Development and application of a research integrity maturity model

Gordon McGurk, PhD, - QIMR Berghofer
Juanelle Furness PhD- Charles Sturt University

June 2024

Context in a Federated System

- Distance (Bne-Darwin =3500km/2200mi)
- Devolution of responsibilities
- No Federal Regulator
- No compulsory RCR learning/training required
- Inaugural National RI Conference in 2023
- Time zones

QIMR Berghofer
Medical Research Institute

- **AHRTC**
- **5 Health Service Regions (17 in Qld)**
- **7 Universities**
- **4 Medical Research Institutes**

What is a holistic state?

1. Researchers and the institution view research integrity as a key component of research quality and adopt and implement the principles, including reflecting good research practices, on a day-to-day basis;

2. Supervisors recognise their role as mentors of junior staff, are proponents of good research practices, and feel empowered and resourced to incorporate this responsibility;

A matrix approach to Research Integrity

	Institutional Culture	Roles and Responsibilities	Systems	Processes	Capability and Capacity	Training and Education	Evaluation
Level 5- Holistic approach to research quality	Researchers and the institution view research integrity as a key component of research quality and adopt and implement the principles, including reflecting good research practices, on a day-to-day basis; Supervisors recognise their role as mentors of junior staff, are proponents of good research practices, and feel incorporate this responsibility;						
Level 4- Fully Integrated	Robust research integrity framework which incorporates a clear understanding of questionable research practices is implemented and supported; institution committed to following the Code and correcting the public record or repaying funding where necessary; institution ensures barriers that may prevent researchers from raising concerns are removed.	Alternate Designated Officer(s); relationships established with regulatory agencies; broad network of experienced consultants who can be called upon to participate in investigations or improve research integrity framework where necessary.	Mechanism for receiving, triaging (may include legal input), allocating and responding to anonymous complaints.	Legal oversight during established process for informing external agencies; a suite of policies and procedures that support effective research governance including handling anonymous complaints, managing authorship disputes, disclosing and managing conflicts of interest and managing research records, data and primary materials. Prescribed periodic review of processes and mechanism in place for internal or external review of decisions	Personnel supporting research integrity attend training/conferences and undergo continuous professional development; participation in research integrity network or research management society; knowledge acquired through evidence-based training design or case management can be published or presented at conferences.	Dedicated Training Officer to support research integrity training; structured training available for Designated Officer; training developed through evidence-based/co-design approaches.	Research Integrity complaints on c... assessments/inves... with previously rep... training material; r... effectiveness throu... feedback mechanis... integrity framewor... institutions global... where necessary.
Level 3- More Advanced	Senior Executive of the Institution aware of the importance of effective research governance; researchers aware of resources in place to support research integrity and mechanisms available to report concerns.	Established Research Integrity Office including Designated Officer and Assessment Officer(s); Research Integrity Advisor(s) providing guidance to individuals wanting to make a complaint; option available to engage external consultant(s).	Mechanism for receiving and managing complaints electronically;	Tried and tested procedures for raising concerns and managing potential breaches of the Code; consideration of the need to inform external agencies. Potential for internal or external review of decisions or processes	Cases fully investigated within appropriate timeframes; Research Integrity Office has significant experience in handling both major and minor cases.	Research integrity training conducted through more than one modality; structured training available for Research Integrity Advisors.	Continuous improv... procedures, Resear... incorporate feedba... through surveys, a... town hall meetings
Level 2 - Intermediate	Senior Executive of the Institution have some awareness of the need for research governance; limited resources allocated towards supporting research integrity; researchers may not be aware of mechanism to report concerns.	Part-time or full time Assessment Officer; may have Designated Officer; may have Research Integrity Advisor; no involvement of external consultant(s).	Use of emails to lodge complaints/ raise issues; may be intranet/ internet page dedicated to research integrity	Institutional policy on responsible conduct of research and procedures for managing and investigating potential breaches of the Code.	Single point of contact to manage and investigate complaints; personnel supporting research integrity may have dealt with some issues, none serious.	Annual online training and assessment for researchers; may not have training for Research Integrity Advisors.	Ad-hoc review of i... research integrity a...
Level 1- Basic	Senior Executive of the Institution unaware of the need for resources to support research integrity; limited overall awareness of research integrity; researchers uncertain of how to report concerns	No defined role or responsibility for research integrity. Institution relies on freely available resources from external agencies or institutions.	No formal system for lodging or handling complaints/ raising issues	Knowledge of the *Australian Code for the Responsible Conduct of Research* (Code).	No or minimal ability to receive or handle complaints.	Ad hoc training may be conducted through informal modalities; not necessarily tailored to meet the needs of the institution.	No or minimal eval...

