Implementing PCOR To Increase Referral, Enrollment, and Retention in Cardiac Rehabilitation through Automatic Referral with Care Coordination

Hybrid CR Workgroup Evaluation Report

Agency for Healthcare Research and Quality

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Prepared for:

Agency for Healthcare Research and Quality (AHRQ)

Dina Moss, MPA

Michael Harrison, PhD

Contracting Officer Representatives (CORs)

Submitted December 9, 2022 by:

Abt Associates Inc.

In Collaboration with:

Steven J. Keteyian, PhD

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Overview

Although interest in nontraditional models of care in cardiac rehabilitation (CR) predated the pandemic, the COVID-19 public health emergency (PHE) accelerated this interest as Hybrid cardiac rehabilitation (HYCR) emerged as a potentially viable model to address patient and provider safety concerns and to meet demand with a severely taxed healthcare workforce. Interest in HYCR intensified once it began to be reimbursed under the PHe by Medicare and some are private payers.

In March 2022, the TAKEheart team was tasked through a contract modification with convening a HYCR Workgroup to specifically and extensively investigate hospitals' use of and experience with hybrid cardiac rehabilitation (hybrid CR) as one promising strategy for increasing access to CR services among underserved populations who may encounter barriers associated with traditional facility-based CR with the goal of increasing understanding and actionable knowledge of and about the full range of topics and issues that may be expected to impact hospitals' ability to more widely and effectively use this model and the ability of underserved patients to benefit from its wider use.

Over a six-month participation period, the TAKEheart team engaged in several activities that could be grouped into three main phases: **recruitment**, **operational support**, and **insight capture and sharing**. In the sections that follow, we describe this task by phase including a description of key activities, lessons learned and recommendations for future similar activities.

Methods

This report and evaluation of the Hybrid Workgroup component leveraged qualitative, self-reported data collected through feedback from HYCR workgroup members and the Abt implementation team. As part of the pre-work activities required for each upcoming HYCR workgroup session, participants were asked to reflect on the previous session to identify a) the insights that were most valuable and b) what one change they would make to future sessions to help them be more useful. The Abt team used this feedback for workgroup session planning and shared it back with participants at the beginning of the following session so participants could see their collective input and how it affected the workgroup session. Additionally, after the final HYCR workgroup session, the Abt implementation team held a discussion to identify a) activities conducted differently than originally proposed in the HYCR workgroup operational plan developed at the beginning of the task, b) contributors to HYCR workgroup success (including WG design, implementation, and output related factors), and c) any unforeseen barriers and how they were addressed. Learnings from the WG participant feedback and Abt implementation team discussion were summarized and included in this report.

Hybrid CR Workgroup Activity: Recruitment

The TAKEheart team recruited two sets of participants for the HYCR Workgroup activities: HYCR Workgroup Members and Technical Expert Panel Members.

HYCR Workgroup Members

Recruitment Targets

The TAKEheart team sought to recruit between 10-15 members to participate in the Workgroup--based on a combination of factors related to the CR programs they affiliated with, whether they demonstrated a clear interest in sharing and learning and were available to participate in scheduled Workgroup sessions, and the need for diversity across the entire set of Workgroup participants.

CR Program Characteristics:

Participants represented programs that collectively spanned the range of involvement with hybrid CR, including:

- Programs actively planning to begin offering hybrid CR within the next 6-12 months
- Programs that have begun offering hybrid CR within the past year
- Programs that have an established hybrid CR initiative that is more than a year old

This mix of program backgrounds was intended to ensure the Workgroup possessed the perspectives of all of the audiences for whom Workgroup-based resources were to be created.

Individual Participant Characteristics:

Participants were selected based on a desire to learn, a desire to share what they have learned within their programs about hybrid CR, and a willingness to actively participate in the group and contribute to the development of resources that it creates for others. The TAKEheart team purposely included a mix of program directors, physicians leading CR programs involved in hybrid CR, and other persons that may be tasked with leading the formation of a hybrid option for their patients. Two professionals from the same hospital CR program were allowed to join the Workgroup, if their roles were complementary or one of the persons agreed to serve as a "back-up" person when the lead person from their site was not available

Overall Workgroup Characteristics:

Collectively, the Workgroup included members representing a variety of program characteristics: both larger and smaller programs, ones that used a mix of funding sources to cover their costs, programs that operated independently or as parts of a health system, and programs in metropolitan areas and ones near CR deserts that lacked available onsite CR. While members could use vendors, to be eligible for participation, they were required to continue to provide onsite CR and coordinate the care of patients throughout their CR experience.

