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THE NOVA SCOTIA MEDICAL BULLETIN

"The Mace"

During my years of interested involvement in the affairs of the Medical Society of Nova Scotia, particularly the years spent as President Elect and President of the Society, I have been impressed with the importance of the deliberations and decisions of Council.

In 1848, Nova Scotia was the first Province in Canada to win responsible Government. In 1854 – six years later and thirteen years before Confederation, the Medical Society of Nova Scotia came into being. It is now in it's one hundred and twentieth year. Although my research has not been exhaustive, I feel certain it is one of the oldest Medical Societies in North America.

It is of particular significance that during the one hundred twenty years of the Society's existence, membership has been voluntary. Throughout these years the objects of the Society have evolved and they are now listed on our membership cards.

Promotion of health, prevention of disease and the maintenance of the integrity and honor of the medical profession have proven to be cohesive as well as the promotion of harmony and unity of purpose between the medical profession and governing bodies of the Province of Nova Scotia and of Canada.

With knowledge of such a background and the contributions made by the Medical Society of Nova Scotia in the fields of science, continuing medical education, health, in assistance to governments in social improvements, and in more recent years, in the economic field, it was my opinion that the Society should acquire a suitable symbol to reflect the dignity and importance of the meetings of Council.

Through the years, the mace, which was once a battle weapon, became a sign of authority and is now used to signify the dignity of organized debate and discussion. This seemed to be the suitable symbol.

A motion presented to Council and the Annual Meeting in November 1972, was to the effect that a mace be acquired by the Society – a design be prepared by the Archives Committee and in the design there be appropriate space for suitable engraving potential.

I wish to extend my sincere appreciation to the Archives Committee under the chairmanship of Dr. R. F. Hand for their work in research on the mace and preparation of the design. I feel confident that the future will justify their efforts and reflect the wisdom of the Medical Society of Nova Scotia.

G. W. Turner, M.D., C.M., F.C.F.P. □

Traffic Crashes: "The Christmas Disease"

Underneath the holly leaves and tinsel of the holiday season the signs exhorting us to drive carefully can still be seen .... but many Nova Scotians have other things on their minds. Some have a little too much of something else in their veins.

The net result? We thought you might be interested in some comparative traffic crash statistics for the month of December in 1971 and 1972. You can do your own extrapolating for projecting emergency department workloads during this year's festive interlude. Coroners might also take note.

In December, 1971, there were 1,395 traffic crashes in Nova Scotia. In 1972 there were 1,596 – an increase of 201, or about 10 more per working day over the previous year's count.

Some 259 of the '71 smash-ups produced 348 injured passengers, drivers or pedestrians. Our '72 track record was a little better with only 325 injured persons being hauled from 238 injury-producing Yuletide encounters between vehicles and the laws of physics.

December '72 highway fatalities, however, jumped to 30 over the '71 figure of 21 for the same month.

For the accountants among us, property damage in the December, 1972, traffic crashes totalled $1,185,034 – an increase of $238,270 over the previous year.

Finally, there were more traffic crashes in December, 1972, than in any of the summer months of that year when the normal peak traffic flow occurs and speeds are generally higher.

While the provincial Department of Highways does not keep monthly tabs on alcohol-involvement in traffic crashes – although it does keep a quarterly count – it's a pretty safe bet that bent elbows and season's greetings played a significant part in the overall picture.

In case you're wondering what the point of this little dissertation might be, here it is: Day by day and year by year, the odds against safe and happy motoring for you, your family, friends and patients are on the increase.

Think about it. Get others to think about it too. In fact, it might pay to get a little angry about the whole sorry mess before we all start working too hard to make December, 1973, a bumper month for traffic crash statistics.

Merry Christmas. □

SNOMED Something Newer

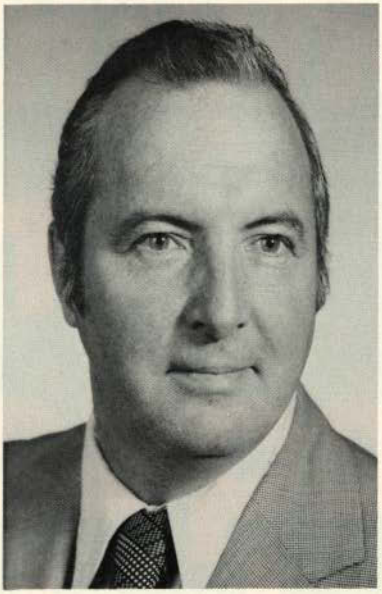
The scheduled January through June 1973 field trial in the computer application of a newly developed systematized nomenclature of medicine could, if all goes according to plan, have far reaching ramifications in the private practice of medicine as well as in institutional services.

Under the SNOMED acronym the move is an attempt to bring all the factors involved in individual patient care into a computer-accessible package for comprehensive instant print-outs which will allow not only for improvements in direct health care but which will permit greater accuracy in budgeting and cost accounting for the facilities in which patients receive care. Coded in-puts must range through the whole gamut of services provided, taking in everything from normal health factors to disease or trauma and including all diagnoses in each case along with procedures, results and administration. The upcoming field trials will be held jointly in Canada, Australia, New Zealand, Britain and the United States.

Chief mover of the scheme in Canada, Dr. Roger Cote of Sherbrooke University, Quebec – operating under a federal health grant complementing American College of Pathology expenses subsidization – has pointed out that success in the SNOMED trials will mean more than greater efficiencies in patient care; SNOMED could become an ideal tool for peer review and/or medical audit. The system, he said, will require more than the simple classification of diagnoses and procedures and print-outs should provide a step-by-step patient management profile. The implications are obvious. They will also provide a step-by-step physician service profile. □

Dr. J. Alexander George

THE MEDICAL SOCIETY OF NOVA SCOTIA PRESIDENT 1973-1974



A native of Ottawa, James Alexander George, M.D., practises radiology in Antigonish where he earned his B.Sc. at St. Francis Xavier University before going on to graduate in medicine from McGill in 1949.

From 1949 to 1957 Dr. George conducted a family practice in Toronto, then specialized in radiology through the Toronto General Hospital to become a staff member.

But memories of Antigonish must have been fond and strong because he returned to the site of his first alma mater in 1961 and to a life of community and professional involvement. Dr. George has served as president of the Antigonish-Guysborough Branch of the Medical Society of Nova Scotia, as chairman of the Section of Radiology, as a board member in Maritime Medical Care Inc. and on the corporation's finance committee, and as president of the Nova Scotia Association of Radiology. He has been the official physician to the St. Francis Xavier University Inter-Collegiate Sports Program for 12 years and is the medical director for the Emergency Measures Organization, Antigonish.

An ardent farmer, Dr. George breeds the exotic Charolais and Simmental cattle on his Antigonish farm and is also committed to the smoother pasturage of Nova Scotia's tees, fairways and greens.

He shares his active life with his wife Margaret Helen and nine children. □

Hon. L. L. Pace Talks To The Bulletin

The Hon. Leonard L. Pace, Q.C., Nova Scotia Minister of Highways

BULLETIN: You are currently Minister of Highways and have also held the Attorney General's portfolio. Has your experience in both these positions led you to any conclusions with respect to tougher legislation dealing with driving privileges?

PACE: I think there's no doubt we'll bring in legislation which will change the situation somewhat. Now, whether you can say it is stricter or more effective in attempting to cure the ill – namely the highway accident situation – is, of course, debatable. We certainly hope that meaningful legislation will spring from the recommendations of our Crash Counter Measures Committee.

BULLETIN: Well the Crash Counter Measures Committee has been in operation for some nine months now.

PACE: Well, it's been my experience with any committee that the first thing it has to do is to define itself and its purposes. I think this committee has gone through this stage now and is perhaps in a position to tackle more meaningful and original approaches.

BULLETIN: Have they made any recommendations to you yet?

PACE: They have made some recommendations. But the format, the structure of the committee is to encourage a free exchange of views. For instance, they may come up with certain proposals and the department, in turn, may have suggestions relating to those proposals which the Counter Measures Committee should rethink and then come back with their revisions.

BULLETIN: In other words, you're talking about a dialogue between the committee and the legislators.

PACE: Sure. You have to have this or you just won't get effective legislation.

BULLETIN: Some suggestions seem to have been made already. There has been talk about recommending a special traffic crash analysis division within the department to take a closer look at all the factors involved in crashes in Nova Scotia without relying on extrapolations from statistics developed elsewhere.

PACE: We've already been doing that for a number of years. It may not be well known to the public but we do analyze each and every accident situation to see if patterns are being formed. Out of one pattern observed early this year came our move to introduce the mobile breathalyzer in order to help combat that particular difficulty – namely that people were driving while impaired and either killing themselves or others. I think in the last month there has been some reflection of our efforts in the tempo of fatal accidents which we have found encouraging.

BULLETIN: We are fairly well acquainted with RCMP accident reports which are very well, even scrupulously detailed but there has also been talk that among police officers themselves that some municipal accident reports are simply a matter of car A travelling North and meeting car B travelling South at the same time.

PACE: Perhaps, but that's not totally true, and you're talking about another package dealing with the updating of municipal police services which we've been working on by way of the Police Act and hearings related to it. Don't forget that some of our better municipal forces do just as much research and give just as much detail in filing accident reports as the RCMP.

BULLETIN: That brings up another question. Most people think of the police in relation to crime but police forces are an important deterrant in terms of highway accidents. Both as Attorney General and in your current position did you and do you think that we have enough qualified men in the service. This is not to imply that we don't; it's simply a matter of curiousity.

PACE: I'd say the answer is negative and there's a very good reason for it. As you know, we have no control over the hiring of municipal policemen. A town, if the taxpayers desire, can hire two police officers to do the job of four men. This is the situation which currently exists in Nova Scotia. The RCMP, of course, is under federal contract. Our Attorney General, as a result of his assessment of the manpower situation, may, for instance, request 20 officers. After the Treasury Board has had a look at the scene he may get only two or four, or six. So, you see, it's not always in our power to control the manpower situation.

BULLETIN: What about legislation that affects the impaired driver who is in violation of the Criminal Code of Canada. Does the province have any jurisdiction whatsoever in establishing the punishment for the crime?

PACE: Not under the Criminal Code, of course, other than that a magistrate in his wisdom may decide there is a margin of say from fifty to five hundred dollars in the area of fines. He, of course, can enforce anything between the two but under the BNA Act matters relating to criminal law are purely within federal jurisdiction and if provinces pass laws which encroach on this area they are ultra vires and therefore nul and void. Until very recently the Supreme Court of Canada held that a province had the right to control traffic under its own MOTOR VEHICLE ACT providing it didn't get into the criminal field. Recently, the federal statute was changed and The Courts now have the power to authorize a so-called conditional license which is contrary to every provincial law in Canada because most provincial jurisdictions call for automatic license suspension. Actually, there is a Supreme Court decision pending at the moment to clarify where we stand on this.

BULLETIN: Is it correct to say that even though the federal statutes apply, the province does have some leeway in imposing sentences?

PACE: No. The province has nothing to do with it. A magistrate must come within the bounds of the sentences as established under the Criminal Code – and that certainly applies to impaired driving.

BULLETIN: In a sense the province could be considered ham-strung in this area.

PACE: If the offence falls under the Criminal Code, yes. That does not mean that we don't have control over other vehicle and highway offences.

BULLETIN: Conceivably, then, a person could be found guilty of impaired driving, running a stoplight, hit and run, etc., thereby increasing the possibility of incurring a sentence greater than that prescribed under the Criminal Code because he or she has also transgressed in areas of provincial jurisdiction.

PACE: Well, it would be entirely impractical to look at a situation in that light. Normally, what you try to do is to get a conviction on the greater offence. It's quite a question of law. For instance, if you got a conviction for, say, dangerous driving you wouldn't press for a conviction on running a stopsign as well because that is an act directly related to the dangerous characteristic for which the offender has already been sentenced.

BULLETIN: What about the Medical Society's recommendation on the mandatory reporting by a doctor of a patient whose medical condition could tend to seriously impair his or her ability behind the wheel?

PACE: I think there is a practical element to it, but I must say that in analyzing all fatality reports since I've come into office I don't recall seeing one in which the accident's causative factors were directly related to health.

BULLETIN: Before we started the interview, you mentioned that the mandatory reporting recommendation has some negative aspects.

PACE: Well, I can see positive aspects, too, particularly when patients are under heavy sedation or have a condition that definitely would affect their ability to operate a motor vehicle. Perhaps the doctor should not only advise the patient against driving but he should notify the department as well.

One negative aspect that troubles me could be described this way: Say you have a truck driver who is dependent on his driving ability for his income and family security. Let's say he gets a few pains in his chest or develops some other symptoms which normally would encourage him to seek the advice of his doctor. If he feels or knows that a visit to the doctor will result in a report to the department which will deprive him of his job, then I very much doubt that he will seek treatment. In my experience as a practising lawyer and as Attorney General, I don't think it's ever been shown that the law can be enforced by what one might call "sneaky" methods.

For instance, our Public Health Act requires that a doctor report each case of gonorrhea and syphillis. I think most doctors will admit that probably no more than 20 per cent

of confirmed cases are reported. We have similar legislation requiring the reporting of cases involving child abuse. Most people involved in this area say reports just aren't made. Would the situation be any different in reporting medical conditions for highway safety purposes?

BULLETIN: Well, regardless of its effectiveness, or ineffectiveness, mandatory reporting legislation on medical conditions as they relate to driving ability might, like other reporting legislation you've mentioned, be considered as a primary line of defence ... apart, of course, from an informed driving public, although I'm not sure in this instance what an informed public might be.

PACE: It means they are not misinformed.

BULLETIN: Or uninformed.

PACE: Believe me, misinformed can be a lot worse than uninformed.

BULLETIN: That starts an interesting train of thought. I don't know how effective the recent RCMP roadside safety checks – with a breathalyzer in attendance – have been, but would it be feasible to ask each motorist stopped three or five questions on the highway code itself to establish some kind of feedback on how misinformed or uninformed drivers are about their highway obligations?

PACE: Well, some of our better drivers may not even be able to read the highway code and those who can read may be very poor drivers indeed. I don't think that would be a very satisfactory way to determine a person's ability to operate a motor vehicle. Of course everyone should know the rules of the road and we try to make sure they do through our highway checkups and when they are first tested for their licence. I should add that this month (September-October) under the NATO Alliance Canada has adopted a voluntary system of questioning motorists on the highway and this will be going on in Nova Scotia as well as across Canada. It's a voluntary sort of thing with trained Ministry of Transport employees doing the questioning and as a result they hope to come up with some answers to many of the problems we face in the highway safety field.

BULLETIN: What about periodic re-examination of licence holders.

PACE: Well, we're a little short of manpower just doing what we are right now. For instance, there's a waiting period right now for people applying for the reinstatement of their licence. I suppose it's all a matter of total priorities: How much additional personnel can the taxpayer afford? And if the taxpayer can afford it, are we going to get results that are that much better? Highway safety problems are not unique to Nova Scotia, of course. The whole matter is of National and international concern.

I should add that we do review licences. For instance, we do call in people involved in accidents and we do have a medical team to advise on a person's ability to drive – and I think we've always followed their recommendations.

BULLETIN: Would there be any point in requiring a medical evaluation of any person who has had his or her licence suspended or who has accumulated ten points for one reason or another?

PACE: I think our personnel are already picking out those who have medical problems, but you must remember that they are not doctors and are not trained to observe as doctors. But, again, can you tie up medical personnel for everyone who applies for a licence or for reinstatement of a licence?

BULLETIN: Well, they're already being tied up at the other end of the spectrum in dealing with the results of traffic crashes – as are the police. I suppose the only ones to benefit are the garages and the auto repair industry. And that brings up another point relating to manpower. Almost every Health-oriented report of late has touched on problems relating to ambulance services. Do you have any comments in this area?

PACE: We're not directly involved in that. Ambulance services do not come under this department's jurisdiction because it's basically a matter of public health, even though financially it rests with Municipal Affairs. How experienced or how well trained ambulance personnel should be is really a public health consideration and I don't think we have the knowledge or potential to advise in that area. However, regardless of what changes are made or what new system is devised, we would be extremely interested in its ability to save lives in traffic accidents.

BULLETIN: Within the last three or four months a concerted effort seems to have been made by the media, professional groups and people actively involved in highway safety work to bring to public attention the need for improvements. Regardless of the validity of all the recommendations made, has this "high-profiling" of the problem had a beneficial effect?

