



**AUSTRALIAN PRIMARY HEALTH CARE RESEARCH INSTITUTE
ANU COLLEGE OF MEDICINE, BIOLOGY & ENVIRONMENT
THE AUSTRALIAN NATIONAL UNIVERSITY**

**SELF HELP E-HEALTH APPLICATIONS AS PRIMARY
HEALTH CARE TOOLS**

**Stream Eleven
International Visiting Fellowship**

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Centre for Mental Health Research
ANU College of Medicine, Biology & Environment**

**Dr Lee Ritterband
University of Virginia, Charlottesville,
US**

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We wish to thank the Australian Primary Health Care Research Institute (APHCRI) for funding the visit by Dr Ritterband (University of Virginia, US). We also wish to thank Dr Ritterband for the inspiring manner in which he shared his practical and theoretical knowledge with students, fellow researchers, the public, policy makers and practitioners including those residing in rural areas. Finally, we thank him for his assistance in compiling this report.

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EXECUTIVE SUMMARY

With the ageing of the Australian population, the cost of the health care system is projected to grow substantially over the next 30 years [1]. According to the 2008 national e-health strategy maintaining Australia's current good health outcomes in the face of these pressure *"will require a fundamental change in the way health care is delivered."*[2]. E-health technologies offer a promising means for addressing this problem, particularly with respect to delivering high quality evidence-based *treatments* direct to the consumer.

The current report summarises the activities and outcomes of an APHCRI-funded visit to Australia by Dr Lee Ritterband, an international expert in the field of e-health self help technologies for improving health outcomes.

In this report, primary health care is interpreted broadly to refer to the provision of first level care in any setting including the delivery of self-help e-health services direct to the public.

Dr Ritterband's visit took place between 12 June and 15 August 2009. During this period he presented eight lectures and seminars on e-health applications and research, including presentations at the: Combined Universities Centre for Rural Health (CUCRA), Geraldton; Black Dog Institute, Sydney; Centre for Mental Health Research, ANU; Department of Health & Ageing, Canberra; Western Australian Department of Health; The Integrated Primary Mental Health Service (IPMHS), Wangaratta, Victoria; Australasian Sleep Trials Network National Insomnia Strategy Meeting, Sydney and a public lecture in Canberra. He also held meetings with e-health developers and researchers at the Centre for Mental Health Research; St Vincent's Hospital Virtual clinic, Sydney, the e-therapy Unit, Swinburne University, Melbourne; and The Black Dog Institute. He met with researchers at CUCRA, the West Australian Sleep Disorders Research Institute and Monash University and held discussions with the Manager of IPMHS.

In his presentations, Dr Ritterband highlighted the potential and efficacy of Internet applications as a means of delivering accessible health care to the public. He has developed several Internet applications including a self help program for insomnia (SHUTi), an Internet glucose awareness training program for consumers with Type 1 diabetes (BGAThome) and a web-based encopresis application for children (UCANPOOPTOO). SHUTi was developed because sleep problems are highly prevalent in the population, are responsible for a high level of cost burden and are associated with comorbidity and injury. The most common treatment for insomnia is medication which can lead to dependence. Cognitive and behavioural techniques are effective and preferred treatments for insomnia but few practitioners are trained in the delivery of such treatments for sleep problems. SHUTi addresses this limitation by delivering cognitive and behavioural techniques automatically online. The program has been demonstrated effective in a recent randomised controlled trial. BGAThome was developed because diabetes is a highly prevalent and costly condition which causes serious health complications. There is strong evidence that training in the anticipation, recognition, treatment and prevention of abnormal blood glucose levels can improve outcomes for this illness. However, such programs are inconvenient and inaccessible for those residing in rural and remote regions or at a distance from specialist centres. BGAThome provides this training conveniently at home via the Internet. Dr Ritterband and his colleagues at the University of Virginia have demonstrated that this Internet training program is both acceptable to users and effective in producing clinical improvements. Dr Ritterband is now working with the CUCRA to modify BGAThome for trialling and use in Western Australia.

