NICE National Institute for Health and Care Excellence

HealthTech Programme
HTE10060 Digital platforms to support cardiac rehabilitation: early value assessment

Draft guidance consultation comments

Additional evidence

Comment number	Consultee number/organisation name	Page number	Section number	Comment	NICE Response
1	Consultee 3 Ki Performance Lifestyle Limited		Not specified	We understand and appreciate the EAG's response to comment 28 on page 266 of the Committee Papers as to the prioritisation protocol. However, in the context of other prioritised evidence across the technologies, we would suggest there is precedent for prioritising the Duvva et al abstract. This has now been published and presented at the European Society of Cardiology Congress in Madrid. We believe the inclusion of this evidence would provide further value to this EVA, by demonstrating that there is evidence for digital technologies delivering significant reductions in readmissions compared to a historical control group.	Thank you for your comment. In its response to the factual accuracy check on the assessment report, the EAG explained the prioritisation protocol and how, in its opinion, it was important to follow this in order to be fair and consistent across all technologies. However, the committee considered the data presented in this abstract in the second committee meeting. The EAG noted that readmission is a proxy for secondary event rate, which was accounted for in the modelling as a function of biomarkers. In the base case analysis, the EAG assumed no difference in risk reduction when comparing KiActiv with conventional cardiac rehabilitation. However, KiActiv was found to be plausibly cost-effective. Therefore, any improvement in secondary

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					cardiovascular outcomes would further improve its cost-effectiveness.
2	Consultee 7 Pumping marvellous Foundation		Not specified	Pre-published research paper delivering insights about the Pumping Marvellous Foundations Cardiac Rehab Platform. Early Insights from the Pumping Marvellous Home-Based Digital Cardiac Rehabilitation for Heart Failure in the UK Rajiv Sankaranarayanan, Nick Hartshorne-Evans, Kate Hornby, Matthew Sunter, Yvonne Millerick, Carys Barton, Ahmet Fuat, Duwarakan Satchithananda, Fozia Ahmed, Patrick Doherty Authors 1. Dr Rajiv Sankaranarayanan MBBS FRCP (Lon) FESC FHFA PhD (Corresponding author) Consultant Cardiologist and Heart Failure Lead for Cheshire and Merseyside Cardiac network National GIRFT Lead for Virtual wards and Honorary Senior Lecturer Vice President British Cardiovascular Society Digital and Communication Committee and Board Councillor British Society for Heart Failure University Hospitals of Liverpool Group, Liverpool	Thank you for your comment. This paper was considered by the committee in the second committee meeting. It noted that it provided information about the characteristics of people registered for Pumping Marvellous Cardiac Rehab platform, and that many had not been referred by heart failure or cardiac rehab teams. See section 3.12 of the guidance.

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				L9 7AL 2. Dr Nick Hartshorne-Evans DUniv BEM Founder and CEO of the Pumping Marvellous Foundation, Preston, UK 3. Kate Hornby Operations and Development Manager The Pumping Marvellous Foundation, Preston, UK 4. Matthew Sunter RGN BSc Heart Failure Lead Specialist Nurse St.George's University Hospital, London UK 5. Yvonne Millerick RGN BSc MSc Heart Failure Palliative Care Nurse Consultant, NHS Greater Glasgow and Clyde Senior Lecturer Specialist Heart Failure Nursing Glasgow Caledonian University Glasgow, UK 6. Carys Barton RGN BSc MSc Heart Failure Nurse Consultant Imperial College Healthcare NHS Trust Chair-elect British Society for Heart Failure 7. Prof Ahmet Fuat PhD FRCGP FRCP FRCPE	

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				FESC FPCCS GPSI Cardiology, Darlington, UK Medical Director, Oberoi Consulting 8. Dr Duwarakan Satchithananda MBChB FRCP Consultant Cardiologist, University Hospital North Midlands, UK 9. Dr Fozia Ahmed MBChB MD Consultant Cardiologist and Honorary Reader Manchester Foundation Hospitals NHS Trust, Manchester and Keele University, UK 10. Prof Patrick Doherty PhD Professor and Chair of Cardiovascular Health, Department of Health Sciences, University of York, UK Director of National Audit of Cardiac Rehabilitation Introduction Heart failure (HF) affects approximately one million people in the UK, causing significant morbidity, mortality and healthcare costs [1] and the burden of HF is likely to increase [2]. Cardiac rehabilitation (CR) is a safe, multi-faceted intervention broadly encompassing exercise,	

