THE CHANGING DRUG LANDSCAPE

10 Cost Drivers and Their Impact On Group Plan Sustainability

September 2012

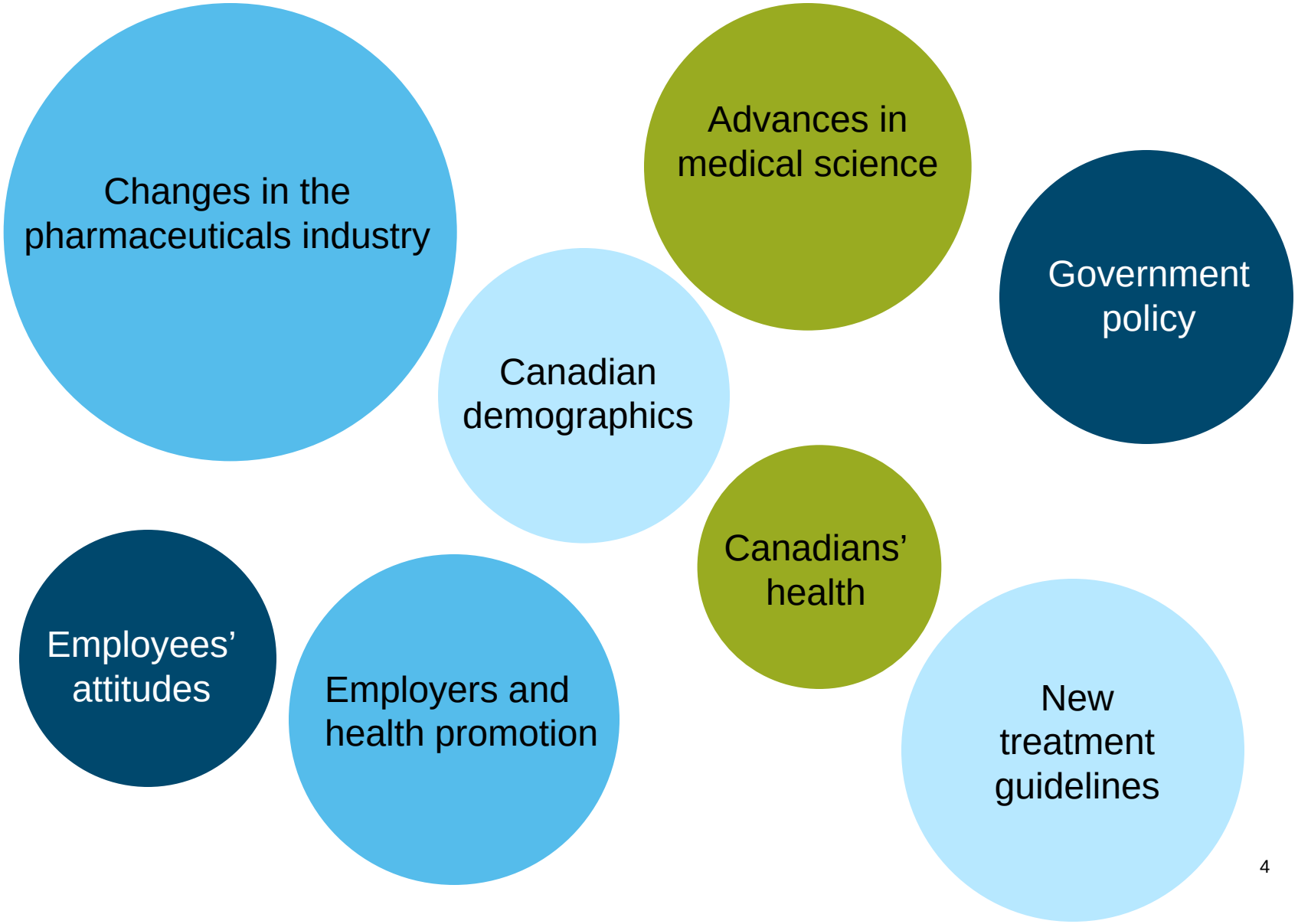
Today

- 10 cost drivers
- What does the data mean to customer plans?
- Solutions

Housekeeping

- Use the chat box to ask questions
- We encourage questions!
- Any questions in particular that you are hoping to have answered today?
  - Use the chat to tell us
- The webinar system will record your attendance
- To earn a CE credit, our records must show that you remained signed in until the end of the webinar

