

Institution: Aberystwyth University
Unit of Assessment: 26 (Sport and Exercise Sciences, Leisure and Tourism)
Title of case study: Community exercise schemes for rural populations
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>The Physical Activity in Ageing, Rehabilitation and Health Research Group at Aberystwyth University has designed, implemented and evaluated rural Community Exercise Schemes (CESs), including GP referral of sub-clinical populations, and more specialised schemes, such as cardiac rehabilitation and falls prevention. This research has made a distinct and material contribution to the provision of CESs in the region by providing evidence to inform service planning and delivery, increase access to and engagement with services, improve health and influence professional standards, guidelines and training.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>The research underpinning this case study was produced by the Physical Activity in Ageing, Rehabilitation and Health Research Group (Department of Sport and Exercise Science, Aberystwyth University) under the leadership of, initially, Professor Jonathan Doust (2002-2006; now University of Brighton) and, subsequently, Dr Joanne Hudson (2006 to date). Other key members of the research group include Dr Emily Oliver (2009 to date), Dr Rachel Rahman (2008 to date), and Dr David Tod (2004 to date).</p> <p>In November 2003 Doust received a collaborative award (New Opportunities Fund: £289, 572) to design, implement and evaluate a GP Exercise Referral Scheme (ERS) (the Ceredigion Exercise For Life Scheme) for people identified by the GP as 'someone who would benefit from a more active lifestyle' and, alongside this, an enhanced scheme for people with, or at risk of, heart disease (the Ceredigion Cardiac Rehabilitation Scheme - CRS). The award was in partnership with Ceredigion Council and Ceredigion NHS Trust, and was secured through a competitive, peer-review procedure.</p> <p>The research (1-3) used a mixed methods approach to determine the feasibility and estimate the effectiveness of the exercise schemes, the acceptability of the schemes and their implementation, and both rates and predictors of continued exercise at 6 months. In addition, focus groups were conducted to further understand the results, inform decision-making and refine treatment protocols. The key findings underpinning impact were:</p> <ul style="list-style-type: none"> • The high number of eligible patients who were referred (>250 patients pa to each scheme) demonstrated that there was demand for community exercise services. • Uptake was good for both ERS and CRS (>70% of referred patients attending), and a high proportion who started also completed the course - 89% and 69% for ERS and CRS, respectively. • Effectiveness of the schemes was demonstrated through improvements in a range of physiological markers of health (e.g. decreased skin fold), as well as a range of psychological outcomes, such as reduced anxiety. • At 6-months follow-up, 50% of patients self-reported that they were exercising at the required level, whilst 15% reported that they were no longer exercising at the required level. • Access to leisure services during the exercise programme was liked by patients and predicted longer term maintenance of exercise, whilst patients also favoured the option of outdoor physical activity, as opposed to only indoor structured exercise. <p>In 2005 Doust secured two competitive, peer-reviewed funding awards from the Countryside Council for Wales in order to develop the evaluation framework (£14,000) for the Walking the Way to Health initiative in Wales and, subsequently, to implement the evaluation framework (£35,000).</p>

Impact case study (REF3b)

The key findings (4-5) of the research were:

- country-side walking to improve health was acceptable to, and safe for, both the general public and sub-clinical populations.
- non-healthcare professionals could be trained in a core set of competencies required to set-up and deliver the walking scheme in accordance with the programme protocol.

In 2009 Hudson and Oliver were commissioned (BCUHB: £32,000) to estimate the effects of a regional community exercise scheme for falls prevention and, importantly, to make recommendations for future practice. A significant factor in attracting a commission is the recognition of not only specialist expertise but also research excellence. The work was expanded to additionally receive an EU-funded Knowledge Economy Skills Scholarship. Quantitative data were collected at the start and end of the 32-week exercise programme, with qualitative data collected at weeks 10, 20 and 30. The key findings (6) underpinning impact were:

- Significant improvements in objective measures of physical function that continued throughout the 32 week period, including measures of balance, gait, and co-ordinated movement.
- Psychological variables, such as attitude towards exercise, improved more in the early stages of the programme, but that these changes were maintained.
- The integration of programme provision with leisure services was a strong patient preference and, when classes were held in the leisure centre, attendance was higher than when classes were held in the community health centre.

