Physicians in health care management: 5. Payment of physicians and organization of medical services

Eugene Vayda, MD, FRCPC

The financing, payment and organization of medical services are closely related. Canada's health care system is financed publicly, from tax revenue, and administered in each province by a single government payer. Although the chief method of payment to physicians is fee for service (FFS), the need to control costs and organize practice more efficiently has led to increased interest in FFS variants, such as capping payments at a certain level or fixing a budget, and alternative payment methods such as capitation-based payment, salary and combinations of these methods. Although solo practice is reportedly still the chief method of practice organization, it is being steadily replaced by arrangements in which physicians share expenses or calls, and by formal partnerships and group and team practices. As medical practice in Canada continues to shift from solo to group and team practice alternative payment methods that facilitate these models will become more common.

Le financement, la rémunération et l'organisation des services médicaux sont étroitement liés. Le système de soins de santé du Canada est financé par l'État, à même les recettes fiscales, et administré dans chaque province par un seul payeur public. La rémunération à l'acte est le principal mode de paiement des médecins, mais puisqu'il faut contrôler les coûts et organiser la pratique avec plus d'efficacité, les variantes de la rémunération à l'acte suscitent de plus en plus d'intérêt : plafonnement des paiements, établissement d'un budget fixe, sans oublier d'autres modes de paiement comme la capitation, le salaire et des combinaisons de ces modes, par exemple. Même si le principal mode de pratique demeure la pratique indépendante, celle-ci cède graduellement la place aux arrangements dans le cadre desquels les médecins mettent en commun leurs dépenses ou les visites, aux contrats d'association et aux pratiques collectives. À mesure que la pratique de la médecine au Canada continue d'évoluer vers la pratique en groupe et en équipe, les modes de paiement de rechange qui faciliteront ces modèles se répandront de plus en plus.

Controversy over the payment of physicians has dominated health care discussions in Europe and North America during this century. As early as 1913 the playwright George Bernard Shaw, a lifelong foe of fee-for-service (FFS) payment, wrote in *The Doctor's Dilemma* that it was absurd to give a surgeon a pecuniary interest in cutting off a patient's leg.[1] The controversy over FFS payment played a prominent part in the deliberations and report of the Committee on the Cost of Medical Care in the United States in 1932.[2] The

Dr. Vayda is professor emeritus in the Faculty of Medicine, University of Toronto, Toronto, Ont.

Reprint requests to: Dr. Eugene Vayda, Department of Health Administration, 2nd floor, McMurrich Building, University of Toronto, Toronto, ON M5S 1A8; fax (416) 978-7350

The first article in this series appeared in the Jan. 15, 1994, issue of CMAJ.

← For prescribing information see page 1672B

controversy in Europe has been summarized by Hogarth[3] and Glaser.[4] From this debate has emerged the realization that no fully satisfactory method of paying physicians has yet been developed. Any method can and has worked in one time and place and has been distorted in another.

Payment schemes do not exist in isolation; they must be considered in the context of funding and practice organization. In this article I will briefly describe Canadian and provincial funding for health care, but I will focus on payment for and organization of medical services and the interplay between the two in Canada and the United States.

Health care funding

Health care in Canada is funded from tax revenues. Although two provinces levy health care insurance premiums, these premiums cover 25% or less of actual health care costs and are forms of regressive (non-income-based) taxation. When cost-sharing for hospital care was initially established, in the 1950s, federal and provincial contributions were roughly equal. When medical care insurance was enacted, in the late 1960s, the federal contributions were adjusted so that the "poorer" provinces received substantially more than 50% of their health care funding from the federal government and the "richer" provinces less than 50%.[5] Since the enactment of the Fiscal Arrangements Act[6] (often referred to as established programs financing), in 1977, the federal government contribution has consisted of tax points and cash transferred to the provinces. The transfer payments have been capped and reduced several times, and more and more of the tax burden has been shifted to the provinces. At the same time, the recession has eroded the federal and provincial tax bases so that health care, like all tax-supported programs, has come under great financial pressure. The provinces are the single payers of health care and are now responsible for generating more than 75% of the tax revenues needed to fund the system. By controlling both the sources and distribution of revenue, provincial governments exercise considerable control over how much, and how, physicians (and other providers) are paid.

Payment

In general, physicians are paid by one or more of the following three methods: FFS, capitation or salary (or sessional payment). Although many combinations are possible, only a few will be examined.

