

**“In God I trust – the rest of you bring data.”**

**Research input into evidence-based national medical workforce policy**

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MSOD & Longitudinal Tracking Project  
Medical Deans Australia and New Zealand



Committee of Presidents of Medical Colleges



CPMC



# Presentation outline

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## 1. "In the beginning ..."

- Where have we been

## 2. "Then there was MSOD"

- The strength of longitudinal data
- Future record matching and sub-studies

## 3. Visioning the future

- Reaping the rewards of a landmark project
- Leading the world in medical workforce planning

## “In the beginning ... ”

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- Acute on-going medical workforce shortage in rural and remote areas
- Government support and incentive programs to assist recruitment & retention  
– RIP, RUSC, RRGPP
- But how do we know what works best?

# Evaluating what works

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- **The absence of comprehensive good quality data**
- **The RUSC Review - Recommendation 10:**

“The Department should progress as a matter of urgency the development of a common minimum agreed data set and consistent methodology for data collection which would allow the dynamic assessment of outcomes against targets and ongoing tracking”

## Then there was MSOD!

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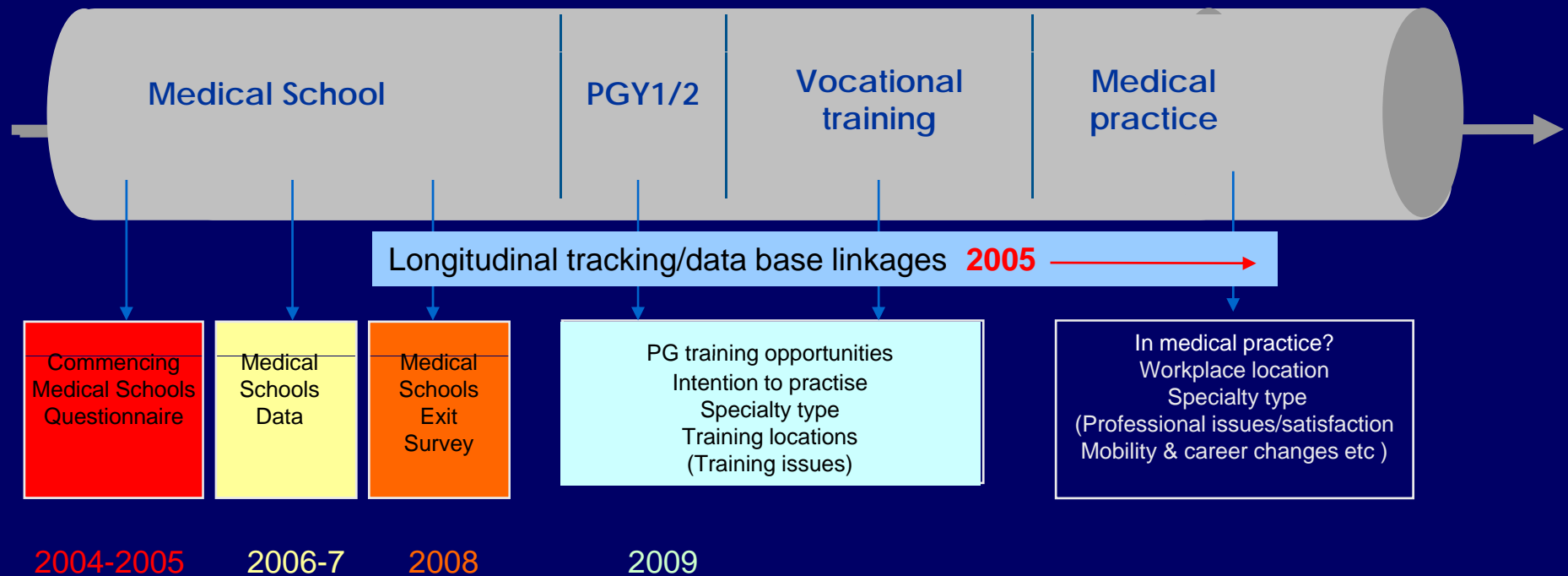
- **The birth of the Medical Students Outcomes Database**
  - Project of National Significance funding
- **Project aims**
  - To develop **an agreed national process** to collect reliable demographic and educational data on all medical students
  - To establish **a national database** for monitoring and reporting on outcomes of medical education programs, including **tracking** students throughout their career