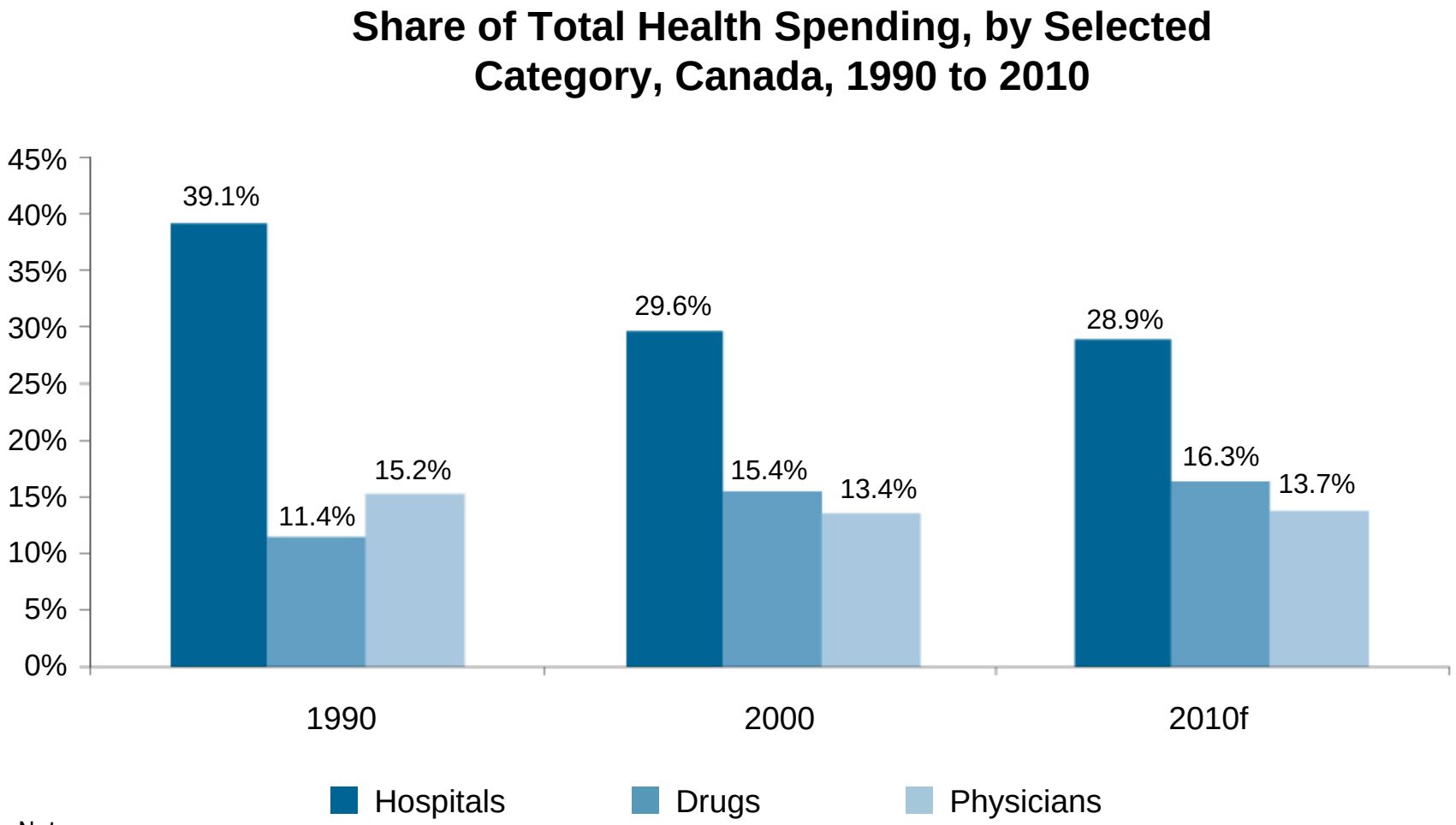
Cost drivers in the drug landscape



10 cost drivers

1. Increased prevalence of disease
2. New, very high cost drugs
3. Revised treatment guidelines
4. Earlier detection
5. Cost shifting
6. Unmanaged formularies
7. Low generic fill rate
8. Lack of employee awareness
9. Lack of widespread workplace wellness programming
10. Aging population

Drugs account for second-largest share of health care spend since 1997



Note
f: forecast.

Source: National Health Expenditure Database, Canadian Institute for Health Information.

Private sector spend

- Prescriptions nearly doubled between 1990-2009
- 272 million to 483 million

Source: Decisions,Decisions:Family Doctors as Gatekeepers to Prescription Drugs and Diagnostic Imaging in Canada
http://www.healthcouncilcanada.ca/tree/2.33-DecisionsHSU_Sept2010.pdf

Opportunity knocks

- These challenges present a huge opportunity
- Everyone has a role to play:
  - Employers
  - Employees
  - Governments
  - Pharmacists
  - Pharmaceutical industry
  - Advisors

INCREASED INCIDENCE OF CHRONIC DISEASE

Some good news

- Fewer teenagers reported smoking in 2009—11.0% of 12-to-19-year-olds said they were current smokers, compared to 14.9% in 2003
- In 2009, more than half of Canadians (53.2%) aged 12 years and older stated they were active or moderately active, an increase from 51.3% in 2008
- In 2009, 13.2% of Canadians reported that they had been diagnosed as having arthritis, a decrease from 13.8% in 2007
- In 2007, breast cancer among Canadian women was 98.4 cases per 100,000, a decrease from 101.7 cases per 100,000 in 2000
- In 2007, the incidence of lung cancer was 56.0 cases per 100,000 population, a decrease from the 58.8 cases per 100,000 in 2000

"Healthy Canadians 2012"
http://www.hc-sc.gc.ca/hcs-sss/alt_formats/pdf/pubs/system-regime/2010-fed-comp-indicat/index-eng.pdf

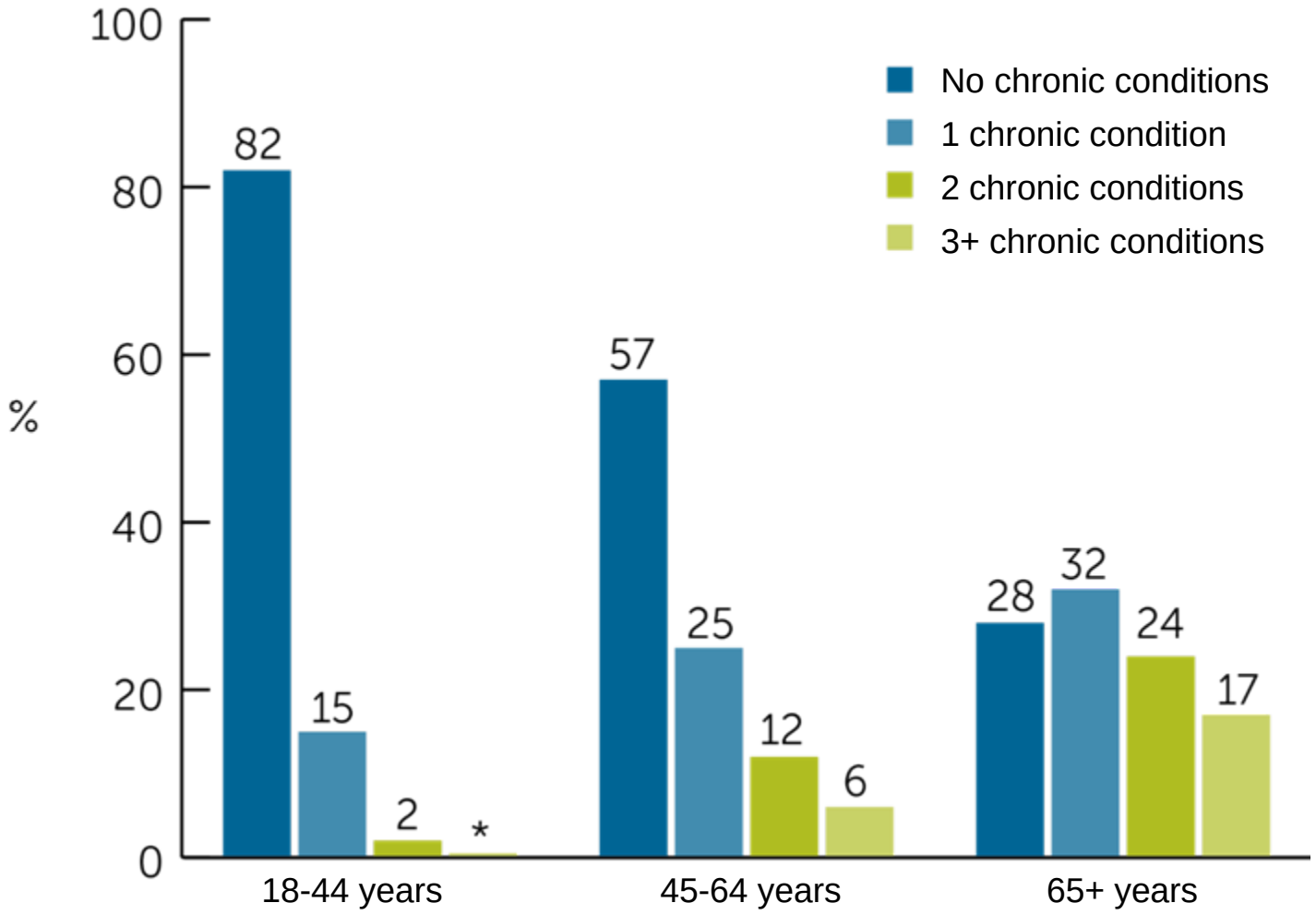
Increased incidence of chronic disease

- Two in five Canadian adults (39%) have at least one of seven common chronic health conditions:

1. Arthritis
2. Cancer
3. Chronic obstructive pulmonary disease (COPD)
4. Diabetes
5. Heart disease
6. High blood pressure
7. Mood disorders including depression

http://www.healthcouncilcanada.ca/rpt_det.php?id=139
Helping Patients Help Themselves: Are Canadians with Chronic Conditions Getting the Support They Need to Manage Their Health?

Increased incidence of chronic disease



% by age group with 0, 1, 2, or 3+ select chronic conditions

Source: http://www.healthcouncilcanada.ca/tree/2.17-AR1_HCC_Jan2010.pdf Health Council of Canada 2010

Source: Statistics Canada Daily, 2010 http://www.statcan.gc.ca/daily-quotidien/111026/dq111026b-eng.htm

NEW HIGH COST DRUGS

Biologics

- Business model is changing in big pharma
- Molecular medicine—biologics—is a growing market
- In the past, biologics have accounted for less than 10% of all previously approved drugs
- 20% of drugs approved in the past decade
- They account for nearly 30% of drugs in Phase III clinical trials

- Source: “Drivers of Prescriptions Drug Spending in Canada” CIHI 2012).

Most Expensive Drugs in Canada

Rank	Trade Name	Indication	Annual Treatment Cost
1	ELAPRASE	Mucopolysaccharidosis II, MPS II	$1,315,080
2	CEREZYME	Gaucher Disease	$737,273
3	MYOZYME	Pompe's Disease	$635,274
4	ALDURAZYME	MPS-1 Mucopolysaccharidosis I	$492,613
5	VPRIV	Gaucher Disease	$481,140
6	SOLIRIS	Paroxysmal nocturnal haemoglobinuria (PNH)	$381,077
7	REPLAGAL	Fabry Disease	$305,640
8	FABRAZYME	Fabry Disease	$301,752
9	NEUPOGEN	Neutropenia - Chemo Side Effect	$144,735
10	ILARIS	CAPS Syndrome	$133,000

Source: IMS Brogan 2012

Most Expensive Drugs in Canada

Rank	Trade Name	Indication	Annual Treatment Cost
11	REVLIMID	Myelodysplastic Syndrome/ Multiple Myeloma	$131,765
12	ZAVESCA	Gaucher Disease	$118,862
13	ZOLINZA	Cancer - Lymphoma	$110,230
14	PROLASTIN	Panacinar Emphysema	$96,096
15	AFINITOR	Cancer - GIST or Renal Cell	$67,890
16	NEXAVAR	Cancer - GIST or Renal Cell	$65,791
17	TASIGNA	Cancer - Leukemia	$65,791
18	SUTENT	Cancer - GIST or Renal Cell	$62,532
19	HERCEPTIN	Cancer - Breast	$56,974
20	RITUXAN	Cancer - Non-Hodgkin's Lymphoma	$56,432

Source: IMS Brogan 2012

Most Expensive Drugs in Canada

	Trade Name	Indication	Annual Cost	Incidence Rate
1	ELAPRASE	Mucopolysaccharidosis II, MPS II	$1,315,080	1 in 140,000- 330,000
2	CEREZYME	Gaucher Disease	$737,273	1 in 50,000-100,000
3	MYOZYME	Pompe's Disease	$635,274	1 in 40,000
4	ALDURAZYME	MPS-1 Mucopolysaccharidosis I	$492,613	1 in 50,000
5	VPRIV	Gaucher Disease	$481,140	1 in 50,000-100,000
6	SOLIRIS	Paroxysmal nocturnal haemoglobinuria (PNH)	$381,077	1.3 in 1,000,000
7	REPLAGAL	Fabry Disease	$305,640	1 in 117,000
8	FABRAZYME	Fabry Disease	$301,752	1 in 117,000
9	NEUPOGEN	Neutropenia - Chemo Side Effect	$144,735	Not Applicable
10	ILARIS	CAPS Syndrome	$133,000	1 in 1,000,000

Source: IMS Brogan 2012

Most expensive drugs in Canada

	Trade Name	Indication	Annual Cost	Incidence Rate
13	ZOLINZA	Cancer - Lymphoma	$110,230	Male: 26.8 per 100,000
14	PROLASTIN	Panacinar Emphysema	$96,096	1 in 6,000
15	AFINITOR	Cancer - GIST or Renal Cell	$67,890	Male: 19.2 per 100,000
16	NEXAVAR	Cancer - GIST or Renal Cell	$65,791	Male: 19.2 per 100,000
17	TASIGNA	Cancer - Leukemia	$65,791	Male: 15.8 per 100,000
18	SUTENT	Cancer - GIST or Renal Cell	$62,532	Male: 19.2 per 100,000
19	HERCEPTIN	Cancer - Breast	$56,974	Female: 122.9 per 100,000
20	RITUXAN	Cancer - Non-Hodgkin's Lymphoma	$56,432	Male: 26.8 per 100,000

Source: IMS Brogan 2012

Top 5 Drugs (total dollars paid in millions)

1995		2000		2010	
LOSEC 20mg	$1.5	LOSEC 20mg	$ 2.6	Remicade	$ 8.4
PROZAC 20mg	$1.3	CELEBREX 200mg	$1.3	NEXIUM 40mg	$ 6.2
IMITREX 100mg	$1.0	PAXIL 20mg	$1.3	CRESTOR 10mg	$ 5.5
BECLOFORTE Inhaler 250mcg/Dose	$0.7	LIPITOR 10mg	$1.2	Enbrel	$ 3.6
ISOPTIN SR 240mg	$0.6	LIPITOR 20mg	$0.9	Humira	$ 3.4