Fee for service

In an FFS system physicians are paid a sum for each service they provide. Hence, the system is volume-driven, and physician incomes are based on the number and types of services provided. FFS may be completely open-ended or based on fee schedules. A fee schedule may cover the full charge, or the physician may add a charge (called extra or balanced billing). In the United States in lieu of a fee schedule usual and customary charges (UCCs) are computed for services provided to Medicare beneficiaries; UCCs are a percentage of the average fee charged for a particular service in the pertinent geographic region. The open-ended UCC system is being modified so that physicians will not be allowed to bill more than a fixed percentage in excess of the UCCs.

Because volume, choice and mix of services are not fixed the total cost of medical care in an FFS system is unpredictable and usually exceeds budgeted targets.[7] As a result, a number of methods of combining FFS with predictable costs have been proposed. In Ontario, for example, under the current contract between the Ministry of Health and the Ontario Medical Association when the total payment to all physicians exceeds agreed utilization targets, a percentage of the excess payment is clawed back by debiting a future Ontario Health Insurance Plan payment to each physician or by billing each physician directly. Several provinces have placed annual or quarterly ceilings on total physician billings, a manoeuvre that has proved ineffective in capping or predicting medical costs. In the United States some independent practice association health maintenance organizations (IPA HMOs) that pay physicians on an FFS basis withhold payment of 10% to 20% of fees in case of unexpected or excess physician utilization. If utilization targets are met, all or a portion of the withheld fees are distributed to the IPA physicians. If targets are not met, the withheld fees are not paid to the physicians, and the fee schedule for the next year is adjusted. Thus, there is an incentive for physicians to remain within targeted budgets. Relative-value fee schedules achieve the same goal. Each service is assigned a relative value in units instead of dollars (e.g., office visit — 1, consultation — 6, cholecystectomy — 15). The dollar value of each unit is based on utilization experience. If utilization targets are exceeded the value of a unit can be reduced (e.g., from $20 to $15).

These modified FFS schemes have the effect of combining a fixed or capped budget for physician services with FFS payment. They have potential advantages for both payers and physicians: payers benefit from predictable costs and physicians from the familiarity of FFS and its incentives for productivity.

Historically, FFS systems have favoured procedures over counselling and surgical over nonsurgical services, but this is less of a problem in Canada than in the United States. In the United States Hsiao and associates[8] have developed a Resource-Based-Relative-Value Scale that bases fees on time spent and skill required; their aim was to increase fees for medical services relative to surgical services. This proposal has met with considerable opposition from surgeons and has yet to be adopted.[9]

Under an FFS system medical practice can be influenced in other ways. The fee schedule can be adjusted selectively so that physicians are paid more for effective treatments and services, and ineffective care is removed from the fee schedule. Payments for certain preventive services, such as screening for cervical cancer, can be increased to stimulate their use.

Any assessment of FFS must specify whether it is open-ended or combined with a fixed budget. In Canadian provinces, with single payer systems, fixed-budget FFS systems are gradually replacing open-ended ones. In the United States, with multiple payers, a capped FFS system is extremely difficult to implement, but there have been attempts to cap payments in managed care systems and in preferred provider organizations.

Capitation

In a capitation system a physician is paid a fixed amount for every patient registered in his or her practice. Each general practitioner or family physician in England, for example, is paid a set sum to provide a full range of primary care services for his or her patients. Bonus payments are made for services beyond those specified in the capitation contract (e.g., preventive services such as screening for cervical cancer and additional time on call).

In the United States one of the two types of HMO pays physicians on a capitation basis. In the IPA HMOs physicians contract singly or in groups with the IPA and are almost all paid based on FFS, with either a capped budget or a percentage of the fee withheld until utilization rates are reconciled. In contrast, in prepaid group practice (PPGP) HMOs, a group or groups of physicians are paid based on capitation, although some physicians may be on salary. FFS payment in PPGP is rare (Fig. 1). In the PPGP model physicians generally derive their entire practice and income from a single HMO; in the IPA model physicians usually combine HMO and private practice.[10] In both models the HMO receives a monthly premium for each patient or family voluntarily enrolled in the program from the patients, their employers or both. In return for this premium the HMO provides or arranges a full range of medical services, which almost always include all physician care in the office, home and hospital and all hospital care and costs. Some HMOs also cover medications, nursing home care and appliances.[11]

