

Educational Implications of the Virginia Study

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Teaching that is unrelated to the facts of practice tends to be unrealistic and easily deteriorates into dogma. Despite the triteness of this truism, the discipline of family practice suffers from a paucity of good factual studies and from the application of methods that have been developed in secondary, not primary care situations.

There is a need for doctors in family practice to demonstrate factually that the clinical emphasis of their work is different from other medical disciplines. This significant study of 526,196 consecutive problems presenting to 118 family physicians in Virginia by Marsland, Wood, and Mayo has wide educational implications. The study covers the work of family practitioners in urban, rural, and suburban settings and demonstrates clearly the quality, quantity, and range of primary care. The findings can be compared with those from other western countries.

Qualitative Characteristics of Clinical Material

A glance at the 23 diagnostic categories that are responsible for 50 percent of patient contacts reveals that the clinical material bears little resemblance to that encountered in hospitals. A knowledge of probabilities is the basis of accurate early diagnosis. The family physician needs experience with common diseases at all levels of learning.

Brief consideration of some of the common diagnostic categories is revealing. Anxiety neurosis ranked as the 15th most common category. The family physician when handling anxiety neurosis needs to know all the various presentations of this common complaint; he must integrate this

knowledge with a wide clinical experience of the many more serious clinical problems which may be confused with anxiety neurosis.

In the category of abdominal pain (18th most common category), for effective early diagnosis the family physician must know all the various presentations of appendicitis and the common causes of acute abdominal pain that are *not* appendicular in origin.

Quantitative Characteristics of Clinical Material

Problems of recognition are caused not by the characteristics of the object to be recognized but by the background against which it is seen. Thus, when searching for a needle in a haystack, it is the nature and size of the haystack, not the needle, that causes the difficulty.

Exactly this principle applies to the early recognition of disease processes in any of the large disease group categories encountered in this study. For example, in cases of febrile, flu-like illness (ranked 10), depressive neurosis (ranked 12), anxiety neurosis (ranked 15), and sprains and strains (ranked 6), there will be a few diagnostic "needles" of life-threatening disease. In such situations, the family physician must learn to be selective in using complex, expensive, and even hazardous investigations.

I suspect that many teachers of family medicine have experienced seminars in which a specialist in infectious diseases suggests that in acute pharyngitis (ranked 4th) all throats should be swabbed to isolate the organism. In such instances, the Virginia figures provide a realistic basis for discussion of what is practicable.

Wide Spectrum of Diagnoses Handled by the Family Practitioner

The study demonstrates that an

average family practitioner uses a working vocabulary of 234 descriptive diagnoses to cover 95 percent of his work. As with a verbal vocabulary, a few exceptional individuals may retain a wider ranging vocabulary, but for most family physicians this is probably nearly the optimal number of diagnostic alternatives. This vocabulary is spread over nearly 20 specialist areas.

As the doctor of first contact, the family physician must become a specialist in recognition and treatment of common diseases (ie, those ranking in the first 23 Virginia categories) and in the early diagnosis of the rarer diseases which may be scattered through the whole range of the first 234 Virginia categories.

Comparison with Other Studies

The Virginia study provides a wealth of much needed factual information about family practice and the age distribution of complaints. This is comparable with a number of similar studies in Britain and elsewhere.¹

Comparisons of similarities and differences between such surveys are illuminating. If we look at the ranking order of the most frequent diagnostic categories in the two countries, we find that there are nine categories in the first 23 whose ranking order is within five:

<i>Problem</i>	<i>Comparative Ranks</i>
Benign hypertension	Va 2, UK 7
Acute pharyngitis	Va 4, UK 3
Acute bronchitis	Va 5, UK 2
Coryza and colds	Va 8, UK 5
Febrile illness (flu)	Va 10, UK 10
Otitis media, acute	Va 11, UK 12
Vulvitis, etc	Va 17, UK 21
Congestive heart failure	Va 19, UK 24
Urinary tract infection (cystitis)	Va 20, UK 22

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In a further seven categories the ranking orders of frequency differ in the two countries by less than 15:

<i>Problem</i>	<i>Comparative Ranks</i>
Minor trauma, etc	Va 3, UK 9
Sprains and strains, etc	Va 6, UK 13
Obesity	Va 9, UK 23
Depressive neurosis	Va 12, UK 4
Prenatal care	Va 14, UK 1
Anxiety neurosis	Va 15, UK 8
Arthritis, etc	Va 23, UK 14

A consideration of the ways in which the Virginia and UK surveys differ also raises some pertinent questions:

<i>Problem</i>	<i>Comparative Ranks</i>
Routine physicals	Va 1, UK 28
Cervical "Pap" smears	Va 13, UK 30
Diabetes mellitus	Va 7, UK 43

We who are teaching family medicine must find the answers to questions concerning the relative yields from different medical procedures.

