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THE NOVA SCOTIA MEDICAL JOURNAL

Another Study: Introduction to the Barer-Stoddart Report

Most physicians in this country have become aware of the increased scrutiny being given the health care sector in the last few years. Many provinces, and Nova Scotia in particular, had Royal Commissions to look at health care provision. The Royal Commission reported on December 8 of 1989 and received much comment, with its recommendations still being considered. The article "Current Options for the Regionalization of Health Care in Nova Scotia", in this issue is one of those appropriate considerations. The Government of Nova Scotia replied officially to the Royal Commission's recommendations with the document, *Health Strategy for the Nineties: Managing Better Health.* As a result of this document, various task forces have been established including the Task Force on Physician Policy Development. The Medical Society of Nova Scotia is well represented on this task force and is giving detailed examination to many proposed changes, and yet again another *report.*

Despite this complex and seemingly never ending series of studies, this even more comprehensive report has been added to the process of change. The Deputy Ministers of Health Canada initiated this latest study "to ascertain problems and issues in the area of Physician Resource Management". The 681 page report has come up with 53 recommendations that are now to be considered by groups in all ten provinces. Released on May 30, 1991, the *Barer-Stoddart Report* has many things which make one believe it may be one of the more influential factors as we grapple with the need for change. First, it was a study national in scope and many policy decisions beg for a national overview. Secondly, it has, in an honest way, acknowledged the complexity of health care system and the difficulty in acting in one sphere without influencing other areas. Thirdly, it has arrived on the scene when this Province as well as others can no longer postpone decisions regarding health care. Nova Scotia physicians in particular, but everyone else also, must understand the consequences of our fiscal situation.

Without new sources of funding, we can no longer afford the system we now have. We as physicians reject the blame so frequently and unfairly placed on our shoulders. However, we are expected to play a large role in devising any new plans. Physicians can participate in setting priorities and standards, as well as making suggestions that will allow proper budgeting in this Province. Alternatively, legislation will force change that will be much more harmful to ourselves and patients than anything we might suggest. Your Society representatives understand this, but the considerations of every physician in the Province is certainly welcomed. Meanwhile, being aware of the *Barer-Stoddart Report,* (see summary of recommendations and options in this issue) is important in the understanding of future health policy plans in this Province. □

J.F.O'C.

Current Options for the Regionalization of Health Care in Nova Scotia

Michael B. O'Neill,* MB, FRCP(C)

Truro, N.S.

The Nova Scotia Royal Commission on health has established the need to regionalize health care. The intents of this paper are: 1) to facilitate an understanding of regionalization through a) describing an idealised concept, b) outlining the historical and current situation in Nova Scotia and c) describing the historical and current situation in Sweden which has successfully regionalized health care: and 2) to describe the options for regionalization and their impact.

When comparing Nova Scotia to Sweden, the following points need to be borne in mind: 1) all of Nova Scotia equates to one region in Sweden: 2) regionalization in Nova Scotia equates to the county level in Sweden; and 3) the teritiary care facilities in Halifax, Nova Scotia, correspond to the regional hospital in Sweden.

REGIONALIZATION OF HEALTH CARE — THE IDEAL

Regionalization of health care has several ideal components.[1] The overall goal should be to provide efficient health and social services with the available resources. The primary effect should be the improved health of the community. There are nine key aspects: 1) The region should consist of 500,000 to 3,000,000 inhabitants, and should be capable of supporting a full range of health facilities; 2) A graded hierarchy of care must be available consisting of primary care (inclusive of preventive care), intermediate level of special care to back up local units and a regional centre for the most sophisticated care; 3) An integrated authority structure should be established addressing regional decision making and fiscal management; 4) A co-ordinated two-way flow of information between all levels of care needs to exist; 5) A direction where primary health care at the local level becomes the highest priority; 6) Closed ended financing at the regional level on a per capita basis for total care of all persons; 7) Ongoing continuing education must occur; 8) Citizen involvement should be instituted to the fullest extent possible; and 9) Local goals should be co-ordinated for the total care of all persons in the area.

HISTORICAL PERSPECTIVE OF NOVA SCOTIA

Nova Scotia has traditionally had a strong tendency to centralize health care. In the early seventies, two reports attempted to define core issues in health care delivery.[2,3] These included: a) fragmentation of services; b) poor organization; c) inability of the health care system to respond to external forces, e.g. community needs; and d) a lack of response to government initiated programs in the public health sector.

To address the outlined deficiencies, the reports advocated Health Care Boards be established, which would be responsible for all facets of health care and be responsive to community needs, in four defined regions. It was anticipated that authority delegation to the boards from government would enhance accountability. To facilitate such a transition, assistance from two committees was to be provided. These committees would aid with administration and medical matters.

Each board would be responsible for a hierarchy of care within its regions. Impediments to the achievement of regionalization were recognized and these included parochialism and a lack of understanding of the concepts outlined.

Counties have vied for equipment and health professionals in order to serve the needs of their community. Due to territorial issues, there has been little co-operation between hospital and community health care. While Nova Scotia has been divided into several regions for the purpose of health care, this has not resulted in meaningful co-operation or sharing of resources between institutions.

HISTORICAL PERSPECTIVE IN SWEDEN

In 1862, the Swedish County Councils were formed. Their major focus was and still is health care. With the explosion of medical technology and markedly increasing costs in the 1960s, the Swedish government decided that health care planning was essential. The development of a regional health care system was guided by several principles: 1) the need to balance accessability for the patient with viability of the medical service; 2) the prevention of duplication of services; 3) the recognition that finances were limited; and 4) financial accountability was required.[4]

The new structure resulted in Sweden's 23 counties being divided into 6 medical regions. Each region has one designated tertiary care centre which provides care for 500,000 to 3,000,000 people. Each county has a county hospital facility (equivalent to a regional hospital in Nova Scotia). This must have 15-20 specialty services which include Internal Medicine, General Surgery, Anaesthesia, Pediatrics, Obstetrics and Gynae-

*Consultant Paediatrician, Department of Pediatrics, Colchester Regional Hospital

Correspondence: Dr. Michael B. O'Neill, Colchester Regional Hospital, Truro, N.S. B2N 5A1

cology, E.N.T., Ophthalmology, Infectious Diseases, Respirology, Orthopedic Surgery, Psychiatry, Child Psychiatry, Long Term Care, Radiology and Laboratory Services. Larger counties may have Neurology and Dermatology Services. These hospitals cater to a population of 250-300,000. District hospitals, if they have 4 specialties (Internal Medicine, Surgery, Radiology and Anaesthesia) provide services for populations of 60-90,000. If all four specialties are not present, the hospital is closed or downgraded to a health centre. This provides primary care for patients. Health professionals, especially physicians, tend to rotate through these facilities and thus continuity of care is limited. In rural areas, family practitioners offer primary care but do not have hospital privileges. The regionalization of health care resulted in the closure of many small hospitals.

County Councils both control and fund the institutions in their areas. However, they make contributions to the county with the tertiary care facility when they use that facility. Built into this system is the recognition that planning of services must respond to community needs and integration and co-operation between services is essential.

While the County Councils are relatively independent, they are required to follow guidelines from the Ministry of Health and Social Affairs as they pertain to health, social welfare services and health insurance.

Government and County Councils jointly own the Swedish Planning and Rationalization Institute of Health and Social Services (SPRI) which works on planning and efficiency measures, undertakes special investigative tasks and supports research and development work in health care administration.

CURRENT SITUATION IN NOVA SCOTIA

For those involved with health care in Nova Scotia, there are several major concerns: 1) Cost of Health Care. In the 1989-90 budget the government spent 26.5% of its budget on health care. In 1985 the amount spent accounted for 10.9% of the Gross Domestic Product (GDP) as compared with the Canadian average of 8.6%; 2) Despite increased spending by government, the quality of health care being delivered appears to be inferior when measured against outcomes in other provinces. The life expectancies for men and women in Nova Scotia are 70.9 and 78.3 as compared with the national average of 71.8 and 78.9 years; and 3) The problems that were recognized in the 1970s still persist.

The Nova Scotia Commission on Health Care sought to offer a solution to the current problems outlined.[5] It proposed the decentralization of authority for health to Regional Health Authorities (RHA). These authorities would: 1) be responsible for planning and management of the full complement of health services within their regions; 2) receive block grants from the provincial government; 3) have the budgeting authority to allocate the money to programs that best meet regional needs in accordance with provincial guidelines; 4) focus on health outcomes; 5) allow citizen involvement on the planning process; and 6) allow planned participation between hospital and community services thus allowing both to have their roles more closely defined. The commission advocated the province be divided into four health regions to insure that medical services had viable population bases. This approach compares favourably with the ideal model of regionalization. The RHA would report to the Ministry of Health. Initially, a health council would function as an advisory resource in the establishment of the RHA.

The government's response to the Royal Commission was outlined in *Health Strategies for the Nineties: Managing Better Care.*[6] It recommended that regional health agencies should be struck. These would function as an advisory body to the government with the latter retaining full authority in budgeting matters. The government felt that the development of these agencies would allow the participants to learn what was involved in the regionalization process and also allow increased co-ordination and integration of health services by various providers. It also hoped for greater participation by citizens in health planning.

With regard to changing the current regional health boundaries, it recommended six regions be created. Of these, two would be viable from a population point of view. The government also planned to change the authority lines within the Ministry of Health to facilitate increased co-operation but no clear mechanism was defined.

In summary, the government envisaged no dramatic alteration from the current system of regionalization in Nova Scotia.

CURRENT SITUATION IN SWEDEN

In 1970, Sweden spent 6% of its GNP on health care, rising to 9% in 1983. Sweden has enjoyed a high standard of health care. The average life expectancy for males was 73.6 years and for females 79.6 years in 1983. Sweden achieved the 1983 World Health Organization European goals for infant mortality and maternal mortality in 1970.[7] The regionalization of health care has contributed to these achievements.

At present, Sweden has appropriately defined regions with adequate population and adequate hospital facilities. An integrated authority structure has not been established due to the Swedish distrust of centralized authority and the reluctance of the county councils to relinquish power. Advisory agencies, e.g. SPRI, continue to influence the direction of health care trends thus promoting proactive stances.

Proper two-way flow of information through all levels works well in some instances, especially between hospitals and other institutions. Two deficiencies are recognized: 1) general practitioners do not have access to hospital systems; and 2) communication between outpatient facilities and health centres is poor. This situation is in marked contrast to Nova Scotia. This problem of information is being addressed by all counties through a five year plan.

Closed ended financing is currently used in Sweden with a small fee for each outpatient visit. Evaluation of priorities is undertaken by the county council in conjunction with national advisory bodies. Education of health care professionals is regarded as a continuous process and citizen involvement through political representation is ubiquitous.

County councils have all developed five, ten and fifteen year plans. This information of changing health needs provided by national bodies allows for adequate preparation and planning. A strong emphasis is placed on education with regard to health needs, thus facilitating smoother change.

Currently, Sweden continues to attempt to fulfill the ideals of regionalization. In order to ensure current and future high standards, the government has adopted the thirty-eight goals for health development as proposed by the World Health Organization (WHO) for the next 15 years.[7] The major foci are: 1) equity in health care with special attention to high risk groups; 2) the provision of health care according to the needs of the individual; 3) preventive measures at community and individual levels; and 4) primary care as the basis for the health care system.

