



# Lessons from Abroad

## A Series on Health Care Reform



# Health Care Lessons from Germany

by Nadeem Esmail



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## Executive Summary

This paper is part of a series that examines the way health services are funded and delivered in other nations. The nations profiled all aim to achieve the noble goal of Canada's health care system: access to high quality medical treatment regardless of ability to pay. How they organize to achieve that goal differs markedly from the Canadian approach. So do their performances and results.

The focus of this paper is Germany. The German health care system has been recognized as one that provides good quality care with attentive service in which wait times are not considered to be a problem, as well as a system that rapidly adopts new medical innovations. A careful examination of the German health care system may provide insights and information to inform the Canadian debate over the future of Medicare.

### Health system performance—Canada compared to Germany

Health care expenditures in Germany are considerably lower than in Canada and close to that in the average universal access nation. In 2009, Germany's health expenditures, as an age-adjusted share of GDP, were 22% lower than Canada's, and 1% lower than in the average universal access nation. Notably Canada's health expenditures in 2009 (age-adjusted) were the highest among developed nations with universal access health insurance schemes and 26% higher than in the average universal access nation.

Unfortunately, the availability of medical professionals, technologies, and services in Canada's health care system does not reflect this level of expenditure. With respect to health care inputs, the Canadian system has higher ratios of nurses to population, MRI machines to population, and CT

scanners to population than the German health care system. On the other hand, the German system has higher ratios of physicians to population and hospital beds to population. With respect to timeliness, Germans experience shorter wait times for emergency care, primary care, specialist care, and elective surgery than Canadians.

Looking at factors such as the health care systems' ability to successfully manage and treat chronic and critical illnesses, and provide protection from medically avoidable mortality, it seems that the German health care system broadly performs at a level similar to that in Canada, with a stronger performance in measures of patient safety. Specifically, the Canadian health care system outperforms Germany's in seven of seventeen measures examined: mortality amenable to health care, two of three measures of cancer survival, one of three measures of in-hospital mortality, and all three measures of primary care performance. Conversely, the German health care system outperforms Canada's in nine measures: infant mortality, two of three measures of in-hospital mortality, and all six measures of patient safety.

### Germany's health policy framework

The basis of the German health insurance system is markedly different from Canada's approach. Rather than relying on a tax-funded monopoly government insurer, the German system provides universal coverage through two insurance premium-funded systems<sup>1</sup>: a Social Health Insurance (SHI) system for all Germans and a Private Health Insurance (PHI) system that is an option for high-income and self-employed Germans (discussed below). Both systems are characterized by competition between independent statutory and private insurers (Germans have a choice of insurance company in both sectors), and competition between providers, alongside personal financial responsibility for patients. Though important in terms of funding, regulation, and oversight, governments play little role in the direct delivery of health care.

The SHI system, with insurance provided by some 145 competing independent, not-for-profit sickness funds (*krankenkassen*), is mandatory for employees earning less than €50,850 (CAD\$65,340<sup>2</sup>) annually and optional for those earning more than that amount and the self-employed. SHI

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- 1 Premiums in Germany are considerably different from health care premiums in Canada. German premiums provide a large portion of funding for health services and are paid to health insurers either directly or through a dedicated fund. Canadian health care premiums do not (or, for Alberta, did not) comprise a large portion of health care funding and are paid to general revenues from which health care insurance provided directly by government is funded.
  - 2 All Canadian dollar conversions in this study are based on the average Euro to Canadian dollar conversion rate for 2012 from the Bank of Canada's 10-year currency converter.



**Health system performance—Canada compared to Germany**

Indicator*	Canada	Germany
Total health expenditures (age-adjusted, % of GDP)	12.5	9.8
Physicians (age-adjusted, per 1,000 pop.)	2.6	3.0
Nurses (age-adjusted, per 1,000 pop.)	10.3	9.3
MRI machines (age-adjusted, per million pop.)	8.8	8.0
CT scanners (age-adjusted, per million pop.)	15.2	14.5
Hospital beds (age-adjusted, per 1,000 pop.)		
<i>Total</i>	3.6	6.9
<i>Curative care beds</i>	2.0	4.8
Waited less than 30 minutes in emergency room before being treated**	20%	33%
Same- or next-day appointment with doctor or nurse when sick or needed care**	45%	66%
Waited less than one month for specialist appointment**	41%	83%
Waited less than one month for elective surgery**	35%	78%
Waited four hours or more in emergency room before being treated**	31%	4%
Waited six days or more for access to doctor or nurse when sick or needed care**	33%	16%
Waited two months or more for specialist appointment**	41%	7%
Waited four months or more for elective surgery**	25%	0%
Infant mortality rate (per 1,000 live births)	5.1	3.5
Mortality amenable to health care (per 100,000 pop. 2007)	74	81
Five year relative survival rate for breast cancer***	86.6	83.3
Five year relative survival rate for cervical cancer	64.9	62.9
Five year relative survival rate for colorectal cancer***	63.4	60.4
In-hospital case-fatality rates within 30 days, AMI***	3.8	6.8
In-hospital case-fatality rates within 30 days, hemorrhagic stroke***	20.6	13.8
In-hospital case-fatality rates within 30 days, ischemic stroke***	6.3	4.0
Uncontrolled diabetes hospital admission rate (per 100,000 pop.)***	15.2	50.3
COPD hospital admission rate (per 100,000 pop.)***	183.3	200.6
Asthma hospital admission rate (per 100,000 pop.)***	15.7	20.8
Obstetric trauma, vaginal delivery w/ instrument (per 100 patients)	13.7	7.5
Obstetric trauma, vaginal delivery w/out instrument (per 100 patients)	2.7	2.1
Foreign body left in during procedure (per 100,000 hospital discharges)	9.7	3.4
Accidental puncture or laceration (per 100,000 hospital discharges)	525	73
Postoperative pulmonary embolism or deep vein thrombosis (per 100,000 hospital discharges)	566	378
Postoperative sepsis (per 100,000 hospital discharges)	769	541

\* 2009 or nearest year, unless otherwise noted. \*\* % of patients, 2010 \*\*\* The difference for this indicator is statistically significant (95% confidence interval). Note that confidence intervals apply to cancer survival rates, in-hospital case-fatality rates, and hospital admission rates.

Sources: OECD, 2011; Commonwealth Fund, 2010; Gay et al., 2011; calculations by author.

premiums are based on a fixed percentage (15.5%) of gross salaries/wages with an assessment ceiling of €45,900 (CAD\$58,980), split between employers (7.3%) and employees (8.2%).<sup>3</sup> Non-working spouses and dependents are covered at no additional cost to the premium payer or employer.

SHI premiums are pooled with tax contributions from the government at the national level in the German Health Care Fund, with SHI funds receiving funding for members on a risk-adjusted per capita basis. SHI funds may also charge members additional premiums if the income from the Fund is insufficient. On the other hand, SHI funds may pay bonuses or provide additional services (beyond those required in SHI) with excess funds generated either through operations or through elective insurance options including no-claims bonuses and gate-keeping models.

The German SHI system offers coverage for a broad range of services including: preventive services (including well-child check-ups, regular dental check-ups, basic immunizations, check-ups for chronic disease, and cancer screening), physician services, in-patient hospital care, out-patient care with registered doctors, rehabilitation, mental health care, dental care, optometry, hospice and palliative care, prescription drug coverage, and compensation for sick leave. These insurers are not required to cover private doctors or surgeons, choice of doctor in hospital, private rooms, dental implants, or vision products for adults though they may elect to offer additional benefits to members over and above those required.

The PHI system, with insurance provided by 24 for-profit and 19 not-for-profit insurance companies, is optional for those earning more than €50,850 and the self-employed. Those choosing this option cannot return to the SHI system. In either case, insurance coverage is mandatory.

PHI is funded through individual risk-rated premiums that are paid directly to the insurer. PHI companies are not permitted to cancel contracts or reduce coverage as long as premiums are paid. While premiums in the PHI marketplace are risk-rated, risk rating takes place only at entry and contracts are based on lifetime underwriting (including age at entry). Those with pre-existing conditions cannot be refused insurance. Thus, premiums do not increase with age in the PHI system nor do they change in the event of diseases or changes in health status after the beginning of the insurance contract. Premiums do, however, increase if there is a general increase in the cost of health care.

PHI members may select both their insurance company and benefits/coverage, with a much wider choice of premium and coverage options and general deductible options than is permitted under SHI. The German PHI system is regulated to ensure those who have made the permanent switch to

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3 Both income thresholds are for 2012.

PHI have access to insurance, in particular that members do not face large premium increases as they age and that they are protected from a high premium burden if their income decreases.

An interesting aspect of the German health care experience, particularly from the Canadian perspective, is that the PHI system does not appear to have compromised quality or access in the SHI system. As shown in the comparison above, the German health care system provides far more timely access to health care than the Canadian system (for all residents), with similar outcomes from the care process at a lower cost. This performance occurs in the presence of a PHI system available to higher income and self-employed Germans in which providers are able to charge higher fees for services (as compared to those in the SHI system) and in which providers (both doctors and hospitals) may serve both PHI and SHI patients.

Cost sharing applies to insured services throughout the health care system, for both SHI and PHI members. For example, under the SHI scheme, patients are responsible for a €10 (CAD\$13) charge per day for hospital care and post-hospital rehabilitation treatment, a €10 payment for the first visit to a physician each quarter and for each contact with other physicians seen without a referral in that same quarter, and between €5 and €10 (CAD\$6 and CAD\$13) for some prescription drugs. Insurance funds are able to offer a range of deductibles and no-claim bonuses. Limits to payments apply, as do exemptions from cost sharing for certain populations.

### Primary care

Primary care in Germany is largely delivered by physicians in individual or dual private practices, with a smaller role for multi-provider health centres. Individuals, whether in SHI or PHI, have free choice of ambulatory care physician including direct access to ambulatory care specialists without a referral if desired. GPs only play a formal gate-keeping function and registration with a GP is only required if patients have voluntarily opted for such coverage with their insurer. Choice of physician is supported by information on patient experiences and patient satisfaction provided by media outlets and non-government organizations.

GPs and specialists in ambulatory care for both SHI and PHI are compensated primarily on a fee-for-service basis. The details of compensation differ between insurance systems, with compensation being higher for patients covered by PHI. Further, SHI payments are moving from capped fee-for-service to a capped mixture of fee-for-service, capitation, and lump sum payments.

## Specialized, hospital, and surgical care

The private sector plays a relatively large role in the delivery of hospital services in Germany. About half of all hospital beds in Germany are found in public hospitals (30.5% of hospitals), with private not-for-profit hospitals accounting for a third of beds (36.6% of hospitals), and private for-profits the remainder (32.9% of hospitals). This distribution reflects an increasing reliance on private hospital ownership over time, with expansion of the role of for-profit providers having mainly been through privatization of public hospitals (including one university hospital in Hessen) in part driven by limitations in government finances.

Germans, whether in SHI or PHI, have free choice of hospital with referral including private for-profit hospitals. Hospitals are typically staffed by salaried doctors, and patients in the statutory scheme do not get to choose their physicians. Choice of hospitals in Germany is supported by mandatory public disclosure of quality indicators alongside information published by media and non-government organizations. German patients are able to compare providers on clinical outcomes, use of appropriate processes, patient satisfaction, and patient experiences.

Since 2004, an activity-based funding model has been used for funding inpatient hospital services. The German system is based on the approach used in Australia and includes some 1,148 categories. Annual revisions to the system are made to account for changes in treatment patterns, costs, and new technologies. Hospitals receive funds for investment costs through transfers of tax dollars.

## Privately funded options and alternatives

In addition to playing a primary insurance role for high-income Germans, public employees, and the self-employed, private health insurance in Germany also provides coverage for items not covered under the SHI scheme. For example, private insurance can provide access to better amenities and cover some co-payments. The SHI and PHI systems share medical resources, with physicians and hospitals in Germany treating both SHI and PHI patients. Senior doctors in hospitals can treat privately insured patients on a fee-for-service basis.

## Lessons for Canada

The combination of superior access to health care, at least in terms of timeliness, and broadly similar outcomes from the health care process with fewer resources suggests there is much Canada can learn from the German approach. Emulating the German approach to health care would require substantial

reform of the Canadian system including, most significantly, a shift from a tax-funded government insurance scheme to a system of independent competitive insurers within a statutory enrollment framework. While that may be a large undertaking, the evidence presented above suggests there may be significant benefits to doing so.

