

## Medical-Legal Applications Of PICA Results

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This meeting marks seven years since I first described the distinction between clinical aphasiology and neurological aphasiology and pointed out that the clinical aphasiologist generally has responsibility for the long-term, rehabilitative conduct of cases of aphasia. Surprisingly, the clinical aphasiologist has been excluded from many of the medical-legal decisions about their patients even though these decisions involve long-term concerns. It has been traditional for the courts to ask the neurologist, (Critchley, 1961) the psychiatrist, (Davidson, 1952) or the psychologist (Leibensen, 1964) for answers to questions about the competency or levels of impairment of a brain damaged patient, while the clinical aphasiologist, with reams of data, sits uninvolved and watches as critical judgements are rendered.

Happily, this situation is changing. With increasing frequency we are being asked for opinions and testimony about patients. In fact, it appears that we are on the brink of developing a new subspeciality---Forensic Aphasiology. Some of us, perhaps most of us, may in the future require specialized skills and knowledge if we are to represent our patients adequately and if we are to make significant contributions to the medical-legal decision making in which we will be involved.

This growing awareness of medical-legal matters related to speech pathology can be seen throughout our field. For example, the American Academy of Private Practice in Speech Pathology and Audiology recently devoted a whole program to medical-legal issues, including a half day on aphasiology. I might also point out that the Academy for Forensic Application of Communication Sciences was founded in recent months for the express purpose of upgrading our standards for legal activities in our field.

Having acknowledged the existence of this new field, we can next explore the foundations of its knowledge. What is its literature upon which we can draw?

Unfortunately, it is extremely limited! The articles that deal directly with aphasia and the law illustrate the subjective nature of much of the decision making in the courts, and that objective standards are badly needed. Critchley (1961) in discussing testamentary capacity in aphasia, points out that lawyers generally think in terms of full competency versus total incapacity, whereas a broader view of the total spectrum of intellectual accomplishment of the aphasic patient is needed. Usdin (1958) has pointed out that dealing with aphasic patients requires initiative upon the part of the medical-legal experts, and he cautions that doctors having no intimate knowledge of aphasia can too quickly come to the conclusion that the patient is incompetent. More recently, Rada, Porch, and Kellner (1975) in discussing aphasia and the expert medical witness suggest that there should be a close working relationship between the psychiatrist and the clinical aphasiologist in determining the competency of the patient. They stress how important it is for forensic psychiatrists to have a fuller knowledge and appreciation of current methods of testing and quantification that have become available for the assessment of the patient.

These and other articles make two things apparent. First, we need to develop our own body of literature based on hard data and good scientific methods, for this type of information will go far to increase our credibility as expert medical witnesses. Secondly, we should begin to anticipate those medical-legal areas in which we will be operating in the future and we should begin selecting methods and approaches that will enable us to function in a responsible and effective manner.

### Forensic Aphasiology And PICA Applications

Let us now take a closer look at some of the areas of forensic aphasiology in which we will be operating in the future and perhaps I can illustrate these with some case studies from the literature or from my experience.

Table 1 lists some of these activities. In general these areas fall in two broad categories; competency and compensation. In the areas that deal with competency we are asked to make a determination as to whether or not a patient is able to carry out a specific act or group of acts in the best interest of himself or of those for which he is responsible. In compensation

Table 1. Areas Of Forensic Aphasiology

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1. Testamentary Capacity
  2. Levels of Competency
    - A. Capacity to stand trial
    - B. Competency for parental activities
    - C. Competency to drive vehicles
    - D. Ability to live independently
    - E. Competency to conduct business and personal affairs.
  3. Quantifying degrees of Impairment
    - A. Accident-Trauma cases
    - B. Surgical-Medical cases
  4. Differentiating Non-Aphasia States
    - A. Hysterical
    - B. Malingering
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cases, the court attempts to determine how much injury or impairment the patient has sustained. In general, the more permanent and more profound the impairment, the more the patient is compensated for his losses.

