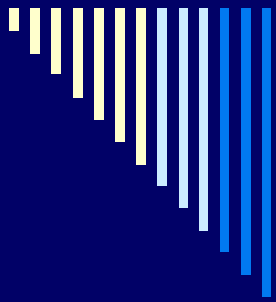


Research in Queensland Hospitals

Robin Mortimer

**Office of Health & Medical
Research, Queensland Health**

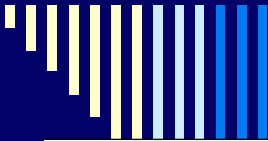


Queensland Government has
contributed about 30% to a \$1
billion health research infrastructure
investment in past 10 years

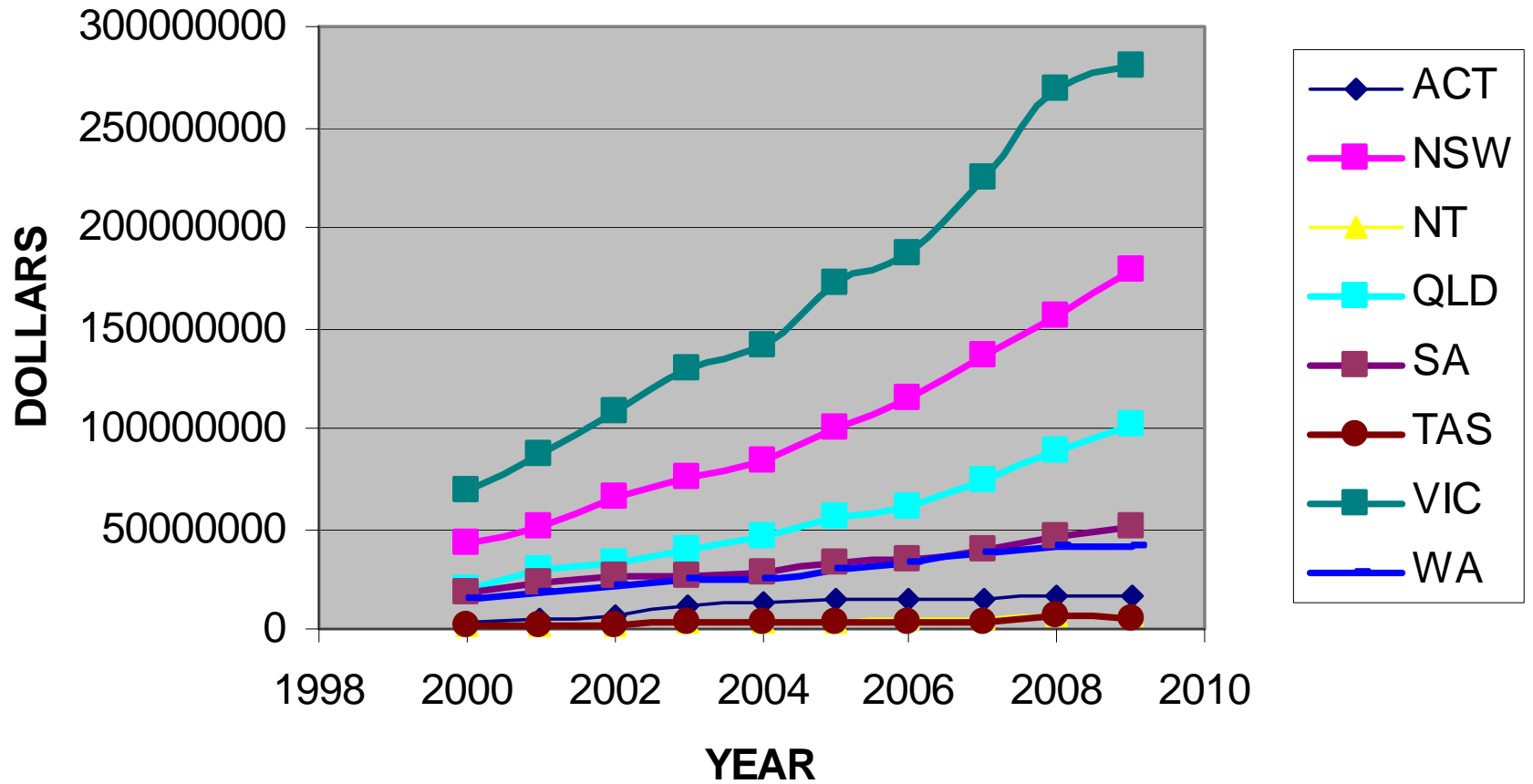


Major Research Facilities

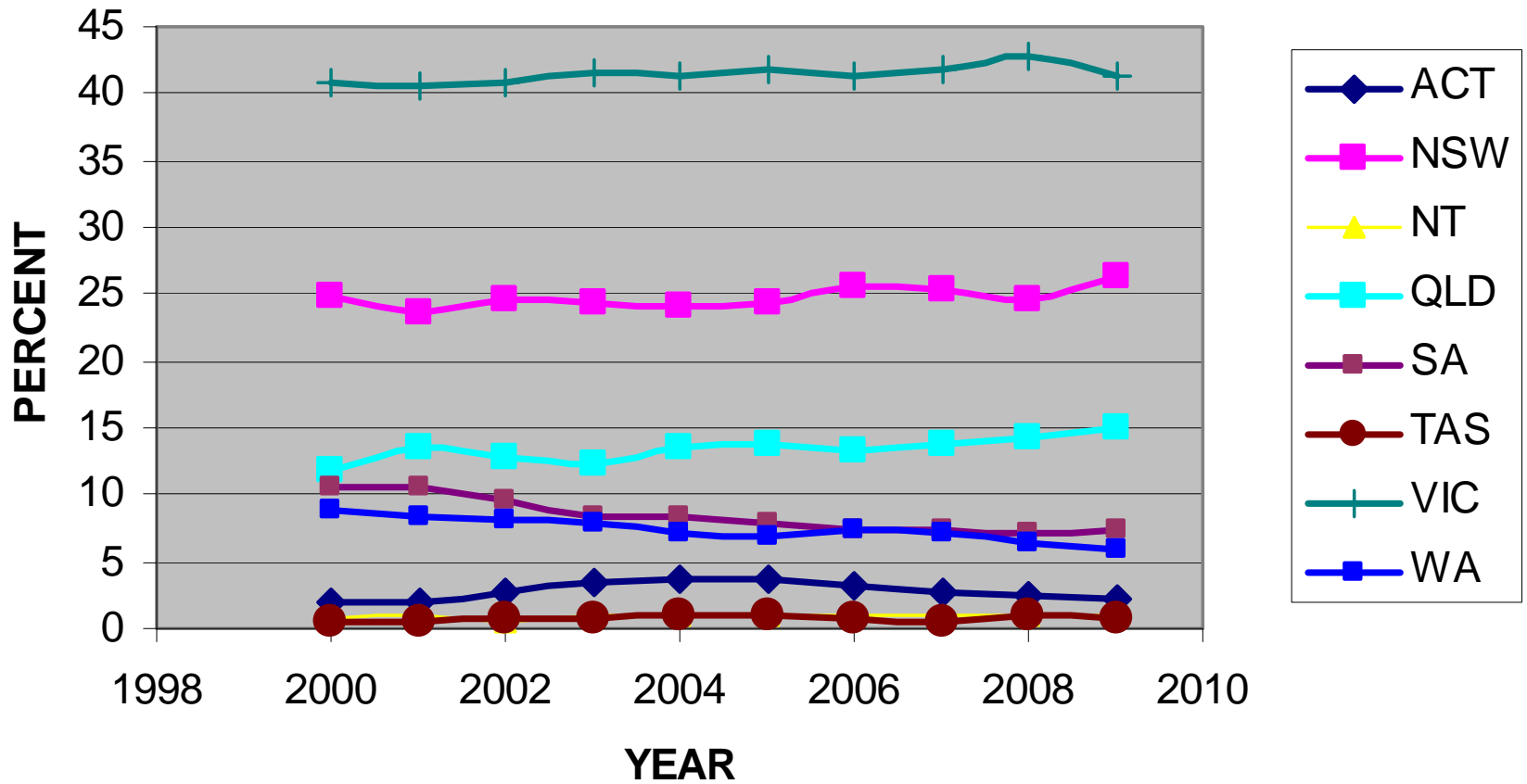
- \$333M proposed Transitional Research Institute (PAH)
- \$145M proposed QIMR Smart State Medical Research Centre (Herston)
- \$105M Qld Bioscience Precinct (UQ, St Lucia)
- \$82M Aust Institute for Bioengineering & Nanotechnology (UQ, St Lucia)
- \$76.6M Aust Tropical Science & Innovation Precinct (JCU, Tvl)
- \$63M Qld Brain Institute (UQ, St Lucia)
- \$66M UQCCR (Herston)
- \$39M Mater Medical Research Institute (S. Bne)
- \$36M Aust e-health Research Centre (CSIRO, UQCCR)
- \$34.7M Eskitis Inst for Cellular and Molecular Therapies (GU, Nathan)
- \$25.5M Medical Engineering Re Facility (TPCH, Chermside)
- \$22M Inst for Glycomics (GU, Gold Coast)
- \$21.4 Wesley Res Inst (Auchenflower)
- \$7.98M Wesley Res Inst Tissue Bank (Auchenflower)



