Actuaries in Health
A Rewarding Career

YAP Session
Melbourne, 20 August 2015

Outline of discussion

Introduction
- The health sector
- How does health insurance fit into the health sector

Overview of health insurance

How does the profession contribute to the health sector?
- What do we do?
- Case studies

Our experience to date
- What we like about our role?
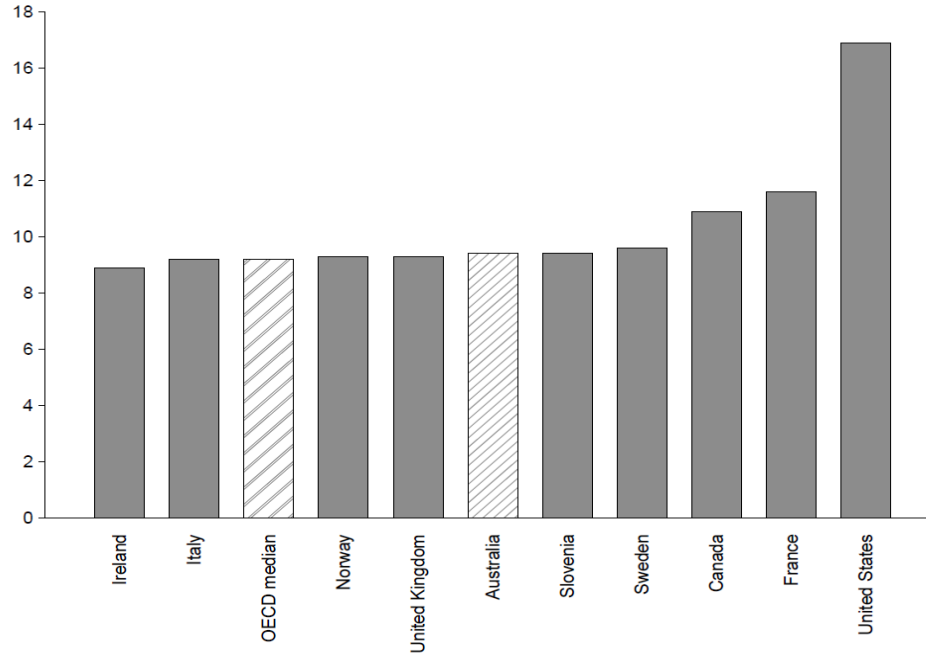- What are the challenges?

What is health?

