



University of Aberdeen and the  
University of the Highlands & Islands  
working in partnership

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# Centre for Rural Health Newsletter

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AUTUMN/WINTER 2011

## CRH facing up to new challenges

Many people reading this newsletter will be aware that both Jane Farmer, who is now Head of School at Latrobe University in Australia, and Dave Godden, who retired in July, have left the Centre for Rural Health in the last year. Gaener Rodger has been appointed as the head of CRH UHI and David Heaney is currently acting Director on the University of Aberdeen side. The University of Aberdeen are currently in the process of looking for a replacement for Dave. It would be fair to say that we are missing much experience, guidance and wisdom especially in these times of continued downturn in economic fortunes.

However, the good news is that we are doing well and are delighted to report that:

- our research income for 2011 is half a million pounds more than in 2010,
- 21 peer reviewed papers have been published in 2011 to date
- we will be recruiting at least 4 new staff and 1 PhD student in the coming months,
- CRH will be leading an NPP funded project worth €2.3m looking at transnational telemedicine
- we are strengthening our collaboration with the Highland Medical Education Centre

In addition, new opportunities are occurring in a number of our areas of interest, and we are all working hard to take advantage of these opportunities as they arise. An example of this is that CRH are working with academics across the Highlands and Islands area to collaborate on potential research on HIE's P4 digital agenda.

We hope to be able to tell you more about these developments in future newsletters.

[David Heaney](#) and [Gaener Rodger](#)

## Implementing Transnational Telemedicine Solutions



Project team at Kick-off meeting

The **Centre for Rural Health** will lead a Northern Periphery Programme (NPP) strategic project entitled '**Implementing Transnational Telemedicine Solutions**' (ITTS). The project includes partners from 6 northern European countries; Scotland, Norway, Finland, Sweden, Republic of Ireland and Northern Ireland. It is worth a total of €2.3M and will commence in September 2011 running until December 2013. The project will implement transnational telemedicine solutions, at scale, and in a sustainable manner, into everyday practice across the Northern Periphery.



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Ten demonstrator projects on the themes of **video-consultation**, **mobile self-management** and **home-based health services** will be implemented in clinical specialities including speech therapy, renal services, psychiatry, emergency services, diabetes, inflammatory bowel disease, rehabilitation and care of the elderly. Common evaluation methods including health economics will quantify the outputs.

This project will carry on from the work carried out in the NPP funded [Competitive Health Services project](#) where existing best practices and innovations were piloted. It will also **fund three new posts at the Centre for Rural Health**; Project Development Worker, Communications Officer and Research Fellow.

A kick off meeting was held at the Centre for Health Science building with all partners, in September, where discussions on existing best practice and which projects to implement in each country were undertaken.

This project will demonstrate academic and service provider collaboration. The Centre for Rural Health will work closely with our

Associate Partners, NHS Highland and NHS Orkney who have contributed staff time to ensure that the demonstrator projects in Scotland are delivered. ITTS will also feed into the [P4 Digital Healthcare Agenda](#) being developed by Highlands and Islands Enterprise.

The projects to be implemented are:

- *VC links for speech therapy services*
- *VC links for renal services*
- *VC links for emergency psychiatry services*
- *VC links for remote diabetes services*
- *Smart phones for tracking physical activity*
- *Smart phones & internet support for diabetes*
- *Smart phones for inflammatory bowel disease*
- *Remote support in medical and social care emergencies*
- *Remote exercise classes for rehabilitation*
- *Home based service delivery for patients with multimorbidity*

[David Heaney](#) Project Director

[Lee Dowie](#) Project Manager

## Sustaining Medical Provision; Knowledge Transfer Partnership project



*The workshops will allow people to share initiatives and think creatively about the dependency on locum doctors to fill medical and surgical post vacancies in RGHs*

The Centre for Rural Health is collaborating with the Caithness General Hospital and Lorn & Islands Hospital to conduct workshops on 8th November 2011 (Portland Arms, Lybster, Caithness; 1:30-4.00 pm) and 15 December (Lorn & Islands Hospital, Oban).

RGH clinical staff, hospital managers, local GPs and medical staff from community hospitals are invited to participate in these locally hosted engagement days. The workshops will allow people to share initiatives and think creatively about the dependency on locum doctors to fill medical and surgical post vacancies in RGHs, particularly vacancies in training grade staff.