NHMRC Funds \$/yr



NHMRC Funding (Percent of Total)







QUEENSLAND HEALTH SYSTEMS REVIEW

Final Report September 2005 (Peter Forster)

- **Creating a culture of learning and excellence** In health service delivery settings, health and medical research contributes to a culture of excellence and learning and is important for attracting and retaining good clinicians. In turn, the community in Queensland derives a direct benefit from improved quality of care particularly from research with a focus on delivery of health services and quality and safety. On a per capita basis Queensland invests significantly less on health and medical research than most other states. This is quite concerning in an environment of workforce shortage and global competition for clinicians.
-



Why must Queensland Hospitals be involved in research?

- ❑ To close the loop between research discoveries and enhanced patient care
 - ❑ To help define the important research questions
 - ❑ To help recruit and retain the best staff
-

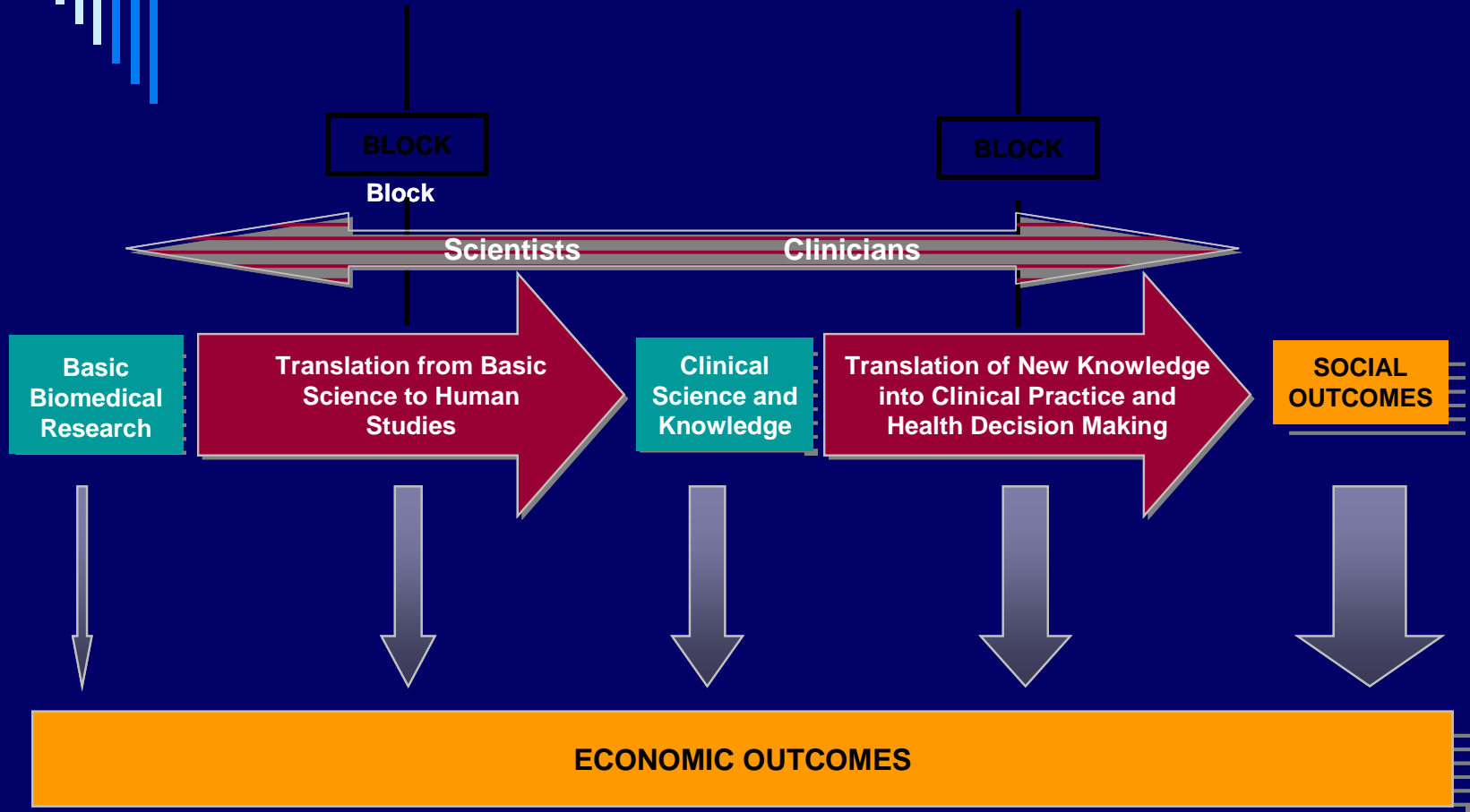


What is Translational Research?

- “Translational research transforms scientific discoveries arising from laboratory, clinical or population studies into clinical applications to reduce disease incidence, morbidity and mortality”

