This is a repository copy of *Improving Cardiac Rehabilitation (CR) Uptake: The impact of increasing uptake and reducing inequality*.

White Rose Research Online URL for this paper:
http://eprints.whiterose.ac.uk/144298/

**Conference or Workshop Item:**
Hinde, Sebastian orcid.org/0000-0002-7117-4142, Bojke, Laura orcid.org/0000-0001-7921-9109, Harrison, Alexander Stephen orcid.org/0000-0002-2257-6508 et al. (1 more author) (2019) Improving Cardiac Rehabilitation (CR) Uptake: The impact of increasing uptake and reducing inequality. In: Centre for Future Health and University of York Research Impact Conference, 22 Mar 2019, University of York.

---

**Reuse**
Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**
If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.
Improving Cardiac Rehabilitation (CR) Uptake: The impact of increasing uptake and reducing inequality

Sebastian Hinde¹, Laura Bojke¹, Alexander Harrison², Patrick Doherty²
Sebastian.hinde@york.ac.uk, ¹Centre for Health Economics ²Department of Health Sciences

1) The benefits of CR
- Globally, CR is recommended after patients have suffered from a wide range of heart conditions.
- Through a programme of exercise and information, patient recovery is expedited and future health improved.
- Large-scale systematic reviews have repeatedly shown strong evidence of benefit on outcomes including mortality.
- Due to the low cost and high potential gain it is considered a very cost-effective use of limited NHS resources by NICE (although the existing evidence is old and cost-effectiveness analysis of poor quality).

2) The challenge
- There have been no high quality assessments of the cost-effectiveness of CR using contemporary evidence.
- Uptake is very poor, ranging from 10 to 60% internationally.
- This is compounded by significant inequality in cardiac health, engagement in CR, and propensity to benefit.
- Despite policy suggestions on how to improve uptake and the issues of inequality there have been no attempts to quantify the impact of these issues on patient health.
- The Government aims to increase uptake from around 50% to 65% in the UK.

3) What have we done?
- Building on the latest large-scale systematic review we analysed the cost-effectiveness of CR in the UK.
- Incorporating the latest evidence on how deprivation effects cardiac health and how people engage with CR we explored the substantial impact of inequality on patient health.
- Using the latest estimates of the productivity of the NHS, from University of York led research, we calculated how much extra money could be spent to overcome the huge uptake issue.

4) What did we find?
- The source of evidence for the ‘reimagining rehabilitation services’ point of the British Heart Foundation five point plan (below), covered on BBC Breakfast among others.
- Referenced as the justification for scaling up CR uptake in the NHS Long-Term Plan.

5) What is the impact so far?
- The most deprived are 66% less likely to complete a CR programme than the least.
- Even if they complete CR the most deprived patients will live 1.37 years less than the least deprived (1.87 when you account for the quality of those years).
- Achieving the 65% target would reduce hospital admissions by 21,000 and deaths by 8,500 over 10 years. This increased to 50,000 and 20,000 with an 85% target.
- £68.4mn could be justified per year to achieve 65% uptake.

PD and AH are part funded by the British Heart Foundation (BHF) (grant reference 040/PSS/17/18/NACR). SH and LB were funded by the NIHR CLAHRC Yorkshire and Humber. www.clahrc-yh.nihr.ac.uk. The views expressed are those of the author(s), and not necessarily those of the BHF, NHS, the NIHR or the Department of Health and Social care.