Before I move on to specific examples of some of these areas, I should point out that medical-legal testimony often involves describing the patient's status at various points in time. There is a tendency on the part of the court to consider the patient's mental status as a permanent condition although we all recognize that aphasia is very much a changing condition. These time based decisions might be summarized as follows:

1. Condition at an earlier point in time
  - A. Premorbid status
  - B. Without earlier measures
  - C. After earlier measures
  - D. Between measures
2. Current status
3. Future status

Estimating a patient's communicative condition at some earlier point in time is always difficult without some type of objective measure. In estimating a patient's premorbid PICA scores, one might use the Mayo Clinic data presented at an earlier conference (Duffy, Keith, Shane, and Podoraza, 1967). These data take into consideration the normal effects of varying degrees of education and age on PICA scores. At present we are collecting some data on the effects of long term alcoholism on PICA scores. As we will see in some case studies, estimating a patient's level of aphasia at some earlier point without previous testing available is a very difficult problem. We have found the best approach here is to use a reverse HOAP slope principle and track backward on what might be considered a normal recovery curve. The same principle is applied when estimating between measures when one has an earlier PICA and a current one on a patient and the court is interested in knowing about the patient's status at some intervening time.

Estimates regarding a patient's current status are perhaps easiest to obtain since it only involves testing a patient and interpreting the results to the court. It should be emphasized that the courts frequently view aphasia as a static condition, however, and they are not cognizant of potential change or improvement in the patient in the future. It is therefore incumbent upon the aphasiologist to indicate the patient's potential for change or the lack of it since it would be unfair for the court to make a decision about a patient on the basis of his present status when he may be competent to handle his affairs in the future.

#### Case Examples

Among the various areas of competency decisions, testamentary capacity, or the ability of a patient to understand and approve the contents of his will, is an issue which hinges primarily on the patient's receptive ability. In these cases the court wants to know if the patient has the capacity to understand the contents of a will through any input modality. An example of such a case is shown in Figure 1. This patient was given a PICA and died one week later. (Hopefully there was no relationship between the two events.) This test was taken at one year post onset and was fairly similar to a previous PICA done at three months post onset during a time when the patient was receiving treatment. After the patient's death a brother with whom he was living presented a relatively new will which he stated the patient had made prior to his death leaving everything to the brother. The courts questioned whether or not the patient was competent to change his original will, which he had made out prior to his stroke.

In analyzing the ranked response summary graph in Figure 1, the crucial elements here are whether or not the patient had the necessary input to understand the changes in the will. It is apparent that his auditory function is not very good and that it would be difficult for him to understand legal terminology through his auditory system. In addition, tests V and VII indicate that he is reading essentially at a single word level and it is unlikely that he could understand complex printed material. Therefore, based on these test results, the clinician indicated that the patient did not have the competency to make complex decisions about the disposition of his estate.

A second type of competency decision which is more complex is one which involves a decision about a patient's capacity to act as a parent of small children. In these cases both the expressive and receptive ability of the

