Exploring Global Health Care Cost Drivers: Canada and Chile

Sponsored by the International Actuarial Association Health Section (IAAHS) and the Academy’s Health Practice International Committee (HPIC)

November 4, 2015
Presenters

- John Have, FSA, FCIA (Canada)
- Jonathan Callund, MBA (Chile)
- Moderator: Susan Mateja, MAAA, FSA, Chairperson, Academy’s Health Practice International Committee
Exploring Global Health Care Cost Drivers: Canada and Chile

All nations face difficult challenges in providing health care to their people
Exploring Global Health Care Cost Drivers: Canada and Chile

A series of webcasts that highlight the health care models of various countries in 2015

- February 18 (Israel & Netherlands)
- May 13 (South Africa & US)
- September 3 (Australia & Singapore)
- November 4 (Canada & Chile)

We are holding a conversation that will explore the following:

- General characteristics
- Financing system
- Cost drivers
- Methods of coping with the cost drivers
- Measurement metrics
- Insights, successes, hurdles
- Future trends
Exploring Global Health Care Cost Drivers:

Canada

John Have, FSA, FCIA

November 4, 2015
Canada

- 7,000 km across
- 35.8 million pop’n
- 75% live within 200 km of U.S. border
- 70% live in urban areas
- 30% in or near
  - Toronto
  - Montreal
  - Vancouver
Canada’s Population

- Growing at 1.1% year with birth rate 1.6 per female
  - International immigration – 260 thousand per year
  - 19% population foreign born
- 1.2 million First Nations and Inuit
- 13 provinces and territories
  - Ontario – 13.8 million
  - Quebec – 8.3 million
  - British Columbia – 4.7 million
  - Alberta – 4.2 million
  - .....}
  - Nunavut – 37 thousand
- Intra-provincial migration – younger population for jobs
Overview of Canada’s Health Care System
Public Health Care System

Each Province has own plan with some funding from Federal gov’t subject to minimum as follows:

- Coverage of all legal residents after 90 days
- Portable between provinces – temporary or permanent moves with no interruption of coverage
- Reasonable access – allows for remote locations
- Covers **core medically necessary** hospital, physician, diagnostics and in-hospital drugs and supplies
  - Family physicians and/or ERs are gatekeepers
  - No extra billings, max nor deductibles allowed for **core** services
  - No private insurance allowed for **core** services
Provinces (cont’d)

- Most hospitals publicly owned
- Physicians – mostly private on fee for service basis
  - Provinces must provide reasonable compensation
- Some add para-medicals, drugs (seniors) …
- Additional coverage for those on social assistance – drugs, dental, paramedical, vision …

Federal government has separate systems

- First Nations and Inuit
- Military including veterans
Funding is government services model

- Provincial taxes – value added, general income taxes, and some health care payroll taxes
- Some provinces also have monthly premiums
- Federal government under Canada Health Transfer plan
  - About 23% of cost on provincial per capita basis each year to each province
    - Should be age adjusted?

Provincial per capita costs vary by province depending an age/gender mix and urban/rural delivery
Private Health Care

Private insurance or out of pocket (OOP) for non-core medical services

- Drugs not covered by province
- Dental
- Paramedical
- Vision services
- Medical supplies – outside hospitals
- Emergency medical services while outside Canada
- Medical tourism – pass the wait line for specialist
# Health Care Cost Split

<table>
<thead>
<tr>
<th>Country</th>
<th>% Public</th>
<th>% Private Ins</th>
<th>% OOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>70.6</td>
<td>15.1</td>
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<tr>
<td>Chile</td>
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<td>U.S.</td>
<td>48.2</td>
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<td>OECD Average</td>
<td>72.7</td>
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2013 OECD Costs
## Health Care Resources

<table>
<thead>
<tr>
<th>Country</th>
<th>Physicians</th>
<th>Nurses</th>
<th>Hospital Beds</th>
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<tbody>
<tr>
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<td>2.8</td>
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<td>2.6</td>
<td>11.1</td>
<td>2.9</td>
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<tr>
<td>OECD Average</td>
<td>3.3</td>
<td>9.1</td>
<td>4.8</td>
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2013 OECD numbers per 1,000 population
## Health Care Utilization