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				patient education and support. It is recommended in national and international guidelines [3,4] and improves outcomes, including reduced hospitalisation, mortality and improved quality of life [5]. Yet, CR uptake for HF remains low at around 15% in the UK [5], with evidence of disparities based on sex, ethnicity, socioeconomic status, availability of staffing and financial constraints [5,6]. Digital and home-based CR programmes are emerging as scalable alternatives to hospital-based models, with potential to improve uptake and accessibility [3,7,8]. The Pumping Marvellous Foundation (PMF), a patient-led charity, developed an online home CR programme ("low-function" and "medium-function courses") specifically for HF patients. This has been devised with expert input from HF specialists, cardiac rehab specialists, and HF patient experts. The portal also assessed registrants' HF awareness levels through a quiz before and after completion of the program. The service was developed as an adjunct to existing CR services or in areas where CR is not commissioned for HF. We conducted this analysis to understand who accesses this service and whether inequities persist, to help guide strategies to achieve	

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				equitable rehabilitation delivery. Methods The PMF online home cardiac rehabilitation platform was launched in August 2024 along with an educational booklet available for order (at no cost) by HF or CR teams. We analysed anonymised data (n=673) of registrants from August 2024 to July 2025. Variables analysed included demographics, ethnicity, deprivation index based on postcode and city, HF type based on ejection fraction, referral source, time since diagnosis, prior CR participation, and knowledge quiz scores (six-item multiple choice). We also analysed CR booklet orders and assessed correlation with HF admissions as per national HF audit data [9]. Descriptive statistics summarised distributions. Results 673 participants (median age 62 years; IQR 18-90 years, 12% aged >76 years) registered for the online cardiac rehabilitation classes from August 2024 to July 2025. The majority (63%) were women, and 6% were from minority ethnic communities. 35% of registrants had either mildly reduced (HFmrEF) or preserved (HFpEF) ejection	

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				fraction. Figure 1 illustrates the referral sources. ~30% of referrals were from HF or CR teams, 29% obtained information via social media, and ~25% obtained information directly from PMF groups. There were also direct referrals from GPs (4%) and around 10% obtained referral information via Google search or YouTube. Analysis of the time since HF diagnosis demonstrated late entry to CR: 343 (51%) registered >12 months post-diagnosis, 88 (13%) within 3 months, and 130 (19%) within 6–12 months. Only 38 (6%) reported any prior CR participation. We also correlated cardiac rehabilitation booklet orders from hospitals with National HF Audit heart failure admissions [9]. As shown in the scatter plot (Figure 2), within the limitations of the spread of the scatter, there was a general positive relationship — hospitals with more HF admissions tended to order more booklets. 33% of registrants came from the top 20 most deprived cities in England [10]. Discussion This study provides crucial insights from the first year of roll-out of digital CR participation for HF using the PMF online platform. 94% of respondents had not participated in CR	

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				previously, and >50% joined 12 months after diagnosis. These findings highlight poor uptake of traditional CR and late engagement in standard CR, potentially due to difficulties in accessing hospital-based CR services, while also demonstrating the potential of digital platforms to institute early modification in physical activity, lifestyle and ensuring optimisation of therapies. This data also emphasises that PMF CR platform can play an essential role as an adjunct to standard cardiac rehab but also importantly as a life-long free offering, it can help bridge the gap in areas which may not have commissioning for standard cardiac rehab, providing a free service allows existing CR services to manage high acuity pts and alleviates resource as well as service burden. Digital platforms are a beneficial alternative for suitable patients by: • benefiting people with learning styles different from the traditional hospital-based model • allowing patients to progress through the rehabilitation programme at their own pace • allowing for ongoing lifelong revision of content not available through face-to-face rehabilitation programmes which have defined, time limited access. Our analysis also shows a gender pattern	