The German health care system departs from the Canadian model in the following important ways:

- ◆ Cost sharing for all forms of medical services
- ◆ Private (both for-profit and not-for-profit) provision of acute care hospital services
- ◆ Activity-based funding for hospital care
- ◆ Permissibility of privately funded parallel health care
- ◆ A system of statutory independent insurers providing universal services to their insured populations on a largely premium-funded basis (commonly known as a social insurance system), with individual choice of insurers and some personalization of insurance cover and premium type

Of these core policy differences, three can be implemented without violating the letter of the Canada Health Act (CHA): private hospital services and surgical facilities, activity-based funding, and privately funded parallel health care. Of course, some German policies would violate the CHA, while others might be interpreted to do so by the federal government. This said, interference or compliance with the CHA neither validates nor invalidates policy reforms. It is critical to recognize that many of the health policies pursued throughout the developed world would violate the CHA and past federal interpretations of the CHA. Yet these reforms have been shown to provide superior access to, and outcomes from, the health care process. Thus, the recommendations below set aside discussion of the CHA and focus only on the policy changes that would have to take place if Canada were to more closely emulate the German approach to health care.

**Recommendation 1:** *Activity-based funding models for hospital/surgical care, potentially with competitive benchmarking employed to set fees; private provision of hospital and surgical services.*

**Recommendation 2:** *Private health care and health care insurance for medically necessary care and dual practice for physicians to maximize the volume of services provided to patients in both public and private settings.*

**Recommendation 3:** *Cost sharing regimes for universally accessible health care with reasonable annual limits and automated exemptions for low-income populations.*

**Recommendation 4:** *A social insurance construct with premium funding and taxpayer supports for those who cannot afford insurance, choice of insurer, and personalization of insurance policies.*

# HEALTH SYSTEM COMPARISON BETWEEN Canada and Germany



## Type of Insurance

**UNIVERSAL**  
**(Government Run)**

**UNIVERSAL**  
**(Mandatory Private)**

## Financing

**Mostly General  
Taxation**

**Insurance Premiums  
and Taxation**

## Total Health Spending as a Share of GDP

**12.5**

age adjusted

**9.8**



PHYSICIANS  
(age-adjusted, per 1,000 pop.)  
**CANADA 2.6**  
**GERMANY 3.0**



NURSES  
(age-adjusted, per 1,000 pop.)  
**CANADA 10.3**  
**GERMANY 9.3**



CURATIVE-CARE BEDS  
(age-adjusted, per 1,000 pop.)  
**CANADA 2.0**  
**GERMANY 4.8**



CT SCANNERS  
(age-adjusted, per million pop.)  
**CANADA 15.2**  
**GERMANY 14.5**



MRI MACHINES  
(age-adjusted, per million pop.)  
**CANADA 8.8**  
**GERMANY 8.0**

**31%**

**Waited 4+ hours**  
**in emergency room before**  
**being treated**  
(% of patients, 2010)

**4%**

**33%**

**Waited 6+ days**  
**for access to doctor or nurse**  
**when sick or needed care**  
(% of patients, 2010)

**16%**

**41%**

**Waited 2+ months**  
**for specialist appointment**  
(% of patients, 2010)

**7%**

**25%**

**Waited 4+ months**  
**for elective surgery**  
(% of patients, 2010)

**0%**





## Introduction

Every government of a developed nation provides some manner of health insurance for its populace. In some cases, comprehensive health care coverage is provided by a government-run insurance scheme on a universal basis; in others, it is provided by government only for specifically identified population groups while the bulk of the population obtains coverage through a private insurance system. In between these two extremes fall various types of mixed insurance systems, including those where comprehensive private insurance is mandatory and those where government provides both a tax-funded universal insurance product and tax-funded supports for private insurance premiums. Some systems even allow consumers to choose between comprehensive private and universal health insurance.

Each of these approaches to health insurance is built around a set of policies that determines how health services will be financed, what will be covered, who will be permitted to provide those health services, how physicians and hospitals will be paid, what responsibilities patients will have for payment of services, and whether or not patients can opt to finance all of their care privately. Ultimately, the types of policies that governments choose will affect the quantity and quality of care that is provided to their populations. Health policy choices must therefore be assessed on the basis of value for money—in other words, how good is the health system at making sick and injured people better, at making health services available, and at what economic cost?<sup>4</sup> One way of assessing health policy choices is to examine the

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4 This is a contested statement in the Canadian health policy debate. Some in the Canadian debate see outcomes as secondary to the justice of the structures and processes by which they are achieved. Still others consider “Canadian values” to be the primary determinant of health policy choices. This analysis seeks, however, to determine what health policies

choices of other developed nations and the performance that has resulted from those choices.

This paper is part of a series that examines the way health services are funded and delivered in other nations. The nations studied all aim to achieve the noble goal of Canada's health care system: access to high quality care regardless of ability to pay. How they go about achieving that goal, however, differs markedly from the Canadian approach; and, as suggested above, so do their performances in achieving that goal.

The focus of this paper is the health care system in Germany. The German system is recognized as one that provides good quality care with attentive service in which wait times are not considered to be a problem, as well as a system that rapidly adopts new medical innovations (Bidgood et al., 2013; Siciliani and Hurst, 2003; Cheng and Reinhardt, 2008). A careful examination of the German health care system may provide useful insights and information to help inform the Canadian debate over the future of Medicare.

The next section examines the performances of the Canadian and German health care systems across a broad range of measures. A detailed examination of German health care policy is undertaken in the third section. A section considering what lessons can be taken from the German experience for Canadians interested in improving the state of Medicare follows.

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may be the most beneficial for those in need of care and those who are funding that care within a universal framework.

## Health system performance—Canada compared to Germany

The comparisons below look at the health care systems of both Canada and Germany, as well as the average performance of health care systems in other developed nations<sup>5</sup> that also maintain universal approaches to health care insurance. Measures of spending and access have been age-adjusted using the methodology from Esmail and Walker (2008).<sup>6</sup> Outcome measures are available on an age- and sex-adjusted basis where appropriate.<sup>7</sup>

Health care expenditures in Canada are considerably higher than in Germany and in the average universal access nation (figure 1). In 2009, Canada's health expenditures (age-adjusted, as older people require more care) were 28% higher than in Germany, and 26% higher than in the average universal access nation (with Germany's expenditures being 1% lower than the average). In fact, in 2009, Canada's health expenditures, as an age-adjusted share of GDP, were the highest among developed nations with universal access health insurance schemes.

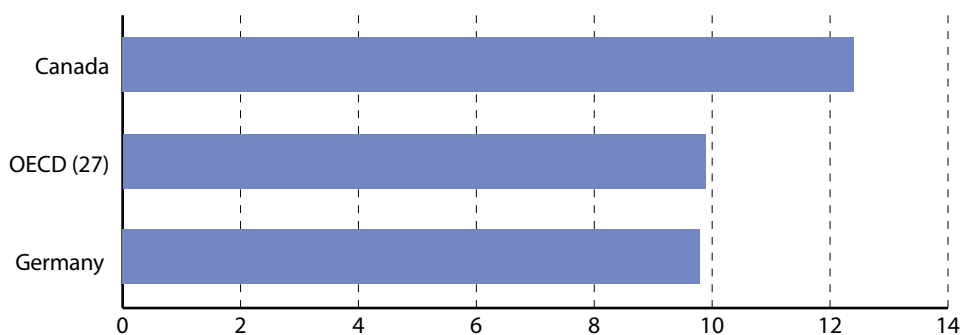
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5 Defined here as member nations of the Organisation for Economic Cooperation and Development (OECD) in 2009.

6 Age-adjustment is based on the percent of population over age 65 in a given country relative to the average of OECD nations that maintain universal access. A complete description of the methodology is available in Esmail and Walker, 2008: 17-22, with a mathematical example shown in Box 2 on page 21. Note that Turkey is not included in the age-adjusted averages due to a low proportion of population over the age of 65 that was not conducive to meaningful adjustment.

7 In 2009, 13.9% of Canada's population was 65 or older compared to 20.5% of the population in Germany (OECD, 2013).

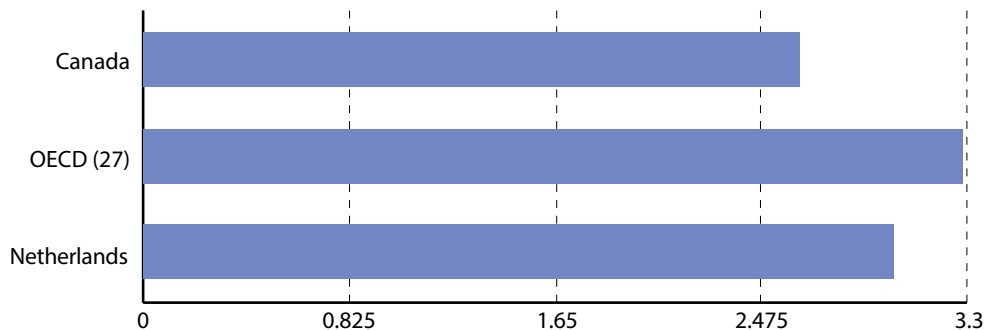
**Figure 1: Total health expenditures, age-adjusted share (%) of GDP, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

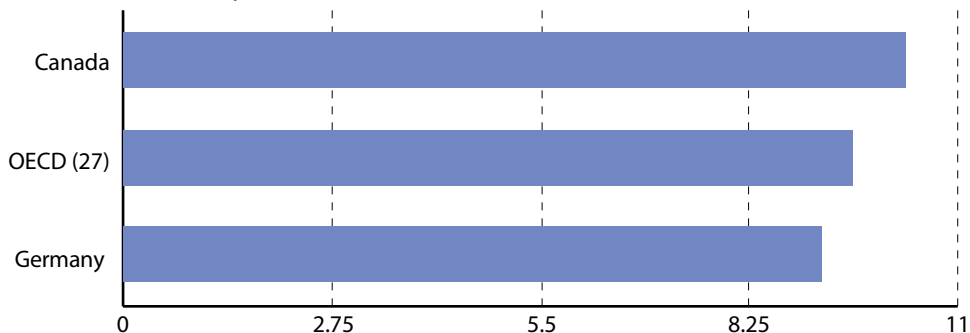
**Figure 2: Physicians per 1,000 population, age-adjusted, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

**Figure 3: Nurses per 1,000 population, age-adjusted, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

## Access

Unfortunately, access to health care services in Canada does not reflect this level of expenditure.<sup>8</sup> The German health care system seems to offer a better balance between cost and access to care than does Canada's.

With respect to physicians, Canada has fewer physicians per thousand population than both the average universal-access nation and Germany (figure 2). In 2009, Canada had 2.6 physicians per 1,000 population (age-adjusted). That compares to an OECD average of 3.3 and Germany's 3.0 per 1,000 population.

Conversely, Canada (10.3) has more nurses per 1,000 population (age-adjusted) than both the average universal access nation (9.6) and Germany (9.3) (figure 3).

Access to medical technologies is notably better in the average universal access nation than in Canada, while Canada outperforms Germany in this regard (at least with respect to the technologies examined here).<sup>9</sup> With respect to MRI machines per million population (age-adjusted), Canada's 8.8 machines per million population compares with 12.9 in the average universal access nation and 8.0 in Germany (figure 4). With respect to CT scanners per million population (age-adjusted), Canada (15.2) performs relatively poorly in comparison with the OECD average (23.9) but again outperforms Germany (14.5) (figure 5).

The supply of hospital beds in the Canadian health care system is below both the universal access average and that in Germany (figure 6). In 2009, Canada had 3.6 hospital beds for every 1,000 population (age-adjusted), of which 2.0 were curative care beds.<sup>10</sup> In Germany, there were 4.8 curative care beds out of a total of 6.9 hospital beds per 1,000 population.<sup>11</sup> The average universal access health care nation maintained 5.6 total beds per 1,000 population (age-adjusted), of which 3.8 were curative care beds.

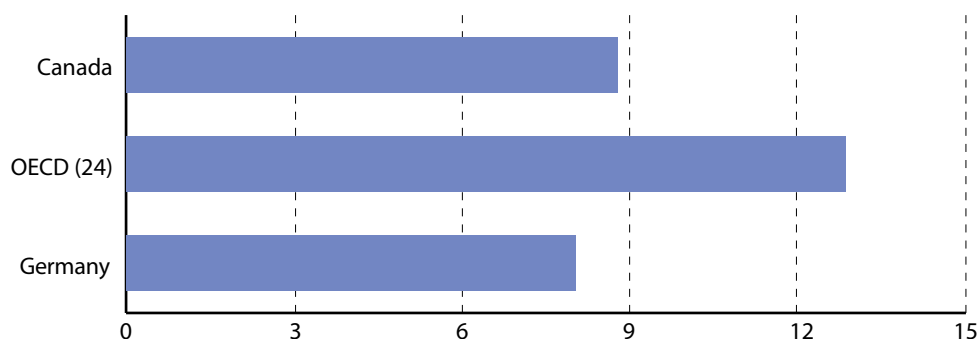
8 It should be noted, of course, that we cannot directly measure access, but rather are measuring the quantity of medical goods and services available to individuals in these countries and the wait times for receiving medical care to provide insight into the availability of medical services for individuals in these countries.

