been achieved in Britain by the panacea of capitation and salary as the payment options for physicians." Serious analysis of the health care system in Canada has never suggested this, nor is it likely to. The work of the National Forum on Health and recent reports from Quebec and Saskatchewan all point to some form of primary care reform and diversification of physician compensation methods. This diversification has been advocated in every serious reform effort in Canada to allow greater flexibility and accessibility in the organization of health services, not simply to save money. I agree with Cary that the health care system of the United Kingdom will remain challenged for the foreseeable future. The market requires that the public system be continuously portrayed as second rate in the UK to make a private tier appealing. I am afraid that no amount of reform talk will change this reality.

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Prescription data

In their recent *CMAJ* article on the provision of prescription data, Dick Zoutman and coauthors missed some key points, misrepresented IMS HEALTH's current practice and reached conclusions that have the potential to harm health-related research in this country by compromising the availability of information.[1]

Although individual estimates of prescribing practice are compiled by IMS, *only* the individual physician can obtain a report on his or her prescribing practice. The data are released to the pharmaceutical industry *only* in aggregated form, wherein a physician is identified as part of a group.

Our practices have been approved in Quebec by the Privacy Commissioner and the Health Information Advisory Board, which has strong physician representation. We have ongoing collaborative discussions with Le Collège des médecins. IMS is also the first company in Canada to gain certification according to the Canadian Standards Association's Model Code for the Protection of Personal Information, the standard upon which the new federal privacy legislation (Bill C-6) is based. IMS does not collect identifiable patient data and has undertaken 6 independent privacy audits that confirm this fact.

Zoutman and colleagues suggest that we have been less than transparent in informing physicians about our practices. In fact, IMS has gone to significant lengths to publicize its activities with physicians. Further, our Web site (www.imshealthcanada.com) clearly explains our practices and how physicians might communicate directly with us. As a result of our recent mailing to 17 000 practising physicians in Quebec, we received over 1000 requests for health information. Additionally, more than 100 physicians requested and received their prescribing profile free of charge from IMS, allowing them to take the initiative to review their own prescribing practices; only 8 physicians exercised their ability to opt out.

Zoutman and colleagues argue that it is principally the interests of the pharmaceutical companies that are being served by the data collected and provided by IMS. The interests of other stakeholders should also be presented: those of physicians who wish to receive information appropriate to their interests and practice, as part of their own continuing education and self-evaluation; those of researchers who monitor drug use and promote more effective and appropriate treatment methods; those of patients and consumers in an environment where evidence-based decision making is encouraged; those of health care professional bodies who identify, develop and evaluate continuing education programs; and those of governments who develop policy and manage health care resources.

We acknowledge Zoutman and colleagues' attempt to foster debate about prescription data mining practices. Unfortunately, their article does not reflect the current reality of the practices of IMS, nor the valuable role that IMS data plays in serving the information needs of many health sector stakeholders.

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1. Zoutman DE, Ford BD, Bassili AR. A call for the regulation of prescription data mining [commentary]. *CMAJ* 2000;163(9):1146-8.

I am puzzled by the debate in *eCMAJ* over the article by Dick Zoutman and colleagues.[1] Surely the moral of their paper is simply that there has to be a better way for researchers and governments to access prescribing data than from a proprietary supplier. In an era in which we have simultaneously come to appreciate that robust data are required to maintain a successful health system and that protection of individual confidentiality is paramount, it would seem that public policy on prescription information demands attention. If a national pharmacare program is ever to emerge and survive in Canada, it will require access to precisely this sort of data. Evidence-based policy requires evidence of undisputed probity. Zoutman and colleagues are to be commended for making this need so transparent.

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1. Zoutman DE, Ford BD, Bassili AR. A call for the regulation of prescription data mining [commentary]. *CMAJ* 2000;163(9):1146-8.

Directed medical education programs modify prescribing practices and can improve care.[1] It would be useful to learn how data management groups like IMS HEALTH could work together not only with pharmaceutical companies but also with medical societies, individual physicians and health services administrators to identify op-

portunities to improve prescribing practices.

IMS is not the only organization that provides information on physician-specific practices.[2] The Canadian Institute for Health Information provides health organizations and provincial governments with such data.[3] Just as pharmaceutical companies have used prescribing information for marketing purposes to increase sales and revenue, so provincial governments and health organizations have used information on comparative lengths of hospital stays from the Canadian Institute for Health Information to reduce the costs of care.

Responsible governance of our health care system requires the capacity to link health care activities with the results of those activities, something that neither the IMS prescription database nor the Canadian Institute for Health Information databases for hospital days can do.

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Most developed countries are in the midst of a debate concerning data privacy. At stake is our ability to study a variety of health outcomes and to assemble data that will help us to assess new technologies and to optimize our use of approved interventions. We urgently need standards and codes of conduct that will be accepted in most countries so that data can "travel" across international boundaries.

