

## CHAPTER 10

# SERVING GOD AND MAMMON? HEALTH CARE FOR PROFIT

### FOR-PROFIT HEALTH CARE IN CANADA: SMALL SCALE BUT WIDER SIGNIFICANCE

Amid "voluntary" not-for-profit institutions in the hospital sector, professional practices, government bureaux, and voluntary agencies, the strictly for-profit (FP) firm of conventional economic theory organized and operated solely to maximize the profits of its owners provides a very small proportion of health care services in Canada. For-profit organization persists primarily in the production and sale of specific commodities -- drugs and supplies, medical equipment, eyeglasses, and prostheses. The for-profit insurance industry continues to provide some prepayment and administration services, in competition with not-for-profit carriers, for care expenditures outside the public programs. In some provinces, a significant proportion of nursing home care is provided by FP institutions, and (again only in some provinces) the non-hospital wing of the laboratory industry appears to be moving or to have moved into the FP sector. Overall, a reasonably generous estimate of the for-profit share of health care expenditures might be in the neighbourhood of 15 percent.<sup>1</sup>

But the importance of for-profit organization in health care delivery is greater than this small proportion might suggest, for three reasons. First, the sectoral division of health expenditures is on a final output, not a "value added" basis; it identifies only the firm or institution directly supplying the end user. But hospitals, for example, buy significant amounts of their inputs from the for-profit sector. About 30 percent of operating expense is non-labour cost, and though much of this is food, fuel, and other inputs non-specific to health care, there remains a substantial share of hospital expense, probably between 10 and 20 percent, which goes to for-profit firms selling health-specific commodities -- drugs, dressings, medical gases, equipment, and supplies. The same is true of capital investment. Facility construction may be carried out by for-profit general construction firms, but major equipment, diagnostic and therapeutic machinery, is purchased from for-profit firms or divisions of firms specialized to the health sector.

Professional practices likewise buy from the for-profit sector some share of the inputs they use in providing services, the significance of equipment and supplies being more obvious in some fields (ophthalmology, radiology, pathology, dentistry) than others (general practice or psychiatry). Moreover as pointed out above, some (rather difficult to determine) share of professional earnings in the NOFP sector is also profit, net earnings after deducting the cost of purchased or owner-supplied inputs to production.<sup>2</sup>

Secondly, the behaviour of for-profit firms influences the decisions made by other suppliers. The extraordinary marketing efforts made by for-profit drug companies to influence physician prescribing patterns and attitudes toward therapy generally have long been a subject for study and comment. (Torrance n.d. *i.e.* 1972). Medical equipment manufacturers have a similar interest

in marketing technological change to physicians and hospitals, whose decisions determine their sales.

Public policy and program design also create or destroy profit opportunities. The willingness or otherwise of insurers to reimburse physicians, as opposed to hospitals, for particular procedures can dramatically affect equipment sales. In Canada, CT scanners are not sold to physicians, because they cannot be reimbursed for providing the service to patients. In the United States physician practices make up a large market for such equipment. Similarly, drug substitution or compulsory licensure laws can have a powerful influence on the distribution of industry sales and profits. The Canadian federal government's modification in 1969 of patent protection for prescription drugs, to require compulsory licensure by the patent holder of competitive domestic producers or importers of generic equivalents, clearly cut into the profits of the multinationals while opening up markets for small domestic firms and lowering prescription drug prices to the Canadian consumer. The multinational drug firms have lobbied against this provision ever since. And the economic interests of private sickness and accident insurers are obviously threatened by the development and spread of public health insurance programs -- the overhead costs of insurance or the spread between premium incomes and benefits paid being the source of their incomes and profits (see chapter 2). Thus the marketing and lobbying efforts of private firms must inevitably be directed to influencing public policy as well as the behaviour of the NFP and NOFP sectors in order to protect and expand their own sales opportunities.

Finally, a number of proposals for policy change, and more-or-less radical restructuring of the health care delivery system, involve a more extensive role for for-profit institutions. Such proposals are more prominent in the United States, where the existing situation is perceived as being in much more need of radical reform. There, some advocate the complete deregulation of the industry and the opening of all aspects of supply to private for-profit providers. Apart from the fact that such a revolution would disregard all the peculiarities of health care as a commodity analysed in chapters 1-4, its political feasibility is probably zero in any developed society.<sup>3</sup> Nevertheless, the powerful theoretical incentives to cost control, and to process as well as product innovations, in competitive markets served by for-profit firms suggest that one give serious consideration to the conditions under which for-profit motivation might be consistent with the more efficient allocation of health care resources. There is considerable experience with for-profit organization in the drug and appliance field, and its role is expanding rapidly, in the United States at least, in hospital ownership and management as well as in diagnostic services (Gray 1983). Some general lessons should be available from this experience, as to the risks and benefits of trying to harness for-profit motivations to health care objectives.

## **BEYOND GOOD AND EVIL: THE ECONOMIC FUNCTION OF PROFITS**

From the outset, however, it is important to emphasize that profit per se is associated with neither moral turpitude nor additional costs.<sup>4</sup> There is an in-grained hostility to profit-making organizations in health care, often of rather obscure motivation. Making profits from the misfortune of others sounds morally offensive. Yet the individuals who provide care in NFP or NOFP settings make their livings, and frequently very good ones, from that same source. And profit, in a well-functioning competitive market, is not an extra cost component which can be "saved" by nonprofit organization. In equilibrium it is a return to invested capital which reflects the opportunity cost of that capital to society as a whole. Capital is not free; it is scarce and has alternative uses. And an organization, profit or non-profit, which does not account for the value

of the capital services which it uses is undercounting its true costs of production. When markets are out of equilibrium, profits (or their absence) also serve as signals of changes in tastes, technology, or resource availability, and provide both information and incentives to redirect resources. They thus perform a critical social role in assuring the efficient use of scarce resources -- in a well-functioning competitive market.

The real concern over for-profit motivation in health care, therefore, (other than that of NFP and NOFP providers who fear the competition as a threat to their own interests or incomes), reflects a judgement that the conditions for a well-functioning market do not exist, and perhaps cannot be created even approximately, in the provision of health care. If this is so, then not profit per se, but the actions of the profit-seeker, may have undesirable results. The problem of the "quack" is not that he makes money -- "legitimate" practitioners in health care also make money, and often a great deal -- but that in the process he does or recommends things to patients which are useless or dangerous, or which delay or preclude more effective treatment. Of course so may legitimate practitioners, but presumably not as often, or else their legitimacy and the licensure process itself would be unjustifiable.

To criticize for-profit motivation, therefore, one must argue both that poor quality practice -- where "quality" is explicitly defined in terms of probable effect on patient health status, *not* on general feelings of well-being -- would be more profitable than good quality, at least for some current or potential providers (or else no one would provide poor quality care), *and* that this profitability is a result of patient ignorance -- informed patients would not buy poor quality (or else it is hard to justify interfering with their decisions). The argument for keeping FP firms out of particular market is presumably that they are more likely to try to take advantage of patients' ignorance.

The same behaviour which the defender of profit views as energetic pursuit of efficient production becomes dangerous dilution of quality of care, while the flexible response to a wide range of individual preferences is interpreted in the context of asymmetric information as the exploitation of a gullible and vulnerable public with useless or harmful products. The objection to for-profit organization is thus based on the same assumption of asymmetric information between patient and provider as is the case for professional licensure, or the rejection of the assumed independence of consumer demand from supplier behaviour in theoretical analyses of utilization.

Conversely, the advocates of for-profit organization who have thought the matter through<sup>5</sup> argue first that the regulatory response to informational asymmetry is not perfect -- which is clearly true -- and secondly that a for-profit delivery system can be established which would remain competitive and would over time develop processes of information transfer (such as brand and reputation effects) which would remedy or at least mitigate the effects of asymmetry. The remaining distortions would be at least no worse than under the current approach.