Need for More Information

The Virginia study provides a base from which to look at the family physician's work and gives teachers of family medicine a view of how much more needs to be done. A number of observations can be made in this regard.

Many diagnostic categories must be looked at in greater detail. Thus, in the category of acute pharyngitis we need to know more about the different bacteriological and virological types of early pharyngitis. Each of the larger diagnostic categories raises similar questions.

We need to define and subdefine our diagnostic categories more clearly. In the case of backache in the UK survey, for example, the subdivided rates for prolapsed disc, back pain, sciatica, and lumbago showed large individual variations in different areas; if, however, the four groups were taken together, the totals for different areas were almost identical. This suggests that the diagnostic habits of the doctors in different areas caused the

apparently differing incidence rates.

We need to look especially hard at those diagnostic categories that are ill-defined, broad, or used as a diagnostic "rag bag" (eg, category 8 — "other sign, symptom, or incomplete diagnosis"). Many of our most difficult diagnostic problems will lie buried in these categories.

The authors point out that the danger of descriptive studies of this kind is that they tend only to reflect the individual experience of the recorder. For this reason, what is omitted is also significant. The light recording of behavioral problems is mentioned but there are a number of other areas in which omission of material is suggestive.

There is no age breakdown after 65+. Perhaps the age group of 75+ was small, but this itself might be important. This (75+) is the age of degenerative chronic disease — an area of great morbidity when patients need their family physicians most, yet have the least money to pay for them. The 75+ age range is an area requiring much input and development from the entire medical profession, especially family doctors. A further breakdown of figures and morbidity might well be rewarding.

Many interesting categories lie in the 99th percentile. Only 15 housing problems are reported in half a million medical problems. Housing difficulties may be few in Virginia, but in most areas housing and related poverty cause a significant amount of primary morbidity of all kinds. In planning any residency program, such a lack should be taken into account.

There were only two problems reported of mental retardation. As a major cause of family stress, this low incidence seems surprising.

The authors comment that a major portion of the family medicine curriculum should be directed towards emergency medicine and serious, life-threatening diseases. This statement is true but there is a great tendency for family physicians to be blind to the continuing and ever-increasing medical needs of the chronically ill, the elderly, and the poor. Practical experience of these needs teaches us that the solution of such problems lies in the area of primary medical care, not social work. How do we ensure that residents acquire such practical experience?

There are some interesting examples of apparent omissions in the reported data. Strokes, for example, are not recorded, and may be buried in the large, but ill-defined category of arteriosclerosis (rank: 16). In addition, death is not mentioned. This omission can be noted in other morbidity surveys. It is easy to see how this occurs, but it should be included because it is a significant measure of outcome! It would be interesting perhaps to see those categories of the ICD or RCGP classifications that were empty. These omissions are not a reflection of the survey, which clearly records what 118 family practitioners' work consists of; they do, however, stress that if we are to develop as a discipline we must look critically not only at what we are doing but at what we are *not* doing.

It is an interesting paradox that a factual study of this kind effectively demonstrates the defects, as well as the main thrust, of our work as family physicians. Any doctor using this material as a basis for an educational curriculum should have enough knowledge of family practice to assess the reason for the low frequency of any problem. Is this due to rareness, defects of classification, or lack of involvement?

Ongoing Use of the Survey

Although not stated in the paper, I suspect that the authors will use their survey mechanism for ongoing teaching and research. Thus, residents can be encouraged to analyze the survey material to provide further details about specific areas. This in turn will enrich teaching and encourage research attitudes in the residents.

Drs. Marsland, Wood, and Mayo have done family practice a great service by gathering and analyzing factual information that forces us to look realistically at our priorities for the teaching of an exciting and developing discipline. They are to be congratulated on a valuable and significant study which will provide a basic reference for all teachers of medicine.

Reference

1. HMSO (1974) (Her Majesty's Stationery Office) Morbidity Statistics from General Practice — Second National Study 1970-71. Studies on Medical and Population Subjects, No. 26