Implementation of an Electronic Quality Improvement Reporting System

By **Pikes Peak Mental Health**, Colorado Springs, Colorado
Winner: Chairman's Award, 2006 Negley Awards for Excellence in Risk Management

$\mathcal{P}$ikes Peak Mental Health, a JCAHO accredited Behavioral Healthcare Center serving 10,000+ clients annually from three counties in the Pikes Peak region of Colorado, has instituted an electronic interface for all staff to use for reporting critical incidents involving risk to Center clients or staff. Pikes Peak utilizes this system for both managing risk and identifying issues amenable to quality improvement and liability reduction activities.

Need and Organizational Goals for Enhancement of Risk Management

In 2004, the Joint Commission of Healthcare Organization (JCAHO) conducted a triennial survey of Pikes Peak Mental Health (PPMH). The survey results indicated a need for improvement in the collection, analysis, and reporting of center-wide data regarding client safety issues. In addition, JCAHO identified a need for a comprehensive risk management system to include Quality Improvement Reporting (QIR), infection control, fire drills, chart auditing, and monthly safety inspections. The recommendation was made for PPMH to improve risk management through the use of an electronic input interface that would be available for data entry by clinical and operational staff. The proposed system would allow concomitant reporting mechanisms for routine trend identification, subsequent risk management activity, and systemic quality control.

Five project goals for the development and deployment of this system were to: (1) collect, aggregate, and dis-aggregate incident data as a means to monitor safety; (2) utilize collected data to improve care and services rendered; (3) relate categorized environmental risks to staff and clients; (4) engage in monthly data analysis to reduce both potential risks and liability concerns; and (5) make incident reporting an expected and proactive job function.

Operationalization of Risk: The Definition of Quality Improvement Reporting and Adopted Procedural Policy

Pikes Peak Mental Health, cognizant of the need to operationalize critical incidents in terms of policy and procedure, identified the following risk categories as required reporting for all personnel:

Homicide; Homicide Attempt; Suicide Death; Suicide Attempt; Natural Death; Unauthorized Leave; Duty to Warn; Endangered Staff Assault/Fight, Unexpected Death; Alleged Physical Abuse; Alleged Psychological Abuse, Fire; Fire Setting/Property Damage; Client Unusual illness/Disease; Communicated Threat; Fall, Accident/Injury; Employee Injury/illness; Obscene Phone Call Message, Medication Error; Missed Medications; Adverse Drug Reactions; and Other.

All critical incidents are documented using the Quality Improvement Report (QIR) electronic interface (Appendix A). The information is stored in a relational database, and each event is automatically emailed (Appendix B) to the Director of Operations and Compliance, the Director of Quality Assurance, and the applicable Program Director responsible for the facility or area cited. The reporting staff member is required to classify the severity of the incident and to specify a staff member to "follow-up" (if deemed warranted). All incident "follow-ups" must be reported via the electronic interface within one month of the event. In addition, in order to manage adverse events with expediency, the following risk incidents must be reported immediately, via phone or in person and prior to completion of the electronic incident report, to appropriate supervisory personnel, with "follow-up" required within 24 hours:

• *All critical incidents involving property damage or injury that may precipitate itate a damage claim must be reported immediately to the Director of Operations.*
• *All critical incidents involving safety related issues must be reported immediately to each facility's Environment of Care Committee site designee and Program Director.*
• *All critical incidents involving an injury to an employee must be reported immediately to the Human Resources Department.*
• *All critical incidents involving infection control issues must be reported immediately to the designated Infection Control nurse.*
• *All critical incidents involving medication errors/adverse side effects must be reported immediately to the program physician or Medical Director.*

In addition to these regulations, all QIR incidents involving client or staff injury must be reviewed on a monthly basis by the organization's Environment of Care Committee. QIRs involving death, suicide, suicide attempts, medication errors, and clinical competence concerns must be reviewed on a monthly basis by the organization's Clinical Issues Committee. The reviewing committee documents its investigation and resolution, and reports the results to the appropriate Program Director and Senior Vice President.

Reporting Risk: Utilization of Aggregated and Disaggregated Reports

QIR data are key performance indicators, thus are vital for the determination of risk and the decision to implement targeted performance improvement initiatives. As a continuous improvement vehicle, PPMH issues differentiated reports once per month to management staff, program directors, the PPMH Governing Board, and several internal compliance committees (i.e., Environment of Care, Clinical Issues, and the Ethics and Compliance Committees). Examples of these data reports are presented in Appendix C, including (1) an executive summary provided to the PPMH management team, (2) program director reports, and (3) annual tracking summaries.

