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| <b>14. ABSTRACT</b><br>Provider profiling is simply measuring a process and/or outcome and comparing it to some defined norm. Profiling has many uses: utilization management, cost-effectiveness review, meeting access standards, patient satisfaction, outcomes assessment, population health, etc. Unfortunately, providers have had a very negative reaction to profiling, a tool that can help them improve outcomes and make their practices more efficient. This paper will explore the reasons for the negative reactions, the keys to a successful profiling system, and the various attributes of good measures. The purpose of this project is to develop a tool that will aid in meeting the profiling requirements established by the Joint Commission on Accreditation of Healthcare Organizations and to use the tool for ongoing quality improvement. This paper examines the existing profiling system of a small, rural Army hospital and describes the development of a new database. Given that many Army hospitals are struggling with the development of an adequate profiling system, this database may prove useful in developing the groundwork to those facilities. |                         |                                       |                                             |                                                               |                                                                    |
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Development of a Provider Profiling Tool for Reappointment

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### Abstract

Provider profiling is simply measuring a process and/or outcome and comparing it to some defined norm. Profiling has many uses: utilization management, cost-effectiveness review, meeting access standards, patient satisfaction, outcomes assessment, population health, etc. Unfortunately, providers have had a very negative reaction to profiling, a tool that can help them improve outcomes and make their practices more efficient. This paper will explore the reasons for the negative reactions, the keys to a successful profiling system, and the various attributes of good measures. The purpose of this project is to develop a tool that will aid in meeting the profiling requirements established by the Joint Commission on Accreditation of Healthcare Organizations and to use the tool for ongoing quality improvement. This paper examines the existing profiling system of a small, ~~rural Army~~ hospital and describes the development of a new database. Given that many Army hospitals are struggling with the development of an adequate profiling system, this database may prove useful in developing the groundwork to those facilities.

## Development of a Provider Profiling Tool for Reappointment

### Introduction

#### *Conditions that Prompted the Study*

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) plays an important role in the military health system. Department of Defense Directive (DoD) 6025.13 requires all fixed hospitals, free-standing clinics, and facilities providing care to DoD beneficiaries under managed care support contracts to be accredited by JCAHO or through another accreditation source approved by the Assistant Secretary of Defense for Health Affairs (ASD(HA)) (TRICARE Management Activity, 1997). The JCAHO created a standard, MS.5.12, that requires a facility to base provider reappointment decisions on continual monitoring of professional performance, judgment, and clinical or technical skills (Joint Commission on Accreditation on Healthcare Organizations, 2003). Subsequently, provider reappointment is the process through which a hospital renews provider privileges.

Bassett Army Community Hospital (BACH) was surveyed by the JCAHO in 2001. During this survey, BACH received a Type I finding based on standard MS.5.12. A Type I finding is "a recommendation or group of recommendations that addresses

insufficient or unsatisfactory compliance in a specific performance area" (JCAHO, 2003, p.232). The rationale for this finding was that while the hospital was collecting information on its providers, they were not comparing individual providers to an aggregate to help make reappointment decisions. In August of 2003, BACH hired a team of surveyors from MagCare to conduct a mock survey in preparation for the next official accreditation survey by the JCAHO in October 2004. The MagCare surveyors found that BACH was still not meeting the intent of this standard because they were not making comparisons to an aggregate.

The credentials section of the hospital is a subordinate unit of the Managed Care Division (MCD). Due to the relatively small size of the facility, many functions are combined under the MCD. In addition to credentials, the MCD includes such functions as risk management, quality assurance, performance improvement, and case management. Many larger facilities have separate sections for these functions. Unfortunately, the staff of the MCD takes on several of these critical roles, and the division has numerous vacancies. This lack of personnel and available time makes the development of a tool for provider profiling difficult for the present staff. However, the

upcoming JCAHO survey requiring at least a year of collected data makes the development of a profiling tool a high priority.

#### *Statement of the Problem*

Bassett Army Community Hospital must develop a provider profiling tool that meets the intent of MS.5.12 to correct a known Type I finding of the JCAHO. This tool must also meet any requirements for credentialing that are imposed by DoD regulations and directives.

#### *Literature Review*

##### *What is Provider Profiling?*

Brand, Quam, and Leatherman (1995) define profiling as "the analysis of rates of events pertaining to the process or outcome of medical care provided by health care practitioners to defined populations" (p. 224). Brand et al. made their definition very broad. This definition allows the inclusion of a variety of providers in addition to the traditional medical doctor such as nurse practitioners, nurse midwives, and physician assistants. The definition also allows a profiler to change the population parameters to meet the needs and goals of an organization; for example, a profile may need to define the population as that of an entire plan, a specific provider panel, or the population of all of a plan's members in a given geographical region. The events related to process or outcomes could mean such things as

dollars spent, pap smears per 1000 female patients, or average glycosylated hemoglobin (HgbA1C) level. This broad definition allows profilers to tailor their activities to meet organizational needs but also allows them to explain what this activity means.

Brand et al. (1995) state the "objective of profiling is to use epidemiologic methods to describe medical practices, monitor health outcomes, and assess the efficiency and quality of care" (p. 224). In a 1995 work, Povar stated that our advances in research no longer allow us to assume we are providing quality care - we must know we are providing quality care. Povar postulates that the drive to measure quality comes from the principles of beneficence and social justice. He asserts that the Hippocratic Oath means more than "abstain from whatever is deleterious and mischievous" (Adams, 2004). Povar believes that ~~at its core~~ the Oath is about doing good, which is beneficence. Povar's ideas about social justice stem from the principle of scarcity of resources. He states that being inefficient decreases the resources available for other goods, such as housing and appropriate nutrition, and that providers certainly know the impact of these factors on outcomes. It appears that Povar leads the reader to believe that as a result of the principle of scarcity, providers intuitively desire to be more

efficient and wish to improve practice to preserve resources for other uses. Pechman (2000) takes a more managerial perspective on profiling by stating that the rationale for profiling is that many studies found variations in physician practice that did not influence the quality of care. These variations could be an opportunity to cut costs by implementing the least costly practices that result in the same outcomes.

The definition, rationale, and objective of profiling seem benign; the defensive reaction of many physicians, therefore, seems unreasonable. What has caused this negative reaction to a tool that appears to offer a benefit to the provider, plan, and patient? To discover this connection, we must look at the beginnings of profiling.

#### *Historical Development of Provider Profiling*

Most of the articles on provider profiling in professional journals deal with provider opinions, ~~misuses~~ of the tool, database problems, techniques of profiling, and case-mix adjustments. Professional journals provide very little on the history of profiling. The following is from the text *Physician Profiling Background and Practical Experience*, edited by Pechman (2000). Pechman states that in 1916, Codman suggested that hospitals be compared by performance measures, but this idea did not become realized until 1987. At that time, the Health Care

Financing Administration began reimbursing hospitals for Medicare patients on a fixed rate per diagnosis. Hospitals were concerned about their profitability given the fixed rate and began to review physician practices. The physicians wrote the orders that determined the services needed by the patient and, therefore, the amount of money the hospital would make based on revenues minus expenses. Initially, they studied various procedures and found that practices varied but that the variances did not result in significant quality differences. These variances were where the hospital felt they could cut costs and maximize their profit. Using this information, the hospital could decide if it wanted to grant or revoke privileges to providers at the facility; those providers that insisted on utilizing resource intense processes would not be reappointed. The hospitals did not share these profiles with the physicians. In the 1980's, States also began collecting information focusing on outcomes of the Medicaid population. Profiling by insurers, at the time, was limited to those that had a large enrolled population and therefore a large claims database. Bindman (1999) discusses the study conducted by Wennberg and Gittelsohn that described the occurrence of small area variations. Bindman states that policymakers and insurers interpreted these results

to mean that physician behavior was partly to blame for rising costs.

The cost of healthcare continued to rise in the United States. Employers began to look for ways to contain the costs of providing insurance to employees. New methods of providing insurance through a third party payer developed; managed care was one product. As managed care grew and obtained greater market share, provider profiling became a common tool to monitor cost. Profiling was not only used by the managed care organizations but also by other insurers and even physician practices. The problems of profiling soon began to appear.

Providers have long enjoyed autonomy and respect. The arduous training they undergo, the sacrifices they make, and the continuing education requirements they must meet make providers the experts in healthcare. Patients historically trusted their providers to make the best decisions and provide the best care. Kassirer (1994) argues that now third party payers can deny treatment decisions, and this denial negates the trust that has developed. He states that while profiling can provide benefits, there is much to be doubted in its current use. This sentiment is echoed time and again in the professional journals and began with the inception of profiling. Providers were concerned about the erosion of their autonomy and potential negative

consequences of profiling. Unfortunately, physician concerns were well founded.