The workshop feedback will be used to appraise different staffing models (for instance, staffing with junior doctors, overseas trained doctors, Remote and Rural medical practitioners, nurse practitioners, physician assis-

tants, extended scope practitioners, advanced practitioners, paramedics and other longer term medical workforce solutions, such as up skilling existing staff, using technology differently and arranging services differently.



The workshop seeks to recognise quality medical and surgical services being delivered for patients at the RGHs and find out how ideas for innovation could be put into practice.

### What will the project look like when its finished?

The project will explore options for staffing models for RGHs in collaboration with groups of staff, managers, local GPs and other stakeholders. The project will use feedback provided to:

- Appraise alternative staffing and service delivery models.
- Prepare development plans to implement agreed alternative or enhanced models, that are safe, feasible and sustainable.
- Measure and evaluate changes implemented in the RGHs.
- Produce a final report, policy briefing and short course on staffing redesign.

[Robert Sullivan](#), KTP Associate

## CURRENT PROJECTS...

For a full list of our current projects click [here](#)



### Rural Digital Economy Hub



The University of Aberdeen [Dot.rural](#) Digital Economy Hub is now two years old and has a further 3 years to run (2014). So far, a wide range of research has been initiated and conducted in its four themes; **healthcare, accessibility and mobilities, natural resource conservation and enterprise and culture**. The Dot.rural Hub is represented within the Centre for Rural Health by Dr Alasdair Mort. Alasdair is a research fellow working within Dot.rural's two healthcare projects; 1) Managing Information in Medical Emergencies (MIME) , and 2) Technology to Older adult support Personal and Social Interaction (TOPS). Papers on MIME and TOPS were presented at the Digital Economy community's '**Digital Engagement**' conference in Newcastle in November

**Managing Information in Medical Emergencies (MIME)** The MIME project aims to develop technology to assist the first person on-scene at rural medical emergencies. MIME is approximately half way through its three years of funding. So far, the team have engaged with a wide variety of pre-hospital and in-hospital groups to explore user requirements for medical monitoring technologies. We have also explored user preferences for data handover; it is not unusual for data to be lost or mistakes made, particularly in the sometimes uncontrolled and unpredictable pre-hospital environment.

Our aim is to develop Natural Language Generation software, which takes in health data from novel wireless, light-weight medical sensors, and user input (e.g. actions, drugs given), and turns it

into meaningful text. This will hopefully improve the volume of patient data recorded, particularly by responder groups who have less medical expertise, and potentially also improve its accuracy. The MIME team are currently exploring opportunities for conducting a pilot pre-hospital evaluation novel lightweight sensors and prototype MIME software. MIME was featured on BBC Radio Scotland's '**Out of Doors**' programme on Saturday 15th October 2011.

[more...](#)

#### Technologies to support Older people at home: maximising Personal and Social Interaction (TOPS)

The TOPS project aims to develop technology to preserve/enhance personal and social interaction between rural older adults with chronic pain and their health and social care providers.



This in response to the general up-scaling of healthcare technology within the home (telehealthcare). Any abrupt or intensive introduction of such technology could be detrimental to personal and social interaction; older adults report that this interaction is central to their healthcare experience. This is potentially more important for groups experiencing chronic pain who may already be personally and socially isolated.

TOPS began in November 2010 and have recently obtained NHS ethics approval. We plan to observe home visits by health and social care providers and conduct interviews in early 2012. Also planned are a larger-scale survey of older adults with chronic pain, and a series of focus groups exploring technology preferences.

[Alasdair Mort](#) Research Fellow



*“Are you waiting for the storm to pass or learning to dance in the rain?”*



Are you waiting for the storm to pass or learning to dance in the rain?

That question was posed by [Professor Keith Shaw](#) of Northumbria University to the audience at a research summit on **rural resilience** organised by Ann Clark, Research Fellow at CRH and Dr Sarah Ann Skerratt of the Scottish Agricultural College. The event was funded by the **ESRC** as part of the **Festival of Social Science**.

A wide range of potential users of findings from resilience research came together to hear a selection of academic perspectives on ‘resilience’ and to set a future agenda for research and policy on this topic.

In a lively and humorous presentation, Professor Shaw outlined his view of resilience as a process of transformative change which needs to be built from the community level and expressed concern that a potentially useful approach was in danger of

## Dancing in the Rain

becoming just another buzz word through overuse in too many different policy contexts.

