



Population Ageing, Health Status and Health Outlays

Assessing Impacts and Policy Options
During the Next 40 Years

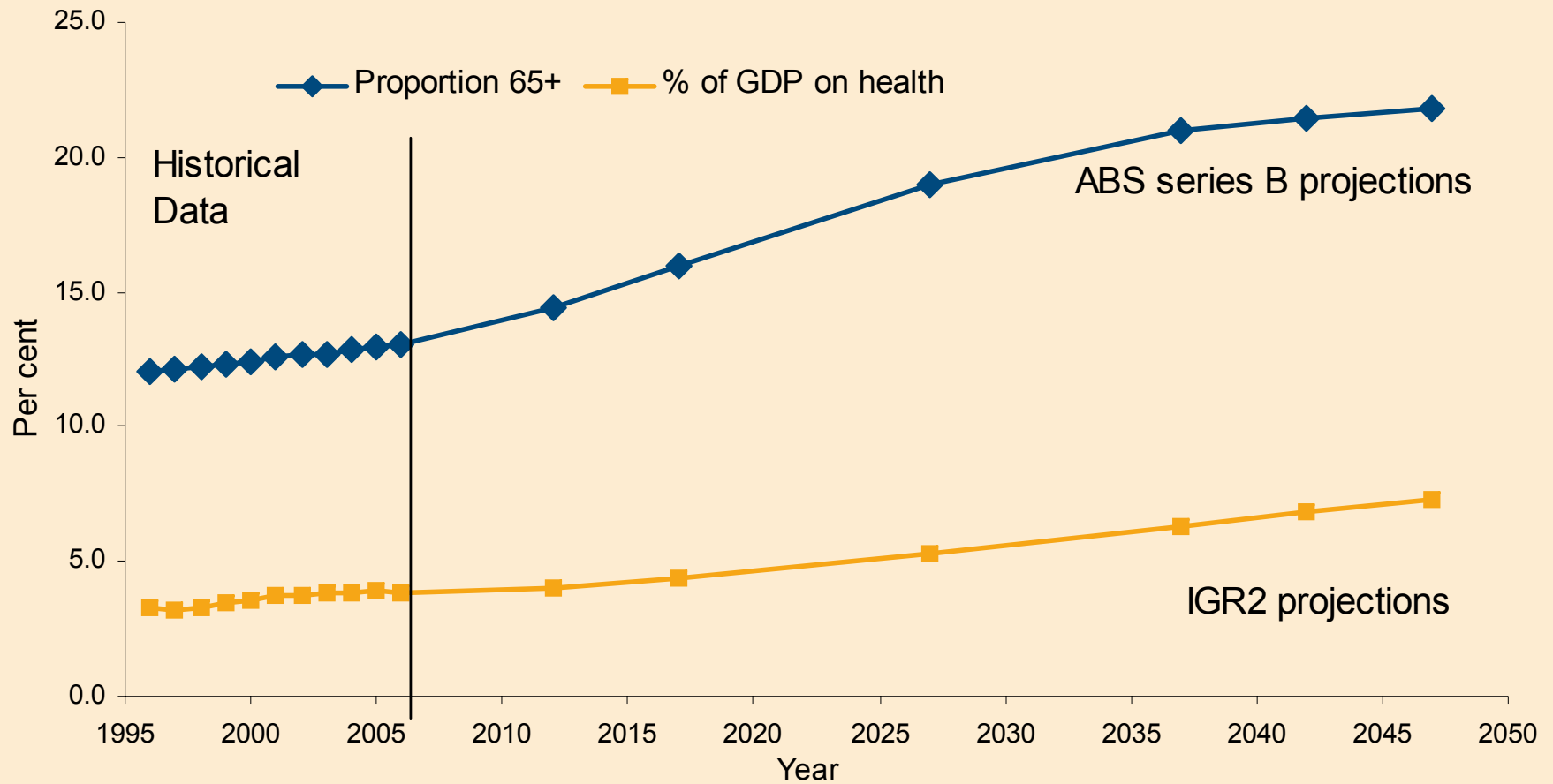
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May 2009

