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Cognition: The Basis for Competency

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BODY AND MIND

Cognition: The Basis for Competency

With increasing use of self-care come concerns about when and how long the patient is capable of caring for him- or herself. Both patients and care providers must recognize categories of cognitive impairment, evaluate the degree of competency for self-care, and seek appropriate care therapies.

By Richard E. Finlayson

A General Framework

The self-care movement in health is growing. Emphasis upon a healthy diet, exercise, and stress management all have an important role to play in staying healthy. A good share of the self-care literature, advertising, and goods are directed at the aged. For the most part this has been a positive trend, but at its fringes there are some worthless and even dangerous therapies and health strategies. It is desirable that all persons try to understand the nature of the illnesses they have at a given time or are at risk of developing. This is true of both acute and chronic illness. In the case of most chronic disorders, such as diabetes mellitus, most of the day-to-day care is in the hands of the patient. Certain events may arise, however, in

which the physician may recommend diagnostic or therapeutic procedures.

There was a time in our culture when the advice "doctor knows best" was probably heeded by most persons under the care of physicians. We now live in a much different time, an information-oriented society in which autonomy and self-determination are highly prized. Most people expect to be informed by their medical care providers as to the nature of their illness, the studies used to evaluate these illnesses, and the nature of the treatments recommended. Risk, as well as benefit, are of paramount importance and become the essential elements of the patient/doctor agreement to treatment.

At the risk of bringing the proverbial coals to Newcastle, I will briefly discuss some concepts well known to our readers. The concept of informed consent is based upon the person so informed being mentally competent. Competency may refer to the ability to perform a number of life functions; e.g., to contract, sign a will, vote, and make

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medical decisions on one's own behalf. According to Robert I. Simon, M.D., Director of the Program of Psychiatry and Law at Georgetown University School of Medicine:

An adult patient will be considered legally competent unless adjudicated incompetent or temporarily incapacitated due to a medical emergency. Incapacity to make health-care decisions does not prevent treatment. It merely requires the clinician to obtain substitute consent. Legal competence is very narrowly defined in terms of cognitive capacity. This definition derives largely from the laws governing transactions. Clinical conditions that produce affective incompetence or denial of illness are not usually recognized by the law unless they significantly diminish a patient's cognitive capacity.¹

Dr. Simon's instructive comments provide a good starting point for the focus of my column, which is cognition. A definition of cognition may be helpful to our readers. Cummings and Benson have offered a simple yet inclusive definition of this function of the mind: "Cognition is the ability to manipulate knowledge."² This ability includes memory, being oriented to one's surroundings, exercising social judgment, and other functions (see Table 1). As one can readily discern, cognition is necessary to survival and meaningful life. The ability to manipulate new information is particularly dependent upon normal memory. For example, the informed signing of a contract today may

Table 1. Cognitive Functions

1. Attention (mental concentration)
2. Memory
3. Intelligence
4. Language
5. Higher-order functions such as complex decision making and judgment
6. Orientation to person, place and time

be dependent upon what an individual remembers from a briefing that was held days or even hours earlier. A demented individual may not recall what was said about the contract hours earlier yet be able to recall her birth date, the street address of the home she lived in as a child, or her social security number. As a general rule, "old" information is retained longer than "new" information as individuals age and perhaps become susceptible to various cognitive disorders.

Categories of Cognitive Impairment in Late Life

It is common in our western culture to comment upon or even joke about memory difficulty. One may hear, "I'd better get checked for Alzheimer's." In fact, forgetting is a part of everyday life. How often have we said or heard "Oh, I just remembered that I have a dentist appointment today" or "Honey, I forgot to return these videos to the rental store; would you mind dropping them off for me on your way to the office"? In most cases the problem is not memory per se, but being distracted or having to deal with too much information at a given time.

Modern life is characterized by what has been termed "information overload." The Internet is often used as an example of an information source that can be overwhelming. Being selective and prioritizing is necessary in this information age.

Emotions may also lead to what seem like memory problems. Sometimes we "forget" to do something because we did not want to do it in the first place. Procrastination is a common result. An individual may also "forget" as an expression of his anger or aggression. "Foot dragging" may result. This is known as "passive-aggressive behavior." An emotional disturbance of clinical proportions can have a profound effect upon memory and other cognitive functions and will be discussed later in this column.

Crook and associates described a condition they termed "age associated memory impairment."³ They concluded that some aspects of memory do change with age even in the absence of a dementia. The most notable feature of this type of forgetting is slowness of recall, which does not typically result in serious problems in a person's life. An example of forgetting that would be serious, and thus not likely to be thought of as "age associated memory impairment," is repeated failures to remember to pay a telephone bill, resulting in the telephone being disconnected by the telephone company. *Repetition of forgetting* important things is a warning sign of more serious trouble. Those of us who are middle aged or beyond, or who do not have signs of dementia,

must learn to be patient with our brains. Very often, the memory of an event will return if we just give it time, usually minutes or hours.

Another category of cognitive dysfunction is sometimes referred to as "reversible dementia." Various medical conditions, including drug and alcohol abuse, may interfere with cognition. Some physicians argue that we should not use the term *dementia* to describe cognitive problems associated with these conditions, but restrict it to the progressive disorders such as Alzheimer's. I thought it important, however, that our readers be aware of the classification. A listing of the more common of such disorders is provided in Table 2. Impairment of cognition, especially decreased mental concentration and recall, are particularly common in older persons who use prescription drugs or too much alcohol. Disorientation to place, person, and time may occur. The degree of impairment tends to fluctuate with the blood level of the drug. Tranquilizers, sedatives, pain killers, and antidepressants are in common usage and all have the potential for interfering with a person's cognitive ability. Assessment of competency in individuals using drugs that affect cognition can be problematic because at a given time the individual may seem incompetent yet hours later may pass a competency test. To some extent this is also true of irreversible dementia, especially in the early stages of the disorder. Repeated assessments tend to minimize the problem.