Managed care plans began to link profiling data to financial incentives within the plan. They also used the data to sanction providers for poor cost containment and utilization control. Data for most profiling efforts are obtained from claims databases. Indications are that data are highly inaccurate. Chaiken (1996) gives two major reasons for the inaccuracy. First, International Classification of Diseases, 9th Edition (ICD-9) and Current Procedural Terminology (CPT) codes are highly variable; many different codes exist for the same condition. Second, under some methods of reimbursement such as capitation, there is no incentive to complete a claims form; therefore, many patient encounters may not be recorded. Data were not appropriately screened for completeness and accuracy and cleaned when profiling first began; providers did not adjust the data for case-mix severity, compliance issues, and panel size (Kassirer, 1994). The idea that sanctions would be initiated from such faulty data angered physicians, as evidenced by the number of editorials and negative articles in the professional journals (Diamond, 2000; Kassirer, 1994; MacKinnon & Lipowski, 2000). In response, some plans, such as United HealthCare Corporation, published their own articles in

the journals in the attempt to educate physicians on the benefits and techniques of profiling (Brand et al., 1995). As the phrase goes, "this was too little, too late."

Based on the definition and objectives stated previously, we know that profiling is a tool with the potential to achieve positive outcomes and improve cost-effectiveness. Managed care organizations and other profilers realized that they needed to make changes and have provider buy-in in order to make profiling work. Hagland (1998) discusses the paths taken by United HealthCare, PacifiCare, Aetna U.S. Healthcare, and Blue Cross Blue Shield of Tennessee (BCBST). United HealthCare ran a pilot project in 1997 to 1998 called Clinical Profiles. Lee Newcomer, the chief medical officer, stated, "...we assumed that we were delivering appropriate care 95 percent of the time. To see data that said we were doing care right only 50 percent of the time was really surprising" (Hagland, p. 33). Newcomer discussed these findings with colleagues, and the plan developed their program with tremendous physician input. United HealthCare also assured the physicians that the data would not be released to the public. United HealthCare's goal was purely quality improvement, and the response by physicians at the time of the article was positive.

Hagland (1998) next discusses PacifiCare's plan for profiling. PacifiCare's program is called Quality Index, which is a public report of the group's profile. The medical directors of this program believe that consumers desire this information to make choices about the plan and the individual providers. They worked extensively with providers on data collection and accuracy for two years to ensure valid results. Their goal is to not only become cost-effective but also to reward those providers who are successful and innovative by publicizing the results and driving market share to those providers. This puts the incentive on the physicians to ensure good data and good care. The plan hopes to move toward true population health work. Reception by physicians at the time of the article was mixed.

Next, Hagland (1998) discusses Aetna U.S. Healthcare, which ~~has been~~ has been doing provider profiling since 1990. They focus on the care provided for specific diseases, such as diabetes. Aetna's subsidiary, U.S. Quality Algorithms, mails reports to individual physicians on how well they meet secondary prevention measures. The report also furnishes the provider with a list of his/her patients with the specific diseases. This allows the physicians to focus on population health; the physicians have mixed opinions of the profiling efforts of this plan.

Finally Hagland (1998) briefly mentions that BCBST performed a test of profiling in 1997. The plan took these results to their physicians to obtain their input. The result was a two million dollar investment in a data warehouse that can pull information from various sources to include laboratory, emergency room and pharmacy. They also refined their indicators and format of the reports. The plan's chief medical director hopes that this data will allow the plan to move away from precertification and other micromanagement techniques prevalent in managed care. The article provided no information on the response of the plan's physicians. The article by Hagland demonstrates that the responses of providers to the changes in profiling are mixed as are the actual changes made.

Profiling has become a common practice in today's health care environment. Some provider groups are even using profiling to monitor their practices given the influence of capitation and other risk-sharing arrangements. Accreditation organizations such as the JCAHO require a form of profiling as a part of their accreditation process, and accreditation is required to receive reimbursement from many payers. Additionally, in 1998 President Clinton signed an Executive Order requiring all federal health programs to comply with the Consumer Bill of Rights (Sandy, 1999). Part of the Consumer Bill of Rights includes the right

to receive "'comparable measures of quality' of health plans and professionals" (Sandy, p. 14). This requirement means that health plans and providers must collect data and analyze it in order to provide meaningful information to consumers. Consumers may then use the information to make informed decisions in choosing a quality plan and provider. The Executive Order, various financial arrangements, and accreditation requirements ensure that some form of profiling will remain well into the foreseeable future. Given the varying methods of profiling and the mixed reactions of providers, the question then becomes, how do you create a profiling tool that is useful to an organization but has the acceptance and buy-in of the medical staff?

#### *Development of a Successful Profiling System*

A quick review of the history of profiling reveals compelling bases for the antagonistic attitudes of providers toward managers. Smith (2003) explored the similarities and differences between doctors and managers and how to bridge the gap between them. Smith cites that both professions require committed individuals of action and risk-taking that are willing to devote many years to education followed by ongoing continuing education. Both professions also receive ethics training; although such training does not guarantee ethical behavior in either profession. Financial incentives drive both professions.

Smith, who is both a manager and physician, states that "doctors like to fool themselves that they don't" (p. 610). Both professions also have specialists and an excessive use of jargon. While both professions require interpersonal skills, neither has a good track record with communicating. The final similarity Smith describes is that both professions have been controlled by "ageing white men" (p. 610). Smith states that healthcare is an ancient profession with a more intellectual base rooted in science and with a greater written base. There is no equivalent to the Cochrane Library, and management has less professional literature and fewer professional organizations to monitor itself. Medicine also has the distinct advantage of having direct contact with the consumer while managers deal with more global enterprises and strategy. Smith believes that doctors are now more involved with large organizations and must learn to think strategically and develop the leadership that managers practice from the start. Doctors tend to dominate teams rather than work on conflict resolution and consensus, skills which they must learn. Finally, doctors are distinctly uncomfortable and disadvantaged when dealing with financial arrangements, economics, and market forces. Smith concludes that each profession has a lot to teach and learn from

the other. Smith's insights can be of particular use when developing a successful profiling system.

Many articles list the pitfalls of profiling and the negative consequences of the practice (Bell, 1996; Bindman, 1999; Sandy, 1999). As an organization develops a profiling program, it must avoid the errors of the past. In reviewing various articles and editorials, the following five key considerations became clear to the development of a successful profiling system: 1) clearly define the goal of the program, 2) involve the providers, 3) utilize accurate data, 4) adjust for case-mix and sample size, and 5) make the profile useful to the end-user.

First, the plan must have a clearly defined and stated goal for the profiling program. Providers want to know how the profiles will be used. The program is less likely to have provider support if the efforts are linked to purely financial incentives or are linked to negative actions, such as restricted admitting privileges and contracting opportunities (Bindman, 1999). Physicians resent this link and become increasingly unhappy with managed care (Bindman). Providers will respond in a more positive fashion if the efforts are linked to outcomes, population health, and to cost-effectiveness. Part of this key includes who will have access to the profiles. Physicians

generally believe that profiles should be used internally and not be available to the consumer (MacKinnon & Lipowski, 2000). Kassirer (1994) counters that patients have a right to know about the quality of the providers but that the data released must be valid. The Clinton Order solves this issue by requiring some form of profile to be released to the consumer. This profile will likely not be the same as that given to the providers; Sandy (1999) states that consumers want the facts in a simple form and do not care about the math involved. Sandy conjectures that the profile provided to consumers may become "summary statistics, composite ratings, or even 'star-ratings' like those... in the automobile and mutual fund industries" (p. 14).

The second consideration, and certainly no less important than the first key factor, is to involve the providers. This ~~does not mean~~ the chief medical director of the plan. To ~~the extent that~~ providers actually being profiled, the director is the plan; the director is subject to bias because he is an employee of the plan and has a vested interest in its profitability. The profiling effort must involve the providers actually being profiled in the development of the metrics, pilot tests, and feedback. Involving the providers helps generate buy-in; if they are involved in the process, they are more likely to

utilize the results. Without this buy-in, the providers will not trust the program and will not utilize the results, as evidenced by the general failure of programs to date.

The third key factor for a successful profiling program is data quality. Kassirer (1994) states, "We do not accept flawed or incomplete data as a basis for medical practice, and we should not accept them for assessing the quality of our care" (p. 635). This statement neatly sums much of the opinion held by providers about most profiling programs. Data should become more accurate as the industry moves toward an electronic medical record, but as stated earlier, the most frequently used source of profiling data is claims transactions. These data are subject to great inaccuracies. Some algorithms have been developed to clean the data, but many providers question the validity of the process. Further, several proprietary software programs have been developed to ~~clean the~~ data (Bell, 1996). The problem is that most of these techniques do not describe their statistical methods, validity, reliability, and deviations. Providers are intelligent people; they demand this information, and this statistical information must be provided. Without the statistics to back up the information, providers will not have buy-in for the profiling effort.

