

Enigami Systems, Inc.

Telemedicine and Data Management Systems for Improvement of Healthcare Coverage Costs

Response to: Colorado Blue Ribbon Commission for Healthcare Reform Request for Proposal

Key Author: Clifton D. Croan, MA, LPC
President and CEO
Enigami Systems, Inc.
2814 E. 13th Avenue, Ste. 8
Denver, CO 80206
(720) 272-6149
cdcroan@enigamisystems.com
wakan1953@msn.com

Signature of Authorizing Agent

Enigami Systems

Overview

Enigami Systems, Inc. offers a patent pending protocol whereby Consumer's symptoms are telephonically assessed on a daily basis using an interactive voice response system. That information is graphically displayed on a (HIPAA) secure web site which can be viewed by the Consumer, the Provider (to enable any necessary changes to the treatment plan), and by the insuring body/benefits plan sponsor (for both Utilization Review and a Provider Rating Scale). Using the Enigami telemedicine system, a Consumer's treatment progress can be reviewed many dozens of times for the cost of what it would take to perform a single traditional utilization review. This cost savings is in addition to the other cost reduction benefits available in the field of telemedicine and the inherent improvement in quality by superior case assessment. An overview of our systems and services can be found in Appendix 1. Additional information can be found on our preliminary web site at: www.enigamisystems.com.

Responses to Specific RFP Sections

1. Comprehensiveness

This proposal addresses the problem of inadequate accountability of healthcare providers and facilities and inadequate management of patients who are under- or over-utilizing provider resources leading to the high costs in the Colorado healthcare system. This is not a proposal for comprehensive healthcare coverage or a new benefits plan, rather it would go hand-in-hand with any proposal that seeks to control healthcare costs and reform the current model of the delivery of, payment for, accountability (or lack thereof) in, and access to healthcare.

Enigami Systems, Inc. provides data management and telemedicine systems which address the lack of Utilization Review for fiscal (i.e. performance based standards) and Quality control, needs specifically identified in the November 2006 Health Care Policy and Financing (HCP & F) Performance Audit (Ch. 1, pages 17-30), Appendix 2. The objective of this proposal is to illustrate how the Enigami system will help to solve these problems and deliver results that address the major points in the Blue Ribbon Commission's RFP:

- Timely, appropriate health care

Enigami Systems

- Benefits with appropriate limitations addressing distinct populations
- Improved quality of care
- Cost-effective healthcare with anticipated lower costs of healthcare delivery
- Wellness and prevention
- Sustainability

The solution provided in the Enigami system will be comprehensive in that it will collaborate and interface with existing wrap around informational databases both at the inception of treatment and during treatment such as in the case of multiple caregivers and interventionists.

2. Detailed Description of the Proposal

The Enigami system is a financially viable and sustainable system that integrates aspects of disease management, data management and telemedicine to align incentives of healthcare providers and healthcare payers to improve patient utilization and provider billing, leading to improved overall healthcare costs. The improvement in healthcare cost savings provides the opportunity to expand coverage to many uninsured and underinsured Coloradans.

According to the recent HCP & F Performance Audit conducted by the Mercer group¹, Colorado's Department of Healthcare Policy and Financing may benefit from improvements in key areas that are addressed by the Enigami system. Two specific areas are utilization management and assessment of provider performance from a financial and quality perspective:

- *Oversight of utilization management* The Enigami system enables proactive monitoring by the Provider for both over and under-utilization to ensure that services delivered are necessary, appropriate and effective. Because utilization data can be analyzed in the context of costs and compared across sites, it becomes possible to identify facilities that employ "best practices", developing standards for expected levels of care for services provided.
- *Analysis of provider data for financial and quality performance* The Enigami software captures data from each patient encounter, and the system tracks the cost of care (measured in billable hours of physician / provider time) for each patient /

Enigami Systems

Consumer according to their diagnosis. Thus, it becomes possible to perform data analysis and identify provider-specific service and cost issues that may warrant further investigation or intervention.

<p><i>Who will benefit?</i></p>	<p>The proposed implementation of the Enigami system will primarily benefit government-sponsored healthcare plans and patients (or Consumers); with an initial focus on mental health plan participants. Colorado-sponsored benefits packages will benefit by experiencing lower costs driven by: reduced visits to specialists; reduced ER visits; and reduced “miscellaneous” or “unclassified” billings which may carry higher than average reimbursement rates. These lower costs may allow for expansion of care to greater numbers of Coloradans, including providing coverage for many of the uninsured and underinsured who would otherwise not be covered.</p> <p>Government-sponsored health plans will also benefit because the Enigami system will implement superior Utilization Review (UR) and generate Performance Ratings. Enigami’s Utilization Review ensures accountability for performance based on the comprehensive data collected: the system tracks billable hours consumed by the plan participant / Consumer for each episode of care as well as tracking the progress of the Consumer, allowing for the timelier “step-down” of care wherein patients who are improving are given less intensive, less costly care. The tracking of billable hours per patient for each diagnosis also establishes performance standards (e.g. average cost of treatment for each diagnosis, by facility and by provider); this collection and analysis of cumulative data therefore allows the identification of under-performing providers/ facilities. More importantly, this ranking system allows for the reward of efficient providers, a practice now common among many health maintenance organizations - HMOs - who use “Pay-for-Performance” systems. The U.S. Congress has recently called on the Centers for Medicare and Medicaid Services to implement a pay-for-performance</p>
---------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Enigami Systems

<p><i>Who will benefit?</i></p>	<p>system for hospitals, and there is strong interest in expanding such programs.² Furthermore, ratings systems similar to that provided by Enigami Systems have been successfully used by many private and government health plan sponsors to improve overall performance and offer plan participants and potential patients greater information about their providers. In fact, authors of the New York State Coronary Artery Bypass Surgery Report-Card System found that reports on performance that identify poor performing surgeons correlated strongly with the poorly-performing surgeon's decision to change his or her profession.³ Progressive legislators here in Colorado have also recognized this important healthcare trend and introduced HB06-1278, the Colorado Hospital Report Card bill which was signed into law last year. In past years the innovative use of telecommunications also realized significant cost savings in the Colorado Department of Labor and Employment's consumer systems.</p> <p>Finally, Consumers will benefit in multiple ways. Telemedicine, the practice of healthcare delivery using telecommunications technology and the internet is a cornerstone of the Enigami system. The additional Consumer contact afforded by the Enigami telemedicine system gives the provider greater ability to assess the consumer's condition, monitor treatment efficacy, and make any needed modifications of care sooner than otherwise possible. In addition, daily phone contact with the patient via the automated phone system allows timely identification of cases requiring referral to crisis or other service providers, avoiding the costlier interventions such as emergency room visits. Over time, analysis of "best practices" for patients/Consumers across facilities will allow the identification of patients who are either over- or under-utilizing the healthcare system. Under-utilization in particular can lead to higher ultimate costs if consumers are not receiving the appropriate level of care and end up using emergent services or facilities or, in the case of some</p>
---------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Enigami Systems