OPTIONS

Three options are presented to address the issue of regionalization in Nova Scotia. These are: 1) the *status quo* or the current government policy; 2) adopting the Swedish model in its entirety; or 3) combining the Swedish model of regionalization with the current Nova Scotian system, which is similar to the Royal Commission's proposal.

OPTION 1 — STATUS QUO

The pursuit of this option would result in current government policies as outlined in health strategies for the nineties being pursued. It would not result in any major changes to the Nova Scotia health care system as it is seen currently. There would be formal changes in structure. However, these would have little or no impact on those who provide health care and no significant increase in co-operation between hospital and community based services would be seen. It is to be anticipated that health care costs will continue to rise due to ongoing partial duplication. The development of services capable of offering a 24-hour coverage will be impaired due to specialist shortages as a consequence of a non-viable population base.

This approach has the advantage of eliminating the pain of dramatic change. There are several disadvantages: 1) the wishes of the stakeholders, as outlined in the Royal Commission on Health Care, would be ignored; 2) Nova Scotians would continue to have costly health care outcomes; 3) there would be ongoing poor co-operation between hospitals and communities; 4) a preventive focus to health care could not be adopted as health care facilities would require their current budgets to maintain current standards; 5) the non-viability of the current health care region would be ignored; 6) bed closures will not occur in a rational fashion because of the limited size of the health region; and 7) the ability for community involvement in planning would be removed.

OPTION 2 — THE SWEDISH MODEL

Adoption of the Swedish model would result in Nova Scotia being divided into four health regions. Funding would be provided to those regions as outlined in the Royal Commission. There would be a supervisory body in the form of a regional health authority that would be responsible for planning, administration and accountability of the region.

There are several advantages: 1) The regions would prioritize their health needs with a major focus on primary and preventive care; 2) Services appropriate to the region could be planned; 3) Rationalization of services could be undertaken. This would result in the closure or the downgrading of smaller institutions and the transfer of resources. The larger centres would better facilitate the health care requirements of the entire population of the region; 4) The region would be responsible for the administration of their areas and thus be accountable locally; and 5) Services to disadvantaged and underserviced communities could be addressed more appropriately.

The disadvantages include: 1) The Swedish health care concept would prove alien to Nova Scotians; 2) The continuity of care which they currently enjoy, through their family practitioners having access to hospitals, would be lost; 3) The initial organization would probably result in a period of dissatisfaction as there would be a learning curve to achieve an optimal response; and 4) The introduction of user fees would not be readily acceptable to those using the Outpatient Department.

OPTION 3 — A COMBINATION OF THE SWEDISH MODEL WITH THE CURRENT NOVA SCOTIAN SYSTEM

Under this option, regionalization, as experienced in Sweden, would be adopted though in a modified form. The concept of the health care centre as the primary focus of care would be deleted and the continued use of the family physician would be encouraged. Nova Scotia would be divided into four regions (each region would be equivalent to a county in Sweden). Services offered by hospitals in the newly defined regions would be evaluated and changed to reflect the needs of the entire region. Partial services would be amalgamated to enhance service provisions and offer twenty-four hour coverage. Hospitals would have a major role in acute care; however, they would be required to focus on disease prevention through health promotion and education.

Regional health authorities would be struck with responsibilities for funding health care needs, for interhospital co-operation and improving hospital and

community co-operation. They would adopt 5, 10 and 15 year plans. These plans would be responsive to the changing health indicators and allow for rational planning. Redundant services would be deleted. Strong cohesive bonds could be developed in the regions thus promoting and developing health services.

The advantages include: 1) The regional needs of Nova Scotians would be addressed; 2) Regions could plan for the future, determining their health care needs and priorities; 3) There could be an allocation of resources to areas which are underserviced; 4) The health care system would be accountable to persons in the communities which they serve; and 5) The viability of medical services outside the tertiary care centre in Halifax would be insured.

The disadvantages include: 1) the need for dramatic change, which is not a Nova Scotian trait and 2) assuming co-operation between facilities which have traditionally been rivals.

RECOMMENDATIONS

The Nova Scotia health care system faces several problems including: 1) the high cost of health care without an apparent improvement in health; 2) a lack of a full complement of medical services outside Halifax; 3) a lack of co-operation and communication between hospitals and community services; 4) a focus on acute care hospitals and technology; and 5) interhospital rivalry. Option 3, i.e. a combination of the Swedish model with the current Nova Scotian system, best addresses the problem outlined above. This model is similar to that advocated by the Royal Commission on Health.

CONCLUSION

At present, Nova Scotia is attempting to regionalize health care. To achieve this, a clear understanding of the ideal concept is necessary as is the use of a model which addresses known deficiencies. The option advocated in this paper can successfully overcome current difficulties. □

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Toward Integrated Medical Resource Policies for Canada

REPORT PREPARED FOR THE FEDERAL/PROVINCIAL/TERRITORIAL CONFERENCE OF DEPUTY MINISTERS OF HEALTH

Morris L. Barer* and Greg L. Stoddart**

SUMMARY OF RECOMMENDATIONS AND OPTIONS

Although we attempt to provide a relatively concise summary of the key recommendations and options, the reader is encouraged to read the background documents to this report in order to gain a sense of the complexities and inter-dependencies that are not always made explicit below.

The ordering of these recommendations is not intended to indicate priorities. Rather it follows (approximately) the medical career life-cycle which has been used as the conceptual framework for our analysis.

UNDERGRADUATE MD EDUCATION

Enrolment

1. Undergraduate enrolment should be adjusted so as to maintain approximately the current population: physician ratio; further reductions in this ratio are not warranted. At present a domestic entry class site of 1600 students is consistent with this objective. This represents a reduction of less than 10% in current domestic entry class size. This recommendation assumes the implementation of concurrent policies (see below) regarding graduates of foreign medical schools, funding of Canadian medical schools, and the supply and mix of post-MD training positions.

Admissions Process

2. The criteria used for admission to medical school should place more emphasis on broadly-based academic preparation and performance, life experiences, and problem-solving and interpersonal skills of applicants.

3. 'Home-province' advantage for applicants should be eliminated or reduced, so that medical schools become a 'national' resource equally available to all Canadian students irrespective of their province of residence.

4. If geographic maldistribution is a high priority problem, some entry class places should be reserved in medical schools for students from under-serviced areas. Alternatively, or perhaps in addition, some places should be reserved for applicants willing to sign (at time of admission) contracts for pre- or post-licensure service provision in designated under-serviced areas.

Curricula

5. The existing undergraduate curriculum should be broadened to include a view of health in its societal context. This will mean greater emphasis on certain clinical areas of increasing importance, exposure to discussions about the context as well as the content of medicine, and more explicit identification of the management or 'gatekeeper' skills required by today's primary care physicians.

6. More training should be located outside of urban tertiary care-environments.

Information for Students

7. A national database should be established containing information on characteristics of practice and opportunities for practitioners by, at least, specialty and region. Medical students should also be provided with information on socio-demographic and health profiles of populations, by region, and on emerging developments such as quality assurance and competency assurance activities of hospitals or licensing authorities which will affect the context of their practice.

GRADUATES OF FOREIGN MEDICAL SCHOOLS (GOFMS)

8. An objective should be adopted, and specific policies enacted, to reduce Canadian reliance on GOFMS in the longer term. This should be achieved through policy initiatives in other areas (see recommendations above and below) which will have the effect of encouraging Canadian graduates to fill those necessary positions presently 'staffed' by 'selected' visa physicians and trainees.

9. A more concerted effort should be made to monitor and strictly enforce conditions of entry for visa trainees and visa physicians.

10. More creative policies need to be developed to encourage 'non-selected' GOFMS entering Canada on grounds unrelated to their profession to fill positions presently filled by 'selected' GOFMS. The feasibility of a national strategy on this issue should be investigated further.

11. Progress on implementation of the recommendations contained in the 1986 Report of the Joint Working Group on Graduates of Foreign Medical Schools to the

*Director, Centre for Health Service and Policy Research, and Associate Professor, Department of Health Care and Epidemiology, University of British Columbia; Associate, Population Health Program, Canadian Institute for Advanced Research

**Professor, Centre for Health Economics and Policy Analysis, and Department of Clinical Epidemiology and Biostatistics, McMaster University; Fellow, Population Health Program, Canadian Institute for Advanced Research

Federal/Provincial Advisory Committee on Health Human Resources should be reviewed and an action plan should be developed for the recommendations which have not received attention to date.

POST-MD PRE-LICENSURE TRAINING

12. The annual number of funded positions for graduates of Canadian medical schools should approximate the number of Canadian medical school graduates times the length of post-MD pre-licensure training.

13. The types of clinical settings require significant realignment away from tertiary care centres and toward settings — which more closely resemble trainees' eventual practice settings.

14. Trainees should receive more exposure to traditionally under-emphasized areas such as chronic care, mental health, rural area practice and others. The shift from a one-year to two-year pre-licensure requirement affords an opportunity to implement this re-orientation.

15. Post-MD pre-licensure training requirements should be consistent across provinces.

16. Further consideration and discussion should be given to the possibility of requiring a period of (non-fee-for-service) remunerated public service (either prior to or upon licensure) in under-serviced geographic and/or clinical areas, particularly if current problems and rigidities in the physician resources sector persist.

RESIDENCY TRAINING AND SPECIALTY CERTIFICATION

17. The national capacity for residency training should be determined by the educational needs of graduates of Canadian medical schools, and not by clinical service imperatives or other factors. This implies the need for about a 10% reduction in the overall numbers of post-MD training positions funded by provincial Ministries of Health in Canada (even after all provinces have adopted a standard two-year pre-licensure training requirement, and assuming that recommendation #1 above is adopted; see also companion recommendation #19 below).

18. Specialty training programmes should be examined to ascertain the time and extent of clinical exposure required for training, *excluding resident provision of purely service needs.*

19. Necessary clinical services currently provided by residents, but which are not essential for their specialty training, should be provided by other configurations of health-care personnel (including possibly non-physician personnel). Several options are suggested in the background documents for examination and further discussion.

20. A forecasting model should be developed nationally which would use detailed data on the characteristics of the existing supply of specialists to project future specialty-specific supply. This is seen as an important input into national discussions of adjustments to the mix of specialty training positions.

21. A national and/or regional co-ordinating body(ies) should be created to oversee and broker the rationalization, redistribution, an ongoing adjustment of the specialty mix and location of residency training positions. Included in the goals of these bodies should be the reduction of unjustified duplication of sub-specialty training programmes and the co-ordination of all sources of residency position funding.

22. Coincident with the restructuring of the funding of academic medical centres (see recommendations below):

a) fee-for-service payments to clinical supervisors for services provided under supervision by residents should be eliminated;
b) clinical supervisors should receive non-fee payment explicitly for the activity of clinical supervision.

23. If 'under-subscription' by Canadians of particular residency programmes persists *after* the recommended rationalization of the number, specialty mix and location of positions, then consideration should be given to providing financial incentives (such as residency stipend bonuses and/or practitioner income bonuses upon obtaining certification) to encourage the choice of these less popular specialty programmes.