<table>
<thead>
<tr>
<th>Country</th>
<th>Doctor Visits</th>
<th>Hospital Discharges</th>
<th>MRI Scans</th>
<th>CT Scans</th>
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<tbody>
<tr>
<td>Canada</td>
<td>7.7</td>
<td>83</td>
<td>53</td>
<td>132</td>
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<td>Chile</td>
<td>3.3</td>
<td>95</td>
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<td>162</td>
<td>?</td>
<td>?</td>
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<td>129</td>
<td>40</td>
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<td>125</td>
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<td>156</td>
<td>51</td>
<td>136</td>
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2013 OECD numbers per 1,000 population
## Health Care Outcomes - 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>Infant Mortality per 1,000</th>
<th>Female Life Expectancy</th>
<th>Male Life Expectancy</th>
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<tr>
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2013 OECD numbers
Cost of Canada’s Health Care System
# Health Care Cost

<table>
<thead>
<tr>
<th>Country</th>
<th>% of GDP</th>
<th>Per Capita (US $ PPP)</th>
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<tbody>
<tr>
<td>Canada</td>
<td>10.2</td>
<td>4,351</td>
</tr>
<tr>
<td>Chile</td>
<td>7.4</td>
<td>1,623</td>
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<td>Australia</td>
<td>8.8</td>
<td>3,866</td>
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<td>France</td>
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<td>Netherlands</td>
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<td>5,131</td>
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<tr>
<td>Sweden</td>
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<td>UK</td>
<td>8.5</td>
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<td>US</td>
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<td>OECD Average</td>
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<td>3,453</td>
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</table>

2013 OECD  – excludes workers’ comp and medical research
Health Care Cost Trends

Growth in per Total Capita Costs – Constant Dollars

Source - Canadian Institute of Health Information (CIHI)
Last 25 years total health care costs - 5.5% per annum
• 1.1% population growth, 2.6% inflation, 0.9% aging, 0.9% health care utilization
Total Health Care Cost Trends versus GDP

Source - CIHI
Health Care Cost Trends

Recent Trends in Public Health Care Costs - 2010-14

Source - CIHI
Health Care Cost Trends

Recent Trends by Age of Public Health Care Costs
Constant Dollars – 1998-2014

Derived from CIHI Data
Canada’s Health Care System

Issues Ahead
Federal Government Role

By Canada’s constitution provinces have role of actually providing healthcare. Federal gov’t limited to:

- Providing Federal government assistance in funding through Canada Health Transfer (per capita basis)
- Sponsoring medical research
- Overseeing approval of new medical procedures and drugs
- Collecting and analyzing detail healthcare cost and utilization from provinces (Canadian Institute for Health Information)
  - Since 1998 and constantly expanding
  - Standard or customized data sets available
Federal Government Role

- Should Federal Gov’t have larger role in delivery of health care for smaller provinces and territories?
- Information technology and workforce modernization?
  - Better sharing of medical records among providers
  - Patient empowerment – own their medical records?
  - Explore and expand role of “big data”
- Role in procurement of drugs and other medical supplies?
- Research innovative approach to delivering health care in diverse settings with variable resource availability?
  - Better integration of health care services since paid from different silos (hospitals, physicians, drugs, other services … public, private, OOP)
  - Urban vs rural
## Prescription Drugs

<table>
<thead>
<tr>
<th>Country</th>
<th>Pharma (US$PPP)</th>
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<tbody>
<tr>
<td>Canada</td>
<td>761</td>
</tr>
<tr>
<td>Chile</td>
<td>228</td>
</tr>
<tr>
<td>Australia</td>
<td>590</td>
</tr>
<tr>
<td>France</td>
<td>622</td>
</tr>
<tr>
<td>Netherlands</td>
<td>397</td>
</tr>
<tr>
<td>Sweden</td>
<td>496</td>
</tr>
<tr>
<td>UK</td>
<td>420 est</td>
</tr>
<tr>
<td>U.S.</td>
<td>1034</td>
</tr>
<tr>
<td>OECD Average</td>
<td>517</td>
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</table>

2013 OECD

- Canada’s costs among the highest?
- Higher usage?
- Poor procurement?
- New expensive drugs?

