Publisher and Editor-in-Chief: Punyamurtula Kishore, MD

Volume 2, Issue 10 October, 2005
National Library of Addictions

Alan Fisch, MD

Quality Improvement in Substance Abuse Treatment

England has tracked hospital mortality rates since the 1600's. In the mid-1800's, Florence Nightingale noted a huge difference in mortality rates between the London hospitals (as high as 92%) and the smaller rural hospitals (12-15%). She also noted that the inner-city hospital patients tended to be sicker which led to the concept of risk-adjustment based on severity. However, she was able to take her observations to the next level with some simple measures that improved the outcomes: e.g. improved sanitation, less crowding, and locating hospitals further from the crowded urban areas. In the mid-1900's, as more therapeutic options became available, the need arose to determine the best option among a myriad of therapies, leading to the advent of the controlled randomized trial and tests of effectiveness.

Only a few short years ago, the medical profession had the sole responsibility as a social mandate to judge and manage quality of care. Today, that mandate has become more complex (and confusing), as the number of "stakeholders" has increased, and the locus of authority and responsibility has blurred. Now we have to take into account: health insurance, corporate payers, health system administrators, health care consumers, and many others. Each has a somewhat different concept of "quality" and different language to describe or define "best practice." So, how do we make sense of the concept of "quality" in our work; and how do we know if we are on the road of "continuous improvement"?

Twenty years ago, Avedis Donabedian, at the University of Michigan School of Public Health, conceptualized a useful triad: structure, process, and outcome. Historically, patients with an adverse health state were studied before and after treatment: this produced outcome measures. When a population of these patients is studied as a group, this is the Public Health model. An example is: what proportion of detoxed patients are sober after one month, six months, or twelve months? When you measure that proportion of an identified patient population that received a clinical intervention consistent with <u>evidence-based</u> recommendations, this is a process measure. An example is: what proportion of IV drug users is tested for HIV? Or measuring the degree to which the staff or a certain medication regimen (including doses) was successful in alleviating detox symptoms. These are examples of the questions to ask, the aspect of the treatment program that you wish to focus on, in order to improve the quality of the program, and thereby improve the outcomes.

Hippocrates, the Father of Medicine, admonished "non nocere" – "First, Do No Harm." Florence Nightingale studied outcomes to improve treatment. Donabedian's insight gave us the need to study the three realms: structure, process, as well as outcomes. Richard Hermann, MD, public health researcher at Harvard and Tufts, took it a step further, by integrating the elements of quality in a systems framework. "After decades of debate over process versus outcome measurement, it is now becoming apparent that improving quality of care requires both..." Since both methods of assessment have strengths and weaknesses, they may turn out to be <u>most useful</u> when combined. Quality issues have for a long time now, been incorporated into general health care; quality concerns are just at the beginning, in the field of Substance Abuse treatment.

<u>Case Study</u>: XYZ Inc. a non-profit mental health center with 5 satellites. The Department of Mental Health issued a regulation to routinely assess and improve quality of care across the system. The chief medical officer of XYZ had observed over a long period that outcomes appeared quite different for schizophrenia among the five centers. He wondered whether some centers were less likely to use state-of-the-art practices to prevent non-compliance and relapse, but he had no data to support his impressions. He resolved to make care for schizophrenia the focus of a quality assessment and improvement initiative. His first question was how to measure the quality of care for schizophrenia in the centers. His second and third questions, and possibly fourth question, were to determine what aspects of the intake/treatment/discharge process might be amenable to outcomes measures, what processes could be studied for their effectiveness or lack of effectiveness, and what aspects of the structure supported the treatment, staff and patients, and what, if any, aspects of the structure had a negative effect. After his decision of <u>what</u> to study, it was hoped that the answers to his questions would guide him and the staffs of all the centers in where improvement could be obtained.

All of us in the field are well aware that this issue is easier said than done. There are few markers or benchmarks that help us in organizing quality improvements in our work.

Process measures can help clinicians determine where to focus quality improvement efforts particularly when there is a significant variance between actual practices and standards of care. Decreased symptoms, improved functioning and improved quality of life are some of the hallmarks of outcomes assessment. It can be measured from the patient and/or the clinician perspective; also, the employer, the criminal justice system, the health plan and the family. Outcomes measurement is a powerful assessor of the aggregate impact of all components of care while process measurement provides information about specific interventions. However, outcomes measurement has its limitations in that poor outcomes may result from many factors totally unrelated to quality of care: severity of illness, co-morbid conditions, social instabilities, etc.

So to return to Donabedian's framework for quality of care:

1. Structural characteristics of a health care organization, such as the number of clinicians, their training, and years of experience and the availability of specialists and recovering addict counselors.
2. Processes of care: these refer to the interactions between the healthcare system (staff, doctors, hospital, insurance companies) and the patient, both technical and interpersonal. Quality improvement activities seek to make changes in the structure and process components of care with the goal of positively influencing outcomes.
3. Outcomes of care: reflect the results of treatment: the change in the patient's symptoms or functioning, their satisfaction and the cost-effectiveness of treatment.

Some quality and outcomes tips (evidence-based)

1. Patients who stay drug-free in treatment longer than three months are 3-5 times more likely to have favorable follow-up outcomes on drug use and criminality measures.

2. Higher program participation in the form of counseling sessions and self-help program participation lead to positive behavioral changes and better outcomes.
3. Family involvement and less family dysfunction leads to better outcomes.
4. Drinking history before age 15 leads to a more difficult course.
5. Coercive treatment shows a slight increase in treatment outcomes in special populations.
6. Access to treatment "when the iron is hot" leads to better outcomes.

In the next issue of Fax Sheet, we will examine one effort to define quality improvement in adolescent substance abuse programs by utilizing the 9 key elements of Model Programs.