Adapted from National Cancer
Institute, USA

TWO TRANSLATIONAL BLOCKS

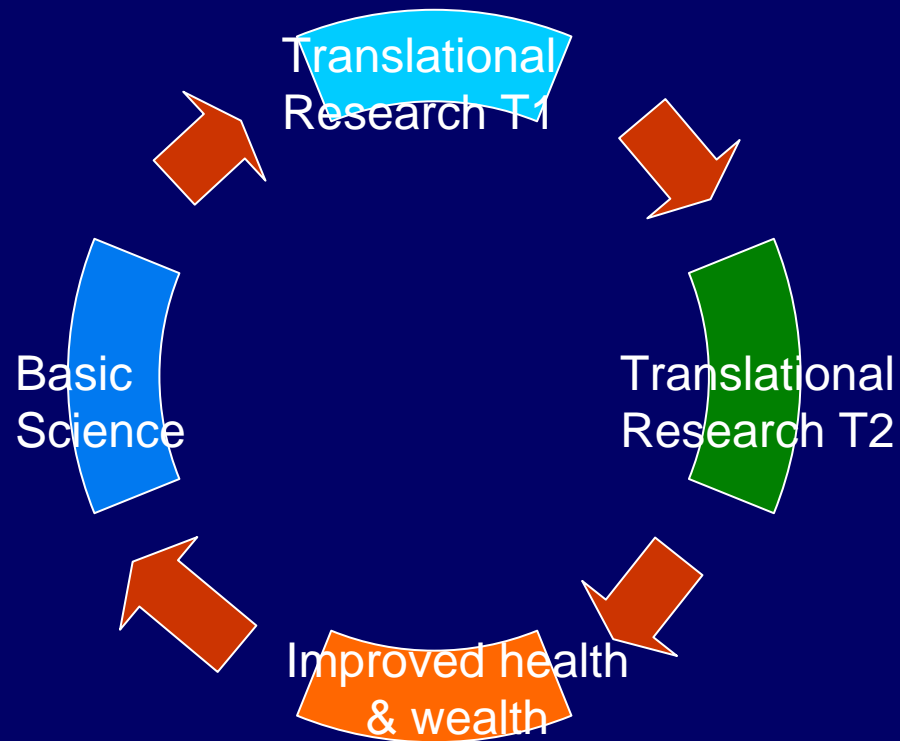


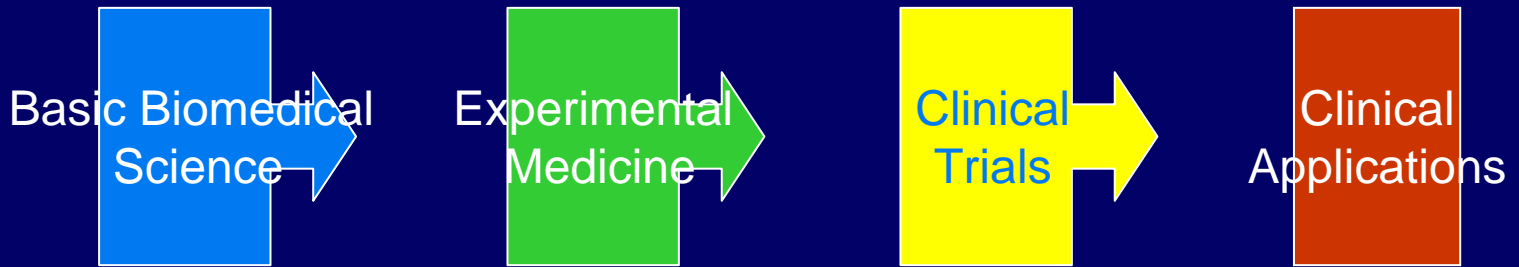
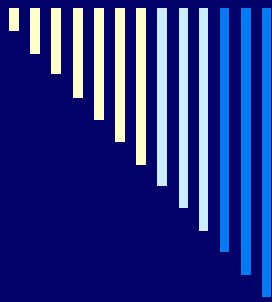


Translational Research

- Harnessing knowledge from basic sciences to produce new drugs, devices and treatment options – T1
- Ensuring that new treatments and research reach the appropriate patients/populations and are implemented correctly – T2

The Virtuous Cycle





Institutes & Universities



QH Hospitals



Industry





Qld Health's Research Capacity

- Approx 281 FTE, but data highly unreliable