Recruitment Processes

The TAKEheart team recruited members using three general methods:

- Through contacting prospective participants already known to Abt and consultant Steven Keteyian, who also served as the Principal Investigator for this task.
- Through outreach to TAKEheart Partner Hospitals that were known to have or be creating a hybrid CR program
- Through a broader request for participants using the TAKEheart Learning Community mailing list, Million Hearts Cardiac Rehabilitation Collaborative (MH CRC) and AACVPR

Abt created a recruiting document to provide basic information regarding the purpose of the Workgroup and expectations for its members (see **Hybrid Appendix A** for recruiting document). Approximately 25 individuals contacted the project through the TAKEheart email address and expressed varying levels of interest (from requests for additional information to requests to participate). Approximately 20 individuals were screened by Abt and Dr. Keteyian (when available) using questions:

- designed to obtain background information about their program and its use or plans to use hybrid CR
- related to the purposes of the Workgroup and their alignment with the interests of the prospective participant (including their desire to actively share, versus simply listening), and
- related to the expected commitments for Workgroup members.

See **Hybrid Appendix B** for a list of the recruitment questions and rationale for use.

HYCR Workgroup Members List

In total, 14 Workgroup members were selected from 13 organizations in 11 states. This group included:

- A blend of established, newly formed, and planning-stage CR programs
- A mix of urban, suburban, and exurban program locations near CR deserts
- One pediatric CR program and one program unaffiliated with a hospital
- Almost half affiliated with academic research systems, but others from community systems or single hospitals
- Multiple participants linked to Million Hearts and AACVPR

Each participant had identified a backup who could participate in sessions and provide prework and feedback if he or she was unavailable. All Workgroup members were offered an honorarium of $500 in total in the last Workgroup session to thank them for their time and contributions. About half of the Workgroup members completed the paperwork by the end of the project to receive the honoraria.

Exhibit 1 below shows the Workgroup membership list by affiliation and experience with HYCR.

Participant	Organizational Affiliation	Location	Experience w/HYCR
Anne Gavic-Ott, MPA, RCEP, MAACVPR	Northwest Community Healthcare	IL	Active in HYCR
Drew Oehler, MD	Allegheny Health Network	PA	Using a platform, wants to have more control
Vicky Yandle, MSN, RN, CCRP	Prisma Health	SC	Getting ready to launch, collecting data as part of PhD
Jonathan Whiteson, MD	New York University Health	NY	Leader of multiple urban programs and need HYCR to increase capacity
David Shippon, MD	Jefferson Health	PA	Leader of multiple urban programs and need HYCR to increase capacity
Phyllis Hyde	Wellstar, Kennestone	GA	Non-clinician manager; experience with HYCR
Ashley Eckroate, BSEP, TTS, CCRP	Aultman Hospital	OH	Currently using HYCR
Melissa McMahon, MS, ACSM EP-C	Lurie Children's Hospital	IL	Pediatrics using HYCR
Jeanmarie Gallagher, MBA, RCEP	Johns Hopkins Health System	MD	Using HYCR
Kate Traynor, RN MS MAACVPR	Massachusetts General Hospital	MA	Using HYCR- created internally
Shelley McCabe, RCEP, CCRP, FAACVPR	Multicare; Pulse Heart Institute	WA	Partial HYCR
Patrick Schilling, RCEP, CCRP	Baystate Health	MA	Using HYCR
Caitlin Coppenrath, MS, CEP	Maine Health	ME	Partial HYCR
Thomas Vidal, CEP	Cardiology Institute of the South	LA	Using platform-based HYCR

Technical Expert Panel Members

Recruitment Targets

The TAKEheart team recruited a small Technical Expert Panel (TEP) to provide input on the implementation of the Workgroup and review content developed for the Implementation Guide. TEP members were identified through known contacts from past TAKEheart activities and consultation with the HYCR consultant, Dr. Steven Keteyian.

