

A comparative analysis of health forecasting methods

by

Astolfi R., Lorenzoni L. and J. Oderkirk

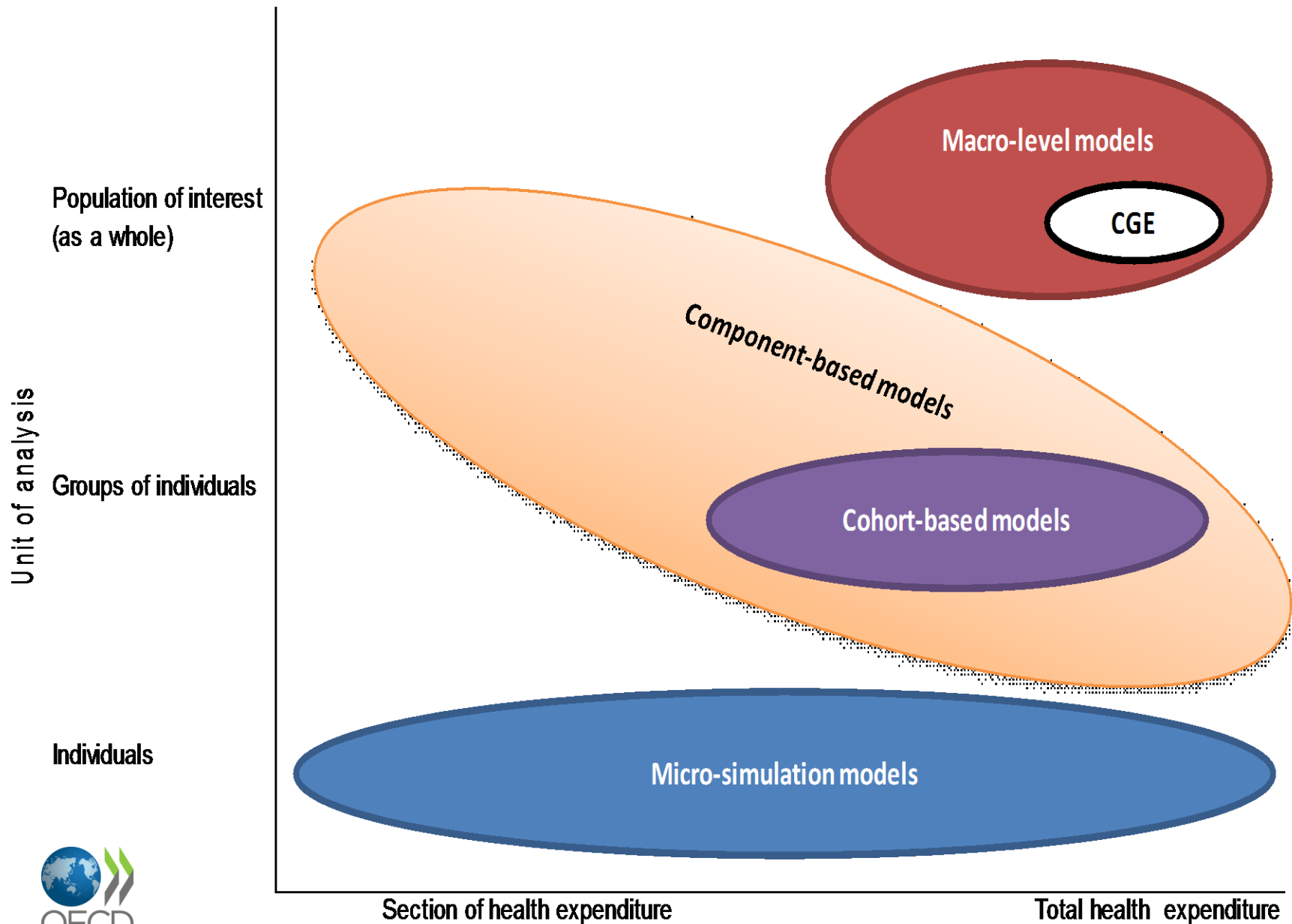
1st ANNUAL MEETING OF SBO NETWORK ON HEALTH EXPENDITURE
Paris, 21-22 November, 2011

Why develop forecasting models?

