

The Institutionalized Discrimination of Cancer Patients– Not What Tommy Douglas Intended: A Business Case for the Universal Coverage of Oral Cancer Medicines in Ontario and Atlantic Canada

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A Business Case for the Universal Coverage of Oral Cancer Medicines

January 14

Highlights

41% of Canadian women and 46% of men will develop cancer at some point in their lives; over half of those afflicted will die from it accounting for nearly 30% of all deaths in Canada.

1

Catastrophic drugcare

Two-tiered pharmacare in Ontario and the Atlantic Provinces discriminates on the basis of age, income, geography, cancer type, and cancer treatment, and is financially ruining 10,000 lives.

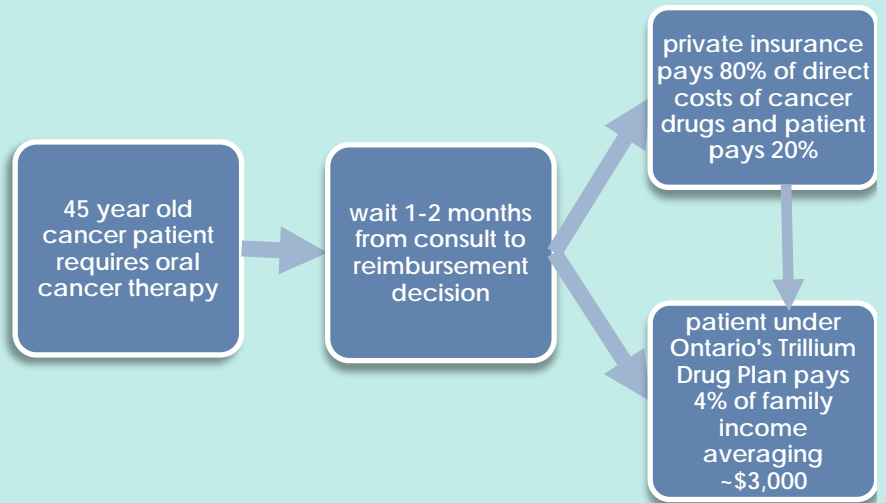
2

Oral drugs the way to go

A \$28-\$58 million investment by Ontario in oral cancer medicines will lead to at least a 17% reduction in overall chemotherapy unit costs, yielding timely, quality, and value-for-money care all around.

3

Staggering oral cancer drug costs



Ontario Budget Impact

SCENARIO	BUDGET IMPACT
Last dollar; new cases only	\$27,661,380
First dollar; new cases only	\$58,484,720
All cases; annualized costs	\$93,814,510
Average impact	\$59,986,870

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EXECUTIVE SUMMARY

Cancer is projected to have the fastest growing prevalence of any non-communicable disease in Canada from 2003-2023. The news is not all bad though. There are more cancer survivors in the country than ever before. Oral cancer drugs have been a major game-changer in this regard allowing cancer patients to live longer while staying in their communities without the stressful ordeal of IV chemotherapy. Oral cancer drugs are targeted therapies that provide the right drug to the right patient at the right time.

The *Canada Health Act* provides for government reimbursement for IV cancer drugs because they are administered in a hospital or medical setting. In Ontario and Atlantic Canada, patients must personally pay some or all of the cost of medications that are taken at home, even if they are considered the standard of care as part of internationally accepted treatment protocols. Today half of the newer cancer treatment drugs are taken at home; the burden of drug costs is shifting to the individual. Discrimination on the basis of age, income, geography, cancer type, and the route for administering cancer treatment should not be tolerated in Canada. The working poor are the ones most vulnerable and disadvantaged by the status quo in Ontario and the Atlantic Provinces.

Oral chemotherapy is as clinically effective as IV therapy and more cost-effective; numerous studies have evidenced this fact. A sensitivity analysis was conducted for Ontario on the pool of 9,588 financially vulnerable new cancer patients assuming different levels of oral drug penetration and different drug costs.

The last dollar scenario, where the Province steps in after private insurance has paid its share, for a year's worth of oral cancer drugs for only new cancer cases would produce a budget impact of **\$28 million**.

If the private insurance industry abdicates covering oral cancer drugs altogether or the government explicitly chooses to assume first-dollar coverage of same, the number of new cancer patients involved would more than double. For first-dollar coverage the budget impact would be **\$58.5 million**, just slightly over 1% of Ontario's 2012 total drug budget.

On an on-going, annualized, first-dollar basis, covering all cancer cases, and based upon the Manitoba experience of last year, full coverage would yield a budgetary impact for Ontario of **\$93,814,510**.

Range of Budget Impacts in Ontario Depending upon Take-up of Oral Chemotherapy

SCENARIO	BUDGET IMPACT
Last dollar coverage; new cases only; 50% penetration; @ Manitoba's cost	\$27,661,380
First dollar coverage; new cases only; 50% penetration; private insurance leaves market	\$58,484,720
All cases; annualized costs	\$93,814,510
Average of the above 3 scenarios	\$59,986,870

Universal funding of oral cancer drugs will save the healthcare system money overall; provide better, more meaningful data for clinical, outcomes and systems researchers; provide better quality of life for cancer patients, their families and compassionate caregivers; provide better purchaser negotiating positions for the procurement of novel prescription pharmaceuticals; and, above all, provide quicker access for patients to life-saving therapy with better outcomes. Wait times for oral cancer drugs can be eliminated.

Universal funding of oral cancer drugs is the right thing to do. Life is no less precious in Ontario and Atlantic Canada than elsewhere in this country. Cancer patients, their families and compassionate caregivers should not be systematically discriminated against simply because of their place of residence, their age, their gender or their income level. The financial, emotional and physical costs of dealing with cancer are significant enough without adding to them the costs of a preferred and often indicated treatment modality. There should be one funding mechanism for all cancer patients for all drugs.

A Business Case for the Universal Coverage of Oral Cancer Medicines

BACKGROUND

Cancer is projected to have the fastest growing prevalence of any non-communicable disease in Canada from 2003-2023. According to the Canadian Cancer Society¹, 41% of Canadian women and 46% of men will develop cancer at some point in their lives; over half of those afflicted will die from it accounting for nearly 30% of all deaths in Canada. In total, there were 840,000 Canadians alive at the beginning of 2009 with a cancer diagnosis in the previous 10 years; 30.4% of all cancers afflicted people under the age of 65 years. An estimated 188,000 Canadians were diagnosed with cancer in 2013; 75,500 died from cancer in 2013.² Canada ranks below average in overall cancer mortality when compared to Organization for Economic Co-operation and Development (OECD) countries³.

The news is not all bad though. There are more cancer survivors in the country than ever before; 62% of new cancer patients are expected to survive for 5 years or more.⁴ Many are living much longer and with a higher quality of life. About half of this improved survival has been attributed to new cancer drugs.⁵ Oral cancer drugs have been a major game-changer in this regard allowing cancer patients to live longer in their communities without the stressful ordeal of IV chemotherapy. But there have been unanticipated costs to this for the patients, their families and compassionate caregivers.

Patient Finances

In addition to the extreme physical and emotional tolls experienced by cancer patients and their families, there is an ever-growing financial burden as well - additional financial challenges to patients, survivors, families, employers, insurance plans and the health care system as a whole. There are disruptions in income-earning power. There are increasingly costly co-payments (75% of private plans have co-pays of 20%) and supportive care costs that deplete savings. In Ontario, 1 in 6 cancer patients reported that out-of-pocket costs were significant or unmanageable.

¹ <http://www.cancer.ca/en/cancer-information/cancer-101/cancer-statistics-at-a-glance/?region=on>

² Public Health Agency of Canada, Statistics Canada, Canadian Cancer Society, *Canadian Cancer Statistics 2013*, Ottawa, 2013: 6.

³ Health Canada, *Benchmarking Canada's Health System: International Comparisons*, November 21, 2013: 13; OECD countries include: Australia, France, Korea, Slovak Republic, Austria, Germany, Luxembourg, Slovenia, Belgium, Greece, Mexico, Spain, Canada, Hungary, Netherlands, Sweden, Chile, Iceland, New Zealand, Switzerland, Czech Republic, Ireland, Norway, Turkey, Denmark, Israel, Poland, United Kingdom, Estonia, Italy, Portugal, United States, Finland, Japan

⁴ *Canadian Cancer Statistics, 2011*

⁵ F. R. Lichtenberg, The Impact of New Drug Launches on Longevity: Evidence from Longitudinal, Disease-Level Data from 52 Countries, 1982-2001, *International Journal of Health Care Finance and Economics* Vol 5, No. 1, 47-73

The novel treatment for most cancers today – and increasingly over the past decade as first-line treatment – is chemotherapy delivered by oral prescription drugs – drugs that are taken at home by the patient in lieu of stressful, time-consuming, chemotherapy administered intravenously (IV) in a cancer centre, hospital, infusion clinic, or physician's office. Five years ago, less than 10% of cancer drugs existed in oral form.⁶ One estimate has 48% of cancer drugs orally administered in the community by 2016;⁷ 60% of all new cancer medications currently in development are oral drugs.

Cancer drugs are very expensive. Drugs generally, in Canada, are paid for by government drug plans, employer/private insurance plans, and/or out-of-pocket. (See Figure 1) Canada ranks second, after only the US, amongst the countries with the highest out-of-pocket drug expenditures; 20% of Canadians' total drug expenditures are out-of-pocket in the form of premiums, deductibles, co-payments, co-insurance, and cash.⁸ Astonishingly, 5% of Canadians spend more than 4% – the “catastrophic” threshold – of their after-tax household income on prescription drugs.⁹ For a family, living in one of the five provinces of Ontario, New Brunswick, Nova Scotia, Prince Edward Island or Newfoundland, earning the national average income, and requiring \$20,000 of oral cancer drug product per year they can expect to pay anywhere from \$2,510 to the full \$20,000.¹⁰ This information is not new. This situation has been around for years and well-documented 15 years ago by Health Canada.¹¹

In many instances lost income had a larger impact than out-of-pocket costs.¹² Families with a child diagnosed with cancer incur, on average, more than \$28,000 in costs¹³ in the first three months following a child's diagnosis – 40% of an average Canadian family's income in 2011, well above the 4% of income that defines catastrophic drug coverage. In most cases those without private insurance or substantial savings are those in the lowest employment income brackets who can least afford the costs and suffer the consequences of lower survival rates.¹⁴ Almost all private insurance is provided by employers and/or unions; only 2.4% of private health insurance in Canada is purchased by individuals, with premiums ranging from \$1,500 to \$3,000 per year.¹⁵

⁶ M. Ogaily, Give patients equal access to drugs, *Lansing State Journal*, November 15, 2013.

⁷ Accessed January 7, 2014 at <http://www.cqco.ca/common/pages/UserFile.aspx?fileId=291365>

⁸ *The Rx&D International Report on Access to Medicines, 2009/2010*: 17; also, Morgan S, et al.: *Toward High-Performing “Pharmacare” Systems: A Review of Experiences in Seven Countries*, Working paper presented at the 2008 Annual Conference of the Canadian Association for Health Services and Policy Research, Gatineau QC, May 2008.

⁹ Statistics Canada, *Table109-5012 - Household spending on prescription drugs as a percentage of after-tax income, Canada and provinces, annual (percent)*, CANSIM (database) (Accessed January 10, 2014)

¹⁰ Canadian Cancer Action Network, *Issues of Access to Cancer Drugs in Canada*, April 2008, 26

¹¹ Applied Management, *Canadian Access to Insurance for Prescription Medicines: Vol. 2 The Uninsured and the Underinsured*, Ottawa: Health Canada, 2000

¹² Longo, C., Fitch, M., Deber, R., Williams, A.P., “Financial and Family Burden Associated with Cancer Treatment in Ontario, Canada.” *Support Care Cancer* 14: 1077-1085.