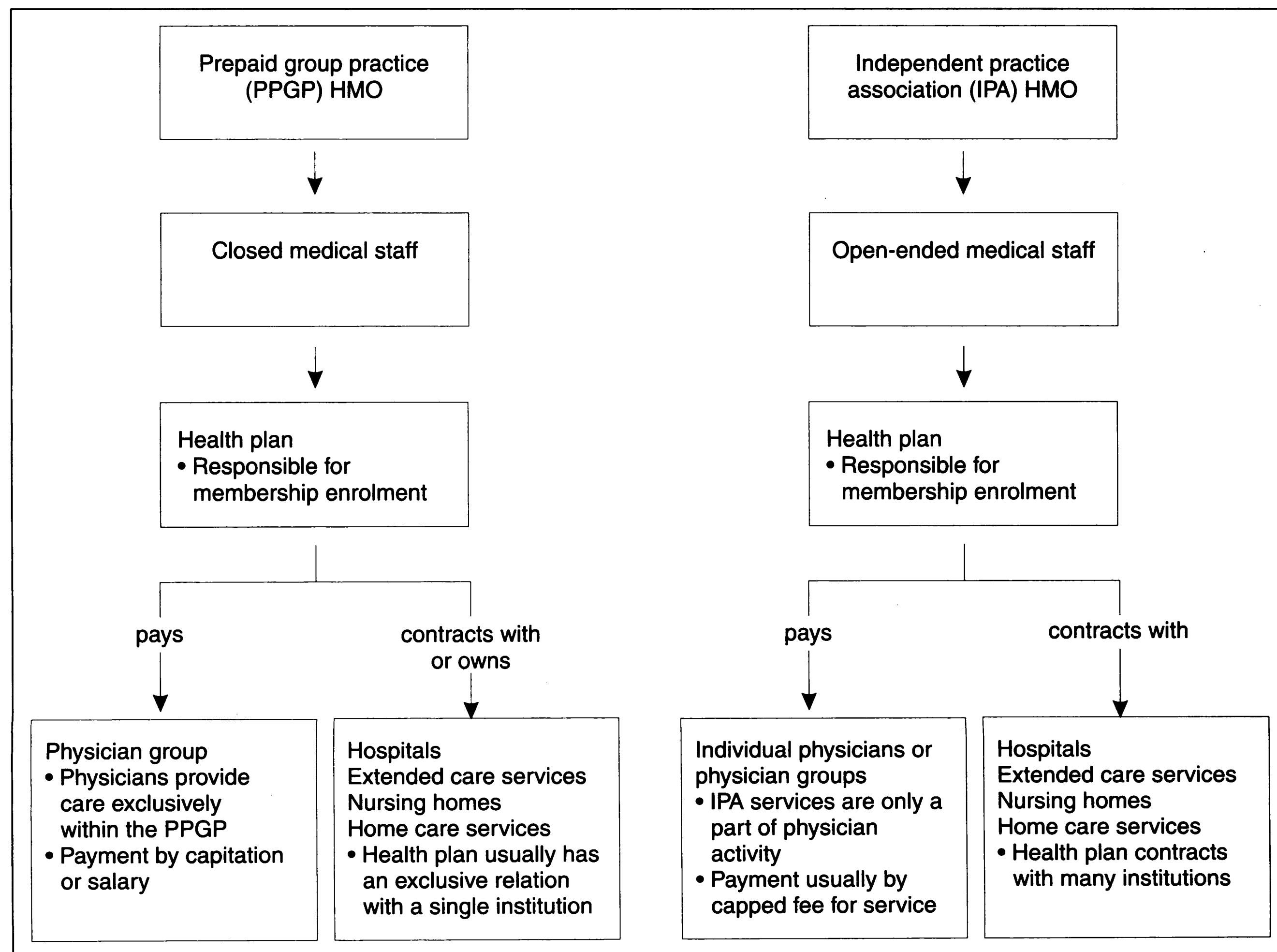

Fig. 1: Funding and payment schemes used in health maintenance organizations (HMOs) in the United States.

Salary

A physician paid on salary receives a fixed sum for his or her professional services. The arrangement may be on a full-time, part-time or sessional basis. Many physicians in private practice have part-time employment in industry, public health or hospitals for which they are paid a fixed sum for each session. Although part-time or sessional salaries are acceptable to almost all physicians, full-time salaried patient-care positions are unusual and, in the past, have been unacceptable. A full-time salaried position implies an employer. Academic, industrial or HMO physicians are employed by universities, companies or health plans, but the identity of the employer of a full-time community practitioner is less clear. Provincial ministries of health are not considered acceptable employers at present. Although it is not yet feasible, the proposed devolution of funding and management to regional or district health councils in several provinces may make it possible for such bodies to employ physicians, much as the health regions or hospitals in Britain employ medical and surgical specialists.