 - No data on funds available for research
 - \$18million+ earned for contract research last year
-



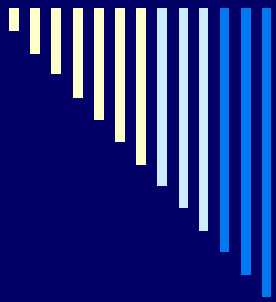
State of play in QH

- ❑ Significant research underspend
 - ❑ Poor integration between basic biomedical research and health care delivery
 - ❑ Dwindling academic clinical departments
 - ❑ Low research activity
 - ❑ Low uptake of research training by clinicians
 - ❑ Recruitment & retention problems
 - ❑ Increasing workload for clinicians
-

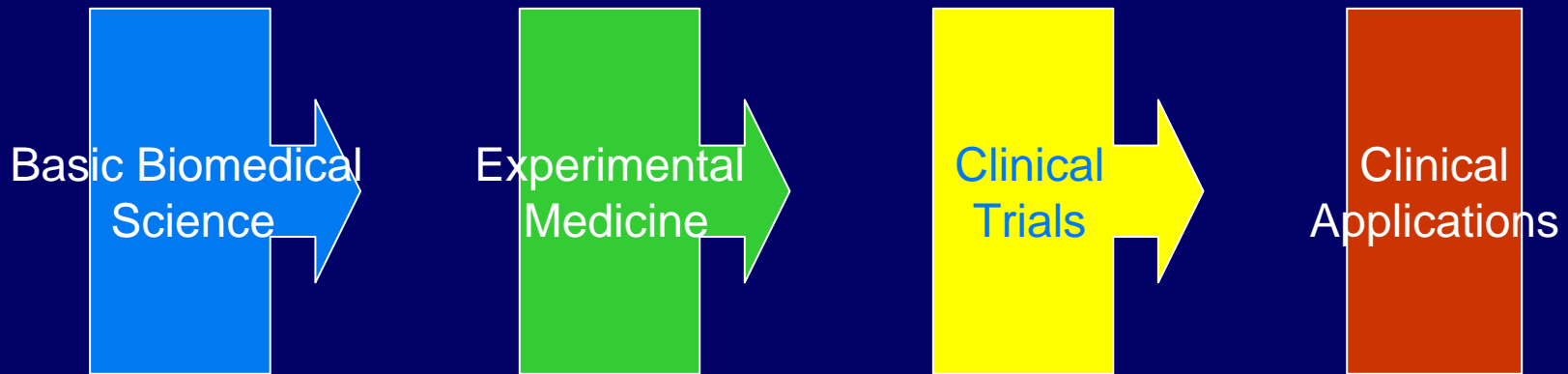


Why do we support biomedical research?