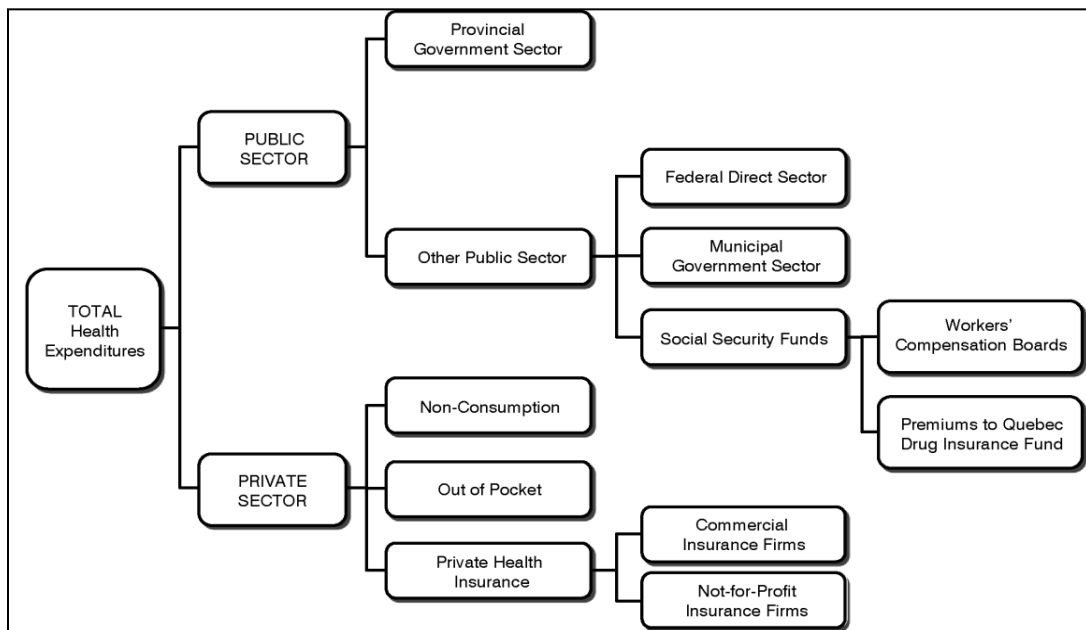
¹³ Tsimicalis, A., *Costs Incurred by Families of Children Newly Diagnosed with Cancer in Ontario*. University of Toronto, 2010

¹⁴ C. M. Booth, G. Li, J. Zhang-Salomons, W. J. Mackillop, The impact of socioeconomic status on stage of cancer at diagnosis and survival : A population-based study in Ontario, Canada, *Cancer*, Vol. 116, No. 17, 4160–4167

¹⁵ Canadian Life and Health Insurance Association; *Facts 2008*

Health insurance, whether public or private, should guarantee timely access to medical goods and services while providing protection against unexpected financial burdens from same. But what good are public and private health and drug insurance plans that cover affordable everyday medical care for everyone but do not reimburse or pay-up-front expensive, life-saving, life-improving treatments for the desperately ill? What good are such plans providing care only after such long delays? Patients affected by these waits are not much better off than being uninsured.

Figure 1: Funding of Healthcare



Source: Canadian Institute for Health Information, *Drug Expenditure in Canada 1985-2012*, Ottawa, 2013:2.

Patient Cost-related Non-adherence

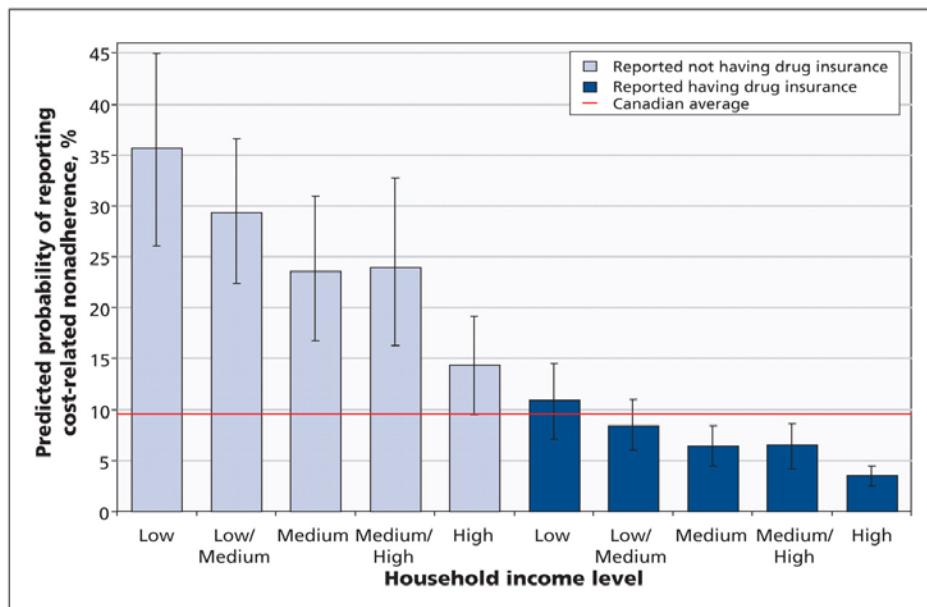
There is also the issue of patient cost-related non-adherence. It has been well-documented – going back over 20 years to the RAND Health Insurance Experiment¹⁶ - in both Canada and the US that as out-of-pocket costs rise, adherence/compliance in drug utilization declines thus adversely affecting patients' health and increasing overall system expenses in the long-term.¹⁷ Every year, for the past 10 years, anywhere

¹⁶ E. B. Keeler, Effects of Cost sharing on Use of Medical Services and Health, *Journal of Medical Practice Management*, Vol. 8, No. 1, 11-15

¹⁷ R. Freeman, K. M. Lybecker, D. W. Taylor, *The Effectiveness of Disease Management Programs in the Medicaid Population*, Hamilton ON: The Cameron Institute, 2011; R. Tamblyn, et.al. Adverse events associated with prescription drug cost-sharing among poor and elderly persons, *JAMA*, Vol. 285, No. 4, 421; X. Liac, et.al., The impact of cost sharing of prescription drug expenditures on health care utilization by the elderly: Own- and cross-price elasticities, *Health Policy*, Vol. 82, Issue 3, 340-347; A.H. Anis, et.al., When patients have to pay a share of drug costs: effects on frequency of physician visits, hospital admissions and filling of prescriptions, *Canadian Medical Association Journal*, Vol. 173, No. 11, 1335; W.J. Ungar, et.al., Effect of Cost-Sharing on Use of Asthma Medication in Children, *Arch Pediatr Adolesc Med*. Vol.162, No. 2,

between 5% (Saskatchewan, Québec) up to 15% (New Brunswick) of Canadians skipped a dose of medication or did not fill a prescription because of the cost.¹⁸ The average cost-related non-adherence rate for Ontario is 9% and for Atlantic Canada it is 12%.¹⁹ The largest non-adherence rates are amongst those age 35-44 years (11.4%); those in fair or poor health (20%); those earning under \$20,000 per year at (20.5%); and those with no private drug insurance (26%).²⁰ (See Figure 2)

Figure 2: Predicted Probability of Cost-related Non-adherence by Income and Drug Coverage



Source: M. R. Law, et al., *The effect of cost on adherence to prescription medications in Canada*, CMAJ, Vol. 184, No. 3, 297-302.

Patients, Families, Children, Youth, Compassionate Caregivers all Affected

104; J. A. Doshi, Impact of a Prescription Copayment Increase on Lipid-Lowering Medication Adherence in Veterans, *Circulation*, Vol. 119, No. 3, 390; D. P. Goldman, et al., Prescription Drug Cost Sharing: Associations With Medication and Medical Utilization and Spending and Health, *JAMA*, Vol. 298, 61; Schoen C et al.; Toward higher-performance health systems: adults' health care experiences in seven countries; *Health Affairs*, Vol. 26, No. 6, p. w717, 2007; J. Kennedy, S. Morgan, A Cross-National Study of Prescription Non-Adherence Due to Cost: Data from the Joint Canada-United States Survey of Health, *Clin Ther* Vol. 28, No. 8, 1217; M. Mathews, et al., How important are out-of-pocket costs to rural patients' cancer care decisions? *Can J Rural Med*, Vol. 14, No. 2, p. 54, 2009; J. D. Piette, et al., A conceptually based approach to understanding chronically ill patients' responses to medication cost pressures, *Social Science and Medicine*, Vol. 62, 846-857; B. A. Briesbacher, et al., Patients At Risk of Cost-related Medication Non-adherence: A Review of the Literature, *Journal of General Internal Medicine*, Vol. 22, 864-871.

¹⁸ Health Council of Canada, *Where you live matters: Canadian view on health care quality*, Toronto, January 2014: 6.

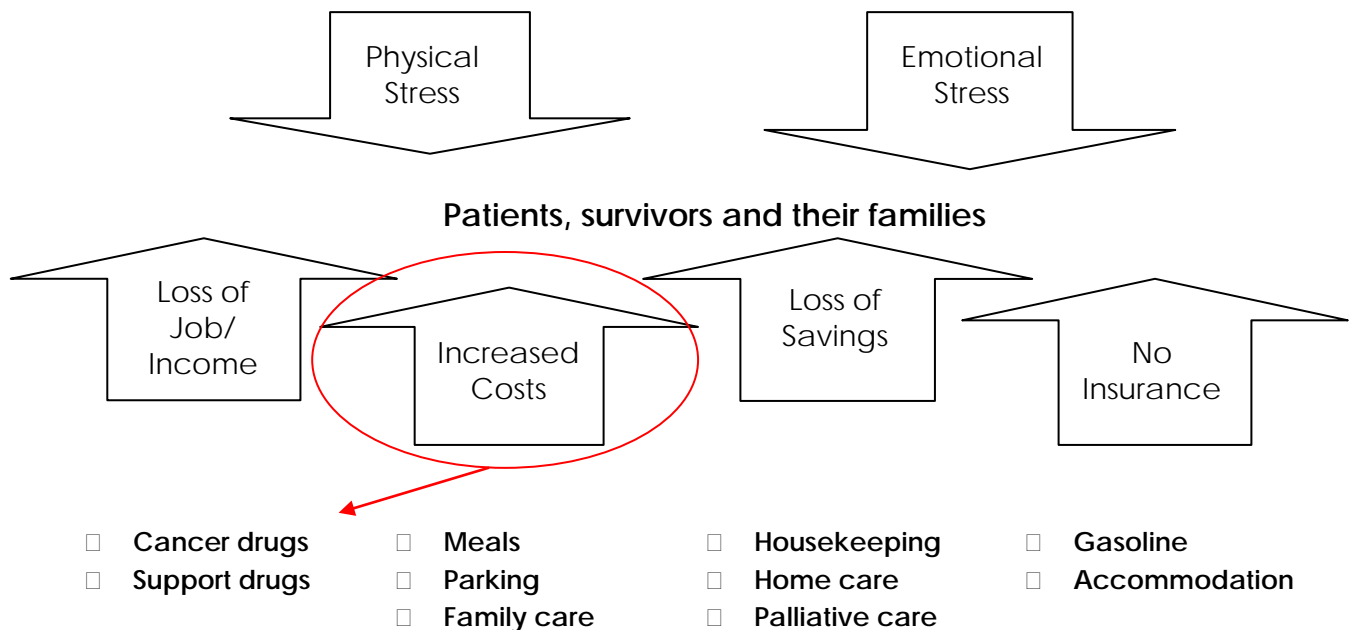
¹⁹ M. R. Law, et al., *The effect of cost on adherence to prescription medications in Canada*, CMAJ, Vol. 184, No. 3, 297-302

²⁰ *Ibid.*

A recent literature review conducted by the Manitoba Division of the Canadian Cancer Society²¹ revealed that there were certain groups of people with cancer who were at-risk of incurring a significant financial burden due to their cancer diagnosis and treatment:

- individuals/families with high out-of-pocket expenses relative to their income (often but not limited to rural residents who need to travel for their treatments and/or low income individuals/families);
- people not covered with private health, medical or disability insurance and/or who work seasonally, part-time or are self-employed;
- individuals/families who may not be eligible for private or supplemental insurance;
- people with high drug costs;
- those with a significant loss of salary (often but not limited to parents with children who have cancer who are unable to work in order to care for their child[ren] and/or compassionate caregivers who may need to take a leave from work as they care for a loved one in the final phase of cancer);
- adolescents and young adults with cancer who are at the early stages of financial independence with no or inadequate private insurance; and,
- persons with cancer receiving multiple modality treatments because of high drug costs, long and intense treatments, and the loss of salary (see Figure 3).

Figure 3: The growing economic burden of cancer



The Economic Facts

²¹ C. Nelson, *The Financial Hardship of Cancer In Canada: A Literature Review*. The Canadian Cancer Society Manitoba Division, 2010

The *Canada Health Act* provides for government reimbursement for IV cancer drugs because they are administered in a hospital or medical setting. In most provinces, patients must personally pay some or all of the cost of medications that are taken at home, even if they are considered essential as part of internationally accepted treatment protocols. Today half of the newer cancer treatment drugs are taken at home; the burden of drug costs is shifting to the individual while the individual's ability to deal with this burden is lessening.²² (See Figures 4a & 4b)

Fifty years ago, Tommy Douglas preached that no one should lose their farm to cover catastrophic health care costs. Yet Sun Life has identified 130,000 households who have mortgaged their homes to cover unaffordable, catastrophic healthcare costs; 40% of Canadians (53 % of those 45-54 years of age) are struggling with healthcare costs²³. Oral cancer drugs are part of these costs in Ontario and the Atlantic provinces.