Outline

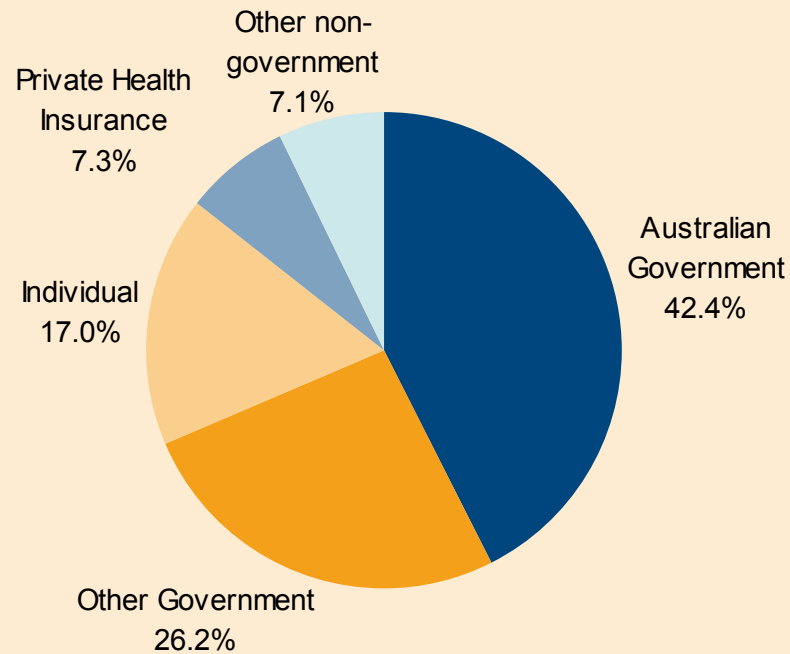
- Context
- APPSIM Health Module
- Preliminary Results
- Future Modelling
- Conclusions

