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AUSTRALIAN CENTRE  
FOR  
ECONOMIC RESEARCH  
ON HEALTH

# Population ageing, longevity, health care systems and funding arrangements:

*what can we learn from low/middle/high income countries' experiences?*

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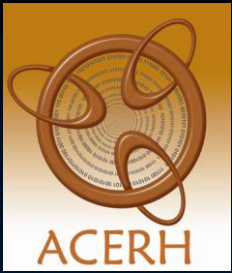


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# Background

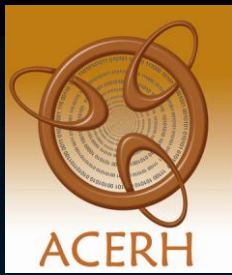
**Design or reform of health and long term care financial systems are currently of global concern**

*- since much improved medical technologies resulted in improved life expectancies, and thus in older populations*

**Ability to learn from other countries' experiences can improve on 'trial and error' approaches, and help the development of more timely and effective health and aged care systems**

**However, across country quantitative comparisons are difficult, especially outside the OECD group**

*- due to scarcity of comparable data*



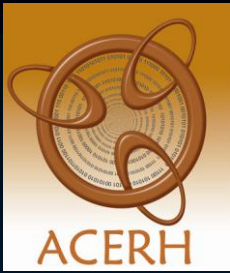
# Aims

**Investigate whether, at a national level, the key policy drivers of health outcomes can be identified:**

- *using 2006 World Health Organisation (WHO) database*
  - comparable across 193 WHO member countries (70 health indicators)
- *exploring use of regression techniques to identify the main policy variables contributing to health outcomes*

**Study which key drivers can best explain health differences across low/middle/high income WHO countries**

- *marking these as important when designing or reforming health and aged care systems*



# The WHO Indicators Considered

## *Extent of population ageing*

- Proportion of population aged 60 years or more (%)

## *Health outcomes*

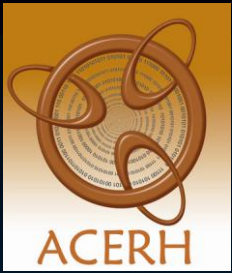
- Life expectancy and Healthy life expectancy (HALE) at birth (years)

## *Income*

- Gross national per capita income (PPP\* international \$)

## *Health expenditures*

- *Total* health per capita expenditure (PPP int. \$)
- *Total* health expenditure as % gross domestic product (GDP)
- *Government* per capita health expenditure (PPP int. \$)
- *Government* health expenditure as % total health expenditure
- *Social Security* health expenditure as % government health expenditure
- *Private* expenditure on health as % total health expenditure
- *Private prepaid plans* as % private health expenditure
- *Out-of-pocket* expenditure as % of private health expenditure



# Finding 1

**Initial regression analyses showed the most important variable explaining HALE to be:**

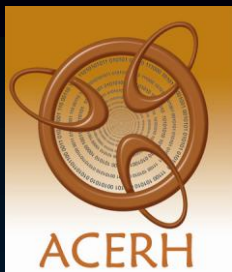
- per capita Gross National Income (PerCapGNI) – ie how rich the country is

**Next, national income was accounted for by grouping the 170 WHO member countries with data on PerCapGNI into:**

- Low PerCapGNI (the WHO Low+Lower Middle Income countries) and
- High PerCapGNI (the WHO Upper Middle+High Income countries)

**A little over 80 countries fell in each group**

- just enough in size to carry out regressions on each separately
- but results need to be interpreted carefully (*national data points only, relatively small number of observations, unclear comparability, missing data*)



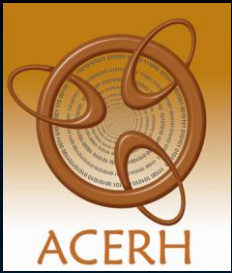
# Finding 2

**Regressing HALE on the remaining indicators resulted in two statistically significant explanatory variables being common to the Low and High income country groups**

- *Per capita total health expenditure (PerCapTotHealthE)*
- *Social Security health exp as % government health expenditure (SShealthEinGovHealthE)*

**For the High Income group another variable was also highly significant:**

- *Out-of-pocket expenditure as % of private health expenditure (OOPhealthEinPrivHealthE)*



# CONCLUSIONS

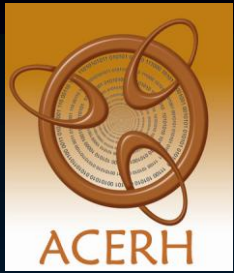
**LESSONS** from studying patterns across 170 WHO countries are that

**(a)** if aim of health and aged care system review is to improve a nation's health, than it is worth focussing on factors that impact at the *person* level:

- lifting the total health expenditure, per head of population
- improving poorer groups' access to health and aged care services
  - *through targeting via Social Security spending on health/aged care*
- lifting the % of out-of-pocket health expenditures in total private expenditures for better off population groups
  - *for example through higher copayments set for those who can afford these*

**(b)** despite popular belief, the government/private health expenditure split was not shown to be that important

- *ie it was not statistically significant*



# Further information

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