Address policy questions

- What if no action is taken
- What if we put a brake on public spending growth?
- Sustainability
- Drives health expenditure
- Costs raise the most
- Impact of medical technologies and innovations
- Impact of/on the rest of the economy
- “What if” policy scenarios

Classes of forecasting models



Models' features

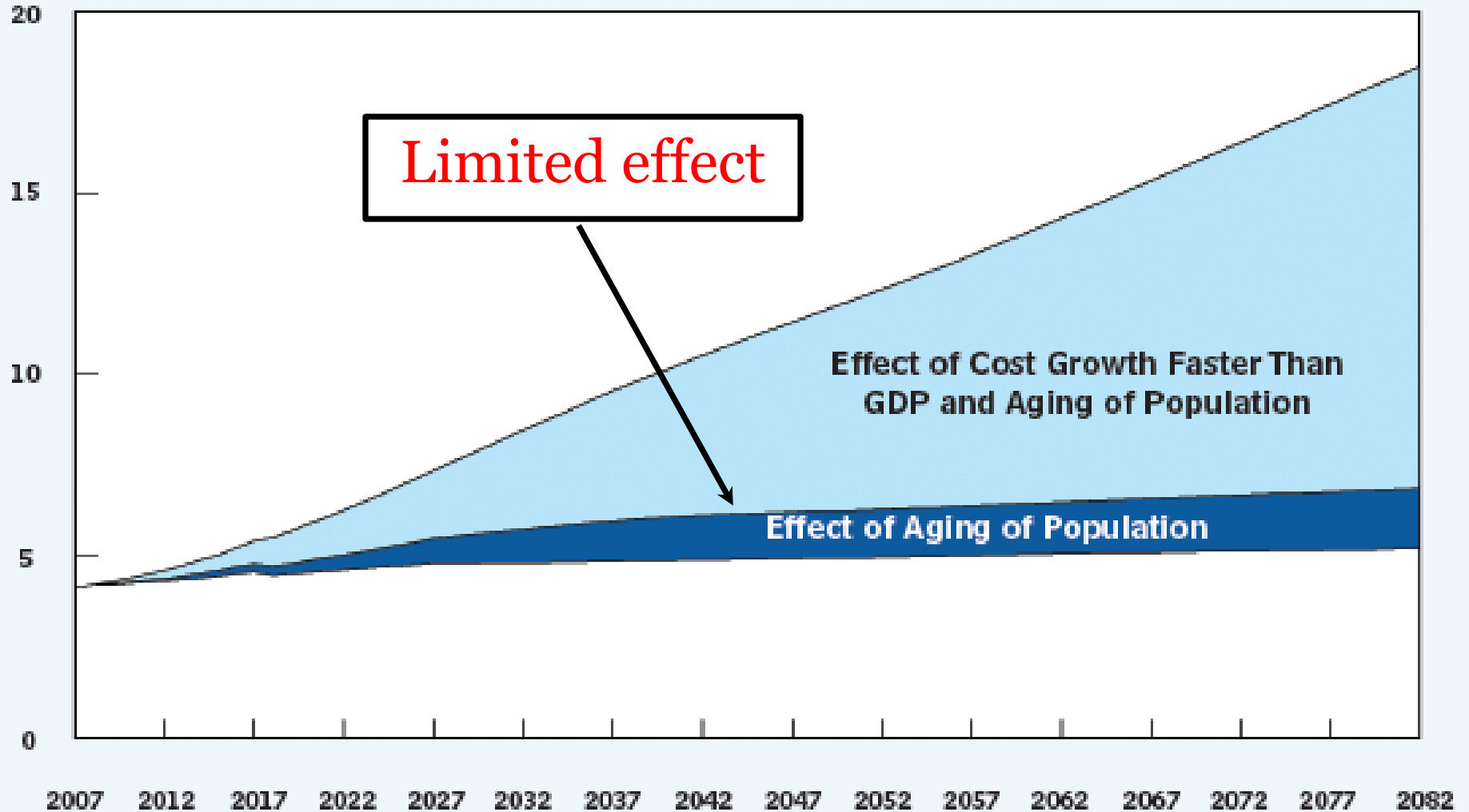
- Policy questions determine the:
 - Time horizon
 - Forecasted variables
 - Units of measurement
 - Drivers