25% OOP for drugs
- Many no insurance
- Provincial formulary limited
- Most provincial plans don’t provide coverage < age 65
Prescription Drugs

- National Pharmacare Plan?
- Are drugs now as medically necessary as hospital and physicians?
  - More curative drugs
  - In 1975 drugs 6.3% - now 15.8% total health care costs
- Who should negotiate drug prices?
- Control excess use of prescription drugs?
- Should coverage reside at the provincial level?
Long-Term Care for Aging Population

- Now more seniors age 65+ than children under 15
- Current provincial plans designed over 40 years ago with focus on curative needs
  - Now also need focus on quality and prevention of chronic illnesses
- Most seniors have chronic illness. Need to focus on quality of care of chronic illness -> palliative care / end-of-life
- Some seniors stuck in hospital beds – over 15% of beds occupied by seniors who should be at home or in seniors residence
- Need better integration of facilities and more choices for seniors
Many Canadians have good access to health care services and experience manageable wait times. But some challenges:

- Finding timely and appropriate health service providers by location
- Emergency room wait times

**Target wait times for priority procedures**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Target</th>
<th>% Within Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip Replacement</td>
<td>182 days</td>
<td>83%</td>
</tr>
<tr>
<td>Knee Replacement</td>
<td>182 days</td>
<td>79%</td>
</tr>
<tr>
<td>Hip Fracture Repair</td>
<td>48 hours</td>
<td>84%</td>
</tr>
<tr>
<td>Cataract</td>
<td>112 days</td>
<td>80%</td>
</tr>
<tr>
<td>Radiation Therapy</td>
<td>28 days</td>
<td>98%</td>
</tr>
</tbody>
</table>

Source - CIHI
Improving Efficiency

- Pressure from both private and public budgets to improve efficiency of healthcare system
  - More walk-in clinics with longer hours vs hospital ERs
  - New technology – day surgery
  - Urban areas hospital specialization and referrals – less duplication of expensive technology
- Drug costs
- Identifying efficient local practices - what are the components
  - Variation - urban vs rural
- Higher emphasis on personal lifestyle on prevention of chronic illnesses
Canada’s Health Care System
Role of Actuaries
Role of Actuaries

- Normal role with private insurance companies and consultants
  - Only 15% of health care costs
- Very limited role with health care ministries
- Potential role in modelling value of healthy populations
  - Prevention
  - Lifestyle improvements (obesity, alcohol, and smoking)
- Big data analytics
## Lifestyle Metrics

<table>
<thead>
<tr>
<th>Country</th>
<th>Alcohol litres/yr age 15+</th>
<th>% Smokers age 15+</th>
<th>% Obesity self-reported</th>
<th>Lifestyle Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>8.0</td>
<td>14.9</td>
<td>18.2</td>
<td>92</td>
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<td>Chile</td>
<td>7.9</td>
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<tr>
<td>US</td>
<td>8.8</td>
<td>13.7</td>
<td>28.7</td>
<td>123</td>
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<tr>
<td>OECD Average</td>
<td>8.9</td>
<td>19.8</td>
<td>15.5</td>
<td>95</td>
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</tbody>
</table>

2013 OECD numbers per 1,000 population with Have Associates Lifestyle Index
 Predictor of COPD?

Lifestyle Index vs % Prevalence of COPD

CIHI Data with Have Associates Model of Lifestyle Index adjusted to average and age-standardized by province
Thank You
Exploring Global Health Care Cost Drivers

Chile

Jonathan Callund

November 4, 2015
Agenda

- Overview of Chile’s **health care financing system**
- Health care **cost drivers** in Chile and how they are being addressed
- **What is working well** and not working well in Chile
- **Unique aspects or programs** in Chile that may be applicable to other countries
- Clarify the **role of the actuary** in Chile
- Learn about the **metrics that are used to measure health care outcomes**
- Likely **changes and impact to future trends** in Chile
Chile

- 757,000 km²
- 4,300 km long
- 180 km across (ave.) [Maximum 360 km]
- 17.5 m pop’n (est. 2015)
- 90% live in urban areas
  - 35% in Santiago
  - 8% Concepción
  - 8% Valparaiso
- GDP USD270 billion
  - USD21,300 per capita GDP
- Life expectancy of 77/83
Chile’s Population