<p><i>Who will benefit?</i></p>	<p>mental health patients, having encounters with the criminal justice system. Under-utilization of healthcare services will be identified by the Enigami data management system which tracks variables such as lack of Consumer progress under the current treatment plan, missed telemedicine and in-person appointments (i.e. dropping-out of treatment), (re)admission rates to provider facilities or referral facilities, and crisis service use.</p> <p>Telemedicine also increases access for patients who may live in remote or rural areas as they will not have to travel long distances to have access to consultations. One study recently published in the <i>Journal of Telemedicine & Telecare</i> demonstrated that the availability of telepsychiatry led to an estimated cost savings of \$210 per consultation for patients who would otherwise have had to travel. From the patient's perspective, telepsychiatry was an acceptable technique in the management of mental health difficulties that both increased access to services and produced cost savings.⁴ Thus the availability of telemedicine alternatives can increase both Consumer care and satisfaction.</p> <p>Consumers will have additional benefits in having access to the Performance Ratings for each facility, giving them the ability to choose facilities and providers who deliver the highest rated care and who have track records of improving patient outcomes according to measures such as reducing symptom distress and improving productivity at work or school.</p>
<p><i>Who will be negatively affected?</i></p>	<p>Certain healthcare providers and facilities may be negatively affected as the built-in accountability of the Enigami system will significantly decrease the use of the uncategorized or “unclassified” expenses which are not associated with any set reimbursement rate and which currently account for approximately \$26 million of Colorado Medicaid each year (see Appendix 3). In addition to likely lower overall reimbursement, performance based funding and provider rating scales introduce an element of competition for both patients and funds which will tend to</p>

Enigami Systems

	<p>drive down costs. Any independent Utilization Review services, as called for in the HCP & F 2006 Performance Audit will be an unwelcome call to accountability by Providers and Facilities.</p>
<p><i>How will the proposal affect distinct populations?</i></p>	<p>Implementation of the Enigami system will bring a significantly greater use of telemedicine to Colorado Consumers. Telemedicine will allow practitioners who deliver care to government-sponsored health plan participants to closely monitor their patients and will allow the Consumers to keep their practitioners apprised of their condition without costly in person visits. One distinct population in particular that will benefit from the system are Consumers in rural or remote areas who will be able to receive quality care via telemedicine, avoiding costly trips to see their practitioners as well as “meds only” services.</p>
<p><i>Evidence of the success of this approach</i></p>	<p><u>Telemedicine</u> is a well known approach that successfully maintains contact with patients/Consumers while reducing overall costs. In the U.S. Department of Commerce’s report on telemedicine published in early 2004, the U.S. Undersecretary of Technology concluded that “<i>the wider adoption of telehealth technologies promises even greater access and higher quality care with reduced costs.</i>”⁵ Telemedicine has been so successful that it is now supported by numerous industry organizations as well as the U.S. Department of Health and Human Services which has an entire department (Health Resources and Services Administration) devoted to supporting the implementation of telemedicine initiatives for government-health plan participants.</p> <p>Further, there is direct evidence here in the state of Colorado that this approach works. Colorado Access, a behavioral health provider was a demonstration site for the "Depression in Primary Care: Linking Clinical and System Strategies" project sponsored by the Robert Wood Johnson Foundation.⁶ This site was also a participant in the MacArthur Foundation’s Re-Engineering Systems in Primary Care Treatment of Depression (the RESPECT Initiative), a key component of which was</p>

Enigami Systems

<p><i>Evidence of the success of this approach</i></p>	<p>telemedicine. Results of this approach were tracked and analyzed. Analysis of a dataset of 370 Medicaid patients revealed that the initiative achieved:</p> <ul style="list-style-type: none"> ▪ Savings of \$170 per enrollee per month ▪ 12.9% reduction in costs for high-cost, high risk patients ▪ \$2,040/year per patient savings and ▪ A total of \$754,800 in annual medical cost savings. <p>There is also ample evidence to support the use of <u>Utilization Review</u>, another key attribute of the Enigami system. UR is the prospective, retrospective, or concurrent review of necessity and appropriateness in the allocation of healthcare resources and services. It is a practice commonly employed by Managed Care Organizations as part of broader cost-containment efforts. The Mercer government consulting group identified several UR “best practices” from a review of multiple states’ managed care operations.⁷ Among these are (1) the regular review of the patient/Consumer’s medical records to assess appropriateness of the current level of care; and (2) the collection and analysis of UR data to monitor trends by level or care and across Providers. The Enigami system is designed to enable the successful implementation of these two aspects of UR.</p> <p>Finally, the Enigami system promotes and ensures accountability from the Providers in the system through the use of the <u>Provider Ratings</u> which themselves are enabled by the data collected and reported by the system. Accountability is a desirable attribute, and any system that promotes this will enjoy some measure of success. Please see the discussion above in “<i>Who will Benefit,</i>” for evidence of the success of Provider Ratings and Report Cards.</p>
<p><i>How will the program be governed & administered?</i></p>	<p>Enigami Systems is a private, for profit company governed by a board of directors. Our goal is to demonstrate that implementation of our system results in benefits to the healthcare system that far outweigh the costs of implementation. It is thus our responsibility to track our own</p>

Enigami Systems

	<p>performance and report on this to the purchasers of the system who will be able to independently audit our reports to ensure that we are being held accountable. As a company based on performance and accountability we expect to have measurable goals set and oversight by an appropriate authoritative body. We look forward to collaborative implementation with HCP&F. Governance will also be ensured by our compliance with nationally recognized entities such as: the Utilization Review Accreditation Commission (URAC), the Disease Management Association of America (DMAA), the National Committee for Quality Assessment (NCQA), and the National Association of Independent Review Organizations (NAIRO) as well as other State and Federal guidelines and statutes.</p>
<p><i>New legislation required?</i></p>	<p>To the best of our knowledge, no federal or state laws or regulations will need to be changed to implement this proposal. However, a CMS waiver will be required due to the focus on Medicaid.</p>
<p><i>Details of implementation</i></p>	<p>The Enigami system will first be implemented in selected Colorado Behavioral Health Organizations (BHOs) and with the approximately 30,000 Consumers not involved in BHO services but who are receiving “medications only” services. BHOs were chosen as the initial sites of implementation due to the recently published Mercer report which reiterates and reinforces the need for this group to implement systems to improve a variety of parameters including Utilization Management and Financial and Quality Performance. This implementation will also help the BHOs to meet their contractual obligations with the state of Colorado to implement performance improvements. The pilot program will establish the benefits of the system and allow for a controlled roll-out beginning with two BHOs providing services to consumers for the first two years, three BHO’s providing services in the third year, four BHO’s in the fifth year, and all five BHO’s in the last year. The “medications only” (non-BHO consumer) population may be graduated annually in a</p>

Enigami Systems

	<p>similar graduation where costs of fewer physician visits will be realized.</p> <p>We propose the pilot program to last five years with a two year review, with funding shared by the State of Colorado and the Centers for Medicare and Medicaid Services. Implementation will be facilitated by the use of the Enigami website interface portal and, at each of the BHOs will consist of:</p> <ul style="list-style-type: none">- installation of the Interactive Voice Recognition telemedicine system;- testing and quality assurance of the installed system at both the Colorado providers of benefits packages/health plans and the healthcare Providers to ensure proper interface with, data acquisition from, and compatibility with existing informational databases;- training of intake professionals, crisis staff, physicians and other caregivers on the use of the software and graphical user interface;- training of benefit package administrators on the Enigami system, reporting tools, and Provider & Facility Ratings.
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

2.1 Access

Enigami Systems provides *enhanced access* to care through its telemedicine platform and ensures that plan participants in Colorado government-sponsored healthcare plans will have timely and appropriate health care. *Timeliness* is ensured because the system makes daily contact with the plan participants enrolled in the system. This daily contact results in early identification of participants who might need additional intervention such as support from a crisis line or other specially trained providers. Timeliness is also ensured because the system, following analysis of patient responses to standard questions, can immediately issue alerts to physicians that the patient may need additional support. The system further assures *appropriate* care by allowing the physician to suggest in person appointments *only when necessary*, rather than allowing consumers who may over-utilize the system to request appointments that may be unnecessary given their symptoms.