There are clear policy implications of this work. Evidence-based automated treatment programs have the potential to improve the provision of health care in rural and metropolitan Australia. There is a need to ensure that ehealth solutions are explicitly incorporated into primary health care service planning, and that mechanisms are put in place to support capacity building within the e-health services field and the systematic dissemination of evidence-based e-health programs to general practitioners, other primary health care practitioners and organisation and direct to consumers.

INTRODUCTION

With the ageing of the population and the primary care workforce, the cost of the health care system is projected to grow substantially over the next 30 years [1]. According to the 2008 national e-health strategy maintaining Australia's current good health outcomes in the face of these pressure *'will require a fundamental change in the way health care is delivered.'* [2]. E-health technologies offer a promising means for improving the quality of the healthcare system and providing cost-effective accessible healthcare solutions for a range of health conditions. However, to date the primary focus of e-health policy in Australia has been on the electronic health record. Although important, the potential of ehealth is far broader than this. E-health systems can also deliver *treatments* direct to the consumer, including those with chronic conditions such as diabetes. However, such systems must be evidence-based.

The current report summarises the outcomes of a visit by Dr Lee Ritterband, an international expert in the development and evaluation of e-health tools for chronic health conditions. The report begins with a brief summary of Dr Ritterband's areas of expertise followed by a description of the activities he undertook during his visit, the key issues emerging from these activities and their implications for primary health care policy in Australia.

Definition of primary health care:

Primary health care has been defined by APHCRI as *socially appropriate, universally accessible, scientifically sound first level care*. According to this definition, primary health care involves not only face-to-face primary care from general practitioners, but also the provision of first level care in other forms including by means of e-health services direct to the public. Both the e-health services direct to consumer and the delivery of such services as an adjunct to general practice were covered by Dr Ritterband's visit.

Dr Lee Ritterband:

Dr Lee Ritterband's visit was funded by an APHCRI International Visiting Fellowship Program. This program was established by APHCRI with the aim of strengthening the knowledge base, facilitating the translation of research into policy and practice Strategic aims).



About Dr Ritterband: Lee Ritterband is Associate Professor and the Director of Behavioural Health & Technology in the Department of Psychiatry and Neurobehavioral Sciences at the University of Virginia. He is a leading researcher in behaviourally based Internet treatment programs and has developed online interventions for diabetes, insomnia and child health. He is a co-founder and past president of the International Society for Research on Internet Interventions and a member of the Editorial board of the Journal of Medical Internet Research. His most recent research grants are for evaluations of an Internet-based intervention for insomnia (NIH) including one study of the effectiveness of the

intervention in cancer patients and an evaluation of an Internet intervention for childhood constipation and encopresis.

KEY ACTIVITIES:

Dr Ritterband's visit took place between 12 June and 15 August 2009.

During this time he delivered *eight presentations* in metropolitan and rural Australia. These included:

- **A public lecture in Canberra entitled *e-health and insomnia: an Internet solution to a health workforce nightmare*** (9 July 2009, see Appendix 1). This lecture was both well attended and very well received, generating considerable discussion and many questions from the audience. It culminated in a four-column media article in the Sunday Canberra Times (12 July, 2009) entitled: "*Log on for some Shut-eye*". Prior to this lecture, Dr Ritterband was featured in a radio interview on ABC 666.
- **A presentation to the Western Australian Department of Health, and Diabetes WA** at the WA DoH entitled *Using the Web to deliver treatments: Focus on Diabetes* (15 July 2009). Seven remote centres teleconferenced into the seminar which focused primarily on diabetes and the nature, efficacy and acceptability of Ritterband's e-tool for managing it at home: BGAThome.
- **A presentation to the Combined Universities Centre for Rural Health (CUCRA), University of Western Australia, Geraldton WA** entitled: *Use of the Internet in delivering remote health care* (14 July 2009). The focus of this seminar was on the means by which Internet applications can facilitate health care (e.g. for diabetes) in areas which are remote from health services. In addition to CUCRA staff/students the seminar was 'attended' via teleconference by staff/students from the Edith Cowan and Curtin Universities.
- **A presentation to the Integrated Primary Mental Health Service (IPMHS), Wangaratta, Victoria, *Treatment of Insomnia*** (30 July 2009). The focus of this lecture to practitioners based in rural Victoria was on the provision of practical information about the assessment and treatment of insomnia and the latest evidence regarding the condition. (The IPMHS is an innovative *primary* mental health care service which collocates mental health professionals in 26 of the 28 regional GP clinics in north eastern Victoria. It is based on a *partnership* between North East Health Wangaratta and the North East Victorian Division of General Practice and is funded by the Victorian State Government Primary Mental Health and Early Intervention Initiative and the Commonwealth Government Better Outcomes in Mental Health Care Initiatives. During this session, Dr Ritterband together with Griffiths who accompanied him on this visit, exchanged views with IPMHS staff about practical aspects of implementing e-health interventions in primary mental health care in rural regions.
- **A presentation to the Black Dog Institute of NSW** of a seminar entitled *Using the Internet to deliver treatment* (29 July 2009). The presentation was attended by academics staff and students of the Institute.
- **A presentation to the Australasian Sleep Trials Network National Insomnia Strategy Meeting** entitled *Insomnia treatment: The e-health perspective* (29 July 2009).
- **A Presentation to and roundtable discussion with the Australian Department of Health and Ageing, Canberra** entitled *E-health and Internet interventions: Australian-based research and clinical centers* (13 August 2009). In this talk Ritterband provided an overview of the organisations in Australia he had visited as part of his APHCRI fellowship and which were undertaking Internet research, development and e-health service delivery. At the specific request of the attendees he also described the results of his insomnia research with SHUTi, his e-health tool for insomnia. The aim of this

presentation was to inform policy makers of developments in and the efficacy of e-health care interventions and tools, to highlight relevant e-health work undertaken in Australia and to provide a context which might inform the development of relevant primary health care policies.

- **A presentation to ehub/CRU at the Centre for Mental Health Research** at the ANU, entitled *Model of Internet interventions* (14 August 2009). This presentation to academic and ehealth services staff as well as students in e-health proposed a “model to help guide future Internet intervention development and predict and explain symptom improvement produced by Internet interventions”.

In addition, Dr Ritterband participated in a series of meetings with a range of stakeholders around Australia including:

- **A meeting at St Vincent’s Hospital Virtual clinic, Sydney** with Professor Gavin Andrews, Director of Anxiety Disorders Clinic and Dr Nick Titov, Director of the Virtual clinic to discuss their work on the delivery and evaluation of e-mental health programs for depression, generalised anxiety social anxiety and panic disorders, including the implementation of e-mental health programs in primary care and schools settings (24 June 2009).
- **Numerous meetings with the Directors of ehub at the ANU** (Professors Helen Christensen and Kathy Griffiths) to plan collaborative research and exchange information about the University of Virginia and ANU e-health programs. ANU delivers online programs for depression, generalised anxiety disorder and social anxiety disorder direct to the public and through primary care settings such as Lifeline and schools. In addition, Dr Ritterband attended a formal ehub meeting to learn about and provide input to projects within ehub including those conducted by several PhD students/early career researchers (26 June 2009).
- **Meeting with ANU ehub technical experts** (Kylie Bennett and Anthony Bennett) in Canberra to discuss computer infrastructure and software implementation for development, testing, and dissemination of ehub Internet interventions (3 July 2009).
- **Meeting at the West Australian Sleep Disorders Research Institute (WASDRI)** in Perth, an institute engaged in clinical, teaching and research activities related to sleep disorders (17 July 2009).
- **Meeting with Associate Professor Shantha Rajaratnam at Monash University, Melbourne.** Associate Professor Rajaratnam is Convenor of the Monash Sleep Network and a member of the Executive Committee of the Australasian Sleep Association, the Australasian Sleep Trials Network and Chair of the Shiftwork Steering Group of the Australasian Sleep Trials Network (21 July 2009).
- **Meeting with Associate Professor Britt Klein, Co-Director of the e-therapy Unit and National e-therapy Centre at Swinburne University, Melbourne.** The e-therapy unit delivers automated psychological assessment and automated self help programs for anxiety disorders, as well as therapist-assisted programs direct to the public (23 July 2009).
- **Meetings at the Black Dog Institute in Sydney, NSW** with Associate Professor Judy Proudfoot, Director e-health, Black Dog Institute and Professor Gordon Parker, Executive Director of the Black Dog Institute. The Institute is trialling online programs for mental health including an innovative web-based application for monitoring and managing depression, anxiety and stress on a mobile phone (29 July 2009).
- **Discussions at the Combined Universities Centre for Rural Health (CUCRA)** (Associate Professor Timothy Skinner), University of Western Australia, Geraldton WA which is engaged in diabetes education and self management in general practice populations (e.g. the DESMOND trial). The focus of the discussions was on the Internet delivery of self management for diabetes in primary health care and included discussion of several proposed joint research projects between CUCRA and University of Virginia.
- Planned meetings at DepressioNet, a service providing direct to public peer-to-peer support and with Dr Grant Blashki at Melbourne University were cancelled as Dr Ritterband contracted influenza (believed to be the Swine Flu virus) (24 July 2009).