Combinations

A number of combinations of payment methods have been proposed.[12] The most interesting ones consist of several payment tiers, with varying percentages of total physician income from salary, capitation payments and FFS payments. In addition, some proposals have suggested bonus payments for favourable health outcomes or appropriate utilization patterns. Previous attempts to couple existing payment methods with credits for merit have always been rejected by Canadian physicians because of the difficulty in developing acceptable merit criteria. Although many payment combinations seem rational and desirable, none have yet been implemented.

Choice of payment method

On one hand, FFS payment methods have sometimes led to excessive and even unnecessary levels of service. On the other hand, salary and capitation payment methods could produce inadequate levels of service. The combination of group medical practice with capitation payments or salaries in PPGP HMOs in the United States, such as Kaiser Permanente, has produced reasonable levels of provider and consumer satisfaction and favourable patient outcomes, with no evidence of underservicing.[13]

For provincial governments, levels of consumer and provider satisfaction and quality of care are considered important, but control and predictability of costs are the overriding concerns. As a result, capped FFS, capitation and salaried payment schemes are likely equally acceptable to provincial treasurers and ministries of health. Consumers want services to be fully insured, accessible, available and high quality — attributes that are not directly influenced by the method of payment. Physicians want professional autonomy, adequate income, protection against excessive patient and government demands and an acceptable practice environment — criteria best met by FFS payment. Capped FFS schemes would retain some of the volume-driven aspects of practice, although they would severely limit physicians' ability to translate increased volume into significantly greater income. In these circumstances capitation payment and salaried care may become more acceptable by making it possible for physicians to move away from volume-driven practice without suffering concomitant decreases in income.

Organization of medical practice

Physicians may work in solo, shared, group or team practices. Practice organization, like payment, has changed substantially in recent years. Solo practice, which half of Canada's physicians have recently said is their mode of practice organization,[14] is, in one sense, almost nonexistent. Although many physicians still bill for their services as solo practitioners, "solo practice" no longer describes their practice organization because of the interdependent nature of modern medical practice. Even physicians who do not share offices refer patients to colleagues for consultation and specialty care and to nonphysician health care professionals for such services as occupational, physical and respiratory therapy, laboratory examinations and social services. So-called solo practitioners usually share night, weekend or vacation call with colleagues; their seriously ill patients are admitted to hospital for care from many hospital-based health care professionals.

Sharing financial or functional practice components or both with colleagues is now the most common form of practice.[14] Physicians share office and other overhead expenses as well as off-duty coverage. Such arrangements may be ad hoc or formally and legally defined as they are in partnerships. Physicians may also employ associates who, with time, may become full partners.

Group practice is the next level of practice organization. In such a practice three or more physicians have a formal legal arrangement, a predetermined method of disbursing income generated by the practice and a single, shared set of patient records. Groups often employ new physicians for a trial period (usually 2 years) before offering full group membership. Groups may own or rent their offices, furniture and equipment.

In a recent survey of established Ontario group practices[15] 80% of the groups that responded were single-specialty groups and 90% of these were family-practice groups. The median group size was five physicians. Groups employed medical assistants, nurses, technicians, receptionists and administrators to varying

degrees, usually in direct proportion to the size of the group.

Of the groups that responded 70% were in private FFS practice, and 30% were either health service organizations (HSOs) or community health centres (CHCs). There are now 81 HSOs and 47 CHCs in Ontario. Together, they serve less than 10% of Ontario's population. All of the HSOs (except for the one in Sault Ste. Marie) are family-practice groups in which physicians are paid by capitation to provide primary and family-practice services for all of the patients registered, rostered or enrolled in their practices. HSOs may be sponsored by physicians, universities or hospitals. A few HSOs had received additional capitation payments for certain types of specialty care (e.g., obstetrics, pediatrics or psychiatry), but this arrangement has been terminated.

CHCs are team practices in which physicians and nonphysician health care professionals work together as equal members of interdisciplinary health care teams. In the Ontario model both the physicians and the nonphysicians are salaried employees of a community–consumer board of directors; the nonphysician team members are not employed by the physicians. The team provides primary medical care and a variety of additional community services such as legal assistance, advocacy, social services and occupational health services. The CHC is the chief Ontario model in which physicians who provide clinical care are paid by salary.