9 Broader examinations, using older data, have found that Germany often outperformed Canada in availability of medical technologies (Esmail and Wrona, 2008).

10 Curative care beds are beds specifically for accommodating patients for the purposes of providing non-mental illness health care (excluding palliative care) including childbirth, treatment for health conditions, recovery from health conditions or surgery, and for diagnostic or therapeutic procedures.

11 Kumar and Schoenstein (2013) note that the availability of hospital services in Germany has traditionally been higher than that in other developed nations.

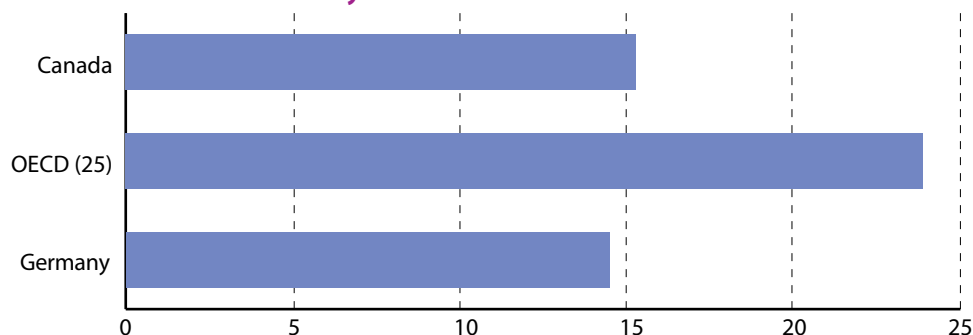
**Figure 4: MRI machines per million population, age-adjusted, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

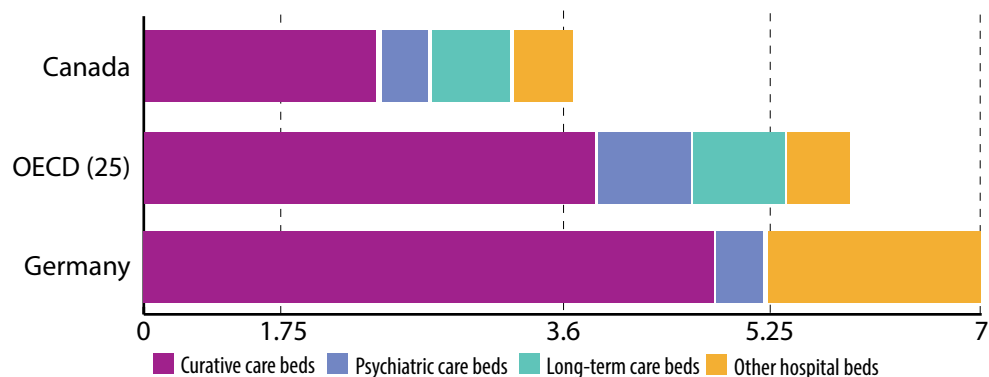
**Figure 5: CT scanners per million population, age-adjusted, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

**Figure 6: Hospital beds per 1,000 population, age-adjusted, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

Siciliani and Hurst (2003) find that acute care bed<sup>12</sup> to population ratios are negatively related to waiting times. This suggests that the German health care system may be better able to deliver health care in a timely fashion than Canada's. Both wait times data from the Commonwealth Fund (2010) and examinations of wait times in Germany confirm that this is the case (Siciliani and Hurst, 2003).

According to the Commonwealth Fund 2010 International Health Policy Survey, Canadians were less likely than German respondents to experience a reasonably short waiting time for access to emergency care, primary care, and specialist care. In all cases these differences were sizeable: 20% of Canadians reported waiting less than 30 minutes in the emergency room compared to 33% of Germans. Further, only 45% of Canadians reported a same- or next-day appointment for primary care when ill compared to 66% of Germans. Canadians (41% and 35%, respectively) were also much less likely to report relatively short wait times to see specialists and receive elective surgery than were Germans (83% and 78%) (figure 7).

Looking at long waits, Canadian access to health care was slower than wait times experienced by German respondents (figure 8) (Commonwealth Fund, 2010). Canadians reporting wait times of four hours or more in emergency was 31%, compared to just 4% of German respondents. The proportion of respondents reporting a wait of six days or more for primary care in Canada was 33%, compared to 16% in Germany. Canadians reporting wait times of two months or more for a specialist appointment was 41%, compared to only 7% of German respondents. Finally, 25% of Canadian respondents reported waiting four months or more for elective surgery, compared to 0% in Germany.

Overall, it seems that the German health care system is able to provide more timely access to health care services and a more abundant supply of physicians for less expenditure as an age-adjusted share of GDP.

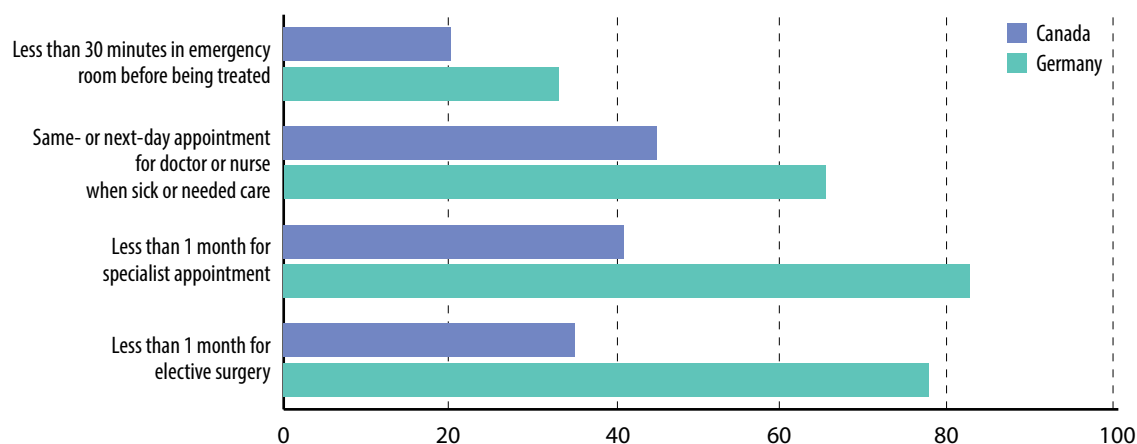
## Outcomes

Looking at measures of the health care systems' ability to successfully manage and treat chronic and critical illnesses, and provide protection from medically

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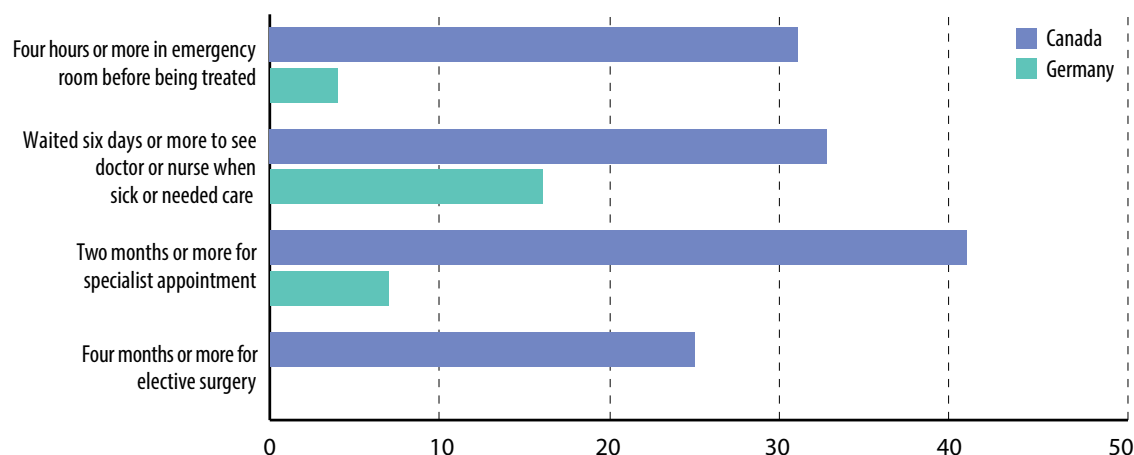
12 The OECD's definitions of "acute care" (OECD, 2013) and "curative care" (OECD, 2011) are similar with the notable exception that the term "non-mental illness" appears in the definition given in OECD, 2011. However, the term "curative care" is used above following OECD, 2011 while the term acute care is used here following Siciliani and Hurst, 2003.

**Figure 7: Wait times, percentage seen or treated in relatively short time frame**



Source: Commonwealth Fund, 2010.

**Figure 8: Wait times, percentage seen or treated in relatively long time frame**



Source: Commonwealth Fund, 2010.

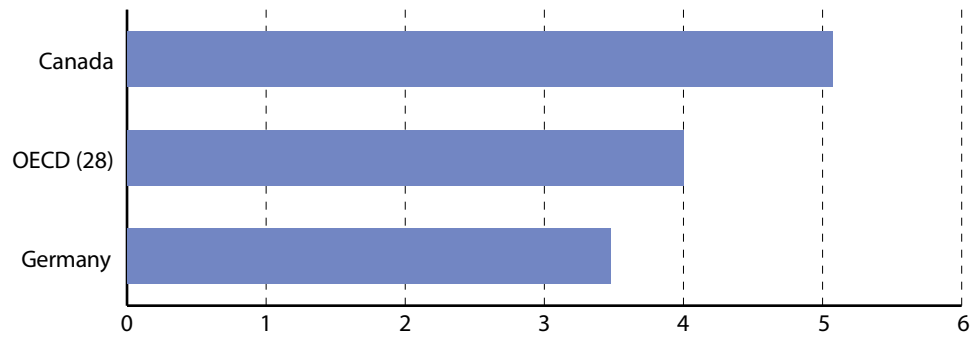
avoidable mortality,<sup>13</sup> it seems the German health care system broadly performs at a level similar to that in Canada.<sup>14</sup>

<sup>13</sup> Life expectancy, one of the more common measures of longevity, is not included here principally because factors outside of the health care system can be significant drivers of overall longevity. This exclusion does not affect the analysis, however, Germany's life expectancy is 80.3 years compared to Canada's 80.7 (OECD, 2011).

<sup>14</sup> Health outcomes data, including measures of mortality, morbidity, and longevity, may reflect both the performance of the health care system and factors external to it. The choice of indicators for the comparison of the German and Canadian health care systems here seeks to minimize to the extent possible the effect of external factors.



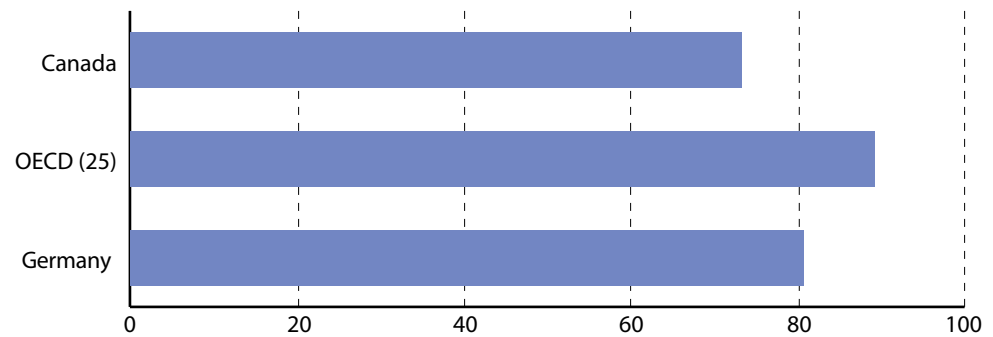
**Figure 9: Infant mortality rate, per 1,000 live births, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

**Figure 10: Mortality amenable to health care, per 100,000 population, 2007 or latest year available**



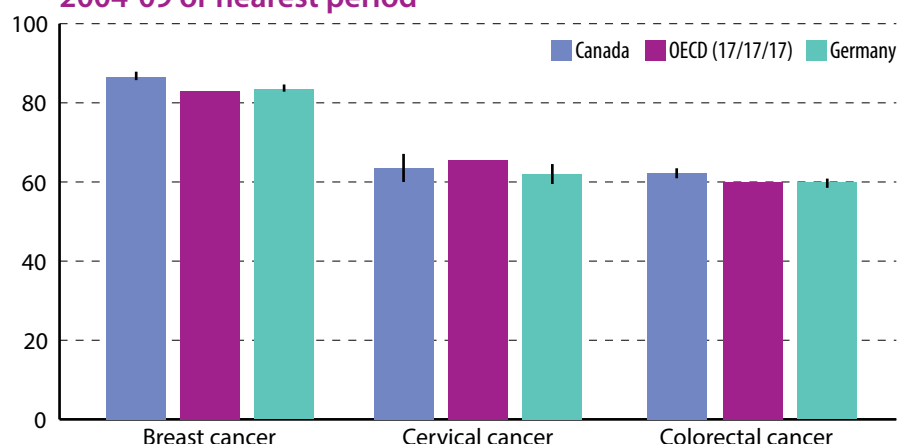
Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: Gay et al., 2011; calculations by author

Infant mortality rates are commonly used to compare population health status, and can provide information on the performance of the health care system. In particular, infant mortality rates may provide insight into the effectiveness of care during pregnancy and childbirth, as well as the ability to prevent death early in life (OECD, 2011). Indeed, a 2001 OECD study found that countries with higher physician-to-population ratios had lower rates of infant mortality (Or, 2001).<sup>15</sup> On the other hand, it should be noted that infant mortality rates can be affected by population demographics such as immigration from poorer countries, population subgroups in poor health,

<sup>15</sup> Physician-to-population ratios were used as a proxy measure for health care resources in the study.