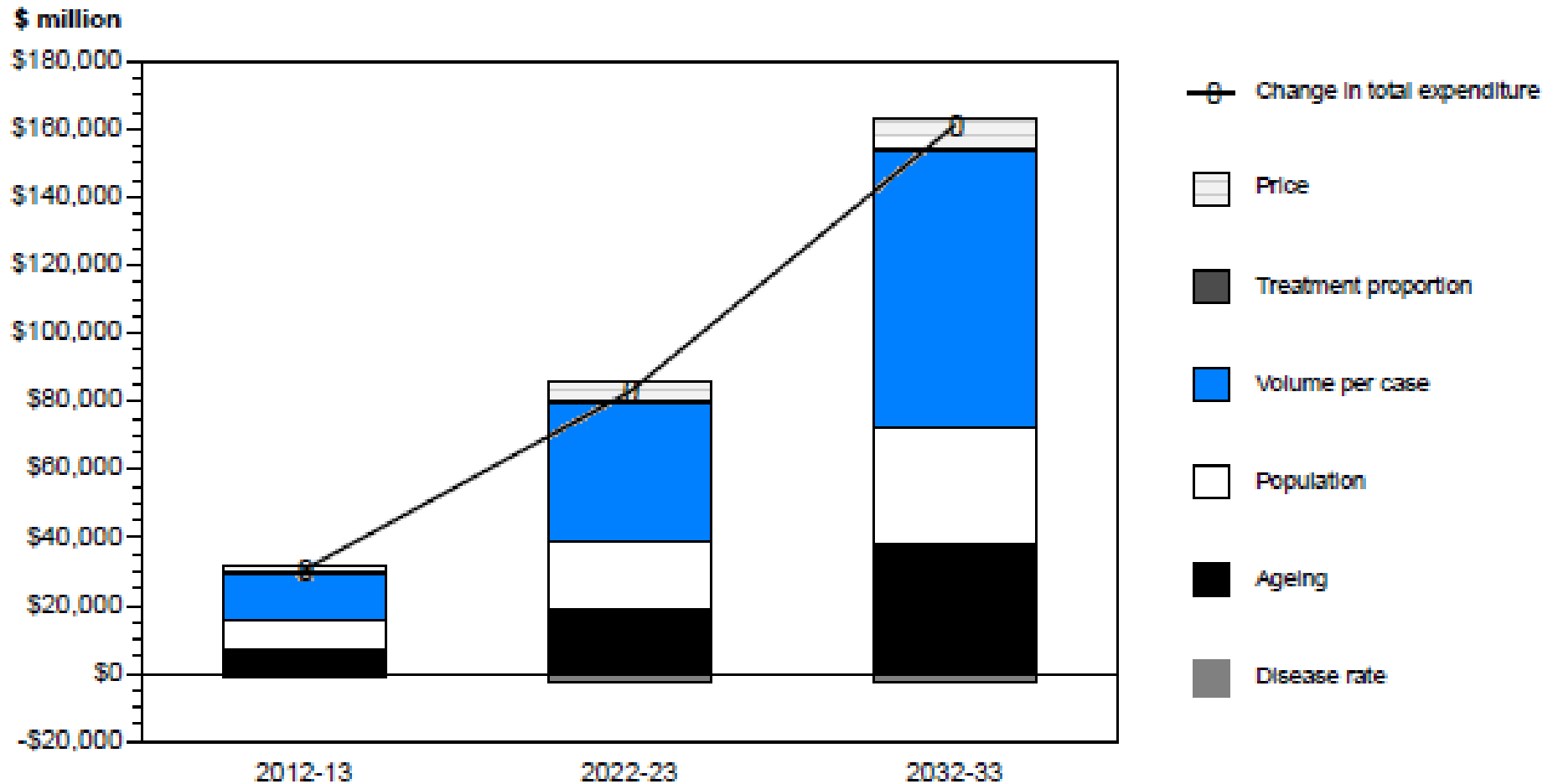
Model
&
its specification

Growth drivers

Percentage of Gross Domestic Product



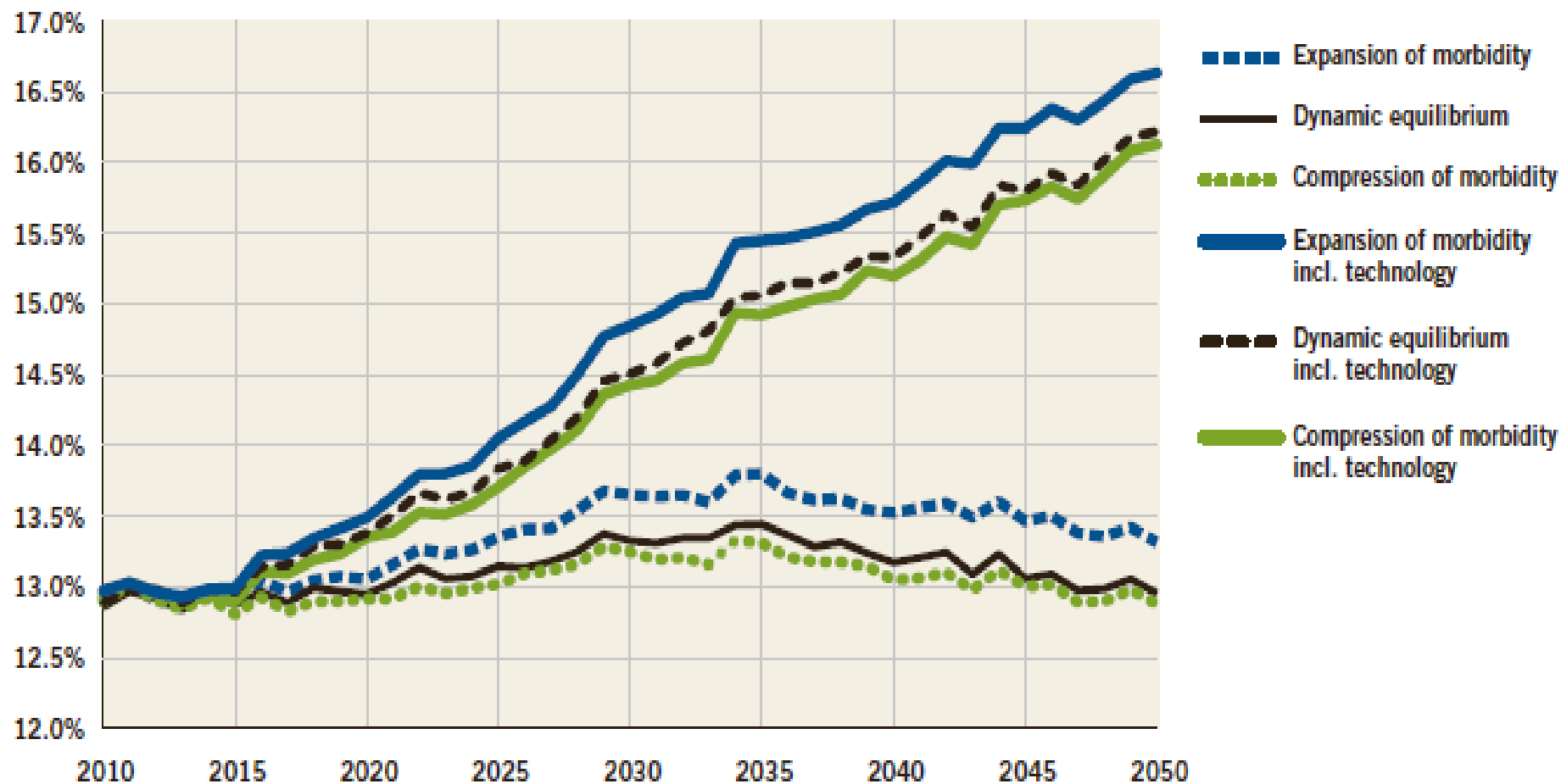
Growth drivers















Source: Goss, J. (2008)

Be Aware of Assumptions

Projected health expenditures in Sweden (as a share of GDP)



	Congressional Budget Office (CBOLT)
	Centers for Medicare & Medicaid Services (Component)
	Centers for Medicare & Medicaid Services (GE)
	U.S. Department of Veterans Affairs
	FEM (Medicare RAND)
	The Future Elderly Model (CMS/RAND)
	Australian Institute of Health and Welfare (AIHW)
	National Centre for Social and Economic Modelling (NATSEM) Micro-Macro
	Australian Government, Productivity Commission
	Australian Government, The Treasury
	Statistics Canada /Population Health Model (POHEM)
	Parliamentary Budget Officer (PBO)
	Canadian Institute for Health Information (CIHI)
	Bureau for Economic Policy Analysis (CPB)
	Direction de la recherche, des études de l'évaluation et des stat.(DRESS)
	Sénat
	Ministry of Health/Università di Roma Tor Vergata
	Ragioneria Generale dello Stato
	HM treasury / Office for Budgetary Responsibility (OBR)
	National Heart Forum Microsimulation Model (Foresight)
	Ministry of Health and Social Affairs
	Ministry of Health and Treasury
	Office fédéral de la statistique (OFS)
	OECD
	European Union/Ageing Working Group

25 models

10 countries
+
OECD & EU

Conclusions

- Projections not predictions
 - Like maps provide information, don't drive
- Policy questions
 - Determine model selection & specification
 - No model is superior to the others
- New forecasting techniques available
 - Testing policies before they are introduced
 - Systems of models on the horizon
- Transparency
 - Limitations and assumptions well described.