In British Columbia team practices similar to CHCs are called health and human resource centres, in Saskatchewan they are known as community clinics, and in Quebec, where this model has been developed further, they are called centres locaux de services communautaires (CLSCs). A few CHCs have also been established in Nova Scotia, New Brunswick and Manitoba.

The CLSC is the only Canadian form of team practice that operates in a provincially planned regional network under a comprehensive provincial statute that determines services and board membership.[16] There are now more than 160 CLSCs, and they serve more than 10% of Quebec residents. Operated by community boards and funded by global budgets, CLSCs offer primary health care, social services and public health services to the residents of the area served. Residents are also free to use the services of private medical practitioners. The CLSCs are organized as team practices and all health care professionals, including physicians, are paid on a salary or sessional basis. One study showed that physicians working in CLSCs were less likely than neighbouring FFS practitioners to prescribe tranquilizers for patients who presented with tension headaches.[17]

At many hospitals emergency department groups have been formed to ensure 24-hour coverage. Physicians in such groups may be paid by the hospital on a salary or sessional basis, by an emergency medical group or by an arrangement in which they receive all or a percentage of the fees generated. Walk-in clinics, house-call services and night and weekend services and clinics have recently been started in response to inadequate night and weekend coverage by many practitioners and long patient waits in emergency departments, coupled, in some metropolitan areas, with an oversupply of physicians. Physicians working in these clinics are usually employed by the clinic owners, who may or may not be physicians. Their payment may be sessional or may reflect the number and types of services provided.

Several organizational models have recently been proposed in the United States and Canada to deal with funding of medical care and payment of physicians. These models include managed care and preferred provider organizations in the United States and comprehensive health organizations in Ontario. Managed care is a system for providing a range of medical and health care services to meet the needs of an enrolled client population for a fixed and predetermined sum. The services are organized, monitored and controlled by the provider organization (the health plan). Four elements are essential: formal agreements with consumers and providers, risk assumption, utilization management and quality assurance.[18] Preferred provider organizations are groups of physicians and hospitals providing comprehensive health care services for a client population under contracts with employers and insurers. Physicians are primarily paid by discounted FFS, although there are a few instances of capitation payment.[19] In reality, the preferred provider organization is the provider arm of a managed care program. In all forms of managed care, payment to physicians is capped and the organizational pattern is usually group practice, although, as in the IPA HMO, the health plan may also contract with individual physicians.

In Ontario comprehensive health organizations are being discussed, and several hospitals and community groups have received grants to conduct feasibility studies and planning of such organizations. These organizations are forms of managed care and are modelled to some extent on HMOs. A comprehensive health organization is defined by the Ontario Ministry of Health as "a nonprofit corporation which assumes responsibility for providing or purchasing the delivery of a full range of vertically integrated health care and related services to a defined population."[20] As the managing organization (the health plan) it would receive a capitation payment for each patient in the defined population and would, in turn, contract with providers for all the necessary services. By accepting contracts the providers would, in essence, agree to fixed budgets; for physicians this fixed budget would result in one or another form of capping whether payment was by FFS, capitation or salary.

Conclusion

Universally acceptable methods of organizing medical services and paying physicians have not yet appeared. However, certain trends are clear. Solo practice

is gradually but surely being replaced by informal shared arrangements and by formal organizational structures such as partnerships and group practices. Team practice is still infrequent. Although there is no agreement on the best payment method, capped or fixed budgets for physicians' services will soon be the norm in all provinces. This trend will reduce the importance of the arguments about the best way to pay physicians. The controversy could then be replaced with a series of trials to develop and assess different methods of payment and organizational models with the use of clearly specified program goals and predetermined measures of success.