REVISED TREATMENT GUIDELINES

Revised treatment guidelines

- Cholesterol: an important warning sign of heart disease
- In 2000, target “healthy” level of LDL was less than 4 millimoles per liter
- In 2009 the target was less than 2
- As many as 10 million Canadians have a cholesterol level higher than the recommended target[1]
- Between 1998 and 2007, retail spending on cholesterol-lowering drugs grew from half a billion dollars to $1.9 billion – a 14% annual growth [2]
- A panel appointed by the U.S. National Heart, Lung, and Blood Institute has recommended that all children as early as age 9 get tested[3]

- 1. Heart and Stroke Foundation, Statistics: heartandstroke.com/site/c.ikIQLcMWJtE/b.3483991/k.34A8/Statistics.htm); and Statistics Canada report, “Heart health and cholesterol levels of Canadians, 2007-2009: http://www.statcan.gc.ca/pub/82-625-x/2010001/article/11136-eng.htm
- 2. IMS Health, Canadian CompuScript, December 2009 data month, “Top 20 Dispensed Drugs in Canada, 2009” http://www.imshealth.com/deployedfiles/ims/Global/North%20America/Canada/Home%20Page%20Content/Press%20Release%20Tables/Canada_2009_Charts.pdf
- 3.globalnews.ca/health/should+all+kids+get+cholesterol+tests+doctors+cant+agree+on+widespread+screening+guidelines/6442683827/story.html

EARLIER DETECTION

Earlier detection

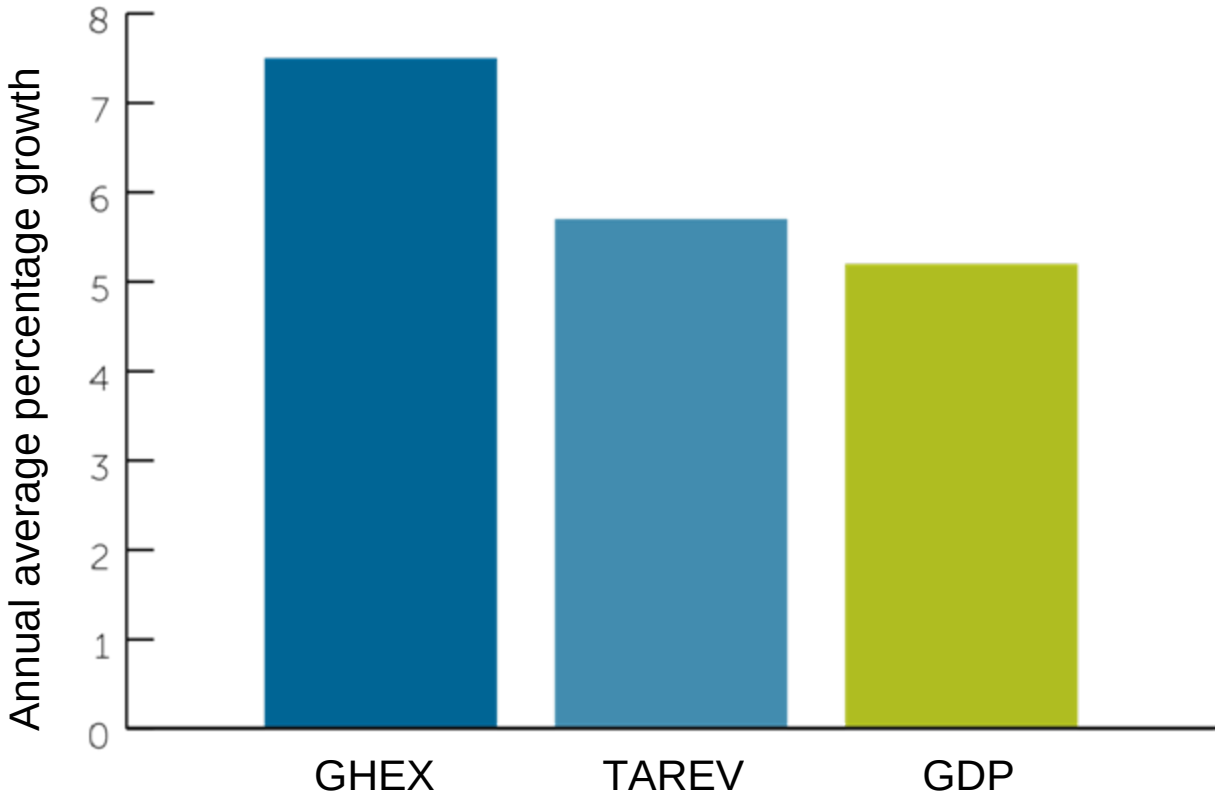
- Rheumatoid arthritis: 1:100 have it and it usually appears between the ages of 25 and 50
- In the past: non-steroidal anti-inflammatory drug (NSAID)
- If x-rays showed patient's joints being damaged, doctor would put patient on a disease-modifying anti-rheumatic drug, like methotrexate (DMARD)
- MRIs and ultrasound researchers have shown joints become damaged early in the disease so doctors now prescribe DMARDS earlier
- A newer class of DMARDs based on biologic agents has hit the market
- Enbrel and Remicade

Source:
1. Arthritis Society, "Rheumatoid Arthritis: Know your options."
arthritis.ca/local/files/pdf%20documents/Types%20of%20Arthritis/TAS_RA_eBROCH_ENG.pdf
2. Canadian Rheumatology Association, "Position on the use of biologic agents for the treatment of rheumatoid arthritis."
rheum.ca/images/documents/Biologics_in_RA.pdf