TEP Characteristics

In total, 7 TEP members were recruited representing seven organizations in six states – see Exhibit 3 below. Most members were involved with established and new hybrid CR programs but some were uninvolved in hybrid CR and some used other nontraditional CR approaches (e.g. home based). Five members had relevant publications on HYCR and two members had grassroot operational credentials. Multiple participants were linked to national CR organizations including: Million Hearts and AACVPR.

TEP Member List

Exhibit 3 below shows the TEP member list with further detail on organizational affiliation and why they were selected as a member.

State	TEP Member	Organizational Affiliation	Reason for Inclusion
CA	Alexis Beatty, MD	U California, San Francisco	Active in hybrid CR, cardiologist
MI	Mike Thompson, PhD	U Michigan	Collaborative quality improvement
NC	Cheryl B. Jones, PhD., RN, FAAN	U North Carolina Nursing School	Systems/policy/informatics specialist
MA	Kathleen Traynor, RN, MS, FAACVPR	Massachusetts General Hospital	Using hybrid CR, also participating in WG
FL	Teresa Becke, PhD., FAHA, FAAN	U Southern Florida	Long experience with CR, especially with women
CA	Columbus Baptiste, MD	Kaiser Permanente	Chief of Cardiology, Kaiser Permanente, recommended by Kaiser's chief innovation officer
OR	Aaron Harding, MS, RCEP	Peace Health	CR Supervisor, Preparing for Hybrid, grass roots perspective

Hybrid CR Workgroup Activity: Operational Support

Hybrid CR Workgroup Members

The hybrid CR Workgroup consisted of an initial planning call with the group, followed by 6 monthly 60-minute Workgroup meetings involving all Workgroup participants. This section describes the approach the Abt team used for **preparing for** these meetings, **conducting them,** and **supporting the testing of ideas** for inclusion in an expanded HYCR Implementation Guide.

Meeting Preparation Processes

Each meeting focused on topics directly related to the creation and subsequent operation of a hybrid CR option. Topics for the initial two meetings were selected by project leadership (i.e.,

Making the Case for CR/Gaining Administrative Buy-in and Getting Patients Started in CR); subsequent topics were chosen by Workgroup members to help ensure their full engagement.

Once topics were selected, the following activities were conducted to prepare for the Workgroup session were performed.

- A scan of available published or grey literature or resources relevant to the topic of interest
- Key informant interviews with 1-2 experts (researchers, patient advocates, or persons with relevant practical experience) to identify key insights for sharing with the Workgroup as needed.
- Development of pre-work discussion questions that allowed participants to contribute content as well as example materials for each Workgroup topic. Pre-work was assigned approximately a week before each session and could be accessed within a Microsoft Excel spreadsheet on Teams. Within the spreadsheet, Workgroup members contributed their responses and could see the responses of others. This information was summarized prior to each Workgroup meeting and allowed for the discussions to focus on what was learned from the pre-work assignments rather than spending time uncovering this information for the first time.
- Creation of the agenda that included a review of insights from previous meetings, pre-work, and results of the literature scan and key informant interviews.

Conducting Workgroup Meetings

Meetings were conducted using the Microsoft Teams platform and co-facilitated by Abt Workgroup leadership (Dr. Hines and Ms. Rodda) and Dr. Keteyian. Abt staff led discussions regarding Workgroup activities, lessons learned, and future plans, while Dr. Keteyian facilitated discussions pertaining to the mechanics of creating and operating a hybrid CR program. Meetings, which were recorded to support note taking, included:

- A review of objectives for the meeting
- Any reflections on or sharing of uses of materials or ideas discussed in the preceding meeting
- A review of insights harvested through the pre-work questions
- A substantive discussion of both WHAT and HOW to successfully perform the activities that were the focus of the meeting. These discussions encouraged sharing of insights from Workgroup participants and sought to avoid extended didactic content from any one person. If relevant, the team sought to SHOW rather than TELL about the topics under discussion. For example, in one session Dr. Keteyian invited Workgroup members to observe a group HYCR session.
- Looking ahead to upcoming meetings and activities

Hybrid Appendix C includes the topics for the six Workgroups plus the pre-work questions included for each.