Enigami Systems

Use of the Enigami system proposed here may result in **expanded access** as a result of the anticipated cost savings realized. The use of the Enigami system will not affect safety net providers.

While Providers and Facilities may express concern about under-funded services, governing bodies express concern there may be over-funded services, the Enigami System will provide ample evidence to support the appropriate level of funding.

3. Coverage

Implementation of the Enigami System can help to ensure expanded and / or more affordable healthcare coverage for Colorado residents. Use of the Enigami System by the State of Colorado government-sponsored health plans should result in system-wide cost savings. These savings can then be applied to either expanding coverage to the uninsured and underinsured, or can be used to make care more affordable to current participants, or both.

The anticipated savings come from improved utilization of healthcare services by plan participants, improved management of patient conditions, and improved billing practices.

Anticipated cost-savings, *for just one kind of plan participant* – those requiring mental health services - are specifically described in the table below. Savings for implementing the Enigami System with other kinds of members, including those with cardiovascular disease and diabetes, would be significantly greater.

Table 1: Enigami-enabled Cost Savings to Mental Health Plan Participants

Cost Savings Category	How savings are realized / Specific Metric	Anticipated Savings
Improved utilization	Telemedicine-enabled monitoring of patient condition and interface with physician results in fewer costly visits to specialists.	\$6,599,469
Improved patient management	Daily contact and technology-enabled physician reporting and alerts when	

Enigami Systems

	changes occur in patient condition; timely intervention before there is an exacerbation of patient’s condition results in fewer Emergency Room visits.	\$ 512,868
Improved billing practices	The physician interface of Enigami’s Compliance Software “forces” a diagnosis to be entered resulting in a significant decrease in “unspecified” charges and expenses which may have higher reimbursement rates than those associated with the average diagnosis code. Ensuring fewer miscellaneous or uncategorized healthcare expenses also reduces costs associated with fraud and abuse in reimbursement.	\$ 1,427,814
	Total Savings	\$8,540,151

The derivation of these cost savings can be found in Appendix 3. In addition to these easily quantifiable savings, savings from the implementation of Enigami’s Utilization Review are also expected; it is commonly accepted that UR systems result in greater cost savings because of the increased scrutiny of patient-associated costs and examination of the necessity of these costs given patient status.

Enigami personnel will work with the healthcare plan sponsor to conduct outreach and enrollment of plan participants. Barriers to enrolling participants in new programs, such as those identified in the Colorado Children’s Healthcare Access Program⁸ include poor reimbursement, poor access to and coordination of mental health services, and problems in providing after-hours telephone care. The latter two issues will be handled by the Enigami system, and the roll-out plan will include educational efforts to inform potential participants and address these potential barriers. Reimbursement will not be a barrier because the system will be paid for by the Colorado health benefits package

Enigami Systems

sponsor (i.e. Medicaid / Medicare). Outreach efforts will identify both potential plan participants currently utilizing approved healthcare facilities as well as plan providers who are good candidates for enrollment in the Enigami system. Good candidates are defined as those currently having high utilization rates or high costs of care.

4. Affordability

Premium sharing requirements should not be impacted by implementation of the Enigami system and can remain as they currently are today. Although there is a “per-participant-covered” fee for using the system, this fee is paid by the plan sponsor and not by the plan participant. The benefits plan sponsor will realize savings from use of the Enigami system, and payment for the system will come out of these savings and will not add additional cost. Implementation of the Enigami System for the State of Colorado will represent an insignificant cost (2%) relative to the overall mental health funding and still be far below the current funding appropriations for disease management controls.

Co-payments and other cost-sharing measures currently in use will not be impacted. More importantly, the Enigami System will provide for UR as specified in the HCP&F Performance Audit. This system will provide the most comprehensive review available, effectively reviewing all cases, and can be implemented dozens of times over for what the cost of a single review would be if traditionally performed by a caseworker – if it were performed; currently, UR is not performed adequately leading to missed opportunities for cost containment. The projected cost savings makes a tremendous argument for affordability.

5. Portability

The Enigami System is based on a common data management system that ensures that simply changing providers or facilities will not interrupt telemedicine services or consumer reporting to new providers. With the secure availability of the Enigami database, containing the comprehensive consumer case history according to HIPPA regulations, each Provider with authorized access can *immediately* treat a transferred case. The Consumer will not suffer a loss or disruption in treatment due to administrative impediments as the System will be immediately accessible to all Providers and Facilities

Enigami Systems

- thus reducing “churning”. “Churning” is defined as a consumer not having a smooth transition of care when changing providers or transferring to another facility within the Colorado system. Plan participants will have access to Enigami services as long as they are with a benefits package provider who has purchased the Enigami System and upon appropriate consent a Consumers treatment history may be accessed at once.

6. Benefits

Benefits of the Enigami system for the plan participant or consumer are that care is closely monitored via the telemedicine and physician reporting systems. These systems allow the caregiver to monitor the therapy for efficacy and thus ensure that the consumer’s care is appropriate and that limitations or “steps-down” in care are applied at the right times. Prior to telemedicine services, a static rather than a dynamic diagnosis was used, with “check-ups” being limited to office visits and face to face encounters. Under that system, a patient’s condition could change dramatically for the worse depending on their response to the treatment plan, and their caregiver might not be aware of such changes until an in-person or emergency visit occurs. Enigami avoids this possibility by providing the clinician with comprehensive assessment of their patient on a *daily basis*, a significant and sought-after enhancement of patient care heretofore unrealized.

The Enigami System is not a benefits package *per se*, but a data and disease management system with an initial focus on the distinct population of Colorado mental health Consumers. Other disease management firms exist that provide patient monitoring services and data management though none operating in Colorado specialize in mental health. In addition to providing unique benefits to a distinct population, the Enigami system may be generalized to address other medical interventions for additional distinct populations.

7. Quality

Accountability and review will lead to improved quality and cost savings as noted in the HCP & F Performance Audit. Enigami Systems provides a means of accountability in the practice of medicine beneficial to all parties involved: the consumer,

Enigami Systems

the caregiver, and the funding agency / provider of the benefits package. The only party threatened by accountability is the caregiver providing inadequate, or substandard, care. Though inadequate care giving is far from the rule in service provision, the provision of inadequate care is significant in human misery, and economic impact. Enigami will improve the quality of healthcare in several ways:

- **Patients / Consumers will experience improved care:** increased comprehensive patient monitoring and timely, easy-to-assess, technology-enabled reporting to the caregiver of a consumer's condition ensures better care for consumers who are enrolled with the Enigami system. This measurement of treatment contributes to the improved management of consumer health. Studies have shown that telephone interventions and support such as those which result from Enigami's caregiver alerts have resulted in significant cost savings due to their bringing prompt attention to a need for outreach *before* the patient consumer's condition exacerbates.
- **Quality is defined** as the delivery of healthcare that results in:
 - Diminishment or resolution and /or completion of an episode of care⁹
 - for the least amount of money
 - and the highest patient satisfaction

The Enigami data management system is designed to measure and promote quality. The system will identify the providers and facilities who deliver the most efficient care, allowing for identification of poorly performing facilities and their subsequent improvement or adjustment to the system.