COST SHIFTING

Comparing health care spend and GDP

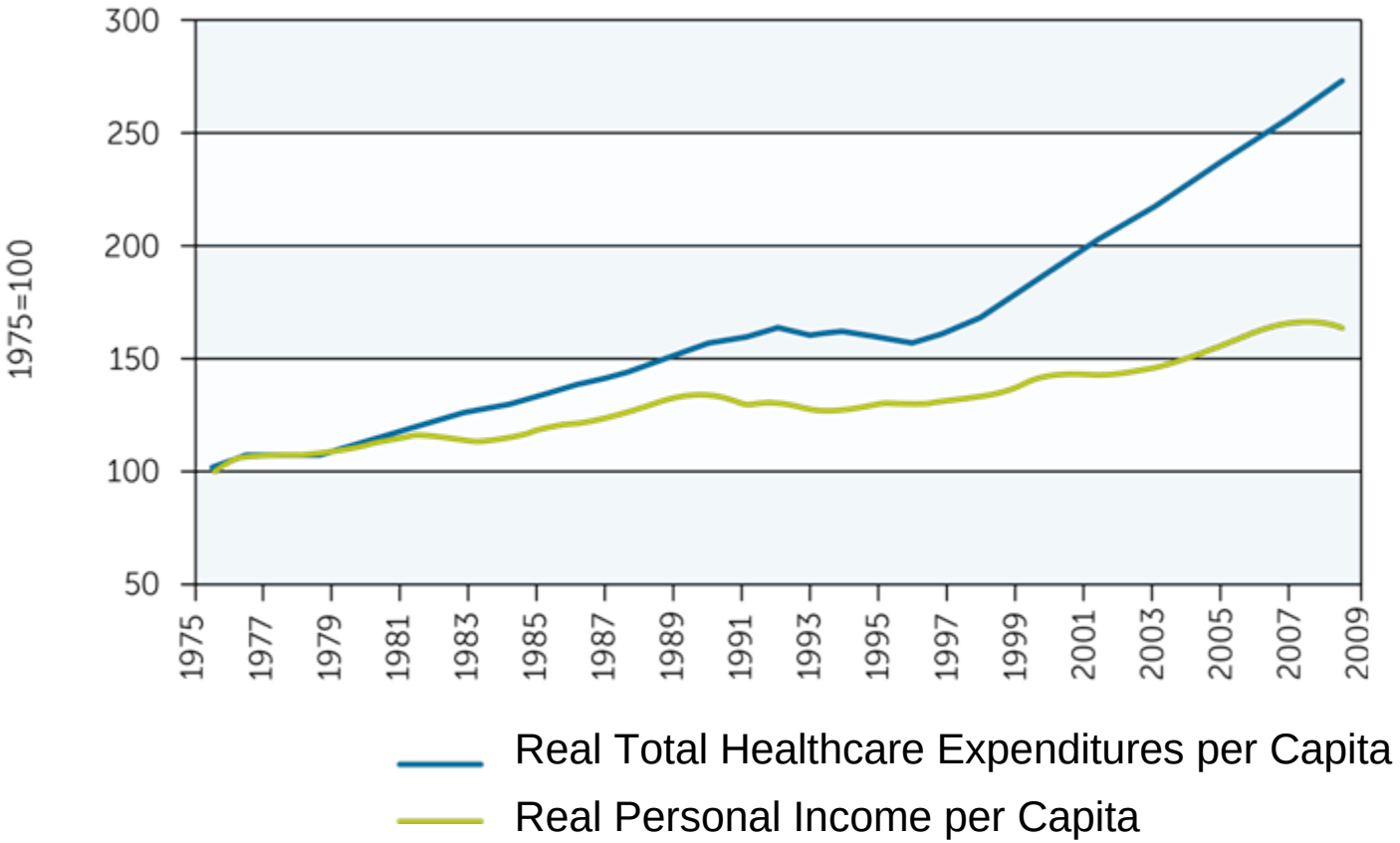
- Figure 1: National 10-year average annual percentage growth rates for provincial government health expenditures (GHEX) and total available revenue (TAREV), 2000/01–2009/10; and gross domestic product (GDP), 2000–2009



Source: Fraser Institute, Canada's Medicare Bubble. 2011 fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/canadas-medicare-bubble.pdf

Comparing health care spend and income

Figure 1: Index of Total Healthcare Spending and Personal Income



Source: CD Howe, Chronic Healthcare Spending Disease: A Macro Diagnosis and Prognosis 2011. http://www.cdhowe.org/pdf/Commentary_327.pdf

Cost shifting hits private plans

- New, oral cancer drugs
  - Injectable drugs given in hospital were paid for by the province
  - Now patients administer drugs themselves, at home
  - Costs have shifted from publicly funded hospitals to private payers
  - Take home cancer drugs now account for half of all cancer drug expenditures
- De-listing services like eye exams

Cost shifting

- We spend an estimated $170 billion dollars on healthcare
- Current cost sharing is 70/30 public/private
- This is forecast to shift to 55/45 in the next 15 years
- We can expect impacts to both the employer and employees

Opportunities for Canada's Financial Sector
McKinsey, 2009
http://www.mckinsey.com/App_Media/Reports/Canada/Opportunities_for_Canadas_financial_sector_2009.pdf

UNMANAGED FORMULARIES

Unmanaged formularies

- Pharmaceutical innovation has measurably improved the lives of millions
- Yet, not every new drug is a medical breakthrough
- Patented Medicines Pricing Review Board's (PMPRB)'s rating of new drugs found that, from 1990 to 2003, only 12.4% of new drugs were considered breakthrough medicines
- The rest were found to offer no substantial therapeutic advantage over existing drugs
- They cost, on average, about 2.5 times as much per prescription as comparable older drugs

- Source: http://www.ti.ubc.ca/newsletter/increasing-drug-costs-are-we-getting-good-value