Fostering communication between Workgroup sessions

Abt used multiple channels to support communication and idea sharing between Workgroup sessions. These included:

- **Individual emails**. All participants received the individual email addresses of everyone else in the Workgroup so that they could communicate directly with each other during and after the Workgroup's active phase.
- **Workspace in Abt's Microsoft Teams**. Abt created a folder accessible to AHRQ and Workgroup members that stored pre-work materials and various resources associated with each Workgroup session. Also within this environment, Abt and Workgroup members were able to post new files, start discussions and receive reminders about upcoming meetings and pre-work assignments. All Workgroup members used this site before each session and visited regularly in between to review the comments made by their peers. This workspace proved a valuable asset to the project for several reasons: 1) most users were already familiar with Teams so no additional instruction was needed, 2) the number of users was small so it was more of a community feel that fostered interaction and sharing, 3) most of the Workgroup members also knew each other and communicated regularly, this platform offered them a way to keep doing what they were already doing with ease, 4) the only way to contribute to the discussion and provide feedback was through this platform, so no other alternatives were provided and 5) it could be accessed without logging in, re-logging in or changing passwords regularly which is often required on publicly hosted sites.

Supporting the Testing of Ideas

Workgroup participants were encouraged to identify one or more insights or ideas surfaced by the Workgroup for implementation of their program. While substantial technical support were outside the scope of this project, Abt and Dr. Keteyian offered general implementation advice, fostered connections to others (in or outside the Workgroup) that may be able to support selected implementation activities, and pointed them to TAKEheart, Million Hearts, AACVPR, or other resources that may be useful to successful implementation.

Sections of the Workgroup meetings were devoted to the sharing of plans, progress, patient reactions, and lessons learned.

Technical Expert Panel Meetings

Abt engaged with the TEP members at two points during the life of the Workgroup:

- An initial meeting that overviewed the Workgroup goals, activities and planned outputs and obtained input on these plans as well as the proposed Workgroup meeting topics.
- A second meeting that focused on the enhanced Implementation Guide, as a means to gather TEP input on its contents, format and alignment with the needs of the field.

Each of the two meetings was one hour long and conducted virtually using the Microsoft Teams platform which allowed participants to see each other during discussions and use of polling and chat functions to interact with each other. Prior to each meeting, the TAKEheart team prepared slides that detailed the goal of the meeting and key discussion points. These slides were reviewed and revised by Dr. Keteyian for clarity. Following each meeting, the TAKEheart team prepared a meeting summary and shared it back with TEP members as well as AHRQ. For their time, TEP members were offered $350 per meeting.

Hybrid CR Workgroup Activity: Insight Capture and Sharing

Insight Capture

Insights were captured throughout the life of the Workgroup as an integral part of the Workgroup's activities. Sources of insights included:

- The literature scans performed on each topic selected for a Workgroup meeting in advance of the meeting to inform content; an additional scan conducted at the end of the project period.
- Informal interviews conducted with experts in the field (including consultant Dr Keteyian) and persons directly involved with HYCR activities
- Discussions during the Workgroup and TEP meetings harvested through notes we compiled for each session
- Between-meeting conversations or email exchanges we conducted with Workgroup participants testing changes or ideas

Insight Sharing

Abt shared Workgroup insights using eight distinct methods:

- A revised and updated HYCR Implementation Guide that included new content addressed by the Workgroup. This guide incorporated relevant insights and lessons learned captured through each process described above. See **Hybrid - Appendix D** for the outline of the final HYCR Implementation Guide contents.
- A brief slide deck to accompany the Implementation Guide designed intended to introduce what HYCR is, benefits to patients and programs, a needs assessment to be conducted by programs to determine if HYCR was a good fit for their facility, and a feasibility assessment to determine if HYCR could be successfully implemented the programs' facility.
- A resource guide that was a compilation of all tools and resources contributed from or noted by Workgroup members during the project.
- Dedicated space on the AHRQ TAKEheart website at https://www.ahrq.gov/takeheart/training/expanding-cardiac-rehab-capacity/index.html that included the updated Implementation Guide, accompanying slide deck, and resource guide.