- Chile’s birth rate 1.8 per female
  - International immigration – 441 thousand per year (2014)
  - 400,000 - 2% population foreign born
- 1.5 million *Mapuche* and other native Indians
- 15 *Regiones* and 54 Provincias
  - BioBio (Concepción) 2.1 million
  - Valparaiso – 1.8 million
  - Maule (Talca) – 1.1 million
    - ....
  - Magallanes (Punta Arenas) – 164 thousand
- Intra-provincial migration
Overview of Chile’s Health Care System
Chile’s Healthcare System

- All employees pay 7% of gross monthly earnings [subject to a ceiling] as a healthcare contribution.
- There are two healthcare sub-systems
  - A national system of public hospitals and medical centres, run by the Ministry of Health and financed through Fondo Nacional de Salud (FONASA)
  - Private sector, dedicated health insurance companies – (Institución de Salud Previsional (ISAPREs)) – offer indemnity or PPO plans to cover expenses met in private clinics, healthcare providers and doctors, including lab tests.
- Each system is autonomous.
  - FONASA members have access to public hospitals and medical centres
  - ISAPRE members have access to private clinics and medical centres
    - Workers compensation has a network of independent hospitals
    - Armed forces also have their own hospitals and medical centres
- “Reasonable” access nationwide
Chile's Health Care System

LA SALUD EN CHILE
Cubre al 91% de la Población

1er Nivel de Organización

2 SECTORES

SISTEMA PRIVADO

SISTEMA PÚBLICO

Administrar el Financiamiento

Administrar el Financiamiento

ISAPRES 13.59%
16 Mutuales

FONASA 2.2%

Administrar
direccionalmente los
programas de
salud

Otear
direccionalmente los
programas de
salud

Medicina Laboral
Regimen Laboral
Beneficios e Incentivos

Presidente de la RS y
Director de ISAPRES

Previsión Social

Previsión Social

1er Nivel de Organización

LA SALUD EN CHILE
Cubre al 16.2% de la Población

Cubre al 78.8% de la Población

PLANES DE CONVERSIÓN

Cubierta de 100% en enfermedades crónicas hasta que se cumplan los 65 años.

PLANES DE SALUD

Cubierta de 100% en enfermedades crónicas hasta que se cumplan los 65 años.

MINSAL

ÁUGE

LA SALUD EN CHILE

2015

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Profile of Chilean Health Care System

Membership of Chilean Healthcare Systems

- **FONASA** 76%
- **ISAPRE** 19%
- FFA & Others 5%

FONASA and ISAPRE Demographics

- **Children <20**
- **Women 20-40**
- **Men 20-60 and Women 40-60**
- **Men & Women >60 years**

*FONASA*  ▪  *ISAPRE*  ▪  *FFA & Others*
Public Health Care

- **Coverage**
  - Total membership of **13.5 million**
    - 3.2 million members make no contributions with access to public system only
    - 5.7 million pay regular contributions, giving 10.2 million beneficiaries treatment in both public and private systems

- **Funding**
  - 42% of members contribute around 34% of the total public healthcare budget
  - The balance 66% comes from general taxation

- **Infrastructure**
  - Regional and specialist public hospitals
  - Municipal Medical centres
  - Most medical professionals will treat FONASA members

- **Plans**
  - Non-contributing members only have access to public hospitals and doctors working in municipal medical centres.
    - No charge for treatment in public centres
  - Contribution-paying members (employees) can opt to be treated in private or public centres and can gain access to most specialists – *Libre Elección*.
    - Voucher system with 50% co-payment for GP consultation – around USD5 per visit
    - Pre-agreed pricing for hospital and surgical procedures – Loans available for co-payments.
Private Health Care

- **Coverage**
  - Total membership of **3.3 million**
    - 2 million make regular contributions

- **Funding**
  - ISAPREs are self-funded, requiring few government subsidies (maternity leave)
  - Most members pay more than the 7% statutory healthcare contribution to improve their plans

- **Infrastructure**
  - Good quality clinics and medical centres in most urban centres
  - Vertical integration with larger ISAPREs owning networks
  - Access to all centres driven by member’s plan and out-of-pocket co-payments

- **Plans**
  - Multiple – over 30,000 age and sex-banded plans, targeting cover of 70% outpatient expenses and 90% in-patient
  - Itemized CLP and % reimbursement limits
  - Option of PPO (ISAPRE-own network) or *Libre Eleccion*
## Comparisons of Health Care Cost Split

