

Seniors' Views of Medication Reimbursement Policies: Bridging Research and Policy at the Point of Policy Impact*

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RÉSUMÉ

La hausse des prix des médicaments entraîne une modification du paiement des prestations prévues aux différents régimes d'assurance-médicament. Les médecins s'y opposent, prétextant qu'ils ne pourront plus prescrire les médicaments qu'ils jugent les meilleurs, comme ils le faisaient depuis longtemps. L'article reproduit des données émanant de groupes de discussion et d'un vaste échantillon d'aînés de la Colombie-Britannique à qui on a demandé leur opinion sur les modalités de paiement d'un régime d'assurance-médicament. Les aînés ont exprimé le vœu que les médecins soient mieux renseignés et plus engagés dans toutes les étapes des soins de santé, y compris dans l'établissement des politiques. Ils font confiance aux médecins en tant que source de renseignements mais ils accordent également une grande confiance à leur pharmacien et presque autant au ministère de la Santé. Les aînés acceptent majoritairement les politiques de réduction des coûts des régimes d'assurance-médicament et appuient même, pour la plupart, les efforts du gouvernement dans ce sens. En outre, ceux qui connaissent mieux les politiques ont plus tendance à les appuyer. L'article se termine par des commentaires sur la rétroaction et les décideurs.

ABSTRACT

Escalating medication prices are forcing drug benefit programs worldwide to change their payment policies. Physicians object that this intrudes on their long established authority to prescribe medications they judge best for their patients. This paper reports data from focus groups and a large random sample of seniors in British Columbia who were asked for their views towards Pharmacare's reference based

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pricing (RBP) policy. Seniors expressed the desire for physicians to be more knowledgeable and more involved in all aspects of medical care including policy changes. They have confidence in physicians as a credible source of information, but they also have as much confidence in pharmacists and almost as much in the Ministry of Health. Seniors overwhelmingly accept, and the majority support government's efforts with their cost-saving Pharmacare policies. Furthermore, those who know more about the policy are more likely to support it. The paper closes with a discussion of the feedback process with decision-makers.

Introduction

With the continually escalating costs of health care, the 1990s have seen industrialized countries accept the challenge of health reform. Much of the rhetoric of this reform includes discussions of other health care practitioners providing many of the tasks previously provided by physicians, encouragement of less costly community care over more expensive institutional care, promotion of less costly pharmaceutical coverage, and acceptance of greater individual responsibility for health. Given that established health care in North America approves only physicians as the legitimate authority for prescribing medications, health reform poses interesting questions about physician authority in this area. For example, do consumers (for our purposes, seniors) still believe physicians should be the only or the ultimate authority for prescription medications? Do consumers believe government policies to ensure cost savings interfere with physician authority? Do consumers support government policies in this area?

In Canada, all provinces have universal Medicare whereby services provided by physicians and within acute care hospital settings are covered for anyone in need. However, the provision of community services and policies covering reimbursement of prescription medications vary from province to province. The province of British Columbia covers all prescription medication costs for seniors with a yearly deductible on the dispensing fee only (currently \$200).

Cost increases for prescription medication have been alarming. In B.C., the prescription medication reimbursement program (Pharmacare) has seen over a 2,200 per cent increase in its budget over the 20 years from 1974 to 1994, approximately a 17.5 per cent per annum increase amounting to a doubling of costs in five years. Most of the cost increase is due to escalating drug prices (B.C. Ministry of Health, 1996).

In October 1995, Pharmacare introduced reference based pricing (RBP) of gastric acid suppression drugs, nitrates and non-steroidal anti-inflammatory drugs. Within each of these three classes of drugs, a reference drug was chosen which had a low price, not necessarily the lowest. Pharmacare pays the price of the reference drug. If the individual wishes another more expensive drug in the same class of equivalent drugs they must pay the difference or their physician must telephone or fax a request to Pharmacare for a "special authority" for full payment of the more expensive drug pricing. Reference based pricing (RBP) was introduced in the province amid

objections and alarming advertising from pharmaceutical manufacturers and objections from physicians and pharmacists that seniors would not accept the policy – that they would be upset and adversely affected by it. This paper reports data on seniors' views of physicians as the sole authority on prescription medication, their view of Pharmacare policies such as RBP, and their preferred sources of drug information, obtained from a series of focus groups and telephone interviews.