- An 18-minute video (also on the website) to demonstrate how a multi-person HYCR session could be initiated and conducted, a recommendation that came out of one of the HYCR Workgroup sessions in which Dr. Keteyian invited members to observe a session. After members viewed the session online, they agreed it would be useful to create such a video so others could observe it as well.
- An Affinity Group session open to the entire Learning Community was conducted at the end of the Workgroup to share key insights and lessons learned about creating and successfully administering a hybrid CR option. This event allowed the TAKEheart team to promote the new website and Workgroup products.
- A brief literature scan conducted at the end of the project on select topics related to HYCR and summarized in a report detailing what is known, what is still unknown and future directions for research.
- Lessons learned and recommendations that are important to AHRQ but not well-suited for the Implementation Guide were incorporated into this HYCR Evaluation Report and the TAKEheart Final Report.

Hybrid CR Workgroup Activity: Timeline

The HYCR Workgroup timeline required a tightly sequenced order of events. Below were the timeframes for each key project activity - all dates are in 2022.

- Recruitment (early May)
- Screening interviews (late May)
- Initial planning call (early June)
- First TEP virtual meeting (mid-June)
- Literature reviews and key informant interviews (monthly from June through November)
- Workgroup sessions (monthly from June through November)
- Affinity Group session (November)
- Draft Hybrid CR Implementation Guide (November)
- Second TEP virtual meeting (November)
- Final Hybrid CR Implementation Guide (December)

Lessons Learned

Recruitment

- The TAKEheart team initiated several activities during the recruitment process to ensure appropriate individuals joined the WG – including **effective vetting of potential participants** and **clear communication of participant expectations**.
- Furthermore, engaging **individuals from diverse CR program and individual characteristics** provided multiple perspectives on a specific issue and allowed members to share resources that could benefit a wider variety of hospitals and health systems.

Operational Support

- Enlisting a **nationally recognized expert to co-lead the Workgroup** lent credibility to the effort and likely contributed to greater participation and engagement by WG members.
- When selecting topics, the TAKEheart team sought out **issues that were most important to Workgroup members** allowing these issues to guide discussions that were active, robust, and considered a good use of their time because of their interest in the topic.
- With the field of HYCR continuing to evolve throughout the duration of the Workgroup sessions, the team decided to conduct **a brief, just-in-time literature scan in preparation for each meeting,** rather than a single literature review conducted at the beginning of the project period which could have quickly become out of date. Additionally, the team conducted a brief, comprehensive scan at the end of the project period to more formally catch any additional, newly published literature and findings.
- With limited research literature and no guidelines available on how to successfully establish and implement a HYCR program, Workgroup members had a **strong need to learn from others**. For other topics, where a robust literature or guidelines are more widely available, this may not be the case.
- **Pre-work activities that were relevant and could be completed in a short period of time** proved an effective method for engaging Workgroup participants both prior to and during the meetings. Pre-work was completed in advance of the meetings to allow for insights to be gathered and reviewed prior to the Workgroup sessions. Furthermore, it supported the development of probes for discussion during the sessions.
- TAKEheart staff strived to **continuously improve sessions based on feedback from** Workgroup members. Feedback was requested at the end of each session with recommendations for improvement shared back at the following session and immediately acted upon. These efforts appeared to be appreciated by workgroup members who rated their experience as an average of 9.3 on scale where 10 is exceptionally helpful and 1 is not helpful at all (range: 8-10; mode: 10)

Insights and Sharing

- A **final Learning Community Affinity Group webinar open to any individual interested in HYCR** was a great mechanism to share back the full set of findings and insights across a large number of individuals given the broad interest in the topic, as evidenced by the highly attended event.
- Although not originally planned, the **development of a short video** that intended to SHOW rather than just DESCRIBE how a HYCR session could be easily conducted with multiple participants was reported as one of the most useful tools to be developed out of the Workgroup sessions.