This second proposition, unfortunately, is a pure statement of faith, arising neither from economic theory, conventional or otherwise, nor from empirical experience. One can, however, explore the present behaviour and performance of for-profit firms in particular areas of the health care field, in an attempt to draw inferences about their strengths and weaknesses. From these, one may be able to judge which other sectors of health care delivery might meet conditions for successful introduction of for-profit organization, and what benefits or problems are likely to follow.

## PHARMACEUTICALS: THE EXTENDED BOTTOM LINE

The pharmaceutical industry is the largest and most studied component of the for-profit sector in health care (*e.g.*, Silverman *et al.* 1981; Silverman and Lee 1974; Walker 1971; Klass 1975). Prescription and non-prescription drug sales to Canadian consumers amounted to \$1473.4 million and \$1357.7 million in 1982, although these include dispensing fees and retail margins respectively, so that cost of drugs sold might be perhaps half of these amounts. Hospital drug purchases (1982-83) are reported at \$224.7 million. Nor are pharmaceutical firms' sales confined to drugs for human consumption.

Prescription drugs, which are of most interest to health care policy, are sold in a market characterized by a dual form of "derived demand." The user wants, not the drug per se (which may have unpleasant or even dangerous side effects), but the improvement in health status which it is expected to yield. Demand for the drug is derived from demand for improvement in or maintenance of health. But the technical relation between drug use and patient health is not in general known by the patient, so the law interposes the physician's judgement in the form of the prescribing process. The physician's demand is then derived from the patient's demand. Hence the marketing effort of pharmaceutical firms is aimed at physicians, and rarely if at all at patients.<sup>6</sup>

The sequence of resource-allocation decisions in prescription drug use can be divided into several stages, each of which raises economic issues. For a given drug, the utilization sequence begins with a prescription, an order to dispense written by a physician or other individual licensed to do so.

The appropriateness of this prescription, its relationship to the patient's condition and its probability of improving health status, is central to the evaluation of the whole drug delivery system. Inappropriately prescribed drugs, like ineffective or harmful diagnostic or therapeutic interventions, represent wasted resources and potential damage to patients however efficiently their production and distribution may be organized. Equally important is patient compliance; if the patient fails to follow the prescription, whether or not she purchases the drug, then the production and distribution process becomes pointless.

Assuming that the drug is appropriately prescribed and the prescription is complied with, a series of issues then arise concerning the efficiency with which drugs are produced, distributed, and dispensed. This includes questions of pharmacy organization and regulation -- issues of price competition, advertising, personnel use, and regulatory restrictions on pharmacy and pharmacist behaviour generally -- bearing on the efficiency and effectiveness of the dispensing process itself. But it extends to questions of product selection and substitution, the supply of branded and unbranded versions of generically equivalent drugs, and the effects of marketing efforts and regulatory policies on the cost, reliability, and efficacy of the ingredients supplied in response to prescriptions.

Finally, lying behind the activities of prescription and supply is the process of research and development whereby new chemical compounds are developed, their therapeutic properties, side effects, and safety determined, and approval granted for their coming to market. The drug industry, even more than most, must be viewed in a dynamic context and its performance evaluated in terms of its ability to generate new products and extend the range of effective interventions, as well as to respond efficiently and effectively to needs for existing products.

## **PRESCRIBING APPROPRIATENESS: INFORMING OR MANIPULATING THE PHYSICIAN?**

For-profit corporations<sup>7</sup> play a critical role at each stage of the drug utilization process, but the positive and negative aspects of that role have been matters of intense and sometimes bitter debate. At the prescribing stage, attention focusses on whether the enormous marketing efforts of pharmaceutical firms, aimed at influencing physicians' decisions to prescribe particular brands of particular drugs, contribute to or detract from the appropriateness of the result. On the one hand, given the complex and rapidly changing array of drugs available, it is obviously impossible for prescribers to fill the role of the perfectly informed professional agent. To some extent the marketing efforts of drug companies serve as an information system, a transmission belt to ensure that new product information is rapidly and widely disseminated among practitioners. If the resources were not spent for this purpose -- detail men, direct mailings, journal advertising -- either some other transmission mechanism would be necessary or the process of innovation would be slowed down.

On the other hand the value of any transmission system depends on the quality of the information it produces, and it is widely recognized that the present channels are biased. Drug companies are in business to sell drugs, not to run professional in-service education programs or to heal the sick. The latter are only particular means to the former end, which is in turn the source of profits, the famous "bottom line." If it were otherwise motivated, the firm would not be for-profit, but "an eleemosynary outfit." Accordingly information is biased toward claims of efficacy and away from reports of side effects. Public regulation, plus the possibility of legal liability, shift the balance somewhat in the other direction, but only somewhat. And the personal contact of detail man with practitioner is difficult to check for "truth in advertising."

Three sorts of questions arise in this debate: (i) how serious is the problem of prescribing appropriateness? (ii) if it is serious, to what extent is it a result of the drive for sales underlying the behaviour of for-profit drug companies? (iii) if drug company promotion is a significant contributing factor, are there "cures" which are not worse than the disease?

Whether even the first question is answerable depends, of course, on the extent of efforts made to evaluate prescribing behaviour. One of the strongest arguments for a universal public pharmaceutical insurance plan is that it can generate the data base with which one can observe and evaluate current prescribing patterns and attempt to modify them. In the absence of such insurance data, one is left with research studies of particular drugs in particular settings.<sup>8</sup>

Data available from such universal public plans as exist, and from specific studies, consistently show that there are indeed significant problems of prescribing appropriateness, and of two types. The first type, which shows up most clearly in utilization data, is misuse of a particular drug independently of the patient's illness. Prescriptions in amounts well beyond maximum safe doses or for overly extended periods or in conjunction with dangerously interacting drugs, represent per se inappropriate prescribing. These seem to be traceable to particular physicians and to derive from imperfections in the process of professional training and continuing competence review rather than in the drug delivery system itself.<sup>9</sup>

The second form of prescribing inappropriateness, probably much more important in quantitative terms, is the mis-match between drug prescribed and patient's condition, which is much harder to detect from utilization data alone. A drug which has been clearly identified as safe and efficacious for a range of specific conditions may also be prescribed in circumstances well beyond its demonstrated usefulness. Cimetidine, which represents a major breakthrough in

duodenal ulcer therapy, is an excellent example. While its efficacy, relative safety, and capacity to substitute for more expensive and dangerous forms of therapy have been demonstrated for patients who might otherwise go to surgery, studies of its use in actual practice indicate that it is being prescribed (i) for conditions in which its efficacy has not been demonstrated (and is in some cases quite implausible), (ii) in conjunction with other therapies (antacid) for which it is a substitute and with whose effectiveness it is incompatible, and (iii) in amounts and for lengths of time which go beyond its demonstrated effectiveness and raise unnecessary risks of side effects (Hall *et al.* 1981). But this pattern appears to be a common one for "popular" drugs, of which cimetidine is a leading example. Antibiotics, which may have been the greatest drug therapy advance of all, have been widely used against virus infections, for which they are ineffective, and merely pose risks to the patient and the wider society by encouraging immune responses in patients and in disease organisms. The "minor" tranquilizers, such as diazepam, are now under criticism for their addictive effects, as well as (unproven) suggestions of carcinogenic side effects. Concern over the "galloping consumption" of pharmaceuticals is widespread among students of health care delivery.

There are of course other pressures besides those from the pharmaceutical industry itself which may lie behind prescribing problems. The physician, particularly in a fee-for-service setting, may find the prescription a convenient way to end a visit, a tangible symbol that she has understood and is taking charge of the problem. And the patient, in a society which expects problems to have solutions, may see the prescription as that solution -- the technological fix. In this context, however, it is important to note that studies of nurse practitioners suggest that they provide somewhat fewer prescriptions than physicians for (apparently) comparable problems, and that their patients are at least as satisfied as those of physicians (Spitzer 1978). Further, cross-system comparisons indicate that practitioners reimbursed by fee-for-service consistently write more prescriptions than do those receiving other forms of reimbursement.