An Ageing Australia

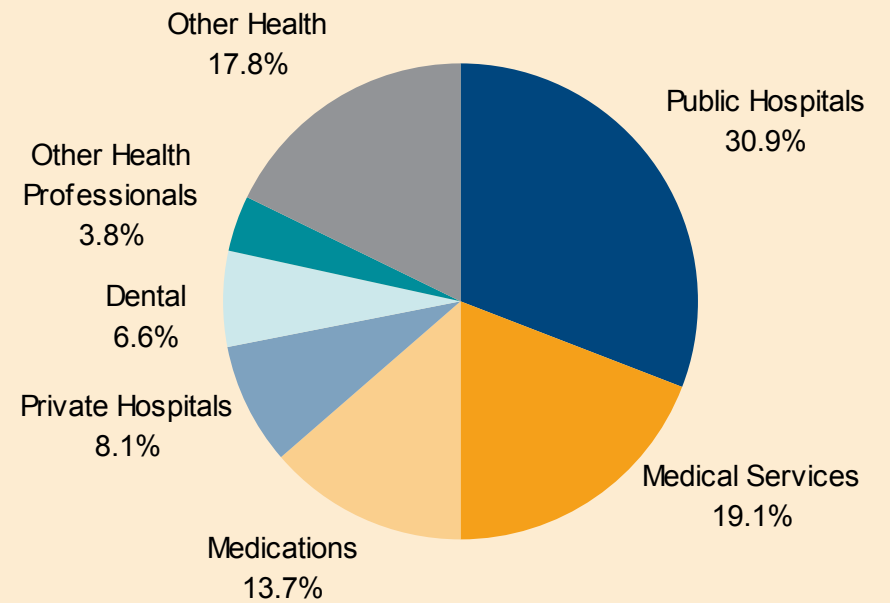


Australian Health System

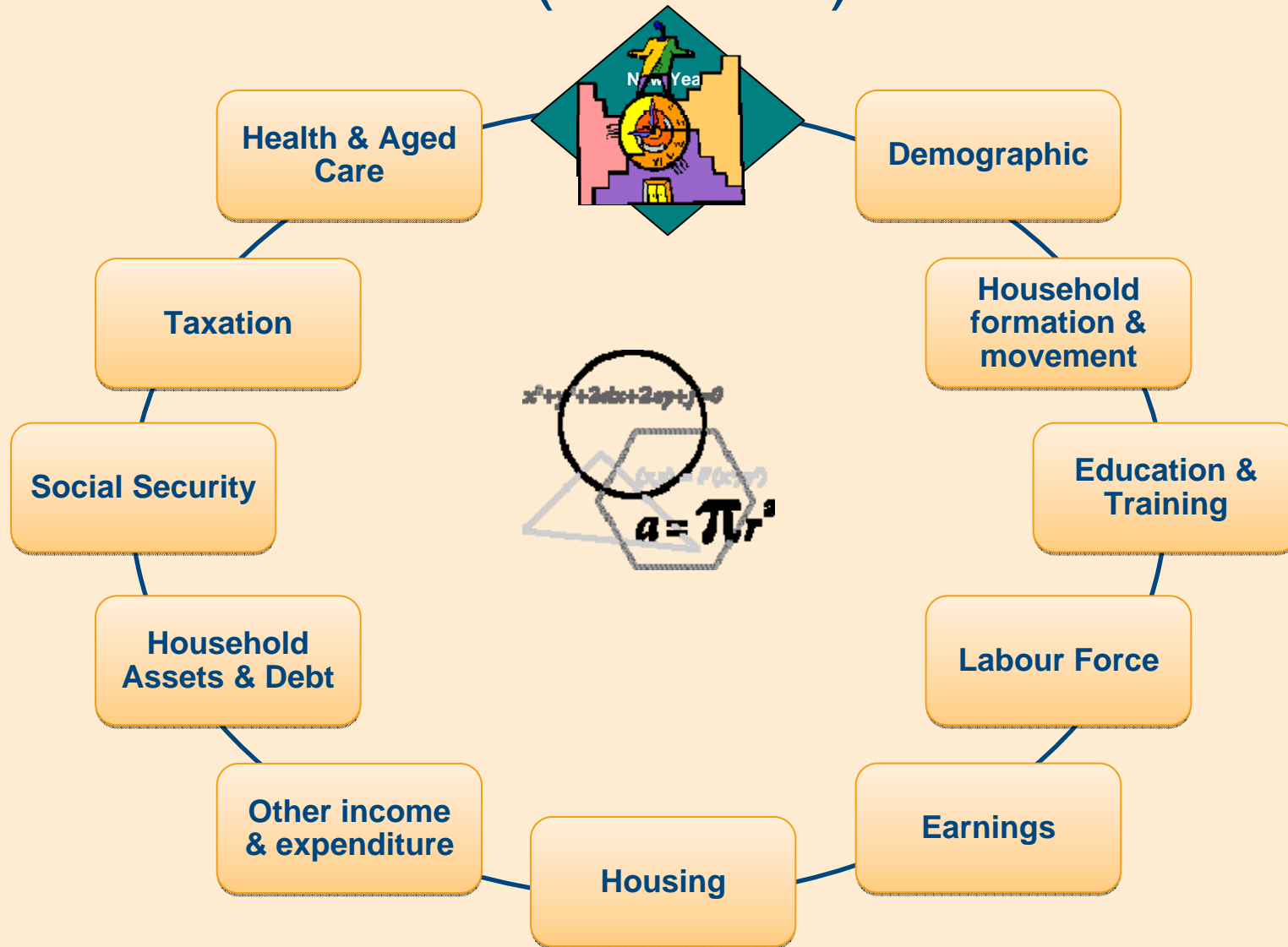
Sources of Funding:



Areas of Expenditure:



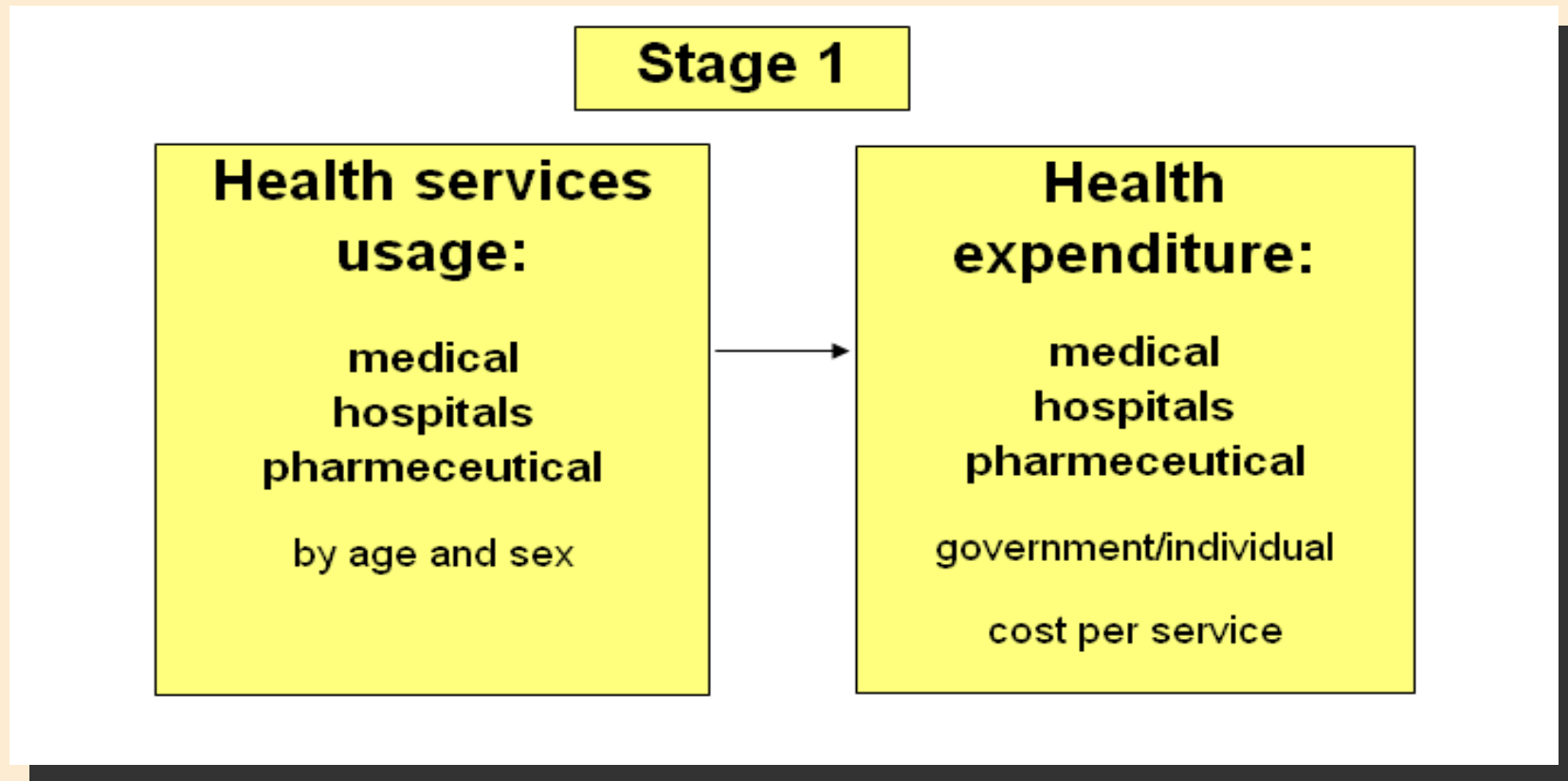
Context - Australian Population Policy Simulation Model (APPSIM)