- **Improvement in quality of care** will occur as providers and facilities are monitored for performance and rated; Providers and facilities will thus have incentives to provide better care: Provider & Facility Report Cards based on the efficiency and quality of the delivery of healthcare to plan members / consumers will be made accessible to consumers as well as government and private plan sponsors. These ratings can then provide incentives for providers, as well as allow benefits plan sponsors to reward behavior that minimizes costs and maximizes access and quality in the health care services. The data

Enigami Systems

which is used to derive the Provider Report Cards will also be used to establish treatment standards based on evidenced-based medicine. A Provider Report card method will compliment the Hospital Report Card system.

Quality will also be ensured by accreditation by and adherence to standards established by the top standards-setting organizations including: the Utilization Review Accreditation Commission (URAC); the Disease Management Association of America (DMAA); the National Committee for Quality Assessment (NCQA); and the Public Health Data Standards Consortium (PHDSC). PHDSC is a national organization which promotes the integration of health-related data systems to meet the health data needs of public and private organizations, agencies and individuals. Implementing PHDSC standards will allow Enigami to integrate existing public health data systems as well as improve data quality and utility and the efficiency of data transactions¹⁰.

8. Efficiency

As illustrated in Table 1 above, the Enigami system will save healthcare costs in a variety of ways including improved utilization leading to reduced visits to specialists, fewer emergency room visits, and reduction in fraud and abuse in billings. Further cost savings not quantified above will be realized from reduced numbers of inpatient days as improved health management results in fewer hospitalizations.

Data collected by the Enigami Data Management System and used to develop Ratings and Report Cards provides an efficient way to determine the more successful caregivers as well as provide information to identify and manage potential fraud, waste and abuse. Provider Report Cards also provide for transparency of costs because the cost of delivery of care for a given diagnosis are tracked and reported.

The “Jack Welch” model of accountability, like the Enigami System rating system, identifies the successful performers (“caregivers” in the medical field) and addresses the future performance of services. Identification of the poorer performers may indicate a need for specialization in areas, or diagnostic groups, in which a caregiver demonstrates a proficiency in- or it, may indicate a need for training in areas where performance is substandard. (Jack Welch was the innovative CEO that transformed GE

Enigami Systems

from a market value of \$14 billion to \$410 billion with revenues that went from \$27 billion to \$130 billion annually – this approach was attributed to identifying the “bottom” 10% of management performers. His “rating system” is now in common use and analogous to rating systems being developed in health care.)

The use of technology reduces the costs of the Enigami system. The interactive voice system reduces the use of more costly personnel needed to place patient monitoring calls. Automated, interactive voice telephony has been demonstrated as an appropriate and accurate way for patients to interact with their caregivers as seen in the 1996 report by Sainfort et al.¹¹ Indeed, as reported in a 2003 study published in the Journal of Ambulatory Care Management, “computerized telephone nurse triage is a well accepted cost-saving alternative method of healthcare delivery that can effectively serve a variety of callers”¹². This telemedicine approach thus reduces the more costly billable time that providers would otherwise spend during a lengthier in-person visit. Additionally, by using the frequently reported treatment data from the telephone monitoring system, caregivers will be able to monitor and adjust treatment remotely (including for example, treatment assignments, medications, strategies, etc.) equating to even greater treatment cost savings. The use of the internet and Enigami’s web-interfaces also provides an efficient means for data transfer, and indeed many healthcare professionals believe that the delivery of validated health information by the internet should be a priority for health care providers.¹³

Utilization Review mentioned above is a process for monitoring the use and delivery of healthcare services, particularly in the context of managed care organizations who seek to control healthcare costs and assess quality of care. UR requires the expenditure of time of a healthcare professional who actively monitors the use of services of high-service utilizing consumers. With the Enigami system, it is possible to perform this assessment through review of the telemedicine data, including patient / Consumer symptoms. Because the acquisition of data required for UR is automated, the cost of Utilization Review is tremendously minimized. Under the Enigami system, the Provider provides UR *in the process* of delivering care, because the data that is required for UR is *the same data* used by the Provider to assess the current condition of the Consumer as well as their progress.

Enigami Systems

We estimate that in addition to the cost of the system, only 1 FTE at the health plan / benefit package sponsor will be required to administer and implement the Enigami system. The cost of this single FTE will be negligible relative to the anticipated cost savings.

9. Consumer Choice and Empowerment

Provider Report Cards, like Hospital Report Cards, contribute to a Consumer's ability to exercise choice in his or her treatment. Consumer groups such as the Colorado Cross Disability Coalition and the Mental Health Ombuds Program of Colorado strongly endorsed the accountability provided by the Enigami System for the provider rating system and for service performance monitoring. They applaud the attention and empowerment that the Enigami system gives to the Consumer in his or her care. Documents concerning Consumer support of the Enigami concept can be found in Appendix 4.

10. Wellness and Prevention

Prevention is inherent in the Enigami system, where escalation or exacerbation of the patient / Consumer's symptoms is avoided due to the increased monitoring by the physician. This increased physician monitoring is enabled by Enigami's telemedicine system, the patent pending protocol for assessing patient condition, and the website interface. Further, because the patient is actively involved in their treatment, the overall wellness is supported.

11. Sustainability

The System is initially geared towards mental health participants in the Colorado-sponsored benefits package, but may be generalized to the larger community of medical Consumers. Initial implementation of the Enigami system will require new public funds or from cost shifting funds appropriated for utilization review services. The System is geared towards cost savings however and like the review bodies present in private industry it must prove to be cost productive or to coin a phrase "cost reductive". The multiple opportunities to realize significant cost savings will significantly outweigh the initial and ongoing cost outlays as Colorado makes its way into the age of telemedicine.

Enigami Systems

The System will encourage competition in services, performance, and for incentives which is always accompanied by reduction of cost. Due to its improvement in quality of services and fiscal accountability telemedicine is not only a sustainable course for healthcare reform but one applicable to all State provided medical benefit packages.

