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3 **it's not the years in your life that matters, it's the life in your years**
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9 Rod Taylor, Professor of Population Health & NIHR Senior Investigator, MRC/CSO
10 Social and Public Health Sciences Unit & Robertson Centre for Biostatistics, Institute
11 of Health and Well Being, University of Glasgow & Honorary Professor Health
12 Service Research, College of Medicine and Health, University of Exeter.
13
14
15

16
17 Hasnain Dalal, Honorary Clinical Associate Professor & Senior Clinical Researcher,
18 University of Exeter Medical School & Royal Cornwall Hospital Trust.
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40 **Corresponding author details:**

41 Professor Rod Taylor MSc, PhD

42
43 Chair of Population Health Research, Institute of Health and Well Being
44 MRC/CSO Social and Public Health Sciences Unit, University of Glasgow,
45 Top floor, 200, Renfield Street Glasgow, G2 3AX, Scotland
46
47
48
49 Scotland, UK

50
51 rod.taylor@gla.ac.uk

52
53 Phone +44 7968 152537
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3 **“it's not the years in your life that matters, it's the life in your years”**
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6 This (mis)quote neatly captures the importance of quality of life. Indeed, our quality
7 of life has perhaps never been so important than during these unprecedented times
8 of the COVID-19 pandemic.
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13 Although limited, there is some empirical evidence to support the value that people
14 with heart disease attach to their health-related quality of life (HRQoL). An innovative
15 study asked 99 people with advanced heart failure to complete a time trade-off
16 (TTO) tool to quantify their willingness to trade time (length of life) for better health
17 (HRQoL) [1]. TTO scores can range from 1.0 (no willingness to trade off length of life
18 for health) to 0 (complete willingness to trade off length of life for health). Importantly,
19 the study authors found that patients were prepared to trade off time for health and,
20 interestingly, this trade off was greatest for those with the poorest HRQoL (e.g.
21 patients with a NYHA score of IV reported a mean TTO score of 0.66-0.69). Whilst
22 ‘hard’ clinical trial outcomes such mortality and hospitalisation have traditionally been
23 used to judge the value of new and existing treatments for heart disease, there is an
24 increasing call for the regulatory approval of new treatments to include formal
25 consideration of impacts on patient-related outcomes, especially HRQoL [2].
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38 When we ask our patients why they want to participate in cardiac rehabilitation (CR),
39 the response that invariably hear is that they do so because they want to be able to
40 better undertake their activities and roles of daily life – in other words, patients
41 undertake CR to improve their HRQoL. This is also reflected in the core standards of
42 the British Association for Cardiovascular Prevention and Rehabilitation noting that
43 whilst optimal medical therapy and percutaneous intervention for management of
44 coronary heart disease add ‘years to life’, the potential for CR to add ‘life to years’
45 should not be underestimated’ [3].
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54 Although we have evidence from our Cochrane review of randomised controlled
55 trials that, overall, people with coronary heart disease following CR have superior
56 HRQoL compared to (no CR) controls, the strength of this evidence is not all that we
57 might want it to be [4, 5]. To date, only few trials (20 trials in 5,060 patients out of 63
58 trials randomising 14,486 patients) have collected and reported HRQoL and, when
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3 they do, there has been little consistency in the HRQoL outcomes collected, often
4 limited to short term follow up.
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8 This study by Hurdus and colleagues published in the current issue of *'Heart'*
9 provides important confirmatory evidence of the benefits of CR on the HRQoL [6]
10 The study was based on a large longitudinal prospective cohort study (Evaluation of
11 the Methods and Management of Acute Coronary Events (EMMACE)-3) with data on
12 the referral and uptake of CR in England from 4,570 patients admitted with an acute
13 myocardial infraction between 1st November 2011 and 17th September 2013.
14 Uniquely, this study provides repeated measures data on the impact of CR on
15 HRQoL collected using the EQ-5D-3L at hospitalisation, 30 days, 6-months and 12-
16 months following hospital discharge. Across all AMI patients, the authors report a
17 small improvement in mean EQ-5D index score from hospitalisation to 12 months
18 (0.744 vs. 0.794). They also found that those who attended CR had greater mean
19 EQ-5D score at 12-months (12 months (0.832 vs. 0.739) and consistent over time
20 following hospitalisation. These HRQoL improvements with CR participation were not
21 only statistically significant but also clinically important. Reassuringly, the Hurdus et
22 al also found those achieving in ≥ 150 minutes of activity per week (a marker of CR
23 adherence), achieved the largest improvements in HRQoL. Although the authors
24 acknowledge that these observational findings of require confirmation in a
25 randomised trial, robust scientific methods were employed by this study group -
26 potential selection bias and confounding minimised by use of a weighted propensity
27 score analysis.
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44 As recognised in a recent editorial, we still have much work to do to agree upon what
45 level of improvement of HRQoL we would exchange for a reduction in quantity of life
46 [7]. However, in the meantime, future evidence collection (trials and observational
47 studies) assessing the impact CR, need to assess and report HRQoL – using
48 generic and disease specific instruments. Although challenging, consensus in the
49 CR field on the HRQoL measures that we should collect, would aid this endeavour,
50 and allow us directly compare results between studies and pool data across studies
51 using standard meta-analytic approaches.
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