- Expand knowledge?
 - Publish papers?
 - Gain research grants?
 - Increase PhDs?
 - Increase prestige?
 - Establish and expand institutes?
 - Expand universities?
 - Build biotech industries?
-



The real reason



**To improve health (and
wealth)**



Queensland needs to improve health & medical R&D

- Significant underspend
 - Fragmentation
 - Institutes – Universities – Industry - Hospitals
-



Research and Development Plan 2007-2012

□ Mission

- Queensland Health is an organisation that values, undertakes and uses research.
 - Queensland Health supports the translation of research knowledge into service improvement and quality patient care for all Queenslanders.
-



Queensland Health Research and Development Plan

Strategic Plan

- Increasing the clinical, translational, health services and public health research undertaken in Queensland Health.
 - Improving the ethical, scientific and research governance procedures for managing research activities.
 - Strengthening the adoption of evidence-based practice to facilitate service improvement and better patient care.
-



Strategic Directions 1

Increasing the clinical, translational, health services and public health research undertaken in Queensland Health.

■ Goals

- A skilled and committed research-focussed clinical workforce.
 - A resilient network and sustainable network of clinicians and researchers working in partnerships with the public health sector.
 - Research costs are identified and recognised in New Funding Model.
-



Strategic Directions 2

Improving the ethical, scientific and research governance procedures for managing research activities.

Goals

- A robust and secure system of access to administrative data for health research purposes.
 - An efficient and effective ethics approval and research governance management program.
-



Strategic Directions 3

Strengthening the adoption of evidence-based practice to facilitate service improvement and better patient care.

Goals

- Clinical networks adopt standardised clinical practice with measurable impact on the delivery of health services and patient care.
 - Develop research program to fund projects that address:
 - Procedures/treatments with long waiting lists; test opportunities for improvements in quality, efficiency or access to care.
-



