Access & equity in the provision of primary health care services in rural and remote Australia

Seminar to the Department of Health, Canberra
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Centre of Research Excellence in Rural and Remote Primary Health Care

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Australian Primary Health Care Research Institute (APHCRI)
2011-2014
Today’s presentation

1. CRE background and rationale
2. Overview and aims of CRE
3. Research streams and progress
4. Knowledge transfer & exchange strategy
5. Research capacity building program
6. Conclusion
Background & rationale

- Good health is a basic right of all Australians
- Health status is worse in rural and remote areas and parallels socio-economic disadvantage
- Workforce shortage and maldistribution are key issues in rural and remote areas
- Problems of access and existing inequities contribute to poorer health outcomes
- Problems are most acute for residents of small isolated communities
Previous APHCRI research

• Systematic review of PHC models in small rural and remote communities
• Detailed investigation of implementation, sustainability and generalisability of PHC models
• Systematic review examining the link between workforce retention and professional development
• Systematic review of workforce retention strategies
• Studies examining measurement, costs and benchmarks related to turnover and retention
Good knowledge of service ‘inputs’
But what about ‘outputs’?

Contexts
- Geographic, socio-economic, cultural, policy contexts; population characteristics & community readiness

Inputs
- Funding arrangements
- Infrastructure/linkages
- Workforce
- Governance & public participation
- Leadership & management
- Population health & clinical activities and decisions

enable PHC delivery

Outputs (products and services)
- PHC products and services: volume, distribution (*who gets how much of what types of services*), type (eg. health, prevention, disease prevention, curative, rehabilitative, supportive, palliative, referrals) & *qualities* (ie responsive, comprehensive, continuity, coordination, interpersonal communication & technical effectiveness)

PHC Effectiveness

Pre-requisites for sustainable PHC services

Immediate (direct) outcomes
- Maintain or improve work life of PHC workforce
- Increased knowledge about health and health care among the population
- Reduced risk, duration and effects of acute and episodic health conditions
- Reduced risk and effects of continuing health conditions

Intermediate (indirect) outcomes
- Appropriateness of place and provider
- Health care system efficiency
- Acceptability
- Health care system equity

Final outcomes
- Sustainable health care system
- Improve and/or maintain functioning, resilience and health for individuals
- Improved level and distribution of population health and wellness
2. Overview & aims of CRE
The CRE team and footprint and team

<table>
<thead>
<tr>
<th>Victoria</th>
<th>Northern Territory</th>
<th>New South Wales</th>
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<tr>
<td>Bendigo &amp; Gippsland</td>
<td>Alice Springs &amp; Darwin</td>
<td>Broken Hill</td>
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<tr>
<th>Role</th>
<th>Name</th>
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<tr>
<td>Chief Investigator</td>
<td>John Wakerman</td>
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<tr>
<td>Project Manager</td>
<td>Lisa Lavey</td>
</tr>
<tr>
<td>Other Chief Investigators</td>
<td>John Humphreys</td>
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<td></td>
<td>Matthew McGrail</td>
</tr>
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<td>David Lyle</td>
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Plus Associate Investigators, Postdoctoral Fellows, PhD students, International experts & health service participants
CRE Aims

- **Stream 1**: Develop a better understanding and improved measure of access to PHC services
- **Stream 2**: Develop an evaluation framework for monitoring impact of PHC services on access and equity of health outcomes in rural and remote Australia
- **Stream 3**: Develop and evaluate appropriate sustainable PHC service models in priority health areas
- **Build PHC research capacity** in rural and remote areas
Expected outcomes

- Relevant and timely evidence-based policy research
- Research translation including high level of stakeholder participation in research/policy development – National Advisory Committee, Delphi Group, health services
- Increased research capacity – completed PhDs, independent post-docs, ongoing activity
3. Research streams and progress
Stream 1: Measuring access to PHC

Background:
- Existing schema for measuring access is deficient

Key policy issues:
- How can we best measure access to PHC services?
- What are the implications of using different access measures?

Output:
- A more appropriate ‘index of access’ to PHC services than just ‘rurality’ or ‘remoteness’ classifications
Stream 1
Measuring access to PHC

1. National index of access for non-metropolitan Australia
2. Constructed using smallest possible geographical unit
3. Primary health care providers (GPs, Nurses, Allied Health)
4. Uses current, accurate data and latest methodologies
5. Capable of adjustment to reflect changes
6. Undertaking validation and sensitivity assessment

Conceptual framework

Availability → Proximity → Health Needs

Index of access

Two-state floating catchment method

Step 1: Calculate service catchments
\[ R_j = \frac{S_j}{\sum \sum P_k \cdot f(d_{jk})} \]

Step 2: Calculate population catchments
\[ A_i = \sum \sum R_j \cdot f(d_{ij}) \]
Stream 1
The national Index of Access
Different access criteria result in different eligibility for resources.
Stream 1
Achievements

• Development of a new national-level Index of Access
  ➢ Process - demonstrate deficiencies of existing approaches; audit available data; empirical research to underpin more appropriate measure; develop methodology.
  ➢ Products - 3 papers submitted, 2 presentations, main paper and non-technical working paper drafted.