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<th>% Private Ins</th>
<th>% OOP</th>
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<td>72.7</td>
<td>7.8</td>
<td>19.5</td>
</tr>
</tbody>
</table>

2013 OECD Costs; OOP – Out-of-Pocket
## Comparisons of Health Care Resources

<table>
<thead>
<tr>
<th>Country</th>
<th>Physicians</th>
<th>Nurses</th>
<th>Hospital Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>2.6</td>
<td>9.5</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Chile</strong></td>
<td><strong>1.9</strong></td>
<td><strong>5.6</strong></td>
<td><strong>2.2</strong></td>
</tr>
<tr>
<td>Australia</td>
<td>3.4</td>
<td>11.5</td>
<td>3.8</td>
</tr>
<tr>
<td>France</td>
<td>3.3</td>
<td>9.4</td>
<td>6.3</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.3</td>
<td>12.1</td>
<td>4.7</td>
</tr>
<tr>
<td>Sweden</td>
<td>4.0</td>
<td>11.2</td>
<td>2.6</td>
</tr>
<tr>
<td>UK</td>
<td>2.8</td>
<td>8.2</td>
<td>2.8</td>
</tr>
<tr>
<td>US</td>
<td>2.6</td>
<td>11.1</td>
<td>2.9</td>
</tr>
<tr>
<td>OECD Average</td>
<td>3.3</td>
<td>9.1</td>
<td>4.8</td>
</tr>
</tbody>
</table>

2013 OECD numbers per 1,000 population
Comparisons of Health Care Utilization

<table>
<thead>
<tr>
<th>Country</th>
<th>Doctor Visits</th>
<th>Hospital Discharges</th>
<th>MRI Scans</th>
<th>CT Scans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>7.7</td>
<td>83</td>
<td>53</td>
<td>132</td>
</tr>
<tr>
<td><strong>Chile</strong></td>
<td><strong>3.3</strong></td>
<td><strong>95</strong></td>
<td><strong>13</strong></td>
<td><strong>71</strong></td>
</tr>
<tr>
<td>Australia</td>
<td>7.1</td>
<td>173</td>
<td>28</td>
<td>104</td>
</tr>
<tr>
<td>France</td>
<td>6.4</td>
<td>166</td>
<td>91</td>
<td>193</td>
</tr>
<tr>
<td>Netherlands</td>
<td>6.2</td>
<td>119</td>
<td>50</td>
<td>71</td>
</tr>
<tr>
<td>Sweden</td>
<td>2.9</td>
<td>162</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>UK</td>
<td>5.0</td>
<td>129</td>
<td>40</td>
<td>76</td>
</tr>
<tr>
<td>US</td>
<td>4.0</td>
<td>125</td>
<td>107</td>
<td>240</td>
</tr>
<tr>
<td>OECD Average</td>
<td><strong>6.7</strong></td>
<td><strong>156</strong></td>
<td><strong>51</strong></td>
<td><strong>136</strong></td>
</tr>
</tbody>
</table>

2013 OECD numbers per 1,000 population
Demand for Medical Services

- Strong correlation between per-capita GDP and healthcare utilization
- Total # of services per 1,000 ISAPRE members has more than doubled from 9.7 p.a. in 1990 to **23.5** in 2014

  ![Graph showing demand for medical services over years]

  **ISAPRE Association (Jun-15)**

- This growth can only to continue…
Rise in sophisticated technology in last decade:
- Slow - X-ray
- Fast - CT & Doppler scans

CT scan utilization
- OECD data confirms the trend across the board:
  - Chile is less than 1/3rd of Canada
## Comparisons on Health care Outcomes