References

1. Shaw GB: *The Doctor's Dilemma*, Penguin Books, Baltimore, 1954: 7
2. Committee on the Cost of Medical Care: *Medical Care for the American People* (pub no 28), University of Chicago Press, Chicago, 1932: 1–150
3. Hogarth J: *The Payment of the General Practitioner*, Pergamon Press, Oxford, England, 1963
4. Glaser WA: *Paying the Doctor*, Johns Hopkins Press, Baltimore, 1970
5. LeClair M: The Canadian health care system. In Andreopoulos S (ed): *National Health Insurance: Can We Learn From Canada?*, John Wiley and Sons, New York, 1975: 37–39
6. *Fiscal Arrangements Act*, SC 1976–77, c 10
7. Lomas J, Fooks C, Rice T et al: Paying physicians in Canada: minding our Ps and Qs. *Health Aff* 1989; 8: 80–102
8. Hsiao WC, Braun P, Dunn D et al: Results and policy implications of the Resource-Based-Relative-Value Study. *N Engl J Med* 1988; 320: 881–888
9. Glaser WA: The politics of paying American physicians. *Health Aff* 1989; 8: 129–146
10. Luft HS: *Health Maintenance Organizations, Dimensions of Performance*, Transaction Books, New Brunswick, NJ, 1987: 20–39
11. Luft HS: *Health Maintenance Organizations, Dimensions of Performance*, Transaction Books, New Brunswick, NJ, 1987: 1–19
12. Lee S: The three layered cake — a plan for physician compensation. *N Engl J Med* 1974; 291: 253–256
13. Luft HS: *Health Maintenance Organizations, Dimensions of Performance*, Transaction Books, New Brunswick, NJ, 1987: 165–319
14. Williams AP, Vayda E, Stevenson HM et al: A typology of medical practice organization in Canada: data from a national survey of physicians. *Med Care* 1990; 28: 995–1004
15. Vayda E, Williams AP, Stevenson HM et al: The characteristics of established group practices in Ontario. *Healthc Manage Forum* 1989; 2: 17–23
16. Sutherland RW, Fulton MJ: *Health Care in Canada*, Health Group, Ottawa, 1988: 219–232
17. Renaud M, Beauchemin J, Lalonde C et al: Practice settings and prescribing profiles: the simulation of tension headaches to general practitioners working in different practice settings in the Montreal area. *Am J Public Health* 1980; 70: 1068–1072
18. Lamb M, Deber RB, Naylor CD et al: *Managed Care in Canada: the Toronto Hospital's Comprehensive Health Organization*, University of Toronto Press, Toronto, 1989
19. Welch WP, Hillman AL, Pauly MV: Toward new typologies for HMOs. *Milbank Mem Fund Q* 1990; 68: 221–243
20. *CHO Descriptive Document*, Comprehensive Health Organization Program, Ontario Ministry of Health, Toronto, 1992

Conferences
continued from page 1579

June 12–15, 1994: Critical Care Symposium
Banff, Alta.
Study credits available.
Continuing Medical Education, Faculty of Medicine, University of Alberta, 2J3 Walter Mackenzie Centre, Edmonton, AB T6G 2B7; tel (403) 492-6346, fax (403) 492-5487

June 16–18, 1994: International Conference on Biomedical Periodicals (organized by the Chinese Medical Association)
Beijing, China
Dr. Yongmao Jiang, assistant director, Publishing House of Medical Journals, Chinese Medical Association, 42 Dongsi Xidajie, Beijing 100710, China; tel 011-86-1-5133311, ext. 362; fax 011-86-1-5123754

June 17, 1994: University of Toronto Department of Ophthalmology 36th Annual Departmental Research Meeting and 14th Clement McCulloch Lecture
Toronto
Guest speaker: Dr. Jack Rootman
Dr. David S. Rootman, Department of Ophthalmology, University of Toronto, 115–1 Spadina Cres., Toronto, ON M5S 2J5; tel (416) 369-5401; or Rajni Lala, coordinator, tel (416) 978-2635, fax (416) 978-1522

June 17–18, 1994: Symposium on Current Trends in Management of Thoracic Malignancies
Montreal
Miss Lynn Kowalski, Room L9-120, 1650 Cedar Ave., Montreal, PQ H3G 1A4; tel (514) 934-8099, fax (514) 934-8235

June 17–23, 1994: 1st World Congress on Biomedical Communications — Global Images in Health and Science
Orlando, Fla.
Professional Conferences Inc., PO Box 50340, Irvine, CA 92619-0340; tel (714) 753-8680, fax (714) 753-8685

June 18–22, 1994: Joint Meeting of the International Strabismological Association and the American Association for Pediatric Ophthalmology and Strabismus (satellite meeting of the 27th International Congress of Ophthalmology)
Vancouver
Ms. Tricia Stevens-Petras, 105 Twin Ridge Lane, Richmond, VA 23235; tel (804) 320-2833, fax (804) 272-1320

June 19–22, 1994: 5th Symposium on Violence and Aggression (cosponsored by the Regional Psychiatric Centre [Prairies])
Saskatoon
Registration Office, Rm. 125, Kirk Hall, University of Saskatchewan, Saskatoon, SK S7N 0W0; tel (306) 966-5539, fax (306) 966-5567

continued on page 1597

For prescribing information see page 1730 →