

SUPPLEMENTARY MATERIAL

Supplemental Methods

The focus of this guideline is delivery of secondary prevention and rehabilitation of CVD in women. By CR program, we are referring to phase II (post-acute) programs, however these recommendations may also be suitable for inpatient and maintenance programs.¹ The CR setting to which this guideline is applicable includes supervised programs in clinical (e.g., hospital to primary care) or community settings, as well as home-based programs, which may involve technology. Home-based CR delivered 1-1 would be considered “women-focused” where elements of items b and/or d in the introduction are applied.² As per the mission of the ICCPR, this guideline takes into consideration the context of programs in low-resource settings.³

The target population is adult women (using this term to encompass sex and gender, and including those assigned female sex at birth as well as individuals who identify as women or non-binary),⁴ with a CVD indicated for CR (i.e., evidence of benefit from randomized trials for reductions in mortality or morbidity when compared to usual care).⁵ Specifically, this guideline focuses on delivery of CR to women with stable coronary artery disease, a history of acute coronary syndrome +/- revascularization (percutaneous or surgical),⁶ heart failure (including with preserved ejection fraction),⁷ or ambulatory patients with stroke or PAD.⁸

The target end-users of this guideline are chiefly CR providers of any discipline and administrators. The recommendations provided herein are also directed to healthcare practitioners providing inpatient acute cardiac care (e.g., nurses, physiotherapists, pharmacists), any referring providers (e.g., cardiac specialist, physiatrist, internist, family physicians) as tailored promotion of CR to women should be initiated in the inpatient setting.⁹ Broader healthcare administrators and policy-makers from the institutional, regional, national and

international levels are other potential users of the guideline. Female CVD patients and their family may also be interested in this guideline, to be informed about what type of CR could be available to them, or to work with programs to implement the recommendations herein.

Writing Panel Composition & Stakeholder Engagement

The writing panel co-chairs (GG, SLG) were approved by the ICCPR Executive Committee. The co-chairs then developed an outline and set out to populate the writing panel so that the sections could be drafted by experts in each area, and this was considered by the Executive; the corresponding authors of studies which were included in the reviews which form the evidentiary basis for this clinical practice guideline were considered,^{2,10} with the aim also of ensuring that the panel had diverse geographic representation, and included the CR-delivering healthcare provider types that would be implementing the recommendations (e.g., nurses, physiotherapist).

Two female cardiac patient partners from a low-resource setting were solicited to serve (one age 74 and the other 82, and one of lower education level and the other higher), as well as a policy-maker with international experience (AN) to promote implementability and uptake of the recommendations. The World Health Organization and World Heart Federation (of which ICCPR is an Associate member) were informed about the initiative.

All members were required to disclose conflicts of interest, financial relationships or personal interests from 12 months before initiation of the writing effort that could impact their contributions to this guideline. All authors declared none (available from corresponding author upon request).

Evidence collection, Grading criteria and Synthesis

This clinical guideline is based on the results of the first systematic review with meta-analysis on women-focused CR undertaken by several of the authors (TM, GG, SLG).^{2,10} In brief, comprehensive literature searches were performed of 8 databases, from inception. The search strategy was based on the following parameters: inclusion of female adults (≥ 18 years) with any cardiac condition, where the study could be of any design (primary research only) and with any outcome, although we focused in particular on access, utilization, satisfaction, cost, as well as psychosocial (e.g., depression, anxiety, quality of life), heart-health behaviour and clinical (i.e., risk factors, functional capacity, morbidity and mortality) outcomes. Randomized trials were considered separately to undertake meta-analyses where it was possible based on availability of evidence, with separate consideration of usual care versus active comparison arms. Again, the intervention had to comprise women-focused CR as defined previously.