Nina Mguni and Chris Jones from the [Young Foundation](#) described their work looking at



the relationship between resilience, health and wellbeing. Working across a range of communities in England, the Foundation has developed a ‘WARM’, a measurement tool for starting conversations about levels of community resilience.

Working in schools, with youth gangs and with older people they are also learning lessons about how to build the emotional and social resilience of individuals in a way that promotes positive change and wellbeing.

Future work will explore their findings that some people can have low wellbeing but high resilience and vice versa. Other tools for exploring and promoting the resilience of communities highlighted included [Carnegie UK’s ‘Resilience Compass’](#) and the [O4O](#) model of social enterprise development which was outlined by Dr Sarah-Anne Munoz from CRH.

One of the key debates during the day was how efforts to promote community resilience can address inequalities within and between rural communities. Presentations from the day will be available on both the CRH and SAC websites and a short policy briefing will be produced.

[Ann Clark](#)



## CURRENT PROJECTS...

For a full list of our current projects click [here](#)

### Study to evaluate the integration of emergency health and social care Services in Highland



**The Highland Council** has funded a study to evaluate how emergency health and social care services are delivered by the **Highland Hub Redesign project**.

The project capitalises on the opportunity offered by co-location of services to

deliver a single point of access for unscheduled or emergency contacts in order to provide a more integrated, appropriate response which they hope will reduce emergency admissions.

The Hub is also providing call handling and remote health monitoring to support individuals with long term conditions to avoid admissions to hospital and reduce

length of stay through early discharge. The Hub is also due to manage all out of hours Social Work calls. The study is progressing well and will be completed in December 2011. [more...](#)

[Mr David Heaney](#) Associate Director  
[Gerry King](#) Research Nurse

### Involving staff and patients in the design of hospital greenspace

The project, led by Sarah-Anne Munoz and Amy Nimegeer from the Centre for Rural Health, as well as partners in the **Forestry Commission**, **NHS Tayside** and **NHS Highland**, began by looking at how several hospitals in Scotland currently involve staff and patients in using the adjacent greenspace.

This has informed development of a series of engagement workshops at the new Forth Valley Hospital in Larbert that will involve staff and patients in the creation of new led activities to take

place in the hospital's greenspace. The first of these workshops commenced in October and will run through to January 2012.

In addition to creating new activities, researchers will also be looking at quantifying the Social Return On Investment (SROI) that these activities create.

The health benefits of using greenspace are well documented, but there is less evidence about how to best involve or engage hospital staff and patients in

creating led activities to maximise the benefits of these outdoor spaces. Outputs from this project will include a report, a toolkit of best practice on engagement for greenspace use, and a transferable SROI framework applicable to other hospital greenspace settings. [more...](#)

[Sarah-Anne Muñoz](#) Research Fellow  
[Amy Nimegeer](#) Research Fellow



Arts & Humanities  
Research Council



*Hannah monitored data accuracy and quality under three conditions;  
rest,  
walking  
and step-ups*

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## CRH Students

### BSc - Impact of pre-hospital data on in-hospital patient management and outcome

Intercalating University of Aberdeen medical student **David McDaid** will conduct the project element of his BSc Medical Science degree with the Centre for Rural Health from December 2011 to May 2012.

He will be supervised by Dr Alasdair Mort ([dot.rural](#) Research fellow) and Dr John Scott (University of Aberdeen clinical teaching staff and trainer with the British Association of Immediate Care Scotland).

David will explore the impact of pre-hospital data on in-hospital patient management and outcome. He will explore this area using a literature review and a survey of emergency medicine specialists within Scottish hospitals.  
[Alasdair Mort](#) Research Fellow

### Nuffield Studentship 2011 - effect of wearer motion on health sensor performance

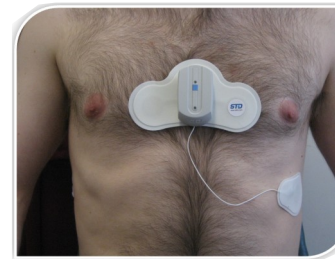
Fifth year Dornoch Academy pupil **Hannah Stevens** worked with us at CRH from July to August as part of the **Nuffield Foundation Science Bursary Programme for Schools and Colleges**.