PACE: Well, it's a matter of opinion, I suppose, because there's no way of telling how bad the situation would have been without all the publicity. It's like a man taking medicine which he feels he doesn't need. The question is: How would I have felt if I didn't take it? He just doesn't know. My personal feeling is that the more aware we all are of a critical situation, the more apt we are to have reasonable people respond to it. Now when it comes to the outrageous violator I don't think any thing helps. This sort of person is simply a public menace. But you must remember that the common man, the average driver needs to have his attention focussed on the overall situation or on certain aspects of it or he'll tend to get a little lethargic and careless and have that extra drink himself. But if he knows there's a chance that the breathalyzer has been set up on his route home or has become convinced by whatever means that he's encouraging a condition which threatens his life, he is more apt to respond sensibly. Basically, you have to reach the average, reasonable driver if you want a reasonable response. It is not possible to legislate 'safety' per se. All persons using the highways must recognize the need to protect both themselves – and others – at all times by assuming the appropriate degree of personal responsibility. □

Background Research for the Development of Programming for the Convicted Alcohol Impaired Driver*

J. W. Anderson† B.A., L.th., M.S.W. (Research)

Halifax, N.S.

This paper will deal with the kinds of preliminary research initiatives needed prior to the establishment of a re-educative-rehabilitative program for the convicted alcohol impaired driver of a motor vehicle. It will stress the kinds of data which need to be covered in the information gathering process which can and must have a formative influence on the remedial program which is subsequently developed. There is no intent here to specify program designs or operating structures, as these are beyond the scope of this paper. Reference to my detailed publication entitled: "A Program To Reduce Alcohol Impaired Driving", code-named RAID, gives fairly adequate coverage to these concerns.

The preliminary research initiatives which I will discuss are premised on three basic assumptions:

(1) that the programming envisaged will be established to meet the needs of a province or region or other natural division of a national state;

(2) that by its very nature and vast complexity, driving-while-intoxicated is, by definition, a metaproblem which can only be confronted by a planned series of incremental steps;

(3) that the logical target group in any beginning initiative, aimed at re-education-rehabilitation, is the convicted alcohol impaired drivers, as the individuals whose drinking and driving has been positively identified and undeniably established. For the convicted offender, the obvious objective is to prevent a reoccurrence of this driving-while-intoxicated behaviour. Thus, one vital item of base line data is the establishment of the current recidivism rate for such offenders to facilitate the later evaluation of program effectiveness by ascertaining whether there has been any significant change in this rate which can be attributed to its implementation.

In developing, on a provincial or regional basis, an adequate program for the convicted, impaired driver, a logical, though rather unsophisticated, first step is to conduct what I have designated as an "opinionnaire-questionnaire" type study involving a representative group of people who by virtue of their professions, training and/or background of experience are particularly knowledgeable about the local, impaired driving scene. This kind of survey yields two valuable kinds of information on:

(1) available data sources and how to gain access to them which serves as a very useful guide in the planning of subsequent research initiatives;

(2) the overall availability of local resource people who can be involved in operating a program. Incidentally, I might add that this preliminary resource inventory can and should figure fairly decisively in the overall format of programming, and in the total approach in implementing the needed change strategy.

It must be self evident, I feel, that prior to designing any program aimed at effecting social change, one must confront and adequately deal with the dual concern of need and feasibility. In terms of the former, need is nowhere more grimly reinforced than it is when we are able to identify the incidence of traffic fatalities where alcohol is a contributing factor! Death, as the most tragic consequence of drinking and driving, points most forcibly and indisputably to the need for implementing a countermeasure to curb this particular type of driver behaviour. Reliable statistics on the incidence of alcohol related traffic fatalities are the one bit of indisputable evidence which silences any would be objector who disputes the need of programming. But note, such statistics must be those for the province or region for which a program is to be designed. Characteristically people are unmoved and unaffected by findings reported from nations or regions other than their own. Thus, if there are no reliable findings on alcohol related traffic fatalities in the province or region for which programming is to be designed, a study on the incidence of such fatalities in the local area is a matter of high priority. For instance, in my own province – Nova Scotia, Canada, no such fatality statistics were available. *I proceeded to do a fatality study and established conclusively that 42% of traffic deaths in my province are alcohol involved.* Needless to say, no one has had the effrontery to say that a program for the alcohol impaired driver in Nova Scotia is unwarranted and unnecessary. The tragic consequences of drinking and driving in my province clearly underline the need of an effective countermeasure.

On the basis of the assumption that convicted alcohol impaired drivers are the logical target group in any beginning effort along normative-reeducative lines, it is evident that the major research effort prior to the development of programming is a survey of all impaired driving convictions in the province or region or other political division of a national state. As a basic enumeration of offences, this initiative can further demonstrate the

*For The Nova Scotia Commission on Drug Dependency, Halifax, Nova Scotia, Canada.

†Supervisor, Community Care Department, Social Planning, City of Halifax.

extent of the need for programming. The basic source of data for this kind of survey in my province was the court docket sheets on file with our provincial attorney general's department. In Nova Scotia, as in all other Canadian provinces, sanctions against impaired driving are embodied in federal legislation; thus, the convictions tabulated were obtained under three specified sections of the Criminal Code of Canada.

The court docket sheets on file were found to be broken down by court jurisdictions which in my province were, for the most part, somewhat too limited in the number of convictions produced to serve as units for programming. Thus, convictions were tabulated for each of six geographical and population districts which were fairly similar in size, and which coincided with the natural boundaries of our province. Further, on the basis of the latest census figures, I was able to establish a "rate per 1000 of population" for impaired driving convictions in each of the designated districts. Incidently, this rate varied all the way from a high of 8.9 per 1000 in one district to a low of 2.5 in another. This I interpreted as being indicative of widely varying levels of law enforcement in various parts of the province.

The resultant picture of the distribution of impaired driving convictions on a district-by-district basis provided much useful information, not only on the need for programming, but also on the feasibility of initiating programming in one particular district and on the total programming needs for the province as a whole. On the basis of predetermined criteria for program viability – (ie: an average of not less than 20 convictions per month in the designated district or local area) – it was established that it was entirely feasible to operate *eight* program units in Nova Scotia. Thus, total programming for the entire province could be planned and organized on the basis of the data obtained.

One other invaluable piece of information yielded from this kind of survey of alcohol impaired convictions is the specification of the best possible site to set-up a pilot project embracing this kind of programming on the basis of such considerations as: (1) the level and numerical consistency of convictions obtained; (2) the availability of good local resource people and (3) the potential for instituting good evaluative measures which could be expected to yield reliable indications of program effectiveness.

Lastly, I would think it to be self evident that an indispensable preliminary to program development is a fairly positive identification of the characteristics of the group which is to be targetted in this kind of social change initiative. I say self-evident, because in order to develop a program geared to meet the needs of and to be most effective for the convicted alcohol impaired driver, we must have an accurate impression of who that person is. Thus, the objective of this final research initiative is to construct a profile of the convicted impaired driver. The kinds of demographic data needed to construct such a profile were, I found, readily available from driver records on file at the offices of our provincial Registry of Motor Vehicles.

Having tabulated the data on a number of common social characteristics, a fairly distinct profile began to emerge. Thus, for the convicted impaired offenders soon to be involved in programming, we can anticipate that:

(1) our participants will be predominantly young males (in that 62% of convicted offenders surveyed were under 35 and only 2.5% were female);

(2) in almost all instances, these individuals will have a record of other "non-alcohol related" traffic violations (as demonstrated by the fact that 88% of drinking drivers apprehended had a record of other types of infractions);

(3) a significant proportion of those for whom the program has been developed will be repeat offenders, as underlined in the fact that 25% of offenders surveyed were recidivists; and

(4) the obvious and accepted indicators of social instability – (ie: an unmarried and/or unemployed status) – do not fit as far as these offenders are concerned. Thus, I found that married individuals were significantly over-represented in terms of the overall proportion of "marrieds" in our province. Further, less than 2% of those convicted were unemployed. Clearly, those to be involved in programming in Nova Scotia are the respected, family segment of society, gainfully employed and in no way mirroring a socially outcast or unacceptable group.

The basic premise on which the proposed research initiatives rest is that effective programming for the drinking driver cannot be developed in a vacuum, but only on the basis of relevant and reliable data. Among the information gaps which should be closed before sound program development can begin is the positive identification of the need to be confronted and an accurate assessment of its extent. Further, I would point out the absolute necessity of determining the distribution of established need in order to ensure that each program unit is a viable one which is adequate to the area of need which it seeks to encompass. The comprehensive data collection procedures advocated are intended to facilitate the establishment of total programming for an entire region or province within a national state, rather than setting-up a somewhat piecemeal project which is only geared to function in one urban centre or local area. This total data build-up, prior to the development and initiation of large scale programming, is, I would submit, what is unique and original in what I have here reported. Last, and by no means least, program development needs to be moulded by a knowledge of the social characteristics of those who are to be involved in the normative re-educative strategy which is to be implemented. Programming developed from such preliminary research initiatives is not an outgrowth of abstract theorizing, but is rooted on a sound reality base which contributes much in ensuring its adequacy and needs-meeting potential. □

"Borderline States" and Mesoridazine

CLINICAL EXPERIENCE AND THEORETICAL CORRELATION*

Charles J. David,† M.B., B.S., D.P.M., F.R.C.P.(C)
Halifax, N.S.

The concepts of Borderline State, Pseudoneurotic Schizophrenia and Undifferentiated Schizophrenia are not new in psychiatry. In general these have been described as a syndrome or a group of syndromes with both resemblances and differences from schizophrenia. Robert P. Knight[1] stated in his paper, "It is the common experience of psychiatrists and psychoanalysts currently to see and treat, in open sanitoria or even in office practice, a rather high percentage of patients whom they regard, in a general sense, as borderline cases."

Freud[2] had earlier drawn attention to the possibility of psychosis underlying a psychoneurotic clinical picture. In practice, the accepted diagnostic categories are not seen in the pure form. We find frequently patients who are in a spectrum between neurosis and psychosis, between the affective disturbance and thought disturbance, between levels of ego functioning which indicate to us the mildness or severity of psychological decompensation.

With his contribution, "The Principles of Grouping Facts in Psychiatry", the late Dr. Adolph Meyer[3] would have us recognize that in the Kraepelinian School, mental symptoms are dethroned unless they are characteristic of aetiology, course and outcome. These three criteria must be satisfied before they can be included in any group categorization. In his own words, "In proposing a plan of grouping the facts of any series of cases of mental disease we recognize, to begin with, the indisputable fact of complexity and therefore high degree of permutability of the data to be grouped."

Even in the neuroses compartmentalization of the different subgroups is not clearly defined, nor do patients fit these labels as neatly as one would like. Ziegler et al[4] have shown that "Conversion" phenomenon is not a homogenous group but forms various subgroups. In this group of Conversion Reaction the following may be included: Depressions, incipient schizophrenias, neurotic anxiety, etc.

Many authors including Hoch and Polatin[5] Melitta Schmideberg[6], Fenichel[7], Stengel[8], Grinker[9] have called attention to the types of cases that belong in the borderline band of the psychopathological spectrum. They have commented on the diagnostic, prognostic, and therapeutic implications of these diagnoses.

In 1941 Zilboorg[10] coined the term "Ambulatory Schizophrenia" to describe a group of people who clearly show autistic thinking and a lack of emotionality but who failed to develop so called secondary symptoms such as delusions and who exist as fringe members of society. These patients rarely see psychiatrists except in medicolegal situations. Hoch and Polatin included, in the rubric Pseudoneurotic Schizophrenia, patients who showed overall anxiety with multiform neurotic symptoms which they called pan-neurosis with chaotic sexuality. In addition they reveal micro-psychotic episodes during stress. In 1948 Ripley and Wolf[11] published data on 50 psychopaths who had developed psychotic reactions during combat conditions. The psychoses were schizophrenia-like in more than half the cases.

Knight[1] has emphasized the importance of assessment of the state of ego functioning in these cases – "We conceptualize the borderline case as one in which normal ego functions of secondary process thinking, integration, realistic planning, adaptation to the environment, maintenance of object relationships, and defenses against primitive unconscious impulses are severely weakened." In addition the clinical picture may be dominated by hysterical, phobic, obsessive compulsive, or psychosomatic symptoms.

In a study of the Borderline Syndrome, Grinker et al found the following patient characteristics appearing most commonly in their series.

1. Those who often as adults had repeated short term hospitalization but with good psychological functioning in intervals.
2. Florid histrionic episodes preceding hospitalization.
3. Quiet or accessible during their diagnostic interview, or rapidly becoming so.
4. Intellectual contact could be made and cognitive functioning intact.
5. Associations were often appropriate.
6. No systemized delusions or paranoid states were found.
7. An ego alien quality to any transient psychotic behavior.

The statistical data related to these conditions are hard to collect. Oberndorf[12] noted that often the diagnosis

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†Assistant Professor, Department of Psychiatry, Faculty of Medicine, Dalhousie University, Halifax, N.S.

is made following a therapeutic attempt or failure. Eisenstein[13] made the diagnosis of Borderline States in 30% of 250 consecutive psychiatric referrals in clinic and private practice.

A number of workers have written regarding psychotherapy of borderline patients, notably Stern[14], Knight[15], Federn[16], Schmideberg[17], Eisenstein[13]. There are some common suggestions made by them all.

1. Warm and supporting attitude on the part of the therapist.
2. Emphasis on reality testing as a major part of therapy.
3. Length of treatment period is more important than intensity of contact.
4. A directive attitude.
5. Avoidance of free association and interpretation of hidden conflict.

While authors have mentioned the use of drugs, no tabled reports are available as far as I know.

PART II

CLINICAL IMPRESSION

It has been a clinical impression of mine that Mesoridazine has a beneficial effect on the Borderline, Pseudoneurotic and Undifferentiated Schizophrenias. To obtain a more consistent impression it was decided to try Mesoridazine on 10 consecutive patients so diagnosed. These patients were seen at three different locations:

1. Psychiatric unit of a general hospital.
2. Psychiatric outpatient clinic of a general hospital.
3. Local mental hospital.

The ages of the patients ranged from 28 to 39 years. The sex included both males and females. Six females and four males. In two patients (one male and one female), there was a history of a previous psychotic episode which required hospitalization. The diagnostic breakdown was as follows:

	No. of Cases
1. Pseudoneurotic Schizophrenia	5
2. Borderline Syndrome	3
3. Undifferentiated Schizophrenia	2
TOTAL:	10

It was appreciated that these patients could be diagnosed as belonging to one or the other category depending on the orientation of the psychiatrist. In the diagnosis of Pseudoneurotic Schizophrenia we followed the clinical description of Hoch and Polatin. Grinker's traits of the Borderline patients were considered in the diagnosis of the Borderline cases. The patients termed Undifferentiated Schizophrenia were so diagnosed at the local mental hospital.

The dose of Mesoridazine was begun at 25 milligrams three times a day to a maximum of 100 milligrams three times a day. Three patients with a diagnosis of Pseudoneurotic Schizophrenia and two patients with the diagnosis of Borderline Syndrome were treated on the inpatient unit. Two patients with Pseudoneurotic Schizophrenia and one of Borderline Syndrome were diagnosed and treated in the Outpatient Clinic. There was no control group. There was no double blind study attempted. The patients were seen on a regular basis – at least twice weekly. Supportive psychotherapy, as indicated, was carried out as usual.

It became apparent that patients who were treated with Mesoridazine showed an improvement. This improvement was noticed within 48 hours. The patient who had been vigilant, tense and on the verge of panic with crumbling ego control demonstrated an objective improvement reflected in the nursing notes and the ability to relate with the therapist. Three patients who were in a psychotic state had their psychoses terminated and the autistic ruminations slowed down to obsessional thinking. One patient with temporal lobe epilepsy producing a schizophreniform illness in the mental hospital did not show the usual violent aggressive behavior otherwise frequently seen even while on other phenothiazines. The other symptoms of schizophrenia during the attacks continued during this study. The other female patient at the mental hospital could not tolerate the drug, but she was sensitive to most other phenothiazines as well.

Four patients showed considerable improvement at the end of seven days and at the end of three weeks reported feeling better than they had even before the illness started. Three patients showed slight improvement so that they felt relieved of the symptoms but continued to need post-discharge psychotherapy and chemotherapy. One patient in the Outpatient Clinic showed a slight improvement – this was mostly demonstrable in his social relationships, and he became more manageable. However, his subjective evaluation of himself was "no different". The patient with the schizophreniform illness was considered improved. The patient who was unable to tolerate Mesoridazine did not improve at all.