The data come from the Seniors Drug Focus Project, designed to evaluate the impact of drug substitution policy on seniors, and seniors' impact on drug policy in B.C. (Maclure & Potashnik, this volume). To proceed, the project has had to create a new bridge between researchers and policy-makers by seeking information from policy-makers that might be important for them to know and eliciting views of seniors, and feeding these back to the policy-makers. RBP was chosen as the focus because it was viewed as an experiment in evidence-based policy (Ham, Hunter, & Robinson, 1995; Rosenberg & Donald, 1995; Evidence-Based Medicine Working Group, 1992). However, despite its bases in evidence at the level of drug effectiveness, RBP necessarily depends on a host of other factors for its implementation, not the least of which is the active participation of clinicians. This paper presents the views of seniors, discusses their lack of convergence with those of clinicians, and discusses how these views have been fed back to policy-makers.

The Policy Context

Pharmacare has initiated several cost saving strategies over the last three years (B.C. Ministry of Health, 1995a). In 1993 it introduced the Trial Prescription Program, in collaboration with the B.C. Pharmacy Association, whereby the patient receives a 10-day trial supply of an expensive drug instead of a three-month supply in an attempt to halt unnecessary waste of expensive drugs due to large quantity prescribing of new medications with significant side effects. In this program, patients take selected medications for a short trial period to determine their tolerance of the medication and whether a larger quantity should be prescribed. In 1994, the Low Cost Alternative program was initiated to cover only certain lower priced drugs in a chemically identical class – a generic substitution policy. Prices of generic drugs are often considerably lower than brand name drugs. Also in that year, the Therapeutics Initiative was established at the University of British Columbia by the Ministry of Health and the Ministry of Skills, Training and Labour to evaluate new and existing prescription drugs according to the best scientific evidence available. It provides evaluations to doctors to assist their prescribing habits and to Pharmacare to assist in determining the drugs to be included in Pharmacare benefits. It is guided by an Advisory Committee composed of representatives of health professional organizations and a seniors' representative, and operates at arm's length from government.

In 1995, Pharmacare and the B.C. College of Pharmacy established PharmaNet, a computer network linking pharmacies throughout the province to a central on-line data base containing a pharmacy record for the past 18 months for every person who was given a prescription drug in B.C. It enables pharmacists to review patients' complete prescription drug information to prevent potentially harmful drug reactions or interactions and to prevent drug fraud and abuse. This system also allows drugs to be charged directly to the system once the deductible limits are met, so there is no need for individuals to pay, submit receipts, and wait for reimbursement. Also in 1995, the Provincial Government established RBP, as an extension of the Low Cost Alternative program. The program is being phased in with specific classes of drugs on an incremental basis. In August of 1995 RBP was announced; it was to begin with H2 blockers (anti-ulcer drugs) on October 1. On November 1 of that year RBP affected patients on nitrates (heart medications); and on November 27 of that year it took effect for non-steroidal anti-inflammatory drugs (NSAIDS) commonly used for arthritis and joint pain. It includes a Special Authority Process whereby physicians can request full reimbursement of a drug other than the reference drug on medical grounds. Over 95 per cent of such requests are approved within 48 hours.

RBP saved Pharmacare \$23.5 million in the first 10 months (*Vancouver Sun*, 1996). The PharmaNet computer network is expected to save an additional \$30 million through detection and prescription drug fraud, abuse and overuse (B.C. Ministry of Health, 1995b). RBP had been in use in Germany, Denmark and New Zealand, but the introduction in B.C. was a first for Canada.

Medication Use and the Elderly

Seniors use more prescribed medications than younger adults. For example, in a province-wide study of prescription use in the province of Saskatchewan, Quinn et al. (1992) found that in the past year 80.8 per cent of seniors received at least one prescription compared to 63.4 per cent of younger adults; viewed another way, 14.6 per cent of the population of the province is 65 years or over, but they account for 40.1 per cent of the prescriptions and 40.2 per cent of the drug costs. In addition, seniors believe there is much room for improvement in drug prescribing in the country. For example, in a recent survey (Angus Reid Group, 1991) of Canadians aged 55 and older, 69 per cent said they strongly or moderately believe that elderly Canadians use more drugs than are really necessary; 53 per cent of British Columbian seniors strongly disagree with the sentiment that "prescription drugs are the best way to deal with difficulties of aging".

We know that drug use accounts for many admissions to hospital. Chrischilles et al. (1992) report that 11.6 per cent of all elderly admissions to the general medicine service of a community hospital were for drug-induced illness; Tuominen (1988) reports for B.C. that between 11 and 21 per

cent of hospital admissions are due to unfavourable drug reaction in patients aged 60 and older. Williams (1992) in the United States estimates that between 10 and 20 per cent of in-patients who are elderly suffer from adverse drug reactions.

