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A REVIEW OF CANADIAN NATIONAL HEALTH INSURANCE

INTRODUCTION

National health insurance is very much on the minds of Americans today. Hospital costs have been soaring upward for more than a decade and medical treatment costs show no signs of diminishing.

As usual in times of sharply rising prices, the government, under the guise of serving the public's expectations, attempts to repeal the inviolable laws of supply and demand. Congress now seems poised to perform new feats in the health care area.

Attention has been focused in recent years on Canada where, despite some protests from physicians, a superficial glance seems to suggest that Canadians are indeed feasting on the proverbial "free lunch." Canadians have had government-financed hospitalization insurance since 1958 and government-financed physician care since 1968. Both of these items are available on a free-for-all basis with a few unimportant expectations, yet no Armageddon in either segment of the health industry seems imminent.

Increasingly, therefore, this system is looked upon as a model for American adoption. It seems to offer the benefits of government money without the widely recognized undesirable results of government organization. Never mind that most of the promised advantages of national health insurance are organizational; Canadian national health insurance (CNHI) is viewed as a success.

It may therefore be of interest that careful economic analysis of these two decades of experience in Canada reveals some results that cast reassuring doubt on the ability of the Canadian government to do magic.

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According to its supporters, this system has brought health care within the reach of all; it has eliminated the price barrier which, prior to its adoption, gave those with more wealth better access to these resources. Our results cast serious doubt on Canadian attainment of these lofty objectives. On the contrary, we find that it has made health care harder to get for large numbers of Canadians, principally those living in already under-doctored areas, and that it has shifted a large portion of the cost of the nation's medical care onto the shoulders of the economically disadvantaged.

Although a few studies have reported that after CNHI adoption the poor began to consume a somewhat larger share of the available medical care, our econometric findings suggest that this is a short term phenomenon. In the long run the reimbursement system adopted by all provinces provides monetary incentives for physicians to spurn the ghettos and the hinterlands and to locate in attractive urban environments already richly endowed with medical manpower. It matters little that there is no price barrier if there is no doctor, and as a result of the reimbursement system adopted by CNHI, doctors are simply moving away from the poor.

When prices no longer influence the rate and location of the supply of valuable services, other factors then fill this vacuum. In the locational choices of physicians, that decision is now made on the basis of the attractiveness of the conditions for living and practicing in different areas.

As fees have been equalized across each province, the opportunity to earn high income no longer functions to attract doctors to remote or educationally and culturally unrewarding areas. Fewer physicians choose to live and practice in less amenable communities since they may earn the same fee wherever they practice.

In our major research report we present theoretical work which derives three implications for post-adoption locational equilibrium for physicians under NHI. That theoretical work is too lengthy to reproduce here, but we will present our implications:

1. Greater variance will exist in the distribution of physicians across regions, relative to pre-NHI conditions. Those areas previously endowed with a larger than proportionate share of physicians will attract even more. Those which were relatively underdoctored obtain proportionately fewer.

2. Increasing relative scarcity of physicians in unattractive areas coupled with the shift to zero pricing

of medical services confront practitioners there with incentives to lower the quality of care they provide. We predict that in these areas, office visits will become shorter, house calls will be more difficult to arrange, and other adverse effects will occur, due to reduced resource commitments per patient.

3. While queues should continue -- indeed become worse -- in the long run in the unattractive regions, the opposite condition will eventually prevail in the attractive regions, the opposite condition will eventually prevail in the attractive regions. The scarcity of patients in the attractive regions should itself produce several disquieting results. Physicians will be employed fewer hours per week in these areas, and they will be treating increasingly trivial complaints.

SOME DISTRIBUTIONAL CONSEQUENCES

So far we have referred to the alternative locations under discussion as merely attractive or unattractive. This analysis may be a bit more relevant if we are more specific about the sort of features likely to influence the attractiveness of a particular location.

There are, of course, certain features of topography and climate which are important in determining the intrinsic attractiveness of a location. Most individuals prefer temperate climates to extremes, trees and foliage to barrenness, hills and irregularities to plain, and proximity to lakes, streams, and oceans. They prefer a low cost of living to a high one. Most, also, probably have a net preference for urban life, in spite of the many costs that such a lifestyle imposes and the several undeniable advantages that rural locations offer. We therefore predict that NHI will cause a general migration toward locations which exhibit more of these features than others. Locations with high costs of housing and food, with extremes of climate, with flat and barren landscape and low population densities will attract fewer physicians than they would without NHI. Patients in these areas will have difficulty obtaining medical care from the doctors who remain, because of the excess demand produced by the fixed fee fee schedule.