3. References to the research (indicative maximum of six references)

1. Rahman R, Thøgersen-Ntoumani C, Thatcher J, Doust JH. (2011). Changes in need satisfaction and motivation orientation as predictors of psychological and behavioural outcomes in exercise referral. *Psychology & Health*, 26, 1521-1539. DOI 10.1080/08870446.2010.538849 [REF2 submitted]
2. Rahman RJ, Doust J. (2007). Ceredigion Communities Cardiac Rehabilitation Scheme: An Evaluation. Report for Ceredigion and Mid Wales NHS Trust.
3. Rahman RJ, Doust J. (2007). Ceredigion Communities Exercise for Life Scheme: An Evaluation. Report for Ceredigion County Council.
4. Doust JD, Tod D. (2006). Walking the Way to Health Wales. A report on the evaluation of the Local Project Coordinator and Walk Leader training courses. <http://letswalkcymru.community.sequence.co.uk/1256.file.dld>
5. Doust JD, Tod D. (2007). Walking the Way to Health Wales. Evaluation Phase 2 – Implementation. Final Report. <http://letswalkcymru.community.sequence.co.uk/1255.file.dld>
6. Hudson J, Oliver EJ, Thomas L, Higgs F. (2011). Functional and Psychological Changes during a Community-based 32 Week Postural Stability Training Programme: Recommendations for Future Practice. Accessed at: http://www.laterlifetraining.co.uk/wp-content/uploads/2012/06/Tywyn-Report_PSI-classes-in-Wales_2012.pdf

4. Details of the impact (indicative maximum 750 words)

The research conducted by Aberystwyth University's Physical Activity in Ageing, Rehabilitation and Health Research Group has influenced provision of, access to, and protocols for, community exercise schemes, particularly, but not exclusively, in the rural context. Before 2005, there were no community exercise schemes in operation in the rural region of West Wales. The role of Aberystwyth University researchers in securing the research funding to develop and implement CESs influenced directly the change in provision of such services. Impact has been achieved by

partnership working with key stakeholders (i.e. purchasers and providers of CESs) to develop and implement research-based exercise protocols and through the collection and delivery of robust, relevant evidence directly to health care decision-makers.

Exercise referral scheme:

Following the delivery of our research report to the Service Planning Strategy Group at the NHS Trust, in which we recommended the provision of continuation funding for the scheme, the service was awarded core funding for a period of three years. The *continued provision of service* is now funded through the National Exercise Referral Scheme. In addition, our evidence-based recommendation that the delivery of the scheme be integrated into the local leisure centre is consistent with the scheme being re-located entirely to the leisure centre in 2009.(1)

Our initial work provided a framework for subsequent services. Specifically, Doust was the academic, expert consultant for the Welsh Government's (GW) (2006) published guidance on setting up, running and evaluating exercise referral schemes and the specification of core training competencies that underpin the National Occupational Standards (NOS).(2) In 2008 the WG funded the appointment of a National Coordinator to commission approved training which met the new NOS for chronic conditions and develop standard protocols. These protocols have been implemented across Wales where there are rehabilitation programmes delivered by exercise professionals with the necessary qualifications.(2)

Cardiac rehabilitation scheme:

Before 2005, the only cardiac rehabilitation schemes (CRSs) in operation in the rural region of West Wales, was a centralised, hospital-based programme. As part of the Aberystwyth research programme led by Doust, four community-based CRSs were developed and implemented in the region, three of which are still in operation, i.e. Aberystwyth, Cardigan and Lampeter.(4)

The availability of a community-based CRS significantly impacted patient engagement with the treatment regimen, such that there has been a 75% increase in the proportion of referred patients who complete the exercise programme, rising from 40% to 70% for the hospital-based and community-based programmes, respectively.(5)