Unmanaged formularies

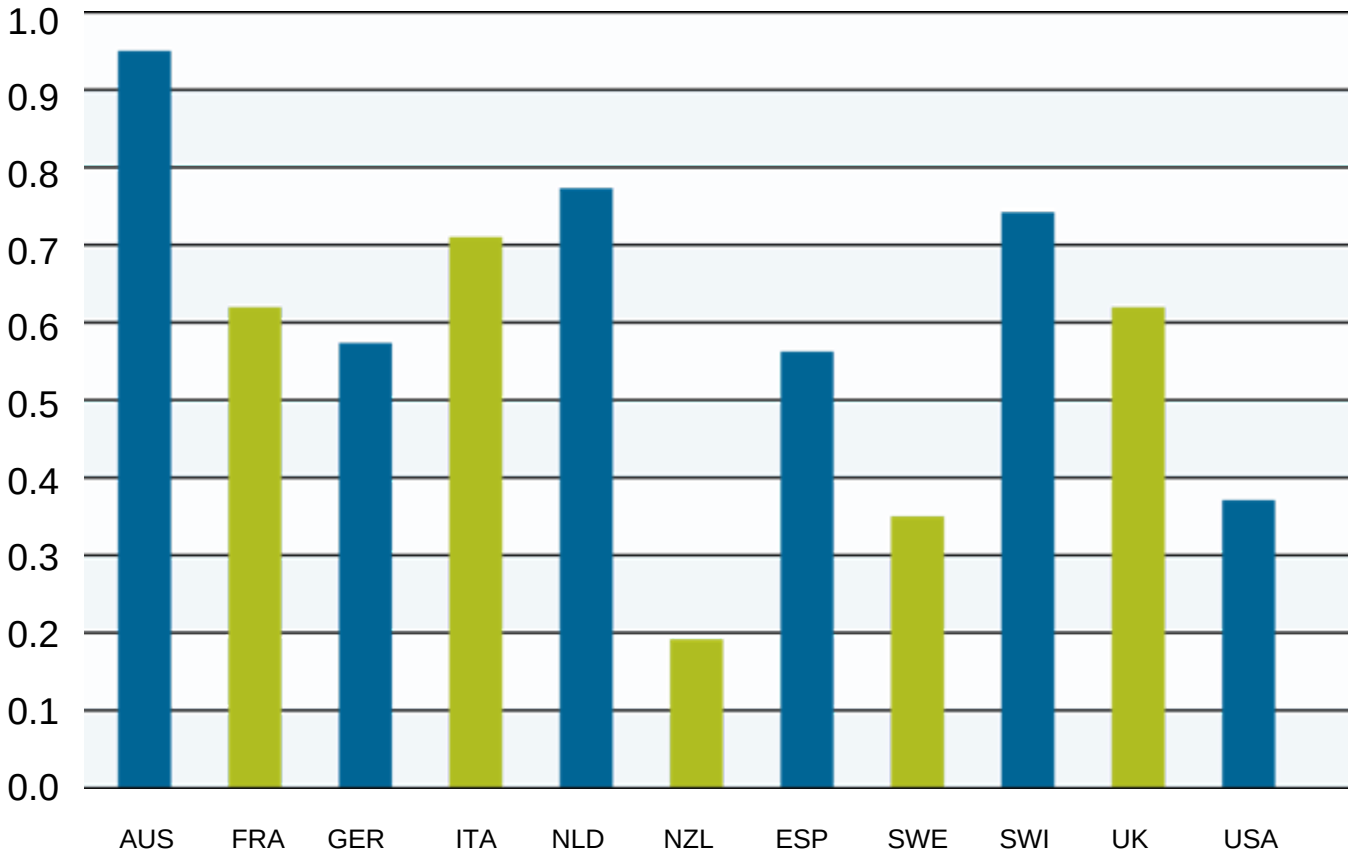
- Canadian companies spend about $200 million per week on prescription drugs
- In 2010, that translated into an estimated $10.2 billion in costs incurred by employer drug plans
- Less than 10% of employers have actively managed formularies
- Formularies with different tiers of drugs with different co-pay amounts encourage employees to shop more wisely

Helen Stevenson, “An End to Blank Cheques”

LOW GENERIC FILL RATE

Low generic fill rate, high generic prices

Average foreign-to-Canadian price ratios at market exchange rates, by bilateral comparator, 2007



Patented Medicine Prices Review Board, “Generic Drugs in Canada: Price Trends and International Price Comparisons, 2007.” 2010

Cost savings with generics

Condition	Brand price per pill	Generic price per pill
Cholesterol	Lipitor 20 mg: $2.19	Atorvastatin 20 mg: $1.04
Hypertension	Norvasc 5mg: $1.43	Amlodipine 5 mg: $1.04

- 1% increase in penetration of generic drugs would save $229 million a year

LACK OF EMPLOYEE AWARENESS

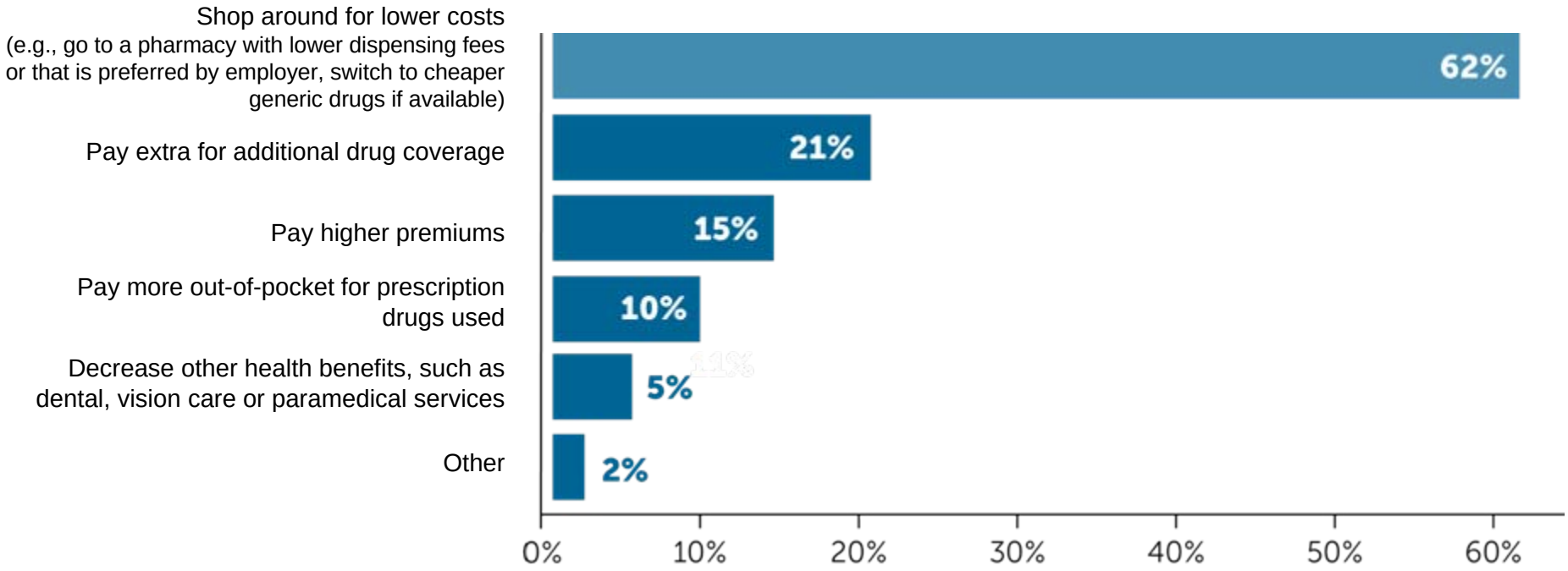
Lack of employee awareness

- Employees are ready to help keep benefit plans sustainable
- There is a gap between employees' reported willingness to help control costs and employers' perceptions of employees' willingness:
  - 57% of employees feel an obligation to help their employers control cost of benefit plans
  - Among 55 and older it's even higher—68%
- Only 33% of employers say they feel that employees are willing to help.