Little information is available about seniors' views of drug reimbursement policies or their confidence in sources other than physicians for prescription medicines. Where studies do ask about alternative sources, it is usually about pharmacists. For example, Kessler (1991) reports that 92 per cent of respondents want a pharmacist available for personal consultation and that between 64 and 89 per cent in a different survey said they want to be advised by their pharmacist about how to take their medication, how to store it, and its possible side effects. It might be noted that the Angus Reid Group (1991) reports 69 per cent did *not* believe their doctors relied too much on prescription drugs to deal with their health problems. However, in the same survey, only 13 per cent of seniors actually requested a prescription drug from their physician during the last year, which means that the majority of prescriptions are physician initiated.

Methods

Seven focus groups of seniors were organized in the fall of 1995 to obtain their views on the content and implementation strategies of recent Pharmacare policies. In total, 51 participants were recruited using both a random procedure from a total list of those living in the Capital Regional District of B.C. and by inviting participants from public forums on drugs held by the Therapeutics Initiative in different parts of the province. These participants had expressed interest in attending further discussions on medications. Three groups consisted of seniors who had been prescribed: heart medications; ulcer medications; and either heart or ulcer medications. Two groups consisted of seniors using any prescribed medications. In total, 30 women and 21 men were involved. The focus groups met in three different locations within the province. The topics for discussion were divided into three broad categories: discussion of RBP policy; discussion of communication and informational issues regarding Pharmacare policy changes; and the Special Authority process. The analyses, however, derived from the discursive data themselves.

Following the analyses of the focus group data, a province-wide random sample of seniors was contacted by telephone for a brief interview, to ascertain the generalizability of the findings emerging from the focus groups. A simple random sample of those age 65 and over was drawn by the Centre on Aging, University of Victoria, from a total population listing of seniors obtained from Vital Statistics of the provincial Ministry of Health. Telephoning was conducted between December, 1995 and March, 1996. The refusal rate was 27.5 per cent. On average, the interviews lasted 30 minutes. A total of 1,699 interviews were conducted.

The telephone interview asked a series of questions concerning the

generic drug substitution policy and RBP. In relation to RBP, those interviewed were asked whether or not they had heard of the policy and then a series of knowledge questions:

- . Reference Based Pricing is a way for Pharmacare to say what medications they will or will not pay for.
- . With RBP, physicians no longer have a choice which medication they can prescribe for you.
- . With the help of expert advice from doctors and pharmacists, Pharmacare will choose one or more drugs that are safe, effective and cost-effective out of a group of drugs that do similar things. This is the “reference drug”.
- . RBP means that when you go to your pharmacist, you will be given a generic drug in place of a brand name.
- . Reference Based Pricing will save B.C. millions of dollars.
- . With RBP, any pharmacy in B.C. can now access all of your records that would normally only be available at the pharmacy that you regularly go to.
- . Unless you have special permission from Pharmacare, you will have to pay extra for the drug you are on if it costs more than the reference drug.

Possible answers for each statement included: true, unsure, false. Correct answers were summed and divided by the total number answered. The respondent was then told what Reference Based Pricing is. If they indicated lack of familiarity with RBP in their response to the earlier question, they were asked if it was familiar, and whether or not they have been affected by it personally.

They were also asked: “Do you think Reference Based Pricing is a good or bad policy?” (answers were good, not sure, both good and bad, bad).

They were then read a series of statements concerning their opinion about RBP related areas to which they could respond: strongly agree, agree, neutral, disagree, strongly disagree. These items were subjected to a factor analysis (orthogonal, varimax rotation). The items, together with the resulting dimensions, appear in the Results section below.

They were asked directly, “Do you believe that RBP gets in the way of your access to health care?”. Response categories were: yes, both yes and no, not sure, no. Individuals were then read a list of information sources and asked where they normally obtain information about Pharmacare policies. The list included: newspaper articles, newspaper advertisements, radio talk shows, radio advertisements, news on television, television advertisements, Pharmacare/Ministry of Health, physician, pharmacist, pharmaceutical companies, family and/or friends, and other (specify). They were read the same sources and asked how much confidence they have or would have in these sources when looking for information about Pharmacare policy. The possible responses were: lots of confidence, some, little, no confidence.

They were also asked their year of birth, educational level completed, total yearly income from all sources for the household, and sex.