24. Consideration should be given to the establishment of accredited residency programmes specifically designed to train 'generalist specialists' for non-urban hospital-based practice. Ministries of Health could give impetus to this by making available special programmatic funding for the purposes of developing, implementing, and evaluating pilot programmes.

SPECIALTY MALDISTRIBUTION

25. GOFMS should continue to be used where needed to meet specialist shortages, but should only be viewed as a short term solution.

26. Aside from inherent differences among specialties in their attractiveness as 'lifestyles', overall problems of specialty maldistribution are largely the by-product of more fundamental problems in the training, certification and remuneration of specialists. Several concurrent actions should be taken as part of a concerted effort to address these problems, including:

a) a review by the Royal College of Physicians and Surgeons of Canada of its processes of sub-specialty certification and accreditation to identify scope for moderating the proliferation of new recognized specialties and of new accredited training programmes;
b) examination of the internal structure of fee schedules by provincial medical associations to identify and remove perverse incentives encouraging the choice of less-needed specialties (also see recommendations on remuneration below);
c) exploration by Ministries of Health of remunera-

tion policies (such as income bonuses) to influence career choice and specialty distribution, if identified problems with these instruments can be overcome.

ROLE AND FUNDING OF ACADEMIC MEDICAL CENTRES

27. The academic medicine establishment should show more leadership in several important areas, including: adapting the training of physicians to changing social needs, monitoring the supply and mix of physicians and the appropriateness of the services they provide, maintaining a balance among different types of research, and contributing to more effective continuing education and competency assurance programmes.

28. The funding of academic medical centres needs to be restructured to link it as explicitly as possible to academic goals and the activities and programmes required for their achievement, and to reduce the growing reliance of the centres on clinical earnings.

29. Although the design of specific models may differ across provinces and centres, the restructuring of funding should incorporate several general principles, including the following:

a) funding should flow through a single office of responsibility at each centre;
b) funding should not be developed on the basis of 'per student' allotments;
c) 'envelopes' should be used to provide funds for particular programmatic objectives and activities;
d) fee-for-service payment for clinical activity undertaken for academic purposes should be eliminated; funding for these activities should be provided programmatically, and should include clear identification of funds for clinical supervision of post-MD trainees.

30. Within each province, all Ministries providing funds to academic medical centres should do so through collective, co-operative, and co-ordinated negotiating mechanisms with the centres as a group (where there is more than one). Significant improvements in inter-ministerial co-ordination and co-operations are required in this regard in some provinces.

GEOGRAPHIC MALDISTRIBUTION

31. The 'framing' of this problem should be modified, so that: (i) the policy objective is *not* seen as *equal* geographic distribution of all types of physicians but rather as equitable and reasonable access to necessary clinical services; and (ii) policy options are not viewed narrowly as *physician* resource options but as options involving increased scope for other health-care personnel.

32. Because 'piecemeal' approaches and/or 'trickle-down' policies of general increases in physician supply are unlikely to be any more effective in the future than they have been in the past, improved geographic distribution of medical services will require a concerted effort (and resource commitment) to create a broadly-based and integrated 'policy *package*' of reinforcing initiatives which cut across virtually every other policy area discussed in this report. Therefore serious consideration and discussion of the priority status of this issue is required.

33. A 'policy package' might include some combination of the following:

- increasing the availability of non-physician personnel as front-line contacts within regional service networks involving regional physician consultants;
- establishing new training programmes for these non-physician personnel;
- improving science programmes and career counselling in rural area high schools;
- reserving undergraduate medical school places for qualified applicants willing to commit to rural area practice;
- revising admissions criteria for medical shool to favour qualified rural applicants;
- enhancing rural area exposure in both undergraduate and post-MD training;
- developing new residency training programmes designed explicitly to prepare specialists to serve as rural regional consultants;
- introducing or increasing financial incentives (both at the training and practice stages) to encourage choices of specialties in short rural supply;
- introducing or increasing financial incentives to encourage the location of practices in non-urban settings;
- providing clinical decision-making support networks and regular sources of relief for rural community physicians through academic medical centres;
- providing 'amenity packages' (e.g. travel funding for continuing education, benefits for spouses/children) as part of recruitment and retention strategies;
- encouraging alternative remuneration methods, e.g. regional capitation for primary care (see also recommendations on remuneration below).

PATTERNS OF MEDICAL SERVICE UTILIZATION

34. Medical colleges and associations and academic medical centres should take leadership roles in the further development and dissemination of clinical practice guidelines, and the ongoing review of their application and effectiveness. There is considerable scope in this area for a national collaborative effort.

35. Academic medical centres in particular should play a larger role than at present in quality assurance activities, including the generation and synthesis of research contributing to the development of practice guidelines, the identification of situations where guidelines are needed, and the provision of training both for the individuals performing quality assessments and

for those whose performance is identified as requiring improvement.

36. For areas in which clinical practice guidelines already exist, the extent of inappropriate care which is presently occurring should be ascertained.

REGULATION AND LICENSURE

37. Exclusive fields of practice should be eliminated and replaced by a more circumscribed set of exclusive acts and reserved titles in order to address overlapping 'scopes of capability' of physicians and other health-care personnel.

38. The establishment of programmes to assure the public of the continuing competence of all physicians should be given higher priority, under the leadership of provincial licensing authorities. If effective voluntary programmes which assure the continuing competence of all physicians cannot be designed, then mandatory continuing competence assurance programmes should be established.

39. Licensing authorities in each province should ensure that there is inter-regional portability of licenses.

REMUNERATION

40. Although there is no single 'best' way to pay physicians in all circumstances, too little use is made of alternatives to fee-for-service as a payment method in Canada. Fee-for-service should be replaced wherever that method of payment aligns poorly with the nature or objective of the service being provided. Following this principle, specific candidates for national payment reform might be:

a) elimination of fee-based payment associated with academic activity (where the primary objectives are either education or educational supervision) (see recommendation #29 above);
b) replacement of fee-for-service with global funding (contracts) for highly specialized, relatively uncommon tertiary or quaternary services serving regional or provincial populations;
c) replacement of fee-for-service by capitation payment for primary care (or a mixture of capitation plus limited fee-for-service) to emphasize and reward the *management* function of primary care physicians.
d) sessional payments or salaries instead of fees-for-service (where it still exists) for emergency department physicians.

These are examples of situations where objectives and methods of payment seem mis-aligned. There are undoubtedly others (see recommendation #41 below).

41. Further review of the appropriateness of method of payment for the nature and objectives of specific types of services should be undertaken for other types of services.

42. Master agreements governing remuneration negotiations between governments and physicians should facilitate the full range of remuneration methods and include a formal dispute resolution mechanism.

43. The development of inter-provincial consistency in fee relativities *within* fee schedules should be encouraged.

GLOBAL EXPENDITURE POLICY

44. Some form of global budgetary policy will be a necessary component of a responsibility policy package. Both quality of care and public accountability would be best served if all provinces moved toward a system of resource allocation consisting of 'top down' budgetary allocative processes and 'bottom-up' evaluative and corrective processes.

45. The level of overall resource commitment to health care is ultimately a matter of social choice. Based on today's apparent social consensus about resource commitments and on existing opportunities for improving effectiveness and efficiency in service delivery and utilization, however, a strong case can be made for limiting increases in health-care expenditures (and especially medical care expenditures) to those necessary to account for general inflation, population growth, and changes in the 'needs-composition' of the population.

46. In the absence of reform of fee-for-service remuneration for physicians and of other physician income reforms, carefully developed individual income ceilings should be considered as an alternative to assist with medical care budgetary control.

INFORMATION CREATION AND PROVISION

47. A nationally co-ordinated information system that could guide the determination of numbers and mix of post-MD training positions should be established with input from stakeholders and organizations which have already developed useful data.

48. Increased emphasis should be placed on 'applied' health services research (i.e. issues such as the effectiveness and efficiency of alternative services or delivery models, and alternative (to medical care) ways of improving population health). The make this investment worthwhile, however, there needs to be a better interaction between research funding agencies (and researchers) and policy-makers.

49. Routine health status/disability surveys, similar to those now in use in Ontario and Québec, should be fielded in a relatively consistent format in all provinces, with pooling of some of the developmental fixed costs and resources. These surveys should be designed to (among other things) support investigations into the broader determinants of health, monitor key changes in health needs, and provide information on the relationship between health deficits and the use of different types of health-care resources.

50. The public should receive more information than at present on issues such as clinical effectiveness and cost-effectiveness of services, current resource allocations, and determinants of health.

51. It is important to realize that no amount of information is ever likely to be sufficient to satisfy all parties in any policy development process. Furthermore, information itself cannot and does not 'make' fundamental allocative and distributive decisions. Therefore, although there are deficiencies in the amount and quality of current information, these should **not** be allowed to paralyze policy development in the physician resources sector. Failure to act on the serious problems in this sector will itself be a policy statement.

NEXT STEPS

52. A process should be launched to seek the reactions of stakeholders, including government officials, from across the country to the framework, analysis, options and recommendations of this report. For this purpose, the report should be viewed as a discussion document which (a) adds impetus to selected changes that are just beginning to occur; (b) encourages other changes that are not yet apparent; and (c) demonstrates the need for integrated policy development within the physician resources sector.

53. The objectives of this process might include the following:

a) to confirm the assessment rendered herein, that it is both imperative and possible to begin now a careful process of significant change in this sector;
b) to seek and develop agreement on the principles upon which collaboration will occur among parties in implementing and managing change;
c) to identify the 'policy packages' for which there is the strongest support;
d) to explore the willingness of different parties to take leading or supportive roles in key areas;
e) to identify further the practical obstacles to specific policy changes, and to develop strategies and agreements to address and overcome them; and
f) to address issues of the timing and co-ordination of specific initiatives more explicitly. □

Physicians and Patients in Nursing Homes

Murray Nixon,* MD, CCFP, FCFP, CHE

Fredericton, N.B.

Each resident of a nursing home deserves a physician who has accepted responsibility for that person's ongoing medical care. The changing role of nursing homes in that they are caring for increasingly disabled residents, offers the medical profession the timely opportunity to clarify their responsibilities in the care of patients who live there. The role of physicians in nursing homes is specific to the nursing home setting and not a carry-over of the hospital model of medical care.

As nursing home care emphasizes quality of life, autonomy, comfort, dignity and the maintenance of functional capabilities, medical initiatives for nursing home patients focus on the stabilization of chronic conditions and the prevention and early recognition of acute medical and iatrogenic illnesses.[1] The absence of hospital technology and the limitations of staffing at nursing homes create a special opportunity for physicians (and others) to combine astute and compassionate clinical care with cost effectiveness.[2]

Which physicians?

Most primary medical care for Canadian nursing home patients is provided by family physicians.[3] The patient and the family physician traditionally consider medical care in the nursing home to be a phase in the continuum of care, and expect the established doctor patient relationship, with its inherent responsibilities, to continue after the patient is admitted. The nursing home, while hopefully recognizing the benefits of this relationship (often developed over many years), is faced with the challenge of ensuring medical services and at the same time encouraging the resident free choice of physician.