But the primary pressure does seem to come from the for-profit industry, as indeed it would be very surprising if it did not. Firms in this industry incur very high research, testing, and approval costs for new drugs, after which costs of production are relatively small. Additional sales, therefore, translate into high gross profit margins, and so can and do support a very large selling expense. It would appear then that the social benefits of information transmission financed by the industry must be balanced against a significant share of the cost of unnecessary and inappropriate prescribing. The global amount of that cost would be difficult to estimate, since it would have to include not only the costs of the drugs themselves, but also of any additional therapy made necessary by the inappropriate prescription as well as any direct costs of additional illness to the patient.

Possible policy responses to this issue fall into two categories: limiting or modifying the marketing efforts of pharmaceutical firms, or trying to improve the quality of information available to prescribers.<sup>10</sup>

Drug advertising is already regulated as to the claims which can be made and the side effects which must be disclosed, but this merely sets challenges for the ingenuity of marketers in pursuing the basic goal of expanded sales. One could conceivably go further, either with direct limits on advertising budgets, or with limits on the deductibility of advertising expenses for tax purposes. Such global constraints might be more effective than attempts to modify advertising behaviour on a piece-meal basis. Even more effective might be the system of wholesale bulk purchase of generic drugs on tender by a purchasing agency, government or otherwise, as is used by Saskatchewan, the military, and a number of hospitals. By weakening or removing the physician's ability to specify brands of particular drugs, such purchasing on tender lowers the

payoff to advertising any brand for which there are several generic substitutes, as such advertising may simply be promoting sales of a competitor's product.<sup>11</sup>

Improving the information available to prescribers might take the form of more extensive pharmacological training in medical school or of a public or publicly supported agency to assemble and disseminate drug information. The former approach has the problem that space in medical curricula is chronically tight and hotly competed for. In any case, the rate of change in pharmaceuticals is such that even better training would rapidly become obsolete. Attempts to provide continuing information may be more successful, although they would be in competition with corporations with finely honed marketing skills and enormous financial resources. Any attempt to increase the flow of drug information through non-commercial channels might require a corresponding limitation on commercial marketing if it were to be effective.

Medical journals are in an ambiguous position, playing as they do the dual role of reporters of scientific research and of the "trade press" in matters which interest physicians as businessmen. Since their budgets depend very heavily on pharmaceutical advertising, their very existence might be threatened by efforts to modify or reduce its scope.

An approach which does appear to have had considerable success in improving prescribing patterns is the expansion of the role of the pharmacist in advising physicians. The pharmacist in a hospital or community health centre setting can communicate directly with physicians, *before* the prescription is written, and introduce better information about the advantages and disadvantages of particular drugs in particular clinical situations. Attempts are underway in some provinces to extend this relationship to cover drug use by the institutionalized elderly, paying a particular pharmacist on a capitation basis for dispensing all the drugs used by an institutionalized group and encouraging her to consult with the relevant physicians) over the nature of the on-going therapy.

This approach depends critically, however, on the existence of an institutional framework such that the pharmacist can participate in the prescribing process "upstream" of the actual writing of the prescription, as well as being reimbursed for advice independently of dispensing. The more common situation, in which the patient contacts a community pharmacist *after* the physician has selected the drug, makes effective intervention by the pharmacist difficult or impossible. In principle, the pharmacist might evaluate prescriptions at this point, checking for the appropriateness of the dose, for interactions among different drugs, and for anomalies in the patient's prescription history. Such potential monitoring is the subject of much discussion by pharmacists seeking to justify the existence of pharmacy as a self-regulating profession.

In practice, however, the setting of community pharmacy makes this virtually impossible. Pharmacists are paid by the prescription, so that (since they never see the prescriptions which should have been written but are not) the monitoring role if energetically carried out would lower prescription volume. It would also engender physician hostility, by pointing out errors in front of the patient. And it would, of course, require extra time and energy. It is not, therefore, surprising that the exigencies of small business operation, for profit, preclude a significant professional role, and that such evidence as there is suggests that despite professional exhortation, community pharmacists exercise little or no influence on the prescription process.

## **DRUG DISTRIBUTION: DISPENSING OR RETAILING?**

Retailing of non-prescription drugs displays similar problems. It is argued, and with justification, that just because a drug is not on prescription does not mean that it is safe in any

and all uses and amounts. Accordingly pharmacists have lobbied, in some jurisdictions with success, for public regulation to require that certain non-prescription drugs should be sold only under the pharmacist's supervision. This places the pharmacist in a quasi-prescriptive role -- she can refuse to sell a drug which she feels to be inappropriate, or can give advice about its proper use. But it also prevents non-pharmacies -- supermarkets, *e.g.* -- from selling such drugs, and thus is obviously in the economic interest of pharmacists. Since retail mark-ups tend to be much higher in pharmacies than in their competitors, this restriction also raises costs to users. But reports suggest that in fact pharmacists exercise little or no active supervision -- which would require time and effort and potentially reduce sales.<sup>12</sup> Thus quite apart from the serious issue of whether such supervision, if it occurred, would benefit users sufficiently to justify its extra cost, it appears that in practice "supervision" responds rather to the economic interests of pharmacies as for-profit firms than to the concerns of pharmacists as health care professionals (Gorecki 1981).

However prescriptions come to be written, drugs must be manufactured, distributed, and dispensed to meet them. The role of the for-profit corporation in manufacture does not appear to have been questioned, subject to the usual considerations of quality control which arise in any industry where quality failure may be undetectable by, but potentially harmful to, the end user. Discussions of the distribution system focus on two major issues, the efficiency of the dispensing process itself, and the competition between different brands (including generic) of the same chemical compound.

The economics of the dispensing process display many of the same problems as do NOFP professional practices generally, in or out of health care. The patterns seem to be characteristic of all firms owned/managed by self-regulating professionals. It has long been a source of amusement or concern that several years of university training are required to qualify one to count pills from a large bottle into a small one. But the manifest inefficiency of this underutilization of skilled manpower, Lieberman's (1978) "inconspicuous production," is no different in principle from a dentist instead of a dental nurse filling teeth, or a paediatrician providing well-baby care (or a lawyer drawing up transfers of residential property). Quantitatively, the waste of resources in pharmacy may even be less important -- but it is more obvious.

The dispensing industry also displays restrictions on firm structure and behaviour -- no advertising of drug prices or dispensing fees, limits on non-pharmacist ownership, and specific restrictions on size, hours of operation, and other aspects of dispensary management which vary from jurisdiction to jurisdiction. The net effect is to hold up the costs of dispensing, which could with present technology be reduced by perhaps as much as 40 percent by optimal use of auxiliary personnel in a high-volume dispensary (Evans and Williamson 1978). These higher costs are passed forward to patients or public reimbursement agencies in the form of excessive prescription charge mark-ups over ingredient cost. Pharmacists receive not only a professional dispensing fee, but in many provinces a "standard" reimbursement for ingredients which significantly exceeds actual acquisition cost.

Despite professional restrictions, however, in British Columbia and Saskatchewan public drug reimbursement programs have had some success in controlling dispensing costs by a blend of public reimbursement and private competition among pharmacies (*The Vancouver Sun* 1983). British Columbia's Pharmacare reimburses actual acquisition cost plus a professional fee for its roughly one-third share of provincial prescription costs, and prohibits pharmacies from differential pricing of prescriptions. Saskatchewan purchases drugs on wholesale on tender and supplies pharmacies, letting them set (within a range) their own mark-ups, which patients must (above a base rate) pay out of pocket. In both provinces, prescription costs are apparently well

below the rest of Canada, suggesting substantial scope for savings in other provinces. Even greater savings might follow from removal of regulatory restrictions on pharmacy pricing and auxiliary use.