Those locations which have more temperate climates, more interesting topography, and a more sophisticated and stimulating urban setting will attract more physicians under NHI. It is worth repeating that such locations will already have a disproportionate share of the practicing physicians, hence the effect of this change will be to worsen the disparity of access to medical practitioners rather than to correct it. There is currently great concern in the U.S. over the observed shift of medical practice out of rural settings and into the cities; out

of the Central States toward either the East or West coast. Such a trend cannot but be augmented by adoption of Canadian-style NHI.[1]

More important for distributional considerations than all the above, however, may be a less obvious factor influencing physician location. The model we describe here is conventionally used to analyze the locational patterns of individuals across a rather large geographical canvas in the manner we have used it above. It is equally applicable to choice within a smaller but perhaps more important compass, i.e., the choice of location of practice within a city and the choice of the style of practice.

Consider, for example, the decision of where to locate one's practice within a particular city or town. Although some altruistic individuals may prefer to locate in and serve the poorer neighborhoods of our cities, most would probably elect to locate in well-to-do and middle-class areas, other influences notwithstanding. National Health Insurance will make it less costly to indulge this taste for more socially attractive patients. For, as we have illustrated above, NHI, in addition to equalizing the supply price to provides, lowers the demand price to patients. The price of a visit, which in ordinary circumstances would act as a deterrent on the ability of middle- and upper-class families to consume additional quantities of medical care, is lowered by NHI effectively to zero. Thus individuals in these neighborhoods are encouraged to visit a physician for any ailment, regardless of medical urgency. For administering to such needs, physicians are reimbursed at the standard negotiated rate, in spite of the fact that the actual value of the service to the demander may be negligible. At the margin, regardless of how great the need of the patient in the slums or how trivial the symptom of the demander in the middle-class neighborhood, the NHI reimburses the physician at the same rate for both. Fewer physicians will choose to care for the poor under such circumstances than they would without National Health Insurance.

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1. There is one important exception to this general rule that net migration should occur from rural, low-density locations to urban high-density locations. That will occur where rural locations were poor and so sparsely populated that no physicians practiced there without NHI. Introduction of NHI with its zero price for service may stimulate demand (increase the number of visits per population) to the extent that physicians are attracted to the area. Where a physician without NHI could not expect sufficient traffic to support a practice at a particular fee, physicians with NHI could now locate there and earn a living at the same fee because of the higher utilization rate with the zero price to patients. This anomaly will be observed, however, only for locations where no physicians existed prior to NHI. In all other cases, the theory we have just discussed implies that NHI will produce net migration away from rural, low-density regions.

Similarly, different specialties themselves offer a physician more glamor, more control over his time, more prestige and power over his associates. Indeed, it seems clear from evidence reported by Sloan (1970) and Lindsay (1973), that a decision not to specialize but to remain a general practitioner involves the sacrifice of much nonpecuniary income of this type. Unless the negotiation process is able to introduce appropriate variation in compensation rates for all such differences in the attractiveness of different medical careers, then we may have even fewer physicians involved in first-line patient care than we have at present. Canada has already experienced difficulty in making such adjustments across specialities.

In summary, our long-run analysis of the influence of Canadian NHI on access to medical care through the locational and career decisions of physicians in Canada suggests that its effects may be quite remote from the intentions of the legislation. Although it is true that NHI lowers the money price to everyone, this need not lower the cost of obtaining care when queuing costs are also considered. Furthermore, access is influenced by both demand and supply, and supply effects of its adoption are almost universally adverse. With regard to locational decisions in the large and the small, this policy has been shown to exacerbate existing differences in spatial distribution of physicians. Attractive locations which had proportionally more physicians before NHI will gain even more at the expense of rural, inclement, ugly and improverished areas and neighborhoods. Quality of care in these needy areas will diminish while care in the more attractive areas will be administered for trivial problems.

WHO BEARS THE COST OF NHI?

The man in the street generally favors government free-for-all programs like national health insurance because he believes that he is getting something for nothing. Since he pays close to or absolutely nothing when he uses it, he gets the impression that it is "free."

The most important lesson in economics, and the most difficult to teach, is that, while one person may get something for nothing (by taking it away from someone else), it is simply impossible for everyone to have something for nothing. For each person who gets something for nothing there must be someone else who get nothing for something.

The fact that no one seems to pay for Canadian national health insurance does not indicate that it is costless -- or for that matter that it costs less than it would if people bought it for themselves. In 1976 the budgetary cost of this program in Canada was $1,122 per family, and this does not include such items as dental care, out-patient drugs, home nursing care, eyeglasses and hearing aids.

Reducing the price at the point of purchase to zero does, however, accomplish three things. First, it eliminates the feature that the market uses to ration the scarce existing health resources among competing demanders. When the price is lowered to zero, more care is demanded by would-be patients than the available doctors, nurses, and hospitals can provide.