Recommendations

- Recruit individuals based not only on expertise but willingness to contribute knowledge and provide feedback on shared materials; vet members carefully and state clearly the expectations for participation.
- Keep WG participation commitment short – 6 months or less.
- Choose topics wisely – we utilized a mix of leadership-selected topics (to get the ball rolling) and Workgroup selected topics (to ensure greater investment and engagement in WG activities).
- Utilize pre-work to ensure group-based discussions are a valuable use of member's time; rather than using the meeting time to report out each person's experience, pre-work allowed facilitators to knit together various perspectives/insights for richer discussion and reflection.
- Make sure there is enough time to both gather inputs through pre-work and process the insights to share back in advance of the meeting (at least 1 week).
- As feasible, seek out a well-respected nationally recognized expert in the field to lend credibility at recruitment and during implementation.
- Seek out public forums for sharing valuable insights at the end of the WG – a widely advertised Affinity Group webinar and sustainable IG, slides, resource guide and video will be available into the future on the AHRQ website.

Hybrid Appendix A: Recruiting Document

TAKEheart Hybrid Cardiac Rehabilitation (CR) Workgroup

Overview:

The Agency for Healthcare Research and Quality (AHRQ) has provided resources to create and disseminate knowledge, tools, and guidance to expand the use of hybrid CR. Hybrid CR combines some onsite or center-based CR with remote, synchronous, supervised audiovisual exercise sessions, offered as a means to increase access and use of CR among eligible patients including women; persons of color; and those whose jobs, family obligations, or locations make attending onsite CR sessions very difficult or prohibitive.

Although hybrid CR is already being used on a limited basis throughout the US, and despite the fact that it has been shown to be generally safe and effective for improving exercise tolerance and quality of life, more information and resources are needed to assist existing CR programs with how to create and operate a hybrid CR option. The purpose of the TAKEheart Hybrid CR Learning Community Workgroup is to convene and support a small number of programs currently engaged in creating or operating a hybrid CR program to identify and share practical insights and learnings that will add to what we know about how programs are using remote connections to better support their CR patients and assist others with implementing and operating their own hybrid CR program in an effective, successful and affordable manner.

Participants:

Between 10-15 persons will be invited to participate in the Workgroup, which will be facilitated by Dr. Steven Keteyian, a national expert in hybrid CR and the leader of a successful hybrid program at Henry Ford Health in Detroit and Stephen Hines, PhD, the TAKEheart Learning Community Lead. Participants will represent the range of involvement with hybrid CR, including:

- Programs actively planning to begin offering hybrid CR within the next 6-12 months
- Programs that have begun offering hybrid CR within the past year
- Programs that have an established hybrid CR initiative that is more than a year old

Collectively, the workgroup will include larger and smaller programs, ones using a mix of funding sources to cover their costs, programs operating independently or as parts of a health system, and programs in metropolitan areas and ones near CR deserts lacking available onsite CR. While some participants may use vendors, program staff must continue to provide the onsite CR and to coordinate the care of patients throughout their CR experience.

Workgroup participants will be chosen in May and early June based on their desire to participate in this group and a short screening conversation to ensure the Workgroup has the mix of programs described above.

Activities and Expectations:

Invited Workgroup participants will have the opportunity to engage in the following activities, which we estimate may require 4-10 hours monthly for a six-month participation period:

- Participate in six monthly one hour workgroup sessions to discuss and learn about strategies for implementing and successfully operating a hybrid CR program. Participants may choose to have a backup person from their organization, one that can also participate in workgroup sessions, particularly when their organizational lead is unavailable.
- Contribute to the selection of the topics that will be the focus of each meeting. The initial set of topics will be chosen based on input we receive during the screening calls.
- Ask questions of other workgroup participants and experts invited to participate in sessions related to their areas of expertise
- Review resources created by the TAKEheart team based on input from workgroup participants and experts invited to participate in the sessions
- Share their insights with other Workgroup participants and other CR professionals so the TAKEheart team can develop an extended hybrid CR Implementation Guide and public webinar that will open to all CR professionals and programs interested in hybrid CR.
- Incorporate insights from the workgroup discussions into their own organization's hybrid CR program planning or operations and report on lessons learned from these actions

Workgroup Contributions:

At the end of the workgroup, AHRQ will receive the following resources for inclusion on the TAKEheart website and potential use in Million Hearts materials. Workgroup members will contribute to the creation and review of these resources, which will be authored by Abt Associates staff in collaboration with Dr. Keteyian.