And in pharmacy, unlike medicine or dentistry, the product volume and mix (prescriptions filled) is externally controlled. The possibility that more competition among for-profit suppliers would lead to more, and less appropriate, output does not arise.

Indeed the steady growth of corporate chain pharmacies suggests that the balance is tipping towards fully for-profit organization in dispensing, with the remaining regulatory structure serving to protect, not the professional role of the pharmacist, but the market of the pharmacy. Restrictions on price advertising and personnel use in particular prevent consumer/patients from receiving the benefits of price competition and efficiency, while an oversupply of pharmacists results in their becoming *de jure* or *de facto* corporate employees. In the end it may be that no one wins, economically, from the combination of the regulation characteristic of a self-regulatory profession, imposed on an industry of for-profit corporate firms. A very different form of regulatory environment may be necessary if we are not to have the worst of both worlds. The issue is of even broader significance, because it appears that (given current United States developments) dentistry, and perhaps eventually even medicine, could move in this direction.

More specific to pharmacy is the long debate over whose drug shall be used to fill the prescription. From the point of view of the large multinational drug firms, the most favourable market position is that in which a given chemical compound has extended patent protection and is marketed to physicians under a specific company brand name. Once the prescription is written for that brand, patient and pharmacist have no choice. No substitute is legally permitted. A potential competitor must then either invest in the discovery of an alternative compound of equivalent or related effect', or seek a licensing agreement with the patent-holder for the right to bring out an alternative brand of the same drug, on payment of royalty. But the competitor must also engage in the very expensive process of marketing the alternative drug to physicians. It is alleged that the large multinationals, who already have a large sales force in being, frequently cross-license drugs among themselves, but for a new entrant costs would be prohibitive. In this environment, prices of drugs can exceed production costs by hundreds or even thousands of percent, marketing expenses take up 20-30 percent of the sales dollar, and industry profit rates (on invested capital) are consistently well above manufacturing industry averages.<sup>13</sup>

This environment has been opened to more competition on a number of levels, whose effectiveness is inter-related (Gorecki 1981). Since 1969 Canadian patent law, as noted above, permits any firm to apply to the Commissioner of Patents for a licence to manufacture or import, and market (under another brand name), any drug patented in Canada, on payment of a royalty (usually 4 percent of sales) fixed by the Commissioner and payable to the patent holder. The number of competitive drugs and firms has significantly increased. At the dispensing level, legislation in several provinces permits the pharmacist in filling a prescription for a particular brand to substitute a generically equivalent alternative brand (at the same or lower price) unless the physician specifies no substitution. And at the prescribing level, the federal QUAD (Quality Assurance of Drugs) program seeks to assure physicians that generically equivalent drugs of different brands are in fact equivalent in quality, while Ontario's PARCOST manuals make available to the prescriber data on the relative costs of different brands of the same generic compound. In Saskatchewan the provincial government has simply taken over the wholesaling function, purchasing drugs in bulk on tender, and supplying the pharmacist (free) with the particular brand which is to be used to fill all prescriptions for that compound. At the same time a provincial formulary is established to determine which drugs are approved for purchase. British

Columbia's Pharmacare program places pressures on pharmacies to bid down wholesale drug costs.

Taken in total, these policies work to increase the price-sensitivity of the sales of particular brands of drugs. They may or may not have any effect on the demand for drugs in general, but the market share of each supplier of a drug should be more sensitive to the supplier's relative price. And indeed, the prices of prescription drugs (net of dispensing charges) in Canada do seem to have fallen, or at least risen less rapidly, during the 1970s, as a result of these policies (Fulda and Dickens 1979; Gorecki 1981). Gorecki concludes, however, that much of the saving has been appropriated by pharmacists, who have been able to widen the spread between actual ingredient acquisition costs and the "catalogue" prices which (along with professional dispensing fees) make up prescription charges. Stimulation of competition at the manufacturing level thus requires effective price competition in dispensing as well, if consumers are to benefit.

The possible sources of such savings are of particular interest. There is no evidence that increased competition and lowered price has led to a dilution of drug quality or efficacy or to adverse health effects. Given the for-profit orientation of pharmaceutical firms there is no reason to expect much scope for increased efficiency in drug manufacture and distribution. To some extent lowered prices will cut into the supranormal profits of drug firms, which strictly speaking represents, not a gain in efficiency of resource use, but a wealth transfer from firm shareholders to buyers of drugs. (Since most pharmaceutical sales in Canada are by foreign-owned firms, of course, this represents a real gain to Canadians.) But even a large reduction in profit rates would not represent a high proportion of net selling price; a 50 percent cut in profits, if profits are 20 percent of sales, represents only a 10 percent cut in selling price.

If competition drives prescription drug prices down toward marginal production and distribution costs, the principal source of savings will probably be marketing expenses. If drugs are bought generically on tender, there is little payoff to marketing effort directed at physicians; indeed all the procompetitive policies outlined above tend to lower the payoff to promoting particular brands through direct personal selling. This selling expense, representing 20-30 percent of product prices, is the major source of potential price reduction at the ingredient cost level. On the other hand, as noted above, selling expense may also serve to transmit information. If all of North America followed the Saskatchewan model, drug advertising would presumably be cut back sharply along with product prices. It is an interesting question whether the quality of prescriber information would rise or fall, but clearly some other institution(s) for information diffusion would have to be developed, which would require some resource investment.

## **RESEARCH AND DEVELOPMENT: DOES SHORT-RUN MONOPOLY BUY LONG-RUN PROGRESS AND COMPETITION?**

More policy discussion has focussed on the issue of research costs, whose social role is perhaps less ambiguous than marketing activity. It is argued by pharmaceutical manufacturers that Canadian policy is "unfair" and if followed by other countries would lead to sub-optimal rates of investment in new drug research. The research required to discover a new drug, determine its safety and efficacy, and bring it to market is very costly and these costs must all be incurred before any sales revenue begins to flow. The selling price must exceed production and selling cost by enough to recover this investment over the expected life of the drug -- *i.e.*, before it is made obsolete by new discoveries. Moreover research is a high-risk activity; the successful drugs must pay not only their own costs, but also those of the failures. The point of a patent

system is to confer a monopoly of specified term on an innovating firm to enable it to recoup these costs. If, as in Canada, competitors can promptly copy the innovation on payment of a nominal royalty, innovation will cease to be profitable and will slow down or stop.

The underlying principle of the argument is valid. It raises an interesting philosophic question, however, in that Canada, as a small market, does not significantly affect the world payoff from, or effort devoted to, pharmaceutical research. Accordingly current Canadian policy enables us to "free ride" on research paid for by others. But why not? Free riding is perfectly rational. The pharmaceutical manufacturers' complaint is that it is immoral -- an odd position for profit-maximizers to take!<sup>14</sup>

The research expenditure share of the drug sales dollar appears to be substantially less than the marketing share, so a focus on research alone does miss the main point. Still, it is true that research costs have to be funded somehow. The issue is highly debatable, partly because economic theory dealing with intertemporal problems is rather weakly developed. There is presumably an optimal rate of innovation, since one can certainly imagine rates which are too large or too small. How much should a society invest, and through what institutional frameworks, to yield that optimal rate? It certainly cannot be shown that the rate generated by a collection of private firms, in highly imperfect competition with each other, meets more general social criteria of optimality, but the alternatives are not obvious either. In other areas of health care, research (or at least new knowledge) is treated as a public good and subsidized directly. But does the for-profit motivation lead to more efficient research? Its proponents say yes -- the stimulus of profit and the test of the market encourage a high yield of useful (saleable) knowledge per dollar of research effort. Its detractors say no -- the spur of profit in an imperfectly informed market leads to a heavy investment in molecule manipulation, "me-too" products to invent around others' patents, and highly promotable compounds of piggybacked drugs of dubious efficacy.