Quality of each study was rated using the Mixed-Methods Assessment Tool.¹¹ Risk of bias in trials was also assessed using Cochrane's tool (v1).¹² Following meta-analysis where possible, evidence for each outcome was evaluated according to the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system.¹³ Where meta-analysis could not be performed, results were analyzed in accordance with the Synthesis Without Meta-analysis (SWiM) reporting guideline.¹⁴

The first-ever reviews of women-focused CR revealed the diversity of what is considered women-focused CR, and it is unclear with what elements women are most satisfied.² Given the limited availability of this model of CR,¹⁵ accessibility is very limited, and whether availability results in greater CR utilization in women cannot be established.² In terms of impact, while there are few studies available, women-focused CR appears to be equivalent in effect to traditional CR in terms of functional capacity improvements, but results in significantly better quality of life.¹⁰

One study reported favorable economic impact and another reduced sick days,^{16, 17} but the cost-effectiveness of traditional CR is well-established across many contexts and from many perspectives.^{18,19,20} No harms were identified, and it is known that traditional and home-based CR are safe.^{6,21,22}

Development and Consensus Process

The guideline was developed in accordance with the Appraisal of Guidelines for Research and Evaluation (AGREE)-II,²³ the Institute of Medicine's Trustworthiness Standards²⁴ and the Reporting Items for practice Guidelines in Health care (RIGHT).²⁵ Recommendations were initially developed by the panel co-chairs, with strength of recommendations based on GRADE.^{13,26} Articles included in the review were used as a basis for ratings,^{2,10} but in many cases additional evidence was also considered, using publications that were part of author's personal databases. The 14 drafted recommendations were circulated to all other authors and ICCPR executive for initial input (Supplemental Table S1).

An online survey was created in Qualtrics to solicit ratings of each recommendation. Delphi panelists, described below, were first asked to specify whether or not the recommendation should be included (yes/no). Next, on a scale from 1-7, they rated each recommendation in terms of (a) potential positive impact for women's CR adherence and/or outcomes, and (b) feasibility of implementation (including in low-resource settings). The anchors were from "no impact" to "major impact" and "not feasible" to highly feasible", respectively (higher scores more positive). For each recommendation there was also a free-text box where panelists were invited to make suggestions about revision to wording or other considerations that could be addressed. Finally, panelists were asked to specify recommendations that should be added.

Delphi panelists comprised corresponding authors from each of the 28 studies included in the women-focused CR review,^{2,10} as well as CR providers who participated in ICCPR's 2016/17 global CR audit who denoted offering at least some women-focused sessions at their program and provided their email to be contacted;¹⁵ there were 74 (67.3%) respondents who provided contact information, but another 36 programs that reported offering some women-focused CR did not. These parties were emailed an invitation with details of the initiative (including proposed definition of women-focused CR) and survey link in December 2021, including a call for any women-focused CR implementation tools they would be willing to share.

Based on best practice,²⁷ it was established a priori to consider recommendations where $\geq 75\%$ of respondents agreed it should be included, as well as impact and implementability average scores $\geq 5/7$ to have consensus for inclusion. Those recommendations with $< 50\%$ agreement for inclusion, as well as impact and implementability average scores $< 4/7$ were considered to have consensus for exclusion. All other recommendations were considered to have "unclear consensus", and with consideration of open-ended comments, would be discussed on the consensus call.

Open-ended feedback was incorporated into the recommendations using tracked changes. The co-chairs discussed suggestions for additional recommendations, and drafted them for consideration by the panelists as well where it was deemed warranted. This was then shared with all respondents who provided their name to review.

A web call was convened in February 2022 to confirm recommendation inclusion/exclusion decisions, discuss recommendations where consensus was lacking, discuss potential revision of recommendations with consensus for inclusion based on comments provided, and consider new recommendations until consensus was achieved. The senior author

chaired the call, ensuring all perspectives were voiced. The recommendations were revised accordingly, with strength of recommendations / certainty of evidence finalized for each based on GRADE after the call.¹³ The final recommendations and GRADE ratings were then shared with panelists and patient partners for confirmation.