Increased engagement and the enhanced treatment regimen have, either alone or together, led directly to improved health of individuals and cost-savings for the health authority. More specifically, Ceredigion Cardiac Rehabilitation Service estimates that the community-based scheme prevents avoidable admissions to secondary care for at least 150 patients pa, with a cost-saving, based on average days in hospital, of £242,316.75 pa.(4-5)

As noted by the Locality Service Co-ordinator, 'we have gained a service which has been properly researched using validated physical and psychological tools, ... providing opportunity to improve our standards and develop protocols'(6, p39), and which '... prevent avoidable admissions to secondary care'.(6, p42).

Falls prevention scheme:

The findings of our research have had a direct impact on regional planning and delivery of community exercise schemes for falls prevention, such that one scheme continues to operate at an optimal level,(7) whilst another entirely new scheme has been launched(8). Our research findings enhanced the decision-making process regarding the planning and delivery of services and, in so doing, increased access to, and provision of, falls prevention services for older people living in the rural community.(7-9)

This impact was achieved through the delivery of robust and relevant evidence directly to decision-making bodies. More specifically, in January 2012 Hudson and Oliver presented the findings of the research to the Tywyn Falls Steering Group (TFSG), which has responsibility for planning and delivery of services locally.(7) In addition, the TFSG Chair (also Clinical Director of Therapy Services, BCUHB) invited Hudson and Oliver to present the work to the Executive Director of Public Health for North Wales (April 2012), so as to inform the pan-North Wales strategy.(9) To

Impact case study (REF3b)

date, three of our five recommendations have been implemented:

- **the scheme should remain a 32 week programme:** unbeknown to us was that the evaluation had been commissioned following a suggestion that the exercise scheme be reduced from 32 weeks to 16 weeks, which was the norm at that time.(7)
- **integration of the scheme with the local leisure centre:** the scheme re-located entirely to the leisure centre in May 2012.(7)
- **expansion of the service to meet increasing demand:** a new 32-week Falls Prevention Service was launched in Tywyn in January 2013, along with a newly created post to deliver the service in the Dwyfor Leisure Centre.(8-9)

The contribution of Aberystwyth University's falls prevention research is discussed nationally through the Director of Public Health Development Reports.(9)

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. Ceredigion's Health, Social Care and Well Being Strategy for 2008 to 2011.
<https://www.ceredigion.gov.uk/index.cfm?articleid=9093>
2. Welsh Assembly Government (2006). Exercise referral: a guide to developing high quality schemes. Cardiff: Welsh Assembly Government.
3. Wyatt-Williams (2012) *Setting Up & Developing the Welsh National Exercise Referral Scheme*. Paper presented at the 8th World Congress on Active Ageing Glasgow, UK. *Journal of Ageing and Physical Activity*, 20, S1 – S369). http://www.wcaa2012.com/wp-content/uploads/2010/06/whats-on-at-wcaa2012-on-thurs-16-august-2012_6aug2012.pdf
4. Ceredigion Health and Social Care Strategy 2011-14:
http://www.wales.nhs.uk/sitesplus/documents/862/Draft_Ceredigion_HSCWBStrategy_2011-14.pdf
5. Cardiac rehabilitation provision in rural Wales: Demonstrating the benefits of a service.
www.bacpr.com/.../G_Parry_-_CR_provision_in_rural_Wales.ppt
6. Cardiac rehabilitation. www.cardiacrehabilitation.org.uk/docs/ewis.ppt
7. Knill (2012). *Reducing the harm from falls – The Ceredigion story so far*. National Service Framework Newsletter.
<http://www.wales.nhs.uk/sites3/docopen.cfm?orgid=256&id=190332>
8. Aberystwyth University research is identified in the press release for the new service as having provided the evidence to support investment in the new scheme.
<http://www.welshicons.org.uk/news/health/a-boost-to-older-people%E2%80%99s-confidence/>
9. Executive Director of Public Health (DPH) Annual Report November 2012.
www.wales.nhs.uk/sitesplus/888/page/46346