In 2013, 14% of Canadians spent more than \$1,000 out-of-pocket for health care, and 24% had no confidence in their ability to afford care if they became seriously ill.²⁴ In the *2013 Bank Debt Report*, Manulife reported that the average ratio of Canadian household debt to disposable income was 161.8%.²⁵ Many Canadians are not confident they will be debt-free at retirement. According to the *2013 Sun Life Canadian Health Index*, 38% of Canadians have no group health insurance coverage; 73% do not have personal health insurance; 81% specifically have no money saved for health care expenses; and 20% have no insurance and no money saved.²⁶

A diagnosis of cancer is most often unexpected and planning for out-of-pocket costs takes place in very few if any families.²⁷

A 2010 national study of income loss due to cancer totalling \$3 billion calculated that 91 percent of households with a cancer diagnosis suffered a loss of income or rise in expenses as a direct result of that diagnosis.²⁸ Cancer patient labour participation was reduced 36% and their income was reduced 26.5 % on average. Not only the patient is affected; family and compassionate caregivers typically lost about 25% of their income

²² Canadian Cancer Society, *Cancer Drug Access for Canadians*, 2009; many of these drugs directly treat the cancer, while others are support drugs taken at home to deal with the side effects of treatment, such as nausea, pain and increased susceptibility to infection.

²³ *Sun Life Canadian Health Index*, September 30, 2013.

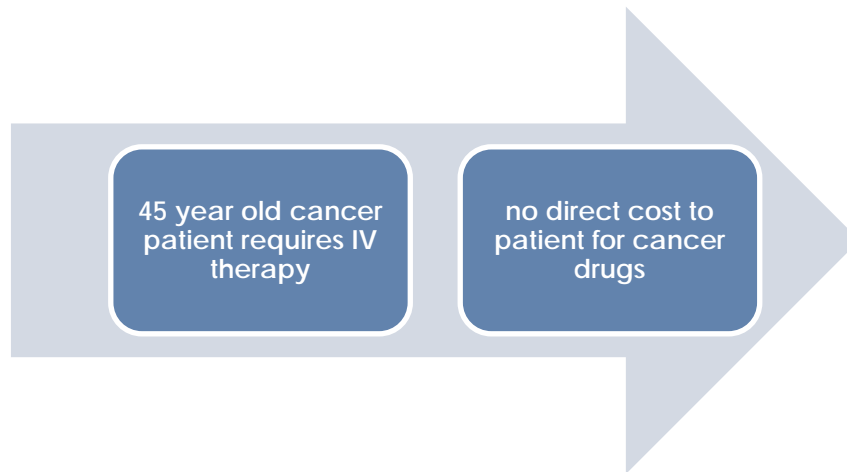
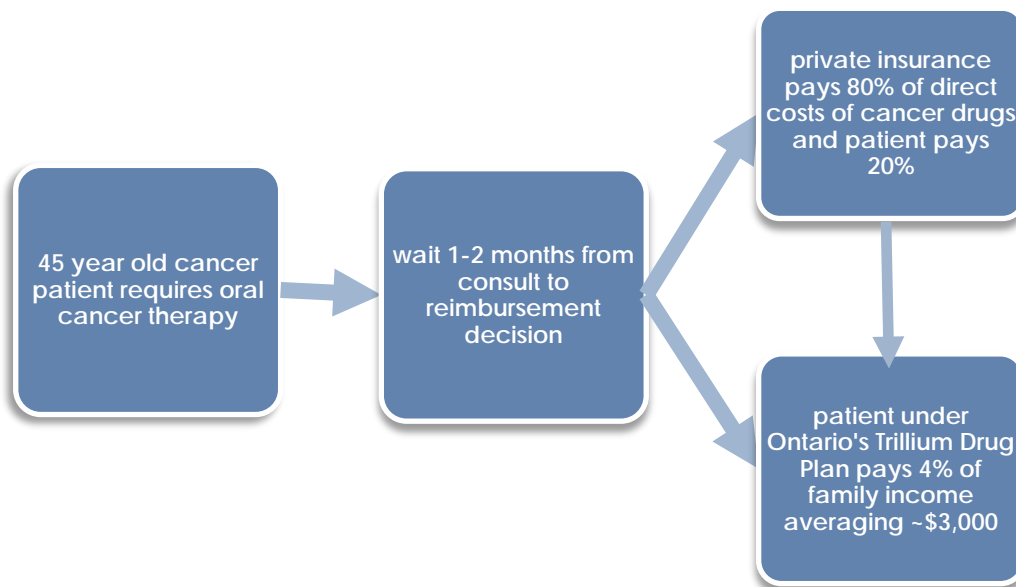
²⁴ Health Council of Canada, *Where you live matters: Canadian view on health care quality*, Toronto, January 2014: 6.

²⁵ *The Manulife Bank of Canada Debt Survey, 2013* – Accessed January 13, 2014 at http://www.manulifebank.ca/wps/portal/bankca/Bank.caHome/Bankingwithus/debt%20research/bnk_wit_hus_debt_newsmay2013/

²⁶ *2013 Sun Life Canadian Health Index* accessed January 6, 2014 at http://cdn.sunlife.com/static/canada/sunlifeca/About%20us/Canadian%20Health%20Index/CHI_2013_FinanciallyPrepared_en.png

²⁷ M. Mathews, A. Park, Identifying Patients in Financial Need: Cancer Care Providers' Perceptions of Barriers. *Clinical Journal of Oncology Nursing*, 13(5), 501-505.

²⁸ Hopkins, R.B., Goeree, R. and Longo, C.J. (2010). "Estimating the National Wage Loss from Cancer in Canada." *Current Oncology* 17(2): 40-49

Figure 4a: IV Cancer Treatment Costs**Figure 4b: Oral Cancer Drug Treatment Costs**

*Adapted

from: <https://www.cancercare.on.ca/cms/One.aspx?portalId=1377&pageId=8888#stwtcurmon><https://www.cancercare.on.ca/cms/One.aspx?portalId=1377&pageId=8888#stwtcurmon> (Accessed on January 9, 2014)

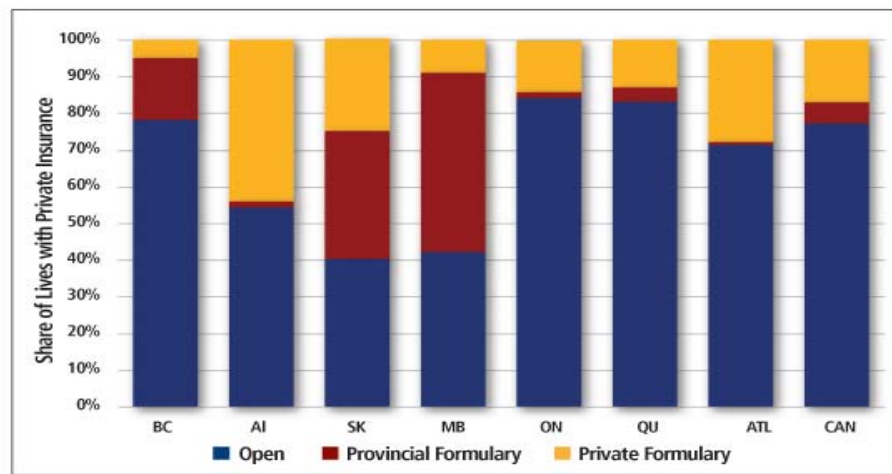
too. Present value of lifetime earnings lost due to cancer mortality ranged from 1% to nearly 40%.²⁹ Total productivity lost to cancer 2004-2033 has been estimated by Health Canada to be \$540 billion with government revenue losses totalling \$249 billion.³⁰

Drug Plans not Dealing with Catastrophic Costs

Canada's western provinces, Quebec and the northern territories cover the reimbursement of oral cancer drugs for all in need. Ontario and the Atlantic provinces do not.³¹ Four of these five provinces have the worst public funding and access to cancer drugs amongst all Canadian provinces.³²

In Ontario, this creates a situation in which there is institutionalized discrimination against those who are not over the age of 65 (amongst whom 30% of all cancers appear) and do not have private insurance coverage, and, those with private insurance coverage but whose plans do not cover the full cost of these drugs over a lifetime, or do not cover drugs at all.³³ (See Figure 5)

Figure 5: Formulary-managed Private Drug Coverage



Source: PRISM 2008

²⁹ C. J. Bradley, et al., Productivity cost of cancer mortality in the United States: 2000-2020, *J Natl Cancer Inst*, Vol. 100, No. 17, 63-70

³⁰ Health Canada, *Strategic Framework for the Canadian Strategy for Cancer Control*, April 2005: 8,9

³¹ In Ontario, the Trillium Drug Plan has a `deductible` equal to 4% of total net family income which in itself can be a debilitating burden on families in need of cancer treatment.

³² Accessed January 7, 2014 at <http://www.cancerdrugaccess.ca>

³³ According to ESI, Prism and Teva Neuroscience, in 2008, only 70% of private drug insurance coverage was "open-ended" in the Atlantic Provinces; 80% in Ontario; and 75% nationally – "close-ended" private plans operate like provincial plans restricting access by a managed formulary whereas "open-ended" plans pay for any drug once it is approved by Health Canada and the manufacturer submits an application to the insurer; many are now following their American counterparts and invoking moratoria averaging 6 months before a new molecular entity is reimbursed; 1 in 6 have annual or lifetime spending caps many of which are lower than cancer drug costs – 70% are \$10,000 - see Canadian Cancer Society, *Cancer Drug Access for Canadians*, 2009 ; drug copayments are often 20%; out-of-pocket expenses can range from \$15 to over \$500 per claim – see M. L. Raborn, E. M. Pelletier, D. B. Smith, C. M. Reyes, Patient Out-of-Pocket Payments for Oral Oncolytics: Results From a 2009 US Claims Data Analysis, *Journal of Oncology Practice*, Vol. 9, No. 6, November 2013

In 2008, only 70% of private drug insurance coverage was “open-ended” in the Atlantic Provinces; 80% in Ontario; and 75% nationally. “Close-ended” private plans operate like provincial plans restricting access by a managed formulary whereas “open-ended” plans pay for any drug once it is approved by Health Canada and the manufacturer submits an application to the insurer.

Many insurers are now following their American counterparts and invoking moratoria averaging 6 months before a new molecular entity is reimbursed. Amongst current private drug plans 1 in 6 have annual or lifetime spending caps – 70% of these limits are \$10,000.³⁴ For many privately insured patients this coverage cap falls far short of the actual cost of oral cancer medications. (See Figure 6) Drug copayments are often 20%; out-of-pocket expenses can range from \$15 to over \$500 per claim.³⁵

Expanded private insurance is not the answer. The most vulnerable and negatively affected with the financial shocks of care are also the least likely to be able to afford private insurance for catastrophic health care coverage.³⁶

Figure 6: Cost of Cancer Drugs Taken at Home (year of approval: 2000-2009)

Cancer Drug	Cancer Site	Drug Cost per Year
Aromasin	Breast	\$1,825
Eligard	Prostate	\$3,800
Faslodex	Breast	\$1,825
Gleevec	Leukemia, Gastrointestinal	\$37,350 to \$74,490
Nexavar	Kidney, Liver	\$63,875
Revlimid	Myeloma	\$131,765
Sprycel	Leukemia	\$50,000 to \$55,000
Sutent	Kidney, Gastrointestinal	\$60,200
Tarceva	Lung	\$19,465
Tasigna	Leukemia	\$66,600
Tykerb	Breast	\$35,000
Velcade	Myeloma	\$30,000 to \$57,000

Source: CCS, *Cancer Drug Access for Canadians, 2009: 4*

The Canadian Cancer Society and the Canadian Cancer Action Network have proclaimed that “all provinces should embrace the policy of the western provinces by ensuring that all cancer treatment and support drugs are available at no cost to cancer patients in all parts of Canada – regardless of whether the drugs are IV, oral or

³⁴ Canadian Cancer Society, *Cancer Drug Access for Canadians, 2009*

³⁵ M. L. Raborn, E. M. Pelletier, D. B. Smith, C. M. Reyes, Patient Out-of-Pocket Payments for Oral Oncolytics: Results From a 2009 US Claims Data Analysis, *Journal of Oncology Practice*, Vol. 9, No. 6, November 2013

³⁶ C. J. Longo, Equitable Access to Healthcare Services and Income Replacement for Cancer: Is Critical Illness Insurance a Help or a Hindrance?, *Healthcare Policy*, Vol. 5, No. 54, e113-e119

self-injectable, and regardless of whether they are used within or outside of a hospital.”³⁷

Discrimination on the basis of age, income, geography, cancer type, and cancer treatment should not be tolerated in Canada. A life is a life. Cancer is cancer. Cancer treatment, and its financing, should be fair and equal for all.