KEY ISSUES:

Dr Ritterband's visit provided information that is relevant to service provision, research and policy directions in primary health care. He delivered presentations on two key content topics: *insomnia* and *diabetes*. The following highlights the key points contained within these lectures and seminars:

(1) Insomnia:

Insomnia is an important health issue for the following reasons:

- **Highly prevalent condition:** Dr Ritterband noted that symptoms of insomnia are the most common health complaint after pain, being reported by up to 48 per cent of the adult population with higher rates in older people and women.
- **High cost burden:** According to Dr Ritterband, statistics on insomnia in Australia are difficult to locate but in the US the condition accounts for an estimated US \$10.9 billion in treatment costs and US \$41 billion in loss work productivity annually. Work absence is a common consequence of insomnia (2.8 days per individual per month).
- **Comorbidity and injury:** Not only is insomnia a risk factor for depression and anxiety but also individuals with insomnia experience increased health problems and driving accidents.

Non-medication treatments are the preferred treatment option for insomnia:

- **Medications the most common but not the best answer:** Insomnia is typically treated with sleep medications (e.g. sedatives and antidepressants). Although these are effective short term, Dr Ritterband explained that they do not treat the underlying problem and can lead to an unhealthy spiral in which tolerance leads to increased medication intake, the development of further tolerance, rebound insomnia on discontinuation and subsequent dependence on resuming the treatment.
- **There are effective non-medication treatments for insomnia:** These involve educational, cognitive and behavioural techniques including Stimulus Control, Sleep Restriction and Cognitive behaviour therapy together with sleep hygiene guidelines. Dr Ritterband noted that meta-analyses have demonstrated the effectiveness of these techniques noting that 70-80 per cent of participants benefit from such interventions and that comparisons between medication and CBT treatments have found that the latter produce superior long term outcomes and are preferred by consumers.

Few practitioners are trained in the delivery of cognitive and behavioral treatments:

- **There is an unmet need for non-medication treatment:** According to Dr Ritterband, very few accredited sleep centres in the USA employ specialists in psychologically based insomnia treatment and only 115 practitioners in that country are certified in behavioural sleep Medicine. It is unlikely that the situation in Australia is any better.

The Internet is a promising means for delivering high quality psychological treatments for insomnia:

- **Solves the problem of lack of trained practitioners:** The structured techniques used in psychologically based insomnia treatments are highly amenable to translation to Internet delivery in the form of self help programs.
- **Is highly convenient:** The Internet enables consumers to receive treatments in a place (e.g. home) and at a time of their own choosing and may improve compliance.
- **May lower costs:** The use of the Internet may reduce the per user cost of insomnia treatment.