- Source: SANOFI CANADA HEALTHCARE SURVEY 2012

Lack of employee awareness

Willing to do to help employer maintain current level of prescription drug coverage

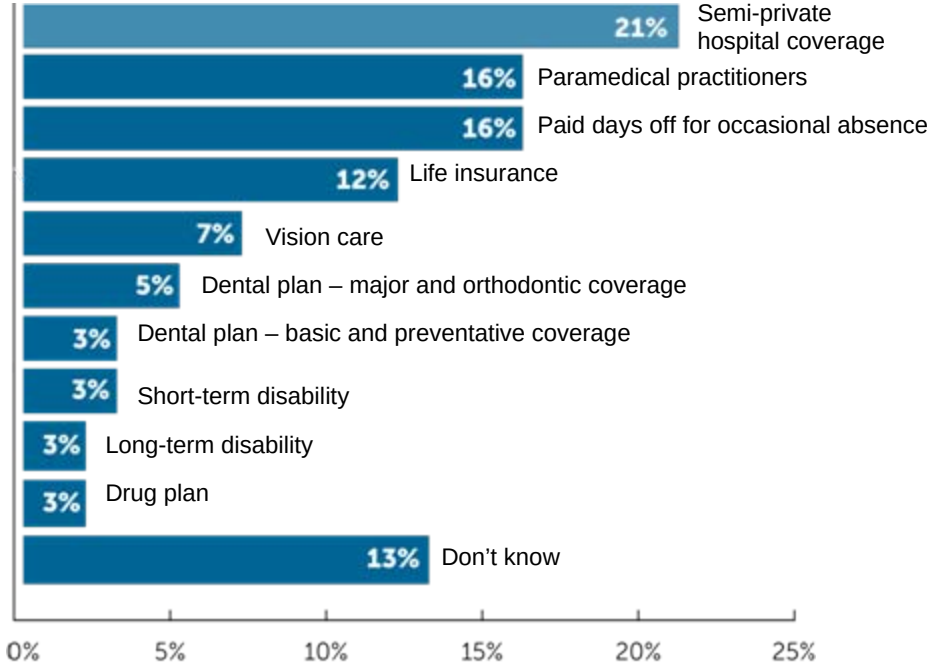


Base: Those who feel they have an obligation to help employer control costs of health benefit plan. n=992

Source: SANOFI CANADA HEALTHCARE SURVEY 2012

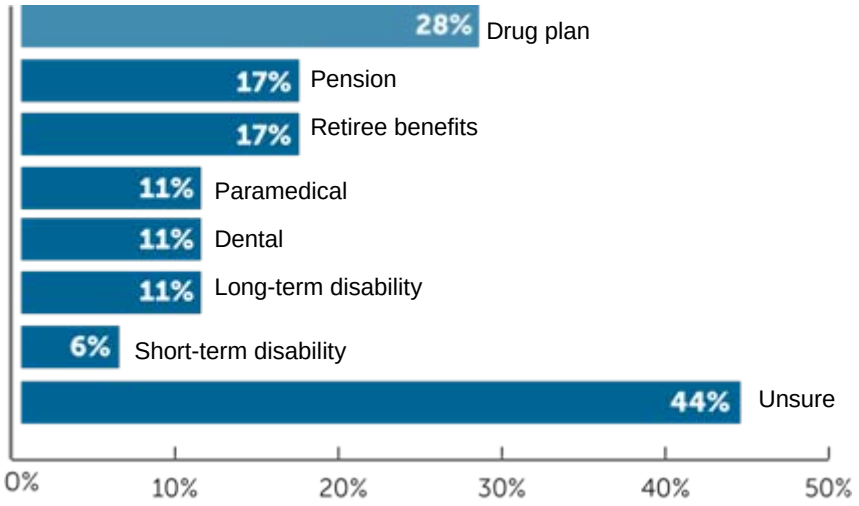
Lack of employee awareness

Component of employee health benefit plan willing to have taken away if employer was unable to pay for coverage



Base: All respondents n=1,757

Parts of the benefits plan plan sponsors are considering making cuts to



Base: Plan sponsors who say yes or maybe to making cuts to the benefit plan. n=18. Note: Sample size is very small. Findings directional only.

Source: SANOFI CANADA HEALTHCARE SURVEY 2012

An opportunity to educate

- Just 13% understand their benefits extremely well
  - down from 19% in 2005
- 45% believe they understand very well
  - down from 53%
- 39% understand their benefits somewhat well
  - up from 23%
- 44% of people with household income < $30,000 understand their benefits extremely well or very well, compared to 65% with incomes of >$100,000 or more
- People in small companies (< 50) are less likely to understand benefits extremely well or very well: 51%

Source: SANOFI CANADA HEALTHCARE SURVEY 2012

An opportunity to educate

- It’s time to engage employees more deeply
- Pay more attention to price and cost
- Shop around: the price of an asthma inhaler ranged from $10.21 to $20 dollars with a dispensing fee ranging from $4.11 to $11.99 depending on location
- Shop around: price of specialty drug differed by $2, 528 dollars for exactly the same dose dispensed at two different pharmacies in the same city

[1] thestar.com/business/article/543077--cleverer-drug-buying-could-save-800m-a-year-competition-czar-says
[2] Helen Stevenson, “An End to Blank Cheques,” May 2011