One of the four patients who showed considerable improvement developed a dystonic reaction which was precipitated when another drug (Levomepromazine) was added to the Mesoridazine. On discontinuing the latter drug, the side effect was eliminated and she continued on Mesoridazine.

PART III

THEORETICAL CORRELATION

All psychiatrists undergo training. As a resident they are exposed to several classes of drugs that they may use. These include hypnotics, minor tranquillizers, neuroleptics, tricyclic anti-depressants, MAO inhibitors, Lithium salts, etc. If we are to follow the reasoning behind the use of these specific drugs, one would have to speculate that one

meets with clinical pictures in their pure form. However, clinical experience teaches that the so-called classical "textbook" picture is a rarity. More and more one is impressed with a kaleidoscopic array of clinical manifestations that belong in the spectrum between normality and neurosis, neurosis and psychosis, affective disorder and thought disorder, neurosis and sociopathy, psychosis and sociopathy. In the final analysis the ultimate picture bears the characteristics of the individual's biological predisposition, his personality, intelligence, his experience, his environment, and the particular nature, quality, intensity, and duration of the "stress". One has only to read the clinical records of a psychiatric unit, hear the discussions of case seminars, glean through the psychological testings of patients to recognize that this is indeed so. Every therapeutic encounter will include the following variables:

1. The therapist – his orientation and experiences.
2. The drugs "available" to him. This is rather specific since there may be many drugs available but he may have knowledge of a few from each of the many groups.
3. The patient that he is treating.

The potential therapist is influenced greatly by the kind of training program that he has been exposed to. Namely, its emphasis or deemphasis of chemotherapeutic measures in the treatment of psychological conditions. The ability of the teacher to try and test new drugs will further influence his own orientation.

The patient variable to a large extent determines the therapeutic approach. Psychiatrists generally tend to identify target symptoms which they hope to modify. Several target symptoms and signs may be identified. Similarly a constellation of symptoms and signs may be identified. The use of terms such as anxiolytics, antidepressants and antipsychotics originates from this clinical application. The dynamic diagnostic impression guides the therapist in many ways. It suggests particular forms of psychotherapy. It suggests possible chemotherapeutic choice. It communicates prognostic implications.

Generally, the minor tranquillizers have been used for the relief of tension, anxiety and mild situational depression. It is also recognized that major tranqillizers have been used for the relief of tension and anxiety. It is not merely the presence of tension and anxiety that determines the choice of the drug but rather the severity of the anxiety, the extent to which it has influenced ego function. Panic, for example, which may be neurotically determined may often be of psychotic proportions and may be a part of a picture of incipient schizophrenia.

Another major symptom "depression" may be seen along as a similar spectrum. It may be part of a syndrome of depression of psychotic proportions. However, a depressed affect may be found in varying degrees in situational reactions, in neurotic reactions, in schizophrenic reactions, etc. The affects of hostility and anger may be similarly evaluated.

It is now possible to appreciate that in the evaluation of an individual patient one may take into consideration the above factors and determine whether the patient fits along a neurotic spectrum, a depressive spectrum, a thought disorder spectrum or any combination of these.

Where the anxiety is of psychotic proportions, the ego functions severely compromised, the symptomatology crippling, and the assessment of reality interfered with, the choice of a phenothiazine is suggested.

From a theoretical standpoint one may try to explain why Mesoridazine works in cases of the borderline syndromes.

Herman Denber[18] suggests "If the patient is acutely disturbed, hallucinating schizophrenic, then Chlorpromazine, Trifluopromazine or Thioridazine would be the choice. If the patient is an apathetic, retarded, withdrawn catatonic, a piperazine phenothiazine would be indicated. A chronic psychotic patient would require more potent drugs... such as, Prochlorperazine, Trifluoperazine, Fluphenazine, or Perphenazine."

Walter Pöldinger[19] prefers the term neuroleptics for the antipsychotic agents. Chlorpromazine, Promazine are phenothiazines exerting pronounced sedative and sleep inducing effect which may be the reason for their use in excited acute schizophrenic patients. Trifluoperazine, Perphenazine, and Fluphenazine are piperazine-alkyl derivatives exerting pronounced antipsychotic and extra pyramidal effects. Mesoridazine and Thioridazine are piperidine alkyl-derivatives exerting moderate sedative and sleep inducing effect. In their clinical relationship with other phenothiazines this group occupies middle spectrum as far as effects of sedative properties are concerned. In addition Thioridazine has been noted to have antidepressant properties as well.

Mary V. McIndoo[20] reports that Mesoridazine resembles Thioridazine in its qualitative effects. Clinically Mesoridazine has been used with notable success in the treatment of psychotic patients and has been shown to be effective antipsychotic and possibly anti-depressant drug as well.

The question does raise itself. Does Mesoridazine have any specific properties that make it have a markedly beneficial effect on those states that we have termed Borderline, Pseudoneurotic and Undifferentiated? This question is difficult to answer. In general clinical psychopharmacological research has been in areas of major diagnostic categories of what we understand to be schizophrenia. No effort has been made to study its effects in these syndromes.

We may ask, "Why does it work?" The answer to this question is not difficult. These states are considered essentially psychotic. They are associated with several symptoms and signs, suggestive of ego disintegration such as increased activity, severe anxiety to panic states, regressive behavior, resistiveness, increased vigilence, diffuse hostility, dissociative reactions, flight of ideas, hallucinations and delusions with a rather ego alien quality, etc. A mild to

moderate depressive affect or hypomanic flavor may sometimes be suggested. A number of neurotic and psychosomatic symptoms may be present.

It appears that these symptom complexes may be beneficially affected by Mesoridazine.

The relationship that Mesoridazine shares with other phenothiazines suggests that it has a somewhat definite indication in these states. The clinical description of these states makes it susceptible to this chemotherapeutic agent.

Mesoridazine is known to have antipsychotic properties and does influence thought disturbance, grandiosity, hallucinations and delusions. In addition it also influences certain constellations of symptoms which can be grouped together. If we understand the borderline syndrome patients along the two spectrums; namely, a thought disorder spectrum and an anxiety spectrum, then Mesoridazine which is a derivative of Thioridazine which is effective in schizo-affective conditions may have a beneficial effect on these two other parameters of psychological disturbance.

Conclusions

A brief survey of Borderline States, Pseudoneurotic Schizophrenia and Undifferentiated Schizophrenia is given. Clinical experience suggests that a piperidine-alkyl derivative of phenothiazine compound Mesoridazine has a beneficial effect in the treatment of the above conditions. The relationship of Mesoridazine to the other phenothiazines suggests a theoretical basis for the observed clinical response. It is suggested that phenothiazines be used in clinical trails in these borderline states. One such study is presently being explored at the Provincial Hospital in Nova Scotia.

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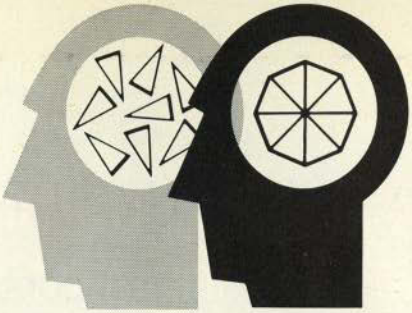

INDICATIONS Serentil® (mesoridazine besylate) is an active antipsychotic agent useful in the treatment of schizophrenia. It has also been found useful in organic brain syndrome and mental retardation associated with psychotic symptoms or where psychomotor disturbances are predominant. It may be of value in some patients with alcoholic withdrawal symptoms.

ADMINISTRATION AND DOSAGE The dosage of Serentil® (mesoridazine besylate) as in most medications, should be adjusted to the needs of the individual. The lowest effective dosage should always be used. When maximum response is achieved, dosage may be reduced gradually to a maintenance level. It is recommended that doses be increased slowly in elderly patients.

RECOMMENDED DOSAGE IN ADULTS:

INDICATION	ORAL DOSAGE RANGE	USUAL DAILY DOSAGE
Schizophrenia	75 mg.-400 mg.	150 mg. per day in divided doses
Mental Retardation (Psychomotor Disturbances)	75 mg.-300 mg.	100 mg. per day in divided doses
Chronic Brain Syndrome (Psychotic Symptomatology)	20 mg.-300 mg.	
Alcohol Withdrawal Symptoms	50 mg.-200 mg.	100 mg. per day in divided doses

Maximum *symptom* reduction can usually be achieved without exceeding 200 mg./day.

INJECTABLE FORM In those situations in which an intramuscular form of medication is indicated, Serentil® (mesoridazine besylate) injectable is available. For most patients a starting dose of 25 mg. is recommended. The dose may be repeated in 30 to 60 minutes, if necessary. The usual optimum total daily dose range is 25-200 mg. per day in divided doses, i.m.

CONTRAINDICATIONS As with other phenothiazines, Serentil® (mesoridazine besylate) is contraindicated in severe central nervous system depression or comatose states from any cause. Serentil® (mesoridazine besylate) is contraindicated in individuals who have previously shown hypersensitivity to the drug.

ADVERSE REACTIONS Drowsiness and hypotension are the most prevalent side effects encountered. Sedation, hypotension and other autonomic effects tend to occur more frequently early in the treatment or when initial high doses are used. When these reactions occur they can usually be controlled by a reduction in dosage. In mild cases of hypotension, the head down supine position may be adequate. In severe cases of hypotension, a pressor agent such as levarterenol bitartrate may be used. Epinephrine should not be administered, since it may result in a further fall in blood pressure. When the injectable form is to be used it is recommended that blood pressure readings be taken before and after the injection. Adverse reactions which have been reported with phenothiazine derivatives should be kept in mind when using Serentil. These include reactions involving: behaviour, central nervous system, autonomic nervous system, endocrine system, skin, cardiovascular system, blood, allergies, liver, urinary system, and abnormal pigmentation.

WARNINGS Where patients are participating in activities requiring complete mental alertness (e.g. driving) it is advisable to administer the phenothiazine cautiously and to increase the dosage gradually. Since it is desirable to keep drug administration to a minimum during pregnancy, phenothiazines should be given only when the benefits derived from treatments exceed the possible risks to mother and fetus. Attention should be paid to the fact that phenothiazines are capable of potentiating central nervous system depressants (e.g. anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorous insecticides.

PRECAUTIONS Since ocular pigmentary changes have been reported with phenothiazines of the piperidine class the possibility of this side effect cannot be excluded. Changes in the terminal portion of the electrocardiogram, including prolongation of the Q-T interval, lowering and inversion of the T-wave and appearance of a wave tentatively indentified as a bifid T or a U wave have been observed in some patients receiving phenothiazine tranquilizers, including Serentil® (mesoridazine besylate). These changes appear to be reversible and related to a disturbance in repolarization. Serentil® (mesoridazine besylate) should be given with caution to patients with heart disease. Leukopenia, granulocytopenia and/or agranulocytosis have been reported following phenothiazine therapy. The possibility of the occurrence of blood dyscrasia can, therefore, not be ruled out. Therefore, patients should be observed for any signs or symptoms of blood dyscrasia. It is also advisable to perform regular blood counts, particularly during the first two or three months of therapy. Hypotension, which is typically orthostatic may occur, especially in the elderly and in alcoholic patients with either dosage form. Resumption of the head down supine position will ordinarily bring the blood pressure back to normal. On rare occasions, and more so after parenteral administration of the drug, prolonged and severe hypotension may occur, requiring the use of levarterenol or phenylephrine. The administration of epinephrine should be avoided in the treatment of phenothiazine induced hypotension in view of the fact that phenothiazines may induce a reverse epinephrine effect and aggravate the hypotension.

COMPOSITION AND SUPPLY **Tablets** — containing 10 mg., 25 mg., and 50 mg., mesoridazine (as the besylate). Supplied in bottles of 100 tablets and 500 tablets. **Ampoules** — of 1 cc containing 25 mg., mesoridazine (as the besylate). Supplied in boxes of 20 and 100 ampoules.
The chemical designation for Serentil is 10-[2(1-methyl-2-piperidyl)ethyl]-2-(methylsulfinyl)-phenothiazine besylate.
Concentrate — each ml. of concentrate contains 25 mg. mesoridazine (as the besylate). Supplied in 4 oz. bottles (approx. 120 ml. per bottle) with droppers, calibrated at 10 mg., 25 mg., and 50 mg.

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An Analysis of Fertility Trends in Nova Scotia, 1952-1971*

Ivan L. Silver,† B.Sc. and Aden C. Irwin, M.D., D.P.H.
Halifax, N.S.

Concern over the population explosion, with its consequent energy crisis, is now one of the greatest fears of modern man. Published statistics for the decade of the sixties show that the population grew faster than during any comparable period in the history of man, and at a rate that may soon exhaust the resources of the earth. Until 15 years ago, little had been done by either governments or private organizations to modify human fertility patterns. In the last decade, however, millions of dollars have been allocated to research and to action programs aimed at altering the course of population growth.

Ravenholt *et al.*[1] have listed some favourable trends and developments which have become apparent during the last ten years:

1. The concept of fertility control has been broadly disseminated over an increasingly receptive world.

2. More than half the population of the world now lives in countries where women have legal access to abortion.

3. Lower-dose oral contraceptives are now widely available in most rapidly developing countries and their utilization is increasing.

4. Outpatient laparoscopic sterilization equipment and techniques, improved intrauterine devices, spermicidal agents, antigonadotrophic releasing factor, improved abortion equipment and prostaglandin therapy, have been developed.

An evaluation of the effects of these fertility control programs seems necessary in the early seventies, to better advise the direction of current and future programs. Since family planning is usually evaluated, at least in the first instance, by attempting to measure its impact on the birth rate, we can observe any effects *over time* as follows:

1. List the birth rates over a number of years, noting any changes in their magnitudes.

2. Tabulate the distribution of births to mothers of all ages, noting any changes in the uniformity of birth rates by age group of mothers.

3. Study the distribution of "non-optimum" births (where "optimum" refers to births with few medical complications for both mother and child, and to births with few social or economic handicaps), comparing changes with the overall birth rate changes.

Dr. R. T. Ravenholt, who is the Director of the Office of Population, Technical Assistance Bureau, Agency for International Development, U.S. Department of State, has expanded the preceding three measures by developing a standardized yet simple analysis of fertility. His basic method (with one modification) will be employed in this paper to examine fertility trends in Nova Scotia from 1952 to 1971, with particular emphasis on the last eight years.

MATERIALS AND METHODS

The data for this study were abstracted from tables entitled: "Live Births By Age of Mother and Total Birth Order", published in the annual Vital Statistics reports of the Nova Scotia Department of Public Health[2]. Three techniques have been applied to these figures:

A. Numerator Analysis

This method, for the evaluation of fertility patterns, does not require a substantial knowledge of denominator data (which is not usually available anyway in most countries) but depends on numbers of births by age of mothers and by birth order, rather than on age-specific parity rates. It was developed by Ravenholt *et al.*[3,4] and the results for each year are displayed as an age-parity grid (Table I), with six marginal indices (outlined in boxes) being of particular interest. Age-parity grids have been prepared for Nova Scotia for the twenty years, 1952 to 1971, revealing interesting changes in fertility patterns by age group of mother and by order of birth.

B. Age-Parity Perimetry

The concept of "excess" births was developed at the University of North Carolina[5] and one definition is "all births occurring to women less than 20 or more than 39 years of age, or a birth order of more than four at any age of mother". This age-parity "perimeter" is outlined in the centre of the age-parity grid (Table I) and the "excess" births lying outside this perimeter are further analysed for Nova Scotia from 1952 to 1971, (Table II).

Ravenholt[6] writes: "With respect to excess fertility limits, the age-parity perimeter of ages 20 through 39 was selected because of a belief that teen-age reproduction is ordinarily bad reproduction in all societies; that reproduction after the age of 39 is ordinarily unwanted and also increasingly hazardous from the viewpoint of the offspring

*Condensed and modified from a report of a Summer Research Project, aided by a Medical Research Council Studentship, under the supervision of Dr. Aden C. Irwin, Professor of Preventive Medicine, Dalhousie University, Halifax, N.S.

†Third-Year medical student, Dalhousie University, Halifax, N.S.