The fourth key consideration is related to the data quality issue; profilers must make adjustments for case-mix and adequate sample size. Many profiling efforts began with primary care because a large part of the managed care thrust affected these providers (Diamond, 2000). The problem is that different primary care practices see differing severity of many illnesses. This problem is compounded by the generally small numbers any given primary care provider sees of a particular illness. Providers against profiling efforts cite these issues many times in the literature. Once again, algorithms exist to make these adjustments. The profiler must ensure that the statistics are properly displayed to ensure the providers that adjustments have been made and that the adjustments are valid.

The final key to success is that the profile must be useful. Diamond (2000) states that the profile reports should graphically depict the data, provide the methods used, and provide "background information and literature references" (p. 81). Sandy (1999) describes the problem of cognitive psychology, "that there is a limit to how much information people can process" (p. 15). Providers generally belong to more than one plan. If each plan sends the provider a profile, the information the profile is attempting to convey is lost in the multitude of differing and complex profiles. The profile must

be easily and rapidly understood. The literature references allow the physician to see that the suggested practice is supported by research.

#### *Quality and the Uses of Measures*

Rising healthcare costs, the threat of government intervention, and consumerism have greatly contributed to the concerns about healthcare quality over the last two decades (Lighter & Fair, 2000). Quality control is seen as a way to reduce variation and contain costs, particularly since Deming emphasized the benefits of increasing quality rather than increasing productivity. These benefits included increased productivity, improved quality, increased employee morale, increased interest and motivation in work, decreased absenteeism, decreased employee burnout, decreased cost per good unit, and decreased price charged (Gitlow, Gitlow, Oppenheim, & Oppenheim, 1989). The healthcare industry ~~has moved~~ from one technique for reviewing quality to another in a long line including quality assessment, quality assurance, quality circles, and total quality management.

Continuous quality improvement is the path to contain the costs of healthcare and improve outcomes. Provider profiling is one tool to blaze this path. However, Povar (1995) states that profiling is a matter of perspective. "What good are we trying

to measure and according to whom" (Povar, p. JS61)? Many definitions for quality exist. What is perceived as quality for one person may not be important to another.

General industry, where quality improvement has its roots, describes quality as "the extent to which the customers or users believe the product or service surpasses their needs or expectations" (Gitlow, Gitlow, Oppenheim, & Oppenheim, 1989, p. 3). Tersine describes quality as how well a good or service conforms to a standard (Stamatis, 1996). Juran espouses that quality requires testing among consumers to determine the degree to which a product or service is favored over others of equal grade (Stamatis). All of these definitions focus on the consumer. However, there is often a gulf between what health professionals believe is quality and what the consumer perceives as quality. The consumer's perception is their reality. Rowland and Rowland ~~(1984)~~ state that the measurement of quality requires two pieces. The first involves the technical aspects of care, "the adequacy of diagnostic and therapeutic processes" (Rowland & Rowland, p. 629). The second aspect involves the art-of-care, "the milieu, manner, and behavior of the provider in delivering care to and communicating with the patient" (Rowland & Rowland, p. 629). The requirements for measuring both the technical and art aspects of providing care represents

a more holistic approach to quality measurement. Most quality programs today recognize both of these aspects as evidenced by the measurement of such things as patient satisfaction as well as outcomes.

The National Quality Measure Clearinghouse (NQMC) (Agency for Healthcare Research and Quality (AHRQ), 2003b) identifies three uses for quality measures: quality improvement, accountability, and research. Quality improvement can be both internal and external. Internal quality improvement may include individual provider practice improvement or improvement of internal hospital processes. External quality improvement may include peer-to-peer comparisons to improve a system.

The Webster's New World Dictionary and Thesaurus defines accountability as "to give satisfactory reasons or an explanation" (Accent Software International, 1998). The use of ~~quality~~ quality measures for accountability largely depends upon the audience. The audience may include consumers making purchasing decisions, accrediting bodies, and external agencies. Each audience will likely require different measures. Consumers such as employers, third-party payers, and patients are looking for value. Consumers want the best possible outcome for the best possible price. In this way, consumers may use accountability measures to choose plans or providers or to set financial

rewards (AHRQ, 2003b). The Agency for Healthcare Research and Quality considers consumers to be the focus for accountability measures. Accrediting bodies are generally concerned with outcomes and expect measures to be used for quality improvement (AHRQ), and profilers are accountable for quality improvement actions. Thus, accountability measures can serve a dual purpose if chosen well. External agencies may include corporate oversight, government entities, and various professional boards. These agencies share the goals of consumers and accrediting bodies, value and positive outcomes.

Research is the use of measures to develop new knowledge. This knowledge is not for the formulation of new practices but rather for formulating policy (AHRQ, 2003b). While this particular use requires a more robust sample, longer time frames of data collection, and the melding of data from various databases, the use of measures ~~for research~~ allows policymakers to make change and review the effects of these changes (AHRQ).

While the purpose of this project is to comply with an accreditation standard, the long-term goal is to use the data collected for quality improvement. The use of measures in this project would fall under both the accountability and quality improvement purposes. The NQMC states that the measures for external quality improvement and accountability are quite

similar and that the organization may use the same measures for each function, but there is a greater requirement for reliability and validity when the measure is to be used for accountability to ensure fair comparisons (AHRQ, 2003b).

Profiling is a large task that requires the establishment of measures.

#### *Attributes of Measures*

The JCAHO (1991) defines indicators as measures that monitor care or service. These measures are the process or outcome of care. "Processes are the activities that act on an 'input' from a 'supplier' to produce an 'output' for a customer'" (JCAHO, 1991, p. 21). "Outcomes are products of one or more processes" (JCAHO, 1991, p. 21). The JCAHO states that indicators are related to dimensions of performance. These dimensions include efficacy, effectiveness, efficiency, timeliness, appropriateness, continuity, safety, respect, and caring (JCAHO, 1996). The JCAHO believes that measures do not directly measure quality but direct inquiry into potential issues. Indicators are further divided into the two categories of sentinel-event indicators and aggregate-data indicators (JCAHO, 1996). Sentinel-event indicators are those that compel investigation every time the incident occurs. Aggregate data

indicators measure many events that can either be continuous variables or rates of events.

The NQMC has compiled a list of the desirable attributes of quality measures from a variety of sources that have developed measures including the JCAHO, NCQA, the Foundation for Accountability (FACCT), and the Institute of Medicine (IOM) (AHRQ, 2003a). The broad attribute categories are the importance of the measure, the scientific soundness of the measure, and the feasibility of the measure (AHRQ). These categories are similar to the attributes described by the National Committee for Quality Assurance (NCQA) under their Health Plan Employer Data and Information Set (HEDIS). The HEDIS attributes are described in detail in Appendix A. The NQMC also describes four domains of measurements: access, outcome, patient experience, and process (AHRQ). Each domain focuses on a different type of information. ~~Access~~ describes the timeliness and appropriateness of care (AHRQ). The outcome domain includes measures that evaluate the health state of a patient resulting from care (AHRQ). Patient experience looks at the patient's perspective of health care received and observed (AHRQ). A process measure focuses on the service provided. The NQMC also provides a listing of questions to assist in the

selection of appropriate criteria. See Appendix B for these questions.

Rowland and Rowland (1984) describe the attributes favored by the California Medical Association and the California Hospital Association. These organizations ask the question "Can the criterion RUMBA" (Rowland & Rowland, p. 638)? These attributes are much the same as those of the NQMC and HEDIS but are much simpler. The letter "R" stands for relevant; the measure must specifically relate to the object of study. The letter "U" is for understandable. The measure must be written very precisely to ensure that there is no misunderstanding of the meaning. A criterion must also be measurable, "M." The criterion must include "the time frame of the activity, the frequency of the activity and/or the specific range of test data expected" (Rowland & Rowland, p. 639). The "B" stands for behavioral; this ~~attribute~~ means that a measure must look at a specific group of providers or patients to identify whose behavior must be changed. The "A" means that an attribute must be achievable or realistic given current technology, patient population attributes, and staff capabilities.

The United States is not the only country struggling with issues of quality. The British healthcare system is also replacing qualitative approaches and trust that providers are

doing the right thing with quantitative measures (Pringle, Wilson, & Grol, 2002). Pringle et al. state that too often measures are chosen based on what can be measured rather than defining what is good and developing measures from that definition. The authors propose several desirable attributes of measures: valid, communicable, effective, reliable, objective, available, interpretation, comparable, remediable, and repeatable. It is easy to note that there are many similarities between the attributes described by the various authors and organizations.