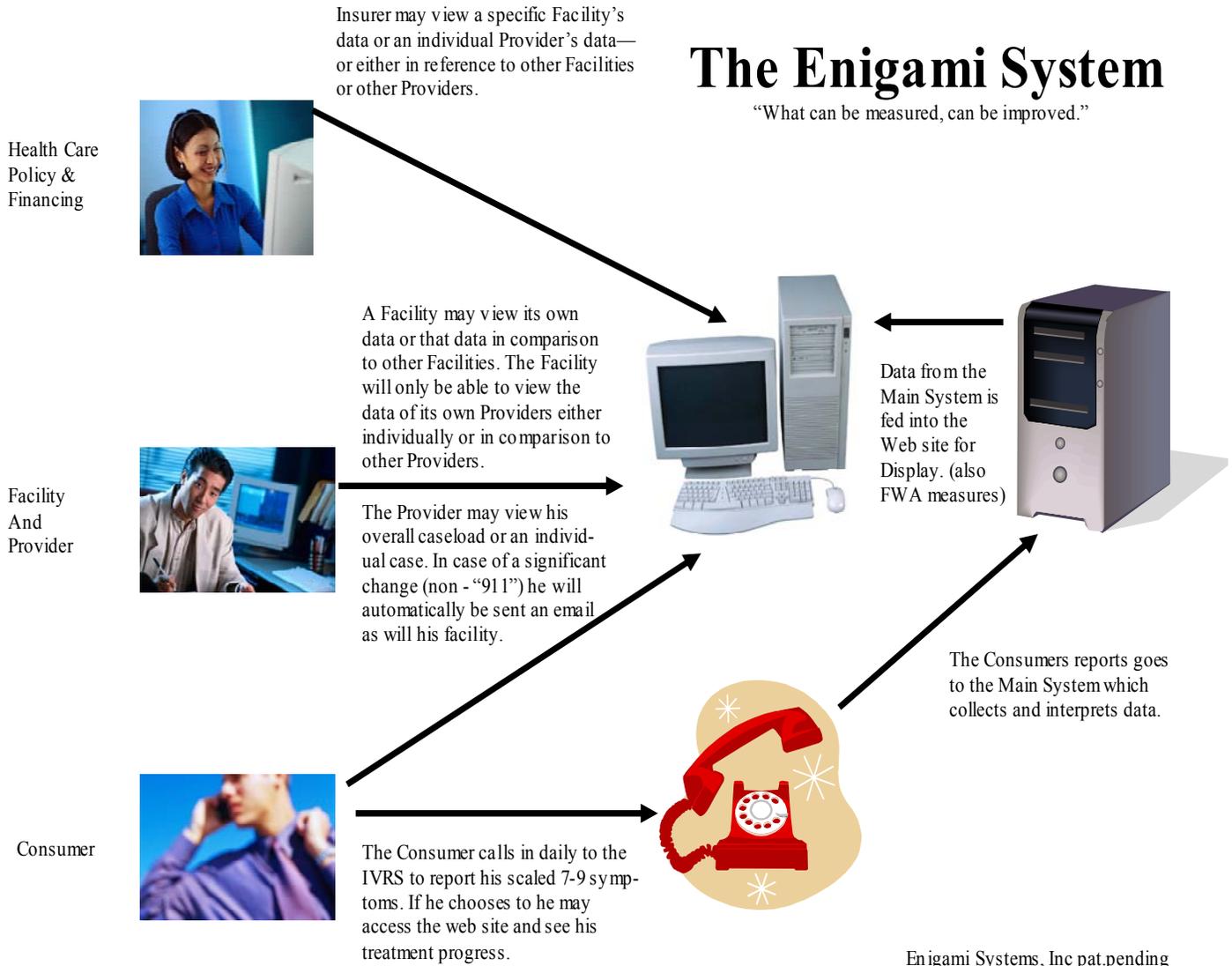
Appendices

1 – Enigami System overview graphic

2 – Mercer HCF&P report excerpts

3 - Cost savings spreadsheet

Appendix 1: Enigami System Overview



Appendix 2: Mercer Consulting Group Report

(Excerpts from “Medicaid Mental Health Rates, Department of Health Care Policy and Financing, Performance Audit,” November 2006)

BHO Utilization Management Practices

Utilization management is a central component of managed care. It should consist of a comprehensive approach that is based on data analysis and that targets oversight toward high cost and complex cases across levels of care more broad than just monitoring inpatient services. In addition, utilization controls should be augmented by network management, care management, medical management, case management, and other clinical programs that are focused on improving access to and quality of care. Utilization management includes monitoring for both over- and under-utilization of care. Over-utilization occurs when a managed care organization provides more services than are medically necessary or delivers services that do not provide an increased health benefit. Under-utilization occurs when a managed care organization or service provider does not provide the services needed to appropriately treat the member's diagnosed condition.

The Department manages Medicaid mental health services and associated expenditures through capitated arrangements with the BHOs in which each BHO agrees to provide all medically necessary care to Medicaid members for a fixed payment per member per month. This payment differs based on the eligibility category of the Medicaid member. In turn, the BHOs manage the services of their CMHC internal provider networks through sub-capitated arrangements in which the CMHC agrees to deliver all medically necessary services to Medicaid members in need of CMHC services for a fixed amount based on anticipated costs, not member months or rate categories. The BHOs pay providers in their non-CMHC external provider networks, including both inpatient providers and additional community-based providers, on a fee-for-service basis. Capitation arrangements, such as those between the State and the BHOs and between the BHOs and the CMHCs, are intended to limit financial risk to the State and the BHOs that result from over-utilization of services. However, capitation arrangements can provide a false sense of security that all services provided are medically necessary.

For example, three of the five BHOs stated that it was not necessary for them to conduct utilization management oversight activities over their internal provider network (i.e., the CMHCs) because all CMHCs are subject to sub-capitation arrangements, and therefore are at financial risk for their own utilization of services. Additionally, although there is some onsite evaluation of utilization management provided through the Department's External Quality Review process, this process does not encompass a review of all industry standard

utilization management procedures. Therefore, the Department does not have a comprehensive program for systematically monitoring utilization management across all BHOs.

While it is true that the BHOs and the CMHCs have a strong incentive not to over-utilize care and spend more on care than their capitated arrangements allow, this is not the same as ensuring that care provided is medically necessary or results in a beneficial outcome. Without active review of the care provided by CMHC providers, BHOs would have difficulty demonstrating that care delivered by the CMHCs is medically necessary or that services provided are efficient and effective in addressing the member's health care needs. Additionally, capitation arrangements provide strong financial incentives for BHOs and CMHCs to limit service expenditures in order to stay within their sub-capitated contracts, and as a result, there is a risk that BHOs and CMHCs may limit access to services or provide a lower level of care than is medically necessary. Therefore, it is important for the Department to monitor the BHOs' utilization management practices.

We reviewed the Department's oversight of BHO utilization management, and we conducted comprehensive reviews of BHO utilization management policies, procedures, and practices through a desk review and follow-up on-site visits with each of the five BHOs. At each BHO, we conducted interviews with BHO care managers and utilization managers, medical directors, and quality improvement staff. The results of these reviews were compared to the 10 separate utilization management practice components summarized earlier that represent the industry standards and best practices observed in our review of Medicaid mental health managed care operations in numerous states. Because the BHOs have different utilization management practices for their internal and external provider networks, we analyzed the BHOs' practices for managing each network separately. We found that the Department has not set standards or contractual requirements for the BHOs to conduct utilization management activities beyond those required by the External Quality Review process. As discussed, the utilization management aspects of the External Quality Review procedures are not adequate to ensure services provided are medically necessary. Additionally, we found that the Department needs to conduct proactive oversight and monitoring of the BHO's utilization management practices. Further, we found that although the BHOs actively monitor utilization in their *external* provider networks, generally the BHOs are not conducting adequate utilization management of the services provided by their *internal* provider networks.

It is critical that the BHOs conduct adequate utilization management reviews of internal network providers because the majority of expenditures of the Medicaid Community Mental Health Services Program are for services provided by the

CMHCs. For example, depending upon the individual BHO, the percentage of total BHO expenditures incurred through the CMHC internal provider networks was between 64 percent and 86 percent of the BHO’s total expenditures for Fiscal Year 2005. When looking at BHO expenditures for medical services only, the amount of medical service expenditures incurred by internal network providers for Fiscal Year 2005 was as high as 95 percent, as demonstrated by the following table.

Department of Health Care Policy and Financing Medicaid Community Mental Health Services Program Behavioral Health Organization (BHO) Comparison of Medical Spending Internal versus External Provider Network Fiscal Year 2005 (In Thousand’s)						
BHO	Internal Provider Network (CMHC) Expenditures	Internal Provider Network (CMHC) Percent of Total Medical Expense ¹	External Provider Network Expenditures	External Provider Network Percent of Total Medical Expense	Inpatient Medical Expenditures	Total Medical Expense
1	\$18,400	67%	\$5,300	19%	\$3,800	\$27,500
2	\$26,600	89%	\$300	1%	\$3,100	\$30,000
3	\$9,700	95%	\$200	2%	\$300	\$10,200
4	\$11,200	84%	\$1,000	7%	\$1,200	\$13,400
5	\$20,900	89%	\$1,500	6%	\$1,000	\$23,400
Total	\$86,800	83%	\$8,300	8%	\$9,400	\$104,500

Source: Mercer analysis of information in BHO audited financial statements for Fiscal Year 2005.
 Notes: ¹ Based on category of spending as a percent of total Medical Expense for Fiscal Year 2005.