Table I

Live Births by Age of Mother and Live Birth Order
Nova Scotia, 1970

Parity		<15	15-19	20-24	25-29	30-34	35-39	40-44	>45	Unknown Ages	All ages Number	All ages %	Median Ages
1		20	1,738	2,535	805	169	51	13	–	–	5,331	37.65	21.79
2		–	373	1,741	1,151	289	78	13	2	–	3,647	25.75	24.17
3		–	51	691	853	392	152	30	1	–	2,170	15.33	27.01
4		–	6	213	469	293	152	22	1	–	1,156	8.16	28.83
5		–	–	64	214	246	134	32	4	–	694	4.91	31.41
6		–	2	19	94	146	106	41	–	–	408	2.88	33.07
7		–	–	4	57	72	76	36	3	–	248	1.75	34.41
8		–	–	–	22	66	60	27	1	–	176	1.24	35.04
9		–	–	–	10	30	46	24	–	–	110	0.78	36.69
10		–	–	1	4	30	25	15	2	–	77	0.54	35.70
11		–	–	–	1	7	28	9	–	–	45	0.32	37.59
12+		–	–	–	1	12	42	31	4	–	90	0.64	38.87
Unknown		–	1	–	–	–	–	–	–	6	7	0.05	–
All Parities	No.	20	2,171	5,268	3,681	1,752	950	293	18	6	14,159	100.00	24.64
	%	0.14	15.33	37.21	25.99	12.38	6.71	2.07	0.12	0.05	100.00	–	–
Mean Parity		1.00	1.23	1.79	2.69	4.01	5.33	6.58	7.11	–	2.55	–	–

as well as the mother; and the finding from my studies that very few women who have the knowledge and means to prevent reproduction wish to have more than four children; plus the finding that almost all Japanese reproduction, which is now near a net reproduction rate of unity, falls within this 20-39-4 age-parity perimeter".

C. Polyvariate Grid Analysis

This technique, recently developed by Ravenholt[7], allows us to summarize visually changes in the distribution of fertility patterns. The essential elements are:

Table II

"Excess" Births by Age Group
Nova Scotia, 1970

Age Groups	Total Births in Age Group (A)	Excess Births in Age Group (B)	Percent Excess Births in Age Group (B/A)	Excess Births as a Percent of Total Excess (B/Total B)
<15	20	20	100.00	0.48
15-19	2,171	2,171	100.00	52.71
20-24	5,268	88	1.67	2.13
25-29	3,681	403	10.94	9.79
30-34	1,752	609	34.76	14.78
35-39	950	517	54.42	12.55
40-44	293	293	100.00	7.12
>45	18	18	100.00	0.44
Unknown	6	–	–	–
Totals:	14,159	4,119	29.09	100.00

1. Two population characteristics, known to be powerful determinants of fertility (i.e. median age of mothers and mean parity of all births), are the *x* and *y* axes of a graph.

2. On this graph, the coordinates of these two characteristics are plotted for each specific year, as single points.

3. Changes in fertility patterns in Nova Scotia from 1952 to 1971 can be represented as a series of 20 points (Figure 1).

RESULTS AND DISCUSSION

A. Numerator Analysis

The year 1970 is illustrated in Table I merely as an example of this method of analysis, whereas Table III summarizes the six important marginal indices which have been calculated for the entire 20-year period. Of particular interest are the following:

1. Total Live Births. The total number of births should always by kept in mind when interpreting the other indices. Their numbers increased almost linearly from 1952 to 1962, decreased from 1963 to 1969, and then rose slightly in 1970 and 1971. It can be reasonably assumed that the introduction of oral contraceptives in 1960-61 played a major role in this reduction.

2. Mean Parity of Mothers of All Live Births. Ravenholt *et al.*[1] treat parity as a continuous variable and calculate *median parity,* whereas it seems more reasonable to deal with it as a discrete variable and calculate *mean parity.* Mean parity is an index of fertility control behaviour and is one measure of the prevalence of birth numbers, reflecting changes in the numbers of births per year. However, since it is not a measure of incidence, we can expect a time lag and,

whereas the numbers of births began to decline in 1963, a decrease in mean parity does not become apparent until 1965.

3. Median Age of Mothers of All Live Births. This is an index of fertility patterns over time. The median age of Nova Scotia mothers having children has decreased quite linearly over the entire 20-year period.

This reduction in median age of mothers may be due to one or more of the following: (i) a decrease in the number of older women bearing children, leaving a proportionately higher number of younger women becoming mothers; (ii) an absolute increase in the number of younger women giving birth each year; and (iii) a real decrease each year in the ages of all mothers having children. Within the limits imposed by the methodology, this question cannot be fully resolved.

4. Proportion of All Births to Teen-Agers. This measures the extent to which society is failing to exercise adequate control over reproduction. During the 20-year study period, the relative percentage of total births to teen-agers has been increasing, thereby accounting for a portion of the decrease in the median age of mothers.

5. Proportion of First-Order Births. Pearl[8] hypothesized that in a population where the practice of contraception is prevalent and increasing, there should be an inverse relationship between the crude birth rate and the proportion of first-order births. From these data, this is apparent in Nova Scotia.

6. Median Age of Mothers With First-Order Births. Although once considered a key predictor of cohort fertility, now, subsequent to the current widespread availability of effective contraceptives, this may no longer be a valid interpretation. While the median age of mothers of all live births decreased from 27.28 to 24.57 years (a decrease of 9.93%), the median age of mothers of first-order births decreased from 22.51 to 21.85 years (2.93%). When this difference is considered together with the decrease in the total birth number *and* with the decrease in mean parity, we can conclude that older women have substantially reduced their birth numbers compared with younger women.

B. Age Parity Perimetry

On the basis of the above definition, the proportion of excess births to all live births in Nova Scotia during 1952 to 1971, has been summarized in Table IV. The overall decline, beginning in 1964, has been from 39.31 to 28.06 (a decrease of 28.62%) but when examined by broad age group, the decline for mothers age 40 and over is from 9.09 to 6.93 (23.76%); that for mothers 20 to 39 years is from 58.92 to 36.19 (38.58%); while for teen-age mothers, there has been a *relative increase* from 32.49 to 56.88 (76.98%).

In an attempt to explain these trends, the raw data* show that the absolute number of births to mothers in general have declined since 1963, and the greatest decline in mean family size has occurred in the 25 to 29 year age group. However above this age, and especially when women have borne three or four children before 1963, the subsequent reduction in mean parity is slight. As for births to teen-age mothers, the absolute numbers reached a peak in 1962 (2,507), then decreased steadily until 1969 (2,068) but have again increased for both 1970 and 1971. We can conclude, therefore, that fertility control has been more successful in reducing the higher parity births of women aged 20 to 29 than for births to women over 30 years of age, and that it has been of limited value in preventing teen-age pregnancies.

*detailed tables available from the senior author.

Table III

Live Births in Nova Scotia, 1952-1971

	All Birth Orders				First-Order Births	
Year	Total Number	Mean Parity	Median Age	Percentage to Teen-Agers	Percentage of Total	Median Age
1952	17,951	3.31	27.28	9.76	25.11	22.51
1953	18,276	3.27	27.13	10.28	25.59	22.35
1954	18,909	3.34	27.10	10.14	24.97	22.29
1955	18,967	3.31	26.99	10.51	25.52	22.19
1956	19,106	3.34	26.89	10.75	29.70	22.12
1957	19,316	3.36	26.73	11.20	24.78	21.99
1958	18,898	3.35	26.61	11.89	24.86	21.92
1959	19,038	3.37	26.49	12.37	24.81	21.63
1960	19,126	3.42	26.43	12.18	24.32	21.66
1961	19,382	3.41	26.25	12.42	24.42	21.61
1962	19,432	3.39	25.90	12.90	24.68	21.51
1963	18,976	3.40	25.87	12.77	25.15	21.55
1964	18,314	3.41	25.99	12.47	25.03	21.57
1965	16,524	3.30	25.75	13.79	28.13	21.45
1966	15,220	3.10	25.27	15.36	31.07	21.39
1967	14,312	2.93	24.89	15.65	33.74	21.49
1968	13,774	2.76	24.75	15.18	35.79	21.73
1969	13,618	2.69	24.75	15.18	35.60	21.73
1970	14,159	2.55	24.64	15.47	37.65	21.79
1971	14,250	2.46	24.57	15.96	38.87	21.85

Table IV

"Excess" Births in Nova Scotia, 1952-1971

		Excess Births as a Percentage of Total Excess Births, By Age Group		
Year	Excess Births As Percent of Total Births	<20 yrs.	20-39 yrs.	>40 yrs.
1952	34.17	28.58	60.74	10.68
1953	34.16	30.09	58.28	11.63
1954	35.69	28.42	60.24	11.34
1955	35.67	29.49	59.33	11.18
1956	35.76	30.06	58.46	11.48
1957	36.71	30.52	58.14	11.34
1958	37.25	31.93	57.53	10.54
1959	38.29	32.30	56.98	10.72
1960	38.43	31.69	57.35	10.96
1961	38.59	32.20	57.06	10.74
1962	38.94	33.13	56.98	9.89
1963	39.31	32.49	58.92	9.09
1964	38.84	32.18	57.43	10.39
1965	39.29	35.11	55.60	9.29
1966	37.85	40.60	49.73	9.67
1967	35.26	44.38	46.96	8.66
1968	32.42	46.82	44.46	8.72
1969	30.91	49.12	42.73	8.15
1970	29.09	53.19	39.25	7.56
1971	28.06	56.88	36.19	6.93

C Polyvariate Grid Analysis

Figure 1 depicts visually the changes in fertility patterns in Nova Scotia from 1952 to 1971, by plotting two major parameters – the median age of mothers having children and the mean parity of births. The median age of mothers has been decreasing continuously since 1952 – at first slowly, then more rapidly between 1965 and 1967, and now it has almost stabilized. In contrast, mean parity slowly increased from 1952 to 1964 and since then has decreased rapidly.

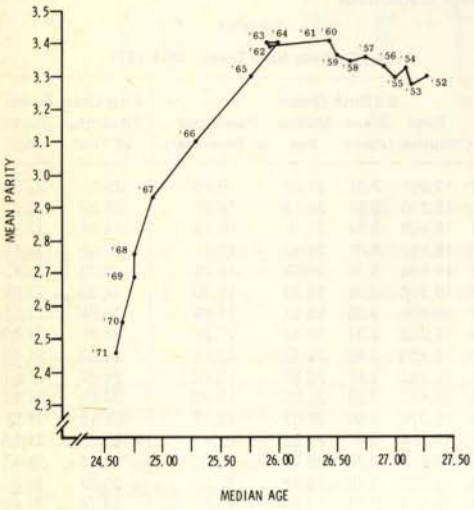

Figure 1

Live Births by Median Age and Mean Parity of Mothers, Nova Scotia, 1952-1971.

From this diagram, the following observations may be made:

1. Nova Scotia women are giving birth to less children than 20 years ago.

2. Babies are being born to younger women today compared with 20 years ago, but the decrease in the median age of mothers has been accelerated by the introduction of oral contraceptives.

3. Since 1965, birth control practices and education have begun to substantially affect the size of families.

CONCLUSIONS

1. Although the number of births in Nova Scotia has fallen substantially since 1962, the decrease appears to have ended, at least temporarily.

2. This decrease in births has not been shared uniformly by mothers of all ages, with older mothers benefiting more than younger mothers.

3. Slightly over 70% of all births today in Nova Scotia can be classified as "optimum" (i.e. not "excess" births according to these criteria).

4. Women under 20 are not being reached by current family planning programs and services.

5. It is recommended that family planning programs should be directed primarily to women under 20, and to older women with three or four children. □

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An Overview of Psychiatric Aspects of Therapeutic Abortion

Charles J. David,* M.B., B.S., D.P.M., F.R.C.P.(C)

Halifax, N.S.

There has been a phenomenal increase in therapeutic abortions in Canada. A total of some 14,188 abortions were performed during the first half of 1972; namely, 3,000 more than the number during the whole of 1970. This rate, therefore, represents some 7.6 abortions per 100 live births compared to an average of 3% during 1970. Essentially the rate varied from 0.5 per 100 live births in Newfoundland to 19.3 per 100 live births in British Columbia with Ontario having the rate of 11.3. The national rate seems to be stabilizing at approximately 8 abortions per 100 live births. These figures compare with abortion rate of 11% for England and Wales (1970), 40% for Czechoslovakia, Japan and Russia, and 29% for New York state.

We have all agreed that therapeutic abortion is a considerable problem facing us today. In phrases such as "The Abortion Dilemma" and "The Terrible Choice" the inherent problems involved in this issue have been outlined. Social, Cultural and Religious factors invariably enter into it and distort the evaluation and cloud clinical judgement.

The new bill states "A therapeutic legal abortion may be granted in an accredited and approved hospital if a board decides that the continuation of the pregnancy will endanger the physical and emotional health of the pregnant woman."

The first difficulty is in determining what is meant by "endangering". The problem gets a bit more complex if one thinks in terms of "endangering the emotional health of the mother". The dictionary defines endangering as exposing to danger – to jeopardise. Yet, pregnancy is one epoch, one incident in the many vicissitudes to which human flesh is heir to. A significant one perhaps, but does it endanger? To what extent? The literature on this subject raises more questions than it attempts to answer.

The second difficulty is in defining "health". The C.M.A. has accepted the definition of "health" as defined by W.H.O.; namely, "Health is not just an absence of disease but a state of physical, mental and social well being." Another issue which we might consider along with the definition of health is the so called concept of "normality". As far as psychiatry is concerned the question of "normality" has been a difficult one to resolve. In the context of health it is perhaps pertinent to explore some perspectives of normality. Here I may briefly outline them as follows:

(1) Normality as "health". Here behaviour is considered normal when no manifest psychopathology is present. To a physician then the lack of signs and symptoms points to "health".

(2) Normality as "utopia". Here health is seen as a state where there is a harmonious and optimal blending of the various elements of mental apparatus and culminates in optimal functioning of the organism as a whole.

(3) Normality as "an average". This is based on the mathematical principal of the bell shaped curve. The middle range is considered normal and the extremes are "deviant".

(4) Normality or health as a "process". Here the perspective is that normal behaviour is the end result of many interacting systems – that temporal changes may upset the balance. Depending on the perspective of health the physician is inclined towards, the views that he takes on the patient wanting an abortion will therefore differ.

The group for the advancement of psychiatry states, "Motherhood requires enormous human and emotional resources; done in a spirit of love and fulfillment it is hard and rewarding; but when the child is unwanted, the task may become onerous and the obligations may become a life long sentence – disastrous for both the mother and the child."

From the point of view of the psychiatrist who is asked to give his opinion on a patient referred to him for a therapeutic abortion, we may try to understand what factors will help him in deciding whether the candidate is "acceptable" or "unacceptable" in satisfying the criteria as laid down by the new law. The following circumscribed and traditional criteria, although infrequently encountered, could probably be consistently applied by different psychiatrists when consulted on the advisability of abortion.

(1) When previous pregnancies have repeatedly precipitated post-partum psychotic reactions.

(2) When the mother is a clear-cut "process schizophrenic" or is in the throes of an acute schizophrenic episode.

(3) When the mother has a severe and a recurrent affective disorder.

(4) When the mother has been previously lobotomised.

(5) When there are suicidal or homicidal tendencies.

With any of the above criteria, most psychiatrists would tend to agree that the candidate who presents herself for a therapeutic abortion would be "acceptable" and would likely meet the approval of the committee involved in processing therapeutic abortions.

*Assistant Professor, Department of Psychiatry, Faculty of Medicine, Dalhousie University, Halifax N.S.

Most difficulties arise with the second group of criteria which are more ambiguous but are far more often used by psychiatrists to characterize women requesting abortions. Here I may briefly list the following:

(1) The presence of a mild suicidal ideation or suicidal gesture in a woman who might otherwise be treated by a brief period of hospitalization or in outpatient care.

(2) Symptoms of a mild neurosis or characterlogical difficulties and problems.

(3) Situations where the mother has pronounced emotional or intellectual immaturity and is likely to be incapable of raising her child or coping with motherhood.

(4) A broad range of socio-economic factors that create serious psychological hardship for the mother.

As will be clear then, almost any woman who wants an abortion might fit "this second set of criteria", and this may be considered as fitting the medical-legal standard. Doctor Joseph Rheingold's quotation contains, I think, the quintessence of this problem which is best stated in his own words. "The explanation of inconsistency of attitudes lies both in the psychiatrist himself and in the complexity of the situations under judgement. Apart from his religious conviction, the psychiatrist is influenced by his ethical and philosophical leanings; his social values; his professional associations; the abortion 'taboo' among physicians; the pressures put upon him; and his unconscious dispositions. The methodological approach too is valuable – the psychiatrist may or may not take into account humanitarian factors, the socio-economic situations, the woman's significant relationships, eugenic possibilities, and the quality of prospective motherhood. He may conform to the letter of the law; he may allow himself a very liberal interpretation of it; or in good faith, he may use subterfuge to bring his findings into consonance with the law . . . He may err in either direction: The woman may be aborted, with regretable consequence or she may not be aborted, with regretable consequences."