Most measures selected for use by such organizations as the NQMC, HEDIS, FACCT, IOM, and JCAHO have undergone considerable scrutiny based on the desirable attributes of a measure before being included in the organizations' programs. Selection of measures from such databases as the NQMC eases the process of ~~developing a profiling program~~. The purpose for using measures is critical to the selection of appropriate measures (AHRQ, 2003a); therefore, a clearly defined goal for profiling efforts allows a profiler to select appropriate measures.

#### *Purpose*

The purpose of this project is to develop a provider profiling tool that meets the intent of the JCAHO standard MS.5.12 to correct a known Type I finding. The long-term intent

of the tool is to enable the analysis of data for quality improvement.

### *Objectives*

1. Meet the intent of the JCAHO standard MS.5.12 through MS.5.12.3 including a comparison to the aggregate.
2. Meet the requirements as laid out in Army Regulation (AR) 40-68, 40-48, and 351-3.
3. Address the new requirements for reappointment review listed on the Department of the Army (DA) 5374 (Appendix C). This form titled "Performance Assessment" is completed by the chief of the department, service, or clinic when the provider requests renewal of privileges.
4. Address the topics listed in the MagCare survey report: blood utilization, mortality/complications, operative/invasive procedures, moderate sedation, medications, and clinical efficacy.

### *Method and Procedures*

The first step in conducting this project, after the initial review of current literature, was to meet with the medical staff to inform them of the requirement to conduct profiling and reassure them that the process would not be punitive in nature. Two objectives of this meeting were to enlist the medical staff's aid in determining appropriate

relevant topics to measure and to request a point of contact (POC) or subject matter expert (SME). The medical staff was not receptive to the idea of profiling but not for the reasons one would normally anticipate.

Because of the history of profiling and its links to reimbursement, medical staffs in general have seen profiling programs as punitive in nature. The medical staff at BACH was not concerned with punitive actions. Their irritation was focused on the fact that the hospital was examining an issue they had addressed two years prior. They were concerned that they were being asked to revisit this topic during a time when military deployment requirements removed medical staff, while the patient load increased due to the influx of additional beneficiaries from the establishment of a new STRYKER Brigade in the BACH catchment area. They had already investigated and developed appropriate measures based on the current research in their areas of practice, and rightfully so, they wanted to know what had happened to their previous work.

The results of their labors and the work of the MCD was a very cumbersome and complicated collection of Excel spreadsheets. A discussion with the staff responsible for maintaining the spreadsheets revealed a number of problems that needed to be solved and a bonus. The bonus is that the

providers were actively engaged in developing a profiling program two years ago. The measures already existed in the current spreadsheets. The providers had investigated and chosen measures that were relevant to their practice and were based on current research. Thus, one of the major goals of this project, developing measures, was no longer necessary. Instead, the focus of the tool creation shifted to developing a database that solves the shortcomings of the previous profiling system.

The staff of the MCD originally described a profiling system utilizing Excel spreadsheets. The reasons that Excel was preferred are twofold. First, the old system is based in Excel, and second, the staff members are all familiar with Excel and are comfortable with entering data into spreadsheets. A meeting with two other organizations regarding how they were developing a profiling system and tools revealed that they were using the program Access due to its robust ability to query the profiling databases. Some of the MCD staff liked this idea and requested that the tool be created in Access for BACH as well. This change from the original project proposal was somewhat unexpected but not impossible. Unfortunately, the lack of personal experience with Access required learning about a new piece of software before even starting the development of the profiling tool. This education was accomplished using a book

titled *Quick Course in Microsoft Access 2002: fast-track training for busy people*. This book enabled a rapid grasp of some of the more common procedures in creating a database in Access. Developing a basic knowledge of Access was a part of the learning progression of this management process. However, the *Quick Course* did not answer all of the questions in creating this complex database, particularly the control query and the creation of complex reports. For these tasks, the *Access 2002 Bible* provided additional information.

#### Expected Findings and Utility of Results

This profiling database meets the objectives listed in the Purpose section of this paper. It should also meet the requirements of the JCAHO. Review of a profile created by Madigan Army Medical Center (MAMC) showed that BACH's database and goals are more sophisticated, detailed, and graphically oriented.

Beyond the survey, the tool should help BACH identify practice variance. Once a determination of variance is discovered, the credentials and medical staffs can investigate to determine why the variance occurred. A variance that cannot be explained due to case-mix or other normal rationale can trigger corrective action and education to the provider. Because reappointment decisions can be made partially on the

basis of profiles, it is important to provide the profiled personnel with ongoing feedback. This feedback provides profiled practitioners with what items are being reviewed and allows them to conduct an ongoing review of their practice and make changes or correct data before their profile comes up for reappointment.

Discussions with several Army Medical Treatment Facilities (MTFs) and military health managers revealed that there is little guidance from higher headquarters, Medical Command (MEDCOM), on how to establish a profiling program. While the new AR 40-68 reflects many changes from past practice, it says little about profiling and lacks detailed instructions on how to complete the new forms in Appendix C. It is hoped that when BACH's profiling database matures, it can be demonstrated to other MTFs and used as a model or exported to other MTFs as a ~~base document~~ base document after being cleaned of personal identification information.

#### Discussion

Review of the existing profiling system demonstrated at least seven problems that needed to be addressed with the creation of a new tool. The problems discovered included 1) many people are responsible for collecting and inputting data, 2) there are more than 20 spreadsheets that require separate

data entry, 3) no one person is responsible for maintaining the spreadsheets and providing the data to the Credentials Committee, 4) there is no method for quickly checking that data have been entered, 5) there is no visual representation of the data, 6) there is no format to provide the Credentials Committee or the providers with a copy of the profiles, and 7) there is no comparison to the aggregate.

The first problem, collecting and inputting data, has no good answer. Each person collects their data as part of their specific job. Further, some of the required data comes from sources that have limited access such as the Military Health System Management Analysis and Reporting Tool (M2). As a result, there will still be many people collecting the data. One could assign a staff member to perform the data input, but this would require at least part of an additional full-time equivalent (FTE). In a budget-constrained environment, it is not fiscally responsible to hire a data entry specialist given that technology has made this process less problematic.

Once all of the data from the past two quarters has been entered into the database, the tool will be placed on a shared drive. Each person responsible for collecting data for the database will be able to directly input their own data. The database will have permissions set so that these data-entry

personnel cannot change existing records; they will only be able to enter new data or change data on records they are entering that session. Existing data can be corrected by going to the database manager.

If the MCD staff decides to make data entry even simpler, they can use web-based forms to allow the providers to complete their peer reviews online if they are comfortable with the technique. This procedure eliminates the need for one of the MCD staff members to input peer review data. Currently, peer reviews are completed on paper, and one of the MCD staff enters the data. Unfortunately, many providers will continue to be more comfortable with handwriting their peer reviews, and someone will still need to enter the data. In the future, these web forms will help the MCD staff enter data in a timely manner because the current person assigned to enter peer review data is a volunteer with limited available hours.

The second problem identified is the large number of spreadsheets requiring data entry. Appendix D displays a screen shot of the file menu for the current profiling tool. Note that some of the spreadsheets in the file menu are for reference purposes containing such information as CPT codes to pull for certain data collection. Each of the subfolders displayed contains multiple spreadsheets, and most of those spreadsheets

require additional data to be entered. Further, each specialty has its own spreadsheet containing worksheets for each provider. As shown in Appendix E, each worksheet requires data entry because of the separate tabs for the providers. The use of Access allows all of the tables to be contained in one database. There is no need to switch back and forth between various separate sheets, which increases the time required and the possibility of error. Appendix F shows the main switchboard of the new database that opens initially when the database is opened. This switchboard provides links to subsequent switchboards in a menu process that leads the staff to the appropriate data entry form. For example, the person entering peer review data wants to enter data for the providers of the Women's Center, BACH's outpatient obstetrics and gynecology clinic, and clicks the appropriate peer review link as shown in Appendix F taking them to the screen shot in Appendix G. Here the person would click on the menu button depicted, taking them to the data entry form displayed in Appendix H. The data entry form allows the person to enter Women's Center Peer Review Data for all providers on a single form rather than switching between multiple worksheets and workbooks. The form utilizes pull-down buttons, default data, and "Limit to List" and "Required" controls to ensure uniformity and completeness of the record.