Office of Health & Medical Research

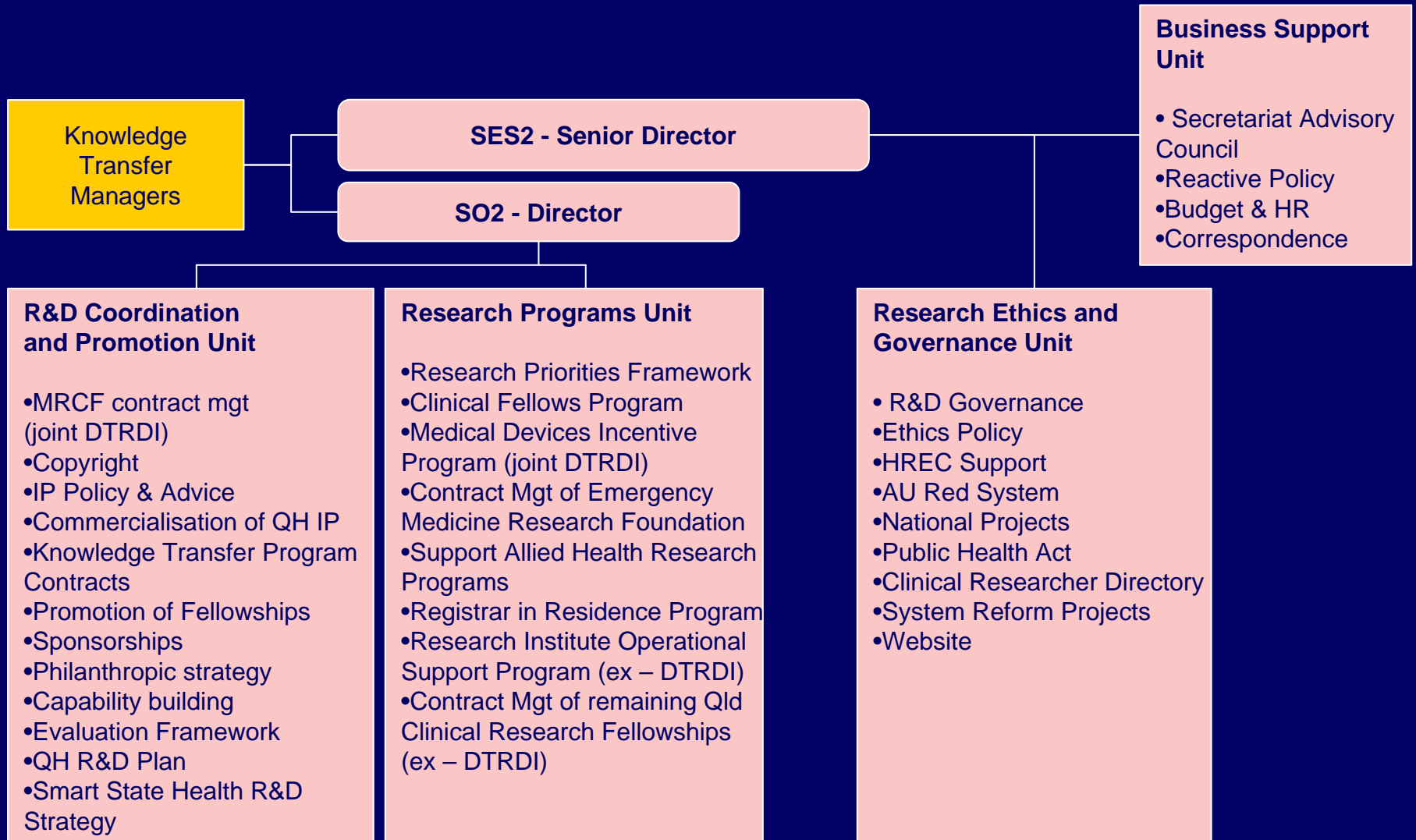
Bringing research to life

- **The Office of Health and Medical Research (OHMR) is a dedicated unit established within the Queensland Health, Centre for Healthcare Improvement.**

 - **OHMR will:**
 - stimulate better support for research in Queensland, and
 - facilitate new collaborations between clinicians, academia and industry.
-



Office of Health & Medical Research



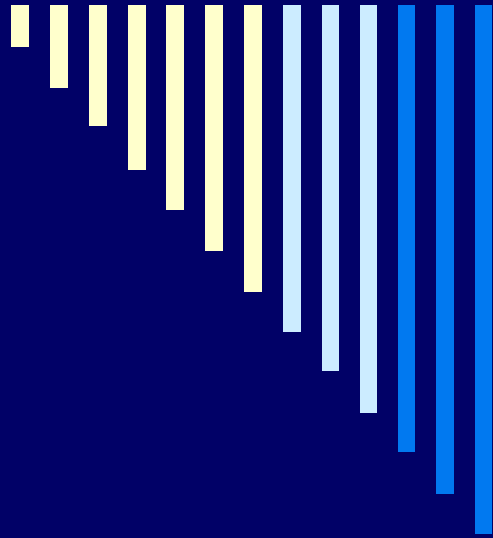


Office of Health & Medical Research

Bringing research to life

Broad responsibilities:

- Promotion and coordination of research
 - Research governance and ethics
 - Research funding
 - Knowledge transfer
 - Increasing capability and productivity
 - Intellectual property guidance
 - Improved linkages between Queensland Health, research institutes, academia and industry
-



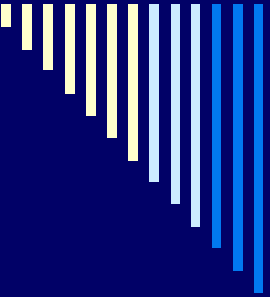
Queensland Government Clinical Research Fellowships

**\$25m Health and Medical Research
Program**



Senior Clinical Research Fellowships (medical, nursing, allied health)

- Up to six Senior Clinical Research Fellowships to be awarded over the next four years
 - Up to \$850,000 per annum over five years
 - Minimum of 6 fellows 2009-2012
-



Health Research Fellowships (medical, nursing, allied health)

- Level 1 – experienced researchers
 - Up to \$150,000/yr for salary support
 - At least 30% FTE research
 - At least 30% FTE clinical
 - Level 2 – mid career researchers
 - Up to \$125,000/yr for salary support
 - At least 30% FTE research
 - At least 30% FTE clinical
 - Minimum of 22 Fellows 2009-2012
-