Before the woman has had the procedure done, there are a number of factors that create psychological difficulties for her. The first is that sexual relationships do not always occur in a preplanned way. There are many physical reasons for failure of contraception. There are just as many psychological reasons for failure to take contraceptive precautions. Heterosexual relationships between the young school goer and the single or the married adult are often temporary explorations or neurotically determined. Pregnancy does not lend any permanence to such relations but often produces much ambivalence, hate and guilt. The teenager, the single career woman, and the middle aged mother all may respond to the pregnancy in unique ways depending upon their personalities, their life experiences, their social-cultural orientations, their coping mechanisms, their levels of maturity, etc. Be that as it may, the woman finally decides to terminate the pregnancy.

This process involves very often individual soul searching, reactions of dependency, denial, hostility, parental pressures, etc. The woman frequently feels a sense of relief at having made a decision. The single career woman who superficially seems adjusted but who presents aspects of decompensation is not often perceived as requiring or needing help. Immaturity and inadequacy in coping is often not dependent upon the chronological age but depends more upon the total psychic organization of the individual concerned.

It has generally been commented that a great sympathy is often lavished by physicians in general for the school goer and the teenager – an almost parental concern so as to neglect what the girl herself may really want. In the odd case it is possible that the young teenager who is pregnant may not herself desire termination of the pregnancy but may be forced into this through parental pressure or emotional blackmail, and it may be psychologically traumatic for her to be subjected to a therapeutic abortion procedure.

Meanwhile no matter what our private thoughts, attitudes, feelings and sentiments might be, a number of men and women will engage in sexual relationships whether legally sanctioned or not. A number of women will get pregnant. A small number of these will desire termination and will seek it no matter how involved the issues. We cannot ignore this. We have to deal with the social changes that are taking place and the legal changes that, in a sense, reflect this social change.

What about psychiatric sequelae following abortions? Helen Deutsch, some 29 years ago, pointed out that a normal woman seems to assume the right emotionally whether it is legal or not to be a mother or to avoid being a mother by any means at her disposal.

Women with a compulsive need to conceive react to abortion either with severe neurotism or in fact in pregnancy.

A Swedish study of 479 women by Ekbald had a follow-up of 2½ to 3 years. His conclusions were that 65 percent were satisfied with the abortion with no self-reproaches, 10 percent had no self-reproaches but the surgery itself was unpleasant and in 25 percent there was some self-reproach or they had regretted the operation; of these, some 11 percent had serious self-reproach".

Senay has described the clinical course of an aborted woman. There occurs a universal experience of loss that gives rise to mourning process. This process can be inhibited or it can energize older conflicts and begin a train of seriously damaging sequelae or it can result in strengthening of the ego by generating a series of self-examinations resulting in maturational steps. After some months patients appear either to have resolved the conflict or to have successfully repressed it.

In summary then the following points may be made.

(1) The first difficulty is in defining health.

(2) That which relates to the medical profession and is

one of its very fundamental guiding ethics; namely, "above all do not cause harm".

(3) The group for advancement of psychiatry states that motherhood requires enormous human and emotional resources and this obviously has to be considered in relation to the patient's presenting herself for a therapeutic abortion.

(4) The economically affluent do not have difficulty in procuring an abortion; the less fortunate ones have to be labeled or pigeon holed in some way so as to have this procedure done.

Problems which create psychological difficulties before the procedure may be summarized are as follows:

(1) It has to be appreciated by physicians that sexual relationships do not always occur in preplanned ways. Many other factors may predispose to sexual encounter. The sexual union is often a result of passion, a partying spirit, emotional blackmail, or merely a form of growing up for an adolescent girl or the pregnancy may be accidental. These are the factors that are often at the root of so called contraceptive failures.

(2) Heterosexual relationships amongst the young and single school girls or college students are often temporary explorations in their adjustment. It should be recognized that pregnancy should not and does not give it permanence but may lead to much ambivalence, hate, guilt, etc.

(3) The teenager, the single career woman, and the middle aged mother may all respond to the pregnancy in unique ways depending upon their personalities, their social and cultural orientation, their coping mechanisms, their levels of maturity.

(4) A woman has to undergo numerous conflicts and resolve several personal, familial, and social conflicts before she finally opts for an abortion. The woman frequently feels relieved after having made the decision. The physician should be aware of this and attempt not to be judgemental or offer his own philosophy on the issue.

(5) The initial contact with the family physician involves testing him on fundamental questions of morality and ethics. These should be explored in as reasonable a fashion as possible without attempting to make personal judgements regarding the patient's conduct of life. It should be appreciated that almost every woman who is pregnant particularly for the first time has strong ambivalent feelings about her pregnancy. The pregnant woman who opts for an abortion is no different except that the decision has to be made in the first trimester of pregnancy for obvious reasons. This criteria requires, therefore, that we offer help and support to the patient, including some active effort on our part to help the patient to resolve the ambivalence that the patient may be undergoing at the time.

(6) There is almost a parental concern about the pregnancy in the teenager so as to neglect what the girl herself really wants. The parent's feelings are held to be sacrosanct. It is often forgotten that the child may be pressured into accepting this ordeal, for ordeal it is for her on the grounds that parental and social rejection will occur, total and final, if she refuses to consent to the parental decision. It is in such cases that the specialist as well as the committee should do well to see the girl along and make some assessment of her own personal feelings.

(7) When the patient has been referred to the appropriate specialist and has repeated her story, she often hopes for a favorable response and a final answer which is not forthcoming as soon as she expects; hence, she has to wait for a period of a week or two in her continuing dilemma.

(8) From here on it passes to the committee. It is often composed of physicians who have to remind themselves of the abortion law, its technicalities, their own orientations, their philosophies, and via a vis, their prejudices. Once accepted a bed must be located; a gynecologist must be found to do the procedure. In the meantime the pregnancy continues.

(9) If the patient is admitted, she is one of the small number who have behaved "differently from the majority who love children and want children". The attitude of staff nurses, students, residents and interns are often communicated in verbal and non-verbal ways which sometimes compounds the patient's problems and may contribute greatly to the post abortion psychiatric sequelae.

(10) The patient whose gestation has gone beyond 12 weeks may have a different set of problems which may need a different approach.

In unusual circumstances a therapeutic abortion may be granted to a woman who is over 12 weeks pregnant who sometimes has to wait for "15 weeks until a saline is done". This procedure itself lasts for a fairly long period of time and in the conscious moments when the "pain comes and the seconds tick away" many a firmly decided woman relieves her feelings of ambivalence. It is at times like these that the patient needs considerable support and help.

(11) The single career woman who is superficially adjusted but who presents aspects of decompensation is not often seen as requiring or needing help. Immaturity and inadequacy in coping with maternal functions is not dependent on chronological age but depend on the total psychic organization.

Conclusion

The final point to be made is that as far as birth control measures are concerned, therapeutic abortion must certainly be the last possible choice and perhaps the most traumatic and most painful one. If prevention of unwanted pregnancy is our goal, then we have to begin with sexual education, family planning, and birth control measures where all professionals become involved. □

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Temporary Specialist Registration

At a meeting of the Provincial Medical Board of Nova Scotia, held on September 15, 1973, the following resolution re Temporary Specialist Registration or Listing was unanimously adopted:

"The Provincial Medical Board of Nova Scotia *may* grant at the request of the Dean of Medicine of the Faculty of Medicine, Dalhousie University, to a full time or a geographic full time member of the Faculty of Medicine, (not otherwise eligible for listing in the Specialist Register), a Temporary Specialist Registration or Listing.

This Temporary Specialist Registration or Listing would be in effect only while holding a full or geographic full time university appointment, and would be for a maximum of three years only. Such a person must be a resident of Nova Scotia and have full or temporary registration to practise medicine in Nova Scotia."

M. R. Macdonald, M.D., Registrar, Provincial Medical Board of Nova Scotia.

Physician Self-Assessment

Lea C. Steeves, M.D.

Halifax, N.S.

The following questions have been submitted by the Division of Continuing Medical Education, Dalhousie University, and are reprinted from the American College of Physicians **Medical Knowledge Self-Assessment Test No. 1** with the permission of Dr. E. C. Rosenow, Executive Vice-President.

It is our hope that stimulated by these small samplings of self-assessment presented you will wish to purchase a full programme.

DIRECTIONS: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the ONE that is BEST in each case.

333. A 40-year old nurse was treated with penicillin for an injury to her hand. After a seven-day course of penicillin, the wound appeared infected and treatment was switched to tetracycline. After two days of treatment with tetracycline, the patient developed fever, skin rash, generalized aches and pains with a tender, hot, swollen right wrist.

This clinical picture is most compatible with which of the following?

(A) Tetanus
(B) Listerosis
(C) Erysipeloid
(D) Serum sickness
(E) None of the above

□

(Please turn to page 261 for answers)

The Quality of Medical Care

DEFINITION AND EVALUATION*

W. R. Gillis,† M.D.

Halifax, N.S.

Introduction

Our increasingly sophisticated society, unaware of the complex trends involved, is constantly demanding higher standards of medical care not only in hospitals but also within the ambit of the 'office' physician. They make their demands on the doctor, not fully aware of the significant changes that the introduction of 'medicare' may have wrought in the traditional physician–patient relationship: having 'purchased' medical services, the Government has acquired the power to regulate them. It is possible that the quality of medical care may deteriorate rather than improve in a system controlled from outside the medical profession. Therefore, since quality is a vital ingredient, the physician who is striving to upgrade medical care must learn to discern its degree of excellence.[1]

What are our goals?

In 1932, in their *"Articles of Faith"*,[2] Lee and Jones listed their criteria of good medical care; perhaps we physicians would benefit from a review of these standards.

The practice of rational medicine based on medical science;

Emphasis on the prevention of disease;

Intelligent co-operation between the lay public and the practitioners of scientific medicine;

Treatment of the individual as a whole;

Maintenance of a close and personal relationship between physician and patient;

Co-operation with allied health personnel;

Co-ordination of all types of medical services;

Application of all necessary modern scientific medical services to the patient's needs.

Not so very different are the following statements included in the by-laws of The Medical Society of Nova Scotia forty years later:[3]

"The promotion of health and the prevention of disease."

"The improvement of medical services however rendered."

"The performance of such other lawful things that are incidental or conducive to the welfare of the public and of the medical and allied professions."

*From the Division of Family Medicine, Dalhousie University, Halifax, N.S.

†Address for correspondence: Dr. W. R. Gillis, Division of Family Medicine, 5849 University Avenue, Halifax, N.S.
Present Address: Dept. of Family Medicine, University of Mississippi Medical Center, 2560 North State St., Jackson, Miss, 39216.

Where are we now?

How can we say we have a system (of medical care) when accountability is missing, and how can we have accountability or evaluation when we have no standards against which to evaluate the providers, the recipients, and what care is received? In any profession, its practitioners are the only body who logically can develop the standards and evaluation methods of the services they provide: industry is far ahead of medicine in this regard.

Quality control, through formal supervision and review, is a fairly recent and still relatively foreign concept to the medical practitioner. Traditionally, the profession has attempted to maintain quality by controlling education and training, confirming the competence of the graduate M.D. by licensing and certification, and by providing opportunities for continuing medical education. In today's world, we should be employing modern technology and automation to increase our productivity and to measure and evaluate it.

How can we define 'good' medical care?

Based on the preceding goals, a relevant definition might be:

a) The availability of medical, psychological, and related services, according to the patient's needs, when recommended by the physician and economically feasible.

b) Good professional judgment in the use of currently accepted standards of preventive, diagnostic, therapeutic, and rehabilitative services.

c) Continuity of care.

d) The patient's understanding of and satisfaction with medical care, and his responsible participation in it, to his maximal ability.

e) Professional responsibility.

How can we assess standards of medical care?

Before we can determine the maximal possible usefulness of our services, we must assess present achievements. How?

The quality of care given to individual patients depends upon four factors: the knowledge, skills, and attitudes of the provider; the amount, validity, and organization of available information; the circumstances or setting in which the care is provided; and the compliance of the recipient patient. To assess this requires consideration of three stages: a) entry into the system *(i.e.,* accessibility and

availability of services); b) measurement of quality once the patient is 'in the system' (system structure and how individual episodes are handled); and c) continuance in the system (patient satisfaction, compliance, and acceptance of the services provided) or exit from it (cure, dissatisfaction).

The ultimate purpose of quality assessment should be to ensure that the health care provided is competent, efficient, economically feasible, and humanely administered. To do this, we must make available, whenever feasible, the fullest measure of scientific knowledge: this could alter the mortality/morbidity rate or the degree of discomfort – and, furthermore, is a right of all citizens, since the introduction of a national medical-care scheme financed by taxation. To achieve this, some portion of the funds allotted for health care must be used to raise its quality, for ambulatory as well as hospital patients. In addition, the continuing competence of individual practitioners must be assured, a concept that should be supported by medical societies.[4]

Systematic peer-review based on direct evaluation of patient care is one way to obtain information about the quality of health care provided; however, this can be cumbersome, expensive, time-consuming, and impracticable. Record-review, however – even with a source-oriented record, as now used – can be readily analyzed to assess the quality of care. Newer types of partly computerized problem-oriented records, in which all data are arranged in categories according to the medical problems,[5] can be used to monitor care and thus alert us to improve its quality. As careful, accurate recording is a necessary element of good care, this is a proper method of evaluation. In addition, profiles of physicians and other providers of medical care can help in self-evaluation and thus lead to changes in behavior – evaluation is necessary to control quality in *any* system.

To evaluate the quality of care, we must consider the criteria of its excellence, the credentials of the providers of care *(e.g.,* licensure), and which organizations and facilities favor 'quality of care'. (In 1914, Dr. John Codman reviewed hospital cases against an arbitrary standard, and published *A Study in Hospital Efficiency*[6] – probably the first attempt at peer review. Have our techniques advanced since then?) Like medical practice itself, the approach to quality evaluation should be based on a combination of assumptions and established theories about the values of various modalities of service in clinical situations. A practice can be assessed by direct observation and medical-record review, to determine the degree to which responsible physicians adhere to accepted principles of management.

Rosenfeld[7] has said that we should "evaluate the extent to which medical records are kept and whether the records of individual providers have the potential for evaluating quality": that is, whether they contain the necessary, logically planned, data elements. Deficiencies in recording jeopardize the continuity of care, especially now that many providers may be concerned in the care of an individual patient. To evaluate and compare the quality of care, we need the following basic elements in the routine record: 1) patient identification (name, age, sex, etc.); 2) provider identification (name, training, experience, etc.); 3) the place and date of care; and 4) the presenting complaint, diagnosis or problem; services and procedures; medication; and disposition of the patient. (The M.S.I. card now in use in Nova Scotia satisfies all but one – disposition of patient – of these criteria.) Given these basic facts, to compare a medical problem and its management in two or more patients requires a standard method of recording.

The purposes of review are to reveal incompetence, reward excellence, and improve function and activities through continuing valid feedback. Before embarking on a review of evaluation, however, the physician must train himself in modern medical audit, and the following factors must be operative:

A clear statement of the goals, purposes, and specific objectives of the quality-assurance program;
Participation of all relevant health personnel;
Acceptance of the concept of 'change for improvement', not 'change for its own sake';
Channels for appropriate feedback to all participants; and A system of reward rather than punishment.

'Outcome assessment' of medical care is difficult – depending, as it does, upon the ascertainment of its aggregated factors from the patient and requiring time consuming, costly, and often unreliable interview techniques. Therefore, far more emphasis should be placed on 'process assessment', which is easier to accomplish.

And the future?

Efficient medical care should apply current scientific knowledge and accepted principles of practice, to promote health concepts; to prevent illness, disability, and premature death; or, when this is not possible, to ameliorate the effects of illness. The most critical test of medical care will be the one devised to measure our progress toward these goals.