SHUTi, Sleep Health Using the Internet: A web program to help you sleep better is an evidence-based tool for delivering insomnia treatment:

- **SHUTi:** This program was developed by Dr Ritterband for the self-help treatment of insomnia. It comprises educational information about insomnia (what it is, how common, risk factors, effective treatments, its effect on health and functioning, economic burden, information about sleep), and training in sleep hygiene, stimulus control, sleep restriction and cognitive restructuring for insomnia.
- **There is evidence that SHUTi is effective:** Dr Ritterband has published the results of a randomised controlled trial of the effectiveness of SHUTi for reducing sleep disturbance [3]. In this trial, 45 participants with clinically significant symptoms of insomnia were randomized to receive either the SHUTi Internet program over nine weeks or a Wait-List Control condition. On average, participants had experienced sleep problems for over 10 years. After the intervention 73 per cent of the SHUTi participants, but none of the Control group had recovered to the 'no clinically significant insomnia category'. Average scores on the **insomnia severity** index fell significantly in the intervention group (15.7 to 6.6) relative to the control group (16.2 to 15.5). Participants also demonstrated significant improvements in **knowledge** about sleep and significant reductions in **depressive** symptoms, **anxiety** symptoms, **fatigue** and **dysfunctional thoughts**. Improvements in sleep were also retained on follow up six months later.

There are other self-help books and web information suitable for the public:

- **SHUTi** is not yet available to the public. Dr Ritterband identified the following resources for those consumers who wished to learn more.
 - Morin CM. Relief from insomnia: *Getting the sleep of your dreams*. NY, Doublday, 1996.
 - <http://knol.google.com/k/rachel-manber/insomnia/>
 - www.sleepeducation.com (American Academy of Sleep Medicine)
 - www.nhlbi.nih.gov/health/public/sleep

(2) Diabetes:

Diabetes is an important health issue for the following reasons:

- **Highly prevalent condition:** Dr Ritterband noted that approximately 9 per cent of the US population (17 million people) have diabetes; there are 798,000 new cases a year in that country and worldwide there are an estimated 120 to 140 million people with diabetes.
- **Causes many serious health complications** including cardiovascular, eye, kidney, nerve, peridontal pregnancy, amputations.
- **High cost burden:** In the US, diabetes accounted for USD132 billion in 2002 and USD 39.8 billion in indirect costs through factors such as lost work productivity (e.g. an average of 10 days per year more sick leave).

People with diabetes need training to accurately detect and anticipate the development of abnormal blood glucose levels:

- **The need:** By increasing their ongoing awareness of blood glucose abnormalities it may be possible for people with Type 1 diabetes to avoid hypoglycemic attacks and activities such as driving when they are at high risk of such attacks. However, it is not practical to conduct blood tests sufficiently often to ensure continuous monitoring of blood glucose.
- **A solution:** A face-to-face eight week training program, **BGAT** was developed to train consumers to anticipate, recognise, prevent and deal with abnormal blood glucose levels. This has been demonstrated effective in 13 trials, Dr Ritterband noting that it has been shown to improve the detection of abnormal blood glucose, reduce its occurrence, reduce the incidence of motor vehicle accidents, severe hypoglycemia and diabetic ketoacidosis and

improve diabetes knowledge and quality of life, However, BGAT can be accessed only from specialist centres which, particularly given the multiple visits required, are not accessible to many people who live in remote areas.

The Internet provides a potentially useful means of disseminating the evidence-based program BGAT:

- **BGAThome** is an eight week, eight module, Internet-based active learning self help program for people with Type 1 diabetes. It was developed by Dr Ritterband and his colleagues, Bill Clark, Dan Cox and Linda Gonder-Frederick from the University of Virginia with funding from the American Diabetes Association. Based on the BGAT face-to-face program, it is designed to assist consumers to recognise, anticipate, prevent and deal with abnormal blood glucose levels without the need to attend a specialist centre for training.
- **There is evidence that BGAThome is effective:** The University of Virginia researchers have published the results of a trial in which 40 people with diabetes were randomly allocated either to BGAThome or a Wait List Control [4]. Dr Ritterband reported that on average the participants completed the program in 11 weeks and that it result in statistically significant clinical improvements. Almost all participants (94 per cent) completed the program and users judged it as 'beneficial', 'easy to use' and 'enjoyable'. [4]
- **Dr Ritterband and his colleagues are now collaborating with Associate Professor Skinner at the Combined Universities Centre for Rural Health in Geraldton, Western Australia** with the aim of the latter group translating BGAThome for use in Western Australia.