When a patient is admitted to a nursing home it is important that the physician assess whether he/she can realistically continue to provide medical service to the patient in the new location. Unfortunately even with the best intent to maintain continuity of care, it may not always be practical for physicians to continue to care for their patients after admission. "Dedicated family physicians (especially in larger cities) face a dilemma when, after decades of being in their care, a patient is placed in a remote facility where the physician cares for no other patients. Lone nursing home patients accumulate in diverse corners of a practice community, creating a situation in which it is impossible to provide consistent care, let alone be adequately paid for it!"[4] The patient and physician must sometimes make the difficult decision that the patient's best interests will be served by changing to a more available physician, who then becomes the patient's new family physician. Communication between the two physicians at this point is important and transfer of appropriate records is helpful.

A specific physician or group of physicians may be recognized formally or informally by a nursing home and when a resident without an available physician is admitted, this physician or group are recommended. These physicians may be better able to make regular visits, having a sufficient number of patients in the nursing home to make the time spent worthwhile economically.[4] They are often formally recognized through contracts with the nursing home. They are not, however, meant to take the place of physicians who are able to continue responsibility for a patient.

Certain physicians should not provide nursing home care. As Sloan says, "those who find the elderly boring, incomprehensible, annoyingly unremunerative or demanding do not generally perform well in nursing homes".[4]

Scope of Medical Care

Although nursing home residents are indeed institutionalized, the nursing home is really a home setting and it is important for physicians to remember that medical care is only one part of an integrated approach developed by the nursing home.

Regular follow-up medical care is very important. The physician requires a thorough understanding of the capability of the nursing home to continue to care for the patient should an increased intensity of care be necessary.[5] If transfer to hospital appears indicated, the physician has the responsibility to discuss the patient's medical condition with the receiving physician.[6] Emergency room physicians need to know why the patient is being sent to them.

Physicians who provide care for nursing home residents must be especially familiar with the diagnosis and treatment of a wide variety of geriatric syndromes, including dementia, depression, incontinence, immobility, falling and malnutrition. The assessment of physical function in terms of activities of daily living and the management of cognitive and affective disorders becomes a critical aspect of care. An interdisciplinary approach is essential.[1]

Responsibilities of the Physicians:

Several publications, including the American Medical Association's Guidelines for Physicians Attending Patients in Long Term Care Facilities,[6] describe physician responsibilities in nursing homes. These responsibilities include:

*Assistant Executive Director, Medical Services, New Brunswick Extra-Mural Hospital, 200 Prospect Street, Fredericton, N.B. E3B 2T8

Associate Professor, Department & Family Medicine, Dalhousie University, Halifax, N.S.

- providing suitable medical involvement in the admission process;
- initiating a medical treatment plan including medications, as part of the overall care plan;
- reassessing the resident at regular intervals;
- ensuring medical coverage for the resident;
- being available to discuss the resident's medical status with the nursing home staff and the resident's family;
- maintaining medical records;
- obtaining consultations when indicated; and
- understanding and respecting patient care policies of the nursing home.[7,8]

These are obvious responsibilities that a family physician assumes in his/her regular commitment to continuity of care and appear to be compatible with the expectations nursing homes have of physicians. Although it is unquestionably easier for a nursing home to have only a small number of physicians caring for its residents, it is important that family physicians who are able to accept these responsibilities be able to continue to care for patients after their admission to nursing homes. The preservation of a long-standing doctor-patient relationship can be very helpful when ethical decisions have to be made.

The Medical Director

A medical director may be appointed or hired by a nursing home and may have several or all of the following responsibilities:

- an advisor to administration and other professional staff;
- an overseer of medical care in the facility;
- a consultant to attending physicians;
- a guarantor of physician compliance with regulations; and
- a provider of direct patient care.[6]

He/she needs to clarify the medical director's role with the other physicians caring for patients in the nursing home to avoid confusion and overlap.

The responsibilities of medical director involve a significant commitment and require special financial arrangements. Every medical director should have a formal agreement that specifically outlines the expectations and responsibilities as well as the support the medical director and the nursing home will provide each other.[8]

The Challenge

Sloan describes nursing home care as increasingly complex care that tests the judgement, humanity, ethical knowledge, instincts and all aspects of a physician's medical competence.[4] "Enthusiastic, capable family physicians who understand nursing home care benefit the patients tremendously, but also, by taking on new variety and challenge, benefit themselves".[4] The care of patients in nursing homes is a meaningful part of the continuum of care family physicians provide to their patients. Residents in nursing homes deserve the reassurance of this consistent medical care, provided whenever possible by their own family physician.

As nursing home care becomes increasingly formalized through standards, policies and procedures, and accreditation, it is important for physicians to identify, in collaboration with nursing homes, their responsibilities to patients living there. "We have an obligation to our patients, our society and ourselves to do everything that is reasonable to improve the care of the elderly and chronically ill persons who reside in nursing homes. Our collective efforts as physicians, teachers, researchers and administrators will be necessary to fulfil that obligation".[1] □

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Drug Interactions and Possible Complications of Fluoxetine in the Elderly

A. Luthra,* MD

Halifax, N.S.

Fluoxetine is a specific serotonin uptake inhibitor. Its efficacy and side effect profile have been established following extensive animal studies and phase I to III clinical trials in man. Phase IV includes accumulating long term data including interaction with other drugs; fluoxetine is in that phase. Specific data on interaction and possible complications of fluoxetine in elderly are lacking and still being noted.

A group of signs and symptoms characterized by restlessness, anxiousness, agitation, tremor, muscle rigidity, hyper-reflexia and myoclonus, autonomic lability, twitching, unsteady gait and mental state changes such as disorientation, fluctuating levels of consciousness, and convulsions, coma and even death have been termed the "serotonergic syndrome" (SS). Most of the patients experiencing this syndrome had in common a combination of serotonin enhancing antidepressant and a monoamine oxidase inhibitor and lithium and/or tryptophan.

The author has collected 3 cases of moderate intensity of SS in elderly patients receiving fluoxetine. In addition, they were also receiving other psychotropic and non-psychotropic drugs. However, none was receiving the combination of drugs which have traditionally been identified as etiological for SS. Further, an attempt has been made to provide a pharmacological explanation, including possible interactions, for the occurrence of this syndrome in these patients.

In conclusion, possible interaction of fluoxetine with other drugs has been proposed, risk factors for the development of SS in the elderly suggested and caution advised against indiscriminate use of fluoxetine in elderly patients.

This paper is written in two parts. Part One illustrates 3 cases of an apparently specific syndrome followed by a general discussion. Part Two of the paper attempts to look at the pharmacological explanation for the occurrence of the syndrome in these cases. In parts it is hypothetical. However it does provide sufficient information to suggest further research in this area.

*Resident, Department of Psychiatry, Dalhousie University.

Recipient of the Merril-Dow Award for excellence in Geriatric Psychiatry sponsored for Dalhousie University Residents for 1991.

Correspondence: Dr. A. Luthra, Department of Psychiatry, Dalhousie University, Camp Hill Medical Centre, 1763 Robie Street, Halifax, N.S. B3H 3G2

PART I

Fluoxetine is a specific serotonin uptake inhibitor. It is probably one of the most intensively researched of recent psychotropic medications. Extensive animal studies and phase I to III trials have been conducted to establish its efficacy and the side-effect profile. However, phase IV in the development of a drug, by definition, means accumulating long term data, including interaction with other drugs; Fluoxetine is now in that phase. This paper focuses on some of the likely interactions of fluoxetine with both psychotropic and non-psychotropic drugs in a geriatric population. Although preliminary data exist, specific information on the possible interactions of this drug and its potential for complications in the elderly is lacking. The author has collected 3 such case reports.

Case Report — 1

A 73-year-old female suffered a right-sided cerebrovascular accident (stroke) in 1987 and was started on Aspirin 325 mg, one tablet daily. Some time after the acute episode the patient started complaining of chronic dysthymia, apparently secondary to the stroke two years previously. In April 1990 her symptoms escalated to a major depression, and she was started on Fluoxetine 20 mg once daily in the morning. Within a week of starting Fluoxetine the patient started complaining of extreme restlessness, agitation, tremor, nausea and vomiting. One morning she woke up and while attempting to leave the bed she felt unsteady and lost her balance. She experienced depersonalization and derealization and seemed very confused. She was taken to the emergency department where the assessment suggested mild congnitive changes and a fever of 38°C. At this point she was sent for a psychiatric assessment.

Case Report — 2

An 80-year-old lady was assessed by her psychiatrist because of symptoms suggestive of major depression. The patient was started on Fluoxetine 20 mg daily. No change was observed for a few days and the dose of Fluoxetine was raised to 40 mg. Within three to four days the patient started complaining of increasing anxiousness and irritability. She was very restless, agitated, and experienced severe hot flushes. Clonazepam 1 mg t.i.d. po was given, but did not settle the symptoms and thus, Buspirone 5 mg t.i.d. was added to

it. She later went on to develop fluctuating levels of consciousness, decreased orientation in three spheres and appeared to have visual illusions and hallucinations.

Case Report — 3

A 77 year-old male was admitted to a medical ward for pain, a cold left foot, and loss of sensation in the left lower limb. At the time of admission he was receiving Insulin, Furosemide, Sinemet (a combination of L-dopa and Carbidopa), Slow-K, Sulcrate, and Fluoxetine 20 mg (the last-named for one week). While in hospital he was started on Heparin and later Warfarin. Shortly after hospitalization the patient became restless, agitated, very irritable and exhibited lability of mood. He was started on prn Lorazepam 1 mg sub-lingual for his anxiety. He was later observed to have fluctuating levels of consciousness, was disorientated and was experiencing visual hallucinations.

GENERAL DISCUSSION

The three cases reported above were collected from three entirely different sources. One of them was an assessment on referral to a Psychiatric Outpatient Department, another was a referral made by a community psychiatrist while the author was the admitting Resident in a hospital, and the third case was brought to notice through a Consultation/Liaison service and the specific details on the patient were obtained from ward records. All three patients had relatively similar phenomenology progressing from irritability, anxiety and restlessness, to marked agitation and, finally to fluctuating levels of consciousness, disorientation and some evidence of perceptual abnormalities. They were all thought to have iatrogenically induced syndromes and all returned to normal after discontinuation of all psychotropic drugs.

SEROTONERGIC SYNDROME

Ciraulo *et al* reported cases of patients receiving a combination of fluoxetine, lithium and a monoamine oxidase inhibitor, phenelzine.[1] They all developed clouded consciousness, some autonomic lability, and marked irritability and agitation. Also in 1990, the Pharmacy Bulletin of the Clarke Institute of Psychiatry, Toronto, entitled *New Complications of Antidepressants,* described a constellation of symptoms ranging from restlessness, agitation, tremor, muscle rigidity, hyper reflexia and twitching, to unsteady gait, and to mental status changes including disorientation and confusion.[2] Convulsions and even death have occurred in patients receiving a combination of monoamine oxidase inhibitor (MAOI) and tricyclic anti-depressant (especially Serotonergic drugs such as clomipramine and fluoxetine), and lithium. Similarly, Feighner *et al* had observed a series of symptoms in their patients who were receiving fluoxetine, along with either phenelzine or tranylcypromine, and trytophan.[3] This included tremor, myoclonus, extreme restlessness and agitation, hypertension/hypotension, diarrhea and mental state changes indicative of organicity. They tried to draw parallels between the above symptoms and the neuroleptic malignant syndrome.