Improved standards of life require harder work, better organized work, more efficient use of our resources, and improved technology. We have a high expectation of happiness and increased standards of living, but sometimes are reluctant to adjust individually and socially to realize our goals; for example, automation is now part of our way of life, a social and economic concept we must accept to be competitive in the market place. Medical practice is a process of continual adaptation and readjustment, and automation should be viewed as a complex of techniques to be adapted to our changing requirements. We, also, must change. We cannot afford to 'sit this one out'. It is better to do something constructive *now* to preserve our professional status than to trust blindly in the future, hoping everything will be 'all right'. It is time to use organization and technology to our own advantage. Competitive industry and business have already developed techniques and concepts that are applicable, with minor adaptations, to the practice of medicine; it is up to us to accept and use them.

References on page 239. □

A Message from MARS

(MARITIME AMBULATORY RECORD SYSTEM)

A. G. Cameron, M.D., W. R. Gillis, M.D., D. B. Shires, M.D., and L. C. Steeves, M.D.

Halifax, N.S.

MARS – Maritime Ambulatory Record System is a Canadian federally funded health research project which is exploring modern information communication technologies and attempting to introduce these technologies to the problem of handling clinical information in the family physician's private office.

Its prime objective therefore is the development of a quality care health record system. Its ultimate objective is to explore the needs for modern information processing and where appropriate introduce these technologies to the doctor's office.

The Project team has set itself seven questions regarding the process of ambulatory care.

(1) Are the ambulatory health care needs of the populace being met by the present "system"?

(2) Can we meet the rising public demand and the challenges posed by consumers for higher quality health care?

(3) Can we define, and where necessary, up-grade the process by which ambulatory care is being provided?

(4) Can we increase the productivity of the ambulatory-care physician?

(5) Can we assure ourselves that a minimum standard of health care is being provided for any given community?

(6) Can we introduce concepts of preventative health care and "risk-counselling" to the traditional crisis-oriented M.D.?

(7) Can we be specific in tailoring education programs to the real needs of individual ambulatory care physicians to maintain their optimal competence.

A record system utilising modern methods of information technology, would provide a great percentage, if not all, the answers to questions posed above.

Having reviewed automated, semi-automated and manual record systems, the MARS Project has chosen the following criteria for the optimum record:

- It must provide rapid access, ease of storage and quick updating of information
- It must be suitable for a wide variety of family practitioners offices and primary care situations
- It must be low cost (both direct and indirect)
- It must improve communications and be capable of use by all health professionals
- It must be reproducible, clear and simple in information presentation

Further investigation led us to believe that the record system should be problem-oriented, consist of two parts (data gathering & alert file), enhance team approach and shall be first piloted through a variety of primary care situations and be subject to revision before widespread implementation. We believe that the MARS system as devised meets many, if not all, of these criteria.

The usual ambulatory care record in the private physician's office usually consists of a small 5" X 8" card on which are scribbled various notations such as, "doing well", "U.R.I.", "X.Y.Z.", etc. – whatever comes to mind. The convenience of this is that it can be easily stored in the office area, usually a desk top drawer and the mass of real information is retained in the mind of the health practitioner. However, if you consider that the average health practitioner looks after a thousand families, each of which may have four members and each member may have three problems, means that the average health practitioner is required to accurately remember details on approximately 12,000 problems. Clearly this is impossible! Consequently there is a desperate need for a proper system and an organization of information in the primary care physician's office which constitutes 90% of the health care administered in North America. Family doctors file their records in many ways, the one quoted previously being the desk drawer approach but many group practice clinics are now working towards the family filing system which enables them to see the interaction of disease processes between family members and their relation to the manifestation of disease in the patient before them.

The MARS Record consists of 2 subsystems -

a) An Alert File
b) A data collection system

Using the family filing technique, these records are color coded and arranged in a simple file drawer. The forms that are used within the folder are listed as follows:

Alert File

1. Problem/Medication list
2. Progress note

Data Collection System

1. "Past Female History"
2. "Past Medical History"
3. "Immunization and Family History"

4. "Birth and Pre-school record"
5. "Progress Note Backing"
6. "Laboratory Report Backing"

The advantages and disadvantages of this new system are as follows:

Advantages

1. Savings (indirect)
2. Quality Assurance
3. Cheaper than commercial supplier
4. Communication instrument between Health Professionals
5. Transferable between communities
6. Computer compatible
7. Makes health care delivery "fun"

Disadvantages

1. Cost (direct)
2. Space requirements
3. Weapon potential
4. Requires obsessional dedication to detail
5. Removes "mystery" of medical care

The physician is basically concerned with the first part of the system – the ALERT FILE. When the physician or health professional sees the patient, he opens the family chart and there, laid out before him are the family problems. Next he refers to the patient's personal chart and when opened, it reveals his problems, medication list, as well as the chronologically arranged progress notes. The remaining data collection forms are filed behind the progress notes and do not immediately concern the doctor.

The second part of the MARS record system is basically an organized data collection method. These formats can be filled out by the patients themselves, or alternatively by a nurse or trained paramedical personnel. The antenatal record is an example in point. This is in two parts, one is the previous female history, the second part is an antenatal record. When the patient is admitted to the obstetrical unit this second part (the antenatal record) is removed from the chart and sent to the hospital as a record of antenatal care. This then becomes part of the hospital record system, and fulfills the objective of providing a communication vehicle between dispensers of health care.

Currently this manual system is being piloted in 3 clinics -

- a rural practice 30 miles outside of Halifax
- an urban practice within the Halifax city limits
- the Family Medicine Centre, the academic Department of Family Medicine at Dalhousie University

Where do we go from here? A number of medical clinics throughout the Maritime Provinces have already expressed interest because of their need for a medical record system. They are waiting for the pilot project to be finished in hope of implementing the system in their respective clinics.

We would be pleased to hear from all interested parties throughout the province and look forward to seeing you at the seminar detailed below where the system will be fully demonstrated and all of your questions can hopefully be answered.

WORKSHOP ON PRIMARY CARE RECORDS

TITLE:	Quality records for Primary Care
PLACE:	Dalhousie University, 15th Floor, Tupper Medical Building
DATE:	Saturday, January 26, 1974
PARTICIPANTS:	Primary Care physicians

Dietary Management of Hyperlipidemia

A. Schlossberg,* M.D., F.R.C.P.(C)
Halifax, N.S.

Hyperlipidemia is present if there is an abnormally increased plasma concentration of cholesterol, triglyceride or both. The term hyperlipoproteinemia is preferred because lipids are transported in the plasma bound to specific protein carriers, and abnormal cholesterol and triglyceride concentrations are an indirect reflection of an abnormality in the concentration of the lipoproteins.

The rationale for identifying and treating these disorders derives from the recognition of hypercholesterolemia as an important risk factor for atherosclerosis; the correlation is less clear for hypertriglyceridemia. Additional benefits of therapy are control of attacks of abdominal pain and pancreatitis which sometimes occur with hypertriglyceridemia, and the regression of xanthomata which often accompany these disorders.

There is no clear division between normal and abnormal plasma lipid concentrations. The upper limit of normal is usually taken to be the upper 95th percentile in a distribution of values from normal subjects of comparable age in the population in which the patient normally lives. Table I shows the generally accepted upper limits of normal for a North American population. However, the cholesterol levels are higher than those usually considered satisfactory in terms of risk of coronary atherosclerosis. A normal distribution curve for both cholesterol and triglyceride for all age groups in the Nova Scotia population is needed.

Table I

Upper Limits of Normal

Age	Plasma Cholesterol (mg %)	Plasma triglyceride (mg %)
1-19	230	140
20-29	240	140
30-39	270	150
40-49	310	160
50-	330	190

Table II

Type	Synonym	Frequency	Major Clinical Features	Secondary Causes
I	Fat-induced or exogenous hypertriglyceridemia	Rare	Abdominal pain Hepatosplenomegaly Lipemia retinalis Xanthomata (eruptive)	Alcohol Diabetes Pancreatitis
II	Familial hypercholesterolemia	Common	Xanthomata (tendinous, tuberous) Xanthelasma Corneal arcus Premature vascular disease	Hypothyroidism Obstructive liver disease Nephrotic syndrome
III	"Broad-beta" disease	Rare	Xanthomata (tuberoeruptive, palmar) Premature vascular disease	–
IV	Carbohydrate-induced or endogenous hypertriglyceridemia	Very common	Xanthomata Premature vascular disease Carbohydrate intolerance	Diabetes Alcohol Pancreatitis Nephrosis Hypothyroidism
V	–	Common	As for I and IV	Diabetes Alcohol Pancreatitis

*Lecturer, Department of Medicine, Dalhousie University.

Table III

Type	Plasma appearance	Lipid Concentration TG	C	TG:C	Lipoprotein Electrophoresis
I	supranatant-cream infranatant-clear	↑↑↑	N or ↑	8:1	Marked increase chylomicrons at the origin
II	usually clear	N or ↑	↑	1:5	↑beta lipoprotein (low density)
III	Turbid	↑	↑	1:1	↑beta lipoprotein (broad band)
IV	Turbid	↑	N or ↑	5:1	↑pre-beta lipoprotein (very low density)
V	supranatant-cream infranatant-turbid	↑↑↑	↑	Variable	↑chylomicrons ↑pre-beta lipoprotein (very low density)
Normal	Clear	< 190mg% (age related: see Table I)	< 330mg%	1:2	no chylomicrons no pre-beta band β and α bands present

Five major types of hyperlipoproteinemia have been defined on the basis of the pattern which emerges with electrophoresis of the plasma lipoproteins. The type does not imply a specific etiology or disease state. Most patterns can be produced by a variety of disorders and hence may be a secondary hyperlipoproteinemia due to renal, hepatic, thyroid or other metabolic disease (see Table II). Each type can also occur as a primary hyperlipoproteinemia which is often familial and genetically determined.

Tables II and III outline the major clinical and biochemical features of each type. It should be noted that:

(a) only Types II, IV, and V occur commonly.

(b) all but Type I are associated with an increased risk of premature atherosclerosis.

(c) Types III, IV, and V are associated with an increased incidence of diabetes mellitus.

(d) Type II is characterized mainly by an increased serum cholesterol, and Types IV and V mainly by an increased serum triglyceride.

(e) the Types can be differentiated in over 90% of cases by the clinical picture in conjunction with the appearance of the plasma and the triglyceride and cholesterol concentration (see Table III).

The mechanism of the hyperlipoproteinemia in these disorders is complex and in most instances involves a number of factors leading both to increased synthesis and decreased clearance of the lipoprotein particle(s) in question. However, this classification is useful in selecting appropriate dietary and drug therapy for lowering plasma lipoprotein levels.

The following measures should be taken prior to instituting specific therapy:

1. *At least two determinations of the plasma cholesterol and triglyceride after a 12-14 hour fast. Cholesterol must be performed by an extraction method to measure true cholesterol. The SMA 12/60 method for serum cholesterol measures other constituents too and consequently gives an overestimate.*
2. *An attempt should be made to determine the type of disorder. This can often be determined by the clinical picture, the cholesterol and triglyceride level, along with observation of the fasting plasma after it has been stored for several hours in the cold. Differentiation sometimes requires lipoprotein electrophoresis, and occasionally ultracentrifugation, though the latter is not widely available. If the cholesterol and triglyceride levels are normal for the patient's age, for all practical purposes a lipid abnormality is not present.*
3. *Exclude and treat any underlying cause (see Table II).*
4. *Determine if the disorder is familial. The younger family members stand to gain most from correction of the lipid abnormality, and young siblings and offspring in particular should be screened for hyperlipoproteinemia.*

Dietary management should always be the first step, and only when the response is inadequate should drug therapy be considered. Dietary therapy should be continued even if drug therapy is undertaken later, since the results are often additive. Non-familial forms of hyperlipoproteinemia are usually more responsive to diet.

Type I The diet should be low in fat, less than 25-35 grams per day, with no alteration in the polyunsaturated to saturated (P/S) fat ratio. There need be no cholesterol restriction (normal intake approx. 700 mg/day) and no carbohydrate restriction (normally about 50% of calorie intake). Alcohol should be avoided.

Type II The diet is low in cholesterol, less than 300 milligrams per day. There should be a decreased intake of saturated fat and an increased intake of polyunsaturated fat so as to change the P/S ratio from 0.5 or less (in the usual North American diet) to greater than 2.0. This can be accomplished by removing eggs, whole milk, most dairy products, and decreasing the animal fat intake while supplementing with polyunsaturated fat. The carbohydrate and protein intake are not limited. Alcohol is not known to aggravate this form of hyperlipoproteinemia. The effect of diet is largely established within two months and may be the only treatment necessary in non-familial forms. In familial forms, and especially in the homozygous patients, addition of drug therapy is usually necessary.

Type III Though this is a rare form of hyperlipoproteinemia, it is very responsive to diet and drug therapy. The diet should be designed to achieve ideal weight and should consist of 40 percent carbohydrate and 40 percent fat, the latter being low in cholesterol and saturated fat.

Type IV The main feature of the diet here is that it be one which will cause a reduction to ideal weight. This alone will often render a return of the serum triglyceride to normal. Carbohydrate intake should be low (less than 40 percent) and alcohol should be avoided, since both these constituents tend to increase the triglyceride concentration. The cholesterol intake should be moderate (300-500 milligrams per day) and the fat composition modified.

Type V Again the main feature of the diet is to maintain ideal weight. The fat intake should be restricted to about 30 percent of total calories and modified to a P/S ratio of greater than 2.0. The carbohydrate intake should be controlled to about 50 percent of total calories, cholesterol moderately restricted to 300-500 milligrams per day and alcohol should be avoided.

If the response to diet is inadequate in any form of hyperlipoproteinemia (except Type I), it may be necessary in some patients to proceed to *specific* hypolipidemic drug therapy. The treatment of hyperlipoproteinemia is predicated on the reasonable basis that correction will reduce the risk of atherosclerosis, but it remains to be unequivocally established that this can be accomplished. □

(Handbooks on "Dietary Management of the Hyperlipoproteinemia" are available free of charge from the U.S. Department of Health, Education and Welfare, Public Health Service, National Institutes of Health, Bethesda, Maryland).

What Is Your Diagnosis?

B. St.J. Brown,* M.D.,

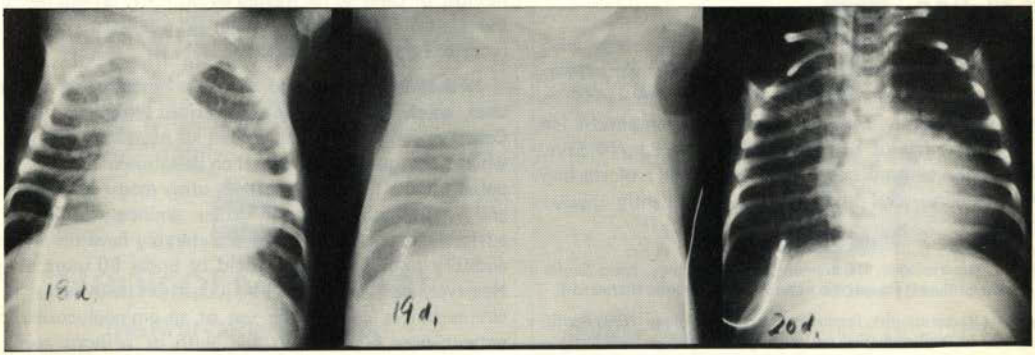
Halifax, N.S.

This premature infant has had respiratory difficulty since birth. Initially this was due to R.D.S. (Hyaline Membrane Disease) but recently there has been evidence of patent ductus arteriosus. Since birth an endotracheal tube has been necessary.

The above radiographs illustrate the status of the heart and lungs on the 18th day, 19th day and 20th day.

On the 19th day (fig. b) there was sudden deterioration in his condition but this rapidly improved with treatment.

What is your diagnosis of the cause of the sudden deterioration on the 19th day?



*Dept. of Radiology, I.W.K. Hospital and Dalhousie University.

(Please turn to page 261 for answers)

A New Aminoglycoside Antibiotic

E. V. Haldane,* B.Sc., M.B., Ch.B., K. Yuce,** M.D. and C. E. van Rooyen,† M.D.

Halifax, N. S.

BB-K8 is a new semisynthetic aminoglycoside antibiotic,[1] developed by Bristol Laboratories, at present only available for investigational purposes.

It has a broad spectrum of antibacterial activity including *Pseudomonas aeruginosa.*[2,3] Of particular interest is its marked inhibitory action against many gentamicin resistant strains of *Escherichia coli,* Klebsiella sp. and Providentia species.[4]

In general, its inhibitory effect against Enterobacteriaceae species is slightly less than that of gentamicin.

So far, BB-K8 has been employed in 5 patients whose infections failed to respond to other antibiotics.