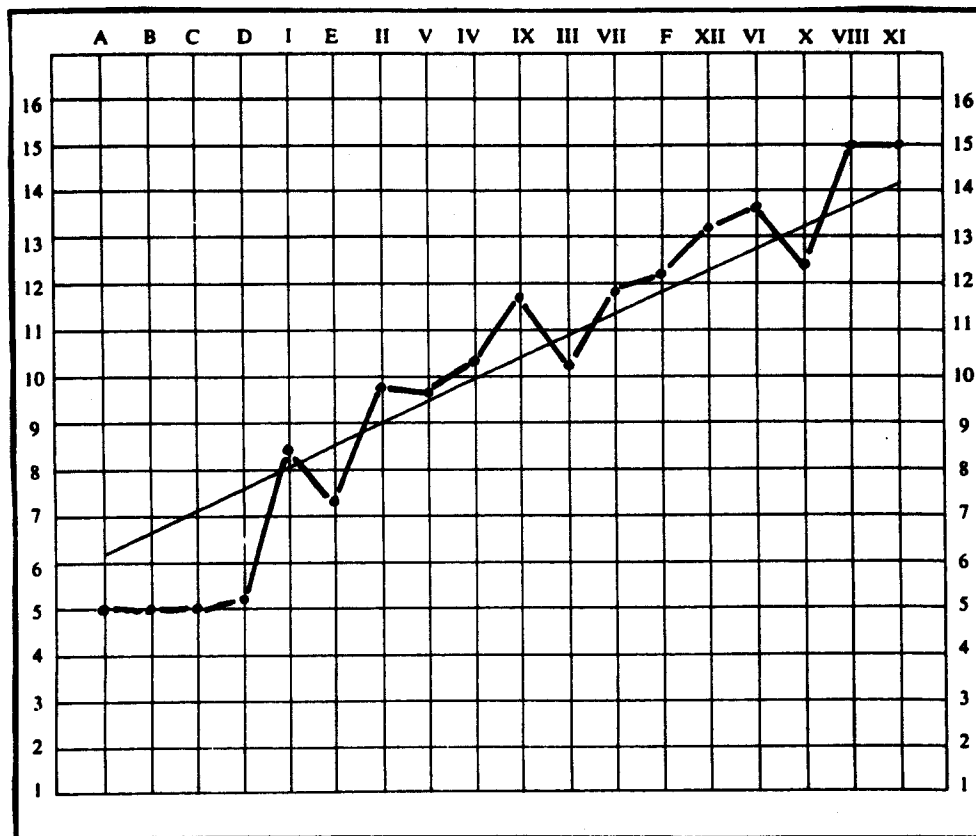


Figure 1. PICA profile of a patient who did not have adequate testamentary capacity.

patient are important, as is an estimate of the patient's future communicative capacity after treatment is completed, since custody cases involve long-term considerations. As an example of such a case I can refer you to our recent article on "Aphasia and the Expert Medical Witness" (Rada, Porch, Kellner, 1975). The court was interested in determining whether a woman who was aphasic following a stroke two years previously was able to care for her two small children or if the husband, who was suing for custody of the children, should be given the responsibility. At the time of the trial, the patient was at the 60th percentile with a 70th or 75th percentile potential recovery. Since she had good auditory ability and functional speech, the speech pathologist testified that she had adequate communicative ability to carry out her parental obligations, and the psychiatrist testified as to the relationship between the woman and her children and the emotional stability of the patient. This case nicely demonstrated the importance and effectiveness of the cooperation between the aphasiologist and the psychiatrist in providing a clear picture about a patient's competency.

One last case will lead into my final comments about medical-legal issues. In the case of the Commonwealth versus Morrison (1920) aphasia was used as a defense against criminal responsibility. Morrison, while in flight from a

jewelery store robbery, killed a man who tried to stop him. He was charged with first degree murder at which time he pleaded that he was a drug user and as a result of the drug was aphasic and therefore not responsible for his acts. In this case the court ruled "general presumption is that every man is normal and is possessed of ordinary faculties; such defenses as intoxication, insanity, and aphasia...are affirmative defenses and the burden of proof is on the defendent to establish them". In such cases the court inevitably must depend upon the expert witness for decisions as to the presence or absence of aphasia. Unfortunately in the past "Mary Smith, Speech Therapist" has had less of a chance of influencing the court's decision than has an expert witness with more illustrious vitae. Hopefully in the future the availability of solid, objective test data and a growing body of literature to support testimony will put the clinical aphasiologist in a much more effective position during his appearances in court.

As an example of the type of data base that we hope to develop in the future, I would like to discuss a study that we recently completed that deals with the area of aphasia versus non-aphasia. These types of decisions most frequently arise in association with compensation cases where a patient has incurred some type of possible brain damage and is involved in a lawsuit to recover some type of reimbursement for that damage. Some times, but not always, the question may be raised as to whether the symptoms are totally aphasic in nature or are possibly the symptoms of some other psychological or psychiatric difficulty. In 1975, Smith showed that such differentiation is not only important to the diagnosis but also the development of reasonable therapeutic plan. Rosen (1965) in stressing the importance of the clinician's testimony regarding the amount of brain damage incurred by a patient indicates that such testimony has the potential of "transforming a simple, low-verdict negligence case into one of astronomical figures".