Apart from the effect of marketing structures and short-run profitability on the rate of investment in innovation, the United States literature has also emphasized the influences of safety and efficacy testing. The more extensively new drugs must be tested, the more costly they are to develop and hence the less profitable for any given market conditions. Consequently, the greater the testing cost the lower the rate of innovation. Some analysts have claimed to observe a clear negative impact of more stringent United States testing regulations in the early 1960s on the rate of new drug innovation, and have even purported to show that the cost of this slowdown exceeds the estimated gain in terms of harmful side effects averted. The evaluation methodology in this area is rather soft, however, and these conclusions have been strongly attacked. Nevertheless, the trade-off clearly exists in principle. Again one is faced with the difficulty, and costs, of aligning private for-profit motivations with social objectives in an environment of highly imperfect user information.

The strengths and weaknesses of for-profit organization in the pharmaceutical field thus appear to be very much what theoretical considerations would predict. Competitive for-profit motivation leads to efficiency in production and distribution, in the sense of minimizing resource use and seeking out lowest-cost methods. It also encourages a proliferation of products, including genuinely new therapeutic agents, minor chemical variants on other chemical entities, and recombinations or different brands of previously existing drugs. But the severe imperfections of *physician*, much less patient, information about the effectiveness of different drugs leads to very heavy investment in brand promotion and serious questions about the efficacy of drug prescribing and utilization patterns. It may also result in serious market imperfections, failures of competition at least in the short run, which are remediable by public policy. The old question of whether imperfect competition at each point in time may lead to more effective long-run

competition through rapid innovation arises in particularly clear form in this industry, but again the imperfections of prescriber or buyer information make it difficult to evaluate the social payoff to innovation in general. The most profitable innovation may or may not be the one with the greatest health payoff (as the case of diazepam suggests). The search for "healthy-people drugs" which everyone can take all the time (Robertson 1976), makes eminent commercial good sense, but has no (or negative) health payoff.

## **MEDICAL EQUIPMENT AND DEVICES; PROFITS AND PROLIFERATION OF TECHNOLOGY**

The same issues arise in all other health sectors where for-profit organizations play a significant role -- medical equipment and devices, diagnostic services, and in some jurisdictions, institutional care. Rapid innovation and attention to per-unit cost control must be balanced against concerns of excessive and inefficacious utilization and high marketing expense.

In the case of medical equipment, the proliferation of highly sophisticated monitoring and diagnostic devices is driven by private for-profit corporations which develop, manufacture, and market such equipment. The results have been a dramatic extension, and rapid dissemination, of technological capabilities in health care. Diagnostic imaging, the ability to observe in detail anatomical structures and physiological processes within the body, has made particularly dramatic strides, from radiography, to ultra-sound, to computerized axial tomography, to positron-emission tomography and nuclear magnetic resonance. Internal information is both better, and safer and cheaper to get. CT scanning, for example, which can be done as an outpatient procedure, substitutes for the uncomfortable and dangerous inpatient procedures of pneumoencephalography and (some of) angiography. And the speed of advance is quite clearly stimulated by the profit opportunities involved.

But, as in the case of prescription drugs, the genuine diagnostic or therapeutic breakthrough carries with it the problem of excessive and inappropriate use. The profit motive drives each indifferently. New equipment is tested for safety, not efficacy -- that is presumably the responsibility of the physician. But the testing of efficacy is a sophisticated and often costly exercise for which practicing physicians are neither trained nor particularly motivated. And the costs of excessive or inappropriate use, as in the case of drugs, are not just economic, they include threats to health as well.

Electronic foetal monitoring provides a good example. Monitoring proliferated rapidly in the early 1970s as a way of lowering neonatal death rates by detecting foetal distress *in utero* and permitting early intervention by Caesarian section. It is now virtually a standard procedure in North American delivery rooms. Yet a later survey of research literature suggested that its payoff in terms of reduced deaths, as measured in randomized controlled trials, was much less than indicated by simply looking at time trends -- the intervention was apparently being credited with improvements generated from other sources. And the high false positive rate of intervention appears to be a major factor in stimulating the epidemic of Caesarian sections in the late 1970s and early 1980s. On balance the intervention may well be doing more harm than good (Banta and Thacker 1979).

The same sort of questions arose earlier about specialized, highly equipped coronary care units, after randomized controlled trials indicated that survivors of a myocardial infarct might in fact be as well off sent home as sent to the high technology CCU or Intensive Care Unit. Indeed some practitioners have expressed concerns that the atmosphere of tension and of patient self-

awareness in the CCU may *induce* some of the heart irregularities that the CCU is intended to control.

Such criticisms could be multiplied. Concern has been expressed that in the United States, CT scanning could be used on everyone with a headache. And the problem is *not* merely one of practitioners being unable to determine in advance who will and who will not benefit from intervention. It is possible to develop protocols for diagnostic and therapeutic interventions which will identify what types of patients and problems can expect to benefit, and in some cases it has been done. It is also, and most important, possible to communicate these probabilities to patients who may then make somewhat more informed choices about whether to undergo particular procedures.

But such pre-screening for efficacy makes no commercial sense for a for-profit firm, and accordingly the research studies casting doubt on the efficacy, at least in some applications, of high technology interventions are either contested or ignored. No serious attempt seems to have been made to confirm them and to apply the results. Providers of health care, hospitals and particularly physicians, share the economic interests of the for-profit firms in extending the reach of new technology without overly energetic investigation of its efficacy. In blunt terms, the epidemic of Caesarian sections in Canada has raised the average billings generated by each delivery and has thus helped to buffer the incomes of obstetricians during a period of rising MD/population ratios and stagnant or falling birth rates.<sup>15</sup> This is not to say that economic considerations *motivated* adoption of the technology -- but they were consistent with it. Cardiac Care Units provide challenging and rewarding employment for nurses and other hospital personnel, as well as a high profile of technical sophistication in the "war against disease and death." More types of interventions imply more billing opportunities for fee-for-service practitioners and more growth opportunities for hospitals and their employees, in directions which are difficult to constrain through easily measurable but crude bed-population ratios.<sup>16</sup>

The interaction between for-profit firms and other NOFP or NFP providers may go further. Just as a new piece of equipment will be more marketable if it is economically rewarding for providers to buy and use, and will thus have allies against challenges to its efficacy, so a breakthrough which *reduces* billing opportunities for professionals or needs for hospital care is likely to meet much heavier resistance. Accordingly the rational for-profit firm should direct its research resources (which like any other are scarce and costly) toward innovations which increase, not reduce, the earning capacity of other providers -- which increase health costs. This motivation may partly explain the peculiar situation that in "normal" economic activity technological advance is seen as, and is, a way to *lower* costs of production, while in health care it is usually identified as a source of cost *increase*. Market failure at the provider level thus feeds back into distorted (from the social perspective) incentives to for-profit firms supplying those providers.

## **THE SHIFT FROM PROFESSIONAL TO COMMERCIAL DIAGNOSTIC LABORATORIES**

The clinical laboratory industry in the United States, which has since the mid-1960s been to a large extent taken over by for-profit firms, displays similar problems (Bailey 1979). Diagnostic testing services have traditionally been provided, in Canada and the United States, in hospital laboratories, private laboratories run as professional practices by pathologists, and special-

purpose government laboratories. Physicians may also do some of their own diagnostic testing, depending on the test complexity and the rules of third-party reimbursement.

Such testing has generally been a very profitable activity, because the physician-owner of a laboratory is able to delegate a high proportion of the actual procedures and thus to extend her professional "reach" over a much higher volume of billings than if she were required physically to perform the functions involved. And the demand for tests originates almost entirely from physicians who do not themselves pay for them. Accordingly, growth of testing volume has been very rapid for many years, and, at least in the United States, mark-ups over cost are much higher than for, say, hospital ward services. (The mark-up on physician services in general is a bit difficult to identify statistically.)