**Figure 11: Five-year relative survival rates for select cancers, 2004-09 or nearest period**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.  
Source: OECD, 2011; calculations by author.

lifestyle factors, and general social and economic conditions, and so should be interpreted with caution (Seeman, 2003; OECD, 2011).

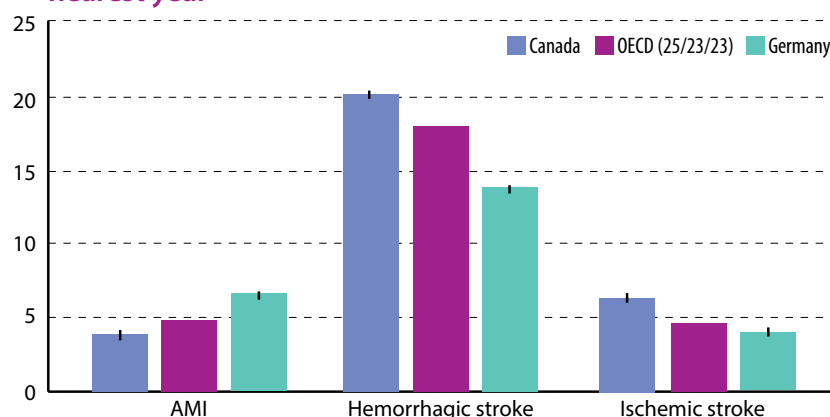
Germany's performance in preventing death at the youngest ages appears to be superior to Canada's (figure 9). In 2009, Germans experienced an infant mortality rate of 3.5 per 1,000 live births. The average universal access nation experienced a rate of 4.0. Canada's rate that year was 5.1. It is important to recognize that this was not an outlier year: Canada has long lagged in comparisons of infant mortality rates as well as perinatal mortality rates (28 weeks gestation to first week of life) (Esmail and Walker, 2008).

Another way of examining health system performance is to measure the number of deaths from specific conditions and diseases in specific age ranges for which there is evidence that timely, effective, and appropriate health care can prevent mortality. This can be done using a measure called "mortality amenable to health care."<sup>16</sup> In this comparison (figure 10), both Germany (81 per 100,000 population) and Canada (74 per 100,000 population) outperform the universal access health care system average. Canada's rate of mortality amenable to health care is therefore 9% lower than Germany's.

Insight into a health care system's ability to diagnose illness and provide effective treatment can be gained from measures of survival from cancers of the breast, colon, and cervix. Canada outperforms Germany in two of these three

<sup>16</sup> Two widely used lists of causes amenable to health care are available for the calculation of this indicator: the list published by Nolte and McKee and the list published by Tobias and Yeh. Gay et al. (2011) provide estimates for both lists. This comparison uses calculations based on the Nolte and McKee list of causes, following comparisons published previously by Esmail and Walker (2008).

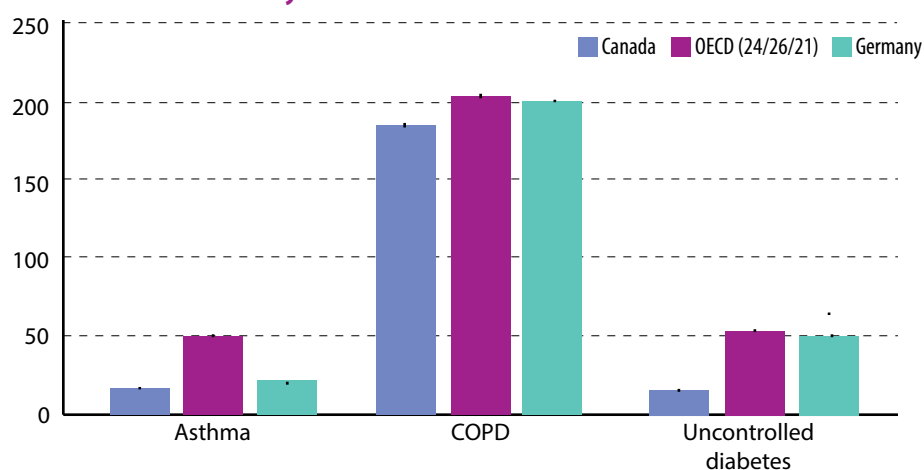
**Figure 12: In-hospital case-fatality rates (age-, sex-standardized) within 30 days after admission for select conditions, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

**Figure 13: Hospital admission rates per 100,000 population aged 15 and over (age-, sex-adjusted) for select conditions, 2009 or nearest year**



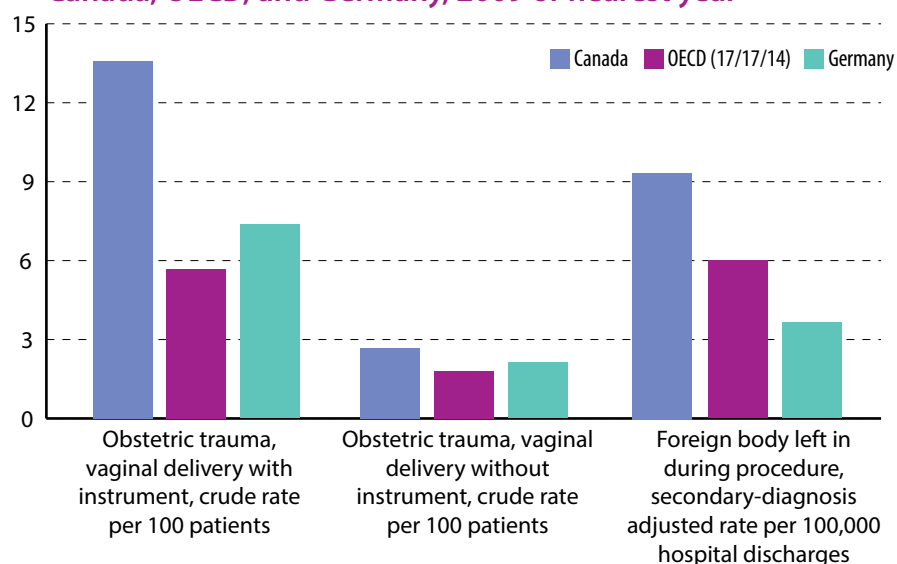
Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

measures, with no statistical difference between these two nations in the third (figure 11). Specifically, Canada outperforms both Germany and the universal access country average in breast cancer survival. For cervical cancer, Canada is not statistically different from either the universal access country average or Germany (though Germany is below the average). For colorectal cancer, Canada's survival rate is again superior to both Germany's and the universal access country average.

In-hospital mortality rates following acute myocardial infarction (AMI or heart attack), and ischemic (obstruction) and haemorrhagic (rupture) stroke can provide insight into the quality of acute care (figure 12). For AMI, Canada

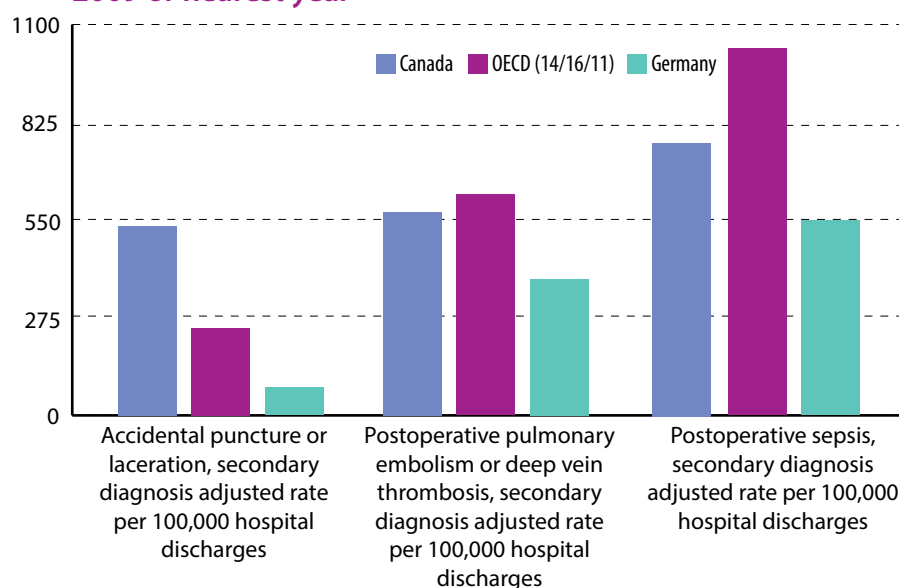
**Figure 14: Patient safety (obstetric trauma, foreign body), Canada, OECD, and Germany, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

**Figure 15: Patient safety (accidental puncture/laceration, embolism/thrombosis, sepsis), Canada, OECD, and Germany, 2009 or nearest year**



Note: The number of universal-access member nations of the OECD in 2009 for whom data was available to create the average is shown in parentheses.

Source: OECD, 2011; calculations by author.

performs better than both Germany and the universal access average, with Germany having a rate that is worse than the average. Conversely, Canada lags Germany and the universal access nation average in both measures of in-hospital mortality following stroke, with Germany outperforming the universal access nation average in both measures of stroke.

Insight into the quality of primary care services, and in particular the ability of the primary care sector to successfully manage chronic illness, can be gleaned from measures such as hospital admission rates for chronic obstructive pulmonary disease (COPD), uncontrolled diabetes, and asthma. The rates shown in figure 13 suggest that both Canada and Germany maintain high performing primary care sectors, and that Canada's primary care sector may be performing better than Germany's. In all three measures, both Canada and Germany outperform the universal access average. Canada also outperforms Germany in all three measures.

The final set of measures examined here relate to patient safety when undergoing treatment in the health care system. As shown in figures 14 and 15, Germany outperforms Canada but not the average in obstetric trauma (with and without instrument) and outperforms both Canada and the average in the other four measures. Canada on the other hand lags the average in all measures except postoperative pulmonary embolism or deep vein thrombosis and postoperative sepsis.

In summary, the Canadian health care system outperforms the German health care system in:

- ◆ ratio of nurses to population
- ◆ ratio of MRI machines to population
- ◆ ratio of CT scanners to population
- ◆ mortality amenable to health care
- ◆ two of three measures of cancer survival
- ◆ one of three measures of in-hospital mortality
- ◆ three of three measures of primary care performance

Conversely, the German system outperforms the Canadian system in:

- ◆ ratio of physicians to population
- ◆ ratio of hospital beds to population
- ◆ wait times (emergency care, primary care, specialist consultations, elective surgery)
- ◆ infant mortality rate
- ◆ two of three measures of in-hospital mortality
- ◆ six of six measures of patient safety

Importantly, Germany's far superior wait times performance and similar performance in outcomes from the health care process come at a substantially reduced cost compared to Canada. The superior value for money provided by the German health care model suggests it is well worth examining if lessons are to be learned for effective, positive reform of the Canadian health care system.

## Germany's health policy framework<sup>17</sup>

### General overview

Germany's health insurance system achieves universality through statutory enrollment with either competing not-for-profit sickness funds in the social health insurance scheme or substitutive private health insurance companies in the private health insurance scheme. The system is overseen by both federal and state (*Länder*) governments, as well as self-governing bodies. The legal and policy structure within which the health care system operates is determined at the federal level and hospital capacity planning is undertaken at the state level. Though important in terms of funding, regulation, and oversight, governments play little role in the direct delivery of health care.