LACK OF WORKPLACE WELLNESS PROGRAMMING

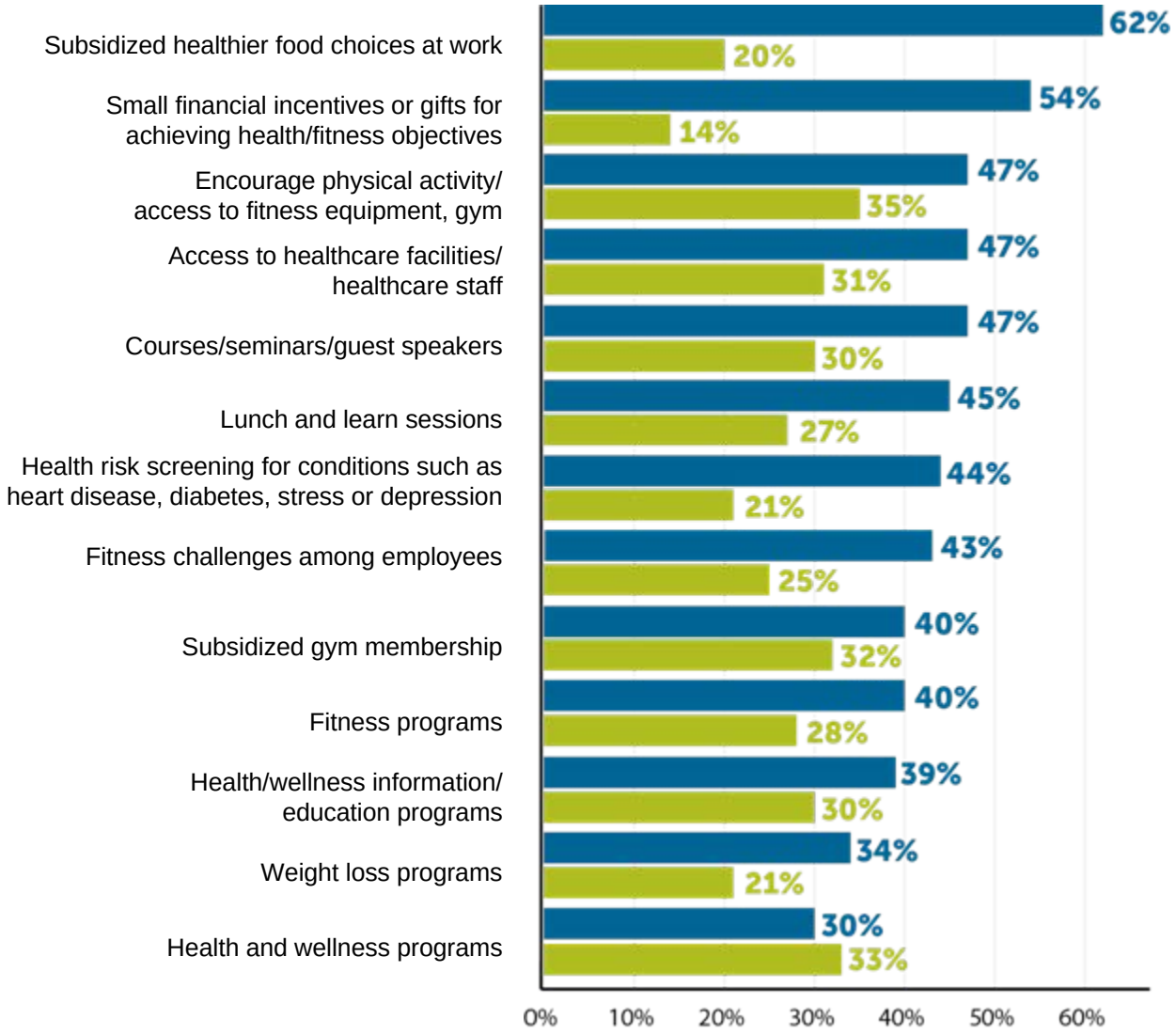
Higher health risks, higher costs

- Low level of exercise
- Smoking
- Overweight
- Higher alcohol use

- Employees with three or more health risks are absent > 50% more often than employees with fewer health risks and cost 2-3 times more in health care (drugs, services, disability claims):

Source: National Quality Institute: Investing in Comprehensive Workplace Health Promotion

Workplace wellness programs by availability



What do organizations offer to encourage employees to become healthier?

Utilization rate

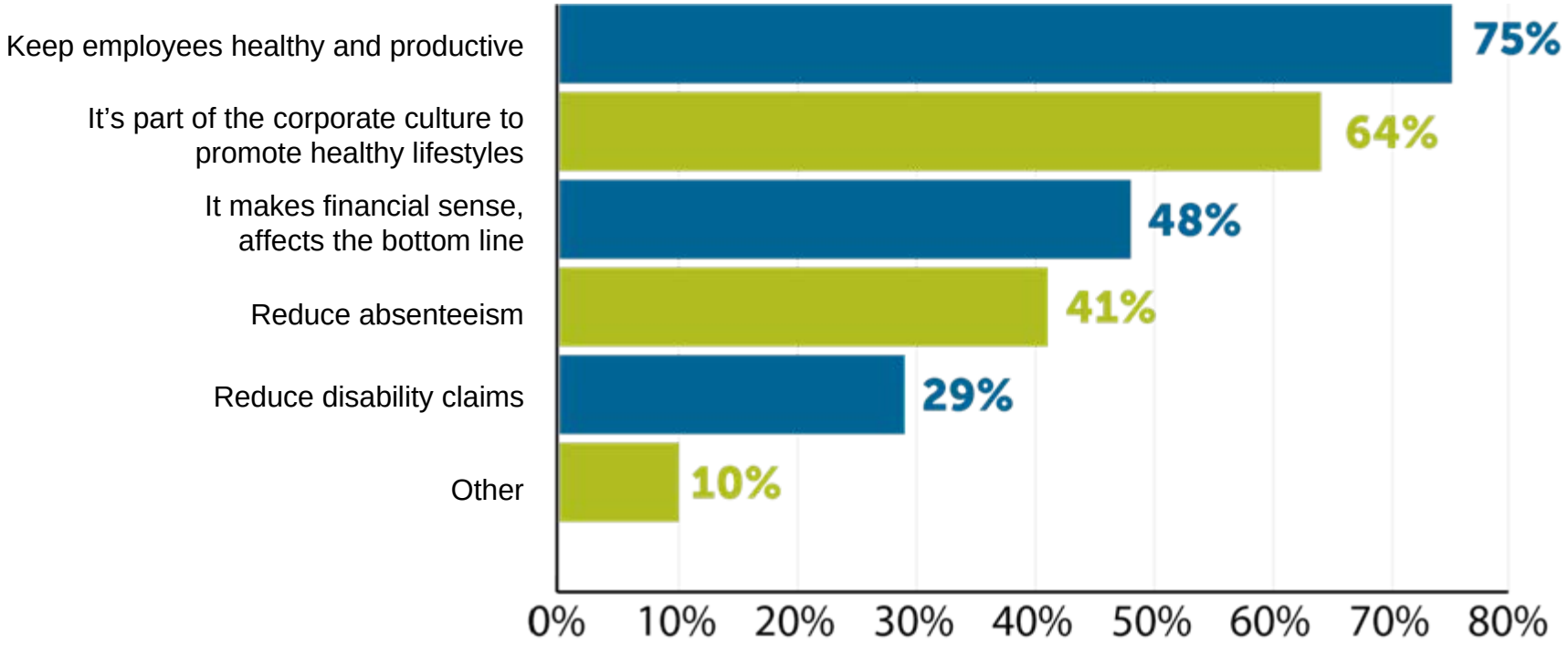
Availability

Base: Plan members n=1,757

Source: SANOFI CANADA HEALTHCARE SURVEY 2012

Lack of wellness programs

The main reasons plan sponsors invest in health and wellness programs for their employees



Source: SANOFI CANADA HEALTHCARE SURVEY 2012

AGING POPULATION

Aging population

- http://www.footwork.com/pyramids.asp

Aging workforce

- An aging workforce:
  - Increased prevalence of disease
  - New, very high cost drugs
  - Revised treatment guidelines
  - Earlier detection
  - Cost shifting
  - Unmanaged formularies
  - Low generic fill rate
  - Lack of employee awareness
  - Lack of widespread wellness programming in the workplace

WHAT CAN WE DO?

What can we do?

- Understand the issues
- Plan design
- Encourage owners to educate employees
- Foster workplace wellness

THANK YOU!