CHEMOTHERAPY

The cost of novel drugs is always an issue for payors but, in fact, the incremental cost of new innovative medicines coming on-stream will be no greater than the general consumer rate of inflation in the near and foreseeable future; the impact of the aging population is minimal as the baby boom bulge has yet to reach catastrophic/chronic disease stage *en masse*; and the patent cliff with its parallel genericization of drugs more than offsets the incremental increase in brand-name product costs if savings are aggressively pursued and captured by insurers, private and public alike.³⁸

What really is at issue is the growing need for care in the community, the growing utilization of medicines in preference to other less cost-effective therapies, and the changing routes of administration.

The Old Way

Today there are many routes by which to administer drugs to fight cancer (chemotherapy). The most common form of chemotherapy administration is intravenously (IV) which requires the patient to attend a hospital, cancer centre or medical office for a period of time. IV chemotherapy involves physicians, surgeons³⁹, pharmacists, nurses, technicians, allied health professionals and all of the labour costs associated with them; the costs of ancillary supplies, clinic furnishings and technology; the overhead costs of the facility involved; all in addition to the costs of the drugs.

The New Way

About a decade ago a new route of administering chemotherapy emerged. - oral chemotherapy⁴⁰, which is any drug taken by mouth to treat cancer. Oral chemotherapy does away with lengthy hospital visits and the need to repeatedly inject the body with needles; it is taken as a liquid, tablet, or capsule that is swallowed.

³⁷ Canadian Cancer Society (Manitoba Division), Canadian Cancer Action Network, *Five year action plan to address the Financial Hardship of Cancer in Canada: A Call for Action*, November 2013.

³⁸ IMS Brogan, *Private Drug Plan Drug Cost Forecast*, November 2013; also, Canadian Institute for Health Information, National Prescription Drug Utilization Information System Database, Ottawa, 2012

³⁹ Often required to surgically install a port, or portacath

⁴⁰ PO, *per os*, peroral

Oral chemotherapy is just as efficacious and effective as IV chemotherapy. In fact many oral cancer drugs today are the bio-equivalent of their IV counterparts. *i.e.*, they are the same molecule. Increasingly, new cancer drug formulations are only in oral form.⁴¹ Oral chemotherapy taken by the patient at home is less stressful and time-consuming for the patient and less costly to the health system as visits to a hospital or clinic are reduced.⁴²

The pharmaceutical industry today is producing more novel oral cancer drugs than IV-administered drugs recognizing both their clinical and economic value as well as the positive impact they have on patients' and families' quality of life.

INEQUALITIES ACROSS THE COUNTRY

Canada no longer performs exceptionally when compared to other OECD countries when it comes to cancer care.⁴³ With respect to access to and reimbursement of cancer drugs specifically we rank in the 3rd quartile; and when it comes to first-in-class drugs, Canada ranks in the 4th quartile.⁴⁴ But that is not all. There are major inconsistencies amongst provinces when it comes to cancer care especially oral chemotherapy (See Figures 7, 8).

Canadians living in British Columbia, Alberta, Saskatchewan or Manitoba have their cancer drugs paid by the provincial government regardless of their age, income level or whether they are IV and orally administered.

Although the funding mechanisms are different, Canadians in Quebec also have both IV and oral cancer drugs reimbursed regardless of age or income level.

In the northern territories, oral, take-home cancer drugs are covered by the territorial governments but sometimes with deductibles less than \$500.

The Manitoba Solution

On April 19, 2012, Manitoba became the most recent province to universally fund oral cancer drugs through the new Manitoba Home Cancer Drug Program (HCD) which is a program for Manitobans diagnosed with cancer that funds eligible outpatient oral cancer and specific supportive drugs, as listed in the HCD Program Formulary, at no

⁴¹ Not all cancer drugs can be administered orally, though, because the stomach cannot absorb them.

⁴² The American Cancer Society - Accessed on January 7, 2014 at <http://www.cancer.org/treatment/treatmentsandsideeffects/treatmenttypes/chemotherapy/oral-chemotherapy>

⁴³ Health Canada, *Benchmarking Canada's Health System: International Comparisons*, November 21, 2013: 13

⁴⁴ Accessed January 7, 2014 at http://www.canadapharma.org/CMFiles/Our%20Industry/Industry%20Facts/20130613_IRAM_2012_en_web.pdf

Figure 7: Public and Private Payor Roles in Cancer Drug Coverage

Area	Public Payor Role	Private Payor Role
British Columbia Alberta, Saskatchewan	Coverage of cancer drugs for all residents	Coverage of cancer drugs not approved for public funding for plan members
Manitoba	Coverage of cancer drugs <u>and</u> support drugs that patients may need during treatment for all residents	Coverage of cancer drugs not approved for public funding for plan members
Ontario	Coverage of cancer drugs for only residents eligible for the public drug plans	Coverage of cancer drugs for plan members as per the limitations of each policy
Quebec	Coverage of cancer drugs for all residents without private coverage	Coverage of cancer drugs for plan members as per the limitations of each policy
Atlantic	Coverage of cancer drugs for only residents eligible for the public drug plans	Coverage of cancer drugs for plan members as per the limitations of each policy
Territories	Coverage of cancer drugs for all residents	Coverage of cancer drugs for plan members as per the limitations of each policy

Source, CCS, *Financial Hardship*, 2013:13

cost to the patient.⁴⁵ HCD was established with the express purpose of removing a recognized major financial burden. To access HCD patients must be;

- identified by Cancer Care Manitoba (patients managed by Cancer Care Manitoba, Community Cancer Program Network, or community oncologists affiliated with CCMB) as receiving or being scheduled to receive eligible outpatient oral cancer and specific supportive drugs, and
- registered with Manitoba Health's Pharmacare Program meeting the following criteria:
 - being eligible for Manitoba Health coverage, and
 - prescriptions for eligible outpatient oral cancer and specific supportive drugs not being covered by other provincial or federal programs.

Changes in New Brunswick

In December 2013, the Government of New Brunswick introduced the New Brunswick Drug Plan aimed at helping New Brunswickers deal with catastrophic drug costs and ensuring that prescription drug insurance is available to all residents of the province. New Brunswick recognizes that, "...when people have access to the prescription drugs they need to manage chronic disease or to prevent or treat illness, they are healthier overall,,, (t)hey take less time off work... (t)hey visit emergency rooms less often and are less likely to be hospitalized."⁴⁶ The New Brunswick Minister of Health stated that this plan will, "...contribute to lower health-care costs, which benefits everyone... allow(ing) us to spend that money in other ways that improve our economy and quality of life."⁴⁷

⁴⁵ Accessed November 19, 2013 at

http://www.cancercare.mb.ca/home/about_us/programs/manitoba_home_cancer_drug_program/

⁴⁶ Accessed on January 29, 2014 at

http://www2.gnb.ca/content/gnb/en/news/news_release.2013.12.1269.html

⁴⁷ *Ibid.*

Figure 8: Eligibility for Public Coverage of Oral Cancer Drugs Taken at Home

Area	Eligibility for Public Drug Plan	Specific High Drug Cost	Program Gaps in Eligibility
British Columbia	All	N/A	
Alberta	All	N/A	
Saskatchewan	All	N/A	
Manitoba	All	N/A	
Ontario	Seniors / Social assistance	All others	Working families without private coverage / High income families
Quebec	All	N/A	
New Brunswick	Changing to All	Changing to All	
Prince Edward Island	Seniors / Social assistance	Specific cancer drugs*	Working families without private coverage / High income families
Nova Scotia	All	All	Premiums ranging from 4% -25%
Newfoundland	Seniors / Social assistance / Low income families	All others	Working families without private coverage / High income families
Yukon	All	N/A	
Northwest Territories	All	N/A	
Nunavut	All	N/A	
Federal	Registered First Nations and Inuit / Military / RCMP / Inmates / Refugees	N/A	

* All PEI residents with net household incomes less than \$150,000 per year are eligible to receive some assistance with payments for a selected list of oral cancer drugs.

Source, CCS, *Financial Hardship*, 2013:14

** Total premiums and co-pays combined range from 6%-35% of income

Source: <http://novascotia.ca/dhw/pharmacare/family-calculator.asp>

The plan covers drugs listed on the New Brunswick Prescription Drug Program Formulary. There is no deductible and coverage will not be denied because of age, gender or pre-existing medical conditions.

The plan is to be implemented in two phases. Phase 1 begins on May 1, 2014, when New Brunswickers with a valid Medicare card can choose to enroll in the plan. The graduated premiums will be as follows for:

- Individuals earning a gross income of \$26,360 or less and families earning a gross income of \$49,389 or less: \$67 per month per adult (\$800 per year);
- Individuals earning a gross income between \$26,361 and \$50,000 and families earning a gross income of between \$49,390 and \$75,000: \$117 per month per adult (\$1,400 per year);
- Individuals earning a gross income between \$50,001 and \$75,000 and families earning a gross income of between \$75,001 and \$100,000: \$133 per month per adult (\$1,600 per year);

- Individuals earning a gross income of more than \$75,001 and families earning a gross income of more than \$100,001: \$167 per month per adult (\$2,000 per year).⁴⁸

From May 1, 2014, to March 31, 2015, New Brunswickers who have private drug plans but still incur high drug costs or need access to a drug covered under the new plan but not through their private plan may join the New Brunswick Drug Plan. Children 18 and younger will not pay premiums but a parent will have to be enrolled in the plan. All plan members will be required to pay a 30-per-cent co-pay at the pharmacy up to \$30 per prescription.⁴⁹

Phase 2 will begin on April 1, 2015. At that time all New Brunswickers will be required to have prescription drug insurance with those not insured by a private plan being mandated to join the New Brunswick Drug Plan. Also at this time, minimum coverage standards will come into effect; all private group drug plans will need to be at least as comprehensive as the New Brunswick Drug Plan and its accompanying formulary. This will mean that private group plans will not be allowed to have annual or lifetime caps on coverage; co-payments paid at the pharmacy may not exceed \$30 per prescription; co-payments and/or deductibles paid at the pharmacy for each plan member may not exceed \$2,000 per year.⁵⁰

It is estimated that the total cost of Phase I of the New Brunswick plan will be \$50 million, of which \$23 million will be paid by plan members and \$27 million will be paid by the provincial government. Once the plan is fully implemented, it is anticipated that the total shared cost will be between \$120 million and \$150 million.⁵¹

The Ontario and Atlantic Canada Problem

Unlike the Western Provinces, Ontario and the 4 Atlantic Provinces (even New Brunswick despite its recent drug reimbursement policy initiatives) have “limited universality” when it comes to drug coverage – oral cancer drugs are not reimbursed like IV cancer drugs which are totally covered simply because they are administered in-hospital, even if the former are first-line, life-saving treatments. These differences in policy exist even though the medical needs and the patients’ preferences across provinces are the same.⁵²

Oral cancer drugs, such as Sutent or Votrient, both first-line treatments for kidney cancer, cost \$6,000 per month, or \$72,000 per year.⁵³ Others vary from \$1,800 to \$132,000 per year; three-quarters cost \$20,000 or more annually.⁵⁴ This amount may exceed various limits placed upon private insurance coverage.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

⁵² D. Menon, T. Stafinski, G. Stuart, Access to Drugs for Cancer: Does Where You Live Matter? *Canadian Journal of Public Health*, Vol. 96, No. 6, 454-458.

⁵³ Kidney Cancer Canada, 2013

⁵⁴ Canadian Cancer Society, *Cancer Drug Access for Canadians*, September 2009, 3-4.

In Ontario the Ontario Drug Benefit Program⁵⁵ is a formulary-managed drug reimbursement scheme that covers Ontarians over 65 years of age, on social assistance, residing in long-term care or special care homes, receiving professional home care services, or registered in the Trillium Drug Program. In 2012 it funded 102 oral cancer drugs.

If you are not a senior or on social assistance in Ontario, you can apply to a special drug program called the Trillium Drug Plan, except there is a co-payment of 4% of your total household income and the same formulary applies. If you have the average family income for 2010 of \$65,500 then you would be out-of-pocket \$2,620 of after tax income; if a couple together made \$160,000 per year then they would be out-of-pocket \$6,400 after taxes. That is providing the patient is willing and/or capable of completing the paperwork for Trillium⁵⁶ and is approved for reimbursement.

Special Authorization Delays Care

Another delay in patient access to life-saving cancer drugs is the common practice of special authorization. Whether a public or private drug insurance plan with a managed formulary the patient's payor may require that certain criteria be met before it will reimburse certain drugs.

In Ontario the Ontario Public Drug Programs has an Exceptional Access Program (EAP) to which physicians may apply for funding of drugs not on the provincial formulary. Circumstances in which this program may apply is the continuation of treatment previously provided through a clinical trial or third party payor, compassionate grounds of a life-, limb-, or organ-threatening nature, or renewal beyond a previously approved funding period. This is the only way for Ontarians to access oral cancer drugs via the government.