- An expanded hybrid CR Implementation Guide that extends the resources in the module 10 Guide to include more elements of how to fully implement a hybrid program. The guide will also incorporate lessons learned/captured from the workgroup participants and invited experts
- A slide deck and recording of a TAKEheart affinity group session on how to create and implement a successful hybrid CR program

Persons interested in participating and that meet the criteria noted above should express their interest to the TAKEheart program at TAKEheart@abtassoc.com. We will reach out to discuss participation through a short phone conversation.

Hybrid Appendix B: List of Recruiting Questions and Rationale

Draft questions	Question Rationale
Understanding the program and participant's role in it	
Please tell us about the current size and capacity of your CR program.	General background. Want to verify that they have sufficient volume to warrant hybrid CR
What role do you play in your CR program?	Want to ensure everyone in the workgroup is in some leadership role--either of the CR program or of the planning or execution of the hybrid option
What led you to implement or begin planning to implement a hybrid CR option?	Want to clarify motives, size, and see how far along they are with hybrid CR use
How does your hybrid option operate and who do you include in it?	Want to confirm it's a true hybrid program and understand their selection criteris (i.e. just people that refuse onsite CR or not, any exclusions based on health)
Reflecting on the purposes of the hybrid CR workgroup	
Please tell us why this workgroup is something you're considering becoming a part of.	Will allow us to explore desire to share as well as learn and desire to use relevant ideas in their own program, when appropriate
What challenges are you encountering in your hybrid CR activities that you'd like the workgroup to address?	Confirm a range of interests--not just one like payment. And see how reflective they are about the challenges they're encountering
How big a priority is it for you to take workgroup ideas and use them to improve the hybrid CR in your program?	Want to confirm that using the information is a priority and that they have the ability to make changes if they are worthwhile
Reflecting on the expectations for workgroup participants	
Members of the workgroup will need to review materials before the meetings, work to implement relevant ideas surfaced in the workgroup, help expand the contents of an existing Implementation Guide on Hybrid CR, and provide feedback on resources that will be shared with peers outside the workgroup. Will you be able to commit 4-10 hours a month for the next six months to these types of activities?	Want to be upfront about expectations and make it clear that it's more than just attending the workgroup meetings

Draft questions	Question Rationale
During the meetings we want everyone to share from their own experiences and to actively ask about questions or challenges they have. Are you comfortable being an active contributor in the workgroup or do you prefer to just listen to others?	Question may not be essential, but it will make a key expectation clear
We are considering having the monthly meetings on (insert possible weeks, days and times). Would you be able to regularly attend the workgroup meetings at any or all of these times? Is there another person in you program that would function as your backup or co-participant?	Need information for scheduling and to make sure that regular attendance is an expectation

Hybrid Appendix C: Workgroup Topics and Pre-Work Questions

WG	Topic	Pre-Work Discussion Questions
WG1	Setting the stage Processes for securing administrative buy-in	What platform do you use or plan to use to facilitate remote exercise sessions? Besides Medicare, what other reimbursement option are you actively pursuing (e.g. grants, reimbursement from private insurers, cost savings from avoiding readmissions, others)? List the areas you're struggling with that the WG will be most helpful if it addresses.
WG2	Patient-related activities Infrastructure-related activities Staff-related start-up considerations	What, if any, resources (e.g. print materials, apps, exercise equipment, monitoring devices) do you provide to patients starting HYCR that you don't provide to onsite CR participants? What are the minimum key functionalities and capabilities you believe are necessary for any remote platform (e.g., Web ex, Skype) that is used in the conduct/facilitation of a synchronized, 2-way audio-visual exercise session? What differences, if any, are there between the data that you collect from a patient during a synchronized, 2-way audio-visual exercise session and the data you collect from patients during an in-person session?