Hence a constellation of symptoms including restlessness, anxiousness, agitation, tremor, muscle rigidity, hyper-reflexia and myoclonus, autonomic lability with twitching and unsteady gait, mental state changes like disorientation, fluctuating levels of consciousness, altered sensorium and convulsions, and even death, has been termed the "serotonergic syndrome". This has been hypothesized to result from toxic levels of serotonin in the brain with excessive stimulation of certain neuronal structures.

Most of the cases experiencing serotonergic syndrome had in common a combination of a serotonin enhancing anti-depressant, a monoamine oxidase inhibitor and lithium.

In the three cases reported in this paper, none was on a combination of these three drugs. However all three cases manifested the majority of symptoms recognized in the serotonergic syndrome and there appeared to be several other similarities between these and other reported cases. The patients were all of advanced age (over 70), all three patients suffered from a form of arteriosclerotic disease and they were all receiving fluoxetine (a serotonergic drug) for their depression. Other psychotropic medications included lorazepam and buspirone and the non-psychotropic medications included aspirin, sinemet, cimetidine, and warfarin.

The serotonergic syndrome is not a pathognomonic entity in itself. Although parallels have been drawn between it and neuroleptic malignant syndrome, it is possible that any organically-induced mental state changes are likely to be confused with serotonergic syndrome. Hence, one needs to look at the etiological factors in order to label a group of symptoms as serotonergic syndrome. Further not every patient is likely to have a full-blown manifestation of the syndrome as documented in some of the published reports. Manifestations of this syndrome may range in severity from mild to severe cases resulting in comas, convulsions and death. The cases described above had experienced a moderate manifestation of the serotonergic syndrome. They were also on a variety of medications for different illnesses, which brings to attention the fact that a majority of our elderly patients have failing health and are likely to be receiving treatment for some disorders. These are also the kind of people who may experience recurrent bouts of dysthymia or depression secondary to abandonment by their families, increasing loneliness and isolation, and constantly living with the fear of failing health. One has to be very cautious in prescribing medications to them for the treatment of depression.

PART II

Let us consider each of the three cases individually and try to explain the occurrence of the symptoms which very closely resembles that of serotonergic syndrome.

Case Report — 1

The patient was receiving Aspirin as prophylaxis against further strokes, and was then started on fluoxetine. fluoxetine is a highly protein-bound drug. Hence there is a minimal amount of free fluoxetine available as the active ingredient for inhibiting the uptake of serotonin at the nerve endings. Caution has been advised when prescribing fluoxetine to patients who are taking another drug which is also highly protein-bound (examples being digoxin, warfarin, aspirin).[4] Fluoxetine may displace such medications resulting in a shift in plasma concentrations with a potential for adverse reactions. The reverse also holds true, in that a more tightly-bound drug may displace fluoxetine from its protein binding so that relatively higher concentrations of free fluoxetine are circulating in the blood causing excessive increases of serotonin in the brain. Aspirin is a highly protein-bound drug. Hence it is likely that aspirin may have displaced fluoxetine from the binding sites in the plasma, resulting in excessive amounts of stimulation of the brain by serotonin.

Case Report — 2

The patient was started on fluoxetine at the usual full dose for young adults, and this was doubled in a few days. The patient had started experiencing the early symptoms of excessive serotonin in the brain even before the dose was doubled. Clonazepam and buspirone were added at this point to try to settle the symptoms of restlessness and agitation. Fluoxetine has been noted to decrease the clearance and prolong the half-life of diazepam, causing higher plasma concentrations of the latter.[5] Also there is a reduction in the formation of the active metabolite N-desmethyl diazepam.[5]

The addition of fluoxetine to therapy with other antidepressant drugs produces side effects such as marked drowsiness, decreased energy, psychomotor retardation and depressed mood.[6] Different authors have concluded that fluoxetine might inhibit hepatic enzyme systems thereby impairing the degradation and clearance of other drugs. A new theory has been proposed that Fluoxetine and its metabolites are stored in the lungs and the inhibition of the tricyclic oxidizing enzymes occurs in the lungs rather than the liver. We know that cytochrome P-450 microchrosomal enzyme systems are present in the gut and the lungs in addition to the liver. Hence, fluoxetine could have inhibited the metabolism of clonazepam, a benzodiazepine drug, thereby having similar effects on its kinetics as it does on diazepam. Jenner *et al* have shown an increase in 5 HT synthesis in animals from the use of clonazepam.[7] Also Browne has suggested that clonazepam increases the concentration of 5 HT at the synaptic clefts.[8] Therefore, clonazepam has been recognized to have serotonin enhancing effects. Thus excessive amounts of clonazepam may have been available to further enhance the serotonergic surge in the body thereby producing stimulation. In a study done of fluoxetine and diazepam it was further noted was that psychomotor responses were not affected.[5] This means that we can possibly rule out the role of the sedating effects of clonazepam in contributing to the impaired mental states. Buspirone is an anxiolytic whose exact mechanism of action is not well understood, although it tends to block the pre-synaptic 5 hydroxy tryptamine 1-A receptors to cause anxiolysis.[9] This blocking is a dose-dependent phenomenon and buspirone might be displaced or become ineffective in the presence of excessive amounts of serotonin. It also tends to have dopaminergic activity which could contribute to the manifestation of the organic mental state. Hence, it appears that a dose-dependent increase in serotonergic drive produced by 40 mg daily of fluoxetine, combined with impaired kinetics of a serotonin-enhancing drug (clonazepam) with some dopaminergic activity (buspirone) resulted in a moderate form of serotonergic syndrome.

Case Report — 3

The reasons for the patient being on fluoxetine are not clear. He was started on this medication by his family doctor and there was no documentation of the patient's depression. He was also receiving sinemet for Parkinson's Disease. While in hospital he was started initially on heparin and then warfarin was added. Carbidopa is a dopa decarboxylase enzyme inhibitor. It may have the potential for inhibiting enzyme systems involved in fluoxetine degradation, although it will not be as powerful as monoamine oxidase inhibitors in decreasing the enzyme activity. However, it would result in increased amounts of the parent compound fluoxetine, which is more potent and active than its metabolite in the preliminary stages of action due to a shorter half-life. Also, as mentioned above, fluoxetine is a highly protein-bound drug and tends to displace or be displaced in the presence of other actively protein-bound medications. Warfarin is a very highly protein-bound drug in itself. Preliminary information suggests that fluoxetine does not displace warfarin from its active binding sites. The author had a patient in whom this belief was supported. While treating patient suffering from anti-cardiolipin syndrome who was receiving warfarin for her coagulopathy and had become depressed, she was started on fluoxetine. This patient's prothrombin time (PT) and partial thromboplastin time (PTT) were stabilized on 5 mg of Warfarin. At this point fluoxetine 20 mg daily was added and we did not observe any increase in the levels of PT and PTT after the addition of fluoxetine. However the reverse displacement cannot be ruled out. It is likely that warfarin may

displace fluoxetine from its binding site, thereby increasing the amount of free active drug. Hence, with the likelihood of decreased fluoxetine metabolism in the presence of carbidopa and in conjunction with warfarin, which may displace the parent compound from its binding site, thereby increasing the free drug, an enhancement in the serotonergic drive to the extent that it caused a moderate manifestation of symptoms very similar to serotonergic syndrome.

CONCLUSION

Fluoxetine is a drug which seems to have captured a very large share of the market in a very short period of time. It has been promoted as a very safe drug with minimal side effects as documented from extensive studies conducted on the drug. However, data on the long-term effects and the possible interactions of this medication with other medications are still being noted. Hence, one needs to be very careful in prescribing fluoxetine to patients who are advanced in age and suffer from any form of arteriosclerotic disease, susceptible to the side effects and are likely to be on other drugs for more than one illness. Hepatic enzyme systems, renal excretion of drugs, apparent volume of distribution and protein binding change with age and have an impact on the bioavailability of orally administered drugs. As a result of these changes, when starting patients on a tricyclic antidepressants we tend to begin with a relatively small dose and gradually build it up. The author suggests that the same principles should be applied when prescribing fluoxetine to the elderly. Although there have been studies which have used 20 mg of fluoxetine per day in elderly people and noted that they have done well, their inclusion criteria were very strict and there is no mention of a comcomitant illness and other psychotropic or non-psychotropic drugs.[10] The author has had experience with elderly patients in several clinical settings in which a starting dose of 20 mg of Fluoxetine every third or fourth day was used. Then the interval between doses was decreased while the patients were carefully monitored for side effects. This seems to give the best results observed in this population group.

An attempt has been made to tease out some of the probable etiological factors which might have contributed to the appearance of a similar constellation of symptoms in three elderly patients. This is to bring to the attention of family doctors and psychiatrists alike that there exists a likelihood of iatrogenic complications with this drug, as with any other drug. Thus we need to be aware of the susceptibility of elderly patients, carefully review the different medications they might be receiving and consider possible interactions before starting them on fluoxetine or other psychotropic drugs. □

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Pain Control in Childhood Cancer

G. Allen Finley, MD, FRCPC, Patrick J. McGrath, PhD and Allan Pyesmany, MD, FRCPC

Halifax, N.S.

Paediatric pain has been overlooked as a subject for research and as a clinical problem until recently. Children with cancer have pain from the disease, from the treatment, and from numerous monitoring procedures. Successful management of paediatric cancer pain requires a high level of suspicion, frequent assessment, and aggressive treatment using both psychological and pharmacological techniques. The benefits of good pain control to patient, parents, and health care personnel are immense.

DEFINITION: Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. Pain is always subjective. Each individual learns the application of the word through experience related to injury in early life. It is unquestionably a sensation in a part or parts of the body but it is also always unpleasant and therefore an emotional experience.[1]

Research into the causes of pain developed rapidly after the presentation of Melzack and Wall's *gate theory* more than 25 years ago.[2] Changes in clinical practice took longer, appearing first with the establishment of the hospice movement by Dame Cicely Saunders,[3] which resulted in a reasoned approach to management of terminal cancer pain. Interest in children's pain has taken much longer to develop. Until recently, most physicians and health professionals had little training in pain assessment and management, and none at all in paediatric pain. It is a measure of the recent development of the field that the first textbook on pain in children was published only four years ago.[4]

PREVALENCE

The World Health Organization estimates that pain is a major symptom of 70% of patients with advanced cancer and 50% of adults and children being treated for cancer.[5] Miser *et al* reported that 50% of paediatric and young adult in-patients, and 25% of out-patients, had some degree of pain.[6] Katz *et al* showed that 73% of children having bone marrow aspiration for cancer monitoring expressed pain verbally during the procedure (and one-third required physical restraint).[7] McGrath *et al* found that 37% of patients remembered the usual pain from their disease as moderate or severe, and 62% had moderate or severe pain at some stage in their illness.[8] More than three-quarters of McGrath's patients described the "usual" bone marrow aspiration as moderately or severely painful.