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				reversal, as, unlike traditional CR, where women are underrepresented [5,6], the majority of the online PMF CR cohort were women (63%). We can infer from this data that online, flexible formats and peer-led promotion may better suit women's caregiving roles and accessibility needs. Socio-economic deprivation is linked with worse HF outcomes [11], and patients from these areas also have lower access to CR [5,6]. It was encouraging to note that up to a third of registrants who access the PMF CR portal were from the top 20 most deprived cities in England, indicating that access to this portal can help improve accessibility to CR in deprived parts of the country. Conclusions By providing free lifetime access to online cardiac rehabilitation, widening the access of cardiac rehab to more women and people without access to standard cardiac rehabilitation (due to staffing, cost constraints, accessibility issues) and reaching areas with socio-economic deprivation, the PMF online cardiac rehab platform can help to increase CR uptake and reduce the inequity in access to CR in the UK.	

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				References 1. Conrad N, et al. Temporal trends and patterns in heart failure incidence: a population-based study. Lancet. 2018. 2. Savarese G, Lund LH. Global Public Health Burden of Heart Failure. Card Fail Rev. 2017 Apr;3(1):7-11. 3. NICE. Chronic heart failure in adults: diagnosis and management (NG106). 2018. 4. Authors/Task Force Members:; McDonagh TA, Metra M, Adamo M, et al; ESC Scientific Document Group. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: Developed by the Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC). With the special contribution of the Heart Failure Association (HFA) of the ESC. Eur J Heart Fail. 2022 Jan;24(1):4-131. 5. British Heart Foundation. National Audit of Cardiac Rehabilitation (NACR) 2022. Dibben GO, et al. Participation in cardiac rehabilitation and mortality risk: a UK cohort study. Heart. 2018. 7.. Molloy C, Long L, Mordi IR, Bridges C, Sagar VA, Davies EJ, Coats AJ, Dalal H, Rees K, Singh SJ, Taylor RS. Exercise-based cardiac	

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				rehabilitation for adults with heart failure. Cochrane Database Syst Rev. 2024 Mar 7;3(3):CD003331 8.. Thomas RJ, et al. Home-based cardiac rehabilitation: a scientific statement. Circulation. 2019. 9.. National Heart Failure Audit (NHFA) - NICOR 10. Exploring local income deprivation 11. Witte KK, Patel PA, Walker AMN, Schechter CB, Drozd M, Sengupta A, Byrom R, Kearney LC, Sapsford RJ, Kearney MT, Cubbon RM. Socioeconomic deprivation and mode-specific outcomes in patients with chronic heart failure. Heart. 2018 Jun;104(12):993-998	

Pumping Marvellous Foundation and cardiac rehab platform

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3	Consultee 4 Pumping marvellous Foundation		1	I am writing in support of The Cardiac Rehabilitation Platform provided by the Pumping Marvellous Foundation free of charge to users. This is a brilliant service and has been beneficial to many users within the Heart Failure Community and my own care centre is currently trying to roll it out to Heart Failure patients that are not offered any rehabilitation due to financial restraints within the trust. Patients with a preserved Ejection Fraction are offered NO cardiac rehabilitation at all and directing them to the Pumping Marvellous Platform at least offers a measure of rehabilitation which is missing from their treatment. An example of where this service is completely absent is the London Borough of Croydon, no one diagnosed with Heart Failure is offered the standard 6 week rehab programme, they are discharged without being given any tools to help them manage their illness and their future. Managing your condition is half the battle and being put out to pasture is not conducive to a continued successful recovery. Having been down this path myself I know what cardiac rehab meant to me, in terms of coping and understanding this new way of life and it is totally unfair and unrealistic to deny newly diagnosed patients this additional tool.	Thank you for your comment. Pumping Marvellous Cardiac Rehab Platform has now been recommended for evidence generation. Discussion of the lack of access to cardiac rehabilitation for people with heart failure has been highlighted in sections 3.5 and 3.7 of the guidance