The recent *CMAJ* article by Dick Zoutman and colleagues[1] is unlikely to prove helpful in this debate. Beginning with a title that uses the pejorative term prescription data mining, the authors have encouraged paranoia about pharmacoepidemiology practice in general and the activities of IMS HEALTH in particular. Much of the analysis appears to be inaccurate with respect to the extraordinary efforts made in the past 4 years by IMS to protect physician and patient privacy while making aggregate data available for scientific, regulatory and commercial purposes.

In calling for "enforceable regulations" to control prescription data mining, the authors seem to undervalue the contribution of such data to hypothesis generation. They offer faint praise that sounds more like scorn regarding the contribution of IMS data to research, yet 31 papers and 125 projects over 4 years represent a sizeable pro bono input to science.

Enforceable regulations would raise jurisdictional disputes internationally and between the national and provincial governments within Canada and would plague us with logistical issues to the detriment of science. A code of conduct as already initiated by the CMA deserves expansion and refinement and is much more likely to serve our future needs.

It is time to recognize IMS as an ally rather than as an antagonist in our efforts to improve the quality and efficiency of Canadian health care. At this time, the aspersions of Zoutman and colleagues are misdirected.

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1. Zoutman DE, Ford BD, Bassili AR. A call for the regulation of prescription data mining. *CMAJ* 2000;163(9):1146-8.

[The authors respond:]

We thank David Zitner and Samuel Shortt for their observations concerning the shortcomings of present health care databases.[1]

We do not wish to argue semantics with Stuart MacLeod; however, the remarks he has deemed to be pejorative and aspersions were neutral descriptions. Where we differ substantively is with regard to the need for prescription data to be collected and sold in accordance with CMA principles.[2] These principles essentially boil down to informed consent. Implicit in MacLeod's arguments is the view that informing physicians about prescription data mining activities and seeking consent would negatively affect IMS HEALTH's databases and related medical research. Similar arguments could be used against the

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general requirement of informed consent in medical research. Although IMS conducts prescription data mining in accordance with self-serving ethical standards,[3] university research ethics boards would not likely approve a study that used IMS methodology. Academic physicians using IMS data might consider the ethical standards under which the data were compiled and encourage IMS to collect physician prescription data with informed consent.

Roger Korman's central thesis is that our article does not reflect the *current reality* of IMS business practices. We endeavoured to present a balanced portrayal of prescription data mining; we even provided drafts of the article to IMS and incorporated many of their suggestions. Our research led us to conclude there should be independent regulation of the industry.

IMS lauds their aggregation of prescription data sold to pharmaceutical companies. However, aggregation with physician identification does not preclude the generation of individual physician prescribing profiles. Each physician's identification number is part of such reports and can be linked to contact information and other reports on their prescribing practices. The value of prescription data sold to pharmaceutical companies would be greatly depreciated if it were not possible to link physicians to their prescribing practices.

The pharmaceutical companies pay the freight and it is principally their interests that are being served. Any benefits accruing to researchers, medical educators, physicians, politicians, policy analysts and the public are secondary and offered in exchange for allowing IMS's business practices. The value of these data does not negate the obligation to collect and sell this information with the informed consent of physicians.

Korman points out that IMS's practices have been approved by their own Health Information Advisory Board. This is peculiar, as IMS's data mining operations are specifically excluded from the board's mandate.[4] Although IMS may be certified by the Canadian Standards Association, informed consent is a tenet of the Canadian Standards Association privacy code except where deemed inappropriate.[5] A note in the code defining "inappropriate" cites legal, medical and security reasons, but not business concerns.

We do not think the mailings to physicians in Ontario in 1996[6] and in Quebec in 1999,[7] which did not include consent-response forms and did not publicize the relevant Web sites, are adequate to inform Canadian physicians about IMS's business practices. We recommend that affirmation of informed consent be sought on a regular basis from all physicians across Canada.

The *current reality* is that prescription data mining practices are at variance with all 5 of the CMA's principles for the sale and use of physician prescription data.[2] The conduct of IMS bespeaks the *current reality* of the need for independent regulation of this industry.

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For the record

I read with interest the letters from Canadian physicians who finished medical school at a young age.[1–5] I graduated from the University of Cape Town in 1947, having just turned 22. I went straight into general practice in the Northwest Cape area, and what a pumped-up ignoramus I was. The patients very kindly referred to me as "the young doctor." I thought I knew everything. I had to learn the hard way.

Now, in my dotage, I will likely write a book about my medical experiences, to stand side by side with my 2 volumes of verse (neither of which are best-sellers).

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[Editors' note:]

According to the Guinness World Records Web site (www.guinnessworldrecords.com), the world's youngest contemporary graduate of a medical school is Balamurali Ambati of Hollis Hills, NY, who graduated from the Mount Sinai School of Medicine in 1995 at the age of 17 years.