WHY IS THIS A PROBLEM?

A number of myths about children's pain are common in the medical and lay communities. Many physicians still believe that children do not experience as much pain as adults, and that the use of strong analgesics in children is too dangerous. A number of studies have shown that children receive significantly less analgesia than adults for the same type of surgery or injury, in spite of a complete lack of evidence that they feel less pain.[9,10] In fact, for many children, pain is the worst part of having cancer, and far exceeds in importance their fears about the disease or their prognosis. Inadequate pain control will interfere with activity, eating, and sleep, and may increase the amount of nausea and vomiting. Children's pain also causes intense suffering for their parents and for the nurses, doctors, and other health care workers involved in their care.

Most cancer pain can be treated effectively. Once the cause of the pain has been determined (and sometimes, before) there is no justification for allowing the pain to continue.

TYPES OF CANCER PAIN

Pain in cancer may be caused by the disease itself, by the treatment, or by the monitoring procedures that occur during the course of treatment.

The initial presentation of cancer is often pain, which usually resolves as chemotherapy or other treatment takes effect. The common cancers in children (leukemias and lymphomas) are probably less intrinsically painful than the carcinomas that occur in adulthood. However, pain frequently occurs from bone or solid organ invasion (either primary or metastatic) or from neuropathic involvement. Recurrence of pain following initial resolution may be evidence of a relapse, and, of course, pain is often a feature of the terminal stages of disease in children who are not cured of their cancer.

The treatment for childhood cancer often causes generalized mucositis, particularly of the mouth and esophagus. Skin ulceration can occur, even to the point of toxic epidermal necrosis, and we have also seen vincristine neuropathy, pericarditis, hypertrophic osteodystrophy, radiation mediastinitis, and other painful conditions. Esophagitis, in particular, may recur after each course of chemotherapy. Miser *et al*

From the Departments of Anaesthesia, Psychology, and Paediatrics Izaak Walton Killam Children's Hospital and Dalhousie University

Correspondence: Dr. Allen Finley, Department of Anaesthesia, IWK Children's Hospital, Halifax, NS B3J 3G9

found that treatment pain was much more common than pain from disease.[6]

Children with cancer require frequent venipunctures, PortaCath® access, and other needle procedures. Lumbar puncture and bone marrow aspiration and biopsy are performed at frequent and regular intervals (depending on the type of cancer) for initial diagnosis and to monitor the effects of chemotherapy. A patient with low-risk acute leukemia will have, on average, about 10 lumbar punctures and 5 bone marrow aspirations during the course of his treatment. Children do not "get used to these procedures"; the experience often becomes worse with each occurrence.[7]

ASSESSMENT

Self-Report

The gold standard for pain assessment is self-report, as is implicit in the definition of pain noted above. If a child says that "it hurts", he or she *must* be believed. Although most older children (over age 4 or 5 years) are quite capable of stating whether they have pain or not, a number of factors may interfere with accurate assessment.

The first requirement for succesful self-report is that *someone ask the patient.* Children will often not spontaneously report pain. The question has to be asked in terminology that they understand ("discomfort" or "pain" may not have the same significance to a 5 year old as to an adult). An adolescent or adult can describe their pain in terms of a score from 0 to 10 (0 = "no pain", 10 = "the worst pain imaginable") or on a visual analogue scale. Smaller children can use a set of line drawings of faces in varying degrees of distress, such as the FACES scale of Bieri *et al,*[11] or they can describe the number of "pieces of hurt" represented by 1 to 5 poker chips. Even the difference between "no hurt," "a little hurt", and "hurting a lot" is enough to modify pain therapy for the individual patient.

The consequences of the answer must be clear to the patient. Most children will deny pain if the result of a "yes" is another needle (or if they think it might be). We have even seen terminally-ill children at home deny severe pain for fear of returning to hospital. A treatment option that is acceptable to the child has to be available and explained carefully before the question is asked.

Cultural and social factors also influence pain assessment. Many people believe that it is morally preferable to withstand pain. "We don't even have an aspirin in the house" is a common refrain and a source of pride for some families. Children from these backgrounds may feel that an admission of pain is a sign of weakness, or that they may be disappointing their parents if they can't "be brave".

Behaviour

In children who are too young or who are otherwise unable to report, behavioural changes may be the only clue to the presence of pain. Common presentations include irritability, sleep disturbance, withdrawal from the parents and other social interaction, refusal to be consoled or cuddled, inability to walk, and/or reduction in eating and play, and these should be assumed to be caused by pain until proven otherwise. Unfortunately these signs may be misleading, as a child may continue to play and interact in spite of pain, and fever or nausea can also interfere with sleep, eating, and activity.

Re-Assessment

Whichever technique is used for assessing the child's pain, the most critical consideration is frequent review and re-assessment. Parents can often do this effectively, but they will need support and reassurance from the physician. For the patient at home, particularly children in palliative care for terminal cancer, frequent telephone checks are imperative, and office visits or house calls should be arranged regularly whenever possible.

PREVENTION OF PROCEDURE PAIN

On the Oncology service in our institution, EMLA® cream [ASTRA PHARMA Inc.] is used for topical analgesia prior to needle procedures, lumbar puncture, and bone marrow aspiration whenever possible. EMLA® is a eutectic mixture of lidocaine and prilocaine that has recently been licensed for use in Canada (as an over-the-counter drug). Application to intact skin for 1 to 2 hours under an occlusive dressing provides cutaneous anaesthesia that lasts for about one hour after removal of the dressing, and is effective for venipuncture and minor procedures.

The pain of bone marrow aspiration and biopsy cannot be completely prevented by local anaesthesia, so additional systemic medication for sedation and analgesia is usually required. Intramuscular "cocktails" such as "DPT" (meperidine, promethazine, chlorpromazine) are painful, provide inadequate analgesia, and result in prolonged sedation after the procedure [McGrath *et al,* unpublished data]. The safest and most effective technique is careful, individualized titration of intravenous drugs (such as midazolam/ketamine or midazolam/fentanyl) by an anaesthetist or another physician trained in paediatric airway management, monitoring, and the use of those specific medications.[12, 13] EMLA® permits local anaesthetic infiltration with less discomfort, and therefore reduces the amount of sedation required.

TREATMENT OF PROLONGED PAIN

Both psychological and pharmacological interventions for pain control are required for successful management. We are developing a handbook for parents [McGrath PJ, Finley GA, Turner CJ: *Making Cancer Less Painful,* in preparation] to help them understand and use these techniques effectively.

Psychological

The psychological management of cancer pain includes three components. The first is the adaptation of the environment so that children will be able to play and enjoy life even while ill. The second is the preparation for potentially painful events by reducing anxiety and by the learning of specific strategies such as distraction, relaxation, and self-hypnosis. The third component is counselling for parents and children.

Child life specialists or paediatric occupational therapists can often assist ward staff or parents to develop age- and illness-appropriate activities. Children and adolescents need play on a regular basis even when they are ill.

Preparation requires information presented in a way that the child can understand and the opportunity to discuss or work through his or her feelings about cancer and about the pain. Specific strategies can be taught by a nurse, psychologist, child life specialist, or social worker.

Counselling is often required by families who have children with cancer. This is not because of family or individual pathology, but because the experience of childhood cancer is such a trauma. Counselling can be done by psychologists, psychiatrists, or social workers, and group support by organizations such as the Candlelighters may also be helpful.

Pharmacological

Treatment of cancer pain in children, just as in adults, is based on the World Health Organization principles: *by the clock, by the mouth, by the ladder.*[5]

"By the clock" = Regular dosing

The goal of successful pain management is the prevention of pain, not the treatment of it after it occurs. Consequently, "as necessary" (*prn*) administration of medication is totally unacceptable. Analgesics should be administered around the clock in a sufficient dose to prevent the pain from recurring.

"By the mouth" = Oral administration

Oral tablets or suspensions are the cheapest, easiest, and safest ways to give analgesic medications in the majority of cases. There is no intrinsic reason why parenteral opioids should be more effective than oral, although an intravenous infusion can be a quicker way of achieving therapeutic levels in a patient with severe pain (the oral dose of morphine is approximately 2 to 3 times the intravenous dose used during the same time period). Once pain is controlled, the vast majority of children can be maintained on oral morphine or other medications.

"By the ladder" = Drug and dose titration

Initial treatment of mild pain should be with regular doses of non-opioid medications such as acetaminophen or non-steroidal anti-inflammatory drugs (NSAID). NSAID are particularly valuable in the control of bone pain from leukemic infiltration or metastases, but unfortunately interfere with platelet aggregation, which restricts their use in many children with bone marrow suppression.

If the pain is not controlled with adequate doses of acetaminophen (10-15 $mg \cdot kg^{-1}$ q4h), then a mild opioid (codeine, up to approximately 1 $mg \cdot kg^{-1}$ q4h) is added. If that dose of codeine is not sufficient, then morphine or an equivalent strong opioid, such as hydromorphone, is used instead. Meperidine (Demerol®) is not appropriate for prolonged use, due to accumulation of a toxic metabolite, normeperidine. The starting dose of oral morphine for pain that is too severe for codeine is usually 0.1 to 0.2 $mg \cdot kg^{-1}$ q4h, but this must be individually titrated, and there is no maximum dose in adults or in children over the age of about 6 months. Non-opioid medications often have a synergistic effect and should usually be continued as well.

Many parents, and some older children, are afraid of addiction to strong opioids. There is no risk of addiction to morphine from proper use in the treatment of pain. However, most patients will develop some physical dependence after prolonged use, and will require reduction of the dose over a few days or a week once the pain is gone. Another common reaction of parents to the use of morphine in cancer pain is what we call the "inference of hopelessness". Many people understand that morphine is used to treat terminal cancer pain, so when it is prescribed, they assume that the child is dying. Morphine can and should be used for many different types of severe pain, whether the problem will last for days, weeks, or months.

In many cases, adjuvant medications, such as steroids, tricyclic antidepressants, or anti-convulsants, can be used to control neuropathic pain from nerve compression or invasion.

The side-effects of opioids are well-known, but should almost never be a reason for stopping pain treatment. Most people placed on regular opioid medication will develop constipation, so prophylactic treatment with a stool softener is required. If bowel movements still do not occur regularly, then peristaltic stimulants or occasional enemas may be necessary. Some children develop a sleep disturbance from high doses of morphine; a small dose of amitriptyline (0.1 to 0.2 $mg \cdot kg^{-1}$ once daily at bedtime) will restore normal sleep patterns and may also reduce opioid requirements. Nausea and vomiting is, in our experience, a rare complication of opioid therapy in children. Management should be individualized, and may involve metoclopramide, antihistamines, or phenothiazines.

A relative overdose of opioid, or a subsequent reduction in pain, will usually present as increasing drowsiness or difficult arousal. This is easily managed with a reduction in dose, as there is invariably a balance between painful stimuli and sedation. Respiratory depression is naturally a concern, particularly in the early stages of treatment when dose titration is in progress. However, with oral administration this is

extremely rare, and even prolonged intravenous infusion of morphine will almost never cause respiratory depression if the dose is adjusted frequently and carefully.