Before initiating this study, we recognized the classic clues that generally suggested non-organicity in patients including such things as radical variations between diagnoses of different doctors, variations in symptoms from day to day, or dysfunction disproportionate to the actual extent of trauma. However, we also noted that some patients who had some true aphasic like symptoms early in their illness often were capable of remembering them and could produce these symptoms with fair reliability over considerable periods of time even though they no longer had "true aphasia".

Since medical and legal literature had described the lack of objective means of separating aphasia from non-aphasic conditions, we decided to design a project that would differentiate these two groups statistically.

Before initiating this study, I hypothesized that non-aphasic subjects would yield a PICA profile which was characteristic of their group and easily differentiated from the PICA profiles produced by an aphasic sample. My assumption was that non-aphasic subjects would not be aware of the fact that aphasic patients do essentially normally on some PICA tasks and do extremely poorly on other tasks and therefore the non-aphasic subjects would, when compared to aphasic patients, do disproportionately better on the more difficult tasks on the PICA and disproportionately worse on the easier tasks. This hypothetical relationship is shown in Figure 2.

My confidence in this hypothesis was strengthened by case study which involved a twenty-six year old woman who had had a cardiac arrest during the delivery of her child and had subsequent subtle neurologic symptoms with persisting "aphasia". Our examination of this woman suggested on the basis

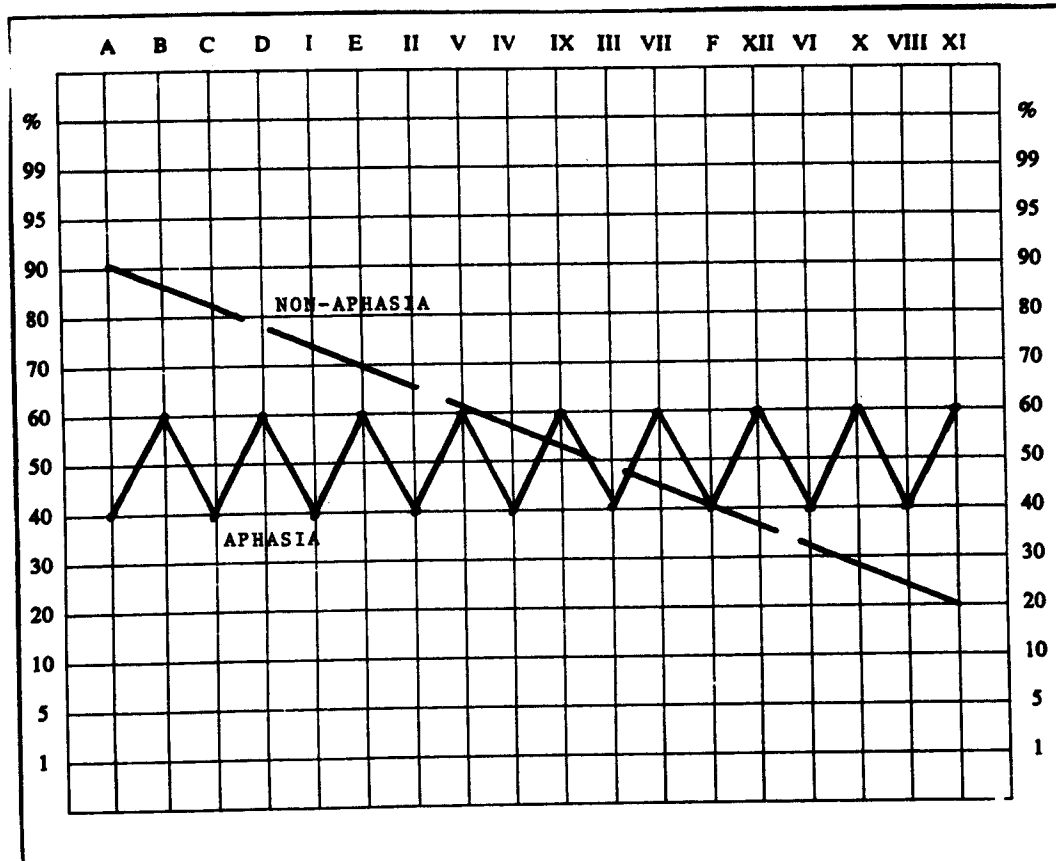


Figure 2. Theoretical relationship between aphasic and nonaphasic PICA profiles.

of clinical impressions that there was a strong non-organic component in her behavior and that her symptoms were not in fact true aphasia. It was especially interesting to us when we compared her PICA profile (Fig. 3) with the hypothetical curve we had generated for the non-aphasic group.