Table 1
Concerns about medication use and policy: factor analysis

	<i>Cost of Medication</i>	<i>Exceptional Patient</i>	<i>RBP</i>
(a) With RBP some people may not get the medication they need	.54	-	-
(b) If I had to remember to take a pill 2 or 3 times a day, then I would probably forget	-	.57	-
(c) Most seniors will be unable to pay for more expensive medications not covered by Pharmacare	.72	-	-
(d) With RBP, <i>many</i> exceptions will have to be made for people who have legitimate medical reasons to be on a more expensive drug	-	.53	-
(e) I am the kind of person who will have an unusual response to a drug that is OK for most people	-	.68	-
(f) Seniors have been paying for years into Medicare, and therefore, should not have to pay anything more for drugs not covered by Pharmacare	.74	-	-
(g) Having my doctor take the time to fill out a brief form and send it in to Pharmacare asking for special permission to have my drug covered will jeopardize my relationship with him or her	-	-	-.57
(h) If my doctor believes that I should get a medication not covered by Pharmacare, Pharmacare <i>will</i> be able to handle these requests quickly and efficiently	-	-	-.55
(i) We all have to pitch in to help protect Pharmacare and I have no problem having to pay for a more expensive version of a medication if I prefer	-.59	-	-
(j) Drug companies are fighting against RBP because they are worried about lost sales	-	-	-.50

Analyses use correlation coefficients for bivariate analyses and logistic regression models for multivariate analyses. The latter allow one to examine the relationship of one variable with the dependent variable, while controlling for all others. Tests were run to ensure assumptions of linearity and non-multicollinearity were met.

Results

Demographics of Interviewees

Of those interviewed, 60.8 per cent were females; 39.2 per cent male. The majority had no more than high school education (69.3% had high school or less), not uncommon for those who are elderly today. A quarter of the sample (24.4%) were between 65 and 69 years of age; 30.2 per cent were between 70 and 74; 23.8 per cent were 75–79 years old and 21.6 per cent were aged 80 or over. Many refused to answer or did not know yearly household income (fully 45.8%). Of those responding, 32.9 per cent reported household income of less than \$20,000 a year; 44.8 per cent reported \$20,000 to \$39,999 a year; and 22.4 per cent reported \$40,000 or more.

Opinions of RBP

Three distinct, interpretable factors emerged from the factor analyses of items referring to seniors' opinions about RBP (see Table 1). The first referred to concerns surrounding payment for medication (eigenvalue = 2.23, variance explained = 22.3%) and included the following items:

- . With RBP some people may not get the medication they need.
- . Most seniors will be unable to pay for expensive medications not covered by Pharmacare.
- . Seniors have been paying for years into Medicare, and therefore, should not have to pay anything more for drugs not covered by Pharmacare.
- . We all have to pitch in to help protect Pharmacare and I have no problem in having to pay for a more expensive version of a medication if I prefer.

The second factor referred to concerns about exceptional patients (eigenvalue = 1.17; variance explained = 11.7%) and included the following items:

- . If I had to remember to take a pill two or three times a day, then I would probably forget.
- . With RBP, *many* exceptions will have to be made for people who have legitimate medical reasons to be on a more expensive drug.
- . I am the kind of person who will have an unusual response to a drug that is okay for most people.

The third factor referred to concerns about the RBP policy (eigenvalue = 1.09; variance explained = 10.9%) and included the following items:

- . Having any doctor take the time to fill out a brief form and send it in to Pharmacare asking for special permission to have my drug covered will jeopardize my relationship with him or her.
- . If my doctor believes that I should get a medication not covered by

Pharmacare, Pharmacare *will* be able to handle these requests quickly and efficiently.

Drug companies are fighting against RBP because they are worried about loss of sales.

The results are organized around three questions: seniors' views on physicians, seniors' views on RBP, and seniors' sources of information. Both focus group and interview data are presented as relevant.

Views on Physicians

Seniors want more information from their physicians; the telephone survey data revealed that less than half of seniors (39%) receive information about Pharmacare policies from their physicians. Seniors have confidence in their physicians; fully 88 per cent have confidence in them as a source of information (more is said about this later).

The focus group discussions provided insight when seniors talked about the impact of the RBP policy on their relationships with clinicians. No comments referred to specialists, but several referred to general practitioners. Most seniors expressed the desire for physicians to be more knowledgeable and involved in all aspects of medical care including policy changes. They hoped that RBP may mean physicians will spend more time discussing options. For example:

Right now the doctor has given me a sample to take, and on the package it says nothing and I would like to know what it is. He didn't tell me anything.

It's their job to find out about all these drugs.

The doctor should spend a lot of time learning. If your doctors are not giving you the information, you should make them tell you.

We should ask the doctor and not be satisfied if the doctor doesn't know. He's got reference books – ask him to get them out and tell you what the side effects are. He (the doctor) should have the information about which is the cheapest one, which is the generic and low cost one and what the current policies are.