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				Purley for information St George's Hospital where I am cared for have in excess of 400 patients currently interested in the Pumping Marvellous Rehabilitation Programme as they do not have access to any other resource. I hope this helps to support Pumping Marvellous in the superb work that they do for the Heart Failure Patients of the United Kingdom.	
4	Consultee 4 Pumping marvellous Foundation		1	We were disappointed to read your interpretation of our Cardiac Rehabilitation platform, where NICE will not be recommending our platform within the NHS without further research. We would like you to reconsider your recommendation based on the following. • Our online platform was specifically built to replicate REACH HF and other evidence-based Cardiac Rehab programmes outlined in a Cochrane Meta Analysis https://pubmed.ncbi.nlm.nih.gov/31302050/ • Additionally our platform was designed to align with data and evidence which formed the basis for the inclusion of Cardiac Rehab in the NG106 Chronic Heart Failure Guidelines for Adults. Therefore, our platform mirrors the same standard of evidence that has already been deemed sufficient to recommend cardiac rehabilitation in heart failure.	Thank you for your comment. Pumping Marvellous Cardiac Rehab Platform has now been recommended for evidence generation. The committee's discussion is highlighted in sections 3.11 and 3.20 of the guidance.

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				Additional key features • Our platform is free and designed to require no training. • It offers two levels; low and medium functional ability, ensuring accessibility. All we ask is that patients offered our platform are fit to exercise, as confirmed by the referring healthcare professional. • The above point clearly differentiates our platform from all others • Providing cardiac rehabilitation for heart failure is limited across the UK due to commissioning and cost constraints. NICE has not included this factor in our submission; where there is no cost, the charity absorbs the expenses. o The Pumping Marvellous platform was designed to serve as an adjunct to both commissioned and non-commissioned services, whether face-to-face, hybrid, or digital. Its aim was to improve access to cardiac rehab, regardless of whether § There were or were not commissioned services § As a convenient extension of a person's exercise and lifestyle support after attending commissioned services, what happens after the programme is as essential as the 8-12 week course itself. § To provide an 8-week programme aligned with current NHS-commissioned services. § To provide lifelong access for those wishing to continue after completing the platform programme.	

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5	Consultee 4 Pumping marvellous Foundation		1	NICE has acknowledged that the content of the Pumping Marvellous rehab platform is virtually the same as the recommended platforms. This is not surprising, as our platform is built around a pre-existing NHS service. PMF has also provided over 350,000 pieces of patient education free of charge, including on medical optimisation—this is the one category NICE suggested was different from the other accepted platforms. The overall output of Pumping Marvellous is therefore at worst as comprehensive and holistic as the accepted platforms, and at best offers greater granularity for overall patient empowerment through education. NICE has previously recognised our patient education material as one of only three trusted sources for patient education—an accolade not awarded to the education content of the other platforms. As the NICE committee knows, Cardiac Rehabilitation for heart failure patients should be available. However, as stated in your draft guidance release, only 13% of people with heart failure are offered it. This is a national disgrace. In the UK, every year, 200,000 people are newly diagnosed with heart failure, and it is estimated that over 1,000,000 people have the condition. This cannot continue, and the Pumping Marvellous Foundation has taken it upon itself to work with leading experts to create a platform that is free to	Thank you for your comment. Please see responses to comments 4 and 5 above.

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				access, offers lifelong support to registered individuals, and aims to reduce health inequalities and improve access.	
6	Consultee 4 Pumping marvellous Foundation		1	What the committee also did not consider was the charity's capacity and reach. We are uniquely positioned to scale access to cardiac rehabilitation for heart failure across the UK. The Pumping Marvellous Foundation supplies the NHS with over 350,000 patient booklets free of charge. It is the most capable organisation to distribute these resources and significantly assist the NHS in offering and onboarding more patients into cardiac rehab, especially when this is a no-cost option. We have – • Distributed 10,000 cardiac rehab onboarding patient booklets • Onboarded 700 patients from across the UK We collaborated with expert NHS Exercise Physiologists, Consultant Cardiologists, GPS, nurses, and of course patients and our community. We also consulted Professor Patrick Doherty from York University, regarded as a world-leading expert in rehabilitation and the architect of many vital assets within the system. Additionally, we worked with NHSE's NACR (National Audit of Cardiac Rehabilitation) to ensure our data capture points align with their expectations. NACR have created a programme to help teams process a patient once referred to the Pumping Marvellous	Thank you for your comment. Please see response to comment 5 above.

