

Medical Imaging Services



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Executive Director
Medical Imaging Services

The Department of Medical Imaging (DMI) provides a full range of diagnostic and interventional imaging services. DMI actively undertakes clinical research in departmental, interdepartmental and multi-site collaborative research projects. Under the directorship of Professor Alan Coulthard, the DMI Research Office supports approximately 20 departmental research projects and 70 service-based research studies for which the department provides imaging services to both research projects and clinical trials established by other RBWH departments or external research groups, for example UQ.

The aims of the DMI Research Office have been two-fold: to strengthen the relationships it currently has with other research groups within the RBWH and externally, and to substantially develop the research interests of staff within the department. This approach has resulted in the completion of seven service-based projects (with subsequent publications), the development of 15 new service-based projects, as well as 18 departmental projects. The DMI Research Office also provides research support to radiology registrars and residents. Registrars are required by the Royal Australian and New Zealand College of Radiologists (RANZCR) to complete two research projects to fulfil their specialty training requirements. Registrars are supervised by consultants from DMI and from other radiology training sites in Queensland. Furthermore, residents are encouraged to become involved in either existing departmental projects or to develop smaller projects which they may present at local or national conferences. The department, therefore, successfully provides an environment for junior doctors to develop key research skills required for their future progression to the Queensland Radiology Training Programme.

There are many clinical benefits attributed to conducting research within DMI. Primarily, our research provides valuable insights into the standards of practice within the department by exploring new diagnostic and interventional avenues. In addition, various clinical trials currently being conducted within DMI may potentially lead to changes of practice which will directly result in improved patient treatment and care across all imaging modalities. For example one ongoing study within DMI is attempting to determine the best practice and technology to identify anti-platelet coagulation prior to patients having a neuro-interventional procedure. Similarly, one of the new studies initiated in 2015 will look at the number of silent strokes that occur during a neuro-interventional procedure with a view to using better anti-coagulation regimes. The results of these studies will have immediate benefits to our patients' treatment and their outcomes.

DMI has successfully obtained a number of research grants during 2015 to support its research interests. These grants have been awarded from a range of different funding bodies including the RBWH Foundation, RANZCR and National Health and Medical Research Council. Furthermore, DMI has maintained its publication output having nine publications accepted by peer-reviewed journals as well as having consistent representation at various national and international conferences by consultants, registrars and radiography staff.

Supervised Post-graduate Research Students

Name	Current Studies <i>University (duration)</i>	Research Project Title	Supervisors <i>(RBWH staff in bold)</i>
Nicole Waters	MPhil, UQ (2015–2018)	Silent Strokes Study: Prospective study of clinically silent ischaemic events post-elective endovascular treatment of intracranial aneurysms.	Alan Coulthard
Cara Odenthal	MPhil, UQ (2013–2017)	Corpus Callosum atrophy: a predictor of future disease burden in patients presenting with clinically isolated syndrome.	Alan Coulthard
Patrick Eastgate	PhD, QUT (2015–2018)	Patterns in current imaging practice in an emergency department.	Steven McPhail

Research Fellows

Name	Type of Fellowship	Research Program	University (years)
Alya Saeed	Women's Imaging	Hook-wire localisation of breast lesions.	King Abdulaziz University

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Policy and practice guidelines internationally highlight the importance of organising and delivering health care on the basis of robust evidence. Charged with efficiently delivering high quality services to meet the diverse and often changing needs of heterogeneous populations, mental health services need evidence of varying kinds. To ensure that evidence is relevant and useful, it is critical that services are actively engaged in identifying areas needing exploration and the development of the evidence.