One way that this market disequilibrium is rationalized is that people will line up -- effectively paying a price in their own time and inconvenience instead of the money price. Evidence on waiting times is costly to collect but those studies that have examined this problem have observed that, in spite of the fact that there are more doctors than ever in Canada, it takes longer to see a doctor there than before CNHI. This cost of waiting is not included in official tabulations of the cost of national health insurance.

Poorer Care

A more important effect to reducing the price at the time of purchase to zero is that the scramble for physician care puts physicians under pressure to hurry their patients through, to have their nurses and orderlies perform more tasks, and in general to reduce the quality of the care provided.

Long lines in the waiting room and the lack of competition among physicians for patients will in the long run yeild a product worth exactly what is paid for it. The sad state of British medicine today speaks eloquently to this point.

The final result of this sort of financing is that it becomes terribly difficult to discover who does bear the cost of health care. The individual who calls for an appointment may realize that in some vague way his taxes are related to aggregate spending on CNHI, but the exact way in which individual taxes and the full cornucopia of government give-aways are connected is only now beginning to be unraveled by economists.

Programs Cut

If each government spending measure were accompanied by tax bill that fully financed that spending, then the task of identifying

who was bearing what share of the cost would be greatly simplified. This is rarely done, however, and was not done at all in Canada when national health insurance legislation was adopted. Indeed, not only tax revenue but also aggregate government spending levels over time fail to reveal the impact of the adoption of these programs.

Government spending over time is best described as a trend line, and this trend is undisturbed in the years when the hospital and medical care programs were established. If spending on health programs is not accompanied by corresponding expansions of the total budget, then the conclusion seems inescapable that some older programs have been cut to finance Canadian national health insurance.

Part of the task of identifying who is bearing the cost of CNHI is therefore to find out which programs were cut and by how much. Space limitations prevent a full presentation of our methodology for estimating these cuts, but the process may easily be summarized. The two parts of this NHI legislation were introduced by the Canadian federal government with matching cost provisions in which each provincial government shared the cost of such programs on roughly a dollar for dollar basis with the federal government. The acts therefore lowered the cost of these programs relative to other programs. As the matching formula varied from province to province, some variation was observed in the relative costs of programs cross-sectionally as well as longitudinally.

We were able to use this variation in costs to estimate the sensitivity of the remaining budgetary items to the lowered cost of government-financed health care. Spending on some government programs was discovered to be highly sensitive to this introduction of Canadian NHI. We found that the programs which suffered most with the introduction of NHI were in the category of Social Welfare, that is, mainly assistance to disabled, handicapped, unemployed persons, workers' compensation and family allowances. We find that 60 cents out of every dollar spent on CNHI came out of this single category. Small reductions were also observed in funding for police and fire protection and industrial subsidies.

These estimates were made econometrically using data for individual provinces' budgets over the period 1954 to 1976. The procedure involved estimating what impact the two government health programs had on expenditure for each program category. Only those programs named were significantly influenced by the medical care program while the impact of each on Social Welfare was large and highly significant.

This is not to say that welfare spending has actually been cut in Canada. Welfare has grown, as have most other government programs, with population and income over the period of our observation.

Our results indicate, however, that the path of that growth has been significantly retarded by the necessity to finance government health insurance.

CONCLUSION

In summary, Canadian national health insurance is quite definitely not a "free lunch." It may superficially appear to have opened access to medical attention to all members of the public regardless of means. It has indeed reduced the money price of care to zero for Canadians, and in this sense the Canadian government has endorsed the notion heralded by Senator Kennedy that "health care is a right." The real implications of extending that right are probably not what its authors and supporters intended. It has set in motion a relocation of physicians away from unattractive areas and patients (who, by the way, were already relatively underserved by physicians) toward urban and educational centers of the country.

This result has almost completely neutralized, for rural and remote communities, the effect of the dramatic growth in the number of physicians in Canada over the past decade. It may spell severe deprivation for these areas in some future period when the nation is less well endowed with medical manpower.

These findings by themselves raise serious reservations about the desirability of this "right." Additionally, such a system fosters waste in that it requires us to "pay for" our medical care twice: once in the form of taxes and a second time by standing in line or suffering longer because of delayed appointments. By reducing competition among physicians for patients, it weakens the inducement for physicians to produce quality care. Finally, it obscures from public observation the cost of this service and, more importantly, each individual's share of that cost.

Only by complex econometric calculations were we able to discover that it is the poorest members of society who have borne the cost of extending the right of health care to the nation.

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* Dr. Lindsay, with the assistance of Steven Honda and Benjamin Zycher, has recently completed an econometric analysis of the issues discussed in this Backgrounder. His findings are published in Canadian National Health Insurance: Lessons for the United States, one of a series of studies and reports made possible by a grant from Roche Laboratories, division of Hoffmann-La Roche Inc.