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				Foundations platform. We have strong support for our platform, especially now that the two-year NHSE pilot that assisted under-resourced cardiac rehabilitation services has concluded. Many centres can no longer offer cardiac rehabilitation because local commissioning funds are no longer available. Our platform would have helped local teams in these areas fill the gap.	
7	Consultee 5 Pumping marvellous Foundation		1	We were disappointed to hear that our Pumping Marvellous free-to-offer Cardiac Rehab platform for heart failure patients has not received a conditional recommendation and has not been approved for funding in the NHS, requiring further research. This statement alone, although a draft, could have damaged confidence in a platform that has been used within the NHS for the past 12 months. Over ten thousand patients have received an onboarding booklet about the platform from NHS teams caring for heart failure patients. In our view and that of our community, heart failure rehabilitation services are not sufficiently provided at an appropriate level across the UK. Your press release states that only 13% of heart failure patients are offered treatment, from a population exceeding one million, with 200,000 diagnosed each year. We regard this as a national disgrace, and the NICE decision has not contributed to the much-needed improvements in its current iteration as the	Thank you for your comment. Please see responses to comments 4 and 5 above.

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				equation relies on cost. Cost is a major reason why people with a diagnosis of heart failure are not offered this evidence-based treatment. We believe we need to do something differently, which is why the Charity developed their cardiac rehabilitation platform where it didn't cost the NHS to offer heart failure cardiac rehab. The platform was built around an existing NHS Cardiac Rehabilitation service, so the content was not trying to do anything beyond what is intended within the NHS. The platform was always designed as an addition to services that couldn't offer cardiac rehab for heart failure where they weren't commissioned, providing their patients with an alternative. It offered lifelong access to the platform once registered. Cardiac Rehab for heart failure is akin to training and development in a company; it is always the most vulnerable to cuts. We request that the NICE committee reconsider their decision and reclassify the Pumping Marvellous platform as a "conditionally offered" status.	
8	Consultee 6 British Society for Heart Failure		1	The British Society for Heart Failure are writing in supports of the Pumping Marvellous cardiac rehabilitation platform. The most recent NICOR National Heart Failure (HF) Audit shows only 20% of discharged HF patients access cardiac rehabilitation. Main barriers include limited NHS financial resources and insufficient personnel, as HF patients require	Thank you for your comment. Please see responses to comments 4 and 5 above.

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				increased supervision. A two-year NHSE pilot that supported under-resourced cardiac rehabilitation services has ended, and many centres can no longer provide cardiac rehabilitation because local commissioning funds are unavailable. Heart failure rehabilitation commissioning is not mandatory and, with the pilot ending and current NHS financial pressures, HF cardiac rehabilitation is at risk of further downgrade. The Pumping Marvellous platform was created to fill this gap, not to replace existing services. It is free to patients with lifetime access, serving areas where HF rehabilitation is not commissioned and patients wishing to continue rehab after conventional programmes. Supported by Professor Patrick Doherty at York, it was developed by heart failure clinicians and rehabilitation professionals. The National Audit of Cardiac Rehabilitation has promoted the platform and provided advice and tools for data collection. The British Society for Heart Failure endorses the Pumping Marvellous programme for its vital role in providing access where conventional rehabilitation is unavailable. The free lifetime access adds significant value for patients managing a lifelong condition.	
9	Consultee 7			I've note that Pumping Marvellous has been grouped with remote monitoring focussed apps which I think	Thank you for your comment.

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				misrepresents the approach and value to the NHS and so have concerns about the recommendation not to utilise – especially as it is a free to use model. Pumping Marvellous hasn't set out to be a remote monitoring solution its more akin to a manual approach which has been in use for cardiac and pulmonary rehab for many years. The value of Pumping Marvellous is digitising the manual process in the NHS via videos etc. 1. Please would the committee consider how the EVA separates Pumping Marvellous from the options with additional functionality in its recommendations. We have recently (since June 2025) started piloting the use of the Pumping marvellous manual in South Yorkshire (with a face to face initial assessment, check in calls and follow-up assessment) to support patients who would benefit from this approach.	Please see response to comment 5 above.