However, according to the Physician Alliance for Cancer Care and Treatment (PACCT) significant delays in waiting for oral cancer drugs to be approved by EAP initially (2/3 within a month; 1/3 longer)⁵⁷, and then renewed every 6 months, results in patients getting sicker, longer remission times, antibodies being developed in the patient thus creating an allergic reaction upon treatment, often a serious progression of the disease, and even premature death.⁵⁸

Often the initial application is refused with only the physician – never the patient – being allowed to appeal. The EAP receives over 100,000 requests per year and has been known to be in a backlog.⁵⁹ Cancer patients cannot and should not wait this long.

⁵⁵ Accessed December 18, 2013 at www.health.gov.on.ca

⁵⁶ Many patients do not have three years' worth of income tax returns to submit as they have not paid taxes; others do not possess the skills or the motivation - when none of this is necessary for IV chemotherapy - to apply

⁵⁷ http://www.health.gov.on.ca/en/public/programs/drugs/publications/opdp/docs/odb_report_11.pdf, 58

⁵⁸ Dr. Sunil Verma, PACCT, December 18, 2013

⁵⁹ D. Jensen, spokesman, Ontario Ministry of Health and Long term Care, as quoted in T. Boyle, Ontario's special drug program mired in backlog, *Toronto Star*, October 12, 2010

Private Insurance Special Authorization No Better

Most private insurance plans have a special authorization process too. However, many private plans' processes are made more onerous because insurers will sometimes authorize a maximum of three months treatment at a time, necessitating repetition of the process several times a year.⁶⁰ Oncologists must spend time completing time-consuming paperwork for their patients, wasting scarce resources. Service providers such as patient navigators⁶¹ and firms specializing in patient access have grown up because of these increasingly complex systems.

Pan-Canadian Disparities

These inequalities across Canada are contrary to the "five pillars" of the *Canada Health Act*, which promises Canadians access to medically necessary services "without financial or other barriers". Times have changed since the Act was written; no one at that time foresaw the monumental progress made in treating cancer at home rather than in a medical institution.

What disease-treatment field of medicine can be described more "medically necessary" than access to life-saving cancer drugs?

The geographic inequality in treatment across provinces for Canadians with cancer is exacerbated by variations in public and private reimbursement payment systems for cancer drugs. In provinces where oral cancer drugs for some patients are not included in a universal system of payment, access is determined not by medical need but by an individual's or their employer's ability to afford good quality open-ended private insurance.

For the five provinces in question, Ontario's average family income is at the national average and the Atlantic Provinces are all below the national average.⁶² (See Figures 9a-c)

Rural Disparities

There is also inequality within provinces. Rural (and northern in Ontario) families experience much higher out-of-pocket costs in terms of travel, accommodation, subsistence, family care, and lost wages than do urban families. In one instance a rural family paid out-of-pocket \$25,000 to access the same treatment over a six month period for which an urban family would have been out-of-pocket \$2,000.⁶³

⁶⁰ *Op.cit.*

⁶¹ Over 40 in Canada at the time of writing

⁶² Accessed January 9, 2014 at <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil108a-eng.htm>

⁶³ Canadian Cancer Society (Manitoba Division), Canadian Cancer Action Network, *Five year action plan to address the Financial Hardship of Cancer in Canada: A Call for Action*, November 2013, 17-18.

Oral cancer drugs reduce expenses for patients living far from regional cancer centres as well as improving their quality of life. As one cancer patient, contacted during the preparation of this report, explained:

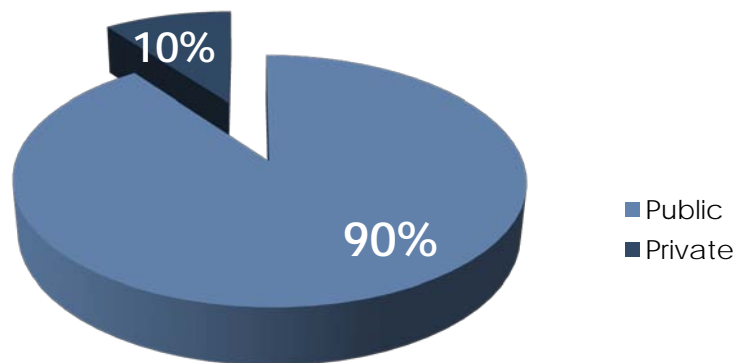
"For me, taking my cancer drugs at home means that I can enjoy everyday living to its fullest without needing to go into the hospital. The convenience factor of not needing to go into the city means a great deal to me and my quality of life."

(Dale Miron, Port Credit)

Youth Disparities

Another vulnerable segment of the population is youth, both rural and urban. Many young people (especially 18-25), working for a living, do so at or just above the minimum wage level (which in most cases yields an annual income below the poverty line) with no or very sparse benefits.⁶⁴ Yet by doing so they are also removed from their parents' private health insurance plans (unlike dependents that are in post-secondary education).

Figure 9a Percentage Public/Private Drug Reimbursement Split by Province, 2006 - MANITOBA



⁶⁴ In 2010, 40% of 18-25 year-olds in Ontario – Accessed January 29, 2014 at <http://www.wellesleyinstitute.com/wp-content/uploads/2013/10/Who-Makes-Minimum-Wage.pdf>, and, <http://www12.statcan.gc.ca/census-recensement/2006/>

Figure 9b Percentage Public/Private Drug Reimbursement
Split by Province, 2006 – ONTARIO

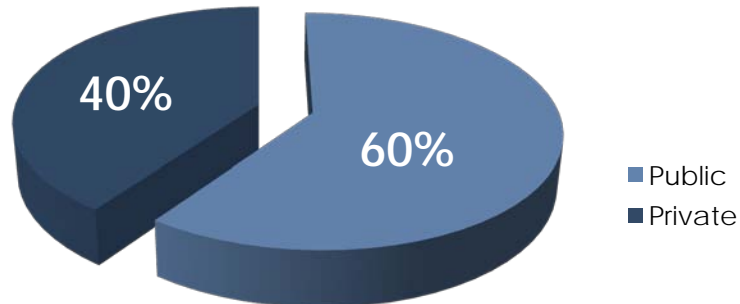
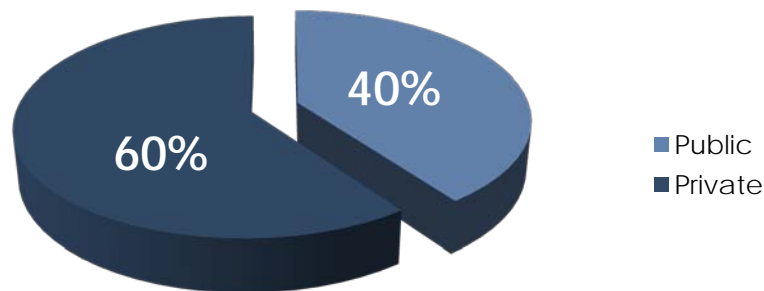


Figure 9c Percentage Public/Private Drug Reimbursement
Split by Province, 2006 – ATLANTIC CANADA



Differences by Tumour Site

Out-of-pocket expenses also vary by tumour site. One study showed that breast cancer patients had statistically significant higher out-of-pocket costs than compared with non-breast cancer patients.⁶⁵ The major drivers of this finding was the lack of government funding for care once the patient left the hospital or cancer centre, and

⁶⁵ C.J. Longo, B.G. Bereza, A comparative analysis of monthly out-of-pocket costs for patients with breast cancer as compared with other common cancers in Ontario, Canada, *Current Oncology*, Vol. 18, No. 1, e1-e8.

the lack of at-home treatment options because of inadequate or no private insurance coverage.

The “Doughnut Hole” in Ontario’s and Atlantic Canada’s Drug Insurance Coverage

In a scorecard study of “ease of access” to cancer drugs in 2008, it was not surprising to see Ontario, New Brunswick, Nova Scotia, PEI and Newfoundland as scoring the highest on the “agony factor”.⁶⁶

Contrary to the rationales for most social programming, education and income are not reliable predictors of need, in this case of inequality, but age and insurance are; patients under age 65 and without private insurance are the hardest hit⁶⁷. In terms that are often used in the US⁶⁸, Ontario and the Atlantic Provinces have a “doughnut hole” of health insurance coverage – a segment of the population left without full coverage.

There is some movement to close this doughnut hole though. There is a trend for provincial drug plans to move away from entitlement-based systems (which automatically cover groups such as seniors) and toward income-based plans. All provinces except Ontario and Prince Edward Island now have some eligibility criteria and/or co-insurance scales based on income.

Provinces such as Alberta are reducing subsidies on their universal drug plans and are moving towards market-value premiums.

Regardless, these inequalities across Canada amount to institutionalized discrimination based upon age, geography, income level, type of cancer, and the modality of treatment. (See Figure 10)

PROMISES TO KEEP

There are three standards against which the drug policies of Ontario and the Atlantic Provinces can be tested: the intentions of Tommy Douglas, Leslie Frost and the other not-so-well-remembered fathers of Canadian medicare; the “five pillars” of the *Canada Health Act*; and the Canadian virtues of fairness and equality as ensconced in the so-called Romanow Report and this quote from it: “the direction of our health care

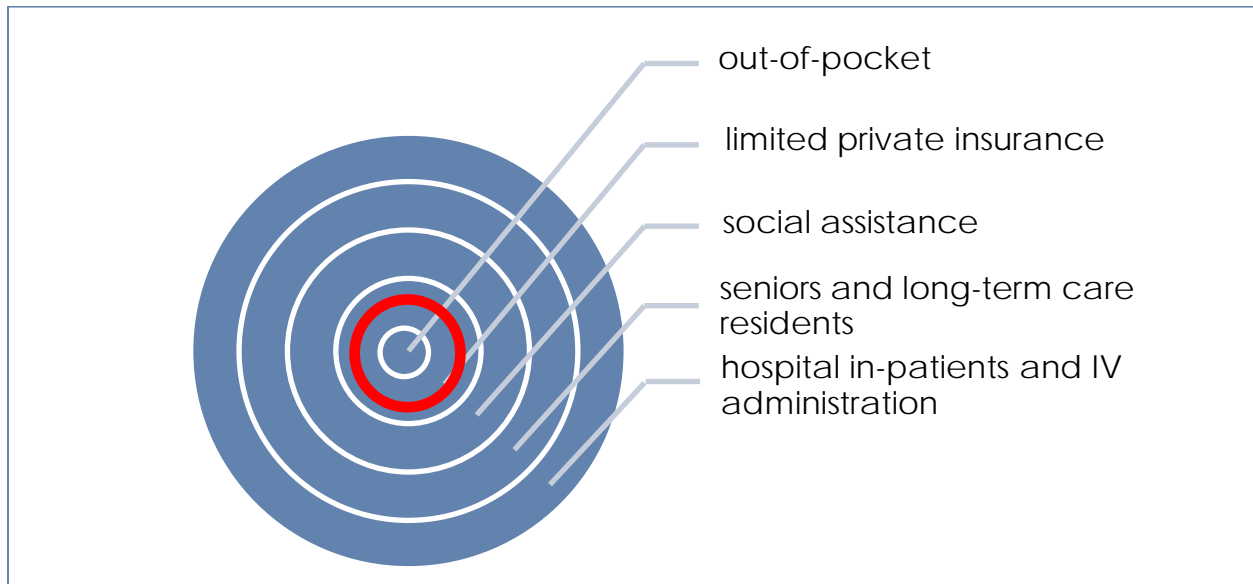
⁶⁶ Canadian Cancer Action Network, *Issues of Access to Cancer Drugs in Canada*, April 2008, 31

⁶⁷ C.J. Longo, R. Deber, M. Fitch, A.P. Williams, D. D’Souza, An examination of cancer patients’ monthly ‘out-of-pocket’ costs in Ontario, Canada, *European Journal of Cancer Care*, Vol. 16, No. 6, 500-507.

⁶⁸ In the US, Medicare Part D is drug insurance for seniors. In 2010, basic Medicare Part D coverage worked like this – the patient pays: (i) out-of-pocket for monthly Part D premiums all year; (ii) 100% of drug costs until the \$310 deductible amount is reached; (iii) after reaching the deductible, 25% of the cost of drugs, while the Part D plan pays the rest, until the total spent on drugs reaches \$2,800; (iv) once this limit is reached, the full cost of drugs until the total spent reaches the yearly out-of-pocket spending limit of \$4,550 (this is the “donut [sic] hole”); (v) after this yearly spending limit, a small amount of the cost, usually 5%. See <http://blog.medicare.gov/2010/08/09/what-is-the-donut%2%A0hole/> (Accessed January 28, 2014).

system must be shaped around health needs of individual patients, their families and communities".⁶⁹

Figure 10: The "Doughnut Hole" of Cancer Drug Coverage



Letting Down Tommy Douglas

Amongst many principles and quotations available from the Tommy Douglas archives surrounding the development of Canadian medicare are the following:

- health services be available to all Canadians on equal terms and conditions;
- indignities of the means test no longer be imposed;
- costs of health services no longer be borne primarily by the sick; and
- health services funding programs be administered by public agencies.⁷⁰

Although drugs and dental care per se were excluded from the medicare model finally adopted by all Canadian jurisdictions, they were originally intended to be included later on – which they never were. Despite that historical artifice, the importance of drugs in medical care today could never have been envisaged by medicare policy pioneers 60 years ago. Nevertheless, the drug policies of Ontario and the Atlantic Provinces, with respect to oral chemotherapy, fail on all the above accounts.