BENEFITS

Recent laboratory findings suggest that untreated repetitive or continuous pain may interfere with immune response and increase the growth of certain tumours in animals,[14] and individualized and effective pain control has been shown to reduce post-operative morbidity in adults and neonates.[15-17] Reduced hospital stay or better recovery has not yet been proven for children, nor has it been clearly demonstrated for patients with continuous pain from cancer. However, successful eradication of pain has an unquestionably positive effect on patient, parent, and staff morale, and allows the child to cooperate more easily with other aspects of his or her treatment. Even for children who cannot be cured of their cancer, the parents' memory of the last weeks or months will last forever, whether the memory is of a child who plays and enjoys life right up to the time he or she dies or of a child withdrawn and silent, or crying with untreated pain.

Most physicians, except those graduating in the past three or four years, received no training in medical school, internship, or residency in pain assessment or management. Care of the dying patient was rarely touched upon, and pain and palliative care in children was totally ignored. Fortunately, that situation is gradually improving, yet most physicians still feel very uncomfortable dealing with children in pain or who are dying of cancer or other disease. Although most children with cancer are cured, physicians, in particular, feel an acute sense of failure when they are unable to prevent death. The opportunity to relieve pain and restore a child to his or her normal, active, happy self, even if only for a few weeks, is an experience that is unparalleled in normal medical practice. □

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"The young dislike power, because they do not share it; the middle-aged adore it, because it gives them some assurance that the world will continue to be as they have known it."

— Goronwy Rees

Current Topics in Community Health

Selected by: Dr. Lynn McIntyre
Department of Community Health & Epidemiology
Dalhousie University, Halifax N.S.

TEEN HEALTH ISSUES AT J.L. ILSLEY HIGH SCHOOL, HALIFAX

Teen Health Issues at J.L. Ilsley High School, released in May 1991, is a powerful study of the health concerns of young people today.[1] It tells us what high school students think are health issues, what health behaviours they engage in, and what they want from a health service. The information gathered from these students comes as a surprise; I guess we never asked them (the right way) before.

Background to the Teen Health Centre

The concept of a Teen Health Centre came out of a working group of community agency representatives in Mainland South Halifax concerned about health care for youth. This group was formed in response to an approach made to the Captain William Spry Community Centre by the prenatal coordinator at the Single Parent Centre who was concerned over the apparent high incidence of adolescent pregnancy in the community, a lack of knowledge regarding sexually transmitted diseases as well as poor nutrition and abusive relationships.

In response to these concerns, a committee, known as the School Based Teen Health Centre Planning Committee, was formed to identify the most appropriate means of providing a broad range of health care services to youth in Mainland South Halifax. Included in the initial composition of the committee were representatives from the Single Parent Centre, the Atlantic Health Unit, Metro Area Family Planning, Dalhousie University's Department of Family Medicine and the Captain William Spry Community Centre. The principal of J.L. Ilsley High School was also invited to sit on the committee because his high school contained the target group under review. Later, three students and a parent were invited to sit as members. Formal meetings began in February 1990.

The committee envisioned the establishment of a Teen Health Centre in the High School that could provide three components: counselling, education and services. It recommended that the centre be governed by a community Board of Directors and that funds be acquired to hire an outside researcher to undertake research among the 720 students at J.L. Ilsley to determine their health needs and concerns as they might relate to a Teen Health Centre.

In late fall of 1990, staff of the Halifax District School Board assisted the committee to obtain a research grant from Employment and Immigration Canada. In January 1991, a community development consulting firm was contracted to undertake research on behalf of the committee over a 4 month period. The specific objective of the research was to assist the School Based Teen Health Centre Planning Committee to determine how adolescents view their own health needs and what services they would use should a Teen Health Centre be located in J.L. Ilsley High School.

The overall research method was a mixture of qualitative, quantitative and action research techniques to provide opportunities for student discussion and ongoing involvement with the research. Efforts were made to reach the total student body of the school.

Qualitative Research

The researcher was given permission by all English teachers to visit their classes for one class period. During the visit, the researcher opened the discussion by broadly defining health as meeting the physical, mental and emotional needs of an individual. She then encouraged the class to 'brainstorm' the types of health concerns they had and the types of services they felt might be usefully built into the proposed Teen Health Centre.

Students were then asked to take about 15 to 20 minutes to write a confidential essay on the proposed Teen Health Centre in which they would address the following question:

- Is there a need for a Teen Health Centre at J.L. Ilsley? If no, why not? If yes, please select your top three (3) health concerns and provide an explanation for your choices.

In all, 436 essays were obtained through this process.

Quantitative Research

A questionnaire was developed based largely on the findings from the students' essays. It was administered to Grade 10 through the Social Studies department, to Grade 11 through the Math department and to Grade 12 through the Science department, thus reaching most of the student body. Confidentiality of responses was stressed. A total of 430 questionnaires were returned.

RESULTS

Of the 418 student questionnaires included in the analysis, 53% were completed by male students. Questionnaires broke down by grade level as follows: 45% from Grade 10, 29% from Grade 11 and 26% from Grade 12.

General and Personal Health Needs

Students were asked to identify what specific types of programming they felt should be built into the proposed Teen Health Centre. A separate question asked what types of programming the students could personally benefit from. The top six areas of general and personal health programming that the students recommended be included in the Health Centre are listed in Table I. These six topics were mentioned by 72 to 88% of the 418 respondents.

TABLE I

General Health Needs Compared with Personal Health Needs As Identified through the Student Questionnaires

General Needs	Personal Needs
1. Drug/alcohol counselling	1. Career counselling
2. Birth control counselling	2. Birth control counselling
3. Someone to talk to	3. Someone to talk to
4. Depression/suicide counselling	4. Stress counselling
5. Abuse counselling	5. Menstrual problems
6. Counselling on STDs and AIDS	6. Drug/alcohol counselling

The student essays revealed the same top three concerns: birth control counselling; someone to talk to; and drug/alcohol counselling. Concern with sexually transmitted diseases; stress and fitness were the next most commonly cited concerns in the essays.

Absence from School Due to Illness

Eighty-one percent of students indicated that they did not miss more than 3 days of school a month because of illness. Colds and flu were cited by 61% of respondents as reasons for time lost from school. Female students were three times more likely to be absent from school because of illness than male students.

Absence from School Due to Other Factors

Approximately 9% of female respondents and 4% of male respondents missed school for other reasons ranging from low self-esteem, body image, feelings of alienation to peer pressure. Twenty-two percent of females and 10% of males missed school because of family problems. Similarly, 19% of female respondents reported depression-related absences compared with 10% of males. A similar pattern was seen when respondents were asked if they missed out on things they liked to do because of reasons related to low self-esteem, body image, depression, feelings of alienation or peer pressure.

Prescription Drugs Usage (Excluding Oral Contraception)

Forty-two percent of respondents reported never taking prescription drugs while 37% took them less than 12 times a year. Eleven percent reported taking prescription drugs on a daily basis. Female students were more likely to take prescription drugs than their male counterparts with 15% of females reporting prescription drug use on a daily basis compared to 8% of males.

Stress Relating to School Problems

Twenty-nine percent of females reported experiencing stress over school-related matters over a matter of weeks or months compared with 13% of males. Nineteen percent of females indicated experiencing no stress compared with 43% of males. The remainder experienced stress on a few occasions. Age did not appear to be a factor associated with either school-induced or personal stress.

Stress Related to Personal Problems

Stress arising from personal problems was identified both more frequently by the female than male respondents as well as being more pressing. Forty-one percent of female respondents reported experiencing stress related to personal problems over a matter of weeks and/or months while only 14% of females reported experiencing no stress. The corresponding percentages for the male respondents were 18% (over a matter of weeks and/or months) and 34% (no stress).

The student essays suggest that much of the stress experienced by the female students was related to peer pressure to engage in sexual activity or to consume drugs and alcohol. Additional stress arose when female students thought or learnt that they were pregnant.

Abuse of Alcohol and Drugs

Forty-four percent of students reported 'abusing' alcohol and 27% reported 'abusing' drugs. Of those reporting alcohol abuse, 15% reported abusing alcohol over several months or years with 30% reporting abuse of alcohol once or twice or over several weeks.

The findings with respect to abuse of drugs indicated that 13% reported abuse over several months or years and a similar percentage reported abuse once or twice over several weeks. There were no gender differences in reported alcohol or drug abuse.

Almost double the number of males in the 17-19 year old range reported abusing drugs compared with the 15-16 year old males. However in females, this ratio was reversed; 15-16 year old females were twice as likely to abuse drugs than were 17-19 year old females. Abuse of alcohol was only slightly higher in the higher age group.

Although 88% of respondents indicated that substance abuse counselling should be the first priority of the proposed Teen Health Centre, a smaller percentage (30% for alcohol, 12% for drugs) actually identified themselves as being in need of substance abuse counselling.

Physical Abuse in Dating Relationships and the Family

Thirteen percent of respondents reported violence in their dating relationships and 10% of respondents reported violence in their families. Almost half (43%) of those who reported violence in their families also reported violence in their dating relationships.

Males and females experienced an equal amount of family violence with 8% of both sexes reporting violence once or twice and 3% reporting violence over several months or years. More violence appeared to occur in dating relationships than at home, with 13% of female respondents reporting having experienced dating abuse once or twice compared with 6% of males. Five percent of females reported physical abuse in a dating relationship occurring over several months or years compared with 3% of males.

Sexual Activity and Birth Control

Seventy percent of males and 68% of females reported being sexually active. More females in the 15-16 year old age group reported being sexually active than their male counterparts (65% compared with 53%) while more males in the 17-19 year old group reported being sexually active than their female counterparts (86% compared with 72%).

At the same time, only 50% of female respondents indicated they had talked to a nurse or doctor about sex with the percentage of males having talked to a nurse or doctor reported as 5%.

These data for sexual activity are somewhat higher than those reported by other teen populations in Nova Scotia. The recent study, *Young Women in Nova Scotia*, published by the Nova Scotia Advisory Council on the Status of Women, for example, indicated that 52% of young women (aged 14 to 18 years) have been sexually active. A second report, *Canada Youth and AIDS Study, Nova Scotia Report, 1989*, indicated that 56% of Grade 11 students (male and female) reported having had sexual intercourse.

Use of Birth Control

Of the females reporting sexual activity, 75% indicated they used birth control compared with only 58% of the males. However, only 66% of the 15-16 year old females who reported being sexually active used birth control compared with 84% of the 17-19 year old sexually active females. There was less disparity between these two age groups (15-16 year olds and 17-19 year olds) in the male population (55% versus 60%).

Frequency of Use of Birth Control

Of the females who reported using birth control, 89% reported using birth control all the time compared with only 64% of males. Again the 17-19 year old female respondents tended to use birth control more regularly than the 15-16 year olds (94% compared with 83%). In the male population, 69% of the 15-16 year olds were regular users of birth control compared with 62% of the 17-19 year olds.

Safe Sex (Use of Condom)

Nearly half of the sexually active teen population at J.L. Isley High School did not practise safe sex (53% of females and 44% of males). Only 35% of respondents who engaged in sexual activity reported using condoms all the time, with a further 20% reporting usage of condoms half the time or some of the time. There was little difference between the female age groups. More of the 15-16 year old males on the other hand tended to practise safe sex than the 17-19 year olds (69% compared with 49% of those who practised safe sex reported using condoms all the time).