WG	Topic	Pre-Work Discussion Questions
WG3	Activities related to getting patients started in HYCR and operating a HYCR session Structure: Staff-related considerations, and Operating a HYCR session	When do you approach patients about the HYCR option? What promotional materials do you use to encourage patients to participate in HYCR? Briefly describe exclusion criteria, if any, that you use to exclude patients from participating in your HYCR option. What do you include in the emergency plans you create for your patients participating in a synchronized, 2-way audio-visual exercise session? What are the top 2-3 “positives or joys” (if any) that you hear from CR staff about their involvement providing the synchronized, 2-way audio-visual exercise sessions? What are the top 2-3 concerns that you hear from your CR staff about their involvement providing synchronized, 2-way audio-visual exercise session? Please also provide the solutions you offer. Understanding the patient perspective and experience with hybrid CR is an element we would like to explore further as we plan to develop our materials. What patient-level data do you think is the minimally essential to collect just before or during a HYCR exercise session (e.g., pre-exercise and exercise heart rates, RPE, weight, symptoms, etc.)? What exercise modalities do you prefer for patients to use in hybrid exercise sessions conducted outside of your facility? Do they need to have equipment with measurable parameters? What do you or your staff identify as the main 1-2 challenges associated with administering a synchronous, audiovisual exercise sessions and what strategy (ies) did you deploy to best overcome them? In general, should the individualized treatment plan (ITP) developed for a patient in HYCR be meaningfully different from the ITP developed for a patient in standard facility-based only CR? Do you currently offer hybrid sessions that you would allow WG members to watch and observe?

WG	Topic	Pre-Work Discussion Questions
WG4	Education: Content and Delivery Methods Outcomes: Tools and Delivery Methods	WHERE do you offer (or plan to offer) education and counseling for HYCR patients? WHEN do you offer (or plan to offer) education and counseling for HYCR patients? HOW is most of your education and counseling provided (or you plan to provide) to your HYCR patients? WHAT education and counseling resources do you provide (or plan to provide) to your HYCR patients? Across the 4 AACVPR outcome domains of (a) clinical, (b) behavioral, (c) health, and (d) service …how do you measure your current program outcomes for patient in HYCR? What additional data (if any) do you (or will you) track or collect to assess the comparative outcomes of HYCR versus your onsite CR activities? What additional data (if any) do you plan to start tracking or feel that it will be important to track to justify the value of HYCR to your administration or to external funders?
WG5	Cost: Downstream saving and vendors Revenue: Billing and reimbursement	What data (if any) are you collecting or examining to calculate the true costs of supporting HYCR patients?
WG6	Underrepresented populations Vendor Characteristics Implementation Guide review	Please share any strategies you have used or are aware of to maximize participation in HYCR by underrepresented groups. What are the biggest reasons why persons from underrepresented groups are unable or unwilling to participate in your HYCR option? What do you feel are the two most important questions that programs should ask when considering the use of a vendor to support their HYCR activities? How concerned are you that alternative reimbursement approaches some vendors use, such as the use of remote monitoring codes, may eventually hurt participation in your overall CR program? What do you see as the competing forces between vendors and providers? If you were in a situation to advise another provider about HYCR, what one piece of advice do you think is the most important to share?

Appendix D: Final HYCR Implementation Guide Outline

1) Introduction
2) What is CR?
    a) Definitions
    b) Graphic
3) Why CR?
    a) Benefits to patients
    b) Benefits to programs
    c) What is the evidence
4) Assessment/Considerations before moving forward
    a) Is it safe and effective?
    b) Is it right for your program?
    c) Can you do it?
        i) Financial Considerations and Business Case
        ii) Other feasibility considerations
5) Planning and Preparation
    a) Anticipate and Address Staff Concerns
    b) Securing Buy-in
    c) Infrastructure planning/ Decision-making
6) Running a Hybrid Program
    a) Recruiting patients
    b) Conducting Remote, Supervised Audio-visual Exercise Sessions
    c) Education and Ongoing Support for Hybrid CR Patients
        i) Tracking outcomes

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