Equality considerations

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10	Consultee 1 British Association for Cardiovascular Prevention and Rehabilitation		Not specified	• Highlight digital inequality > patients without smartphones, poor digital literacy, or even limited broadband • Stress the need for hybrid models to avoid excluding patient groups	Thank you for your comment. This is highlighted in section 3.2.2 of the guidance which describes the groups of people who may find using digital tools challenging and the need for additional support. Also, on the "what this means in practice" section highlights the need for shared decision making to avoid exclusion of patient groups, and emphasises that people with CVD should always be given the option to do conventional cardiac rehabilitation. The risk of digital exclusion is also highlighted in the evidence generation plan in section 6 on implementation, listed under people who may need support and resources.
11	Consultee 2 Novo Nordisk		3	Equity & digital inclusion:	Thank you for your comment.

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				While we believe digital models can provide the flexibility and personalisation that could increase uptake in certain groups, we endorse the committee's concerns about digital exclusion and propose stratified reporting of meds outcomes (initiation, titration, adherence) by deprivation and ethnicity to ensure that digital deployment narrows rather than widens gaps in access and outcomes.	The committee considered that adherence to medication was a relevant outcome for evidence generation. The evidence generation plan discusses the need for subgroup analyses in section 2.2, and specifies that data on ethnicity, socioeconomic status and location should be collected in section 3.4.
12	Consultee 2 Novo Nordisk		3	The committee notes digital could increase uptake, but subgroup evidence is limited.	Thank you for your comment The committee's discussions on the evidence on uptake are highlighted in section 3.12 of the draft guidance. Uptake and adherence is specified in the evidence generation plan, as are subgroups (see sections 2.2 and 3.4).

Technology implementation

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13	Consultee 1 British Association for Cardiovascular Prevention and Rehabilitation		Not specified	• Support strong governace locally and nationally, ensuring platforms remain decision-support tools not replacement • Promote interoperability - platforms to link with NHS app, patient record systems, and NACR to avoid duplication • Stress importance of reducing admin burden, not adding to it ! • Encourage co-design with PPIE • Training for staff • Innovation and research	Thank you for your comment. The committee recommended digital tools as an option to support the delivery of cardiac rehabilitation. Section 1.1 states that the technologies can only be used if a trained healthcare professional has assessed that the technology is suitable. The 'What this means in practice' section of the guidance and the evidence generation plan have been amended to highlight that people should always be given the option of conventional cardiac rehabilitation. Section 6 of the evidence generation plan has been updated to include a sentence emphasising the need to link data to NACR when implementing data collection.

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14	Consultee 1 British Association for Cardiovascular Prevention and Rehabilitation		Not specified	Continued importance on having a viable face to face or remote support by a person for people who can't access is key.	Thank you for your comment. Some digital technologies offer remote support from NHS or company staff. The 'what this means in practice' box and the evidence generation plan have been amended to state that people who choose to do digital cardiac rehabilitation should have continued access to support from the cardiac rehabilitation team.
15	Consultee 2 Novo Nordisk		Not specified	Novo Nordisk supports NICE's proposal to conditionally recommend digital cardiac rehabilitation platforms for use with evidence generation. We agree that digital options could increase access, uptake and adherence to rehab and thereby reduce recurrent events and unplanned admissions. This is particularly important given the most recent NACR annual report shows that only 41% of those with Acute Coronary Syndrome (ACS) in England and 51% of those in Wales with ACS are accessing rehabilitation services, despite a target of 85% by 2028. For those living with heart failure, uptake is substantially lower, at 13% in England and 16% in Wales. Increasing access to digital platforms is also in line with the Government's stated aim to move from analogue to digital, as described in the recently	Thank you for your comment. The 'What this means in practice' section of the guidance and the evidence generation plan have been amended to highlight that people should always be given the option of conventional cardiac rehabilitation. Please also see the NICE guideline for shared decision making.

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				published 10-year plan for health. However, it is essential that the offering of digital platforms does not come at the expense of access to in-person services. Patient choice must be at the heart of service design, and digital options should serve to broaden, not narrow, the pathways available. Many patients continue to prefer face-to-face engagement, and for some, it remains the most appropriate and effective mode of delivery for cardiac rehabilitation.	
16	Consultee 8			I think from our team's experience it's absolutely about offering that menu approach to patients, to allow them to select which option(s) most align(s) with their own lifestyle and therefore which option they are most likely to remain motivated to engage with in the longer-term. If that is digital for ease of access, then we should be able to offer this option to all patients alongside the traditional cardiac rehab group/ face to face approach.	Thank you for your comment. Please see the response to comment 15.