WHO definition of Health

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

How big is the health sector?
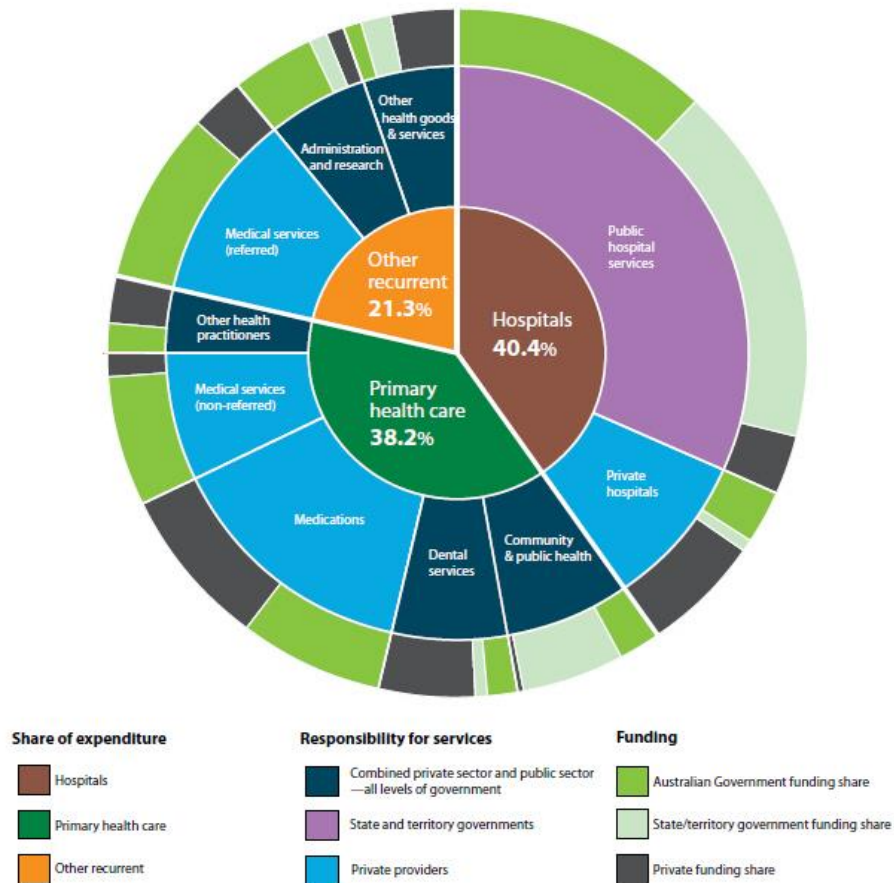

Health to GDP ratio (per cent)

Figure 2.12: Health expenditure as a proportion of GDP, selected OECD countries, 2012[a]

(a)   See definition of 'OECD financial year' in Box 2.3.

Source: Table 2.14.

The Australian health system

Source: Australia's Health 2014, AIHW

The current role of private health insurance

- Operates in conjunction with Australia's publicly funded universal healthcare cover—Medicare

- Augments Medicare with PHI

- Provides a greater choice of treatment options, including the choice of doctor and time of treatment

- Protects policyholders from some or all of the costs related to a person's hospital and general treatments.

Overview of health insurance

- 50% of the Australian population have some form of health insurance

- Cover for hospital and general treatment (e.g. dental, optical, physio)

- 34 health insurers – the top 5 funds have 80% of the market

- Operate differently to other forms of insurance, including:
  - Community rating principle
  - Ability to shop around for the best policy at no cost or disadvantage;
  - Price regulation; and
  - Heavily affected by government initiatives (Rebate, Medicare Levy surcharge, Lifetime healthcover)

Key challenges to the industry

- Affordability
  - Cost pressures on insurers
  - Increasing out of pocket for patients who have health insurance
  - Premium increase higher than CPI

- Value proposition
  - What do I get out of this purchase?

What do health actuaries do?

- Forecasting
- Modelling - scenarios
- Premium setting
- Reserving
- Costing of initiatives
- Strategy development
- BI development
- Health management/outcomes
- Marketing – segmentation, campaign analysis, market research
- And a lot of other projects!

Case studies
- Health management program evaluation
- Business intelligence development
- New product development

Heath management evaluation

- Process
  - Define measure of success – health outcome, cost saving, satisfaction level
  - Collect all data required - clinical, satisfaction, claim experience, control group
  - Assess program outcome

- Why is it enjoyable?
  - Challenging - hard to measure cost saving
  - Pleasing to see how our fund can help manage the health of our members with chronic disease

Business Intelligence Development

- Process
  - Infrastructure set up
  - BI tool selection
  - Consultations with the business
  - Project management
  - Testing
  - Building reports and dashboards
  - User engagement and training
  - Data and report update/maintenance

- Why is it enjoyable?
  - Building the BI tool from scratch
  - Learning new skills – BI tool, data model
  - Playing with data and building beautiful reports
  - Training others to use the tool

New product development

- Process
  - Define strategic challenges and business issues
  - Environmental scan
  - Develop solutions
  - Business case development and approval
  - Implementation
  - Continuous improvement cycle

- Why is it enjoyable?
  - Exposure to a wide range of views – both internal and external
  - Develop cutting edge competitive analysis
  - Seeing it through from start to finish
  - Making a difference – it is what we sell!
  - Results to date very pleasing and on target

Our role:
The good and the challenges

Discussion