There were no comments regarding pharmacists, but there was a general distrust of pharmaceutical corporations. There was also concern that physicians think seniors are stupid and do not give them appropriate respect.

Views on RBP

Among the seniors contacted in the telephone survey, only 19 per cent had heard of RBP, unprompted. When those who had heard of it were asked a series of questions about RBP, 60.1 per cent knew the correct answer for at least half of the questions; 28.7 per cent knew the correct answer for 70 per cent or more of the questions; only 7.9 per cent knew the correct answer

over 85 per cent of the time. All respondents were then told what RBP was. When asked whether they thought it was a good or bad policy, the majority (57%) thought it was a good policy, with 21 per cent unsure and 14 per cent who thought it was both good and bad; only 8 per cent said it was bad. Similarly, when asked whether or not they believed RBP gets in the way of their access to health care, 62 per cent said no, with a further 24 per cent saying not sure, 3 per cent saying yes and no, and only 10 per cent saying yes.

Support for the policy and a belief that it does not impede health care, not unexpectedly, are correlated ($r = .43; p < .000$). Most support RBP; few are opposed. The vast majority reveal either neutral acceptance or positive support. Furthermore, those who are more knowledgeable about RBP (scored higher on the list of knowledge questions) are more likely to believe RBP is a good policy ($r = .24; p < .000$) and does not impede access to health care ($r = .20; p < .000$). Of those answering over half of the knowledge questions correctly, 76.8 and 80.5 per cent respectively, thought RBP was a good policy and that it did not impede access to health care. Given that the knowledge scores leave room for improvement, this suggests the more seniors can be educated about RBP, the more supportive they will be.

Support for RBP is related to only two of the three scales derived from factor analysis of the items asking their concerns with RBP. Concern with exceptional patients correlates at less than 0.10 with both questions on support for RBP. That is, whether or not they believe there will be many exceptions to the reference drug, that they themselves will be an exception, or their concerns about the exceptional person who has difficulty remembering multiple dosing are not particularly associated with their support of RBP. However, those generally not concerned that RBP will interfere with their relationship with their doctor, who believe Pharmacare will handle special authority requests quickly and efficiently and who believe drug companies opposed to RBP are worried about lost sales, are more likely to support RBP ($r = .19; p < .000$) and are less likely to think it will impede access to health care ($r = .21; p < .000$).

Not unexpectedly, those who support RBP also have fewer concerns about the policy. Those with more cost concerns about RBP are less likely to say it is a good policy ($r = -.29; p < .000$) and less likely to say it will not impede access to health care ($.32; p < .000$). Interestingly, whether RBP has personally affected the senior (i.e. they are on a medication affected by the policy) is unrelated to their support for the policy, but is related to their concerns about the policy ($r = .14, p < .000$) and to cost concerns ($r = .08; p < .001$). Those who have been personally affected have more concerns.

Multivariate analyses used logistic regressions because the dependent variables are dichotomous (RBP is a good policy or not and it will not impede access to health care or it will). By and large, they confirm the bivariate analyses. As shown in Table 2, education plus concern with exceptional patients and concern with the policy are both significantly related to support for RBP. Those with more education, those who have little concern about

Table 2
Support for RBP; multivariate analyses: logistic regressions

A) <i>RBP a good policy:</i>				
	<i>B</i>	<i>Wald</i>	<i>R</i>	<i>Odds ratio</i>
Age	-.01	1.08	.00	-
Education	.16	15.00***	.08	.84
Gender	.25	4.72	.04	-
Change to generic drug	-.00	.00	.00	-
Affected by RBP	-.13	.52	.00	-
Concern with cost	-.12	3.01	-.02	-
Concern with exceptional patients	.57	70.15***	.18	.23
Concern with policy	-.74	110.94***	-.22	.48
Stomach medications	-.17	1.01	.00	-
Arthritis medications	.02	.02	.00	-
Heart medications	.17	1.23	.00	-
<i>N</i> = 1603				
Model χ^2 = 249.76***				
Goodness of fit = 1602.28				
% correctly classified 67.75%				
*** <i>p</i> < .000				
B) <i>RBP does not impede access to health care:</i>				
	<i>B</i>	<i>Wald</i>	<i>R</i>	<i>Odds ratio</i>
Age	-.01	.42	.00	-
Education	.15	12.43***	.07	.85
Gender	.15	.90	.00	-
Change to generic drug	.15	1.99	.00	-
Affected by RBP	-.08	.16	.00	-
Concern with cost	-.05	.51	.00	-
Concern with exceptional patients	.66	89.46***	.20	.06
Concern with policy	-.73	103.92***	-.22	.48
Stomach medications	.11	.41	.00	-
Arthritis medications	-.05	.12	.00	-
Heart medications	-.14	.80	.00	-
<i>N</i> = 1593				
Model χ^2 = 247.65***				
Goodness of fit = 1592.58				
% correctly classified 69.43%				
*** <i>p</i> < .000				