Technology features

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17	Consultee 1 British Association for Cardiovascular Prevention and Rehabilitation		Not specified	Digital platforms should be holistic [psychology support, behaviour change and self-management], not just exercise monitoring	Thank you for your comment. The need for technologies to offer the core components of cardiac rehabilitation is highlighted in section 3.6 of the draft guidance. All technologies recommended for evidence generation cover the core components of cardiac rehabilitation (see Table 1, section 2 of draft guidance). Also, some technologies can be tailored to the need of the cardiac rehabilitation service.
18	Consultee 2 Novo Nordisk		Not specified	We also note that approximately 50% of current cardiac rehabilitation services include a prescriber, and there is a clear aspiration to increase this proportion. It is vital that digital platforms are designed to support prescribing where appropriate, and that they are equipped to identify and address cardiovascular risk factors such as cholesterol, blood pressure and obesity. This will ensure that digital services are not only accessible, but also clinically robust and capable of delivering comprehensive care. This is particularly important given the Government's recognition that cardiovascular	Thank you for your comment. The committee agreed that the features, potential for personalisation and accessibility of a digital platform were important considerations when choosing a suitable programme. Digital platforms are not intended to replace

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				disease is a major driver of poor health and economic inactivity, and that cardiac rehabilitation can help deliver on its ambition to reduce premature deaths from heart disease and stroke by 25% over the next decade. Risk factor management is a core component of cardiac rehabilitation, and we must ensure that this is built into any digital offerings to provide parity with how this is being delivered via in-person programmes.	the initial assessments in a cardiac rehabilitation programme, which is when prescribing decisions would usually be made (see BACPR standards 2023). All technologies recommended for evidence generation cover the core components of cardiac rehabilitation, including medical risk management (see Table 1, section 2 of draft guidance).
19	Consultee 2 Novo Nordisk		3	Role of prescribers: The committee notes digital could increase uptake, but subgroup evidence is limited. Embedding prescriber enabled optimisation in digital pathways is supported by evidence in heart failure (reduced all cause and HF hospitalisations) and by systematic reviews on adherence interventions. We therefore recommend NICE encourages pharmacist and other non-medical prescriber participation and that all platforms should include medicine optimisation features.	Thank you for your comment. NICE HealthTech guidance only makes recommendations on technologies as they are, not on how they could be developed further. Please also see response to comment 18.

Evidence generation

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20	Consultee 1 British Association for Cardiovascular Prevention and Rehabilitation		Not specified	• Advocate for use of NACR as a national dataset to capture impact • Recommend collecting longitudinal data [12 months +] to assess sustainability	Thank you for your comment. The evidence generation plan has been updated to include "Data collection should ideally link to .... the NACR" in section 6. The evidence generation plans highlights that data should be collected over 12 months, and ideally 18 months in sections 2.1 and 3.4.
21	Consultee 1 British Association for Cardiovascular Prevention and Rehabilitation		Not specified	I think the costs and effectiveness data is too old and there is such a disparity between how services are delivered & how they collect data. Emphasised by a recent benchmarking in our North West NHS England cardiac rehab board. Against the well-funded research of these Apps. Maybe over the three years of the guidance a comprehensive benchmarking of WTE, Bands, Referrals and delivery could be explored by NACR / BACPR? I had a look at NICOR recently and there is a large difference between our NICOR data and NACR data on take up.	Thank you for your comment. Section 6 in the evidence generation plan has been updated to include support for linking to existing NHS infrastructure and NACR.
22	Consultee 2 Novo Nordisk		3	Clinical effectiveness & meds outcomes: Given the committee's finding that longer term effectiveness is uncertain and AE/hospitalisation data	Thank you for your comment.

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				are sparse (3.13–3.14), we recommend that evidence generation explicitly captures medicines specific endpoints (see Annex A). This is consistent with HTA expectations for real world evidence and outcomes meaningful to patients, clinicians, and payers.	Section 3.4 of the EvGen plan includes medication adherence as an outcome to be collected.