The Internet has potential to provide home-based self help for a range of conditions:

- Dr Ritterband has also developed the program UCANPOOPTOO, a multi-module program for encopresis in children of demonstrated effectiveness. He and his colleagues are currently in the process of developing an Internet Intervention for Spinal Cord Injury patients to 'prevent pressure ulcers and promote protective health behaviors'.
- During his presentations Dr Ritterband emphasised the evidence in support of the efficacy of Internet interventions for a range of health fields conditions citing 13 systematic reviews of the efficacy of this form of intervention for conditions ranging from weight loss to depression and anxiety disorders.
- He concluded a number of these presentations by drawing the audience's attention to Beacon (<http://beacon.anu.edu.au>), a program developed by The Australian National University (ANU) to assist consumers to identify evidence-based Internet applications for health conditions.



Dr Lee Ritterband delivering a seminar at the Integrated Primary Mental Health Care Service in Wangaratta, Victoria
July, 2009

CONTRIBUTION OF THE VISIT TO APHCRI's STRATEGIC GOALS

Dr Ritterband's visit contributed to a number of APHCRI's strategic goals as follows:

APHCRI Goal One: Strengthen the knowledge base within primary health care by conducting and supporting research. This visit has facilitated the development of collaborative research links between Australian researchers and Dr Ritterband and his group. Ongoing collaborative research between the Combined Centre of Remote Health in Geraldton was strengthened. In addition, two new collaborative projects were commenced as a result of his visit. In particular, researchers from CMHR (Professors Helen Christensen and Kathy Griffiths), the University of Sydney (Associate Professor Nick Glozier), the Mental Health Research Institute (Professor A Mackinnon) and Dr Ritterband and his University of Virginia colleague Frances Thorndike are currently planning an Australian-based (CMHR) trial of the effectiveness of SHUTi for preventing depression. An NHMRC project grant proposal to fund the study is currently in preparation. Secondly, Dr Ritterband, Professor Griffiths, Professor Christensen, Professor Klein (University of Swinburne), and Professor Proudfoot (University of NSW) are planning to co-author an editorial on the utility of automated, as opposed to clinician mediated, Internet interventions. Further, researchers and research students from a range of institutions around Australia have benefited from Dr Ritterband's presentations at the Black Dog Institute, the Centre for Mental Health Research, ANU, Combined Universities Centre for Rural Health and the Australasian Sleep Trials Network National Insomnia Strategy Meeting and from face-to-face meetings at Swinburne and Monash Universities, the University of New South Wales and the West Australian Sleep Disorders Research Institute. Over time, the international collaborations between Ritterband's group and Australian researchers and the knowledge shared by Dr Ritterband with his senior colleagues, early career researchers, and students, will increase the knowledge base in the field of primary health care in Australia and internationally, particularly with respect to consumer-centred self-help Internet tools.

2. APHCRI Goal Two: Facilitate uptake of research evidence in primary health care policy and practice. Dr Ritterband contributed to this goal in a number of ways. First, he delivered lectures to practitioners in which he described the latest evidence-based practice in the field of insomnia and diabetes. For example, he travelled to rural Victoria to deliver such a seminar to the staff in a model primary mental health care service in which practitioners are co-located in general practice settings. Inspired by the session at least one of the staff in this Centre has now enrolled for further training in the subject. Moreover, Dr Ritterband's visit to Western Australia will have further contributed to plans in that State to implement an Internet self-help tool for people with Type 1 diabetes. Dr Ritterband also disseminated research evidence direct to consumers through his public lecture in Canberra. Empowering consumers in this way is a key means for influencing practice and it is clear from the response of the audience following the lecture that Ritterband's lecture was of considerable interest to consumers. Finally, Dr Ritterband's presented research evidence in support of the uptake of self-help Internet tools at a policy level at a roundtable at the Department of Health and Ageing and also at the WA Department of Health with WA Diabetes in attendance.