Overall, our review found that although the BHOs use 9 of the 10 standard utilization management practice components to manage their non-CMHC external provider networks, the majority of BHOs use only one of the utilization management practices to oversee their internal provider networks. Therefore, BHOs generally lack adequate monitoring procedures to oversee the appropriateness of the majority of their expenditures. Specifically, we found:

- None of the five BHOs currently require that CMHCs receive prior authorization to deliver intensive services to patients such as residential, day treatment, intensive case management, or home-based services.

- None of the five BHOs regularly review CMHC service encounter data (i.e., data on actual treatments and services provided to members) to identify cases that meet criteria that should trigger additional reviews by the BHO for possible over- or under-utilization by the CMHC. One BHO is in the process of implementing a method that monitors aggregate levels of service delivery by its CMHC, but the BHO does not review individual cases identified through this process for appropriateness of care. Aggregate-level reviews will not address problems at the individual case level.
- Only one of the BHOs actively monitors and analyzes data on services delivered at an aggregate level and by different levels of care for CMHC providers.
- Three of the five BHOs limit the roles of their medical directors in terms of direct oversight of CMHC care to those instances in which CMHC providers have denied care to Medicaid patients. The medical directors of these three BHOs also serve as CMHC medical directors, and therefore they are involved more broadly in the oversight of care delivery at their CMHCs. However, because in these instances the CMHCs own the BHOs, our concern is that the medical directors perform their oversight of CMHC care delivery from the perspective of the CMHC, not the BHO. Only two BHOs employ medical directors who are not also CMHC staff. In these two cases, the BHO medical directors participate more actively in broader oversight of utilization management activities with respect to services provided by the CMHCs, including chairing the BHO utilization management committee and being involved in data-driven medical management.
- None of the BHOs perform regular, formal supervision of CMHC staff making utilization management decisions for the internal provider network. One BHO does require that the CMHC self-report on delegated utilization management activities that include inter-rater reliability reporting, but these self-reports are not audited.
- All five BHOs delegate responsibility for utilization management to the CMHCs for services provided through the internal provider network, and three BHOs also delegate prior authorization of all inpatient services to the CMHCs. While four of the five BHOs have formal delegation agreements in place with their CMHCs outlining the specific terms of the responsibilities delegated to the CMHCs, only one of these four BHOs conducts any formal monitoring of how the CMHC carries out the delegated utilization management activities. Even this BHO's efforts include only self-reported results without direct monitoring by the BHO.

While comprehensive medical record audits are conducted as part of the required External Quality Review process, these audits do not include assessment of whether the level of care delivered is medically necessary. Without formal and direct monitoring of the medical necessity determinations made by CMHCs with delegated utilization management responsibilities, there is no mechanism in place to ensure that the CMHCs carry out their contractual obligations for managing utilization. In other words, the CMHCs are responsible for overseeing their own utilization management, with essentially no external oversight by the BHOs of these utilization management processes.

A table containing more detail on the 10 utilization management practice areas reviewed, and whether those areas are currently used by BHOs to conduct utilization management activities for external and internal provider networks, is included in Appendix A.

In addition to following the standard protocols for managing utilization discussed above, managed care organizations should specifically monitor for under-utilization. Our review found that BHOs rely on a reactive system of oversight for under-utilization. Specifically, if a Medicaid member seeks care, and the member protests either the provider's denial of care or the level of care that the provider recommends, then this action must be documented and reviewed by the BHO medical director. This process is a direct requirement of the federally-mandated External Quality Review regulations effective in August 2003, and all five BHOs have implemented such a process. The problem with relying solely on this approach is that the BHO will only identify potential instances of under-utilization if the member actively disagrees with the service provider's care decisions. If too little care is provided and the member does not know either that the level of care is inappropriate, or the member is not able or willing to tell the provider that they disagree with the care plan, then the under-utilization will not be identified. Given the vulnerability of many mental health service recipients and the technical nature of many mental health services, relying solely on the recipient to identify all instances of limited or inadequate access to care is not a reliable means of monitoring for under-utilization. This reactive approach could have implications for the adequacy of the care provided and ultimately result in high costs of care in the long-run through increased crisis intervention services, such as emergency room and inpatient treatment that result from a lack of more routine care.

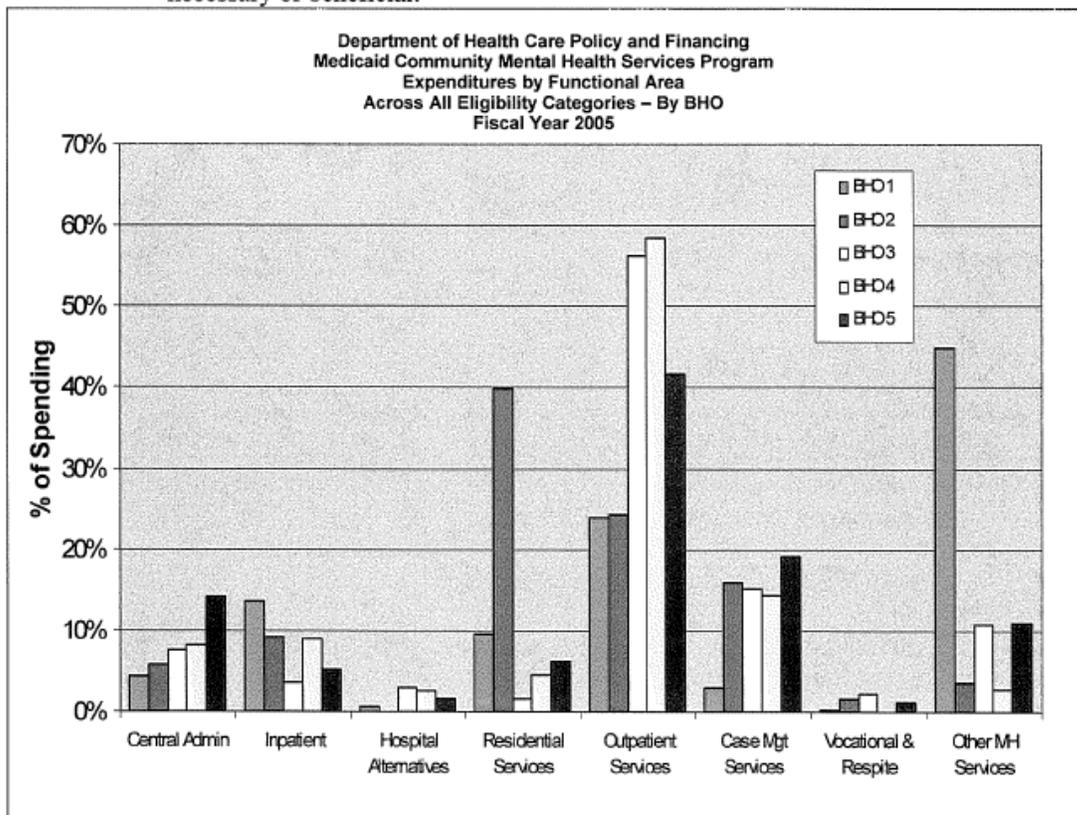
As part of the development and implementation of a comprehensive system of utilization management, the BHOs should follow specific standards to proactively monitor for under-utilization. We found that neither the Department nor any of the

BHOs actively monitor for under-utilization by their CMHC providers. The Department should work with the BHOs to develop standards and practices based on the following indicators to identify potential under-utilization by providers.