If an area is identified as a targeted priority based on QIR monthly trending, the program directors initiate a performance improvement *"Plan, Do, Study, Act"* process. This action plan was developed based on failure-mode analytical parameters. Details of this action plan are entered into the PPMH Quality Project Tracking System (Appendix D). Two current risk reduction activities focus on the development of a separate and more sophisticated infection control reporting system and a reduction in client decompensation due to problems with medication appointment scheduling.

Other current risk reduction initiatives include improving responsiveness to client complaints/grievances, developing clinical progress indicators for clients aged *0-5* years, and identifying solutions to supply shortages. The PPMH Quality Performance Improvement Committee reviews the progress of each performance improvement project monthly. Updates regarding progress to date, as well as recommendations from committee members, are structured for each performance improvement initiative (Appendix E).

Future Risk Reporting Enhancements: Refinement of Infection Control Reporting

The success of Pikes Peak Mental Health's QIR electronic interface, incorporating the concepts of risk management monitoring and targeted focus areas, has stimulated the application of this system to additional areas of concern. For example, this procedure is now being applied to the development of a unique, independent infection control interface. Surveillance, prevention, and control of infection within the treatment environment are the aims of this project. The goal is to promote a clean, safe environment for clients, staff, visitors, and the community through the application of best-practice monitoring. The overall design will be directed at reducing the rates or trends of epidemiologically significant infections by reducing infection risk. The critical importance of reporting staff and client infections by specific categories will be emphasized. The risk of infection will be minimized by expedient collection and analysis of reports regarding occurrence of infection and the subsequent analysis of situations through which risk of infection can be reduced. Several distinct population groups will be monitored, including geriatric, adult, and child and adolescent clients as well as employees. Deployment of this tool is anticipated in Spring, 2006.

Summarized Outcomes of the Implementation of an Electronic Quality Improvement Reporting System within Pikes Peak Mental Health's Service Delivery Environment

Pikes Peak Mental Health has a longstanding tradition of quality improvement, such as organizational project improvement initiatives, utilization management planning, and quality improvement reporting from the field. The implementation of a contemporary computer-based QIR system has increased the accurate identification of risk issues in need of attention. Since the implementation of the QIR system using an electronic interface, staff reporting of incidents involving risks to client and staff has increased 34% compared to baseline paper-based reporting. This increase has resulted in the ability to quantify systemic liabilities across the organization at any time point. Furthermore, reporting mechanisms and feedback loops associated with both data aggregation and dissemination have resulted in significant and timely performance improvement initiatives.

The new QIR electronic system has been showcased as a best practice, shared with governing bodies, and firmly incorporated into all high-stakes organizational accreditation reviews. Furthermore, this project has resulted in the identification and documentation of risk reduction practices and has matriculated into a database that allows for the monitoring of quality improvement activities. This interaction between incident reporting and targeted performance improvement has resulted in:

(1) The assurance that PPMH has the ability to continuously improve the quality of client services through the appropriate analyses of risk data and the prudent intercession of the organization's management/leadership;

(2) The activation of mechanisms by which all departments, teams, and staff can proactively evaluate their efforts to improve organizational outcomes and processes;

(3) The enhancement of the organization's internal preemptive risk management whereby unacceptable outcomes, procedures, and processes can be promptly detected and improvements swiftly implemented;

QIR System, continued from page 7

(4) The practical use of comparative and baseline data to measure quality of care and level of environmental safety afforded to both clients and staff

(5) The establishment of a tangible tool by which staff members at all levels of the organization are motivated and encouraged to contribute to improving organizational processes and outcomes; and,

(6) The documented infusion of risk reduction and quality services into the efficient and effective management of PPMH as a client-centered organization. ❖ *Contact Pikes Peak Mental Health for referenced appendices.*

ABOUT THE ORGANIZATION:

Pikes Peak Mental Health (PPMH) is a 501(c)(3) non-profit community-based mental health organization established in 1875 to care for the indigent. Its mission is to promote recovery through delivery of clinically sound behavioral health-care solutions. The company delivers comprehensive mental health and chemical dependency treatment services to approximately 11,000 clients annually in El Paso, Teller, and Park Counties. It is the only comprehensive non-profit outpatient behavioral healthcare provider in the area. PPMH has maintained accreditation by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) for over 20 years, and is the only mental health center in Colorado with JCAHO accreditation.

PPMH services focus on three groups: 1) those with chronic mental illness, 2) children and families, and 3) individuals in need of crisis, detoxification, and substance abuse treatment services. Behavioral healthcare services target individuals and families of all ages, socioeconomic levels, and ethnic groups. PPMH provides mental health services on a contract basis throughout the region with many healthcare partners, and is a provider of services under Medicaid. The company employs approximately 300 staff with a FY2006 budget of approximately $20.5 million. (PH: 719-572-6100 CEO is Morris L. Roth)