When data entry personnel are done entering Peer Review data for the Women's Center, they close the form by clicking on the smaller "X" in the upper right corner. The form closes and brings them back to the switchboard, allowing them to continue with other data entry. This menu and form system prevents the staff from having to deal with the Access control system and tables as shown in Appendices I and J. Note that the names of the providers and reviewers in the various appendices have been grayed out to protect their privacy because this is an active database.

Looking at a table can rapidly become disorienting, lending to the possibility of mistyped information. Although you can use pull-down buttons, default data, and "Limit to List" and "Required" controls in the tables, people tend to be more comfortable working on a form with a simple layout. Tables also allow a user to inadvertently skip to other records. With forms, a user can only access another record by using the controls at the bottom of the form as in Appendix H; therefore a person is much less likely to inadvertently change other records.

The third and fourth problems listed above are critical to resolve with this database, particularly since the first problem of multiple staff entering data could not be effectively solved.

Solving the third problem, no one person is responsible for maintaining the spreadsheets and providing the data to the Credentials Committee, is simple. The obvious choice for the database manager is the person assigned to the Credentials Section. This choice makes sense because the profiling database is to provide information to assist in reappointment decisions. As mentioned earlier, reappointment is the process through which providers have their credentials reviewed and renewed. The person who is responsible for credentialing at BACH hosts the Credentials Committee meetings and provides the packets, background information, and the profiles. Unfortunately, this person has no knowledge of operating in Access. A major goal of this project is to simplify the process of managing the database so that it does not cause an increased burden on the database manager. Part of this simplification is to build queries to ~~solve the fourth problem identified - there is no method for~~ quickly checking that data have been entered. The database manager will be instructed on the development and tailoring of queries to check for data. A sample query design is depicted in Appendix K. When the exclamation point is clicked, the query runs, and the data are displayed on the screen. The query results are displayed in a table similar to that of Appendix J.

Problems five, six, and seven are solved with the creation of the profile reports. Problem five is that there is no visual representation of the data. Problem six is that there is no format to provide the Credentials Committee or the providers with a copy of the profiles. Problem seven is that there is no comparison to the aggregate. Because of the lack of knowledge with Access, the database manager exports appropriate data to Excel for graphing, analysis, and trending. Appendix shows a fictional sample provider profile. Displayed is a graphical representation of the data contained in the tables for a group of providers. This type of profile would allow those providers performing reviews on the reappointment packets to compare providers to their peers as determined by specialty. This single report for each provider solves all three problems and is the ultimate goal of the entire project and profiling database. This sample profile will mature as the database develops and display a more sophisticated graphical depiction of the data to include such items as spider charts and control charts.

The final step remaining is to teach the appropriate MCD staff members how to perform basic maintenance on the database, how to run the appropriate queries, and how to print out the profiles in order to report the information to the Credentials Committee. Unfortunately, the credentials manager does not have

sufficient knowledge with Access to make functional changes in the system. However, one of the staff members of the MCD does have this ability and currently collects data for the database. This person can easily assist with functional changes that are necessary over time because of his Access knowledge and his familiarity with the database.

Despite being required for a variety of reasons, provider profiling is a large undertaking for any facility, particularly given the lack of specific direction. Because this project has practical applications, an ongoing issue for management will be the oversight of maintenance of the database. Given the personnel vacancies in the MCD, this can be particularly challenging. Management must also ensure that profiles are being used in accordance with the established goals of the program. Providers will rapidly and openly rebel if they perceive punitive actions result from the profiles. Providers should be kept informed of the results and be allowed to provide input into what is measured. Finally, managers must emphasize the importance of accurate data entry into the systems from which the profilers pull. Inaccurate data are a great failing of many systems and a frequent complaint of providers. If the data put into such systems as the Composite Health Care System (CHCS) are "junk," then the data pulled from it and placed into

the profiling database will be "junk." Many people throughout the facility input data into a variety of systems. Data from these systems are pulled for the profiling database. All staff must be informed of the need for clean, accurate data.

This database is quite new and therefore has a small bank of data. Aggregate comparisons will still be difficult given the small sample size of the specialties at BACH and the limited historical data in the system. Future efforts need to be made at a corporate, MEDCOM, level. Such an endeavor will enable relatively small facilities to use banked data to make more useful comparisons to an aggregate and determine true variance. If you only have two optometrists at your facility, who is the outlier in a given practice?

#### Conclusion

Provider profiling is here to stay. Market forces, government intervention, and accreditation requirements have all made this statement clear. It is up to each organization to determine their needs and goals and ensure that their efforts accomplish their objectives. The future of BACH's database is promising. If the staff wishes to further develop the database, speed data entry, and make its upkeep simpler, they can place it on a shared drive with appropriate permissions or use its web abilities to allow the providers to input data directly into the

database. As with all data collection projects, the utility of the database needs to be evaluated at least every two years to ensure that appropriate standards are met and that the items being measured are useful in the reappointment process. The database must also be kept current with the changes made in clinical practice to maintain its usefulness. Given that many MTFs are struggling with the development of an adequate profiling system, this database may prove useful in developing the groundwork to those facilities.

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## Appendix A

## Desirable Attributes of Measures

| Category  | Attribute                 | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relevance | Meaningful                | The measure should be meaningful to at least one of the audiences for HEDIS: individual consumers, purchasers, or health care systems. Decision-makers should be able to understand the clinical and economic significance of differences in how well systems perform on the measure. The meaningfulness of a measure is enhanced if benchmarks and targets are available.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|           | Health Importance         | The measure should capture as much of the health care system's activities relating to quality as possible. Factors to be considered in evaluating the health importance of a measure include the type of measure (e.g., outcome vs. process), the prevalence of the medical conditions to which the measure applies, and the seriousness of the health outcomes affected.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|           | Financial Importance      | The measure should be related to activities that have high financial costs to health care systems, or purchasers or consumers of health care.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|           | Cost-Effectiveness        | The measure should encourage the use of cost-effectiveness activities and/or discourage the use of activities that have low cost-effectiveness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|           | Strategically Important   | The measure should encourage activities that deserve high priority in terms of using resources most efficiently to maximize the health of their members. In general, measures that have high clinical importance, high financial importance, and are cost-effective will also be of high priority.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|           | Controllability           | There should be actions that health care systems can take to improve their performance on a measure. If the measure is an outcome measure, there should exist one or more processes that can be controlled by the system that have important effects on the outcome. If the measure is a process measure, the process should be substantially under the control of the system, and there should be a strong link between the process and desired outcomes. If the measure is a structural measure, the structural feature should be open to modification by the system, and there should be a strong link between the structure and desired outcomes. The measure's time period should capture the events that have impact on clinical outcomes and reflect the time horizon over which the health care system had control. |
|           | Variance Among Systems    | If the primary purpose of the measure is to differentiate among health care systems, then there should be potentially wide variations across systems with respect to the measure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|           | Potential for Improvement | If the primary purpose of the measure is to support negotiations between health care systems and purchasers, or to stimulate self-improvement by health care systems, there should be substantial room for systems to improve their performance with respect to the measure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Appendix A (continued)

## Desirable Attributes of Measures

| Category                | Measure                       | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scientific<br>Soundness | Clinical                      | There should be evidence documenting the links between the interventions, clinical processes, and/or outcomes addressed by the measure.                                                                                                                                                                                                                                                                                                                 |
|                         | Evidence                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                         | Reproducible                  | The measure should produce the same results when repeated in the same population and setting.                                                                                                                                                                                                                                                                                                                                                           |
|                         | Valid                         | The measure should have face validity, i.e., it should make sense logically, clinically, and, if it focuses on a financially important aspect of care, financially. It should correlate well with other measures of the same aspects of care (construct validity), and capture meaningful aspects of this care (content validity).                                                                                                                      |
|                         | Accurate                      | The measure should accurately measure what is actually happening.                                                                                                                                                                                                                                                                                                                                                                                       |
|                         | Case-Mix                      | Either the measure should not be appreciably affected by any variables that are beyond the health care system's control ("covariates"), or any extraneous                                                                                                                                                                                                                                                                                               |
|                         | Adjustment/Risk               | factors should be known and measurable. If case-mix and/or risk adjustment is required, there should be well-described methods for either controlling through risk stratification or for using validated models for calculating an adjusted result that corrects for the effects of covariates. (In some cases, risk stratification may be preferable to risk adjustment because it will identify quality issues of importance to different subgroups.) |
|                         | Adjustment                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                         | Comparability of Data Sources | The accuracy, reproducibility, risk-adjusted and validity of the measure should not be affected if different systems have to use different data sources for the measure. We recognize that strict comparability may be difficult to obtain with current information systems; however, we hope to minimize any potential bias that might be introduced by different data sets, and to stimulate continuous improvement in information systems.           |
|                         |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Feasibility             | Precisely Specified           | The measure should have clear operational definitions, specifications for data sources and methods for data collection and reporting.                                                                                                                                                                                                                                                                                                                   |
|                         | Reasonable Cost               | The measure should not impose an inappropriate burden on health care systems. Either the measure should be inexpensive to produce, or the cost of data collection and reporting should be justified by improvements in outcomes that result from the act of measurements.                                                                                                                                                                               |
|                         | Confidential                  | The collection of data for the measures should not violate any accepted standards of member confidentiality.                                                                                                                                                                                                                                                                                                                                            |
|                         | Logistically Feasible         | The data required for the measure should be available to the health care system during the time period allowed for data collection. The measure should not be susceptible to cultural or other barriers that might make data collection infeasible. (e.g. inpatient or physician surveys, there may be cultural or personal barriers that lead to biased responses; these would need to be addressed).                                                  |
|                         | Auditable                     | The measure should be auditable, i.e., it should not be susceptible to manipulation or "gaming" that would be undetectable in an audit. Methods to verify retrospectively that reported results accurately portray delivered care should be suggested.                                                                                                                                                                                                  |
|                         |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                         |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