⁶⁹ Accessed January 17, 2014 at <http://www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/romanow-eng.php>

⁷⁰ M. G. Taylor, *Health Insurance and Canadian Public Policy, 2nd Edition*, Montreal: McGill-Queen's University Press, 1987: 492.

Unfulfillment of the *Canada Health Act*

The “five pillars” of the *Canada Health Act*: are: universality, accessibility, comprehensiveness, portability and public administration. A lot has changed since 1984 when the *Act* was promulgated; cancer drug discovery took off in the late 1980`s and has continued at a rapid pace ever since⁷¹.

As has been illustrated throughout this report, the drug policies of Ontario and the Atlantic Provinces, with respect to oral chemotherapy fail when tested against all five pillars.

In particular, the fourth pillar of the *Canada Health Act*, “portability”, is violated by this situation of unequal funding and access. For many cancer patients their drug coverage is not portable across the country. Patients for whom expensive oral cancer drugs are their means of survival can have their access to this lifeline cut simply because they move from one province to another. As oral cancer drug development surpasses and overtakes IV cancer drug development this problem of portability will only get worse.

Romanow’s Vision Dashed

The drug policies of Ontario and the Atlantic Provinces, with respect to oral chemotherapy, fail on all accounts with respect to the notion that our health care system “must be shaped around health needs of individual patients, their families and communities”; they do not treat all fairly and equally.

Canadian Strategy for Cancer Control

Ontario’s and Atlantic Canada’s lack of funding for oral cancer drugs also ignores the goals of the *Canadian Strategy for Cancer Control*⁷², specifically:

- increasing access to care;
- decreasing wait times;
- improving access to specific treatments at various stages;
- increasing the quality of life of Canadians and their families living with cancer; and,
- reducing emotional stress.

For those lucky enough to be reimbursed and/or funded for oral cancer drugs they make all the difference in the world as another patient told us:

"Taking an oral cancer drug has meant that I can spend more time at home caring for my husband who has dementia. Trips to the hospital require that I get a caregiver for him and that requires extra expense for us. We are both living on pensions."

(Pat Mein-Shields, Toronto)

⁷¹ Federal Drug Administration at www.fda.gov

⁷² Health Canada, *Strategic Framework for the Canadian Strategy for Cancer Control*, April 2005:12

Cancer Care Ontario's Plan 2011-2015

Specific to Ontario, the lack of universal funding of oral cancer drugs also violates the Guiding Principles of *Cancer Care Ontario's Plan 2011-2015* which are transparency, equity, evidence-based, performance-oriented, active engagement, and value for money.⁷³ The Cancer Quality Council of Ontario (CQCO)⁷⁴ in talking about modernizing cancer care in Ontario has called for maximizing resources and supporting the patient voice - concepts often at odds with each other - but in this instance able to be accomplished simultaneously through the universal funding of oral chemotherapy.

The CQCO has also cautiously championed⁷⁵ personalized medicine in the field of oncology – a medical model that customizes healthcare, clinical decisions, practices, and/or products tailored to the individual patient. Yet the CQCO to date has limited its focus to the narrower definition of personalized medicine that only focuses on the genetic stratification of disease-treatment pairing.

What could be more personal in cancer treatment than taking a pill at home versus travelling miles to a clinical setting, being subjected to all of the inconveniences associated with institutional healthcare, being injected with an IV line, and waiting hours for the treatment to end, then travelling home again?

Most importantly, the working poor, who Tommy Douglas championed, the *Canada Health Act* implicitly targeted, and Romanow talked about as an echo of Douglas, are the ones most vulnerable and disadvantaged by the status quo in Ontario and the Atlantic Provinces.

THE BUSINESS CASE FOR THE UNIVERSAL COVERAGE OF ORAL CANCER MEDICINES

There is a direct correlation between the rise in the prevalence of non-communicable chronic disease, with cancer in the lead, and lost economic output.⁷⁶ The most cost-effective treatment of cancer is both a health imperative as well as an economic imperative.

There is clear evidence that insurance plans that have used data mining and predictive modeling to stratify patients have been particularly successful in tackling cancer and other chronic diseases in a cost-effective manner.⁷⁷ Singularity in approach or administration of care is expensive.

⁷³ Cancer Care Ontario, *Ontario Cancer Plan 2011-2015*, n.d., 7

⁷⁴ Cancer Quality Council of Ontario, *Modern Care for Modern Patients*, June 2010, 3

⁷⁵ Cancer Quality Council of Ontario, *Mapping a Way through the Double Helix*, May 2011

⁷⁶ R. DeVol, A. Bedroussian, *An Unhealthy America*, Santa Monica CA: Milken Institute, October 2007

⁷⁷ R. Freeman, K. M. Lybecker, D. W. Taylor, *The Effectiveness of Disease Management Programs in the Medicaid Population*, Hamilton ON: The Cameron Institute, 2011

Value for Money

According to Sir Mike Richards, in his seminal report to the Secretary of State for Health in the UK in July 2010, Canada fails to receive value for money spent on healthcare.⁷⁸ The two major drivers of rising chemotherapy costs are the high cost of drugs and staffing.⁷⁹

Drug costs have been tackled relentlessly in Canada. Retail prices of innovative products are controlled; generic prices have been reduced; purchasing economics explored. The most recent study concluded:

- the small impact of patented drugs on total health costs means even the most extreme rationing of new medicines will not return significant overall savings for the health system;
- the economics and evidence on patented drug prices do not suggest significant savings can be gained by further regulation or by leveraging the monopoly buying power of governments; and,
- cost containment efforts that reduce access to new medicines are socially and economically counter-productive.⁸⁰

We believe there is still room for gains in generic pricing and volume purchasing – which should be pursued - but Pareto optimality suggests that there is probably more to be gained now by switching attention to labour costs.⁸¹

From 2007-2012 total direct spending on patented drugs rose only 4.1% when compared to the rest of healthcare spending which increased 30.5%,⁸² approximately three-quarters of which was fees-for-service, wages, salaries and benefits. In current dollars that translates into an actual 1.8% reduction in patented drug spending while the rest of healthcare costs increased 23.2%. When just total Provincial/Territorial government spending on patented prescribed drugs was isolated from the aggregate data, the decline in current dollar spending was 8.2%.

Any change in therapy administration that can reduce staff expenses should be considered seriously – not in the interest of reducing the labour component but making it more productive, i.e. tackling the throughput issues of waiting times that pervasively plague the Canadian system like no other in the industrialized world (see Figure 11).

Centres of excellence – such as regional cancer centres – often are defined by their technology. Radiation bunkers and chemotherapy suites have proliferated – as they should – and have been driven by technology and by the fact that institutional care is covered by government funding. Unlike industry where technology generally replaces labour, healthcare technology adds to labour costs. Given that the demand for health

⁷⁸ M. Richards, *Extent and Causes of International Variations in Drug Usage*, July 2010, 71.

⁷⁹ Oncology Roundtable, The Advisory Board, *State of the Union: Assessing service line trends and opportunities*, Washington D.C., 2003: 20

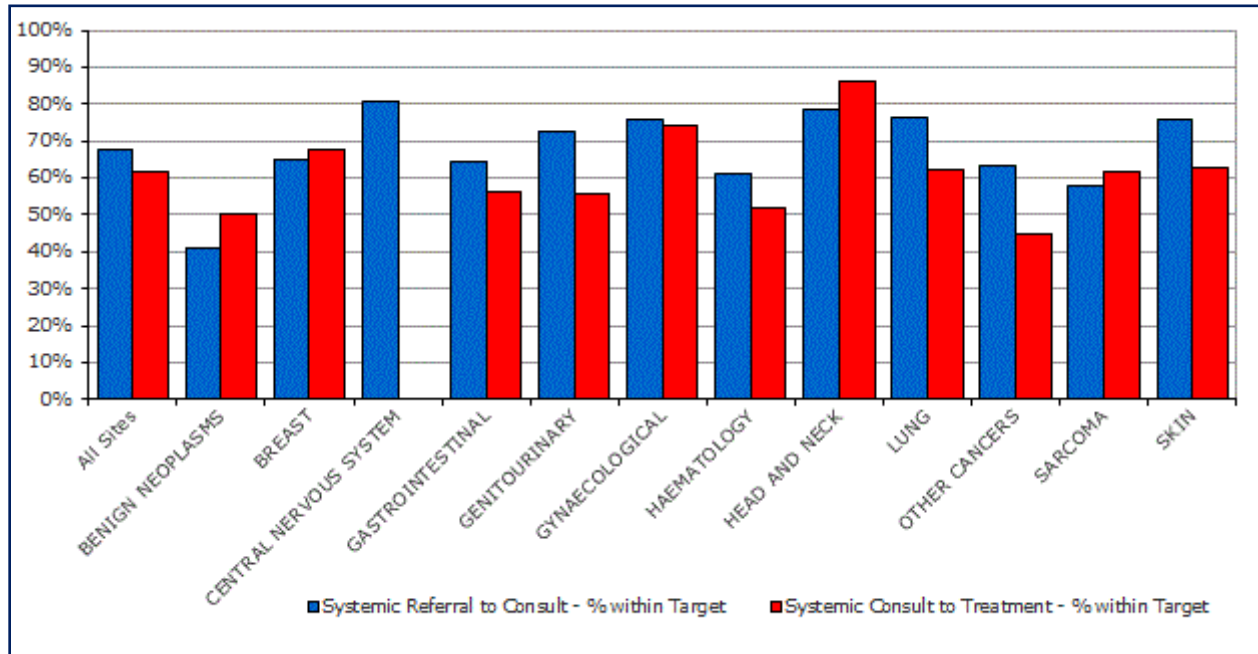
⁸⁰ Canadian Health Policy Institute, *The cost of patented drugs in Canada*, November 24, 2013

⁸¹ M. Richards

⁸² Canadian Health Policy Institute, *The cost of patented drugs in Canada*, 14

professionals at any given time in most provinces over the past few decades has exceeded supply, the unit cost of labour has skyrocketed compared to a relatively flat rate for recent consumer inflation and industrial wages increases.⁸³

Figure 11: IV Chemotherapy Wait Times by Disease Site, Cancer Care Ontario, September 2013



Referral to Consult: The time between a referral to a specialist to the time that specialist consults with the patient. The target for this interval is 14 days. Consult to Treatment: The time between a specialist consult with the patient and the time the patient receives his or her first chemotherapy treatment. The target for this interval is 28 days.

Source: <https://www.cancercare.on.ca/cms/One.aspx?portalId=1377&pageId=8888#stwtcurmon> <https://www.cancercare.on.ca/cms/One.aspx?portalId=1377&pageId=8888#stwtcurmon> (Accessed on January 9, 2014)

Cost-effectiveness

Oral treatments are more cost-effective than IV treatments. Numerous studies have evidenced this fact. Savings by this means could be used as a wait time strategy with more patients being treated for cancer.

Blue Cross has determined that one in six cancer patients with high out-of-pocket costs abandon their medication thus negatively affecting their health as well as long-term health system costs.⁸⁴

⁸³ The annual consumer price index was 1.2% for 2013; wages increased by an average of 1.4% in 2013; see <http://www.statcan.gc.ca/start-debut-eng.html> (Accessed January 28, 2014)

⁸⁴ C.I. Starner, P.P. Gleeson, B. W. Gunderson, Oral Oncology Prescription Abandonment Association with High Out-of-Pocket Member Expense, *Journal of Managed Care Pharmacy*, Vol. 16, No. 2, 161-162.

Fully reimbursed by government drug plans, oral chemotherapy does not have the adherence/compliance issues when take-home medicines are only partially covered by private insurance or not reimbursed at all.

One population-based study compared the cost of oral capecitabine to IV taxane-based chemotherapy as a first line treatment of metastatic breast cancer. The annual cost of oral chemotherapy in this case was \$35,842 compared to \$43,353 for the IV therapy⁸⁵. This produced a savings of 17%. Moving six metastatic breast cancer patients onto oral chemotherapy would save enough money to add a seventh patient to the IV treatment group that otherwise would be waiting for treatment and possibly facing worse outcomes because of the wait. Administrative expenses including physician and nursing time accounted for 10% of the IV costs in this study.

Assuming a regional cancer centre that experiences 25,000 systemic treatment visits per year could reduce its unit costs at least 17% by using oral cancer drugs where possible, then 4,250 visits could be offered to additional new patients waiting for IV chemotherapy at the centre.