With this background of information we initiated a study in which we asked twenty graduate students in speech pathology and five bartenders to submit to PICA testing during which time they should attempt to simulate aphasia as closely as possible. All of our pretest instructions to each subject were presented in a standard manner and we felt confident that each of the subjects cooperated fully in trying to simulate aphasia. We subjected these test results to a discriminant analysis in which we asked the computer to separate these twenty-five non-aphasic subjects from one hundred and forty-three acute aphasic patients. This the computer was able to do with no misclassifications.

As a second validating study, we attempted to sort out a second group of non-aphasic subjects from aphasic subjects by using the discriminant scores obtained from the first sample. For this second sample of non-aphasic subjects we selected family members of aphasic patients who had had an average of 32 months of living with an aphasic person in their home. We hoped in

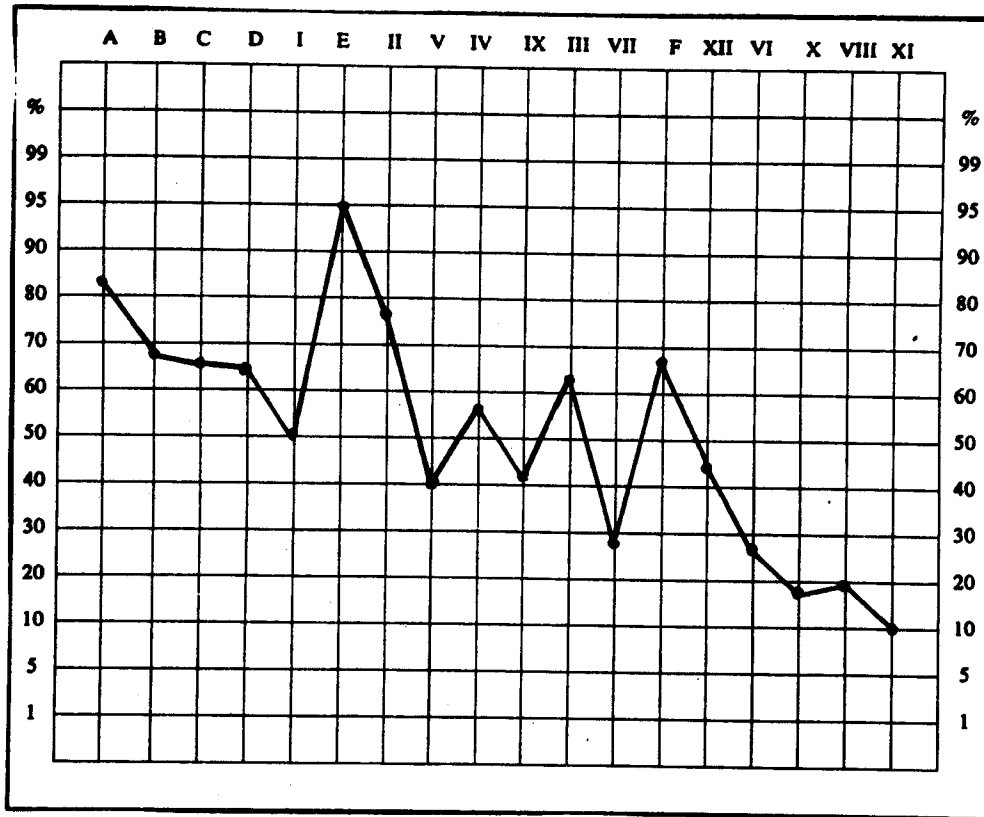


Figure 3. PICA profile of a patient who presented nonaphasic symptoms.

this way to maximize the possibility of these new non-aphasic subjects of "beating the game". The results of this second validating study were essentially the same as the first and none of the patients or non-aphasic subjects were misclassified into the opposite. As you can see, the PICA results for the non-aphasic subjects shown in Figure 4, closely conforms to the hypothetical curve that we generated before the initiation of the study and all of these data supported our hypothesis that we could now sort out non-aphasic components from true aphasia by the use of the test.