Note. Adapted from *Desirable traits of HEDIS Measures*. NCQA (January, 1998). Retrieved May 1, 2003, from <http://www.ncqa.org/Programs/HEDIS/desirable%20attributes.html>

## Appendix B

## Questions to Ask in the Selection of Measures

1. Does the measure possess the desirable attributes as outlined by the conceptual areas of importance, scientific soundness, and feasibility of a measure?
2. What data sources are available? What is the possibility and expense of collecting additional data?
3. Does the measure apply to the desired setting of care and to the providers that give care that you wish to assess?
4. Is the measure selected from the appropriate domain of measurement that will produce the type of data appropriate for use?
5. Have considerations been made for comparisons?

*Note.* Adapted from *Selecting Measures*. AHRQ (n.d.). Retrieved October 2, 2003, from [http://www.qualitymeasures.ahrq.gov/resources/measure\\_selection.aspx](http://www.qualitymeasures.ahrq.gov/resources/measure_selection.aspx).

## Appendix C

## DA Form 5374 (Test)

| PERFORMANCE ASSESSMENT<br>(For use of this form, see AR 40-68; the proponent agency is OTSG.)                                                                                                                                                                                                                     |                  |                                                     |                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------|----------------------------------------------|
| 1. NAME OF PROVIDER (Last, First, MI)                                                                                                                                                                                                                                                                             | 2. RANK/GRADE    | 3. SSAN                                             | 4. PERIOD OF EVALUATION (myrmmdd)<br>FROM TO |
| 5. DEPARTMENT/SERVICE                                                                                                                                                                                                                                                                                             | 6. SPECIALTY/AOC | 7. FACILITY (Name and Address: City/State/ZIP Code) |                                              |
| 8. PURPOSE OF EVALUATION<br><input type="checkbox"/> Initial privileges <input type="checkbox"/> Renewal of privileges <input type="checkbox"/> Modification of privileges <input type="checkbox"/> Reassignment/separation <input type="checkbox"/> Adverse action                                               |                  |                                                     |                                              |
| 9. ACTIVITY DATA (Indicate average # per month, as applicable.) Percentage of time in providing patient care ____%<br>( ) Ambulatory care visits ( ) Emergency care visits ( ) Admissions ( ) Major diagnostic procedures<br>( ) Radiographic studies ( ) Surgical procedures ( ) Deliveries ( ) Other (Specify): |                  |                                                     |                                              |
| 10. IS THERE ANY ASPECT OF THE PROVIDER'S HEALTH STATUS WHICH THE CREDENTIALS COMMITTEE SHOULD CONSIDER IN AWARDED PRIVILEGES? <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain)                                                                                                                 |                  |                                                     |                                              |
| 7. MEDICAL FACILITY                                                                                                                                                                                                                                                                                               |                  |                                                     |                                              |
| 11. IS THE PROVIDER'S ATTENDANCE AND PARTICIPATION IN PROFESSIONAL ACTIVITIES AND COMMITTEE MEETINGS ACCEPTABLE?<br><input type="checkbox"/> YES <input type="checkbox"/> NO (Explain)                                                                                                                            |                  |                                                     |                                              |
| 12. ARE THE PROVIDER'S INTERPERSONAL SKILLS WITH BOTH PATIENTS AND STAFF ACCEPTABLE?<br><input type="checkbox"/> YES <input type="checkbox"/> NO (Explain)                                                                                                                                                        |                  |                                                     |                                              |
| 13. CLINICAL PERFORMANCE PROFILE (Provide quantitative data and explain patterns of care as demonstrated through the following functions.)                                                                                                                                                                        |                  |                                                     |                                              |
| a. ANTIBIOTIC USAGE REVIEW                                                                                                                                                                                                                                                                                        |                  |                                                     |                                              |
| b. BLOOD PRODUCTS UTILIZATION REVIEW                                                                                                                                                                                                                                                                              |                  |                                                     |                                              |
| c. SURGICAL CASE REVIEW                                                                                                                                                                                                                                                                                           |                  |                                                     |                                              |
| d. RECORDS REVIEW                                                                                                                                                                                                                                                                                                 |                  |                                                     |                                              |
| e. PHARMACY AND THERAPEUTICS REVIEW                                                                                                                                                                                                                                                                               |                  |                                                     |                                              |
| f. MORBIDITY/MORTALITY REVIEW                                                                                                                                                                                                                                                                                     |                  |                                                     |                                              |
| g. INFECTION CONTROL                                                                                                                                                                                                                                                                                              |                  |                                                     |                                              |
| h. UTILIZATION REVIEW                                                                                                                                                                                                                                                                                             |                  |                                                     |                                              |

## Appendix C (continued)

DA Form 5374 (Test)

|                                                                                                                                                                                                                                                                                                                                                           |                                    |                             |                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------------------|------------------------------------------------------------------------------------------|
| i. ANCILLARY SERVICES UTILIZATION                                                                                                                                                                                                                                                                                                                         |                                    |                             |                                                                                          |
| j. OCCURRENCE SCREENING                                                                                                                                                                                                                                                                                                                                   |                                    |                             |                                                                                          |
| k. RISK MANAGEMENT                                                                                                                                                                                                                                                                                                                                        |                                    |                             |                                                                                          |
| l. DEPARTMENT/SERVICE SPECIFIC REVIEWS                                                                                                                                                                                                                                                                                                                    |                                    |                             |                                                                                          |
| 14. REMARKS                                                                                                                                                                                                                                                                                                                                               |                                    |                             |                                                                                          |
| 15. PERFORMANCE EVALUATION. The following evaluation is based on this provider's demonstrated clinical performance compared to that which can reasonably be expected of a provider with his/her educational background, level of training, and experience. Check (X) the appropriate column. Any unacceptable rating must be explained below in block 16. |                                    |                             |                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                           | ACCEPTABLE                         | UN-<br>ACCEPTABLE           | NOT<br>APPLICABLE                                                                        |
| a. Basic professional knowledge                                                                                                                                                                                                                                                                                                                           |                                    |                             |                                                                                          |
| b. Professional judgement                                                                                                                                                                                                                                                                                                                                 |                                    |                             |                                                                                          |
| c. Professional competence                                                                                                                                                                                                                                                                                                                                |                                    |                             |                                                                                          |
| d. Patient management skill                                                                                                                                                                                                                                                                                                                               |                                    |                             |                                                                                          |
| (1) Outpatient                                                                                                                                                                                                                                                                                                                                            |                                    |                             |                                                                                          |
| (2) Inpatient                                                                                                                                                                                                                                                                                                                                             |                                    |                             |                                                                                          |
| (3) Operating room                                                                                                                                                                                                                                                                                                                                        |                                    |                             |                                                                                          |
| e. Written communication skills                                                                                                                                                                                                                                                                                                                           |                                    |                             |                                                                                          |
| f. Oral communication skills                                                                                                                                                                                                                                                                                                                              |                                    |                             |                                                                                          |
| g. Relationship with colleagues                                                                                                                                                                                                                                                                                                                           |                                    |                             |                                                                                          |
| h. Cooperation with hospital/clinic personnel                                                                                                                                                                                                                                                                                                             |                                    |                             |                                                                                          |
| i. Appearance                                                                                                                                                                                                                                                                                                                                             |                                    |                             |                                                                                          |
| j. Emotional stability                                                                                                                                                                                                                                                                                                                                    |                                    |                             |                                                                                          |
| k. Sense of responsibility                                                                                                                                                                                                                                                                                                                                |                                    |                             |                                                                                          |
| l. Professional conduct                                                                                                                                                                                                                                                                                                                                   |                                    |                             |                                                                                          |
| m. Ethical conduct                                                                                                                                                                                                                                                                                                                                        |                                    |                             |                                                                                          |
| n. Leadership capability                                                                                                                                                                                                                                                                                                                                  |                                    |                             |                                                                                          |
| o. Quality and timeliness of medical/dental record documentation                                                                                                                                                                                                                                                                                          |                                    |                             |                                                                                          |
| 16. COMMENTS                                                                                                                                                                                                                                                                                                                                              |                                    |                             |                                                                                          |
| 17a. DATE (YYYYMMDD)                                                                                                                                                                                                                                                                                                                                      | 17b. NAME OF EVALUATOR/GRADE/TITLE | 17c. SIGNATURE OF EVALUATOR | 17d. REVIEWED<br>BY PROVIDER<br><input type="checkbox"/> YES <input type="checkbox"/> NO |