exceptional patients or little concern with the policy specifics are more likely to support RBP. The relationships with the attitudinal scales are strong. The multivariate results for whether RBP impedes health care are shown in Table 2b. The identical variables show significant relationships when this indicator is used as the dependent variable and their strength is very similar. In other words, when controlling for other factors (age, gender, whether they have changed from a brand name to a generic drug, whether they have been personally affected by RBP, whether they have concerns about costs, whether they are taking stomach medications, whether they are taking arthritis medications, and whether they are taking heart medications), it is

education and, most importantly, their attitudes towards exceptional patients and towards the specifics of the policy that are highly related to their support for RBP.¹

In the focus groups, the majority of seniors expressed positive comments concerning the policy based on probable health outcomes and suggested that they would judge the policy successful primarily if the health outcomes were the same or better than they are experiencing at the present time. For example, they said:

If the less expensive drug helps just as much as the one you are on now, then I would be all for it.

I don't mind cheaper versions as long as it is effective.

Most also expressed a willingness to try reference medications. For example:

I am all for trying it, too.

The way all this is going is O.K. with me.

Furthermore, many seniors thought that changing to a reference drug that required multiple doses was no problem.

A second area of impact was costs. Most expressed positive comments about Pharmacare saving money. They believe that reducing program costs is in the best interest of seniors. For example:

Slow release is very expensive and I find that the cheaper version is every bit as good.

When I read about it, I thought we all had to do something to keep the cost down.

We should all be tried on the lowest one in order to save the system.

I think you are more concerned than anything about what is happening to help costs and seniors are worried about that because they have children and grandchildren.

RBP was also viewed as positive because it could help to curb the power and profits of pharmaceutical corporations. There was also a feeling that RBP may convince doctors to prescribe the cheaper effective medicine rather than over-prescribing the deluxe versions when there is no need to.

Sources of Information

We were also interested in the sources of information on Pharmacare policies. Table 3 shows the sources of information and the confidence of seniors in those sources. Most seniors receive information on Pharmacare policy from news on TV (67%) or from newspaper articles (62%). Fewer

Table 3
Sources of information on pharmacare policies

	Source %	Confidence (Some or lots) %
News on TV	67	64
Newspaper articles	62	53
Pharmacist	50	85
Physician	40	92
Pharmacare/Ministry of Health	39	73
Radio talk shows	35	35
TV advertising	31	20
Newspaper advertising	30	19
Family/friends	30	51
Radio advertising	17	18
Pharmaceutical companies	5	15

Table 4
Information sources; multivariate analyses

I.V.*	Odds Ratios: Source					
	News- paper	TV News	Ministry of Health	Physician	Pharma- cist	Family/ friends
Age	1.04	1.04	-	-	-	1.01
Education	.79	-	.84	-	-	-
Personally affected	.37	-	-	-	.95	-
Concern – cost	-	-	.81	-	-	.61
Concern – exceptional patients	-	-	.80	-	-	-
Concern – policy	1.17	-	-	1.18	1.25	-
Stomach meds	-	-	-	-	.22	-
model χ^2	109.10	44.23	45.78	32.33	89.95	48.11
% correctly classified	65.47%	67.44%	61.41%	60.13%	58.71%	69.90%

* Only those variables emerging as significant predictors for at least one source are shown here. Variables entered but not significant include: changed from a brand name to a generic drug, taking arthritis medications, taking heart medications.

receive information from the pharmacist (50%) or the physician (40%) or Pharmacare and the Ministry of Health (39%).

Multivariate analyses using logistic regressions were computed (the results are shown in Table 4) for the six sources of information that most seniors utilize. The table demonstrates that several variables are unrelated to the source that individuals use to obtain information about Pharmacare policy, including: whether they had changed from a brand name to a generic drug, whether they take arthritis medications, and whether they take heart

Table 5
Confidence in information sources; multivariate analyses

I.V.*	Odds Ratios: Source					
	News- paper	TV News	Ministry of Health	Physician	Pharma- cist	Family/ friends
Age	1.02	1.03	-	-	-	-
Education	-	-	.20	-	-	-
Personally affected	.68	.82	-	-	-	-
Concern – cost	-	-	1.19	-	-	-
Concern – exceptional patients	-	-	.28	-	-	-
Concern – policy	1.19	-	1.18	-	-	-
Stomach meds	-	-	-	-	55	-
model χ^2	55.28	49.43	71.20	ns	27.06	ns
% correctly classified	58.69%	64.79%	74.08%		88.21%	

* Only those variables emerging as significant predictors for at least one source are shown here. Variables entered but not significant include: changed from a brand name to a generic drug, taking arthritis medications, taking heart medications.

medications.

