in appropriately identifying “cases” to report. Data definitions and file specifications are critical components.

User Access:

Meanwhile, each facility that joins the BHPMS will designate users including a “primary contact”— the person who will work with NRI in getting your data submitted. The designated users will have access to the NRI BHPMS secure website.

Joint Commission Start:

Facilities will also need to decide on a start date. If accredited as a hospital with The Joint Commission (TJC), the TJC usually identify when facilities need to begin submitting performance measure data. TJC requires facilities to start at the beginning of quarters and usually provides 3 to 6 months lead time for the first submission of data.

Set-up:

During this initial contact phase, we provide relevant documents to assist in decision making. The HBIPS Data Abstraction Form is our prototype to

assist facilities with gathering the required data. The form includes code options and quick reference to key definitions. The file layouts provide the names of the data elements we collect; further details on coding is provided in the full guide and definitions for all fields are provided in the full guide. We provide the guide (approximately 15 sections) to all facilities on enrollment.

Online tech-support:

The NRI BHPMS provides users with online support through web meetings. This allows for collaboration, simulated “face to face” communication, and trainings. The system delivers real-time meeting quality through a secure interface. The online meetings allow NRI to demonstrate usability of tools and products, provide immediate feedback, and orient users to the NRI system and website.



Data File Submission:

These data files are created by the facility by taking extracts from its information system, medical record, incident report forms, pharmacy system, and/or other internal data sources. Using these extracts, the facility then creates what is known as “flat text files” which are basically strings of numbers and letters to represent the various elements without any delimiters between those various elements.

The NRI BHPMS has data submission guidelines in place in order to maintain an efficient system for processing data, therefore the system accepts submissions via a secure Internet portal only.

To ensure the integrity of all data submitted to the BHPMS, NRI has adopted data quality standards for timeliness, completeness, and accuracy. To assist facilities with meeting these standards, NRI provides specific guidance on the minimum data requirements for files to be accepted by the BHPMS. NRI has also implemented procedures to evaluate data quality and integrity. In addition to these procedures, it is important to note that our contracting process also includes safe-guards to address HIPAA regulations.

Our Expertise

The NRI BHPMS staff have extensive experience working with state psychiatric hospitals using the BHPMS for data quality, common measures, and using data to inform practice and policy. The staff creatively solve problems and consistently tackle challenges with a positive attitude.

The BHPMS Director has demonstrated expertise in protocol development, data management, analysis of utilization, cost analysis, program evaluation, Medicaid analysis, consumer surveys, and risk adjustment. The Director has experience working in community outreach programs, a state mental health department, and hospital environments. Some of the staff have also worked in similar environments.

The Research staff have years of experience working with public mental health data system and have co-authored numerous reports and publications. They have expertise in research and clinical study design, statistical analysis, survey design, and multi-state project coordination. NRI researchers have broad-based experience in childhood mental health, public health, surveillance systems, patient safety, adverse drug events, maternal depression, and effectiveness of cognitive behavioral therapy.

The NRI BHPMS Analysts have expertise in outpatient behavioral healthcare, psychological testing and scoring, economic development, and data analysis. The staff have experience in psychometrics, behavioral health policy as well as technical expertise in Access database tools, SQL server databases, and Visual Basic.

The Database staff have years of experience as

database administrators and applications development with a focus on systems analysis, database development and integration, including conversion of Legacy systems. The staff have expertise in writing technical documentation, training and end-user support as well as web development including data driven and e-commerce applications.

The NRI Programmers have expertise in data driven web-page development to build dynamic websites. They create web pages for the collection and display of confidential and public behavioral health-care data on the public and secure web and other electronic media. The Staff have experience in managing, designing, and building websites for NRI using state-of-the-art software tools.



Staff that provide exceptional service and meet all your needs.

All staff have experience and familiarity with HIPAA compliance standards and applicable

federal regulations.

The staff also actively investigate new technologies and quality improvement tools to assist our users.

NRI BHPMS staff are competent in several languages including Farsi, French, Spanish, Swedish, and Thai.

Our Fees

Our current annual fee is \$7,160.00 per facility. This fee includes reporting to The Joint Commission the selected measures, providing feedback reports on our secure website, technical assis-

tance, and other analyses and reports. In addition to direct contact with the staff, we provide resources through the secure website and monthly technical bulletins via email.

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Visit us on
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NASMHPD Research Institute, Inc.

Our Mission

NRI will make mental health relevant data and analysis available to states and other key stakeholders for policy making, monitoring accountability, and to improve mental health programs and services.

The Organization

*The NASMHPD Research Institute (NRI) is a not-for-profit 501(c)(3) organization serving as **a central catalyst in putting knowledge** to work. It connects research and knowledge gained from real-world experiences with policy and professional practice in the delivery of public mental health services.*