There has also, however, long been a fringe group of "lay laboratories" in the United States owned and run by non-physicians (who may have other relevant professional qualifications), which has sought to share the testing market. Pathologist-run laboratories have tried to keep them out in the name of "quality." But with judicial decisions establishing that the reporting of a test result did not constitute the practice of medicine, the way was open for non-physician controlled, for-profit corporations to move into this field.

According to the standard economic models of firm behaviour in competitive markets, the results of this shift in ownership should have been generally beneficial to consumers. For-profit motivation should lead to the minimization of testing costs per unit, efficient production procedures, as well as to the development of new forms of tests which are useful to and convenient for practitioners. Physicians as (presumably) informed buyers should be able to choose the most convenient and effective testing procedures for their patients, and competition among firms should drive down testing prices to a level which yields a return on investment comparable to that in similar commercial services industries.

Issues of quality control remain, since a test result does not carry with it any way of validating its reliability. But quality control can be maintained by a public agency periodically submitting blind test samples, just as the products of food processors are periodically tested for foreign matter. One does not license canners of beans; one inspects the cans.

The actual outcome of for-profit organization in the clinical laboratory field, however, appears to be somewhat different. After studying the California experience, Bailey concludes that the change may well have reduced per unit testing costs, at least at the level of the testing firm. But these are partly a result of transferring some costs -- specimen collection and handling -- back to the physician. Such a transfer may or may not be optimal from the social point of view; it depends on the marginal opportunity cost of physician time, which may be low in a situation of physician oversupply. But it does mean that one must be careful in comparing for-profit and professional lab costs to ensure that the same bundle of services is being priced.

More important, the relationship of for-profit labs to practicing physicians involves a number of different financial arrangements, "compensating" the physician for her role in specimen handling and test interpretation, which serve to give her a substantial economic stake in the performance of tests. To the extent that for-profit labs are price competitive, they compete for the business of physicians, not patients, by offering a wider spread between the rate charged to patients or third parties, and the amount the physician pays the laboratory. Market failure in the physician/patient relationship thus again feeds back into the relation between physician and for-profit supplier, such that whatever benefits of efficiency and competition are generated, they do not appear to be passed through to patients. Bailey's interpretation here parallels Gorecki's conclusions above that Canadian pharmacists have absorbed the savings from competition among drug suppliers.

Of course there are various regulatory and professional ethical constraints on the nature of the physician-laboratory relationship -- overt fee-splitting has long been an unethical practice. But as Bailey shows, the for-profit stimulus is strong enough to induce a variety of innovations in organizational form which serve to establish an economic link without violating ethical or legal prohibitions.

Economists are fond of pointing out, however, and quite correctly, that one must distinguish resource allocation and wealth transfer effects. If for-profit firms lower the resource costs of carrying out a given number of tests, then society collectively is better off, even if the benefits flow differentially to one particular group in society, physicians, rather than to patients. It does not follow, of course, that public policy should be indifferent as to issues of wealth distribution and therefore automatically accept or encourage the final result, but it is true that a saving is a saving, to whomsoever accruing.

The serious issues of efficient resource allocation arise, however, when one considers the effects of such arrangements on the overall volume of laboratory testing performed. If one adopts the framework of chapter 1, then the optimal investment of resources in laboratory testing has to be evaluated in terms of their marginal impact on health status.<sup>17</sup> This in turn is a combination of the payoff from a test, in terms of new diagnostic information in a given situation, and of the payoff to that information in terms of its effects on choice of effective therapy. A test may be inappropriate either because it could not reasonably be expected to yield additional information, or because the information it could yield would not affect treatment in such a way as to improve outcomes.

From this perspective a number of commentators, including pathologists, have expressed considerable concern about the extent to which laboratory testing activity currently outruns its usefulness, not only *ex post* (in the sense that in many cases nothing of value is learned) but also *ex ante* (in the sense that the test orderer knew, or with a little consideration could have known, in any case *should* have known, that it could not be of value). Various ways have been considered, and some tested, for trying to discourage test-ordering by clinicians (Schroeder *et al.* 1973; Martin *et al.* 1980; Hardwick *et al.* 1982).

In this context, the strong stimulus to "more" which is a consequence of for-profit motivation justifies serious concern. Unnecessary testing is pure waste of resources. But for-profit organization does not, cannot, recognize unnecessary testing as an intellectual concept. Sales are their own justification. Individual people in organizations may recognize and share concerns about appropriate use, but insofar as these concerns influence firm behaviour they represent a departure from profit-maximization and will, at least in a theoretical perfectly competitive market, be punished. Firms which fail to maximize profit disappear, or their managements are taken over. Bailey suggests that the professional orientation of the pathologist-run labs, in or out of hospitals, did serve as some limitation on the performance of unnecessary testing; this would be plausible since NOFP organization is intended to deal with the conflict between economic and patient or professional interests. FP organization is not.

## **FOR-PROFIT HOSPITALS AND RELATED INSTITUTIONS: THE UNITED STATES EXPERIENCE**

The growth of FP organizations, the so-called "investor-owns," in the United States hospital and institutional services industry provides yet another example of the two-edged impact of FP organization. Optimistically, one might predict that FP hospitals would actively seek out

ways of caring for patients which were less expensive than those employed in the NFP sector. The sorts of evidence alluded to in chapter 9 would suggest that there is significant scope for such economies. And indeed one does find examples in the United States of investor-owned freestanding surgical centres, offering care which would in many hospitals be provided on an inpatient basis, while some advocates of proprietary hospitals suggest that they achieve lower costs per inpatient day or episode of care.

In reply, it is often alleged that United States proprietaries "cream off" the less costly, less ill, and more fully insured patients. But the possibility of "cream-skimming," of selecting patients with higher ratios of (collected) charges to costs depends on anomalies, on cross-subsidization, in the charge or reimbursement structure of the NOFP sector. If hospital reimbursement represents a lower share of costs of "sicker" patients, this suggests that they are being subsidized by the less sick, or at least less service-using, and an FP hospital could bid away those more profitable patients. But in the absence of cross-subsidy, from one class to another, there is no incentive to skim.

More recently, however, comparisons of NOFP and FP hospitals have uncovered further interesting aspects of charge and cost behaviour (Lewin *et al.* 1981; Pattison and Katz 1983). Matched samples of each showed very little difference in patient population, at least as measured by age and insurance status. Also very similar were charges per patient-day for "hotel" -- room and board -- services. There were, however, marked differences in ancillary costs -- specific diagnostic and therapeutic interventions -- such that costs overall in the FP hospitals were significantly *higher*. These differences were a result both of higher mark-ups of charges over costs in FP hospitals, and of a higher rate of provision of ancillary services.

The higher mark-up is quite consistent with the standard theory of the firm selling in markets with different elasticities of demand. The patient or her physician can collect information on, and perhaps respond to, differences in "hotel" costs prior to entering hospital, and the service may be thought of as fairly standard. But once admitted, the patient has no recourse to alternative suppliers of drugs, tests, or therapy, and will accordingly be sensitive to price differences only insofar as those forms of utilization could be forecast before admission. (Assuming, of course, that such services are uninsured.)

The quantity differences, however, reflect the special features of health care. The FP supplier will be more likely to exploit the professional influence over utilization to stimulate greater sales at the same, or even higher, prices. And since bed use and length of stay are easily observed and compared, and have in the United States been subject to planning controls, ancillary services are the least noticeable and most profitable to stimulate.