<table>
<thead>
<tr>
<th>Country</th>
<th>Infant Mortality +</th>
<th>Female Life Expectancy *</th>
<th>Male Life Expectancy *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>4.8</td>
<td>83.6</td>
<td>79.3</td>
</tr>
<tr>
<td>Chile</td>
<td>7.4</td>
<td>81.4</td>
<td>76.3</td>
</tr>
<tr>
<td>Australia</td>
<td>3.6</td>
<td>84.3</td>
<td>80.1</td>
</tr>
<tr>
<td>France</td>
<td>3.6</td>
<td>85.6</td>
<td>79.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.8</td>
<td>83.2</td>
<td>79.5</td>
</tr>
<tr>
<td>Sweden</td>
<td>2.7</td>
<td>83.8</td>
<td>80.2</td>
</tr>
<tr>
<td>UK</td>
<td>3.8</td>
<td>82.9</td>
<td>79.2</td>
</tr>
<tr>
<td>US</td>
<td>6.0</td>
<td>81.2</td>
<td>76.4</td>
</tr>
<tr>
<td>OECD Average</td>
<td>4.1</td>
<td>83.1</td>
<td>77.8</td>
</tr>
</tbody>
</table>

+ Deaths per 1,000 live births  
* At birth
Cost of Chile’s Health Care System
## Comparisons of Health Care Cost

<table>
<thead>
<tr>
<th>Country</th>
<th>% of GDP</th>
<th>Per Capita (US $ PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>10.2</td>
<td>4,351</td>
</tr>
<tr>
<td><strong>Chile</strong></td>
<td><strong>7.4</strong></td>
<td><strong>1,623</strong></td>
</tr>
<tr>
<td>Australia</td>
<td>8.8</td>
<td>3,866</td>
</tr>
<tr>
<td>France</td>
<td>10.9</td>
<td>4,124</td>
</tr>
<tr>
<td>Netherlands</td>
<td>11.1</td>
<td>5,131</td>
</tr>
<tr>
<td>Sweden</td>
<td>11.0</td>
<td>4,904</td>
</tr>
<tr>
<td>UK</td>
<td>8.5</td>
<td>3,235</td>
</tr>
<tr>
<td>US</td>
<td>16.4</td>
<td>8,713</td>
</tr>
<tr>
<td>OECD Average</td>
<td>8.9</td>
<td>3,453</td>
</tr>
</tbody>
</table>

* 2013 OECD – Excludes Workers Comp and medical research
Health Care Cost Trends

Recent Trends in Public Health Care Costs - 2002 - 2012

Healthcare Expenditure
(USD Millions)

USD 12,000
USD 10,000
USD 8,000
USD 6,000
USD 4,000
USD 2,000
USD 0

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Public System
Private System

Healthcare Expenditure
(% GDP)

9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0


Public
Private
Total

Source: FONASA – Informe estadístico 2014

Source – World Bank Metadata – October, 2015
Health Care Cost Trends

Growth in per Capita Costs – Real Index 2002 - 2012

Índice de gasto real por beneficiario en Fonasa e Isapres, 2002-2012 (2002=100)

ISAPRE Association (Jun-15)
Health Care Cost Drivers

Prime factors in Medical Cost Inflation

- Technological innovation
- Economic growth
- Population ageing
- Population state of health
- Relative prices
- Healthcare policy decisions
Chile’s Health Care System
Issues Ahead
Government Role

- Constitution guarantees all residents access to health care – this is provided through FONASA.

- Ideology
  - (New) centralized collectivist vs (last 30 years) neoliberal view
  - Ambition to break up ISAPRE system and bring population under a single system
    - State as single provider model vs subsidiary provider, leaving private sector to handle those that can pay their way
    - Inefficient public vs efficient private sector
  - President created a private sector healthcare reform commission
    - Few resources to improve quality and delivery of the public system.
    - Focus on undermining economic solvency of ISAPREs
Government Role

- ISAPRE Reform Commission
  - Challenges
    - Transparency/simplicity of plan design
    - Mobility among ISAPREs
    - Equity in age, gender, and preexisting conditions
    - Solidarity across the system
    - Plan pricing
    - Medical expenditure inflation
  - Conclusions
    - 7% contribution to be paid to a Universal Commonwealth Fund
    - Creation of central sick pay administration, to be funded by employers, employees and the State
    - ISAPRE members to contribute to a central Inter ISAPRE fund
    - Unique Basic Plan for all
  - Risk of having ISAPRE members return to FONASA!
### Prescription Drugs

<table>
<thead>
<tr>
<th>Country</th>
<th>Pharma (US$PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>761</td>
</tr>
<tr>
<td><strong>Chile</strong></td>
<td><strong>228</strong></td>
</tr>
<tr>
<td>Australia</td>
<td>590</td>
</tr>
<tr>
<td>France</td>
<td>622</td>
</tr>
<tr>
<td>Netherlands</td>
<td>397</td>
</tr>
<tr>
<td>Sweden</td>
<td>496</td>
</tr>
<tr>
<td>UK</td>
<td>420 est</td>
</tr>
<tr>
<td>US</td>
<td>1034</td>
</tr>
<tr>
<td>OECD Average</td>
<td>517</td>
</tr>
</tbody>
</table>

Chile’s per capita expenditure is **lowest** in OECD!