• Monash model (Mason review, Senate enquiry)

• NHMRC Career Development Fellowship (McGrail)

• 2 PhDs – Russell (2014); Chisholm (2015)
Background:
• Many rural and remote communities lack access to effective and sustainable PHC services.

Key policy issues:
• What PHC services do communities of different sizes and locations require?
• What indicators and benchmarks should be used to monitor service performance, quality and sustainability?
• What are appropriate models of community participation in PHC?

Outputs:
• A comprehensive evaluation framework which includes:
  – funding benchmarks for rural and remote contexts;
  – human and physical resources, multi-disciplinary staffing mix, and supports required; and
  – different mechanisms of community participation optimised for context

Stream 2
An evaluation framework for PHC service access and equity
Stream 2 Progress

• **Core PHC services**
   Defined - Care of the sick & injured; Mental health, Maternal and child health; Allied health; Sexual & reproductive health; Rehabilitation; Oral health; Public health & illness prevention.
   Systematic review published BMC Health Services Research – highly accessed
   Core services paper under review BMC Family Practice
   Implementing core services paper in development

• **Funding benchmarks**
   Australia-wide rural and remote fieldwork under way

• **PHC evaluation framework**
   Paper documenting adaptation of Elmore framework in remote areas in preparation
Stream 2 Achievements

- Impact of **community participation** on PHC – Journal of Primary Health Care
- **Fitzroy Valley** publications
  - Community process
  - Impact
  - Evaluation framework
  - PhD enrolment
• NT Indigenous diabetics in remote areas 2002-11
• Increased access to PHC resulted in:
  ➢ Decreased hospitalizations X 5
  ➢ Decreased death rates X 3
  ➢ Decreased years of lost life X 5
  ➢ Decreased costs - $248/$739 VS $2915

Thomas et al, 2014: Medical Journal of Australia
Stream 3: To evaluate sustainable PHC models

Background:
• Metropolitan PHC models do not fit rural and remote settings
• Few rural and remote PHC models have been evaluated

Key policy issues:
• What service models will best ensure access and equity to mental health, aged care and comprehensive PHC in rural and remote Australia?

Output:
• Evidence-based evaluation showing what models work well to provide effective, sustainable PHC
Stream 3 Progress

Evaluations:

• **Mental health emergency care**
  - 3 papers published, 2 in preparation; PhD on track

• **RFDS Studies (NSW)**
  - Diabetes study finalised, paper submitted
  - New study on clinical handover under ethics review

• **Fitzroy Valley PHC re-orientation (WA)**
  - See Stream 2

• **Youth suicide and youth services mapping in central Australia**
  - Completed

• **Patient-led appointments in routine mental health practice (NT)**
  - Completed

**Overarching Stream 3 paper:**
• In preparation
Stream 3 Achievements

• Project Outputs
  ➢ All projects in write up and dissemination phases
  ➢ Most have already published in referred journals
  ➢ Formal and informal translation activities, including presentations and educational activities

• New Projects
  ➢ Service Learning Evaluation Plan (unsuccessful ARC Linkage) (multi-site)
  ➢ Royal Flying Doctor Service Handover Project (NSW)
  ➢ Palliative Care Service Evaluation (NSW)
  ➢ NHMRC Kimberley Carer Support Project (WA)
  ➢ Developing a nutrition screening tool for older Aboriginal people (NT)
  ➢ Realist review of telehealth in PHC
  ➢ Rural access to drug and alcohol
Stream 3 example: Strengthening PHC & improving access in the Fitzroy Valley

- **Strengthening PHC**: Enhancing primary health care services
- **Improving access**: Increasing availability and accessibility of health services

The graph illustrates the percentage of people in the Fitzroy Valley participating in health checks, care plans, and primary care staff from 2006/7 to 2011/12. Significant milestones include:

- **H4L**: Healthcare Initiative for Long-term Services
- **Alcohol restrictions**: Measures to control alcohol consumption
- **19.2**: Year when alcohol restrictions were implemented
- **COAG**: Council of Australian Governments initiative

Key insights:
- **Health checks** saw a steady increase from 2006/7 to 2011/12.
- **Care plans** showed a significant rise post-2009/10.
- **Primary care staff** experienced growth particularly after 2010/11.