Few other differences emerged; in particular administrative costs were *not* lower at the hospital level in FP hospitals. This suggests that the overhead costs of central office staff for FP chains do not offset local administration costs, and may be a form of marketing expense. There was some indication (Lewin *et al.* 1981) that the personnel mix in FP hospitals might include relatively fewer registered nurses, which could represent greater efficiency or lower quality depending on its effect on patient outcomes. Or it could indicate less ill patients -- the study did not address these issues. Certainly there is no one-to-one relationship between quality of care and either numbers or qualifications of personnel, and efforts to represent the one by the other are generally recognized as circular reasoning, if not special pleading for the interests of particular personnel groups. Nevertheless, quality control is a serious concern in all health institutions, and these concerns become particularly severe in the FP environment. The extensive regulatory and evaluative systems which monitor hospital quality, as well as the high costs of adverse publicity, probably discourage quality dilution in acute-care hospitals, but very serious scandals have emerged in the American FP nursing home industry where patients are, in general, unable to

protect themselves. And early experiences with FP health maintenance organizations, capitation-reimbursed medical service plans, showed that the obvious profitability of signing up prospective patients and then providing inadequate, or no, services, had not escaped the notice of entrepreneurs with short time horizons.

## **CAN ONE MIX MOTIVATIONS, OR MUST FOR-PROFIT FIRMS BE ALL IN OR ALL OUT?**

Experience with FP firms in a number of sectors of the health care industry thus all tends to reinforce the same conclusions. As theory and conventional wisdom predict, FP firms are very energetic and innovative in development of new products and services and, to a lesser extent, new ways of producing existing products. They bring a dynamism to the process of health care delivery which is often lacking in NFP or NOFP firms.

But FP firms do not, cannot by their very nature, respond both to profit objectives and to social concerns for the efficient provision of *effective* health care services. They do not serve two masters. Nor do they in any other sector of the economy. As Adam Smith pointed out, the butcher and the baker are led to serve us by our appeals not to their charity, but to their self-love. We speak to them not of our necessities, but of their advantages. It is the invisible hand of the competitive market which turns this selfishness to the general advantage.

But in health care the hand is not only invisible, but usually absent. Its functioning depends on rational informed consumers, making choices among numerous competitive suppliers and enjoying or suffering the consequences, direct and financial, of those choices. The problems of overutilization or inappropriate utilization arise because consumers are insufficiently informed to make their own choices. The process of choice is delegated to professionals, while the financial consequences are shifted to governments or private insurers, and through them to the wider community. But the professional agent's information is often incomplete as well, and her financial incentives are usually perverse -- she benefits from overuse. In such an environment, to expect a for-profit seller to disseminate unbiased information is to misunderstand the whole dynamic of the private marketplace.

In thinking about the current role of FP organizations in health care, therefore, and their possible extension or restriction, the central question should be, In which sectors do the customers of FP organizations possess the combination of information and incentives such that they can collectively form a market which will constrain FP firms? Informed buyers, bearing the consequences of their decisions, do not buy useless or dangerous products, and if they (knowingly) choose what professionals regard as "low quality" -- so what? Further, structural reorganization of some sectors could lead to a shift in product definition which would enable buyers to be better informed. This is the basic idea of the United States advocates of competitive HMOs, to redefine the product sold from specific services to a combination of insurance plus all "needed" services, bought for a fixed annual fee, such that consumers can make informed choices among these new composite commodities (Enthoven 1980).

An intriguing possibility in Canada for such product and buyer redefinition is raised by very recent initiatives in the for-profit contractual management of hospitals. In this context it is the management team, not the hospital itself, which is attempting to earn profits, by selling not hospital services, but managerial services. And the buyer, in the Canadian context, is the provincial reimbursement agency. This represents a crucial difference from earlier and more developed United States experience with for-profit contract management.

In the United States the client for managerial services is the hospital board, and its objectives are increased revenues, growth of operations, or in some cases sheer survival. "Successful" management has meant primarily elimination of deficits, and increases in occupancy and throughput. These have been achieved by better control of bad debts,<sup>18</sup> improved "marketing" of the hospital in the community, and expansion of high mark-up ancillary services. But of course all such activities, while they improve the financial position of the individual hospital, *add* to the costs of hospital care as experienced by the community as a whole. No provincial reimbursing agency in its right mind would pay a private team for aggravating its problems.

Thus the intriguing question is, Can one write contracts with such private managements which will reward improvements in efficiency rather than expansion in hospital revenues/costs? The answer *may* be yes, as there is some United States evidence that contract management has also had some constraining influence on hospital costs of production. But it is not their major influence. And such contracts will have to be written on a comprehensive capitation basis, so that managements are not rewarded for shifting high-cost patients to other hospitals, perhaps in other regions, or for spilling costs out into the medical care sector or elsewhere in public or private budgets. Moreover it is obvious that some form of external quality monitoring must be maintained.

If such contracts can be written, to reward for-profit managements for cost-containment rather than cost-shifting or quality-dilution (or as in the United States, cost-expansion!) then they may serve as a countervailing force with the appropriate incentives to confront providers of care within hospitals. As emphasized above, cost control *definitionally* requires income control of physicians or of hospital workers -- lower hospital costs means fewer employed nurses, however it is done. At present, no individual or institution anywhere in the Canadian health care system (except of course government) has any personal incentive to limit costs. Private for-profit management *could*, if properly contracted, be a way of introducing such incentives. But the highly speculative nature of this approach must be emphasized, as the successes of such management in the United States have been with the very different problem of working *with* the hospital to *expand* costs.<sup>19</sup>

Other sectors of health care show even greater scope for potential redefinitions of product and buyer. Prepaid FP group practice in dentistry, for example, reimbursed by annual capitation payments and bidding competitively for the business of employee groups, shows promise of great improvements in efficiency and reductions in cost if it were not blocked by self-regulating professionals (Evans and Williamson 1978). Dispensing of drugs and sales of eyeglasses or other appliances can, in an appropriately structured market, be left to unregulated FP firms. Of course normal commercial regulations to ensure truth in advertising, periodic product inspection, and anti-combines oversight to ensure maintenance of competition would be necessary as in any marketplace, but a special self-regulatory structure appears much more questionable. And FP organization may be essential to keep the competitive process going (Evans 1980).

But the largest share of health expenditure, acute care hospital and physicians' services and, increasingly, long-term care of the elderly, is provided to people for whom the postulate of rational informed choice is inappropriate, and it is likely to remain so under any conceivable organizational restructuring. Shifting the incentives to providers, as competitive HMOs do, has some promise, but even there the possibilities of adverse selection and quality dilution make it questionable if FP operation of such organizations is workable. And the "first-mover" advantages of a firm which has established the first phase of a continuing relationship makes effective competition very difficult to maintain. In this setting, the pressures which bear on FP firms will

always drive them toward oversupply and, if professional agents mediate purchases, little if any price competition.

Accordingly, FP firms in this "central core" of health care are likely always to be heavily regulated. Unfortunately, such regulation will generate its own inefficiencies and is unlikely ever to be fully effective. Moreover, there is a tendency, resulting from the powerful growth dynamic of FP firms, for them to penetrate and absorb NFP or NOFP sectors. Titmuss (1970) has documented this process in systems for collecting and distributing blood and blood products. On fairly general criteria, voluntary blood donor systems are both more effective and less costly, but FP systems are more profitable and tend to drive out voluntary systems unless restrained by public policy. FP private insurance firms, by experience rating and seeking out good risks, were similarly cutting into the market of NFP insurers in Canada prior to the public programs. FP chain pharmacies control a growing share of the dispensing business. And in the United States FP hospitals have shown a dramatic resurgence in the past decade. Health policy toward for-profit firms must then balance the trade-off between the specific virtues and specific vices of FP firms, structuring the regulatory environment accordingly and recognizing their inherent tendency to try to circumvent, or to burst, regulatory bounds. The appropriate balance may be struck quite differently in different sectors; indeed, an argument can be made that present policy is *too* balanced. In some sectors, FP organizations should, by reduced or changed regulation, be allowed to become dominant and left to compete among themselves. In others, they may not belong at all.