The guideline outline was discussed by the author team on a call before the consensus process. Benefits and harms of the recommendations were considered, as well as costs and implementability. Section authors provided their sections after the process, which were collated by the senior author; the full draft was then circulated to the writing panel for input. Feedback was incorporated by the co-chairs. Where there were significant outstanding questions, a webcall of authors was planned, but ultimately not necessary.

The drafted guideline was then shared with all those invited to the Delphi panel, who were considered an independent external review panel of experts (see acknowledgments). The draft was also posted on ICCPR's website for a 14-day period to enable interested public stakeholders to provide input. It was also shared with all 42 member societies of ICCPR and 16 "friends" from countries where CR is emerging. Input received from associations and stakeholders was documented and considered, and integrated where appropriate. The document was then submitted to the ICCPR Executive Committee for quality assurance, and ultimate approval.

The writing panel will consider updating this guideline if substantive new evidence is available that may change practice in recommendation areas where there is uncertainty, new studies become available with ample power, and/or there is a reason to incorporate new methods, as per best practices.²⁸

Supplemental Results

Women-Focused CR Recommendation Development Process

Of those 94 unique women-focused CR experts globally invited to serve as Delphi panelists including co-authors, 18 (19.1%) email addresses were confirmed as no longer valid, and 19 (25.0%) responded (one anonymously); respondents were from all World Health Organization regions except Africa.

Based on the rating scheme, results suggested consensus to include 10/14 recommendations, and unclear consensus for recommendation five, as well as three, eight and 14 (issues of feasibility only for latter three). Based on comments, some edits were made to these four recommendations. Then comments for all other recommendations were considered; recommendation 11 regarding exercise was separated into 2 recommendations. Ultimately, revisions were made to every recommendation, with some of the suggestions for additional recommendations which pertained to existing recommendations incorporated therein (e.g., fostering a safe space, considering intersectionality, community settings).

The consensus call was attended by all seven co-authors plus eight other panelists from diverse regions. First, the definition of women-focused CR was discussed, and following some edits, consensus achieved on the four elements.

Next, the four recommendations with unclear consensus were discussed. There was a decision to re-frame recommendation five on staff not to specify sex, but instead to focus on characteristics, training and approach. Panelists then decided that related recommendation nine was not necessary, considering also that patient-centered care is relevant for men and women, and thus out of scope. Recommendations three and eight were discussed with the revisions from the comments, and the decisions were to include them given specification that these only be applied where feasible. Discussion about recommendation 14 centered around the scope of post-

CR care being more in the domain of the health system, although the audience for this guideline includes policy-makers. Given the importance of continuity of care for optimal secondary prevention, it was decided to re-frame the recommendation to focus on what should be done within CR to support women to achieve optimal secondary prevention and quality of life post-program given their unique challenges.

Half of respondents had forwarded additional recommendations in their survey responses. They were considered in terms of scope, and relevance to women-focused CR specifically; some of the suggestions were set aside accordingly by the panel. Some were included as directions for future research (e.g., seldom-heard women). There was agreement on incorporating some of the points into existing recommendations, as had been circulated prior to the meeting. Inclusion of family was discussed; it was agreed that women patients are more often unpartnered and hence use of more inclusive terminology was needed (e.g., support persons). It was agreed these parties should be engaged at the stage of CR referral to support women's enrolment, but that inclusion of husbands in women-only exercise sessions may be problematic for some group class participants. Rather than adding a recommendation, this was added to recommendations two and four, respectively. Ultimately, one new recommendation was added, regarding evaluation (#15).

The inclusion of all recommendations was confirmed, and finally revisions to included recommendations based on open-ended feedback was discussed. Some further wording changes were made for clarity (e.g., "weighing" in recommendation 4 changed to "body composition assessment"). Means to provide support to women in one-on-one models was discussed in relation to recommendation seven. For recommendation 10, panelists discussed the lack of evidence for some alternative forms of exercise, and thus specified "evidence-based" to qualify

delivery of aerobic forms of dance. Final decisions on each recommendation are shown in Supplemental Table S1.