Domains within the matrix

1. Institutional RI Culture
2. Allocation of Roles and Responsibilities
3. Systems
4. Processes
5. Capability
6. Capacity (Integrity Office Staff)
7. Training, Learning and Education
8. Evaluation and Improvement

Attainment Levels

1. Basic
2. Intermediate
3. More Advanced
4. Fully Integrated
5. Holistic

Self-assessment circa 2020

InstitutionRI culture	Roles and Responsibilities	Systems	Processes	Capability and capacity	Training, Learning and education	Evaluation and Improvement
Level 2	Level 3	Level 2/3	Level 3	Level 2	Level 2	Level 1

Self-assessment 2023

Institution RI culture	Roles and Responsibilities	Systems	Processes	Capability and capacity	Training, Learning and education	Evaluation and Improvement
Level 3/4	Level 4	Level 4	Level 3	Level 3/4	Level 3/4	Level 2/3
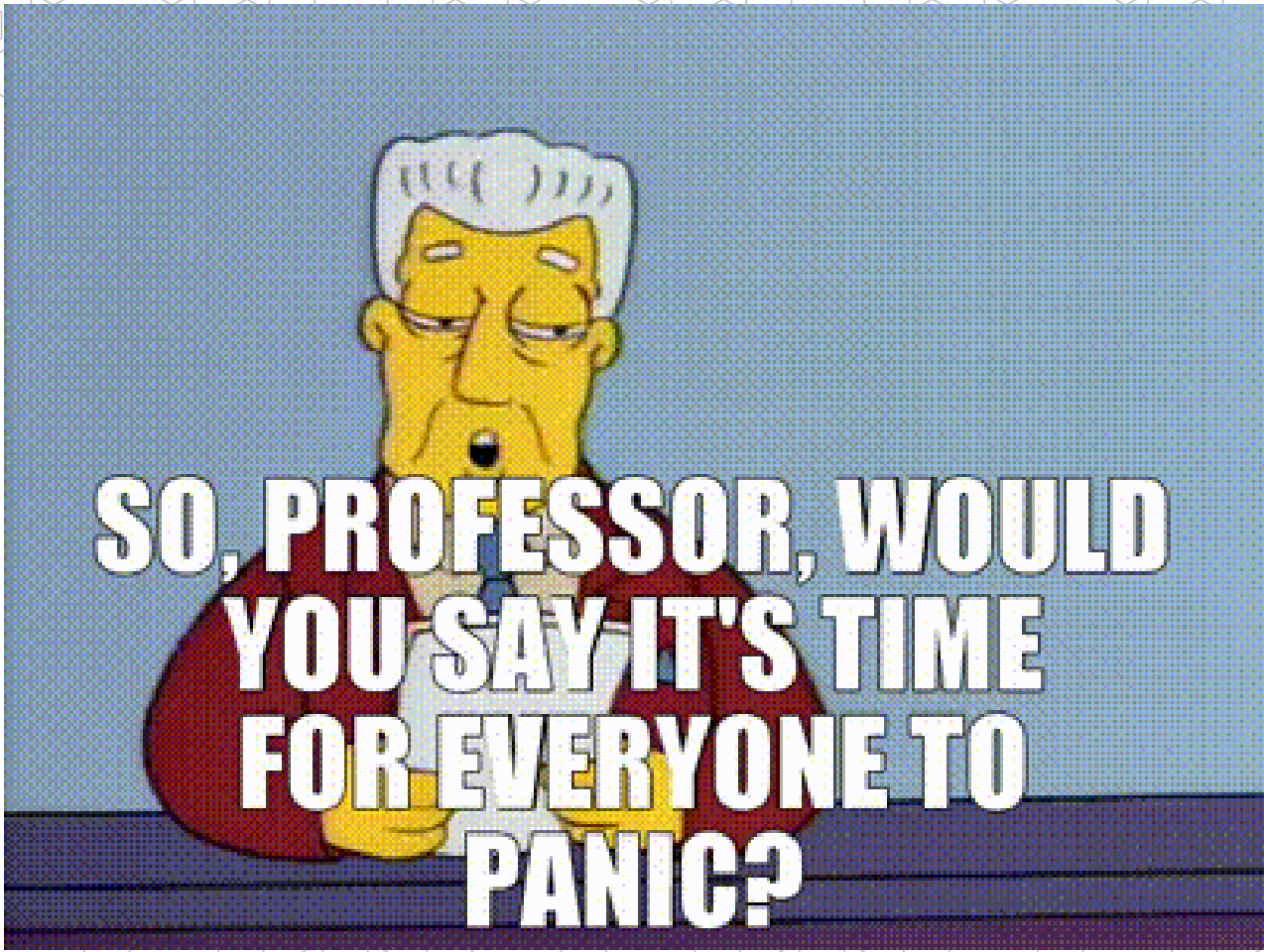
Use and validation

- Provided to all members of the partnership and other Institutions in Australia.
- Feedback positive
- Currently assisting one MRI to develop its own framework and plan
- Being used by HHS' within the AHRTC

QIMR Berghofer
Medical Research Institute

Institutional RI Culture

**Level 4-
Fully integrated**

- **Robust research integrity framework which incorporates a clear understanding of questionable research practices is implemented and supported;**
- **Institution committed to following the Code and correcting the public record or repaying funding where necessary;**
- **Institution ensures barriers that may prevent researchers from raising concerns are removed.**

Training, Learning and Education

Level 4- **Fully integrated**	• **Dedicated Training Officer to support research integrity training.** • **Structured training available for Designated Officer.** • **Training and learning developed and provided through evidence-based/co-design approaches.**

Key Learnings

- Model can be used in most situations and expanded as needs be
- Applicable across most types of entities
- Can modify eg training based on needs, learning styles, priorities

QIMR Berghofer
Medical Research Institute

Σε ευχαριστώ

Gordon.mcgurk@qimrberghofer.edu.au