Age is related to three sources of information. Those who are younger are more likely to obtain information from newspaper articles, from television news, and from family and friends, that is, not from the “experts”. Those with more education are more likely to obtain their information from newspaper articles and from the Ministry of Health, that is, from non-clinicians. Those who have been personally affected are more likely to obtain their information from the newspaper and from the pharmacist. Those who are not particularly concerned about the cost of medications under the policy are more likely to obtain their information from the Ministry of Health and from family and friends. Those who have fewer concerns about exceptional patients are more likely to obtain their information from the Ministry of Health. Those who are more likely not to have concerns about the implementation of the policy obtain their information from the newspaper, from physicians, and from pharmacists. Those who are on stomach medications are most likely to obtain their information from the pharmacist, but this is not the case for those on heart or ulcer medications. This suggests that people are more likely to consult pharmacists for symptoms they view as less serious and non-life threatening. Stomach problems are also likely an area of high over-the-counter (OTC) medication use, where the pharmacist is frequently consulted.

All models are statistically significant and correctly classify approximately 60 per cent of the cases, ranging from a low of 59.71 per cent for those obtaining their information from the pharmacist, to a high of 69.90 per cent for those who obtain their information from family and friends.

Having been personally affected by RBP is particularly strongly related to receiving information from the newspaper. Being on stomach medications is a strong predictor of receiving information from the pharmacist. The attitudinal scales emerge as fairly strong predictors for several information sources.²

Irrespective of the actual source of information, seniors have greatest confidence, when their information comes from the physician (92%) or the pharmacist (85%). Nevertheless, the Ministry of Health is a credible source for the majority of seniors (73%) as is news on TV (64%) and newspaper articles (53%). Half (51%) have confidence when the information comes from family and friends. Taking the top six sources seniors have confidence in (including sources where at least 50 per cent of seniors have confidence), results of the multivariate analyses appear in Table 5.

The results are similar to, but also different from, the predictors of information sources. Those who are younger are more likely to have confidence in "non-expert sources" (the newspaper and TV news) than are those who are older, although again the relationship is not very strong. Those with more education are much more likely to have confidence in the Ministry of Health than those with less education. Those who have been personally affected by RBP are more likely to have confidence in the newspaper and in television news. Those with fewer concerns about the policy as measured by all three scales have greater confidence in the Ministry of Health. Once again, if an individual is taking stomach medications, they are more likely to have confidence in the pharmacist as a source.

The overall models for predicting confidence in the physician or family and friends as a source were not significant, demonstrating that we were unsuccessful in identifying the factors that are related to confidence in these two sources. For the other four sources, the models were all significant, correctly classifying anywhere from 58.69 per cent of the cases (for confidence in newspapers) to 88.21 per cent (for confidence in a pharmacist). These data suggest that experience with stomach medications is an important factor in confidence of the source, and that concerns about RBP are strongly related to confidence in the Ministry of Health.³

The data point both to multiple sources of drug policy information and confidence in a variety of sources on the part of seniors. While confidence in physicians as a source is high, confidence in pharmacists is equally high and strong for several other sources. Furthermore, demographic characteristics such as age and education are related to the use of and confidence in non-expert sources of information. Fewer concerns with the policy are related to confidence in non-clinical sources, especially the Ministry of Health; but when it comes to actual use of a source, concerns are related to clinical and non-clinical sources.

Conclusions

This paper has reported data from focus groups and a large random sample

of seniors who were interviewed by telephone to assess the extent to which seniors still view physicians as the only or the ultimate authority on prescription medications, and consumers' views towards government policies that are trying to ensure cost savings. Seniors express the desire for physicians to be more knowledgeable and more involved in all aspects of medical care, including policy changes. They would like physicians to spend more time discussing options with them and, where they do not have the knowledge, seniors believe it is the physician's job to obtain it. Seniors have confidence in physicians as a credible source, although, at the present time, they frequently receive information from television news and newspaper articles, from pharmacists, and from the Ministry of Health, rather than from the physician. Furthermore, they have as much confidence in the pharmacist as a source of information as they do in the physician, and almost as many have as much confidence in the Ministry of Health. In other words, physicians are not the only credible authority on medication use.