A written record of feedback received from the external review and public comment period as well as corresponding edits has been archived. Input did not result in alteration to the recommendations, but some sections of the text were clarified and some additional considerations added along with supporting references (e.g., early and surgical menopause assessment at intake, Indigenous considerations). Note that considerations for delivery of CR to women more broadly (i.e., not specific to women-focused CR) are well-reviewed elsewhere, including all components such as diet.²⁹

Other Considerations for Women-Focused CR Recommendation

CR Setting: Mode of Delivery

Women-focused CR could be offered in clinical, community, hybrid or home-based (including incorporation of digital technologies) settings. Offering it only in a clinical setting raises the common barriers among women of distance, time conflicts, lack of transportation, and /or transportation cost.³⁰ Location and ease of access are key for women.³¹

Recent research suggests that alternatively offering programming hybrid or in the community, and in the case of this guideline we hope women-focused programming specifically, may facilitate greater women's engagement.³²⁻³⁴ Features of community-based CR appealing to women have been elucidated.³⁵ How to best leverage digital technologies for women-focused CR requires further investigation; however, where women have the technology and digital literacy, exploiting commonly-used apps to facilitate women's education in CR, health behaviour change (e.g., tracking exercise intensity) as well as peer support and psychosocial well-being appears

prudent.³⁶ However, few trials of mobile phone-based CR involve women, and none provide sex-specific analyses.³⁷⁻⁴¹

Patient Preferences and Values

Previous research has elucidated women's needs and preferences for CR⁴² as well as for delivery models specifically.^{43,44} Many of these, as well as other preference and value considerations are addressed in the recommendation elucidation. However, this work is quite dated; women's needs and preferences should be established in the current context, particularly given CR is now often delivered using new technology.⁴⁵ Moreover, investigation of the CR preferences and needs of women with the following characteristics is necessary: those of lower socioeconomic status, of various sexualities and gender identities, ethnocultural backgrounds (including Indigenous), occupying various societal roles (e.g., informal caregiving, in abusive relationships), young and old, with women's more common yet only recently-investigated and hence less understood cardiac conditions (e.g., ischemia with non-obstructive coronary arteries) and multimorbidity (including mental health and cognitive conditions), in low-resource and non-Western (including less gender-egalitarian) cultures. Then these needs and preferences can be met.

Until these are well-known, program staff could assess women's preferences individually by, for example, administering the CR Preferences Form at time of intake assessment, and then using the results to inform the treatment plan.⁴⁶ Programs may also benefit from recommending women patients complete the CR barriers scale (CRBS)³⁰ and Information Needs in CR (INCR) scales⁴⁷ at intake. These validated scales are available in self-report form in various languages online (<https://globalcardiacrehab.com/For-Patients>), with mitigation strategies suggested in lay language for their biggest barriers as well as patient information sources provided where gaps exist; the means to share results with CR programs directly are also provided.

Special Populations: Stroke and Peripheral Arterial Disease

People with PAD and those with stroke are severely under-represented in CR; this disparity is even greater for women.⁴⁸⁻⁵⁰ With regard to the former, in 5 retrospective CR studies, <36% (12%-35%) of all PAD participants were women,⁵¹⁻⁵⁵ despite the fact that women represent ~52% of people with PAD worldwide.^{56,57} This under-representation extends to stroke, where among 116 consecutively-enrolled stroke outpatients eligible for CR, only 24% of those that enrolled were women, despite the higher point estimate of incident and prevalent strokes in women than in men globally.^{58,59} It is therefore not surprising that there is little to no research on tailoring CR to women with stroke or PAD.⁶⁰⁻⁶²