CASE I, K.A.B.

Osteomyelitis of right femur, infected with *Pseudomonas maltophilia, Serratia marcescens* and Achromobacter sp.

This man had previously been treated with Staphcillin and Keflin without improvement. Following a 10 day course of 500 mg of BB-K8, given intramuscularly q.12.h. there was marked improvement and gram negative bacteria were eliminated from wound cultures.

CASE II, J.J.B.

Empyema with oesophago-pleuro-posterior chest wall fistula following a severe accident. Organisms present were *Pseudomonas aeruginosa, E.coli* and *Klebsiella pneumoniae* resistant to multiple antibiotics following prolonged therapy. He was given a course of BB-K8, 500 mg/IM/q.12. h./10 days. His clinical condition showed steady improvement and permitted surgical excision and drainage of the gastric fistula after which he was discharged from hospital.

CASE III, H.P.R.

Sustained a gunshot wound of the left arm with shattering of the midshaft of the humerus. The wound was infected with *Pseudomonas aeruginosa,* which failed to respond to treatment with carbenicillin and gentamicin. He was given a course of BB-K8, 500 mg/IM/q.8.h./10 days. Wound swabs became negative within 4 days of starting BB-K8 therapy, and the wound subsequently healed satisfactorily.

*Assistant Bacteriologist, Department of Bacteriology, Nova Scotia Department of Public Health.

**Assistant Bacteriologist, Department of Bacteriology, Nova Scotia Department of Public Health.

†Acting Director, Department of Bacteriology, Nova Scotia Department of Public Health.

CASE IV, G.W.M.

Developed an intra-abdominal abscess and septicaemia following insertion of prosthetic grafts into the right iliac artery. Organisms isolated from the abscess were *Escherichia coli* and *Klebsiella pneumoniae.* No marked improvement followed treatment with kanamycin, chloramphenicol and clindamycin, and it was decided to give a course of BB-K8 to which both organisms were sensitive *in vitro.* After 5 days treatment with BB-K8, 500 mg/IM/q.8.h. the patient showed evidence on audiogram of mild deterioration of hearing in the right ear and the drug was discontinued. Although his general clinical condition was slightly improved, *E.coli* and *K.pneumoniae* were still cultured from the abscess drainage.

CASE V., J.A.

Was admitted to hospital with severe and intractible lower urinary tract infection complicating prostatic hypertrophy. The infecting organism was *Proteus retgerri,* which was resistant *in vitro* to multiple antibiotics, including gentamicin, and failed to respond to such treatment.

The organism was sensitive in vitro to BB-K8, and a course of treatment was therefore given; 500 mgm/IM/q.8.h./10 days. Within 5 days the patient was no longer symptomatic, the urine became sterile and prostatectomy was carried out without incident and with satisfactory recovery.

Discussion

Since BB-K8 is at the moment in the early phases of its clinical application, more time is required to evaluate its potentialities and sphere of usefulness. In the limited number of cases so far treated by us, it has proved useful in the control of infections which have failed to yield to a range of other antibiotics.

Within the dosage and duration range which we have used, we have not encountered serious toxic symptoms. In Case IV, some slight impairment of hearing was detected, which subsequently recovered on cessation of therapy. This patient had a history of chronic otitis media in childhood, and in common with all other aminoglycosides, it is advisable that patients should preferably have no previous auditory pathology, and should be under 60 years of age. However, each case should be judged on its own merits. If circumstances compel the use of an aminoglycoside in a patient over 60 years of age, with or without auditory impairment, the aggravation of deafness should be accepted as a calculated risk. □

Acknowledgements

We wish to thank Drs. D. Nicholson of the Dept. of Surgery, D. Petrie of Orthopedic Surgery and C. L. Gosse of Urology, for their cooperation and assistance, enabling clinical studies to be performed; also Dr. J. Hammerling who performed audiograms on the patients.

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These papers were all presented at -
13th Interscience Conference on Antimicrobial Agents and Chemotherapy, 19-21 Sept., Washington, D.C. American Society of Microbiology.

The doctor and his leisure

Back to School as a Hobby

Paul E. Kinsman, M.D.

Wolfville, N.S.

Surely the physician, individually and collectively must develop a clear understanding of the balance between undue concern over the quality of medical services provided by himself and his confreres, on the one hand, and a carelessness as to his professional image resulting from the standard of his health delivery on the other. Such an orientation is essential if the physician is to remain free from an introspective paranoia which seems to be insidiously invading every area of the body politic of the medical profession, as we try to adjust to the changing social structure of today's world. An obsession with the concept, whether real or imagined, of constant public and government derogatory scrutiny of quality of care and fee schedules, assures the individual physician of frustration in his work, resulting unhappiness, reduced productivity and unnecessary fatigue. In this situation the physician loses perspective and like other human beings turns to unproductive and often self-destructive means of soul fulfillment, failing to take proper advantage of increased leisure time available to him more and more as group practice arrangements become fact in today's medicine.

Each individual may choose his own particular form or forms of recreation, boating, skiing, painting, politics, but it seems self-evident that whatever his choice, it must be beneficial to his total well being and that of his family. It is a fact that many times the leisure recreation demands work. It often must be away from his home and can in some cases be dangerous to the health of the physician.

I wish to present for your consideration a leisure time involvement which can be carried out in front of the fire in your favourite chair in the midst of family in your home. It is not dangerous and above all it stimulates the physician to think and write in abstracts applied to practical human situations.

When I returned to Nova Scotia from a brief ill-conceived sojourn in Maine in September 1967, I found myself in a university town. Close association with university personnel both professionally and socially, prompted me to complete my undergraduate degree. Changed university regulations allowed me to utilize credits and created the situation whereby completion of five Arts courses as a Major, and using my pre-Medical Science courses as a minor, I could obtain my Bachelor Degree in Arts at Acadia University.

It seemed worth a try so being interested and active in politics I registered with my Major in Political Science. Of the five courses necessary I took one at regular summer school sessions, three during regular class sessions and one as an evening class, successfully completing them all and maintaining an average to qualify for major course requirements.

This was not a small task but certainly if I could do it any of my confreres could do so. I asked no favors of my professors and received none, being treated as any student.

What did it do for me?

(1) I was taught by men qualified in their field of political science.

(2) I was forced to read and encouraged to enlarge my small library by some 100 volumes.

(3) I was forced to adjust the focus of my mind to a different aspect of human endeavour.

(4) I was placed among young people half my age and heard them put forth ideas which made me think.

(5) Above all I learned a lot, not only of the British tradition in Government, but also of other great nations – the United States of America, Russia and China.

The work was worth it. I am glad and rewarded by having completed the courses. Above all it broadened my understanding and awareness of society.

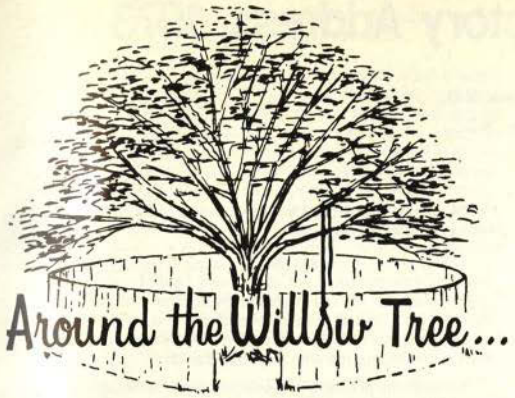
My experience may not provide startling reading, but I would recommend it to you for what it is worth. Take advantage of the university in your area to direct your thoughts toward abstract principles of justice, equality and liberty. □

JAMAICA MEDICAL CONGRESS – 1974

The British Medical Association and the Medical Association of Jamaica will hold an International Congress in Kingston, Jamaica, from April 21-27, 1974. The programme will feature speakers from the U.K., Canada, the U.S.A. and the Caribean countries.

Arrangements are being made for charter/group travel from Canada and a block of rooms (75) has been set aside at the Jamaica Pegasus for Canadians. The daily rates at the hotel will be $13.00 per person for twin occupancy and $19.00 for single occupancy. Registration fee for the Congress will be $100.00 for registrants and $60.00 for spouse. The social side of the programme indicates that the well known Jamaican hospitality and entertainment are not being overlooked.

The deadline for preferred housing has been set at December 14, 1973. All those interested in attending are asked to contact DR. J. S. BENNETT, at C.M.A. House, Ottawa, Ontario.



DOCTORS BLUNDER TOO!!!!

Chloris Mahar, Kentville

(Heard when transcribing dictation)

"It was noted on examination that this lady had dyspareunia."

"She is able to walk to school which is a block away in fine weather."

"This patient was admitted for internal rectal bleeding over the last few years by Dr. Tweedie."

"This little full term normal delivery child has had a cold since birth, but prior to that no trouble."

"Pain which is left on the right than the worse."

"The patient will require h.s. sedation to sleep for several months."

"This lady was first treated for this complaint following a car accident in Chedoke Hospital a year ago."

"Pain in calf of legs when he walks briskly for several years. . ."

"a history associated with pain on voiding on and off for the past two years."

"This patient has been on one tablet of Prednisone for three years."

"This patient complains of lumps on her toes which bother her shoes."

"Most recent audiometer test shows . . . and at 2,000 both ears fall off and go down. . ."

"Patient had a Colles' fracture with good results."

"Jo-Anne was admitted to hospital, placed in a croupette and covered with an antibiotic."

"He has also experienced discomfort which he has from time to time with walking fast, especially after having a meal within two blocks."

"I saw this perennial blossom in the Chedoke Hospital again on June 14, 1968." (Dr. Marson)

"The patient has been injected roughly each month. . ." □

SUMMER MEETING

Hard-nosed business sessions of the September 7-8 Executive Committee at the Digby Pines Hotel had compensatory in-puts on the local greens, tees and fairways (as well as the rough) and on the tennis courts.

In men's golf Dr. G. D. Douglas, Halifax, low grossed his win of the Medical Society Trophy and a weekend at the Pines. He was followed by Dr. Ian Bruce, Yarmouth, who pulled in six golf balls and a new putter. Low net winners were Dr. C. H. Young, Dartmouth, who picked up a trophy and a golf bag, followed by Yarmouth physician Dr. A. Legere who took in six golf balls and a small tote bag as trophies.

The hidden hole ace was Dr. Jeff Whisten, Halifax, who was rewarded with 12 golf balls.

Lady low grossers – if the expression is appropriate – were, first, Mrs. T. J. McKeough, Sydney Mines, who took the Rose Bowl and a trey of balls, followed by Mrs. M. M. Davis, Halifax, who came up with three golf balls and a handbag prize.

Mrs. D. B. O'Brien won the Murray G. Bulger trophy in low net calculations with Mrs. A. J. MacLeod nipping into second place for a reward of golf balls and golf socks.

On the courts the Myrden Cup went to men's singles winner Dr. J. A. McPhail, Sydney, and ladies' singles winner Miss Donna Shakespeare, Halifax, walked away with the cup and saucer to come back later for a cake plate as co-winner in the mixed doubles with Mr. R. Miller, Halifax, a beer stein winner.

Beer steins also went to Musquodoboit Harbor physician P. B. Jardine and Dr. Kazimirski of Falmouth for top men's doubles play. □

Physician Self-Assessment – ANSWER

Question No.	Correct Answer
333	D

What is Your Diagnosis?– ANSWER

The endotracheal tube had slipped too far down so that it ventilated only the right middle and right lower lobes.

Presidential Valedictory Address, 1973

J. A. Myrden, M.D.,
Halifax, N.S.

Mr. Chairman, Members and Guests:

During the past year I have had an opportunity which falls to relatively few members of our Medical Society. I have been directly involved in and responsible for the often extremely complex and sometimes frustrating business of pursuing the Society's aims and commitments.

I hope my stewardship has been productive and has advanced not only the interests of the profession but also the process whereby all Nova Scotians will receive good health care.

During the past twelve months many members have, quite frankly, surprised me by asking: What is the Medical Society? What does it do? And in particular, what does it do for me?

I would like to address my remarks to those questions and to their implications for the future.

First of all, *you* are the Medical Society – at least to the extent that you involve yourself in it. The Medical Society of Nova Scotia is a lot more than a group of short-term office holders. It is the continuing process through which we seek to achieve medical ideals through the practical application of knowledge, experience, and planning. The Medical Society has exercised a responsibility to initiate improvements in the health care field and serves as a reservoir of expertise and counsel for government, the public, and all health care professionals. That reservoir is being tapped daily. Think for a minute of the influence your Society exerts on health care considerations in Nova Scotia.

For instance, we have a continuing and responsible involvement with government in such things as tariff review. On the surface, this sounds like a fairly simple exercise. However, when you consider that the decisions made on a matter like this affect the number, distribution and type of medical professionals throughout the Province, then the implications of our considerations and counsel take on more import. The fact is, they affect you and the way you practice.

Administrative organizations such as the Health Services and Insurance Commission and the Health Council often turn to the Society for advice because the Society can and does relate practical experience to planning theories; we know what the clinical application of paper proposals will be. We have a responsibility to let others know, too. To an extent far greater than many members realize, government and planning bodies recognize this and do place a great deal of reliance in our advice.

The public, the man in the street, is coming to realize more and more that your Society is not simply a professional fraternity. Rather, it is an organization which can be turned not only to the resolution of doctor-patient differences but also to lending what assistance it can to lay-originated health care projects, to providing outspoken moral support in matters of social significance, and to assistance in the development of educated opinion on matters affecting the welfare of all Nova Scotians. The Medical Society does and must exercise the responsibility of using our professional abilities wisely.

I find it particularly heartening to see the increased incidence of public referrals to the Medical Society on matters which cover the entire spectrum of health care and, to a certain extent, social development. I hope this trend continues, and I hope we continue to rise to each and every occasion.

But physicians, our members, often need help and counsel too. The Medical Society is there to provide it. As I have already stated, the Society is more than a few committed members. It is and must be a large representative body with the ability to influence situations in a responsible manner – whether those situations cover the entire health care field or the immediate problems of a lone physician. It is a quality which is needed and which will futher prove its worth in days to come.

Of course, the Medical Society provides some direct and obvious services to the membership.

The Bulletin, for instance, is geared to offer you up-to-date scientific information in just about every field of medical interest. It is also a vehicle for the presentation of facts and the exchange of opinion in all matters related to medicine and the climate in which we must practise it.* Our editor, Dr. Alvin Buhr, and the staff have done a tremendous job with their publication.

Through the president's newsletters, too, the Society attempts to provide you with current information on matters which affect your livelihood and the welfare of your patients. From comments I have received, this method of communicating with you is well received.

As you know, the Society has its own insurance program for members; a self-administered plan which can be tailored to meet the often special needs of physicians.

And hardly a week goes by when the Society does not provide some form of special services to Sections, Branches or individuals.

In talking about the Society and the practice of medicine, however, there is one element which we must never forget. In fact, it should be the focal point of all our discussions, deliverations, planning and efforts.

That, quite simply, is *the patient.* We must not forget this fact. Time and again this point has come through clearly as I served as your President.

We live in a complex age. Not only is clinical medicine becoming more complicated with new knowledge and scientific advances, but the administration of health care delivery and our relation to a universal insurance program is also becoming increasingly more sophisticated. We must take great care in our own planning and we must encourage governments to make sure that the *patient* is always the focal point of all our efforts.

Unhappily, in considering costs, regulations, budgets, manpower needs and all the various components of the system it is sometimes all too easy to lose sight of the patient, the recipient of the services we provide. We must maintain a proper perspective in what one might call the "business end" of medicine. Remember, medicine is a very personal thing. It involves an intimate relationship between the physician and the patient. While advances in planning and changes in the system may expedite the delivery of care, they can also threaten the physician-patient relationship if we allow them to.

Today extensive data is being recorded regarding health delivery – one must has to push a button and it is all there. I would offer a word of caution in this regard. The profession must become knowledgeable about the data so that it is interpreted properly in relation to a patient.

Medicine's best hope today lies in keeping our relationship with our patients on a personal basis. Increased utilization and the ever more intricate administrative requirements affecting all of Nova Scotia's doctors makes our job more difficult but it has to be done – for the sake of the patient primarily and also for the medical profession as well

In regard to this, I'd like to say a few words about the profession's social responsibilities.

Physicians do have a responsibility to speak out and to make sure they are heard on community and general social problems which may or do detract from the health of our citizens. If we are convinced that good health demands at least a modicum of social ease and well-being of our patients then we have a responsibility outside the office or hospital to promote and encourage steps toward a better life for all Nova Scotians.