## NOTES

<sup>1</sup> In 1982, drugs and appliances expenditure was \$3,275.3 million. From this, subtract half of prescription drug expense (a conservative estimate of dispensing charges) or \$736.7 million. Then add one-third of prepayment and administration expense (\$147.1 million) and 40 percent of nursing home expense (\$1647.1 million) (thus assuming that the private sector financing proportions reported in Canada, Health and Welfare Canada (1979) are equivalent to the for-profit shares -- a more dubious proposition for nursing homes) to yield \$4332.8 million, or 14.4 percent of total expense. But some portion of prescription dispensing charges, as well as some portion of physicians' services expense (private labs) should be added back as well.

<sup>2</sup> In this context one must keep in mind the distinction between the accounting and economic conceptions of profit. An accountant will describe as profit the firm's net revenues after deduction of purchased production inputs (labour and materials), depreciation of capital equipment, and interest on borrowed capital. This form of profit includes a return to the equity invested by the firm's owner(s), and so should be positive for a healthy business. Economists attribute a "normal" return to that capital (normalized for risk), and define as profit, or supranormal profit, any surplus of net revenue after attribution to owner-supplied capital. In a well-functioning competitive market, supranormal profits in the economist's sense tend to zero. In self-employed practice, economic profit is defined as net revenue after deduction of a return to owner-supplied capital *and labour*, using some estimate of market wage in the next best opportunity.

<sup>3</sup> One may therefore assume that the promotion of complete deregulation is a stalking-horse for other objectives, probably re-distributional.

<sup>4</sup> Nor with any unique moral or spiritual virtues either. If the predominant, or at least noisiest, ideology of the 1960s made profit a dirty word, that of the 1980s seems to regard any activity which generates profits in the private sector (and for which no one has yet been convicted) as not only *definitionally* in the broader public interest, but also a source of particular satisfaction to the Most High. This requires a reinterpretation of ethical and religious tradition, and a definition of the Good which, while not previously unheard of, is distinctly unusual. If fully spelled out, it might not command universal assent.

<sup>5</sup> As opposed to the zealots or the fuzzy-minded for whom profit is per se a social desideratum.

<sup>6</sup> Some industry "image advertising" is directed to the general public, presumably in the hope of political and public policy benefit. And a certain amount of "ricochet" advertising has begun in the U.S. to encourage patients to request physicians to order particular tests which may lead to subsequent drug use. Non-prescription drug advertising is of course directed at the general public -- patients or otherwise.

<sup>7</sup> It is important to distinguish the motivation or objectives of an organization from its actual beneficial ownership. A for-profit corporation may in fact be partly or wholly owned by government, such as Canada's Connaught Labs or now France's Rhône-Poulenc, yet organized on private firm lines and evaluated on its profitability, and thus little if at all distinguishable from a private firm. A public drug production or distribution service as an arm of a Ministry of Health could be expected to behave quite differently.

<sup>8</sup> It might be technically possible for private insurers or prescription drug suppliers to assemble similar data, and indeed extensive data on physician prescribing behaviour is assembled to support the marketing efforts of private firms. But it would be naive in the extreme to imagine that firms whose profits depend on drug sales, and on the goodwill of physicians, would or could take an interest in restraining unnecessary or inappropriate prescribing. Creating the *appearance* of such interest might from time to time help to hold off unfavourable public regulation, but that is quite another matter. "For-profit" means what it says.

<sup>9</sup> A comprehensive data system enables one to distinguish the inappropriate prescribing behaviour of a particular physician from so-called "shopping" patients who might accumulate hazardous quantities or combinations of drugs by contacting several different physicians. Apart from narcotics or other addictive drugs, the problem seems to be located, not surprisingly, at the prescribing level.

<sup>10</sup> In principle one might also try to augment the information available to patients, but the practical prospects of this appear small. Better patient information might well improve compliance with the prescription once written, but reliance on patient information to improve the prescribing process itself is logically inconsistent. If patients are reasonably informed about a drug's effects, it should be available without prescription (again excepting addictive drugs).

<sup>11</sup> It is of course essential that competitive generic equivalents are available in the market; hence, the significance of Canada's compulsory licensure legislation in ensuring that market alternatives exist.

<sup>12</sup> This is not to say that pharmacists may not respond to patients' requests for advice about particular non-prescription drugs, or in some cases supply informed diagnostic as well as "prescriptive" services. And a patient/consumer buying information along with a product may reasonably pay for that information through a higher product price. Thus the availability of non-prescription drugs in both pharmacies and supermarkets, at different prices, may be a perfectly reasonable market equilibrium. But it is quite another matter to use public regulatory power -- direct or delegated -- to *compel* customers to use the high-priced source. Such compulsion must be justified on the grounds that consumer protection requires active professional intervention to check *each* product choice, and this form of pharmacist supervision is clearly absent.

<sup>13</sup> It is frequently argued by industry spokesmen that reported profit rates overstate "true" rates because the asset base of a drug company is understated. Costs of research and of marketing are expensed in the year incurred, whereas in fact they represent investment in intangible assets -- knowledge and goodwill -- which should be added to assets and depreciated over time. The argument is correct, as far as it goes, though its corollary, that expensing investments represents an extreme form of accelerated depreciation and therefore a subsidy from the taxpayer, is rarely emphasized. If research and marketing expense are "really" investment, then they should not be deductible from income for tax purposes, until they depreciate.

The issue then turns on choice of an appropriate depreciation schedule. If intangible assets *never* depreciated, the asset base could become indefinitely large and profit rates indefinitely small. But plausible adjustments still show pharmaceutical profits consistently above those of manufacturing generally (Temin 1979).

<sup>14</sup> The question of whether or not the research is carried on *in Canada* is a complete red herring. It will be sited wherever the conductors think most profitable. To reverse present Canadian policy in return for more locally-conducted research would be to fund a rather specialized employment-creation program by an indirect tax on Canadian drug buyers, administered by the pharmaceutical companies, without even any guarantee that "tax" revenues would be limited to program expenditures. See also chapter 12, n. 17, below at p. 285.

<sup>15</sup> In 1961 there were 688 certified obstetrician/gynecologists in Canada, and 475,700 births, or 691 each. By 1981, there were 1391, and 371,346 births, or 267 each. Of course, this ratio takes no account of the role of GPs in obstetrical care, or the gynecological share of ob/gyn workload. But the increasing technological sophistication of the delivery process may have played a significant role in increasing obstetricians' "market share" of ob. work.

<sup>16</sup> Analysts of U.S. attempts to control hospital costs have generally concluded that certificate-of-need programs have controlled growth of new bed capacity, but not overall hospital investment, because hospitals have simply diverted their resources to equipment purchases and associated staff and supplies. Direct public controls over all hospital investment have been more successful, but at the political cost of accusations of failure to keep up with the latest technology. The key questions of whether the latest technologies are worth buying, and if so in what quantities, tend to be lost in the political debate -- partly because, although critical, they are difficult to answer.

<sup>17</sup> An alternative, market evaluation of optimal testing in terms of patient willingness-to-pay could be formulated in theory, but the process of writing down its requirements in terms of locus of decision-making and availability of information is sufficient commentary on its plausibility.

<sup>18</sup> This also implies more careful screening of patients on admission for insurance coverage or personal resources.

<sup>19</sup> It is the institutional framework, not the personal characteristics or abilities of managers themselves, which is of interest in this discussion. There is no reason to believe that the *individual* managers working in present or potential FP environments are more skilled or energetic than present administrators of NFP institutions; indeed the combination of experience plus demonstrated survival capability in a very complex environment might point the other way. The key question is whether management teams, however composed, might exercise more cost control if provided with a different pattern of incentives and authority. If experiments should show some success, present NFP administration teams might well seek FP contracts.