These trends highlight the progressive strategies implemented to improve health outcomes in the region.
4. Knowledge transfer & exchange strategy
# Knowledge transfer matrix to measure impact of CRE

<table>
<thead>
<tr>
<th>Broad area of impact</th>
<th>Specific areas of impact</th>
<th>Key audience Stakeholders</th>
<th>Evidence</th>
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</thead>
<tbody>
<tr>
<td>Research-related impact</td>
<td>New knowledge</td>
<td>Researchers</td>
<td>Produce push</td>
</tr>
<tr>
<td>‘Advancing Knowledge’</td>
<td>Capacity building</td>
<td>Educators</td>
<td>Publications</td>
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<td>Media</td>
<td>Media releases</td>
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<td>Grants</td>
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<td>PhDs</td>
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<tr>
<td>Policy impact</td>
<td>Evidence base</td>
<td>Policy makers</td>
<td>User pull</td>
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<tr>
<td>‘Informing decision making’</td>
<td>Influence in decision-making</td>
<td>Politicians</td>
<td>Access hits &amp; citations</td>
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<td>Professional bodies</td>
<td>Media interviews</td>
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<td></td>
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<td></td>
<td>Secondary circulation</td>
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<tr>
<td>Service impact</td>
<td>Evidence-based practice</td>
<td>Managers</td>
<td>Rapid responses DoHA)</td>
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<tr>
<td>‘Improving health &amp; health systems’</td>
<td>Quality &amp; safety</td>
<td></td>
<td>Decision maker awareness &amp; use (DoHA/services)</td>
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<td></td>
<td>Efficiency</td>
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<td>Invited policy papers</td>
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<td>Cost effectiveness</td>
<td></td>
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<tr>
<td>Societal impact</td>
<td>Health literacy</td>
<td>Consumers</td>
<td>Website hits</td>
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<tr>
<td>‘Creating broad social &amp; economic benefit’</td>
<td>Health behaviour</td>
<td></td>
<td>Media coverage (Croakey, OZ Doc, ABC)</td>
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<td></td>
<td>Health status</td>
<td>advocates</td>
<td>Consumer surveys</td>
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Knowledge transfer

Comprehensive strategy:

- Strengthened relationships with consumers, providers and policymakers
- Increased capacity and research literacy of policymakers and practitioners
- Highly accessed dedicated website
- Peer-reviewed academic papers
- Conference presentations
- Curricula
- Evaluation of impact describing strengthened evidence-informed policy and practice
KT outcomes

• National Advisory Committee meetings X 5
• Stakeholder Presentations x 39
• Evidence of uptake/usage x 54
• 42 conference presentations – 11 invited
• CRE submission + called as witness to Senate Enquiry into Rural Health Workforce
• Technical Advisory Group for geographical systems review
• Several references to CRE work in Australian Parliament
• 64 Pull media events & 27 Push media events
• 53 peer reviewed publications
• 6 newsletters
5. Research capacity building program
Research Capacity Building

**Goal:** Build research capacity of the next generation of rural and remote health researchers.

This will be achieved by:

- **growing our own** – 5 PhDs, 3 post-doctoral fellows, research succession planning, extending research culture through collaborations

- **extending the range of research training** - reducing researcher isolation, increasing researcher access to support and training, linking research with stakeholders and end users
Research capacity building activities

- Australia-wide novice researcher program for PHC workers in rural and remote services
- Shared supervision/external supervisors
- Face-to-face writing workshops/weeks
- Research seminar program
- Selected conferences
- Research scholars as educators
Building research capacity
Progress

• PhD Students
  ➢ Deb Russell submitting August 2014
  ➢ Emily Saurman on track to submit early 2015
  ➢ Marita Chisholm on track to submit March 2015
  ➢ Michael Tyrrell on track to submit end 2014
  ➢ Carole Reeve to submit 2015

• Early Career Researchers
  ➢ 7 of 8 (88%) remain in the program
  ➢ 4 have completed, 2 in write up phase and 2 collecting data
  ➢ 3 presentations at 2014 PHC Research Conference
  ➢ 1 presentation at 2014 Institute of Family Studies Conference

• Evaluation of Early Career Researcher Program
  ➢ Ethics approval granted
  ➢ Participant interviews scheduled
Research capacity building
Achievements

• **2014 Primary Health Care Research Conference presentations**
  - Carole Meade “A General Practice Model of care in residential aged care facilities”
  - Di Roberts “A clinical Audit of a diabetes self-management program in rural Victoria”
  - Laurencia Grant “Analysis of secondary data on Aboriginal Youth Suicide and referral pathways”

• **2014 Australian Institute of Family Studies Conference presentation**
  - Fiona Tipping “Pacific Islander parents’ perceptions of school readiness”
Conclusion

• Improving access and equity requires sound evidence and translation into policy and practice

• These are current and important ‘wicked’ problems with ongoing challenges such as:
  ➢ building rural health research capacity;
  ➢ the inherent difficulty of operationalising equity;
  ➢ establishing appropriate rigorous evaluation methodologies;
  ➢ getting access to data; and
  ➢ engaging busy end-users.
Conclusion

Through its activities the CRE has:

- **Investigated key policy issues** and problems;
- Produced **empirical evidence** across multiple sites, states and institutions;
- **Engaged policymakers and service providers** in the process; and
- Generated important **new evidence** for policy.

The CRE has increased **research capacity**:

- Service **staff, students** on placement, **PhDs, post-docs**, and **promotion** of staff to leadership pathways
- **Critical mass** across rural sites, with other CREs
CRERRPHC contacts

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