The under-representation and under-investigation is of concern because women with these conditions have greater depressive symptoms, pain, fatigue, poorer cardiorespiratory fitness, quality of life and functional mobility than their male counterparts, which are parameters that can improve with CR/exercise participation.^{63,64-73} Regarding mobility, eligibility criteria for CR entry are based on level, where a progressively greater proportion of people with PAD and stroke are excluded from CR as their mobility deficits increase.^{48,49} This would disproportionately restrict entry of women with stroke or PAD, given their greater functional impairment than men. Therefore, having less restrictive inclusion criteria where feasible may mitigate sex differences in access, and ensure exercise engagement among those who most need it. Other strategies are to have stroke-specific and PAD-specific referral brochures for patients and families that target women (i.e., pictures of older and younger women exercising with and without mobility aids, or using arm ergometry), including how the program can help, who can join, and what happens during the program (including pain management).

Another sex difference is that women, including those with cardiac diseases, are more likely to have asymptomatic PAD or have atypical symptoms of PAD than men.⁷⁴ This may be in

part why PAD is under-diagnosed and under-treated in women worldwide (particularly in low- and middle-income countries), leading to delayed treatment and worse outcomes.^{75,74} It is important for the CR practitioner to be aware that difficulty walking because of PAD can be mistaken for hip or knee arthritis or spinal stenosis.⁷⁶ This presents a challenge as these are more common or more disabling issues for women in general than men.⁷⁷ However, CR provides an opportunity for identifying these women with or at high risk for PAD, by targeted use of the ankle-brachial index for timely diagnosis and treatment.^{75,74}

Women with stroke may be significantly more likely to decline to be referred to CR than men; fatigue being the only reason for declining that differed from men in one study.⁵⁸ Women may have more musculoskeletal issues and poorer adherence to outpatient stroke rehabilitation than men.⁴⁷

For the exercise practitioner, ways to overcome barriers reported more frequently by women with stroke and PAD are to re-assure them that exercise will not make the condition worse, help plan exercise where there is opportunity to sit when fatigued or if leg pain occurs, and to prescribe a modality of exercise that minimizes the risk of falls.⁷⁸ Strategies to manage fatigue, musculoskeletal issues, pain and psychosocial issues can be found in other sections. Nevertheless, once stroke and PAD patients enroll, there seems to be no sex difference in CR completion.^{51,58,79}

Low-Resource Settings and Consideration of Equity, Feasibility

Implementation of women-focused CR in low-resource settings³ will represent an even greater challenge, not only for socioeconomic reasons but also gender-related societal ones. Chief among barriers to implementation in these settings is the lower availability of CR, which results in no programs to tailor to women or greater geographic barriers.⁸⁰ Interestingly, much of

the women-focused CR available globally is offered in lower-resource settings in the Eastern Mediterranean Region.¹⁵ Indeed, in these contexts, CR is often single-sex for cultural and/or religious reasons; hence there is experience and knowledge that could be transferred for the benefit of higher-resource contexts. Guidance on augmenting CR capacity in low-resource settings is offered elsewhere.^{81,1}

In many lower-resource regions of the world, gender inequality is greater,⁸² which likely leads to the lower use of CR in women in these regions than in more equitable societies, such as Sweden for example.⁸³ Women may be less likely to work outside the home, especially older women, and additionally often have less control over, and access to, the family's financial resources; this would be exacerbated in families of lower socioeconomic status. This could impede payment for CR services (which must be paid out-of-pocket more often in low-resource settings²⁰) as well as needed funds to access CR (e.g., appropriate footwear, transportation). Family sizes are often larger,⁸⁴ so women are shouldering greater family responsibility, including caretaking responsibility that extends to parents and grandchildren. This represents a major time commitment for women, limiting time for their own cardiac care, which is also often not prioritized. Women may more often experience interpersonal violence,⁸⁵ and have subsequent psychosocial issues. Women may require their husband's consent to participate, and may not be able to participate if programs are not women-only.⁸⁶ Finally, many specialty physicians are male, and sexism exists in care;⁴ but regardless women should be encouraged to attend CR like men.