Table 2. Examples of Potentially Reversible Dementia

1. Toxic agents
 - alcohol
 - drugs
 - heavy metals
 - carbon monoxide
2. Nutritional problems
 - vitamin deficiency (thiamin, folic acid, niacin)
3. Disturbances of metabolism
 - diabetes mellitus
 - kidney and liver failure
4. Infections
 - viruses
 - AIDS
 - equine encephalitis
 - bacterial
 - tuberculosis
5. Diseases of blood vessels
 - high blood pressure
 - coronary artery disease
 - stroke
 - connective tissue diseases
6. Depression ("pseudodementia")
7. Brain tumor
8. Head injury
 - blood clots on surface of brain

Chronic Progressive Dementia

It is noteworthy that mental disorders, as diagnosed by standard diagnostic criteria, decrease in frequency in late life with one exception, cognitive disorders. The chief cognitive disorder is dementia; however, there are different causes of dementia. The most common type of dementia is Alzheimer's dementia. It accounts for about two-thirds of the total cases of dementia. A detailed discussion of Alzheimer's is beyond the scope

of this column; however, certain key features of the disease should be mentioned. Its incidence increases with age and it tends to run in families. The onset is typically insidious and ultimately fatal. The time from diagnosis to death averages about seven years. Memory impairment is the key feature, although other mental functions deteriorate as well.

One issue that may complicate the determination of competency is the language disorder associated with Alzheimer's. Individuals so afflicted have difficulty finding words to express their thoughts and feelings. In an attempt to communicate they may substitute less relevant words, resulting in speech that is difficult, if not impossible, to comprehend, to the point of being "garbled." At a purely intellectual level the individuals may know what is demanded of them. Fortunately, nonverbal communication can often meet the standard of law in determining competency, and the fulfillment of social obligations, until the severity of the disorder precludes either.

The next most common dementia is vascular dementia. Vascular dementia tends to present itself in two ways, and sometimes by a combination of the two. A major stroke may cause impairment of many functions such as mobility, speech, swallowing, and cognition. The area of the brain damaged determines the type of symptoms and signs. Cognition, if affected, often remains stable for months and even years after a stroke, providing that other strokes do not

occur. The second manner of presentation is the accumulation of what are sometimes referred to as "small strokes." Clinicians use the term "small vessel disease" to describe the underlying problem.

There are many other dementias such as Parkinson's disease, Huntington's disease, dementia associated with alcoholism, and many more. It should be noted that some cases of alcoholic dementia are reversible, others are not.

A discussion on the topic of cognitive functioning would be incomplete if the role of emotions were excluded. If each of us were to be introspective, and honest, we would know that many of the decisions we make in life are not as purely rational as we imagine them to be. Emotion has an influence, for example, upon much of what we perceive, conclude, and act upon. I offer a clinical case history to illustrate the impact of emotion on the rational processes of an elderly person:

A 63-year-old farmer was brought to the family doctor by his family because his behavior had become "irrational." In the late spring he began to lose interest in his usual activities. In short he wasn't preparing for spring planting. He slept fitfully and his appetite was poor. His thinking had become very "negative." When members of his family inquired as to what might be bothering him, he replied, "we don't have enough money to buy seed, fertilizer and gasoline and the bank

won't lend us any money. Besides there will be a bad drought this year, so what's the use." His family knew that there was no basis for this thinking. They became alarmed when it was learned that the father had placed an ad in the local newspaper announcing an auction to sell all the equipment. This had to be stopped.

It is doubtful that this man would pass a competency test directed at his ability to manage his financial affairs. The narrow definition of competence being based on cognitive capacity is not strictly adhered to by the law. As stated by Robert Simon: "Clinical conditions that produce affective incompetence or denial of illness are not usually recognized by the law unless they significantly diminish a patient's cognitive capacity."⁴ The farmer's delusions, rather than his underlying cognitive ability, would be the limiting factor. The psychiatric diagnosis in this case would likely be "major depression associated with delusions of poverty." Somehow his distressed emotions had led to a major distortion of his cognition. Often the content of delusions has its roots in past and/or current experience. In this case we might rightly speculate that having grown up on a farm, and later owning and working the farm, this man had been exposed many times to dealing with lack of money for planting supplies, lack of moisture, and low commodity prices. These anxieties, usually timed for late winter or

early spring, would be tailor-made for this episode of depression and may have played a role in its development. It is quite possible that testing of his intellectual functions would indicate that he was normal except perhaps for difficulty with mental concentration and mildly disturbed memory. This has been referred to as *pseudodementia*.

It is well known that the presence of a mental illness does not necessarily result in diminished competency in a particular area, e.g., consent to a medical procedure. Even a psychotic person may pass a competency assessment. In subsequent columns I plan to use more case histories to illustrate issues of competency in elderly persons, as seen from the point of view of the clinician.

Endnotes

1. Robert I. Simon, *PSYCHIATRY AND LAW FOR CLINICIANS* 64 (2d ed. 1998).
2. Jeffrey L. Cummins & David F. Benson, *A CLINICAL APPROACH* 33 (2d ed. 1992).
3. T. I. Crook et al., *Age Associated Memory Impairment; Proposed Diagnostic Criteria and Measures of Clinical Change: Report of a National Institute of Mental Health Work Group*, 2 *DEVELOPMENTAL NEUROPSYCHOLOGY* 261 (1986).
4. Simon, *supra* note 1, at 64.