Another study of oral capecitabine as an adjuvant therapy for Dukes' C colon cancer demonstrated a 57% savings over IV chemotherapy with fewer side effects, fewer adverse events, fewer relapses, over 75% fewer hospital visits required, less support medications, and 60% less travel time for patients.⁸⁶ The clinical results were just as good if not better than the IV administered 5-FU/LV. It was, in fact, determined to be the dominant therapy in terms of quality-of-life months gained and costs saved.

Yet another study showed that IV chemotherapy administration procedures and other clinic visit-related services for lung cancer patients accounted for 42-48% of the cost of IV chemotherapy treatment, much of which could be avoided due to the increased availability and utilization of oral chemotherapy drugs.⁸⁷

Besides the lower or same cost of the oral drug compared to the IV drug, there are also savings in the number of clinic visits required, in one case involving colon cancer patients going from 30 visits for IV patients down to only 8 for patients taking oral medication – 73% fewer visits.⁸⁸ In addition to the monetary savings the oral form of chemotherapy, as efficacious as the IV form, was also shown to be more clinically

⁸⁵ F. T. Camacho, J. Wu, W. Wei, G. Kimmick, R. T. Anderson, R. Balkrishnan, Cost impact of oral capecitabine compared to intravenous taxane-based chemotherapy in first-line metastatic breast cancer, *Journal of Medical Economics*, Vol. 12, No. 3, 238-245

⁸⁶ J. Cassidy, et al., Pharmacoeconomic analysis of adjuvant oral capecitabine vs. intravenous 5-FU/LV in Dukes' C colon cancer: the X-ACT trial, *British Journal of Cancer*, Vol. 24, No. 8, 1122-1129

⁸⁷ A.T. Skarin, M.S. Duh, J. R. Weiner, P. Lefebvre, M. P. Neary, Costs associated with intravenous (IV) chemotherapy administration in patients with lung cancer, *Journal of Clinical Oncology*, Vol. 25, No. 18S, 18902

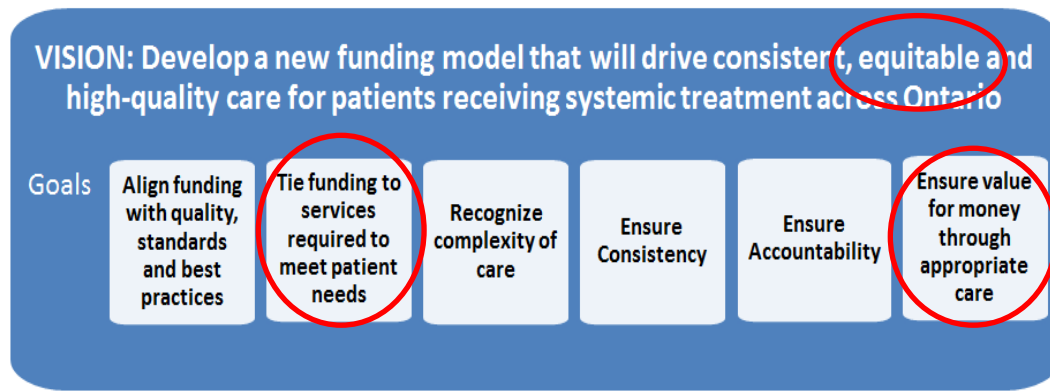
⁸⁸ J.J. McKendrick, J. Cassidy, et al. Capecitabine (x) is resource saving compared with i.v. bolus 5-FU/LV in adjuvant chemotherapy for Dukes' C colon cancer patients: Medical resource utilization (MRU) data from large phase III trial (X-ACT), *Journal of Clinical Oncology*, Vol. 22, No. 14S, 3578; New Data Highlights Presented at ASCO (May 13-17, 2005)

effective with fewer complications⁸⁹, significantly higher relapse-free survival rates, less serious and more manageable side effects, less time-consuming because of the elimination of travel to and from clinic, and more convenient and less stressful for the patients on the oral medication.

Ontario as an Example

In February 2013, Ontario's Ministry of Health and Long Term Care produced its *Quality-Based Procedures Clinical Handbook for Systemic Treatment* and in it charged those responsible for implementing chemotherapy reform to, "develop a new funding model that will drive consistent, equitable and high-quality care for patients being treated with systemic treatment across Ontario".⁹⁰ Universal funding of oral cancer drugs helps accomplish two of the six goals set under that vision (see Figure 12).

Figure 12: Vision and Goals for the Reform of Systemic Cancer Care in Ontario



Systemic therapy reform is to be based on "best practice", which is defined by the Ministry as, "...a combination of best available evidence and clinical consensus".⁹¹ Universal funding of oral cancer drugs also fulfils nine out of the ten quality dimensions for the quality improvement of Ontario's cancer system, as well as helps accomplish two of its five funding model goals (see Figure 13).

As seen in Figure 11 above there is a serious wait time for IV chemotherapy in Ontario. Last year only 60% of all chemotherapy patients' wait from consult to treatment was within target – and the target is 28 days! Much of this wait is due to limited access to MRI imaging and other diagnostic and laboratory testing needs.

⁸⁹ Complications and adverse events arising from chemotherapy have been estimated to cost between \$1,000 and \$30,000 per case in 2001; with healthcare inflation averaging 5% per annum, those costs in 2014 would be \$2,000-\$50,000 per case – see, Oncology Roundtable, *Instilling a cost discipline*, Washington, D.C.: The Advisory Board, 2001: 9.

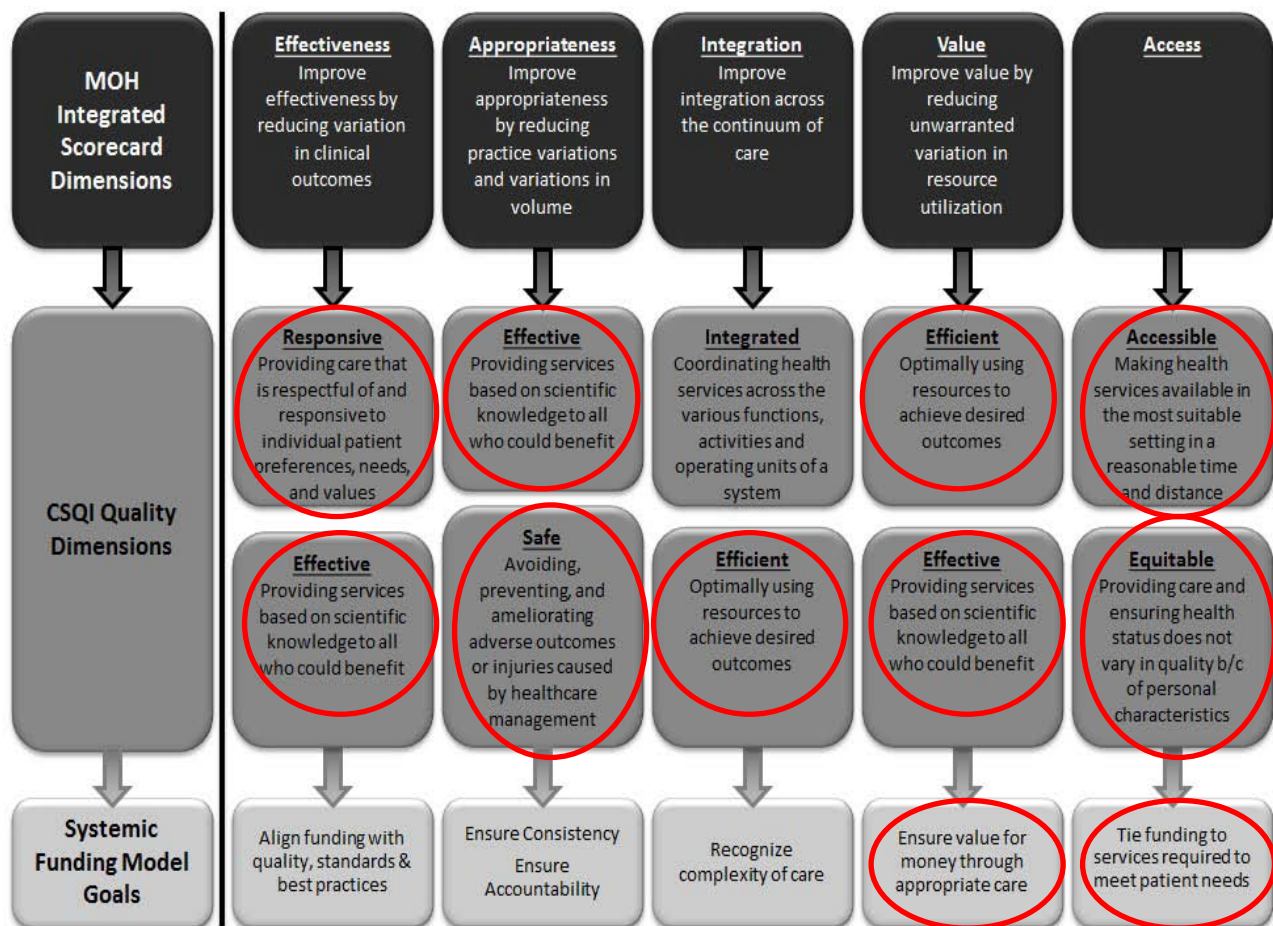
⁹⁰ *Quality-Based Procedures Clinical Handbook for Systemic Treatment* - Accessed January 10, 2014 at <https://hsimi.on.ca/hdbportal>

⁹¹ *Ibid.*,16

If oral cancer drugs were funded like IV drugs the only wait time for oral cancer drug treatment would be the time for a patient to get a prescription filled.

Evidence-informed, patient-based funding is 30 years old, pioneered in the US and adopted throughout the industrialized world yet Ontario is just embracing the concept for hospitals and community care access centres (homecare) and the Atlantic Provinces have yet to do so. Chemotherapy is scheduled for reform in 2013-2014. Cancer Care Ontario has the lead in this and has been tasked to, "(d)rive consistent, equitable and high-quality safe care for patients receiving systemic treatment... and...consider the complexity/cost/quality elements for the out-patient and eventually community and inpatient setting." The Ministry concedes that, "(i)t's about consistent high quality first; (f)unds are where the patient get their care".⁹²

Figure 13: Ontario's Cancer Quality Improvement Scorecard, Indicators and Goals



⁹² *Quality-Based Procedures From Intention to Reality*, Health System Funding Reform – Sector Engagement Clinical Engagement Outreach Forums, February / March 2013 - Accessed January 10, 2014 at <https://hsimi.on.ca/hdbportal>

In the words of the former CEO of Cancer Care Ontario, Dr. Terrence Sullivan, universal funding of oral cancer drugs would be a “pragmatic, measured investment” the kind of which were to be the building blocks of Ontario’s “ambitious but not extravagant” Cancer Plan 2011-2015.⁹³

New Cancer Cases and Last-Dollar Coverage

Where to start?⁹⁴ How many new cases of cancer were there in Ontario in 2013?

According to the Chronic Disease Surveillance and Monitoring Division, Public Health Agency of Canada and the Canadian Cancer Registry database at Statistics Canada, there were 187,600 new cases of cancer in Canada in 2013 with 71,900 (38%) of them being in Ontario.⁹⁵ Given the age distribution of new cancer cases currently in Ontario, 21,858 of those new cancer cases in Ontario would be under the age of 65 years⁹⁶. Given the proportion of Ontarians under the age of 65 years on social assistance, of one kind or another, 1,587 of those cases would be patients on social assistance⁹⁷ leaving 20,271 not. Assuming, for Ontarians under age 65 the average private insurance coverage, 38% of these cases (7,703) would not be privately insured and 15% of those insured would have limited private insurance coverage (1,885), for a total of 9,588 financially vulnerable cancer patients in Ontario in 2013 (see Figure 14).

A sensitivity analysis was conducted on this pool of 9,588 financially vulnerable cancer patients assuming different levels of oral drug penetration and different drug costs. Population penetration rates of 10%, 25% and 50% were used. Faslodex, an oral drug for breast cancer, was used for the low end cost; Gleevec was used for the high end. In-between costs were the average cost in Manitoba (calculated using their estimated case numbers in Figure 14 and budget of \$10 million⁹⁸ which includes reimbursement for all oral cancer drugs AND support drugs), and the average cost of the cancer drugs identified in Figure 6. Below are the results.

The first scenario is the **last dollar** scenario, where the Province steps in after private insurance has paid its share. Most probably, half of the financially vulnerable new cancer case population (4,794) would be administered oral chemotherapy at approximately the same unit cost as that in Manitoba (\$5,770) producing a budget

⁹³ Cancer Care Ontario, *Ontario Cancer Plan 2011-2015*, n.d., 2

⁹⁴ Due to space and time limitations the analysis was conducted only for Ontario but can be easily adapted for use in any one of the four Atlantic Provinces.