There is a large role for corporatism/self-administration in the German health care system, where self-governing associations of SHI insurers and providers regulate the operation of the SHI system. Their activities include contract negotiations for the provision of services, organizing care, determining price schedules for medical goods and services, ambulatory care capacity planning, and acting as financial intermediaries between SHI insurers and providers. The Federal Joint Committee (a self-governing body in which provider and insurer associations play an important role) establishes guidelines

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<sup>17</sup> The description of the German health care system in this section is based on information found in: Bidgood et al., 2013; Blümel, 2012; Brandt, 2008; Busse, 2013; Cheng and Reinhardt, 2008; Hofmann and Rosenbrock, 2013; Kumar and Schoenstein, 2013; Lundy and Finder, 2009; Obermann et al., 2012; Paris et al., 2010; Roeder, 2012; Schnackenberg and Tabernig, 2011; and Stolpe, 2011.

for SHI and oversees the list of benefits provided under SHI among other regulatory and oversight activities (including contributing to the activities above). Obermann et al. note: leaving the state out of daily management of the health care system results in “flexibility, better understanding of local needs, [and] less bureaucracy” (2012: 25).

Germany’s health insurance system is the world’s oldest universal/government-regulated statutory health insurance system, with mandatory health insurance enrollment for all workers below an income threshold enacted under Chancellor Otto von Bismarck in 1883. Though the organization of the health care system around independent insurers and providers with a large role for corporatism/self-administration has remained largely intact since that time, many of the details of how the system operates have been altered in search of greater efficiency, financial sustainability, and economic competitiveness. In recent years the German health insurance system has undergone substantial reform of financial contribution policies for SHI, regulations for private health insurance providers aimed at improving the affordability of private health insurance, and the introduction of a statutory insurance requirement for all to ensure universality.<sup>18</sup> The hospital sector has also seen an increased role for private for-profit ownership and operation.

## Fiscal/financing arrangements

Two separate insurance systems operate side-by-side in Germany (Figure 1). The larger of the two, covering some 85% of the population, is the Social Health Insurance (SHI) system<sup>19</sup> which provides mandatory insurance coverage for employees earning less than a pre-determined income threshold, students, and those without income (including those receiving unemployment benefits). There is also a much smaller private health insurance (PHI) system,<sup>20</sup> covering some 11% of the population, which is available to the self-employed<sup>21</sup> and high-income earners (making more than €50,850, or CAD\$65,340<sup>22</sup>, annually in 2012) who can voluntarily choose to permanently leave the SHI

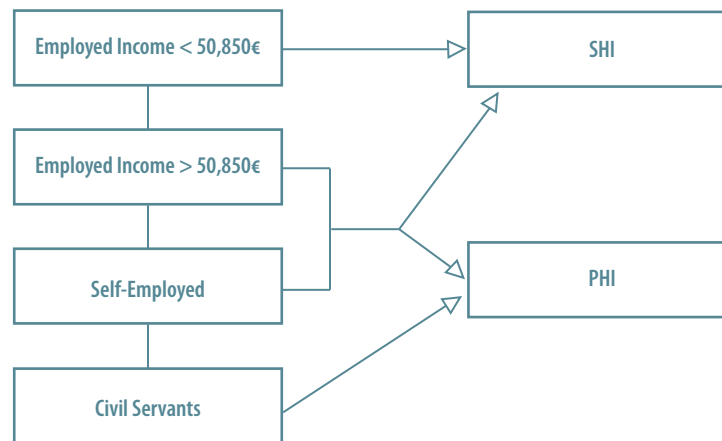
18 Approximately 0.2% of Germans (~200,000) were uninsured in 2007 (Cheng and Reinhardt, 2008). The mandate for those below the opt out income threshold (discussed below) was effective in 2007 with the entire population subject to the mandate in 2009. Several additional reforms aimed at ensuring access to insurance, particularly in the private health insurance system, accompanied the introduction of this mandate.

19 Known in Germany as *Gesetzliche Krankenversicherung* or *GKV*

20 Known in Germany as *Private Krankenversicherung* or *PKV*

21 Not including farmers, who fall under mandatory SHI cover.

22 All Canadian dollar conversions in this study are based on the average Euro to Canadian dollar conversion rate for 2012 from the Bank of Canada’s 10-year currency converter.

**Figure 1: German insurance systems and choice**

Source: Obermann et al., 2012: 147.

system.<sup>23</sup> Those who may choose between SHI and PHI but opt for SHI are called voluntary insured in the SHI system, with some 75% who have the option choosing to remain in the SHI system rather than switch to the PHI system. Regardless of system, German residents are required to carry health care insurance coverage.

Public employees, including teachers and university professors, may also participate in the private insurance sector for the share of health costs not reimbursed by government. The remainder of the German population, such as soldiers or policemen, are covered under special programs that may pay for health services directly.

## SHI

Insurance in the SHI system is provided by some 145 competing independent, not-for-profit sickness funds (*krankenkassen*) that are federally registered and regulated by the federal government. There has been a steady decline

23 Schneider (2002) notes that this requirement prevents the SHI system from being “burdened” (2002: 4) by the elderly returning from PHI. The permanent opt out may also avoid individuals departing the SHI system for PHI when it is financially beneficial (when they are young and healthy perhaps without children, for example) but returning to the SHI scheme when PHI is no longer financially attractive (after children for example). A number of regulations apply to the PHI scheme to ensure affordability for those who have opted out of SHI.



in the number of sickness funds over time, in part the result of a focus on reducing administrative costs and increasing the pool of insured individuals that are partly driven by competitive premium pressures. The 145 funds break down into: 112 BKK or company sickness funds (18.5% of members), 12 AOK (*Allgemeine Ortskrankenkasse*) or general public sickness funds (34.8% of members), 16 other funds (farmers funds, minders guilds funds, etc., 11.3% of members), and 6 *Ersatzkassen* or substitute sickness funds (35.4% of members) (Obermann et al., 2012). While in the past most individuals were assigned an SHI fund based on their geographic location and/or employment characteristics,<sup>24</sup> making these distinctions between type of fund more relevant, choice of sickness fund for all Germans (not just those voluntarily in the SHI system but excepting farmers<sup>25</sup>) has been in place since at least 1996, if not earlier for many. Generally, members can switch SHI funds with two months' notice after an 18 month initial membership period (elective insurance scheme contracts last 3 years). The result is that SHI funds compete with one another for clients, under a requirement that they must accept any applicant.

While the German SHI system is primarily premium-funded, premiums are based on gross salaries or wages as opposed to a risk-rated or flat-rate/pooled premium. The share of income or contribution rate to be paid as the premium for SHI is fixed (since 2011) at 15.5%, split between employers (7.3%) and employees (8.2%).<sup>26</sup> The plan is for future health cost increases in excess of income growth to be funded through fund-imposed member premiums (discussed below) rather than changes in the contribution rate in an effort to protect (non-wage) labour costs from increase.

Premiums are charged on earnings to a pre-determined contribution assessment ceiling, which was set at €45,900 (CAD\$58,980) in 2012 making the maximum SHI contribution roughly €593 (CAD\$762) per month or €7,114.50 (CAD\$9,142) annually (counting both employer and employee contributions). A low-income limit for employee contributions also applies, below which only the employer contribution is made. As mentioned above, individuals must be insured in the SHI system until their earnings exceed the social security income threshold (€50,850 in 2012) at which point the option to permanently leave SHI for the PHI system becomes available. Those

24 This is similar to how individuals are assigned to an insurance company in Japan. The Japanese health insurance system was originally based on the German model (Esmail, 2013).

25 Agricultural health insurance funds do not participate in the general SHI system with choice of insurer.

26 The reliance on wages as the base for SHI premiums has not been without its problems, as households are less dependent on wage income over time alongside a general expansion of self-employment and contract work.

who leave are not able to return to SHI even if their income falls below the threshold in future years.

Premiums are paid by the working household member, with non-working spouses and dependent children included on the policy at no additional cost to the premium-payer (or employer).<sup>27</sup> Health insurance premiums for pensioners are at the same rate as those for employees (15.5% in 2011) with 50% paid for by the pensioner and the other 50% paid for by statutory pension insurance. Unemployed people contribute from their unemployment entitlements while long-term unemployed with a low entitlement have a fixed per capita premium paid by the government employment agency.<sup>28</sup> Those who have no income are covered by the social fund which arranges health coverage directly with providers or through one of the AOK funds.

In 2012, 43% of those insured by the SHI system were mandatory members including the employed, students, and unemployed. Family members of insured individuals made up 24% of SHI members and 26% of SHI members were pensioners. Finally, 7% of SHI members were voluntary members who had chosen to remain in the SHI system rather than move to the PHI system (Obermann et al., 2012; calculations by author).

Premiums are paid to the sickness fund of choice, with the funds then transferred to the national level where premium payments to all funds are collected by the German Health Care Fund (*Gesundheitsfonds*). Taxpayer funds are also paid into the German Health Care Fund in part to fund coverage for children in the SHI system. These funds are then redistributed among SHI funds on a risk-adjusted per person basis using a risk adjustment model known as Morbi-RSA that adjusts payments for age, sex, and 80 pre-defined chronic and serious illnesses (such as cancer, AIDS, or cystic fibrosis, as reported by insurance companies and providers for an individual in a previous period).<sup>29</sup> Under this system, SHI funds will receive equal payment for

27 The German approach to premium payment, where non-working family members are covered at no additional cost to the premium payer and where unemployed individuals maintain insurance even without the employer contribution in addition to guaranteed issue/renewal (and an insurance mandate), reduces the likelihood of job-lock (remaining in a job in order to keep health insurance). Free choice of insurance fund means individuals leaving a job or changing jobs have the opportunity to remain in the same sickness fund if they wish to do so.

28 In 2010, 8% of SHI revenues or €15.4 billion came from these tax transfers (Blümel, 2012).

29 More specifically, Morbi-RSA (morbidity-oriented risk structure compensation) uses 152 risk groups in total: 40 age and sex categories, 106 morbidity categories based on the 80 conditions, and 6 age- and gender-based categories for those who received invalidity benefits. Relevant diagnoses are reported to the Federal Insurance Office annually by sickness funds, within which hospital diagnoses are immediately accepted as reliable while GPs must provide a second confirmation within six months. Evidence of appropriate drug treatment is required to further validate some diagnoses. Funds also receive a small payment for administrative costs for patients enrolled in a disease management program.

patients with similar characteristics at least in terms of age, sex, and the conditions included in Morbi-RSA.

Sickness funds are not limited to only these revenues from the German Health Care Fund, and are permitted to directly charge members supplementary premiums. These direct premiums are expected to become increasingly important in the financing of SHI over time, adding to a prior shift away from equal employer financing in the contribution rate. A social compensation/federal subsidy that reduces the income-related contribution is provided to members if the average supplementary premium exceeds 2% of the member's wage income (on which the SHI contribution is based).<sup>30</sup> Members of SHI funds that elect to charge or increase the additional premium are permitted to leave the SHI fund and join a competitor within two months of the new premium coming into effect.

Plans that spend less than their allocation from the Fund are able to pay members a bonus, offer additional benefits beyond those in the basic SHI benefits package, or maintain financial reserves. These savings/additions may be generated through operations. They may also be generated through elective plan features that can be offered to members by SHI funds including: increased cost sharing/personal financial responsibility, no-claims bonuses, disease management and integrated care programs, restricted provider networks, specified care pathways, and gate-keeping/family-physician led models (requiring GP referrals for specialists).<sup>31</sup> SHI members may also elect to pay for services directly and be reimbursed by the SHI fund, as is typically done in PHI (see below), rather than have services (less cost sharing) paid directly by the fund/regional associations.<sup>32</sup>

The German SHI system offers coverage for a broad range of services. While the services are defined in general terms by government, the specifics are determined by the Federal Joint Committee discussed above.<sup>33</sup> Under SHI, Germans receive coverage for: preventive services (including check-ups for healthy children, regular dental check-ups, basic immunizations, check-ups for chronic disease, and cancer screening), physician services, in-patient hospital care as a ward patient with the doctor on duty, out-patient care with registered doctors, rehabilitation, mental health care, dental care, optometry, hospice and palliative care, prescription drug coverage (subject to a negative

30 A €2 billion tax subsidy is being provided until 2014 to compensate for loss of income-related contribution revenue as a result of the social compensation.

31 Preventive services do not count towards the deductible in SHI.

32 The ability to vary plan characteristics and for funds to charge members additional premiums should allow SHI members to at least partially reveal their preferences for rationing and benefit restrictions versus increased expenditures individually, as opposed to a uniform system where such choices are made by government for all insured equally.