# Why a national collaboration?

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- **Education imperative**
  - To monitor and understand which factors most influence career choice and practice location
- **Workforce imperative**
  - To evaluate outcomes of Australian Government workforce initiatives and assess value for money from government funding on rural medical education

# Concept plan



# MSOD data collections

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- 1. Commencing Students Questionnaire**
  - demographic, rurality, career intentions (geographic location, type)
- 2. Annual Medical Schools Data**
  - enrolment status, rural club membership, clinical placements (location, type), electives
- 3. Exit Questionnaire**
  - internship location, contact details, career intentions (location, type)
- 4. Postgraduate training**
  - internship location, contact details, career intentions (location, type)
- 5. Medical practice**
  - in practice, career destination (location, type)

# Accomplishments to date

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- **Accomplishments to date**
  - A uniform national minimum data base
  - Collaboration & trust among medical schools
  - Agreed principles, nationally consistent definitions, organisational processes, and communication
  - Australian government commitment to resourcing medical schools
  - Successful engagement of all key stakeholders
  - Confidentiality and security of all data
  - Method for longitudinally tracking graduates

REFERENCE: *Medical Journal of Australia*, 2009, 191(5): 244-245

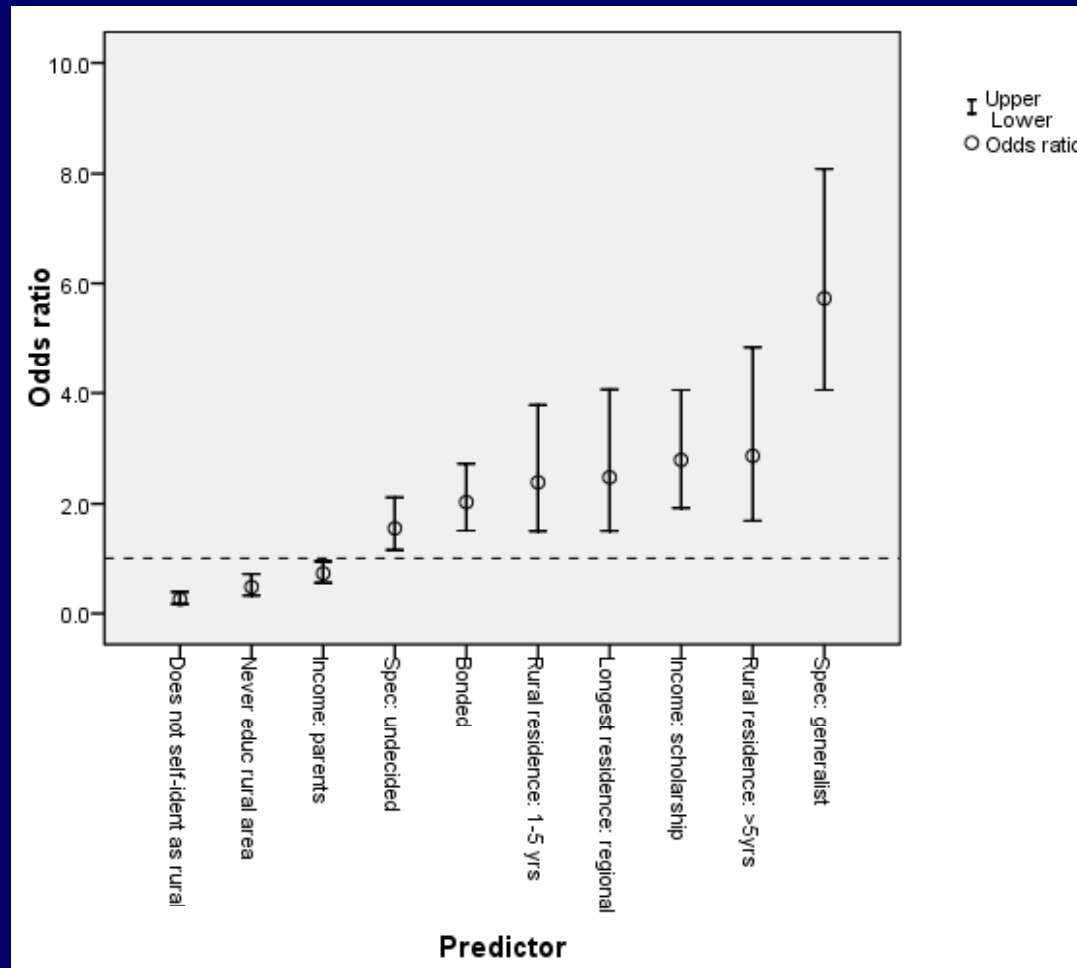
# The power of good data

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1. Answering important strategic questions
2. Program evaluation
3. Future workforce modelling and planning

# 1. Answering important strategic questions

What factors are most likely to contribute to take-up of rural practice?



REFERENCE: *Medical Education*, 2009, 43: 1001-1009

## 2. Program evaluation

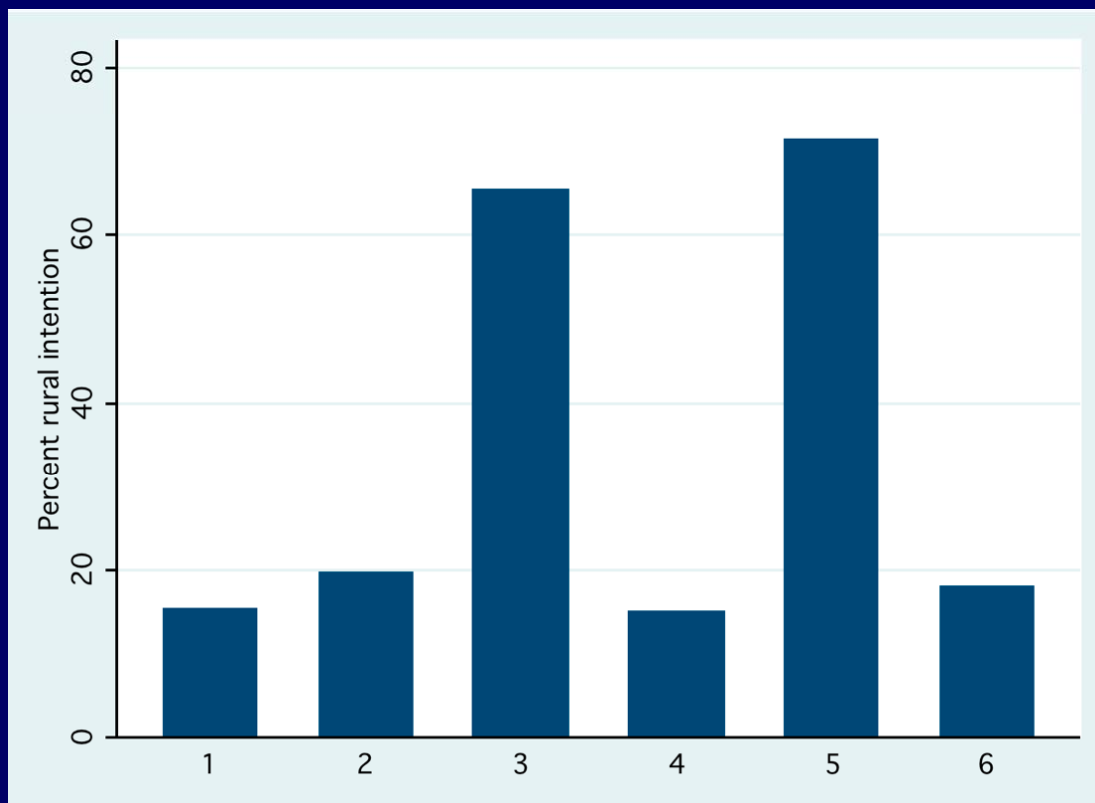
How likely are rural placements to contribute to take-up of rural practice?