Support Systems

The availability (perceived or real) of support systems to the teen population varied somewhat between female and male respondents. While both females and males were most apt to talk over personal matters with their friends (reported by 81% of females and 63% of males), females made greater use of the medical community than males (63% compared with 31% by males). Males on the other hand, particularly those in the 15-16 year old age range, felt more able to talk with their parents (46% compared to 34% of females in either age range).

Sixteen percent of male respondents and 6% of female respondents reported having no one to talk to concerning personal issues.

Interest in Using the Proposed Teen Health Centre

Seventy-five percent of all respondents indicated an interest in using the proposed Teen Health Centre (88% of female respondents and 66% of male respondents). There was a somewhat greater tendency for the younger students to indicate interest in using the Teen Health Centre with 90% of the 15-16 year old females and 70% of the 15-16 year old males indicating user interest compared with 85% of the 17-19 year old females and 63% of the 17-19 year old males.

Preferred Hours of Usage and Appointment Preference

In general, there was no strong preference indicated by respondents as to hours they would more likely use the Health Centre. Sixty-two percent had no strong preference as to how they would make their appointment, while 25% of respondents indicated they would prefer to make their appointments by phone. These are important findings as they indicate that the potential target group of the proposed Teen Health Centre would not be discouraged from visiting a Health Centre during regular school hours or from dropping in on an as required or *ad hoc* basis.

Use of Doctors/Preference

Sixty-seven percent of respondents indicated they would like to be able to access a doctor at the proposed Teen Health Centre, despite the fact that 85% of respondents reported they had visited a doctor's office in the last year. Seventy percent indicated they used the same doctor as their parents, with 28% indicating they saw a different doctor from that of their parents. A further 3% reported they saw both their family doctor and a different doctor. These findings may suggest that

teens are interested in establishing a confidential doctor/patient relationship that is apart from that shared with their parents, a finding confirmed through discussion with students over the research period.

Gender Preference for Doctor

Female respondents were more likely to have a gender preference for the doctor at the proposed Health Centre than male respondents. Sixty-eight percent of female respondents indicated a preference for a female doctor while 50% of male respondents indicated that sex did not matter. Four percent of female respondents indicated they would prefer a male doctor while 27% of male respondents indicated a preference for a female doctor.

* * *

"If the Health Centre could stop a young girl, through education, from making one mistake and then becoming pregnant or stop the young guy from trying drugs, then it will be worth while."
Male student. Grade 12.

These comments aptly sum up the over 400 essays written by students in Grade 10 through 12 as part of the research process. Support for the proposed Teen Health Centre among the student body was overwhelming with over 95% of students' essays in favour of the concept. The 4.5% not in favour felt that services were available already in the area or that students would just not use the Centre.

Students participated openly and willingly during the research period because they believed in the concept of a Teen Health Centre, and because they recognized how significant such a facility could be in both their own and their friends' lives. As one student wrote:

"The establishment of a Teen Health Centre in the school will not only give the school a positive image, it will give the student a feeling that someone cares."
Female student. Grade 10.

Reference

1. Martell Consulting Services Ltd: *Teen Health Issues at J.L. Ilsley High School, Halifax, Nova Scotia,* Report prepared for the School Based Teen Health Centre Planning Committee of the Captain William Spry Community Centre in Halifax, May, 1991.

Ghoulies and Ghosties. (some medications produce vivid dreams)

Barry R. Wheeler, MD

Truro, N.S.

Down there in that
World of shadows,
Where the rats crowd
Round your ankles,
Chisel toothed
And eyes like embers,
Scratching scratching
Running rustling,
Get out quickly,
Run like Hades,
Where the clawed men
Run beside you,
Ripping flesh
And faster much.
Watching while my
Muscles fail me
Breath is rasping,
Gulping air.
See before me
Living rows of
Chomping chomping,
Rows of skulls,
Biting chunks of
Living flesh off,
Falling to the
Skull beneath.
Veer away
I see before me
Zulu Impis,
Lean and chanting,
Shaking spears with
Blades like sharks heads,
Stamping stamping,
Stabbing stabbing,
Wounds like craters
Through my body.
No escape from,
Running rustling,
Chasing claw men,
Chomping skulls,
Chanting Zulus
Stabbing spearheads.
Leave that world,
And lie there sweating,
Heart still pumping,
Know they're still there
Waiting for you
When you slacken,
Get too sleepy
And you close your
Eyes again.
There's the chomping
Running rustling
Chasing clawmen,
Stabbing Zulus,
Leave that world
And lie there sweating,
Heart still pumping,
Know they're still there
Waiting for you
When you slacken. □

NOTICE OF MOTION

BY-LAW AMENDMENTS
The Medical Society of Nova Scotia

The By-Laws of The Medical Society of Nova Scotia stipulate that amendments to them may be proposed at an Annual Meeting of The Society provided they are published in The Nova Scotia Medical Journal at least one month prior to the Annual Meeting.

The following amendments will be presented as recommended by the Executive Committee.

EXISTING	PROPOSED
It has been apparent for some time that although the Officers have a crucial role in The Society, they have no terms of reference within the By-Laws. I should like to propose therefore the following Terms of Reference for a new Statutory Committee.	
10 OFFICERS AND OFFICIALS	
10.2 Does Not Exist	**10.2 The Officers' Committee**
10.2.1 Does Not Exist	**10.2.1** The Officers' Committee shall consist of the Officers of The Society, and, quorum shall be four of the elected Officers. The President shall be the chairman.
10.3 Does Not Exist	**10.3 Duties of the Officers' Committee**
10.3.1 Does Not Exist	**10.3.1** The Officers' Committee is charged with conducting the affairs of The Society in between meetings of the Executive Committee. It shall have all the rights and powers of The Society except those specifically or generally reserved. It shall meet as often as it is necessary at the call of the Chairman or of any four of its members, and it shall report to the Executive Committee.
15 AMENDMENTS	
15.1 Notice of motion by one or more members to amend these By-Laws must be placed in the hands of the Executive Director two months before the date of the Annual Meeting.	

EXISTING	PROPOSED
15 AMENDMENTS - cont'd.	
15.2 Amendments may be proposed at an Annual Meeting of The Society by the Executive Committee or by the Committee on By-Laws without notice of motion but the proposed amendments shall be published in The Nova Scotia Medical Journal at least one month preceding the Annual Meeting.	
15.3 Subject to the conditions provided by paragraphs 15.1 and 15.2 hereof, these By-Laws may be amended by a majority vote of a duly advertised general meeting of the members of The Society.	**15.3** Subject to the conditions provided by paragraphs 15.1 and 15.2 hereof, these By-Laws may be amended by a majority vote of a duly advertised general meeting of the members of The Society. A proposed amendment may itself be amended provided that the intent of the amendment is not altered
15.4 Rules and Regulations of The Medical Society of Nova Scotia may be amended by a majority vote of a duly advertised meeting of the Executive Committee, always subject to approval of the Annual Meeting of The Society.	
15.5 Rules and Regulations shall relate to non-policy matters concerning Branches, Sections, Committees and general administration of The Society.	

□

138th Annual Meeting
The Medical Society of Nova Scotia
November, 21-23, 1991

Appreciations

DR. WILLIAM WINSOR BENNETT

William Winsor Bennett, MDCM, general practitioner, and surgeon serving Lunenburg and Queens counties for forty-four years, died May 8, 1991 in the South Shore Regional Hospital, at age 83.

Bill was born in Random Island, Newfoundland and he was raised a minister's son on "The Rock". He slipped through a hole in the fence between the manse and the school at age three to begin his formal education. He got his gift of speech from his father and organizational abilities from his mother.

He graduated from Memorial University prior to attending Dalhousie Medical School. After graduation in 1933, he enjoyed six months of general practice in Caledonia, Queens County and then took over Dr. Young's practice in New Germany for four years. He took his first year of surgical fellowship in Edinburgh and Manchester, concentrating on Orthopedics, when war broke out. He returned to Bridgewater where he practised until 1978. He was one of three physicians in Bridgewater during W.W.II and was kept hopping — now we have over forty!

Alice Jackson RN, became Bill's wife in 1936, aiding him in his practice and at home.

Bill was President of the Lunenburg-Queens Branch of the Society, and for six years served on MMC board of directors. He was on active medical staff of the Dawson Memorial Hospital from 1934 to 1978.

He had staying power, pushing on inspite of a myocardial infarction at age 55, and could be seen out for a constitutional walk even one week prior to his death. He loved reading, taking particular delight in History, Medicine and Economics. His patients thought of him as "a friend in whom they could confide".

He was predeceased by his parents, Rev. Sidney and Anna, and his brother Major Sidney Bennett MD, FRCP (radiology). He is survived by his wife, Alice, son Gary, three grandchildren, and his sister Mrs. William (Irene) Shaffner RN.

He is missed by his colleagues. Our sympathy is extended to Bill's family.

Ewart A. Morse, MD
Bridgewater, N.S.

OBITUARY

Dr. Neil K. MacLennan (68) of Sydney, Nova Scotia died on August 31, 1991. Born in St. Peters, he received his medical degree from Dalhousie Medical School in 1948. He practised in Sydney since 1952. He is survived by his wife, two sons, five daughters, a stepson, two stepdaughters, and twelve grandchildren. The *Journal* extends sincere sympathy to his family.

DR. D. GRAHAM GWYN

Dr. D. Graham Gwyn, MB, BS, (London), PhD, (Birmingham), Professor of Anatomy, Dalhousie University, Faculty of Medicine, died unexpectedly at his home in Halifax on August 12, 1991, at the age of 55. Following his appointment in 1974, Dr. Gwyn served three consecutive terms as Campbell Professor and Head of the Department of Anatomy. Under his leadership, the Department experienced a period of major growth and diversification. During his tenure, departmental research funding grew from about $40,000 to an average of $600,000 per annum. After his retirement as Head in June 1990, he served as Acting Head until December 1990. He continued to be active in teaching, research and administration. In recognition of his skill and qualities as a dedicated teacher he was named Professor of the Year in 1985 and 1987 by the second year medical class.

Outside the Department and Faculty, he played a major role on university committees and was active on committees leading to the formation of the Neuroscience Institute.

Dr. Gwyn was active at the national level, serving on Medical Research Council of Canada Grant Review Committees, as well as holding offices in the Canadian Association of Anatomists, serving as Vice-President 1985-87 and President 1987-89.

Dr. Gwyn is survived by his wife Joan, three children and five grandchildren.

Dr. Gwyn will be greatly missed by his students and colleagues.

Donations towards a Scholarship Fund in Dr. Gwyn's name may be made at the Development Office at Dalhousie University to the attention of Charlotte Sutherland.

Dr. David A. Hopkins,
Professor and Head,
Department of Anatomy,
Dalhousie University.

THE MEDICAL SOCIETY OF NOVA SCOTIA

NOVA SCOTIA DIVISION OF THE CANADIAN MEDICAL ASSOCIATION

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5 Spectacle Lake Drive
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