



## **Unit for Medication Outcomes Research and Education (UMORE)**

**School of Pharmacy  
Faculty of Health Science  
University of Tasmania**

### **Vision**

- To become a premier source of information, education and collaborative research in the assessment and improvement of medication outcomes.
- UMORE has a strong focus on the application and evaluation of information and communications technology (ICT) solutions to improve the safety and efficacy of health care delivery, including the use of medications.

### **Achievements**

- Almost \$5M in R&D funding over the past 5 years
- Strong collaborative research links with numerous government, professional and commercial organisations
- A range of ongoing consultancies
- Keynote presentations at national conferences
- Several commercial entities have been formed by members of UMORE
- Several products are undergoing the commercialisation process
- Two of the 9 inaugural National Institute of Clinical Studies Fellowships were awarded to UMORE
- Finalist in the 2005 Tasmanian ICT Industry Awards
- Pharmaceutical Society of Australia Young Pharmacist of the Year 2005, Dr Shane Jackson
- Pearcey Foundation Tasmanian Award 2005 and National Pearcey Award 2006 for innovative and pioneering achievement and contribution to research and development in information technology; Luke Bereznicki
- NPS National QUM (Quality Use of Medicines) Student Award 2006, Luke Bereznicki
- Continual flow of visiting research students from overseas

UMORE is a University of Tasmania e-health research unit focused on the development, application and evaluation of ICT solutions to improve the safety and efficacy of health care, including the use of medications. UMORE has a record of achievement in engaging with ICT businesses to attract projects and pursue commercial outcomes from joint research projects. Its research in medication safety solutions has been widely recognised nationally and internationally.

Over the past 5 years, UMORE has attracted external funding of almost \$5M in health informatics to Tasmania. This research and development has been performed in a unique collaboration between university-based health and information system specialists, State Departments of Health and Human Services and Economic Development, health professionals and the local and national ICT industry.

## Recent projects

- **Online learning:** an innovative e-learning initiative in medication safety for health care professionals and students ([www.medsafety.net](http://www.medsafety.net)), commercialisation underway with Multi-Ed Medical Limited.
- **Data collection and linkage, and economic analysis:** development and comprehensive evaluation of an innovative national electronic database for medication-related incidents and pharmacists' clinical activities in the community setting, incorporating an electronic communications system (PROMISe) that interfaces seamlessly with two commercial pharmacy dispensing systems and sends encrypted messages to a secure server for collation and analysis. The solution has been retained by PCA NU Systems within their commercial software (WiniFRED) following very positive user feedback.
- **Clinical data mining:** development and comprehensive evaluation of an innovative data mining tool (MedeMine) for identifying patients with poorly controlled asthma on the basis of their medication usage patterns.
- **Continuum of care:** a national program to improve communication flow between hospitals and the community setting to reduce adverse medication outcomes following hospital admission or discharge ([www.medesupport.com.au](http://www.medesupport.com.au)); incorporating an electronic communications pathway that interfaces seamlessly with commercial pharmacy dispensing systems and sends encrypted, HL7-compliant messages to a secure server for viewing by hospitals, nursing homes, general practitioners, pharmacists and patients/carers.
- **Patient empowerment to improve safety:** home-based monitoring of medication response (INR control in patients taking warfarin), with two-way secure communication with GPs; in collaboration with Neuragenix Pty Ltd. and Roche Diagnostics. Has now been refined (MedePOC) to enable secure communication of INR results between aged care facilities and GPs, with communication of clinical instructions back to the aged care facilities, in a HealthConnect project.
- **Marketing and education using digital technology:** Full production of an innovative national case-based DVD promoting rural practice to undergraduate pharmacy students ("Innovative Marketing of Rural and Remote Pharmacy Practice via the Digital Medium"). Now being utilised nationally by the Pharmacy Guild of Australia and universities around the country.

The major achievement of UMORE has perhaps been bringing together a number of key (but disparate) players within the health informatics environment in successfully completing large research and development collaborations. This unique team approach has included university-based health and information system specialists, State Departments of Health and Human Services (Tasmania, Victoria and Western Australia) and Economic Development, health professionals and the local and national ICT industry.

In several cases, this experience has enabled smaller ICT companies to develop a footing in health informatics. In essence, UMORE has acted as a catalyst for interest in health informatics amongst IT companies in Tasmania.

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### **Professor Greg Peterson PhD, MBA, FSHP, FACP, MPS**

Greg has a personal Chair in Pharmacy at the University of Tasmania, and is a practising pharmacist. Greg's research interests centre on improving the use of medicines (optimising the safety and cost-effectiveness of medication usage), and he has over 100 research papers published in refereed international and national journals. He has led many community and hospital projects directed at improving the use of medications and patient outcomes. Greg is a member of the American Medical Informatics Association, Health Informatics Society of Australia and the Tasmanian e-Health Association.