33 A list of services not covered (a negative list of services) is established at the central level.

list of drugs specifically not covered), and compensation for sick leave. SHI also provides domestic nursing care for situations where it is not possible to hospitalize patients, and may also do so for those with children under 12 and the handicapped who cannot be looked after by another person at home. The SHI system is not required to cover private doctors or surgeons, choice of doctor in hospital, private rooms, dental implants, or vision products for adults. SHI funds may also elect to offer additional benefits to members, over and above those required for the SHI system.

Cost sharing, in addition to elective SHI plan options, does however apply throughout the SHI system including:

- ◆ €10 (CAD\$13) for the first visit to a GP or specialist each quarter and for each subsequent visit in that quarter without a referral
- ◆ €10 for the first visit to a dentist each quarter, 50% for the cost of routine care (which falls to 40% or 35% if the patient has a history of checkups at least annually), and 20% for orthodontic treatments
- ◆ 10% co-insurance for non-physician care (for example from physical therapists or midwives)
- ◆ 10% co-insurance, with a €5 (CAD\$6) minimum not to exceed the cost of the product and €10 maximum for prescribed medical aids;
- ◆ €10 per day during a stay in a hospital or rehabilitation facilities and for outpatient rehabilitation services
- ◆ 10% co-insurance, with a €5 minimum not to exceed the cost of the product and €10 maximum for outpatient prescriptions, with no co-payment/co-insurance if the price of the prescription is at least 30% below the reference price (more than 5,000 drugs are thus effectively free of charge). Co-payments may not apply under certain SHI policy options if particular requirements (for example prescriptions are from a family physician) are met.

As is common in universal access health care systems that impose cost sharing requirements, a number of limits and exemptions apply. The daily co-payment for hospital and rehabilitation services applies to a maximum of 28 days per calendar year. Children and adolescents are exempt from most cost sharing (up to age 18) while pregnant women are exempt from all cost sharing. Cost sharing is subject to an annual limit of 2% of gross family disposable income (a portion of income is deducted for additional family members), after which point an exemption is provided for the rest of the year. That limit

is reduced to 1% of income for the chronically ill/those receiving on-going treatment for the same illness. Payments for services not covered by SHI or for price differentials paid for reference-priced pharmaceuticals are not included in the annual limit calculation. In addition to these limits, various additional exemptions/reductions apply to social assistance recipients and those in hardship, and young adults who receive annual check-ups among others. There are also co-payment reductions for early detection measures.

## PHI

Following a 2006 reform of the health care system in the Netherlands, Germany is the only developed nation with a universal insurance scheme where a sizeable portion of the population (including the self-employed and higher-income individuals) receive primary/substitutive health insurance coverage from a regulated private scheme and forego coverage from the statutory scheme that is in place for the majority of the population.<sup>34</sup> Other than contributions to the German Health Care Fund through the tax system, individuals who choose to seek mandatory cover in the PHI system are not required to make income based contributions to the SHI system. Those who move to the PHI system are also generally not able to return to the SHI system.

Some 43 companies, 24 for-profits and 19 not-for-profits, serve the PHI marketplace. Like the SHI sector, the PHI sector is premium funded but premiums are individual, risk-rated, and paid directly to the insurer.<sup>35</sup> Newborn children of PHI members are insured at the same tariff as the parents (no extra premiums for risk are charged) to ensure that even those born with disability are covered at a standard rate. PHI members may select both their insurance company and benefits/coverage, with a much wider choice of premium/coverage options and general deductible options than is permitted under SHI, though the basic benefits are similar. PHI policies also typically provide benefits not provided under SHI including treatment by senior or head physicians, superior hospital accommodations, and access to practitioners who do not participate in the SHI system. On the other hand, PHI members can also select plans that cover fewer benefits than SHI (for example, by excluding dental coverage). A portion of PHI premiums is tax-deductible.

34 Opting out of the public scheme is also permitted for civil servants in Spain (García-Armesto et al., 2010); and for physicians, pharmacists, lawyers, architects, public accountants, veterinarians, and notaries in Austria (Hofmarcher, 2013). In the Netherlands, prior to the 2006 reform, those above an earnings threshold and their dependents were not covered by the statutory system (Westert, 2012).

35 The risk rating charge is limited for new public employees, reflecting their reliance on PHI.

The German PHI system is regulated to ensure those who have made the permanent switch to PHI have access to insurance, including regulations around premium calculation, underwriting, the use of profits, and opportunities for switching between tariff options provided by an insurer. PHI companies are not permitted to cancel contracts or permitted to reduce coverage as long as premiums are paid. While premiums in the PHI marketplace are risk-rated, risk rating takes place only at entry and contracts are based on lifetime underwriting (including age at entry) with lifetime contracts for insured individuals. Those with pre-existing conditions cannot be refused insurance. Thus, premiums do not increase with age in the PHI system nor do they change in the event of disease or changes in health status after the beginning of the insurance contract. Premiums do increase if there is a general increase in the cost of health care.

Two important regulations support the goals of ensuring that PHI members do not face large premium increases as they age and that they are protected from a high premium burden if their income decreases: the *Basistarif* policy option and mandatory portable aging reserves. Introduced in 2009, the *Basistarif*, or basic benefit policy option under PHI, is intended to ensure that PHI members with serious pre-existing medical conditions, those with financial limitations, those in ill health, and others have access to PHI. Enrolment in this option is not restricted by age or health status. Prior to January 2009, this was known as the *Standardtarif* option and was available to elder and uninsured PHI members.

*Basistarif* policies are not risk-rated beyond age and sex, and offer coverage that is similar to that offered under the SHI system. Premiums are limited to the average maximum premium paid in the SHI system, while those identified as especially in need pay half that amount during their period of need (with tax-financed support if even that reduced premium is considered unaffordable). This premium gap is financed by all PHI members. The *Basistarif* policy option is supported by a risk adjustment scheme, separate from that used for SHI.

All PHI companies are required to hold a portion of premiums (10% to age 60, children exempt) for insured individuals in a fund to assist with premium increases in old age. This ageing reserve was previously not transferable in the case of an insurance company switch, in an effort to assist insurance companies with the balance in their risk pools, assist with financing the lifetime guarantee, and avoid adverse selection of members (attracting young healthy members while avoiding older and sicker members) by companies.<sup>36</sup> Since January 2009, the ageing reserves that would have been accumulated

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36 Hofmann and Rosenbrock (2010) point to a number of problems surrounding adverse selection created by the portability of ageing reserves in combination with the basic benefit policy option.



under Basistarif can now move insurance company with the PHI member, with the intention of encouraging greater competition in the PHI system.

The combination of an ageing reserve, life-time risk rating, and no increase in premiums with age means the PHI system works on something of a funding principle over time. This is in contrast to the pay-as-you-go basis used in the SHI system or indeed most universal health insurance schemes that do not have a capital fund for increased costs associated with advancing age. Thus, in theory, the PHI system is potentially better insulated from changes in demographics than the German SHI system or tax-funded pay-as-you-go systems like Canada's.<sup>37</sup>

## Financing

In 2008, SHI accounted for 58% of total health expenditures. Total public expenditures added up to 74% with statutory long-term care insurance, statutory old-age insurance, statutory accident insurance, and direct funding making up the remainder. PHI (both primary, as discussed above, and complementary/supplementary to SHI coverage, discussed below) accounted for 9% of total health expenditures, with private out-of-pocket spending (including cost sharing) accounting for 13% and employers accounting for 4% (Obermann et al., 2012).<sup>38</sup>

## Delivery of primary care

Primary and ambulatory specialist care in Germany is organized primarily around private practitioners who are largely in solo practices. Specifically, 79% of practices (58% of physicians) are single physician practices with 19% of practices (36% of physicians) dual or group practices. Multi-provider and multi-specialty health centres make up 2% of practices (6% of physicians) (Blümel, 2012; Busse, 2013). Most physicians employ physician's assistants. Since 1992, regional physician associations are able to geographically restrict settlement of new physicians based on their specialty.

37 The unfunded liability of Canada's universal access health care system, in part driven by changing demographics, was estimated to be \$537.7 billion in 2010 (Palacios and Esmail, 2012).

38 Canada's total health expenditures break down as approximately 70% public and 30% private. Public expenditures cover 91% of all spending on hospitals and 99% of all spending on physicians, while covering less than half (46%) of prescribed drug expenditures. On the other hand, nearly half (46%) of private expenditures on health care in Canada are for drugs (both prescribed and non-prescribed) and dental care (CIHI, 2012).

Individuals, whether in SHI or PHI, have free choice of ambulatory care physician including direct access to ambulatory care specialists without a referral if desired. The network of practitioners is larger for PHI patients than SHI patients, as PHI offers access to specialists who are not registered under SHI. SHI members must go to practitioners recognized by the sickness funds (more than 90% are) and may be further restricted by their choice of SHI fund/policy. GPs only play a formal gate-keeping function and registration with a GP is only required if patients have voluntarily opted for such coverage with their insurer. Choice of physician is supported by information on patient experiences and patient satisfaction provided by media outlets and non-government organizations.

GPs and specialists in ambulatory care for both SHI and PHI are compensated primarily on a fee-for-service basis. The details of compensation differ between insurance systems and compensation is typically higher for patients covered by PHI. Further, SHI payments are increasingly moving from capped fee-for-service to a capped mixture of fee-for-service, capitation, and lump sum payments. SHI funds also offer integrated care contracts to physicians with a capitation rate paid for enrolled patients.

For SHI patients, physician compensation is based on the uniform valuation benchmark schedule (*Einheitlicher Bewertungsmaßstab* or EBM) determined nationally by physician and SHI fund associations. This schedule, along with a national score defined annually, provides euro prices for services provided to SHI patients. Below this level of fee determination are regional agreements between regional physician and fund associations that determine a joint budget for the region (and any divisions between general practitioner and specialist care). That budget is paid by SHI funds to the regional physician association, which acts as a financial intermediary between funds and providers.

For their part, SHI physicians bill the regional physician association for services, with practice billings limited by a pre-determined budget based on case volume, specialty, and practice age-structure (practices with older patient populations will have higher budgets than those with younger populations).<sup>39</sup> Physicians and group practices that exceed their budget will receive reduced reimbursement per item but may also receive consideration for a higher budget in the future. SHI physicians are not permitted to extra bill (charge prices higher than the SHI schedule for covered services).

PHI services are reimbursed using a different national fee schedule known as the GOÄ (*Gebührenordnung für Ärzte*) determined by the national

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39 More specifically, physician budgets are comprised of two components: the *Regelleistungsvolumen* (RLV) that depends on case volume, physician specialty, and patient ages; and the *Qualifikationsgebundenen Zusatzvolumen* (QZV) that is based on the physician's specialty/groups of special services.



government. This schedule provides a fixed euro value for services, while practitioners are permitted to charge between 1 and 3.5 times that value with the multiple determined by the individual physician.<sup>40</sup> This multiplier is restricted for patients covered under a *Basistarif* policy. While fees with the multiplier are typically higher than compensation for similar services under SHI,<sup>41</sup> PHI services are also not subject to budget or volume restrictions. This makes PHI patients additionally attractive to providers. Physicians typically bill PHI patients directly while patients apply to the insurer for reimbursement.

## Delivery of specialized, hospital, and surgical care

The private sector plays a relatively large role in the delivery of hospital services in Germany. In 2010, 30.5% of hospitals were publicly owned, 36.6% were private not-for-profit, and 32.9% were private for-profit.<sup>42</sup> Public and private not-for-profit hospitals tend to be larger than private for-profit hospitals, leading to a 48.3% share of beds in public hospitals, 35.6% in private not-for-profit hospitals, and 16.1% in private for-profit hospitals (Bidgood et al., 2013).

This distribution reflects an increasing reliance on private hospital ownership over time, with the number of private for-profit hospitals having increased by some 90% since 1991 compared to a decrease of some 43% in the number of public hospitals over that same time (Roeder, 2012). The expansion of the role of for-profit providers has mainly been through privatization of public hospitals (including one university hospital in Hessen), which often involved municipal hospitals in rural areas and Eastern Germany and publicly-listed chain operators.<sup>43</sup> These privatizations have in part been driven by a need for hospital investments and government fiscal difficulties particularly at the local/municipal level. Private operators also benefit from greater

40 Physicians may charge more than 3.5 times if the patient agrees while charges over 2.3 times must be explained in the bill to the patient. Some 80% of services in the early 2000s were billed with a multiplier of 2.3, and less than 10% showed a multiplier below that level (Schneider, 2002). A more recent examination suggests a typical range of 1.6 to 3.2 (Porter and Guth, 2012).