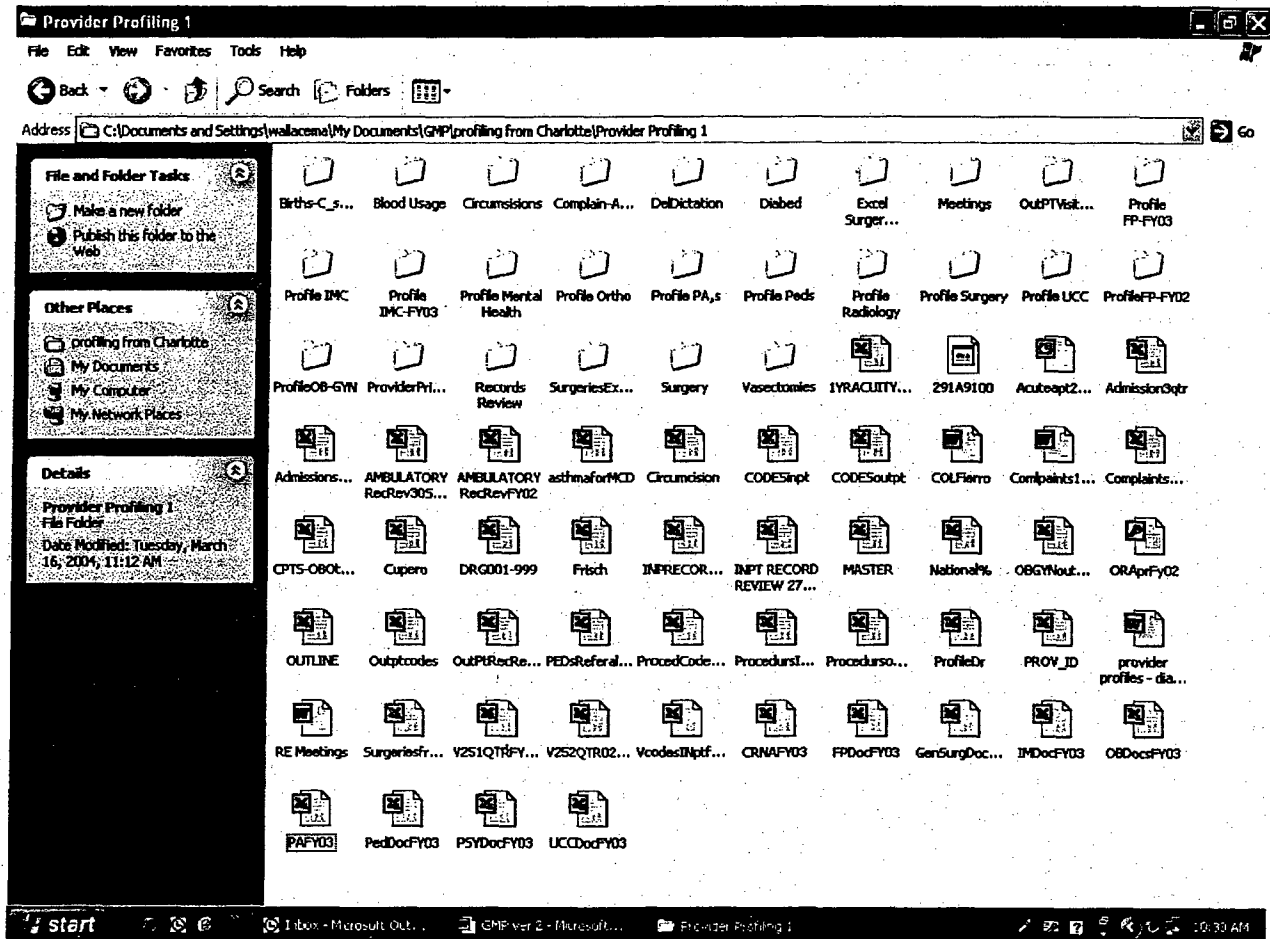
DA Form 5374, DATE?

PREVIOUS EDITIONS ARE OBSOLETE  
EXEMPT FROM DISCOVERY UNDER 10 U.S.C. 1102

Page 2 of 2 Pages

## Appendix D

## Existing Tool File Menu



## Appendix E

## Example of Existing Spreadsheet

Microsoft Excel - FPDccFY03

File Edit View Insert Format Tools Data Window Help

File Edit View Insert Format Tools Data Window Help

C30 8

|    | A                                                                 | B       | C       | D       | E       | F       | G       | H       | I       | J       | K       | L       | M       |
|----|-------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1  | NAME: MAJ Nobody Smith                                            |         |         |         |         |         |         |         |         |         |         |         |         |
| 2  | First Credential Date: Sep 02 - Sep 03                            |         |         |         |         |         |         |         |         |         |         |         |         |
| 3  | Current Credential Period: 15 Sep 03 - 15 Sep 05                  | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | FY 02   | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | FY 03   |         |         |
| 4  | MEETINGS (Tammy)                                                  | FY02    | FY02    | FY02    | FY02    | Total   | FY03    | FY03    | FY03    | FY03    | Total   |         |         |
| 5  | PRODUCT LINE meets _____ of times quarterly                       |         |         |         |         |         |         |         |         |         |         |         |         |
| 6  | NUMBER of times meeting was attended                              |         |         |         |         |         |         |         |         |         |         |         |         |
| 7  | JOINT STAFF meets _____ of times quarterly                        |         |         |         |         |         |         |         |         |         |         |         |         |
| 8  | NUMBER of times meeting was attended                              |         |         |         |         |         |         |         |         |         |         |         |         |
| 9  | MED STAFF meets _____ of times quarterly                          |         |         |         |         |         |         |         |         |         |         |         |         |
| 10 | NUMBER of times meeting was attended                              |         |         |         |         |         |         |         |         |         |         |         |         |
| 11 | CREDENTIALS meets _____ of times quarterly                        |         |         |         |         |         |         |         |         |         |         |         |         |
| 12 | NUMBER of times meeting was attended                              |         |         |         |         |         |         |         |         |         |         |         |         |
| 13 | RISK meets _____ of times quarterly                               |         |         |         |         |         |         |         |         |         |         |         |         |
| 14 | NUMBER of times meeting was attended                              |         |         |         |         |         |         |         |         |         |         |         |         |
| 15 | QI meets _____ of times quarterly                                 |         |         |         |         |         |         |         |         |         |         |         |         |
| 16 | NUMBER of times meeting was attended                              |         |         |         |         |         |         |         |         |         |         |         |         |
| 17 | Births Occurrence Screening (Carolyn)                             |         |         |         |         |         |         |         |         |         |         |         |         |
| 18 | # of Births (do not input data in these cells)                    | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| 19 | # Records reviewed due to occurrence                              |         |         |         |         |         |         |         |         |         |         |         |         |
| 20 | # Met criteria after review                                       |         |         |         |         |         |         |         |         |         |         |         |         |
| 21 | # Not Met after review                                            |         |         |         |         |         |         |         |         |         |         |         |         |
| 22 | Unattended Births                                                 |         |         |         |         |         |         |         |         |         |         |         |         |
| 23 | Rate of unattended births (do not input data in these cells)      | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 24 | Internal Benchmark -- <1%                                         |         |         |         |         |         |         |         |         |         |         |         |         |
| 25 | Clinical Practice Guidelines (Carolyn)                            |         |         |         |         |         |         |         |         |         |         |         |         |
| 26 | Diabetes                                                          |         |         |         |         |         |         |         |         |         |         |         |         |
| 27 | # of Diabetics in panel                                           |         |         |         |         |         |         |         |         |         |         |         |         |
| 28 | Hemoglobin H1C Ordered                                            |         |         |         |         |         |         |         |         |         |         |         |         |
| 29 | Enpanelled patients average HgbA1C                                |         |         |         |         |         |         |         |         |         |         |         |         |
| 30 | National Benchmark - HgbA1C <8                                    | 8       | 8       | 8       | 8       | 8       | 8       | 8       | 8       | 8       | 8       | 8       | 8       |
| 31 | Outpatient Procedures                                             |         |         |         |         |         |         |         |         |         |         |         |         |
|    | Smith / Jones / Thomas / Peters / Rosa / Wilson / Roberts / Lewis |         |         |         |         |         |         |         |         |         |         |         |         |

Listing of fictional Family Practice Providers. Each tab requires data entry.