Yes, it does take time and it does take effort. Time is a dear commodity to a busy doctor. But if you have the time and the cause is just, then pursue it. The Medical Society will do its best to help.

*It is also another means of documenting the history of our Society.

While I'm on this subject, there is one area of medical services within our communities which deserves some mention.

On several occasions I have heard of communities which thought themselves under-doctored or lacking in a medical service which they deemed essential. May I suggest to you in this room and by extension to the people of communities across the Province that there is room for a great deal more co-operation between the community, the profession and government. As a physician I would whole heartedly support the exploration of a request from a community for additional health personnel or a new service, provided that the community spokesmen, the profession and those government agencies involved could sit down together to establish actual needs and the potential for development.

Requirements for physicians must be planned well in advance of their need and not just on the spur of the moment. Communities can no longer expect to obtain the satisfactory services of a physician without proper planning.

We have in Nova Scotia one of the finest medical schools in the world. It has a research and application ability beyond medical skills alone. It can help in determining needs and, through research, assist in meeting those needs. There is a place for the Faculty of Medicine at Dalhousie University in determining the medical service needs of our communities.

But the community must initiate the request, then we can sit down and co-operatively work towards a solution to whatever problem is presented.

Now, there is one problem which I have been stressing over the past year. Perhaps some of you are tired of hearing about traffic crashes . . . but they won't simply go away if we ignore them. While it is true that you cannot wholly legislate safety – or, for that matter, sanity – I am becoming more and more convinced that stiffer penalties for violators, greater emphasis on driver education, greater surveillance of automobiles and their operation and a form of regular relicensure will do a great deal to save a lot of lives. I hope that this Society keeps up its strong stand on this matter.

I hope, too, that in the year ahead – starting today – our individual members and the Society as a whole will address themselves to the problem of physical fitness – or unfitness – in Nova Scotia. One of the most welcome moves by government in the recent past has been the formation of the provincial Department of Recreation. I am sure this has prompted and will encourage a decided increase in standards of physical fitness throughout the Province as well as providing opportunities for recreation and good physical development resulting in better health.

But we physicians have a job to do too. We have the expertise and the opportunity to promote physical and mental fitness. I hope, in the future, to see the Medical Society place more emphasis in this area.

I hope, too, to see a marked increase in lay ability to cope with medical emergencies. Quite frankly, I would like to see first aid a required subject in all our schools. I would like to see the Medical Society press for this and I would like to see direct physician involvement in programs geared to better acquaint people with emergency and standard health techniques.

We can do more to help the acutely ill and injured, to provide primary care on the spot. We can do more to save lives. We can improve our hospital Emergency Departments. I am not a logistics and systems expert, but I think there is a need for central regional emergency phone numbers for the provision of emergency medical help when it is urgently needed. At the same time, more attention should be paid to our mobile medical units – the amublances. Nova Scotia's ambulance operators have made great strides in the past several years. Service and vehicle quality improvements have been really remarkable. However, we still have a long way to go.

For instance, the radio dispatch and control of emergency vehicles will save time and confusion. Improved training and standards for drivers and attendants will save lives and give ambulance attendants the desire to develop these skills to a degree where they are more competent.

And here I must pay tribute to Dr. Bob Scarf who has spearheaded a program across the Province to improve the medical knowledge of ambulance drivers and attendants. With very little fanfare and in co-operation with the Ambulance Operators Association he has volunteered his time to community training programs. But this has been a voluntary program and subject to all the problems common to voluntary efforts. I hope the Medical Society will get behind Dr. Scarf and his colleagues so that a comprehensive formal program can be initiated.

Finally, I would like to touch on one area of personal concern. It is an area in which the profession may not have specialized remedial expertise, but the problem confronts us almost daily.

One of the basic elements of society as a whole is today being threatened. The family unit is under attack from a variety of quarters. Inflation, unsuitable accommodation, conflicting standards and the growing complexities of life are eroding the foundations of the family. Good health is as much a state of mind as it is physical sufficiency. Broken homes, families under crushing pressure and those whose lives must centre on the high rise environment produce and are the victims of this disease. It is a disease which does not lend itself particularly well to diagnosis. It can be a disease of the spirit and, of course, it can manifest itself in an organic form. Children, because they are relatively defenceless and almost wholly dependant, are usually the first victims of the syndrome.

I am not going to subject you to words of wisdom on this matter except to repeat that the profession and the Society have a responsibility to do more than treat symptoms. We must publicly identify the cause. And we must encourage the use of other professionals who do have special expertise in the problem areas that are identified . . . and I am referring to social workers, family counsellors and others who share our commitment to help people.

Mr. Chairman, fellow physicians. It's been an interesting, and rewarding year. I have enjoyed association with all of you during my term of office and during the preceding year.

It would have been a difficult year if I had not had the cooperation and counsel of so many of you at all times. I would also take this opportunity to remind everyone of the sound administrative organization which you have assembled. You should be proud of them. On your behalf I say thank you to them. The honor and privilege of being your president and of contributing to the cause of medicine on behalf of the people of Nova Scotia has taught me a great deal. In turn I hope I have made a worthy contribution to the Medical Society of Nova Scotia.

Thank you. □

NEW MEMBERS

The Physicians listed below have joined The Medical Society of Nova Scotia between September 1, 1973 and October 31, 1973. A most cordial welcome is extended from the Society.

Dr. Mohan Aggarwal	Sheet Harbour
Dr. Donald B. Carruthers	Elmsdale
Dr. F. Andrew Davis	Halifax
Dr. Lesley C. Edwards	North Sydney
Dr. James M. Fitzgerald	Lower Sackville
Dr. Harland C. Hastings	Guysborough
Dr. David T. Janigan	Halifax
Dr. David W. Marsters	Berwick
Dr. H. Stewart Montgomerie	Elmsdale
Dr. Patricia J. McKenna	Antigonish
Dr. Laurie K. McNeill	Halifax
Dr. Edward F. O'Rafferty	St. Peters
Dr. Doreen J. Osen	Halifax
Dr. Sheila M. Pride	Dartmouth
Dr. R. Sathasiva Ram	New Glasgow
Dr. John B. Ross	Halifax
Dr. Stanley K. Sandomirsky	Halifax
Dr. Marjorie A. Smith	Pictou
Dr. Llewllyn T. Stead	Halifax

Some Pictorial Highlights of the 120th Annual Meeting

Lieutenant Governor C. L. Gosse, M.D., is formally installed as the first Honorary President in the 120 year history of The Medical Society of Nova Scotia by outgoing 1973 President Dr. J. A. Myrden. The Lieutenant Governor was cited by Dr. Myrden for his many contributions to medicine, the principles of the profession, to professional organizations within the field, and to the people of Nova Scotia.

Dr. S. Marcus, Bridgewater, is installed as a Senior Member of The Medical Society of Nova Scotia during the organization's 120th annual meeting. Flanking Dr. Marcus is, left, Dr. L. A. MacLeod, Liverpool, acting President of the Lunenburg-Queens Medical Society, and provincial society President Dr. J. A. Myrden, Halifax.

CMA President Peter Banks, M.D., formerly installs the 1973-74 President of the Medical Society, Dr. J. A. George of Antigonish (right).

Dr. J. W. Reid, Halifax, receives his Senior Membership and the congratulations of, left, Halifax Medical Society President Dr. D. K. Murray, and, right, provincial society President Dr. J. A. Myrden. □

Personal Interest Notes

Citations for Senior Membership in the Medical Society of Nova Scotia*

Dr. Samuel Marcus

Honourable Lieutenant Governor, Honourable Premier, Honourable Minister of Public Health, President of the Medical Society of Nova Scotia, Executive, Head Table Guests, Fellow Members and wives.

The Medical Society of Nova Scotia has honoured Dr. Samuel Marcus by electing him to Senior Membership in The Society.

Dr. Marcus was born in Sydney, Nova Scotia but he was raised and took his primary education in Sydney Mines and graduated from that Academy in 1918.

He entered Dalhousie Medical School in 1919 and graduated in 1925. He started General Practice in New Germany, Lunenburg County where he stayed for eight years. In 1933 he moved to Bridgewater and has continued there to the present time.

In 1929 Dr. Marcus married Isabel Carthew in New York. This union produced two daughters and a son.

Dr. Sam as he is affectionately known by all members of the Lunenburg-Queens Medical Society, is highly respected as a practicing physician and surgeon. He is on the Specialist Register as a surgeon.

Sam is a faithful friend, an industrious, and capable physician, an ardent debater, and genuinely concerned about his fellow man.

Sam has been county health officer for Lunenburg County for 30 years and is a life member of the Public Health Association. He has been President of the Lunenburg-Queens Medical Society for numerous terms. He spent two years on the Council of the C.M.A. and a number of years on the Executive Committee of The Medical Society of Nova Scotia. He has spent seven years as Chief of Surgery at Dawson Memorial Hospital.

Dr. Sam Marcus, it is an honour to introduce you on your acceptance of the honour bestowed upon you by the Medical Society.

Dr. L. A. MacLeod

Dr. J. W. Reid

This year, in their wisdom, The Medical Society of Nova Scotia has elected to Senior Membership Dr. James W. Reid.

In a sense, the Society was honoured to elect such a person to this especial position.

Jim Reid has long been a byword to all fortunate enough to meet and to know him. In his chosen life style he has had undoubtedly some advantages over others. He had a physician father, a physician maternal grandfather and an older physician brother to influence his philosophical inclinations as well as to stimulate his inquiring young mind. All this in Windsor, Nova Scotia.

These circumstances are not necessarily a prerequisite, but they must have helped a little.

Dr. Jim, as he is affectionately known to many in all walks of life, became one of the early physicians who perceived the wide angle focus of healing and decided to limit, and thus elevate in quality his interest in Internal Medicine.

Graduating from Dalhousie Medical School in 1926, he began practice in Newport, Hants County. After three years of seasoning, he pursued graduate study in London.

His teachers comprise a starry list – Sir Arthur Hurst, at Guys Hospital, – Hunter, Parkinson, Turnbull, Brian at the London Hospital.

It is history that Dr. Jim successfully sat his Royal College Examination, and was so admitted to that agust body.

I believe that he was the first Dalhousie graduate in Medicine to achieve this distinction.

A true Canadian, he returned to Halifax in 1931 and began an association with Dalhousie University which lasted thirty years.

Lecturer in gastro enterology, clinical demonstrator and associate professor in medicine, Dr. Jim still found time for an extensive private practice.

He was generous with his contributions to his two Medical Societies' needs, directing the affairs of the Halifax Medical Society in 1944 as President, and those of the Medical Society of Nova Scotia in 1953 in the same capacity.

In 1927 he married Mildred Colpitts of Halifax, a graduate of the Montreal Royal Victoria Hospital. They have a son and a daugther.

Jim is, without question, a man apart. His enormous capacity for getting to the crux of the matter has led to scores of extra curricular activities. His loyal interest in affairs of the community, of his Province and of Canada as a whole is a legend. It is with infinite ease that he assesses priorities in problems and arranges them in perspective. In many an instance where arduous and complicated delibera-

*Citations delivered November 9, 1973.

tions seemed to bear heavily, a typical swift, witty solution by Jim has brought laughter, light and relief to a meeting.

Being fondly and universally regarded as a good physician, teacher, scholar, poet, wit, fine citizen, an elder of his church, and above a Christian gentlemen, Jim has influenced in some good measure everyone who has ever known him.

I am aware of a great privilege in making these remarks, but in the wealth of accolades which might be submitted, I feel I am perhaps making a mole hill out of a mountain. How else could one feel when, after forty-three years, from student to the present, I am still convinced?

Jim Reid, M.D., I am glad you have accepted this gesture of respect and regard from your Medical Society. We are honoured.

Dr. D. K. Murray

The following physicians from Nova Scotia passed the recent Certification Examinations held by the College of Family Physicians of Canada:

Residency Eligible – **Dr. H. J. Scrimgeour** and **Dr. N. R. Shore** Dalhousie University, Family Medicine Centre. Dr. Shore is now practising in Moncton, N.B.

Practice Eligible Physicians – **Dr. C. W. Bugden,** Dartmouth, **Dr. D. E. Lewis,** Digby and **Dr. H. R. Phillips,** Halifax and **Dr. M. P. Quigley,** Amherst

Obituaries

Dr. Patrick S. Gardner, 53, of North Sydney died October 7, 1973. Born in Singapore he was educated at the University of London Medical School where he specialized in obstetrics and gynecology. Upon graduation, he came to Canada and practiced in Cape Breton. Sincere sympathy from the Society is extended to Mrs. Gardner and his four sons.

Dr. Alex C. Gouthro, 78, of Bras d'Or died September 1, 1973. Born at Bras d'Or, he attended Dalhousie University Medical School where he graduated in 1925. He then returned to Bras d'Or where he practiced medicine for over 50 years. Our sympathy is extended to his widow, Mrs. Gouthro.

Dr. J. Oliver Hunter, 47, of Yarmouth died October 15, 1973. He was born at Londonderry, Ireland. Dr. Hunter was a radiologist at the Yarmouth Regional Hospital. He is survived by his widow Lois, three daughters, Susan, Shelly and Stephanie, and a son Garvin. Sympathy is extended to his family. □

GUIDELINES FOR AUTHORS

Reference to these guidelines and recent issues of the Bulletin will help authors in preparation of their papers. Send the original typed copy to the Editor and keep a carbon copy.

The entire manuscript (including references and tables) should be typed double-spaced, with a generous margin on the left, on only one side of the pages. Do not underline unless the type is to be set in italics. Standard abbreviations (**e.g.**, hr, mg, ml) are acceptable without definition; less-common abbreviations should be written in full the first time they are used. Give generic as well as proprietary names and the manufacturer's name for drugs.

References. Identify references by numbers within the text, and list them in numerical order on a separate sheet [see (f)].

Figures. Provide an unmounted glossy print of each, clearly marked on the back with a SOFT marker, indicating top, figure no., and author's name. Show scale when relevant. Do not write legends on them [see (h)].

The usual framework of a paper is as given in (a) to (h) below, starting each section on a new page and numbering pages consecutively to the end of (h).

a) Front page, showing title, author(s) and degrees, whether the author is in family practice or the institution where the work was done, and address for correspondence.

b) Brief summary.

c) Introduction.

d) Materials and methods, then Results; **or** Case report.

e) Discussion.

f) References.

Examples: **Journal papers** – EBBERT, A., Jr. Two-way radio in medical education. J. Med. Educ. 38:319-28, 1963. **Books** – MAJOR, R. H., and OELP, M.H. Physical Diagnosis, 6th ed. Philadelphia, Saunders, 1962, p. 51. **Contributions in books** – Voheer, H. Disorders of uterine function during pregnancy, labor, and puerperium. **In:** Pathophysiology of Gestation, ed. by N.S. Assali. New York, Academic Press, 1972, vol. 1, pp. 145-268.

g) Tables (each, including heading and footnotes, on a separate page).

h) Figure legends (all listed on one page); state magnification of photomicrographs.

[To Members of the Medical Society of Nova Scotia: In view of the advantages of a strong professional organization, kindly make this page available to a non-member associate.]

THE MEDICAL SOCIETY OF NOVA SCOTIA
APPLICATION FOR MEMBERSHIP

NAME ..... (Surname) (Given names)

ADDRESS .....

TELEPHONE NUMBER ..... DATE OF BIRTH .....

MEDICAL SCHOOL ..... DATE OF GRADUATION .....

LICENSURE PROVINCE ..... DATE ISSUED .....

OTHER DEGREES .....

POST GRADUATE TRAINING .....

.....

PRESENT TYPE OF PRACTICE .....

SECTIONS: Membership in the Society entitles you to make application for membership in the Section(s) of your choice. Please mark Section(s) you may be interested in.

- ☐ Anaesthesia
- ☐ General Practice
- ☐ Internal Medicine
- ☐ Ophthalmology and Otolaryngology
- ☐ Paediatrics
- ☐ Pathology
- ☐ Psychiatry
- ☐ Residents in Training
- ☐ Radiology
- ☐ Salaried physicians
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NAMES OF TWO SPONSORING MEMBERS OF THE MEDICAL SOCIETY OF NOVA SCOTIA .....

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NOVA SCOTIA DIVISION OF THE CANADIAN MEDICAL ASSOCIATION

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ABBREVIATIONS:

Corr – Correspondence; DL – The doctor and his leisure; AWT – Around the Willow Tree; 1000 – Thousand Word Series; E – Editorial; BN – Brief Note.

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