Clinical Academic Fellowships (medical, nursing, allied health)

- ❑ Designed to increase academic presence in QH hospitals
 - ❑ Salary supplement of up to \$75,000/yr for 5 years
 - ❑ At least 30% FTE research
 - ❑ At least 30% FTE clinical
 - ❑ Minimum of 12 Fellows 2009-2012
-



Knowledge Transfer

- Employing ~2 FTE knowledge transfer managers (locations TBA)
 - Hub and spoke model
 - Identifying commercialisation opportunities
 - Facilitating and negotiating tech transfer
 - Advisory services for IP
 - Education and training sessions
-



Queensland Emergency Medicine Foundation

- ❑ Established 2008
 - ❑ QH seed funds of \$5M
 - ❑ QH annual funding of \$2M
-



Queensland Emergency Medicine Foundation

- ❑ Emergency Medicine Trainee Grants
 - ❑ Emergency Medicine Staff Specialist Grants
 - ❑ Project Grants
 - ❑ Program Grants
 - ❑ Leverage Funding Research Fellowship Scheme
-



Allied Health Research Program

- Research Positions
 - Postgraduate Scholarship Scheme
-



Research Position Package

- Intended to build research capacity in the Health Practitioner workforce and facilitate the implementation of evidence based clinical services.
 - The Research Package includes:
 - (a) five full time equivalent research positions which will be created each year of the Agreement, for a total of 15 new positions by the end of the Agreement; and
 - (b) Research Funds of \$300,000 per annum (in addition to the current Allied Health Research funding of \$100,000 per annum).
-



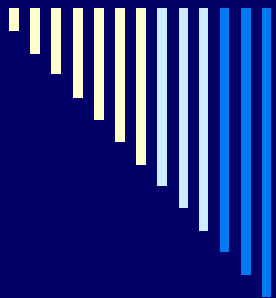
Allied Health Postgraduate Scholarship Scheme

- Up to \$7000/yr if completing a formal tertiary postgraduate qualification eg.
 - • Graduate Certificate
 - • Graduate Diploma
 - • Masters
 - • PhD (where course costs are incurred)
-



Targeted Postgraduate Scholarships for 2009

- • Masters of Musculoskeletal Physiotherapy
 - • Graduate Diploma qualification in Medical Ultrasound
 - • Graduate Diploma qualification in Cardiac Ultrasound
 - • Graduate Diploma in Primary Health Care/ Health
 - • Promotions/ Chronic Disease
 - • Graduate qualifications in Clinical Pharmacy
 - • Graduate qualification in Rehabilitation studies
 - • Graduate qualification in Diabetes Care
-



Office of Health & Medical Research
Bringing research to life

QUESTIONS?

Email: ohmr@health.qld.gov.au

Phone: 340 56121



How can I do research?

- Ask research questions
 - Find:
 - Mentors
 - Collaborators
 - Resources
-



The research question

- A clear research question is an essential basis for a research proposal
-



Framing a research question

- Does the question:
 - Flow from a detailed analysis of the area?
 - Give a clear idea of what the project is about or hopes to address?
 - Can the question be addressed by research?
 - Is the question researchable?
 - Is it possible to deduce from the question:
 - “answers” or ways of addressing the question?
 - Possible techniques for answering the question (sampling and data collection?)
 - Is the question interesting, relevant and important?
 - Is there a single question?
-



Unhelpful research statements

- I want to look at
 - I have collected some data and now I want to write it up
 - Does “x” work?
 - etc
-



Improving research questions

- Does technique x give better chest radiographs than technique y?
 - Is soft tissue resolution in chest radiographs done with technique x better than technique y?
 - Are lung nodules measuring less than 3 mm more reliably found with technique x than with technique y?
 - etc
-



Research design

- Are lung nodules measuring less than 3 mm more reliably found with technique x than with technique y?
 - Reduce the variables
 - Gold standard
 - Methods
 - Analysis
 - (Write the paper before the study)
-



Research resources

- Departmental funds
 - Private practice trust funds
 - Hospital foundations
 - Research grants
 - Research fellowships
-