There are other important factors to consider in low-resource contexts. Chagas disease, rheumatic heart disease and congenital conditions are more common,^{87,88} so women will present with these CR indications. When recommending women exercise on non-CR days, there may be

additional barriers to consider both within and outside the home. In the home, there may be less space for exercise, and there may be less money for any needed equipment. Outside the home, temperature extremes raise health concerns and there may be fewer green spaces for exercise. With regard to safety, road traffic injury,⁸⁹ air pollution,⁹⁰ as well as potential for assault in the evening may represent risks for women exercising outside in these contexts (although these issues can also be at play in all contexts).

Within CR programs themselves, there are additional considerations. Programs in low-resource settings can be shorter⁹¹ or women might not have funds to pay for sufficient sessions, despite their likely greater need for comprehensive programming. Education levels and literacy may be lower,⁹² so more time in patient education, using materials tailored to women's needs would be imperative in supporting women to understand and implement needed self-management practices. Often, there is stigma and under-identification of psychosocial issues, despite higher burden in these settings;⁹³ CR programs should aim to identify such issues and ensure women have access to evidence-based treatments, given the hazards of depression and anxiety for example for mortality and morbidity in CVD patients.⁹⁴ Domestic labour may be leveraged as lifestyle activity, but women may have less experience with higher-intensity aerobic as well as resistance exercise and it may not be understood as important. Where women cannot come on-site, the potential of offering CR and peer support via commonly-used apps such as WhatsApp or WeChat could be explored (i.e., internet connection, devices, power available, data plans), to support women in their secondary preventive lifestyle changes and promote their psychosocial well-being.

Supplemental Discussion

Directions for Future Research

In addition to some directions raised herein, in the reviews underpinning this guideline, directions for future research are forwarded,^{2,10} and a recent review also presents a good overview.²⁹ Considerations around incorporating women with less-studied cardiac conditions that are more common in women (e.g., heart failure with preserved ejection fraction, ischemia with non-obstructive coronary arteries, stress cardiomyopathy, spontaneous coronary artery dissection) in CR are also recently reviewed elsewhere,⁹⁵ and we bolster that call for research in relation to these populations specifically in women-focused CR.

Most imperative is getting women into CR, and then facilitating their adherence. With regard to the former, research is needed on how to address the gender gap in physician CR encouragement.^{96,97} We would argue that where women-focused CR is available, inpatient cardiac care providers be informed, and encouraged to communicate it to patients and their family. Also scripts supporting referral discussions with women patients, as available in the implementation tools in the Appendix, need to be tested and revised based on findings. Whether knowledge of the availability of women-focused CR increases women's enrolment should be investigated. Standardized triage algorithms need to be developed and tested to support patient allocation to program model; but specifically in relation to this work, consideration of factors more common in female CVD patients and that are related to decisions to allocation to a women-focused model (e.g., session timing availability, safety, psychosocial well-being) must be incorporated in that assessment.

With regard to programming itself, as outlined in the reviews,^{2,10} features of women-focused CR that most engage women through to program completion must be identified. With

regard to setting or models, research on how one-on-one CR (i.e., often home-based) should be tailored to women to optimize utilization and outcomes also must be established; we identified no work in this area. Also needed is research into how hybrid models, as well as more-recently applied asynchronous and synchronous group online programming can meet women's needs, including how this affects outcomes. On a related note, data do suggest that exercise intensity is equivalent in unsupervised versus supervised programs,⁹⁸ but more research on this in women specifically is needed given their well-known barriers. It is encouraging that research attention has recently turned to sex differences in cardiorespiratory fitness in CR,⁹⁹ but more work to understand optimizing initial exercise prescriptions and progressing it for women is needed, to maximize outcomes without leading to dropout. Finally, where they are shown to be beneficial, the question of how CR programs can integrate women's preferred forms of exercise (e.g., Zumba) and how this affects outcomes needs investigation.