Hannah was supervised by [Dr Alasdair Mort](#) and [Lee Dowie](#).

Hannah's project explored the **effect of wearer motion on health sensor performance**; traditionally, such sensors are particularly sensitive to motion such as that experienced during ambulance transport (road and helicopter) and patient management.

Hannah recruited five healthy male volunteers to explore the effect of motion on two different monitors;  
1) a novel, wireless, health sensor,

that recorded the electrical activity in the heart (electrocardiogram), and heart rate, and 2) a finger pulse oximeter that recorded the level of blood oxygen saturation, and heart rate.



*Rathlin monitor from Intelesens used*

Hannah monitored data accuracy and quality under three conditions; rest, walking and step-ups. She compared the data visually and by using a specialist statistical technique called Bland-Altman analysis. Hannah found that

sensor 1's 'noise' increased with motion, which increased heart rate error. However, this error was considerably greater for some subjects than others, which indicated that the origin of the observed error possibly included factors other than motion alone.

Hannah produced a report and a poster, which she presented at an event hosted at the **Royal College of Physicians**. She also submitted her work for a British Science Association Gold CREST award. Hannah did an excellent job and we wish her all the very best for her 6th year, University and beyond.

[Alasdair Mort](#) Research Fellow  
[more...](#)

## PhD - Community based mental health services in the Highlands of Scotland and Canada, Canadian Field Trip



When it was first proposed that I could go to Canada as part of my PhD in

rural mental health, I thought I was dreaming and would suddenly wake up! However, in May of this year those initial discussions became a reality as I set off for a 10 week stay in Calgary, in the province of Alberta. During my stay I met with many people around the province that were involved in mental health, which allowed me to better understand what some of the challenges are, both for people that use services and for those that provide them.

Despite having difficult stories of social exclusion and stigma to tell, service

users in Canada were open, warm and hospitable. They were also very excited to be included in research from so far away!

Their willingness to open up and discuss their experiences left me feeling humble and full of gratitude.

During my final days in Alberta, I was also able to meet with the Mental Health Commission of Canada. This gave me a chance to present my research and to discuss some of the findings from

Canada. As a consequence, the Commission have agreed to incorporate the findings from my research into their recommendations for remote and rural populations once the study is completed.

Being sponsored by UHI to go to Canada was an exciting and unforgettable part of my PhD. In particular, it allowed me the opportunity to go and experience a different culture for a while, and, in doing so, to understand where points of similarity meet and diverge between Canada and our own culture here in Highland, within the context of mental health.

Such a unique opportunity will hopefully inspire others who are considering a career in academia that it's not all desk work!

[Clare Daley](#), PhD Student





*If you would be interested in participating in these events contact [Ann Clark](#) Research Fellow*

## CRH Students

### Medical Elective - Developing technology to assist the first person on scene to medical emergencies

University of Aberdeen 5th year medical student **Daniel Simpson** conducted his medical elective at the Centre for Rural Health from August to October. Daniel was supervised by Dr Gary Kerr (emergency medicine specialist) and [Dr Alasdair Mort](#) (dot.rural research fellow).

Daniel's report titled '**Developing technology to assist the first person on scene to remote and rural medical emergencies: the perspective of an accident and emergency department.**' contributed to the dot.rural [MIME](#) project.

Daniel analysed four months of trauma patient data collected by the Accident and Emergency (A&E) Department at Raigmore Hospital. This included 576 cases who had been transported to hospital by ambulance or RAF search and rescue helicopter.

Daniel explored patient demographics, injury severity, outcome, rurality, injury type, region of injury, number of injuries, and the proportion of patients for whom physiologic data (e.g. heart rate and breathing rate) was recorded by pre-hospital groups.

He also extracted motor vehicle accident data to carry out a secondary analysis and comparison with non-motor vehicle accident data.

Daniel also explored A&E clinicians' preferences with respect to pre-hospital data by conducting semi-structured interviews.

Daniel produced an elective report of a very high standard and we wish him well for his final year at medical school, and beyond.

[Alasdair Mort](#) Research Fellow

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## Engaging Research Users to Demonstrate Impact

Ann Clark, Research Fellow at CRH is co-investigating in an ESRC funded research methodology network that will meet four times over the next twelve months to identify innovative ways of engaging non academic audiences with the research process and demonstrating the wider benefits

of research to the economy and society.