APHCRI Goal Three: Enhance research capacity in primary health care through strategic partnerships with other relevant national and international groups. See the benefits outlined in APHCRI Goal One. Dr Ritterband's visit has led to a planned international research collaboration involving researchers with no previous research contact in addition to consolidating an existing connection. Dr Ritterband, Professor Christensen and Professor Griffiths are keen to facilitate the exchange between their groups of early career researchers and PhD scholars.

Dr Ritterband's visit was directly relevant to the *National Primary Health Care Strategy* which has a focus on self-management and high quality care through innovation.

CONCLUSIONS

Given the the escalating demand on health care services, the increasing emphasis of consumers as a focus for health care, and the need to provide high quality services to those in rural and remote regions, the development, evaluation and implementation of innovative, highly accessible, self care tools for health conditions is critical. As noted by Dr Ritterband, there is evidence that such tools when implemented on the Internet can address major public health problems as diverse as insomnia, Type 1 diabetes, obesity, depression and encopresis in children.

Dr Ritterband indicated that Australia is a leader in the e-health field, particularly with respect to e-mental health research and delivery. This country is well placed to build on its existing capacity to produce and deliver programs that will deliver improved outcomes to consumers cost effectively. It is also well placed to develop partnerships with other international leaders in the field to ensure the further development and strengthening of our e-health capacity both nationally internationally. The time has come to ensure primary health care policy explicitly incorporates statements regarding the importance of (i) Internet and related technologies in the delivery of health care; (ii) capacity building in the field so that we grow rather than lose key expertise in the area; and (iii) the systematic dissemination of existing and future evidence-based e-health programs to general practitioners, other primary health care practitioners and organisation and direct to consumers.



Dr Lee Ritterband (right) with Mr Will Wright (left) of APHCRI at Ritterband's public lecture at The John Curtin School of Medical Research.
July 2009

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Appendix 1: Dr Ritterband's public lecture

AUSTRALIAN PRIMARY HEALTH CARE
RESEARCH INSTITUTE



SEMINAR

E-HEALTH AND INSOMNIA: AN INTERNET SOLUTION TO A HEALTH WORKFORCE NIGHTMARE

Dr Lee Ritterband

Thursday, 9 July 2009, 6pm
Finkle Theatre, John Curtin School of Medical Research
Garran Road, ANU



Refreshments will follow the seminar. RSVP by 6 July 2009: will.wright@anu.edu.au

THE SEMINAR

Insomnia affects 30 per cent of the population and is the most frequent health complaint after pain. It can cause significant problems in daily life and is often connected with feelings of depression and anxiety. However, only a minority of people with insomnia receive evidence-based treatments. Access to such treatments is hampered by a lack of trained clinicians, high cost and geographical constraints. The internet offers a promising means for addressing these barriers. In this lecture, Lee Ritterband, PhD, provides an overview of insomnia and presents the results of research on the effectiveness of his interactive and tailored web-based system for treating insomnia called *Sleep Healthy Using the Internet* (SHUTI).

THE LECTURER

Dr Lee Ritterband is an Associate Professor at the University of Virginia Health System and Director of the Behavioral Health and Technology program area. With degrees in clinical psychology and computer science/technology, Dr Ritterband specialises in the development and testing of behaviorally-based treatment programs delivered via the web. Specific areas of focus include adult insomnia, pediatric enuresis and diabetes. Over the past 10 years, Dr Ritterband has established himself as one of the leading researchers in internet health interventions. In 2004, he co-founded the International Society for Research on Internet Interventions. Dr Ritterband is an International Visiting Fellow of the Australian Primary Health Care Research Institute and the Centre for Mental Health Research.

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