- **Missed Appointments.** BHOs should have processes in place to identify members that discontinue care prematurely, with particular attention to needed outreach for members at higher risk. For example, any member missing follow-up appointments post-discharge from episodes of 24-hour care or otherwise missing three or more outpatient appointments of any type could trigger review by a BHO care manager. In addition, any active authorization for which care has not been delivered in a 60-day period could be identified for review.
- **Readmission Rates.** BHOs should identify members at the individual member level (not just in aggregate) that are readmitted to inpatient or residential care within 7 and 30 days of discharge. Any cases readmitted in these time frames could trigger a special review.
- **Crisis Service Use.** Crisis services are by their nature responses to situations that are out of control. While many people need repeated crisis support, this can also be a sign of inadequate care planning or ineffective or inadequate service availability. BHOs should have processes in place to detect and trigger a review of members using a high level of crisis services. For example, BHOs could conduct a special review of any cases where four or more crisis services are used by a member within a 30-day period.
- **Under-Utilization at Any Level of Care.** Once services across levels of care are actively monitored by BHOs, service usage can be summarized and ranked from highest to lowest, and criteria related to the expected level of service use for each defined level of care can be developed. Any individuals receiving a level of service that is significantly below the average use for a given level of care could trigger a review by the BHO. A similar standard could also be developed for over-utilization.
- **Quality of Care Concerns.** Any case involved in a sentinel event or critical incident, such as a suicide, homicide, member injury, or allegation of abuse or neglect, should be reported by network providers to the BHO and trigger additional review.

Similar to the arrangement under the fee-for-service system that existed in Colorado prior to the implementation of managed care in 1995, our audit found that for the most part CMHCs continue to make decisions about the level of care that is to be provided with very little external oversight of the appropriateness of

their care decisions by the managed care organizations, or BHOs. One of the possible effects of such a lack of oversight of utilization management by the BHOs can be seen in the graph below. The graph shows spending across functional areas by BHO, including several types of clinical levels of care. There is wide variability in the use of some types of clinical services. For example, in the case of one BHO, Residential Services represent approximately 40 percent of its total spending, while all other BHOs incurred 10 percent or less of their total spending for Residential Services. Significant ranges among BHO spending can be seen for Outpatient Services and Other Mental Health Services as well. While there may in fact be medical justification for such widely varying utilization patterns, without adequate oversight of service utilization, both the Department and the BHOs will have difficulty demonstrating that such use is medically necessary or beneficial.



Source: Mercer analysis of Fiscal Year End 2005 Supplemental Schedules from the BHOs' financial statements and Independent Accountants' report.

Managed care practices are evolving across the country, and Colorado is not alone in having gaps in its system for overseeing utilization and medical necessity. We found evidence that many of the BHOs have taken initial steps to redesign and increase the rigor of their utilization management processes since the start of their new contracts with the State beginning midway through Fiscal Year 2005 (January 1, 2005). Generally, these improvements have been to increase the independence of financial and managerial oversight of the BHOs from the CMHCs, separating out more formally the ownership and management structures of the BHOs. As mentioned previously, the BHOs are generally owned or operated at various degrees by the CMHCs. After the 2005 contracts were in place, one BHO spun-off its managed care functions from its CMHC to an entirely new entity in order to increase independence in the BHO's oversight of the CMHC. Two other BHOs split more formally from their CMHC owners, naming executive directors who were independent of the CMHCs and formalizing distinctions between their utilization management programs and the CMHCs' clinical management. These BHOs also restructured to have chief financial officers who are independent from the CMHCs, further formalizing boundaries between the CMHCs and the BHOs. All five BHOs had implemented targeted provider monitoring and oversight in response to federal External Quality Review requirements.

While all of these changes are movement in the right direction, additional separation of authority between the BHOs and their CMHC providers is needed in the area of utilization management. Specifically, to remove real or perceived conflicts of interest between the BHOs and the CMHCs and to improve the BHOs' ability to function as managed care organizations, the Department should require BHOs to more directly and transparently manage utilization of services by the CMHCs. Without more formal separation, the CMHCs are in effect managing themselves, and there is little assurance that the CMHCs are managing care in a way that ensures the best interests of the State or that the individuals served by the CMHCs are adequately protected.

To accomplish this, the BHOs should significantly increase their utilization management activities to ensure that the appropriate level of medically necessary care is being provided to members served through their CMHC provider networks. Furthermore, utilization management is critical to ensure the validity of encounter data upon which the new rate setting methodologies proposed later in this report are based (rate setting is discussed in Chapter 2). Without adequate utilization management and oversight of the clinical care provided by CMHCs, encounter data used in the rate setting process will not be based on the medical needs of the Medicaid populations to be served, and will likely perpetuate disparities in the services provided and rates paid to providers with different utilization practices. In addition to the utilization management procedures required by the External Quality Review process, the Department should require the BHOs to comply with additional, industry-standard utilization management

procedures and ensure consistent management of service utilization among the BHOs. As part of developing a comprehensive utilization management strategy, the Department should continue working with the BHOs to eliminate distinctions between internal and external providers. The strategy should provide the BHOs flexibility to tailor oversight approaches to high volume providers and maintain the capacity for BHOs to monitor utilization by provider.

Given the timing requirements for rate setting, it is critical that the Department take action on this immediately. For example, if the Department is able to have improved utilization management procedures in place within the current fiscal year (Fiscal Year 2007), the first full year of encounters subject to these procedures will be those in Fiscal Year 2008, which will drive rate setting activities in Fiscal Year 2009. The rates will not be implemented until Fiscal Year 2010. The Department should incorporate requirements for minimum utilization management into its contracts with all BHOs that participate in the State's Medicaid Community Mental Health Services Program, monitor the BHOs for compliance to the requirements, and take appropriate action if BHOs do not adhere to the requirements.

Recommendation No. 1:

The Department of Health Care Policy and Financing should improve utilization management in the Medicaid Community Mental Health Services Program by:

- a. Requiring the BHOs to disclose the nature and extent of their financial and organizational relationship with the CMHCs to the Department annually.
- b. Reviewing the ownership and governance relationship between the CMHCs and the BHOs to ensure that oversight of utilization management is sufficiently transparent and accountable given the potential for conflicts of interest between the CMHCs and BHOs.
- c. Working with the BHOs to develop requirements for a minimum set of utilization management procedures and incorporating these requirements into the State's contracts with the BHOs in order to supervise the activities of all providers, whether part of the BHO's internal or external provider networks. The distinction between "internal" and "external" providers should be eliminated, although BHOs should be allowed to implement tailored oversight approaches for high volume providers, such as the CMHCs, and maintain the capacity to monitor utilization by provider. Procedures should include standard protocols that monitor for both over- and under-utilization. In addition, since industry standards for utilization

management will continue to evolve, the Department should implement a process for monitoring the adequacy of these minimum practice standards and updating them as needed over time. This process should involve BHOs, as well as periodic reviews of practices employed by other states.