41 In the early 2000s, payment for SHI services roughly equated to a multiplier of 1 in the PHI fee schedule (Schneider, 2002). This means charges in the PHI sector can be more than twice as high, and commonly are, in comparison with charges in the SHI sector.

42 Public hospitals are commonly owned by municipalities but may also be owned by state governments (primarily university hospitals and mental institutions). The federal government only operates military hospitals. Private not-for-profit hospitals are typically owned by charitable organizations including churches.

43 Large chain operators include Asklepios, Sana Kliniken, Fresenius Helios/Helios Kliniken, and Rhön-Klinikum.

flexibility in collective agreements and greater ability to manage employee participation in comparison with their public counterparts.

There is debate in Germany over which form of hospital ownership performs best. Some studies have found higher cost-efficiency and staffing levels at public hospitals. On the other hand, there is evidence of higher performance at private for-profit hospitals including: higher investment per case (some 64% higher than in public hospitals, contributing to the availability of newer technologies and approaches), fewer quality issues in quality audits, and shorter waiting times. In addition, the performance of formerly public hospitals was found to have improved after privatization, both in terms of medical quality and efficiency. Private for-profit hospitals also tend to treat more complex and older patients than their counterparts.

Germans, whether in SHI or PHI, have free choice of hospital with referral including private for-profit hospitals though, again, choice for SHI patients is restricted to hospitals operating in the SHI system and may be further restricted by their choice of SHI fund/policy. 91% of hospitals covering more than 99% of hospital cases participate in SHI, with a few private for-profit hospitals not accepting SHI patients. Choice of hospitals in Germany is supported by mandatory public disclosure of quality indicators alongside information published by media and non-government organizations. German patients are able to compare providers on clinical outcomes, use of appropriate processes, patient satisfaction, and patient experiences.<sup>44</sup>

Choice of physician within the hospital for SHI members is restricted to the doctor on duty or doctor assigned by the hospital. PHI patients typically have choice of physician including access to senior physicians. Hospital-based doctors in Germany are predominantly salaried employees with senior doctors able to treat PHI patients on a fee-for-service basis.

Hospitals in Germany are funded in two parts: investment costs through transfers of tax dollars and operations through activity-based funding. Since the early 1990s, as noted above, tax-funded subsidies from states have fallen considerably. This has led to an increased reliance on alternative funding sources for hospital investments. The few hospitals that do not accept SHI patients, and are not listed in the state hospital plans, do not receive tax funds for investment.

Since 2004, the German health care system (SHI and PHI) relies on a Diagnosis Related Group (DRG) activity-based funding model for all inpatient

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44 The mandatory quality reporting system measures more than 150 indicators for 30 diagnoses and procedures. Results for 27 of these indicators (determined by the Federal Office for Quality Assurance) must be published.

hospital services (with the exception of psychiatric care).<sup>45</sup> Under this system, hospitals are paid per patient based on the expected costs of dealing with that patient's condition (including important patient characteristics).<sup>46</sup> The German system uses national DRG weights based on the Australian Refined Diagnosis Related Groups (AR-DRG) system and includes some 1,148 categories.<sup>47</sup> Annual revisions to the system are made to account for changes in treatment patterns, costs, and new technologies. Hospitals negotiate annual budget caps for SHI services with SHI funds. Hospitals that exceed their budget must reimburse SHI funds part of the payment for the additional services, while those that operate below the budget cap receive additional compensation from SHI funds. PHI insurers, in addition to DRG payments, make additional payments to hospitals for private rooms and access to senior physicians.

While hospitals and hospital doctors typically do not provide outpatient or ambulatory services, hospitals are able to provide certain specialized services on an outpatient basis. These services are billed individually based on the uniform valuation benchmark (EBM) similar to the approach employed by SHI physician practices. Unlike physicians, however, hospitals bill insurers directly for outpatient services.

## Privately funded options/alternatives

Germany's system of comprehensive insurance coverage provided either in the competitive regulated SHI system or the competitive regulated PHI system, both providing timely access to quality care at all levels, means voluntary insurance coverage is generally for supplementary/complementary services for SHI members. This said, whether PHI or SHI members, Germans are able to seek care privately if they choose to do so.

45 A marginal amount of hospital budgets, other than for mental health services, comes from supplementary fees for items including certain complex and expensive services. Teaching, training, and research are also compensated separately from the DRG system. Emergency care is included in the DRG system, with a €50 (CAD\$64) per case discount for hospitals that do not have emergency departments.

46 Early in the implementation of the DRG system, hospitals were permitted to individually vary their base rate (the euro amount that is combined with the DRG relative weight to determine payment). Hospitals were to move to a state-wide base rate by 2010, with a plan for state-wide rates to converge closer to a nationwide base rate after.

47 According to Kumar and Schoenstein (2013), Germany's DRG schedule has 1,200 groups across 25 major diagnostic categories. For comparison, the AR-DRG has 698 groups across 23 major diagnostic categories.

Voluntary health insurance for SHI members provides a number of benefits beyond those included in compulsory SHI including: coverage for certain SHI co-payments (for dental care and hospital stays, for example), access to single hospital rooms/better amenities, and coverage for additional benefits (for example vaccinations, out-of-country coverage, and complementary/alternative medicines).

As discussed above, the PHI and SHI systems (and by extension the voluntary insurance sector) share medical resources. Hospitals in Germany treat both SHI and PHI patients and physicians are permitted to see both SHI and PHI patients, even within the same hospital.

## Lessons for Canada

The combination of superior access to health care, at least in terms of timeliness, and broadly similar outcomes from the health care process with fewer resources suggests there is much Canadians can learn from the German approach. Emulating the German approach to health care would require substantial reform of the Canadian system including, most significantly, a shift from a tax-funded government insurance scheme to a system of independent competitive insurers within a statutory enrolment framework. While that may be a large undertaking, the evidence presented above suggests there may be significant benefits to doing so.

The German health care system departs from the Canadian model in the following important ways:

- ◆ Cost sharing for all forms of medical services
- ◆ Private (both for-profit and not-for-profit) provision of acute care hospital services<sup>48</sup>
- ◆ Activity-based funding for hospital care<sup>49</sup>
- ◆ Permissibility of privately funded parallel health care (in addition to the PHI option)
- ◆ Ability to opt-out of the statutory health insurance system (SHI) for mandatory regulated primary private health insurance (PHI)
- ◆ A system of statutory independent insurers providing universal services to their insured populations on a largely premium-funded basis (commonly

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48 Beyond a small private surgical clinic sector, Canada's health care system generally relies on public hospitals for acute and surgical care (Detsky and Naylor, 2003).

49 Payment is based on services provided, as opposed to budgetary models which pre-fund patient care in bulk.

known as a social insurance system), with individual choice of insurers and some personalization of insurance coverage

Of these core policy differences, three can be implemented by Canada's provinces without violating the letter of the Canada Health Act (CHA): private delivery of acute care and surgical services, activity-based funding, and private parallel health care. As noted by Clemens and Esmail (2012), however, a federal interpretation of the term *reasonable access* in section 12 of the CHA could be used to discourage (through reductions in cash transfers) a broad range of policies at the sole discretion of the federal government, including in particular private acute care providers and private parallel health care. Given these reforms are emulating a more successful approach to universal access health care, and thus cannot be reasonably opposed in a factual manner, this restrictive feature of the Act is not considered here.<sup>50</sup>

The first policy difference, cost sharing, does clearly violate the CHA and would result in required reductions in federal transfers for health and social services under sections 19 and 20 of the CHA.<sup>51</sup> This policy change requires either a federal change to the CHA, which may be undertaken unilaterally by the federal government (Clemens and Esmail, 2012; Boychuk, 2008), or a province to accept dollar-for-dollar reductions in federal cash transfers. Setting aside concerns about the politics of doing so, this latter option may not necessarily be against a province's financial interest depending on the savings that may accrue from such a decision (Esmail, 2006).

Germany's social insurance construct with multiple insurers and choice of policy options also violates the CHA. The ability to opt out of the SHI scheme in Germany and to instead opt for PHI cover with different premiums/premium determination and the possibility of a greater range of coverage options, all under the umbrella of universality/mandatory coverage, also violates the CHA. Importantly, section 8 of the Act disallows multiple insurer social-insurance constructs, though monopoly social insurance constructs

50 Of course, the argument against these policies by a federal government could be purely ideological in nature, as so many discussions of allowable health policy have been in the past. As it is difficult to predict the outcome of such ideological opposition, and in the interests of objectivity, such an argument is not entertained here.

51 Clemens and Esmail (2012) also note that the CHA, partly through limitations on cost sharing, effectively discourages the inclusion of pharmaceuticals under the taxpayer-funded universal health insurance scheme. Clemens and Esmail argue that "free" physician and hospital care required by the CHA encourages patients to forego pharmaceutical care unless the province sets deductibles/co-payments to zero and bears the full cost. This either harms the health of patients and decreases cost-effectiveness, or forces provincial policy decisions regarding pharmaceutical coverage. Clemens and Esmail further note that this distortion under the CHA relates to many areas of health care in addition to pharmaceuticals, including home care and long-term care.

are permitted. Further, both sections 10 and 12 of the CHA require provinces offer insurance for physician and hospital services on “uniform terms and conditions” which means the German policy of allowing personalized health insurance agreements and the ability to opt out of the general scheme for a differently funded scheme with a greater range of options are not permissible under the CHA. Requiring some citizens to seek care only in the PHI system also violates the requirement to “entitle one hundred percent of the insured persons... to the insured health services provided for by the plan” under section 10, though this violation may be tempered by the mandatory insurance requirement and mandated *Basistarif* policy option. By violating “principles” of the CHA, a province undertaking these policy approaches would put its entire cash transfers for health and social services at risk. Implementing these policy choices would require a federal change to the CHA or a province’s willingness to forego federal cash transfers.

This said, interference or compliance with the CHA neither validates nor invalidates these policy approaches. It is critical to recognize that many of the health policy constructs pursued throughout the developed world would violate the CHA and past federal interpretations of the CHA. Yet these constructs have been shown to provide superior access to and outcomes from the health care process (see, for example, Esmail and Walker, 2008). The Canada Health Act has clearly not produced superior access and outcomes for Canadians. Thus, the discussion of reforms below sets aside the CHA discussion and focuses only on the policy changes that would need to take place if Canada were to more closely emulate the German approach to health care.

Principal policy differences two and three are very much intertwined and relate strongly to the efficiency of hospital and surgical care. Importantly, the economic literature generally finds that private businesses (both for- and not-for-profit) operate more efficiently and at higher quality with a greater consumer focus than their public counterparts. Reviews of the literature focused on hospital care are generally supportive of the conclusion for businesses in general (Esmail and Walker, 2008). Indeed, a recent survey of the literature on hospitals and surgical clinics finds that competition, and a blend of public and private (both for- and not-for-profit) delivery will likely have a positive impact on some measures of health care, little impact on others, and is unlikely to have a negative impact (Ruseski, 2009). That survey concludes that “... a carefully crafted policy that encourages competition among non-profit, for-profit, and public providers can result in a health care system that is fiscally sustainable, ensures access to quality health care, and results in better health outcomes” (Ruseski, 2009: 42). Further, reviews of hospital funding mechanisms have generally found that activity-based funding is markedly superior to budget-based funding in terms of efficiency and output (Esmail, 2007).



Neither result is surprising when one considers the incentives associated with the various approaches to ownership and financing.

Kornai (1992) identified budget constraints as one of the major and unchangeable differences between private-sector businesses and government. Government budget constraints are “soft”, since it is effectively impossible for government to be de-capitalized. Private-sector businesses, on the other hand, face “hard” budget constraints: if they incur sustained losses, or even a few large losses, the decline of capital can push them into bankruptcy. Kornai argued that this central difference between the two types of entities can result in extraordinary differences in operations. Private-sector businesses must provide consumers with the goods and services they demand in a timely manner and at affordable prices that are consistent with their quality. Government Business Enterprises (GBEs) do not face the same constraints. They can consistently lose money by offering goods and services whose prices do not reflect their quality or timeliness. Put more simply, private businesses face the risk of going under if they fail to provide good value, and thus will usually behave differently from their public sector counterparts who do not. Further, public enterprises tend to employ less capital and more labour intensive processes than their private sector counterparts (Megginson and Netter, 2001). That GBEs do not incorporate an optimal amount of capital has negative implications for both labour and total factor productivity.