This study is presented as an example of what we must do in the future to prepare ourselves for making objective decisions in legal cases. For instance, as a result of this study we now can apply some relatively simple formulae to our PICA results on patients and obtain added information regarding the possible presence of a non-aphasic component in the patient's behavior.

To conclude this discussion on the medical-legal aspects of aphasiology, let me stress these points: (1) we need to change our perspectives and realize that we are being drawn into a position of being an expert witness in the area of aphasia; (2) since we are going to have to assume this role, we should prepare ourselves by insuring that we have standard, reliable

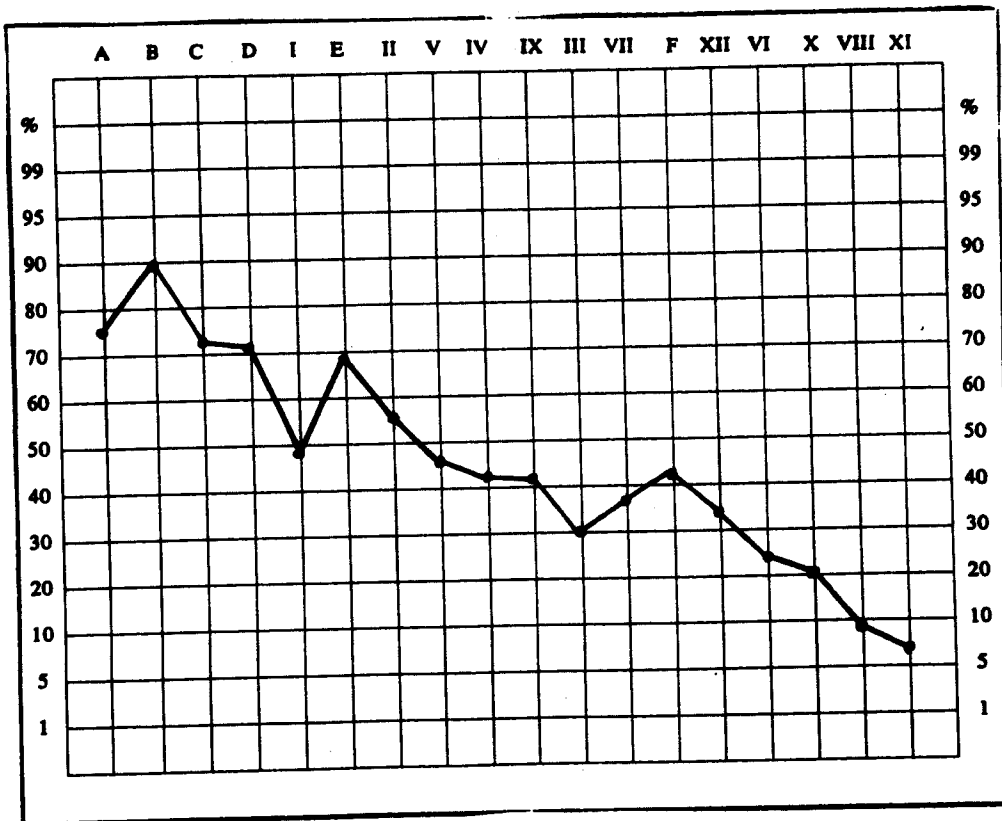


Figure 4. Mean subtest scores for subjects simulating aphasia.

measures on our patients and we must recognize that each of these tests that we do daily are potentially a legal document, and (3) we must begin to carry out more studies that will increase our data base and which will give us the right to assume our role in the practice of forensic aphasiology.

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