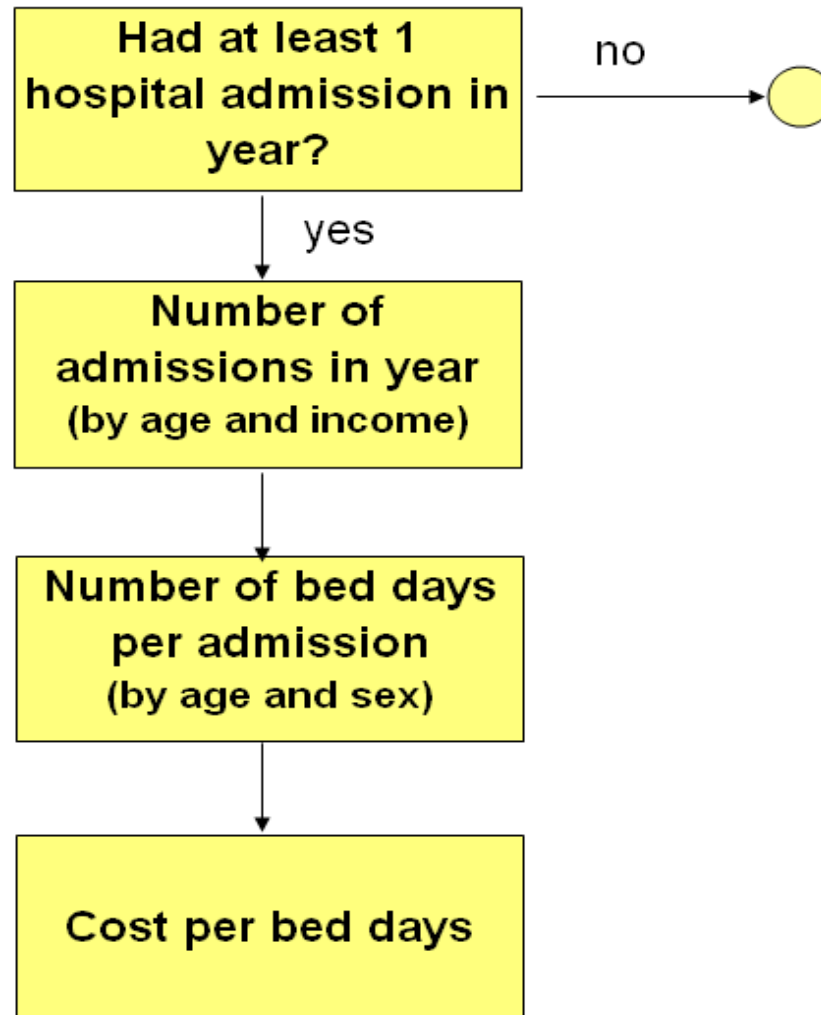
Aims and Objectives

- build **modelling infrastructure**;
 - develop 4 sub-modules:
 - health status
 - private health insurance
 - health service utilisation
 - health care expenditure
- investigation of the effects of changing **health patterns** of the **ageing** Australian population and the effect these changes have on **health expenditure**, both by the government and the individual.