With respect to funding, a key problem with global budgets or block grants (the dominant form of hospital funding in Canada) is the lack of connection between receipt of funding and delivery of services. This leads to weak incentives for efficiency (particularly where budgetary limits are flexible) and weak incentives for the provision of higher quality and more timely services, while generating incentives for adverse risk selection (avoiding more costly cases) and shifting the delivery of services to other levels of care or other providers (Leonard et al., 2003; Gerdtham et al., 1999). Activity-based funding, by more directly connecting funding with the provision of services (commonly referred to as money following the patient), generates incentives to increase service volumes as well as provide higher quality/shorter delays (attracting patients to the facility), while still maintaining incentives for efficiency by paying only for the average cost of treatment and not for all services delivered.

Studies have shown that activity-based funding can lead to a greater volume of services delivered using existing health care infrastructure, reductions in wait times, reductions in excessive hospital stays, improved quality of care, more rapid diffusion of medical technologies and best practice methods, and the elimination of waste (see, for examples, OECD-DFEACC, 2006; Bibbee and Padrini, 2006; Bjørn et al., 2003; and Siciliani and Hurst, 2003). In addition, studies have also shown a positive benefit to including private providers within an activity-based funding model, particularly if a competitive bidding process is employed to determine compensation rates under the



activity-based funding model. For example, OECD-DFEACC (2006) notes the “presence of for-profit hospitals can be associated with 2.4% lower hospital payments in a geographic area,” that “[p]rice competition between selectively contracted hospitals can lead to price reductions of 7% or more,” and that “[b]enchmarking of payment levels against most efficient hospitals can lead to a 6% reduction in costs at less efficient hospitals” (25). An OECD economic survey of the UK has also noted that “[i]nvolving a broader mix of providers can stimulate productivity as public and private providers learn from each other’s innovations...” (OECD, 2004: 5).

It is valuable to reiterate the benefits created by combining activity-based funding and competition with private provision of services. When it comes to efficiency, ownership (though an important factor) may be less important than the extent of competition. Both public and private providers are likely to be less efficient in the absence of competition, while both are likely to operate more efficiently in the presence of competition. The key advantage of introducing more private provision of health care is that it would provide greater competition, putting pressure on all providers (whether public or private) to operate more efficiently.<sup>52</sup>

Clearly there are significant benefits that can accrue from shifting from global budgets to activity-based funding and including private providers under the universal access health insurance scheme.

**Recommendation 1:** *Activity-based funding models for hospital/surgical care, potentially with competitive benchmarking employed to set fees; private provision of hospital and surgical services.*

Many in the Canadian health care debate have argued that allowing a private parallel health care sector is tantamount to abandoning the ideal of universality, or that it would put Canada on a slippery slope to abandoning universality. Yet the German PHI system does not appear to have compromised quality or access in the SHI system. As shown in the system comparison section, the German health care system provides more timely access to health care than the Canadian system (for all residents), with similar outcomes from the care process at lower cost. This performance occurs in the presence of a PHI system available to higher income and self-employed Germans in which providers are able to charge higher fees for services (as compared to those in the SHI system) and in which providers (both doctors and hospitals) may serve both PHI and SHI patients.

From the Canadian perspective, a private parallel health care sector plays several important roles. First, it provides individuals an option to return

52 Further, as noted above, there may be differences between public and private providers in their responsiveness to competition and financial incentives.

to normal life more rapidly than might be possible through the universal system. This has private benefits for those who opt to not wait including reduced financial losses if unable to work while waiting and fewer limitations on personal activities. This also has potential benefits for worker productivity in terms of increased work effort and productivity for those who opt to not wait for care (Day, 2013; Globberman, 2013). Second, when patients exit the universal system and use the private parallel health care sector they free up resources in the universal system for patients who have opted to not seek private care. Third, a private parallel health care sector provides a safety valve for the public system in the event of a capacity limitation or sudden increase in demand. Fourth, a private parallel health care sector creates incentives for better service in the public system through competition.

Allowing physicians to work in both the public and private health care sectors, rather than requiring them to opt out of the universal system, has the benefit of making more efficient use of highly skilled medical resources. Importantly, under dual practice, any spare physician time that may be available due to limitations in practice under the universal scheme and/or restricted access to operating time can be employed to treat patients in private settings thus increasing the total volume of services provided. Even in the absence of such “free time,” physicians may be encouraged to take less leisure time and work additional hours in return for supplementary private compensation.

Importantly, dual practice for physicians is not an unusual practice in the developed world—it can be found in Denmark, England, Ireland, New Zealand, Norway, Spain, Sweden, Australia, Finland, and Italy. In Australia, Denmark, England, and Ireland specialists working in public hospitals can also visit or treat private patients within the same institution. This said, restrictions may be imposed either in terms of earnings (England, for example), authorizations (Finland, for example), restrictions on the use of public hospitals (Spain, Sweden, Netherlands, for example), or by other regulations (Hurst and Siciliani, 2003). Put differently, allowing dual practice in an effort to more efficiently employ valuable medical resources is not uncommon, and various regulations that work to avoid potential negative consequences are available to be studied and adopted as well.

It is less clear whether the dual approach where higher-income and self-employed Germans may opt out of the SHI scheme for the regulated PHI scheme is one Canada should emulate. Part of the difficulty in considering this option in a Canadian or non-German context lies in understanding how it might be considered as part of a reform package. Universal insurance coverage in Germany is not maintained solely through the SHI system and relies on a number of regulations in the PHI system as well, making the PHI option part of the universal scheme rather than an alternative to it. On the other hand, PHI—at least at time of voluntary permanent opt out—is a system

predominantly for those who have a high income and are in good health, perhaps without children. While these individuals continue to contribute to the SHI system and coverage for the elderly, chronically ill, and those with lower income through taxes and the redistribution of PHI premiums, there is nevertheless a reduction in the contributions of higher income individuals as well as a departure of relatively better risks experienced in the SHI scheme at least in the short run (income mobility and changes in health status, not to mention tax contributions and the partial capitalization of demographically-driven unfunded liabilities make the net effect of departure less certain in the long run).

Some of the key benefits of the PHI option might also be captured within the recommendation for a more flexible universal SHI framework discussed below. For example, the greater ability to tailor insurance options and vary deductibles/premiums could be accomplished through greater policy variation under a universal SHI scheme. Competition in basic levels of coverage and provider compensation might also be captured to at least some extent through greater variation in what insurance policies are required to cover and how provider prices are determined within a universal SHI scheme, as well as through complementary/supplementary insurance policies and policy options such as permitting extra-billing.

It is important to remember also that Germany's PHI/SHI separation dates to the origins of its statutory insurance in the late 1800s, when it was felt that government should support and assist those who may not be able to provide for themselves while those with sufficient means or income should not fall under government programs. While that perspective may still be relevant, and while Germany's approach remains unique among developed nations with universal access insurance programs, the PHI sector in Germany is heavily regulated and recent reforms have effectively made it part of the universal scheme with mandatory coverage and its own redistributive mechanisms.

In summary, it is perhaps best to consider the separation between SHI and PHI less a separation between a universal scheme and a private alternative, and more as a different way of structuring insurance options under a universal social insurance approach (discussed below).

**Recommendation 2:** *Private parallel health care and health care insurance for medically necessary care, and dual practice for physicians to maximize the volume of services provided to patients in both public and private settings.*

A lack of cost sharing for medical services in Canada has resulted in excessive demand and wasted resources.<sup>53</sup> Having patients face a limited but positive

53 There are some who disagree with this view in the Canadian debate, often citing studies by Forget et al. (2002) and Roos et al. (2004). However, neither demonstrate that low income users and frequent health care users aren't wasteful. Nor do they demonstrate

price for health care both increases cost efficiency of health care (ultimately reducing total spending) and improves access to practitioners as demand for services is reduced through a nominal out-of-pocket charge. This is borne out in the economic literature showing the value of cost sharing in an insurance scheme (see, for example, Ramsay, 1998; Newhouse et al., 1993). Further, cost sharing policies have been shown to not have an adverse impact on health outcomes as long as specific populations are exempt (Newhouse et al., 1993; Esmail and Walker, 2008). Studies of experiences in Nordic countries and Canada also point to the importance of proactive administration and automatic provision of exemptions in order to ensure that lower income individuals are not faced with potentially harmful barriers or limitations when accessing services (Warburton, 2005; Øvretveit, 2001).

**Recommendation 3:** *Cost sharing regimes for universally accessible health care with reasonable annual limits and automated exemptions for low-income populations.*

The final major policy difference between Germany and Canada is the use of a social insurance construct (with taxpayer support) including choice of insurer and tailoring of insurance policy (including both the statutory health insurance and regulated private insurance options) rather than a one size fits all taxpayer-funded government insurance scheme. A social insurance construct is primarily premium funded<sup>54</sup> and relies on an independent insurer or operator of the insurance scheme, as opposed to a tax-funded scheme like Canada's where government plays the role of insurer and services are funded

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that use of health care among those of higher income or among infrequent users isn't wasteful. They show clearly that the majority of health spending is driven by a small portion of the population and that use of health care increases with income (while sensitivity to cost sharing falls as income rises). But this is true in all developed nation's health care systems—it is not unique to the Canadian experience.

Thus, to the extent we can rely on international experience, we can rely on studies of the implementation of cost sharing in other nations (including the RAND Health Insurance Experiment) to inform thinking on cost sharing in Canada. Such studies typically show not insignificant reductions in total expenditures from low levels of cost sharing.

Further, even if we accept that there is no excess demand for health care services on the part of patients, cost sharing can act as a brake on excess supply of services by practitioners, a point made by both Newhouse (1993) and Tussing (1983).

- 54 Premiums in Germany are considerably different from health care premiums in Canada. German premiums provide a large portion of funding for health services and are paid to health insurers either directly or through a dedicated fund. Canadian health care premiums do not (or, for Alberta, did not) comprise a large portion of health care funding and are paid to general revenues from which health care insurance provided directly by government is funded.

primarily through taxation (either general or much less commonly hypothecated). Social insurance schemes in practice are often multiple-payer (insurer) and virtually always multiple provider models, and insurance companies (as in Germany) are often not only independent but non-governmental.

One of the central differences between a social insurance construct and a government insurance system is the de-politicization of decision making. This occurs through a clearer connection between the payment of premiums (to an insurer) and the receipt of services (funded by the insurer). The independence of providers from government makes politically-motivated intervention much less likely, particularly in the presence of a high level of self-regulation as in Germany, and creates a greater focus on the needs of funders and consumers as opposed to administrators and providers.<sup>55</sup>

A number of examinations of the relative performance of health care systems confirm that social insurance or statutory insurance models tend to outperform government-run tax-funded approaches. For example, Esmail and Wrona, in a review of access to medical technologies, note superior access to advanced medical technologies in social insurance models (2008). Recently, Matthews et al. undertook a broad review of health systems performance analyses including those by the World Health Organization, the Health Consumer Powerhouse, Canada's Frontier Centre for Public Policy, and the Commonwealth Fund. They find that social insurance models consistently outperform their tax-funded government-run counterparts, delivering "quality care with minimal delays at a reasonable price" (2012: 111)

The high level of respect for individual preferences and consumer choice in Germany combined with individual financial responsibilities further enhances these characteristics while adding a dimension of personalization to a mandatory scheme. Importantly, the competition between insurance companies that results from choice may serve to further enhance efficiency and quality, as well as consumer focus and responsiveness. Allowing individuals to tailor their insurance plan (within certain bounds) to their preferences may help to increase satisfaction with a mandatory scheme. It may also lead to a universal health insurance system that is more closely reflective of the preferences of the public, and may serve to improve efficiency in both the

55 An ancillary benefit is that premium-funded universal access health care insurance can more easily be adjusted to include risk-adjustment for controllable personal behaviours and choices such as smoking and obesity that increase health expenditures (imposed on other funders through the universal scheme) as compared with tax-funded schemes. Such an approach is more direct (and less distortionary) than the current approach to tobacco (consumption taxes paid to general revenues) and proposed approaches to obesity (taxes on certain foods, subsidies for certain activities, bans and restrictions in certain places, etc.) which are far less direct and do not provide individuals with a clear link between their choices and the cost of those choices.

health insurance marketplace and in the broader economy. Finally, this construct may also result in a closer relationship between total health expenditures and the demands/desires of the public (both upwards and downwards) than is the case in centrally-managed/planned systems as individuals trade off cost sharing and care management for lower health insurance premiums and react to changes in premiums over time individually. As in the German PHI system, partial capitalization of the liabilities associated with an ageing population might also be more readily possible under a social insurance or mandatory insurance approach.

**Recommendation 4:** *A social insurance construct with premium funding and taxpayer supports for those who cannot afford insurance, choice of insurer, and personalization of insurance policies.*

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