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- **Why evaluate specific purpose and incentive programs?**
  - Throwing resources indiscriminately may be wasteful
- **How can we measure their effectiveness?**
  - Comprehensive and reliable data enable the measurement of what works and the magnitude of the effect

## 2. Program evaluation

How likely are rural placements to contribute to take-up of rural practice?



- Students can be grouped into clusters based on all known characteristics.
- Students undertaking long community-based placements are significantly over-represented in clusters 3 and 5.
- What is it about those students that makes them have a more positive view of a rural career ?

## So what ?

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- Many of the conclusions to date have individually been identified in previous studies
- But ... MSOD has allowed definitive and prospective analysis to confirm
- Its size allows flexibility not generally available in typical-sized studies
- Has demonstrated that MSOD can be used to answer practical policy questions and will be favourably received under peer-review

### 3. Future workforce modelling & planning

What is the effect of sentinel factors on likely take-up of rural practice?



<b>Medical course &amp; training program</b>	<ul style="list-style-type: none"><li>• Under- or post-graduate</li><li>• Entry scheme requirements</li><li>• Location of medical school and internship</li><li>• Scholarship</li><li>• Rural-urban placement experience</li><li>• Rural exposure<ul style="list-style-type: none"><li>- community/hospital</li><li>- length</li><li>- compulsory/elective</li></ul></li><li>• Rural incentives</li></ul>
<b>Personal</b>	<ul style="list-style-type: none"><li>• Rural origin</li><li>• Financial considerations</li><li>• Rural support</li><li>• Family considerations &amp; support</li><li>• Career intention and preferences</li></ul>

### 3. Future *workforce* modelling & planning

What is the effect of sentinel factors on likely take-up of rural practice?

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$$\text{Take-up of rural practice} = f(\text{Rural origin} + \text{rural exposure} + \text{rural support} + n)$$

Controlling for confounding variables such as:

- age
- gender
- marital status
- dependents
- practice type intentions etc

### 3. Future *policy* modelling & planning

What is the effect of sentinel factors on a given policy question?

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$$\text{Desired policy outcome} = f\left(\begin{array}{c} \text{Personal} \\ \text{factors} \end{array} + \begin{array}{c} \text{Curriculum} \\ \text{factors} \end{array} + \begin{array}{c} \text{External} \\ \text{factors} \end{array} + n\right)$$

Controlling for confounding variables such as:

- age
- gender
- ...

# Learning from what has been achieved so far

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- **Maximizing return on investment**
  - Increased policy etc questions for which evidence-based answers are obtained via MSOD
  - MSOD becoming a co-ordinating structure through which initiatives are driven
- **How ?**
  - Stakeholder inclusion, substudies, ...
  - Government making use for input into policy
  - ...

# Visioning the future

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- A **comprehensive and reliable data base and evaluation mechanism** to assess the effectiveness of measures on student career decisions
  - internal reporting
  - accountability to government
- A foundation for research leading to an **evidence base** on which to better match medical education programs and policies with national workforce needs
- Development of **strategic links** with relevant stakeholders and organisations to facilitate ongoing tracking process

## Ongoing challenges

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- Sustainable funding for a national project
- Future governance
- Continuing engagement of all parties
- Co-operation from medical students & graduates for ongoing tracking
- Record matching and data management
- Ethics and data-sharing arrangements

## Where to next?

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- An ambitious and visionary project backed by the Australian Government - Important not waste the foundation work as you won't get a second chance
- Australia can lead the world in evidence-based medical education and training evaluation

# Thank you

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To the Australian Government  
Department of Health and Ageing

Further information on the project

<http://www.medicaldeans.org.au/projects.html>