Bringing together three existing practice networks of researchers, a series of three workshops around the UL will explore ways of conceptualising and demonstrating research impact, methods in

user engagement in research and how research education can adapt to new demands on researchers to achieve and measure wider benefits to society from their work. The network is keen to involve non academic users of research in its activities.

[more...](#)

# Reports & Publications

(for full listing of CRH reports and publications click [here](#))

## Publications

Gandiya T, Dua A, **King G**, Hussain A, Leslie SJ. "Self reported "communication technology" skills in patients attending a cardiology outpatient clinic in a rural district general hospital". Telemedicine and eHealth (accepted)

**Mort A**, "Injuries to individuals participating in mountain wilderness sports; a thematic review" Clinical Journal of Sport Medicine (in press)

Collidge T, Honeyman B, Stewart S, Allan A, Robinson L, Brown R, **Wakeling M**, **Heaney DJ**, Peel R, "Teledialysis: new service technology". Journal of Renal Nursing vol 3, no 3 (150-15) May 2011

**Roberts A**, Garrett L, **Godden DJ**, "Can Telehealth Deliver for Rural Scotland: Lessons from the Argyll and Bute Telehealth Programme. Scottish Medical Journal (in press)

**Godden D**, **King G**. "Rational development of Telehealth to support respiratory primary care: patient distribution and organisational factors". Primary Care Respiratory Journal (in press)

**King G**, **Heaney DJ**, Boddy D, O'Donnell CA, Clark JS, Mair FS (2011) "Exploring public perspectives on e-health: findings from two citizen juries" Health Expectations 2011; 14:2:1369-7625 doi: 10.1111/j.1369-7625.2010.00637.x

Farmer J, **Clark A**, **Munoz S-A** (2010) "Is global rural and remote health research agenda desirable or is context supreme?" Australian Journal of Rural Health, 18, 96-101

**Nimegeer A**, Farmer J, West C, **Currie M** (2011) "Addressing the problem of rural community engagement in healthcare service design". Health and Place. Vol 17:1, 1004-1006,

Farmer J, **Munoz S**, **Steinerowski A**, **Bradley S** (2011) "Participation and Older People's Wellbeing in Remote and Rural Scotland" in Le, Q., ed., Health and Wellbeing: a social and cultural perspective (New York: Nova)

Farmer J, **Nimegeer A**, **Rodger G**, Farrington J (in press) "Rural citizen's rights to accessible health services: an exploration". Sociologica Ruralis

Farmer J, **Nimegeer A**, Prior M (in press) "How important are health professionals to sustainable rural communities?" Chapter in the forthcoming book The Sustainability of Australia's County Towns.

## Reports

Competitive Health Services Report on Scotland Pilots, Teledialysis and Remote Speech Therapy (Report) March 2011

**Mary Wakeling & David Heaney**

## Vacancies at CRH

### Implementing Transnational Telemedicine Solutions

We will be advertising shortly for a part time  
**Research Fellow**  
to work on this project.

Please see the [vacancies page](#) on our website for details.

### Welcome back to:

Emma Coates, Communications Officer, who joined the [ITTS](#) team on 1st December.

Sara Bradley, Research Fellow, who rejoined the team in September.

Welcome to:

Sarah Bowyer, PhD student

### Congratulations to:

Mags Currie, Research Fellow, on the birth of her baby girl *Anna*, a little sister for Joseph. Mags will return to CRH in May 2012.

Artur Steinerowski who successfully gained his PhD in July. His thesis is entitled “**Developing the social economy as a provider of health and care services in remote and rural areas: an investigation of barriers and promoters in remote and rural areas**”

### Farewell to:

Jane Bays, Project Secretary.  
Susan Hall, Research Assistant.



*Dave Godden with his painting*

On 28th July 2011 staff, acquaintances and friends bid farewell to **Professor Dave Godden**, Co-Director of CRH by holding an informal “send off” at The Centre for Health Science. Dave was presented with an original oil painting by local artist, and close friend of Daves, Irene Ross. Rather amazingly we managed to keep the painting a secret, so the reveal was a genuine shock to Dave. For those who were not there, Irene painted Badentarbet beach in Achiltibuie, somewhere that Dave and his wife Jean have visited frequently. We wish Dave all the best in his retirement, he will be sorely missed and affectionately remembered.



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