Ready

start GMP ver 5 - Microsoft... Profiling Docs Microsoft Excel - FPD... 7:24 PM

## Appendix F

## New Profiling Tool Main Menu

Microsoft Access [Main Switchboard]

File Edit View Insert Format Records Tools Window Help

System 10

Type a question for help

**Provider Profiling Database**

- ☒ Enter New Providers
- ☐ Edit Current Providers
- ☐ Enter Peer Review Data
- ☐ Enter Peer Review Data for Other Services
- ☐ Enter Meetings, Utilization and Patient Satisfaction Data
- ☐ Enter Pharmacy Blood, Infection Control and Mortality Data

Click here to enter Women's Center Peer Review Data

Form View FLTR NUM

start IIS - Microsoft O... GMP ver 2 - Microso... PP ver 2 - Database... Main Switchboard 10:54 AM

## Appendix G

## Peer Review Data Switchboard

Microsoft Access [Peer Review Data]

File Edit View Insert Format Records Tools Window Help

Type a question for help

System 10

**Provider Profiling Database**

- ☒ Enter Family Practice Peer Review Data
- ☐ Enter Pediatric Peer Review Data
- ☐ Enter ER Peer Review Data
- ☐ Enter APV and OBS Peer Review Data
- ☒ Enter Women's Center Peer Review Data
- ☐ Go Back to Main Switchboard

Click here to enter Women's Center Peer Review Data

Form View FLTR NUM

start 1 box - Microsoft ... GMP ver 2 - Microso... F1 ver 2.1 Database Peer Review Data

Appendix H

Women's Center Peer Review Data Entry Form

Microsoft Access [Family Practice Peer Review]

File Edit View Insert Format Records Tools Window Help

Times New Roman 10

Type a question for help

Women's Center Peer Review Data Entry Form

Provider: [ ]

Fiscal Year: [ 0 ]

Quarter: [ 0 ]

Month: [ ]

Record Number: [ 0 ]

OB or GYN Record: [ ]

Reviewer: [ ]

Chief Complaint: [ Yes ]

History Adequate: [ Yes ]

Physical Exam Adequate: [ Yes ]

Test Results Documented: [ Yes ]

Diagnostic Plan Appropriate: [ Yes ]

Diagnostic Appropriate: [ Yes ]

Treatment Plan Appropriate: [ Yes ]

Patient Education Documented: [ Yes ]

Instructions legible, in layman's terms: [ Yes ]

Follow-up Plan Documented: [ Yes ]

Overall Score: [ ]

Click on the small "X" to close.

Record Controls

Record: 14 of 1

Form View

start

Task - Main...

GNP ver 2...

PP ver 2: Dat...

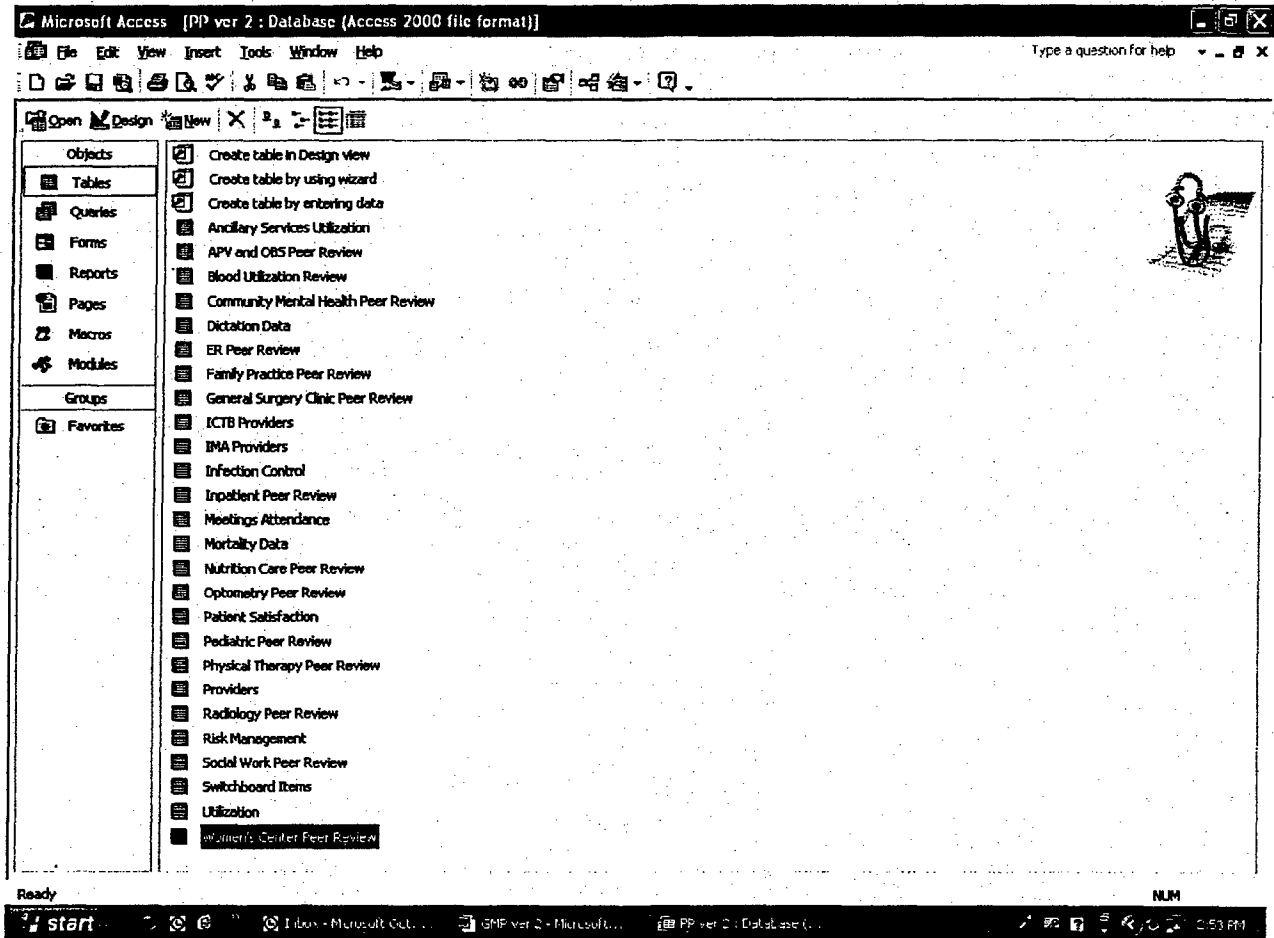
Peer Review ...

Family Practi...

2:28 PM

## Appendix I

## Access Control System



## Women's Center Peer Review Data Table

[illegible]

# Appendix K

## Example of Query for Complete Data

Microsoft Access [testing fy and qtr query #2 : Select Query]

File Edit View Insert Query Tools Window Help

Providers

- SSN
- Rank
- Last Name
- First Name

Blood Util...

- Provider
- Fiscal Year
- Quarter
- Month

Utilization

- Provider
- Fiscal Year
- Quarter
- Month

Clicking the exclamation point runs query

| Field:    | Specialty                           | Last Name                           | Fiscal Year                   | Quarter                            | Fiscal Year              | Quarter                  |
|-----------|-------------------------------------|-------------------------------------|-------------------------------|------------------------------------|--------------------------|--------------------------|
| Table:    | Providers                           | Providers                           | Blood Utilization Review      | Blood Utilization Review           | Utilization              | Utilization              |
| Sort:     |                                     | Ascending                           |                               |                                    |                          |                          |
| Show:     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/>           | <input type="checkbox"/> | <input type="checkbox"/> |
| Criteria: | "OB/GYN" Or "CHN" Or "NP"           |                                     | [What FY are you looking at?] | [What Quarter are you looking at?] | [What FY]                | [What qtr]               |

Ready

start GMP ver 5 - Microsoft... Copy of PP ver 3: D... Man SwtJocard testing fy and qtr qu... 6:50 PM

# Appendix L

## Sample Portion of a Fictional Provider Profile