⁹⁵ Cancer statistics accessed on January 6, 2014 at <http://www.cancer.ca/en/cancer-information/cancer-101/cancer-statistics-at-a-glance/?region=on> and, Public Health Agency of Canada, Statistics Canada, Canadian Cancer Society, *Canadian Cancer Statistics 2013*, Ottawa, 2013; Ontario social assistance statistics accessed on January 7, 2014 at http://www.mcass.gov.on.ca/en/mcass/programs/social/reports/ow_quarterly.aspx; populations statistics accessed on January 14 at <http://www.satacan.gc.ca/tables-tableaux/sum-som/101/CST01/demo02A-eng.htm>; calculations by the author

⁹⁶ 69.6% of the 10 year tumour-based prevalence for all cancers was in patients age 65+; 30.4% was among those under 65

⁹⁷ The number on social assistance (all forms) in Ontario in October 2013 was 883,000 out of a population of 13,775,000

⁹⁸ <http://www.winnipeg.sun.com/2012/04/19/cancer-drugs-get-100-coverage>

impact of **\$28 million** – 6/10ths of 1% of Ontario’s 2012 total drug expenditure, or about 10% of the existing oral cancer drug budget⁹⁹ - for a year’s worth of oral cancer drugs. (See Figure 15)

Figure 14: Logic Chart in Determining the Number of Financially Vulnerable New Cancer Patients in Ontario and Manitoba, 2013

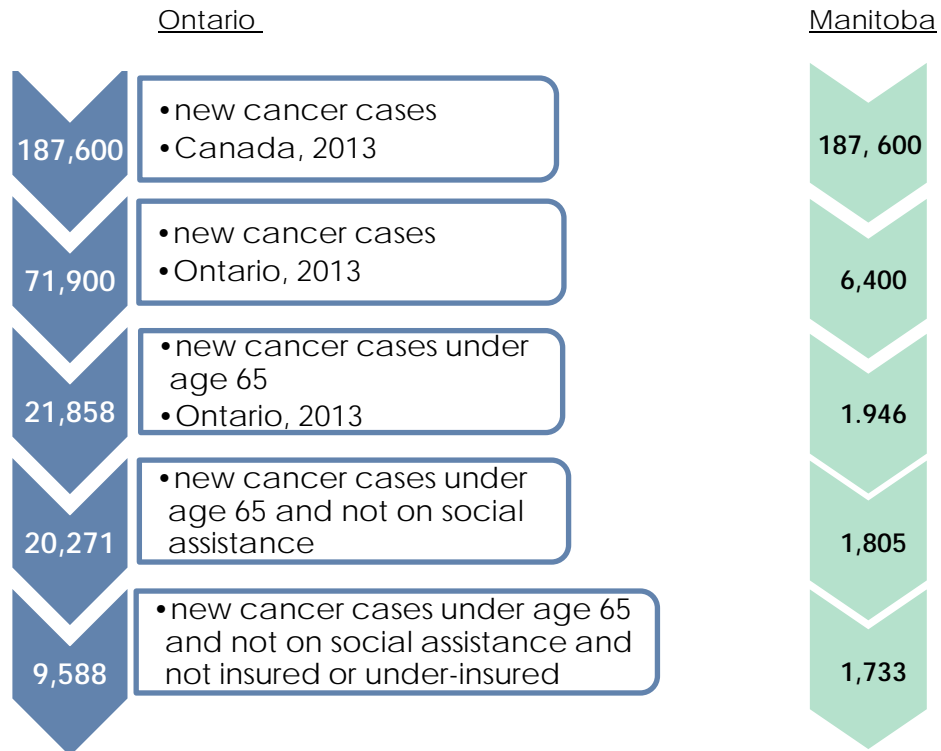


Figure 15: Sensitivity Analysis for Calculating the Budget Impact of Last-dollar, Universal Oral Cancer Drug Coverage in Ontario, 2013

PENETRATION n-9588		ANNUAL COST PER CASE			
percentage	number	\$2,000 (Faslodex)	\$5,770 (Manitoba)	\$45,000 (average Rx P)	\$75,000 (Gleevec)
10%	959	\$1,918,000	\$5,533,430	\$43,155,000	\$71,925,000
25%	2397	\$4,794,000	\$13,830,690	\$107,865,000	\$179,775,000
50%	4794	\$9,588,000	\$27,661,380	\$215,730,000	\$359,550,000

This last dollar scenario also yields a sizeable economic/societal return on investment (E/SROI). Using today’s low-end monetary value of \$200,000 for one patient/year of life

⁹⁹ Ontario spent \$265,387,587 on oral cancer therapy in 2012.

extension¹⁰⁰, the E/SROI on an annual per case expenditure of \$5,770 on oral cancer therapy is 3,466%. Recognizing that the patient/year of life extension was usually a fraction of a year in most studies referenced in this report, even at 6 months the E/SROI would be 1,733%.

New Cancer Cases and First-Dollar Coverage

The above universal oral cancer drug coverage is predicated upon the assumption that the private insurance market in Ontario would retain “first-dollar coverage” of all Health Canada approved oral cancer drugs from the time of the Notice of Compliance being issued up until Provincial coverage commencing on a case-by-case basis with the new Provincial plan, therefore, assuming “last-dollar coverage”. Through this collaboration, 100% oral cancer drug coverage with no deductibles or caps would become available to all Ontarians with no concern regarding patient adherence.

But what if the private insurance industry abdicates covering oral cancer drugs altogether OR the government explicitly chooses to assume **first-dollar** coverage of same? The number of patients involved would be 20,271. The budget impact would be **\$58.5 million**, just slightly over 1% of Ontario’s 2012 total drug budget. (See Figure 16)

The 2012 Ontario Budget¹⁰¹ mentioned significant cost savings of \$249 million expected in the public drug plan through drug plan payment and procurement reforms and generic entry of high volume drugs. Subsequent cost-savings could offset the investment of \$28-58 million for the reimbursement of oral cancer and support drugs.

Figure 16: Sensitivity Analysis for Calculating the Budget Impact of First-dollar, Universal Oral Cancer Drug Coverage in Ontario, 2013

PENETRATION n=20,271		ANNUAL COST PER CASE			
percentage	number	\$2,000 (Faslodex)	\$5,770 (Manitoba)	\$45,000 (average Rx P)	\$75,000 (Gleevec)
10%	2,027	\$4,540,000	\$11,695,790	\$91,215,000	\$152,250,000
25%	5,068	\$10,136,000	\$29,173,120	\$228,060,000	\$380,100,000
50%	10,136	\$20,272,000	\$58,484,720	\$456,120,000	\$760,200,000

¹⁰⁰ N.S.B. Rawson, *Potential Impact of Delayed Access to Five Oncology Drugs in Canada*, November 2013; this figure is conservative considering that the National Institutes of Health in the US uses a figure of \$270,000 as in *Cancer Trends Progress Report - 2009/2010 Update*, National Cancer Institute, NIH, DHHS, Bethesda MD, April 2010 - Accessed March 4, 2011 at <http://progressreport.cancer.gov> (2005 base figure \$225,000 inflated by US CPI 2005-2012 for comparative purposes and assuming USD-CND parity)

¹⁰¹ http://www.fin.gov.on.ca/en/budget/ontariobudgets/2012/papers_all.pdf, p. 62;

All Cancer Cases and Annualized Budget Impact

Not knowing what the conversion rate in Ontario will be to oral chemotherapy for those currently undergoing IV chemotherapy, looking at the Manitoba experience, where the private insurance sector was a very small player to begin with, compared to Ontario, the oral cancer drug budget grew 70.7% from 2012/2013 to 2013/2014, i.e. the start-up year for universal funding for oral cancer medications in that province. Applying the same multiplier to the 2012 Ontario oral cancer drug budget of \$265,387,587 would yield a dollar increase in spending of \$187,629,020.

However, the so-called doughnut hole in Manitoba was 27% whereas in Ontario it was less than one-half of that – 13%. As a result, the multiplier may only be $[(70.7 \times 13) / 27]$ or 34% which would yield a dollar increase of **\$93,814,510** on an on-going, annualized, first-dollar basis, covering all cancer cases, and based upon the Manitoba experience of last year. (See Figure 17)

Figure 17: Range of Budget Impacts Depending upon Take-up of Oral Chemotherapy

SCENARIO	BUDGET IMPACT
Last dollar coverage; new cases only; 50% penetration; @ Manitoba's cost	\$27,661,380
First dollar coverage; new cases only; 50% penetration; private insurance leaves market	\$58,484,720
All cases; annualized costs	\$93,814,510
Average of the above 3 scenarios	\$59,986,870

The Government of Ontario (or those of the Atlantic Provinces) may wish to consider any one of a number of innovative listing agreements with manufacturers to help offset these incremental costs to the drug budget. Commonly known as risk-sharing agreements (RSA's), these agreements between payor and vendor set a price or revenue level in relation to the future performance of the drug.

Although RSA's have become quite common in the US and the EU they have been used less frequently in Canada. In the most successful examples, market surveillance, pharmacovigilance, or performance measurement have been techniques employed to validate funding decisions on an outcomes basis. In many cases, payors have seen great returns on their investments.¹⁰² In Ontario, RSA's are known as Product Listing Agreements (PLA's) and have been generally successful to date.¹⁰³

Another approach for the Provinces could follow the example set by the private insurance industry in pooling their risk, although pan-Canadian solutions are often elusive at best.

¹⁰² M. Toumi, *et.al*, Influence of health technology assessments on utilization of bevacizumab in Europe, *ISPOR 15th Annual International Meeting*, Atlanta GA, May 2010 - Accessed on January 16, 2014 at http://www.ispor.org/RESEARCH_STUDY_DIGEST/details.asp

¹⁰³ C. Ciapanna, *et.al.*, Cost-effectiveness observations and oncology drug reimbursement recommendations in Canada by the Joint Oncology Drug Review, *Value in Health*, Vol,13, No. 3, A51

CONCLUSION

There are more cancer survivors in the country than ever before; 62% of new cancer patients are expected to survive for 5 years or more.¹⁰⁴ Many are living much longer and with a higher quality of life. About half of this improved survival has been attributed to new cancer drugs.¹⁰⁵ Oral cancer drugs have been a major game-changer in this regard allowing cancer patients to live longer in their communities without the stressful ordeal of IV chemotherapy.

Take-at-home, oral cancer medicines are safe, efficacious, clinically effective, and less expensive to administer than IV chemotherapy. For the patient there is less stress, less inconvenience, lower risk of hospital-acquired infection and complications.

It is quite within the realm of probability that a \$28-\$58 million investment today by the Government of Ontario in safe, cost-effective oral cancer and support medicines for home use will lead to, at least, if not more than, a 17% reduction in chemotherapy unit costs, yielding timely quality, patient-focused, and value-for-money care all around. The same holds true, proportionally, for the Atlantic Provinces.

Overall, the budgetary increase in oral cancer drugs for Ontario could range from **\$28 million (first dollar) to \$58 million (last dollar) to \$94 million (annualized) - averaging \$60 million**. As a percentage of the total drug budget for the Province this ranges from 0.6% to 1.2% to 2.1% - averaging 1.3%.

Universal funding of oral cancer drugs will save the healthcare system money overall, provide better, more meaningful data for clinical, outcomes and systems researchers, better quality of life for cancer patients, their families and compassionate caregivers, better purchaser negotiating positions for the procurement of novel prescription pharmaceuticals, and, above all, quicker access to life-saving therapy with better outcomes. Wait times for oral cancer drugs can be eliminated.

Universal funding of oral cancer drugs is the right thing to do. Life is no less precious in Ontario and Atlantic Canada than elsewhere in this country. Cancer patients, their families and compassionate caregivers should not be systematically discriminated against simply because of their place of residence, their age, their gender or their income level. The financial, emotional and physical costs of dealing with cancer are significant enough without adding to them the costs of a preferred and often indicated treatment modality. There should be one funding mechanism for all cancer patients for all cancer drugs.

¹⁰⁴ *Canadian Cancer Statistics, 2011*

¹⁰⁵ F. R. Lichtenberg, The Impact of New Drug Launches on Longevity: Evidence from Longitudinal, Disease-Level Data from 52 Countries, 1982–2001, *International Journal of Health Care Finance and Economics* Vol 5, No. 1, 47-73

The Cameron Institute is an alternative, not-for-profit, public policy think tank specializing in the independent study of current health, social, and economic issues in Canada and internationally. The Institute researches policy concerns in the health world related to the need for balance between patient safety and access to new, innovative, affordable therapies. It is an objective of The Cameron Institute to provide decision makers with analyses that will help inform choices. The Institute is also dedicated to educating and better preparing patients, providers, and payers to make appropriate clinical choices. The Cameron Institute's values are:

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