Likely set to rise...

FONASA/ISAPRE does not cover out-patient costs – only in hospital.

This is either an OOP or group insurance cost.

2013 OECD
Employee Benefit Group Insurance

- Rising AVCs to ISAPREs… Now around 30% or USD per person p.a. . . .

  ![Chart](chart.png)

  *Estructura de los ingresos operacionales de las Isapres, 1991-2014*

  ISAPRE Association (Jun-15)

- Significant growth in number of employees covered under supplementary plans to fund growing OOP expenses
  - 734,000 in 2002 to 3.14 million in 2014
  - Out-patient pharmacy represents more than 25% of claims
Major Medical/Catastrophic Cover

AUGE/GES

- Conditions
  - 80 pathologies
  - 20% maximum OPP expense with $ limit
  - Additional premium to be paid

- Protocols
  - For all pathologies with strict time-limits
  - Treated separately from other medical conditions

- Trends/issues
  - Playing a role in managing cost dread diseases and major medical illnesses
  - FONASA members need to await approval for treatment in the private centres, even though protocol waiting times are exceeded
    - Long waiting periods, even for guaranteed AUGE procedures
  - ISAPRE members are covered and there is general availability
The first ten pathologies approved in 2005:

1. Chronic kidney disease, stage 4 and 5
2. Operable congenital heart disorders in children under the age of 15 years
3. Cervical cancer
4. Pain relief and palliative care for advanced cancer
5. Acute myocardial infarction
6. Type I diabetes mellitus
7. Type II diabetes mellitus
8. Breast cancer in people aged 15 years and older
9. Spinal dysraphism
10. Scoliosis surgery for people under the age of 25 years

The other 70 pathologies, include: HIV/AIDS, Parkinson’s disease, Prostate cancer, Bipolar disorder, Leukemia, Systemic lupus erythematosus and hip dysplasia…

Having a significant impact – over 10 m treatments in 10 years. Success story!
Success of AUGE Program

#8 Breast cancer in people aged 15 years and older


#10 Scoliosis surgery for people under the age of 25 years

Long-Term Care for Aging Population

- Growing concern over cost and delivery of specialist treatments
- Like most developing countries, the Chilean population is also aging quickly.
  - Falling fecundity rates
  - Increasing longevity

http://populationpyramid.net/chile/2015/
FONASA

- 1.2 million members have waited more than 120 days year to see a specialist.
- 134,000 non-AUGE members are awaiting surgeries.

ISAPREs

- Access on demand to specialists and lab tests, but at a significant price differential.
- No material waiting times for surgery at all degrees of complexity.

Sources: Ricardo Bitrán, ENASA Oct-2015
Chile’s Health Care System
Role of Actuaries
Role of Actuaries

- Actuarial profession does NOT exist in Chile
  - Akin to mathematical engineer, but no university actuarial courses
  - Mexico and Argentina do have developed profession
  - Role of *Gerente Técnico* in life and health care insurance carriers

- History of detailed regulation on reserving and pricing models
- International actuaries recognize methods
- Good census and morbidity data available in public and private sectors
Thank You
Exploring Global Health Care Cost Drivers

Thank You

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South Africa
Switzerland
Taiwan
UK
US
Exploring Health Care Cost Drives

Presenters

2015 webcasts that highlight the health care models of various countries

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Rian de Jonge (The Netherlands)
Emile Stipp (South Africa)
Tom Wildsmith (US)
Alvin Fung (Singapore)
Candice Ming (Australia)
Stuart Rodger (Australia)
John Have (Canada)
Jonathan Callund (Chile)
April Choi  IAAHS moderator
Susan Mateja Academy’s HPIC moderator