Furthermore, seniors overwhelmingly accept, and the majority support, government's efforts to change their Pharmacare policies. They do not believe that these efforts at cost savings interfere with physician authority. Interestingly, those who know more about the policy are more likely to support reference based pricing. It is primarily co-existing attitudes about medication costs, about exceptional patients, and about different aspects of the policy that predict whether seniors support RBP. These attitudes are also strongly related to the source of information, with those having fewer concerns more likely to use both non-clinical and clinical sources and more likely to have confidence in the non-clinical sources. Younger age and more education also tend to be associated with the use of and confidence in non-clinical sources. Whether individuals are personally taking stomach medications is strongly related to whether they use the pharmacist as a source and in their confidence in the pharmacist. Stomach problems, relatively common and usually not life threatening, are prone to self-indication. This leads to consultation with and confidence in the pharmacist.

These data strongly suggest that seniors currently do not view physicians as the only or ultimate authority in the area of medication prescribing. Furthermore, seniors strongly support and believe in government's efforts at cost saving. In addition, they suggest that, at least for the RBP policy which seniors find reasonable and acceptable, when they know about the policy, they are more likely to support it. These data argue strongly against physician and pharmaceutical manufacturers' views that policies such as RBP will not be accepted by seniors and point to the value of asking for input directly from seniors themselves. Many, but not all, clinicians predicted RBP would be an unacceptable intrusion, causing clinically significant disruptions in patient care. Perhaps this was reasonable, given past experience. They could not have predicted that fax machines and on-line access to the new single centralized prescription database for the entire province (PharmaNet, introduced one month before RBP), would allow their requests for exemptions to the policy for special patients to be ap-

proved almost without exception and generally within 24 hours at a rate of over 500 per day.

The information obtained from the seniors has been disseminated in the form of a public report and ongoing meetings with Pharmacare decision-makers. The research team has actively co-operated with the communications department of the Ministry of Health, and the University researchers have released a statement to the media. There can be little question that the knowledge gained from the research has informed RBP. The policy-makers have cited findings in committee meetings and at least one press release. However, the extent to which this has affected the RBP policy is not so clear. The same decisions might have been made in the absence of the information. Given the cost savings within the program, it is unlikely that government would have changed course even if the research suggested seniors were not particularly supportive. However, the research has had a major impact on the communications branch within the government ministry which frequently uses verbatim findings generated from the research. In addition, Pharmacare is seriously considering how they can support further information dissemination to seniors as seniors have requested. It is too early to tell the form or extent this may take. The research is continuing and does have the input and acceptance of the policy-makers within Pharmacare. The clearest lesson to date from this collaborative endeavour is that the links between research and policy are so poorly developed that it is not even clear which path is the most appropriate to follow. Furthermore, given the way decisions are made at the policy level within government, it is not at all clear that there is a single or even a definable number of paths that can work from one issue to the next, or from one player to the next.

In conclusion, we found a mismatch between clinicians' and seniors' perceptions of the need to give and to receive information on prescription drugs and drug policy within the context of the patient-physician-pharmacist triad. Additional information sources do exist and should exist at the locus of policy impact. Our emerging impression is that evidence-based policy requires not only bridging research and policy at the locus of policy-making but also at the locus of impact. In other words, policy is not fully evidence-based without evidence dissemination and a continuous feedback loop.

Notes

- 1 The above analyses were conducted with the total sample. The senior's knowledge about RBP therefore had to be excluded for the analyses, because so few knew about the policy that the majority would be lost through missing values. Separate logistic regressions were therefore conducted with the subsample of 307 respondents who had heard of RBP and answered the knowledge test. (The test was asked only of those who had heard of the policy). When this was done (not shown here), education is no longer a significant predictor of either dependent variable. However, both scales measuring concerns with exceptional patients and with the policy remain significant predictors. For whether they believe that RBP is a good policy and only for that dependent variable, knowledge is a significant predictor. Those having more knowledge are more supportive of the policy. In both instances, the overall

model is significant ($p < .000$).

- 2 When the multivariate analyses are repeated on the smaller subsample of those who knew about RBP and incorporating their knowledge scores as one of the independent variables, all of the regressions with different sources of information as the dependent variable revealed insignificant models other than the one for the pharmacist as the source of information. In this instance, the model was significant ($p < .000$) and two variables emerged as significantly related to this source. Those who had been personally affected by RBP and those who were more knowledgeable about RBP were more likely to obtain information about Pharmacare policies from the pharmacist.
- 3 The reduced sample who answered the knowledge question about RBP did not produce any models that are statistically significant.

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