Building the Health Module – Stage 1

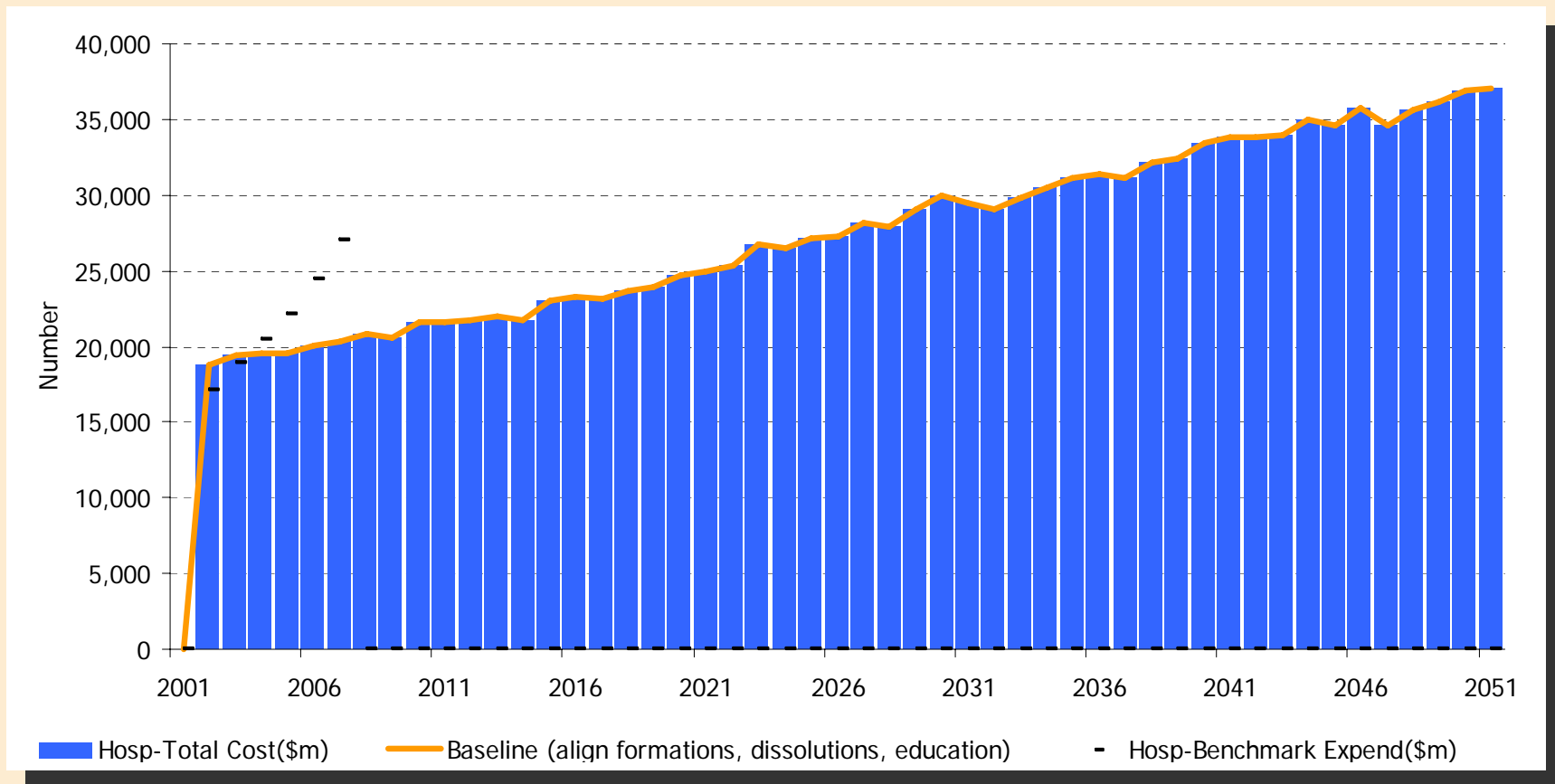


Building the Health Module – Hospital Sector



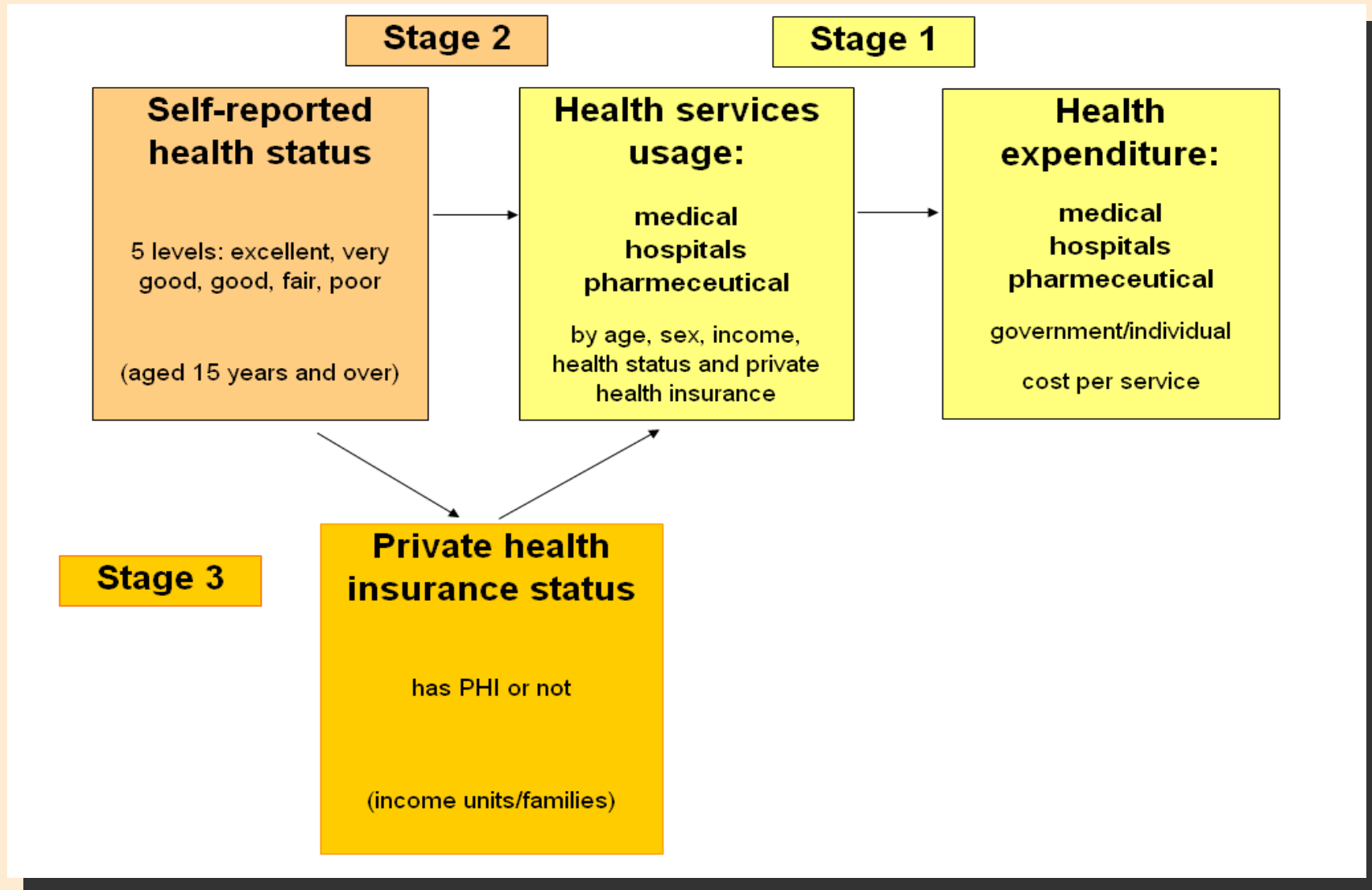
Preliminary Results

Projected total government cost of hospital admissions in Australia, 2001-2051



Note: The graph shows initial output from the prototype health module where expenditure varies only due to demographic change, not to changing service usage within age/sex groups or growth in service cost due to such factors as technological change.

Future Modelling – Stage 2 & 3



Conclusions

- Clear understanding of the aims and objectives of the model
- Understand the available data and its limitations
- Flexible modelling approach – use of modules and sub-modules

Selected References

- Cassells, R., Harding, A. and Kelly, S. 2006, Problems and Prospects for Dynamic Microsimulation: A Review and Lessons for APPSIM, *Discussion Paper no. 63*, Canberra, NATSEM, University of Canberra.
- Harding, A. 2007b, 'APPSIM: The Australian Dynamic Population and Policy Microsimulation Model', paper presented at the Presentation to the Technical Workshops of the 1st General Conference of the International Microsimulation Association, Vienna, Austria, 20-22 August.
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- Kelly, S. 2007b, APPSIM - Selection of the Main Source Data File for the Base Data, *Working Paper no. 2*, Canberra, NATSEM, University of Canberra.
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