- d. Requiring BHOs to establish formal delegation agreements when delegating utilization management functions to any agency, especially their providers. Such agreements between the BHOs and any delegated entities (CMHCs or other organizations) should be reviewed and approved by the Department prior to the BHOs' execution of the agreement. Formal agreements to delegate utilization management should require the providers to furnish annual reports on utilization management procedures conducted and the documented results of those procedures. Delegation of utilization management functions should supplement but not replace utilization management activities conducted by the BHOs.

Department of Health Care Policy and Financing Response:

- a. Agree. Implementation Date: July 2007. The Department will require the BHOs to disclose the nature and extent of their financial and organizational relationship with the CMHCs to the Department by March 2007 and annually and incorporate this requirement into the BHO contracts by July 2007.
- b. Agree. Implementation Date: July 2007. The Department will review the ownership and governance relationship between the CMHCs and BHOs to ensure that oversight of utilization management is sufficiently transparent and accountable. Where BHOs do not establish or maintain oversight of utilization management functions, corrective action will be required.
- c. Agree. Implementation Date: October 2007. The Department will work with the BHOs to develop requirements for a minimum set of utilization management procedures for overseeing the activities of both CMHC and non-CMHC providers and incorporate these requirements into the BHO contracts. Procedures will include standard protocols for monitoring over- and under-utilization. The Department will work with the BHOs to implement processes for monitoring the adequacy of utilization management practice standards and updating them as needed over time.
- d. Agree. Implementation Date: December 2007. The Department will require BHOs to establish formal delegation agreements when delegating utilization management functions. Such agreements between a BHO and

any delegated entity will be reviewed and approved by the Department prior to the BHO's execution of the agreement. Formal delegation agreements for utilization management will require delegated providers, which may include CMHCs, to report utilization management activities and results of procedures. Delegation of utilization management functions will not replace oversight of utilization management activities by the BHOs.

Appendix 3: Cost savings spreadsheet

Enigami Systems

Psychiatry Specialist Visits	Current Visits/year	Anticipated		
		Current costs	future costs	Savings
Avg cost of Psychiatry visits per patient / year	5	\$311.40	\$217.98	\$93.42
stable patient (outpatient)				
% Stable patients in covered population*	84%			
unstable patient (outpatient)	9			
% Unstable patients in covered population*	11%			
Total average visits /yr	5.19			
Assumptions				
% Reduction in Visits	30%			
Average cost (medicaid reimbursement rate) per visit	\$60			
Total number of covered lives for mental health*	70,643			
* Data taken from: "Orchid Report", Summary Report of Client Characteristics, FY2003-04, Colorado Community Mental Health Centers/Clinics/ CO Dept of Human Services, January 2005				

Emergency Room Visits	Current Visits/year	Anticipated		
		Current costs	future costs	Savings
Avg cost - psychiatry ER visit/patient/year	0.5	\$ 220	\$ 154	\$ 66
Total average visits /year				
Assumptions				
% Reduction in Visits	30%			
Cost of Psych ER visit (NY 2001)	\$ 440			
Total # of patients (unstabes)*	7,771			
		Total costs	\$ 1,709,561	\$ 1,196,692
				\$ 512,868

Unspecified / Uncategorized Charges & Non-specific Diagnoses	
\$193M in Medicaid Mental Health expenditures from 2005-6 State of CO, HCPF website; 13.7% unclassified/misc charges from: the "Orchid Report", Summary Report of Client Characteristics, FY2003-2004, Colorado Community Mental Health Centers/Clinics/CO Dept of Human Services, Jan 2005	
Current charges to uncategorized	\$ 26,441,000
Assumed % that will be properly reclassified, higher OR lower bill rate (neutral impact)	85%
% that will be reclassified @ lower bill rate	12.0%
% that will not be reclassified (e.g. charges dropped or not submitted for reimbursement)	3.0%
Charges that will be billed @ lower bill rate	\$ 3,172,920
% reduction in lower bills	20%
Savings from lower bills	\$ 634,584
Savings from dropped charges	\$ 793,230
Total savings from reclassified bills	\$ 1,427,814

Total savings	\$ 8,540,151
----------------------	---------------------

Endnotes

1. Mercer Government Human Services Consulting , “Medicaid Mental Health Rates, Department of Health Care Policy and Financing, Performance Audit,” November 2006.
2. Fisher A “Paying for Performance – Risks and Recommendations,” NJEM 2006; 355(18):1845-1847
3. Jha A, Epstein A “The Predictive Accuracy of the NY State Coronary Artery Bypass Surgery Report Card System; *Health Affairs* 2006; 23(3); Private conversations 3-22-07, 3-28-07
4. Simpson J, Doze S, Urness D, Hailey D, Jacobs P. “Telepsychiatry as a routine service--the perspective of the patient.” *J Telemed Telecare*. 2001;7(3):155-60.
5. “Innovation, Demand, and Investment in Telehealth,” 2004; U.S. Department of Commerce, Office of Technology Policy:
<http://www.technology.gov/reports/TechPolicy/Telehealth/2004Report.pdf>
6. Power A. Kathryn, Keynote Address: “Transformation in Collaborative Healthcare”, Collaborative Family Healthcare Association, Eighth Annual Conference, “Best Practices in Collaborative Healthcare”, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, U S Department of Health and Human Services, November 4, 2006, Newport, Rhode Island.
7. See reference 1 (ibid)
8. AAP Proposal Appendix E "*Colorado Health Outcomes Measurement & Evaluation Consortium (CO-HOME): A System to Ensure an Effective and Efficient Medical Home for All Coloradans. (2007) Colorado Chapter of the American Academy of Pediatrics and The Children's Hospital, Denver, Colorado.*"
9. C Shapiro M.D., Jed (BCMHC) Private conversation 3-13-2002
10. AAP Proposal Appendix I. "*Colorado Health Outcomes Measurement & Evaluation Consortium (CO-HOME): A System to Ensure an Effective and Efficient Medical Home for All Coloradans. (2007) Colorado Chapter of the American Academy of Pediatrics and The Children's Hospital, Denver, Colorado.*"
11. Sainfort F, Becker M, Diamond R.”Judgments of quality of life of individuals with severe mental disorders: Patient self-report versus provider perspectives.” *Am J Psychiatry*. 1996 Apr; 153(4):497-502.
12. Cariello FP, “Computerized telephone nurse triage. An evaluation of service quality and cost.” *J Ambul Care Manage*. 2003 Apr-Jun; 26 (2):124-37.
13. Ayantunde AA, Welch NT, Parsons SL. Et al, “A survey of patient satisfaction and use of the Internet for health information.” *Int J Clin Pract*. 2007 Mar; 61(3):458-62.

Request for Proposal Signature Page

Date: April 6, 2007

RFP for : Colorado Blue Ribbon Commission for Health Care Reform

RFP hand delivered to: Blue Ribbon Commission for Health Care Reform

303 East 17th Ave., Suite 400

Denver, Colorado 80203

Number of copies delivered: 1 Original and 1 Copy.

Direct Inquiries to: Clifton D. Croan MA, LPC

2814 East 13th Ave. #8

Denver, Colorado 80206

(720) 272-6149

cdcroan@enigamisystems.com

wakan1953@msn.com

Enigami Systems, Inc. is willing to comply with all RFP requirements, stipulations, and conditions and proposes to implement a “healthcare data management system” in collaboration with the duly designated authoritative body of the State of Colorado.

Clifton D. Croan / President and CEO

Typed or Printed Signature / Title

Handwritten Signature by Authorized Officer

Enigami Systems