Limitations

The limitations of the evidence review are reported elsewhere.^{2,10} With regard to this guideline, we did not have representation on the writing panel from all global regions; for instance Africa was not represented, but there is limited CR and very limited women-focused CR there.¹⁵ There was good diversity in Delphi panelists, covering all regions but Africa. However, survey response rate was low. Finally, the authors are cautioned as while the additional literature from author's personal databases used to support the recommendations was assessed for quality, all references cited in the text were not.

Supplemental Acknowledgements

We are grateful to our patient partners Tereza Rodrigues Pinto and Ana Maria da Silva. We recognize the contributions of Delphi panelists Sol Vidal Almela, Holly Wykes, Evangelia Kouidi, Mahdiah Ghanbari, Debbie Childerhose, Faith Delos-Reyes, Simonetta Scalvini, Lee Wan Ling, Michael D Kennedy, Masoumeh Sadeghi, Priya Chockalingam, Robert Zecchin, Lucia Filippucci, and Mireille Landry. We also recognize external reviewers, particularly Robyn Gallagher, but also including Mary Whooley, Danielle A. Gomes Pereira, Diann Gaalema, Jose Antonio Caldas Teixeira, Marta Supervia, Ardiana Meity, Won-Seok Kim, Jibril Mohammed, Jamal Uddin, Nidal Tourkmani, Carlos Alberto Cordeiro Hossri, Susan Dawkes, Nabila N. Soomro and Fakhr Al-Ayoubi.

SUPPLEMENTAL REFERENCES

1. Grace SL, Turk-Adawi KI, Contractor A, et al. Cardiac Rehabilitation Delivery Model for Low-Resource Settings: An International Council of Cardiovascular Prevention and Rehabilitation Consensus Statement. *Prog Cardiovasc Dis*. 2016;59(3):303-322.
2. Mamataz T, Ghisi GLM, Pakosh M, Grace SL. Nature, availability, and utilization of women-focused cardiac rehabilitation: A systematic review. *BMC Cardiovasc Disord*. 2021;21(1):1-20.
3. Van Zyl C, Badenhorst M, Hanekom S, Heine M. Unravelling “low-resource settings”: a systematic scoping review with qualitative content analysis. *BMJ Glob Heal*. 2021;6:5190.
4. Mauvais-Jarvis F, Noel Bairey Merz C, Barnes PJ, et al. Sex and gender: modifiers of health, disease, and medicine. *Lancet*. 2020;396(9):565-582.
5. Taylor RS, Dalal HM, McDonagh STJ. The role of cardiac rehabilitation in improving cardiovascular outcomes. *Nat Rev Cardiol*. 2021;19:180-194.
6. Dibben G, Faulkner J, Oldridge N, et al. Exercise-based cardiac rehabilitation for coronary heart disease. *Cochrane Database Syst Rev*. 2021;(11):CD001800.
7. Long L, Mordi IR, Bridges C, et al. Exercise-based cardiac rehabilitation for adults with heart failure. *Cochrane Database Syst Rev*. 2019;1(1):CD003331.
8. Smith SC, Benjamin EJ, Bonow RO, et al. AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: A guideline from the American Heart Association and American College of Cardiology Foundation. *Circulation*. 2011;124(22):2458-2473.
9. Grace SL, Chessex C, Arthur H, et al. Systematizing inpatient referral to cardiac rehabilitation 2010: Canadian association of cardiac rehabilitation and canadian

- cardiovascular society joint position paper. *Can J Cardiol.* 2011;27(2):192-199.
10. Mamataz T, Ghisi GL, Pakosh M, Grace SL. Outcomes and cost of women-focused cardiac rehabilitation: A systematic review and meta-analysis. *Maturitas.* 2022;160:32-60.
 11. Hong Q, Pluye P, Fàbregues S, et al. Mixed Methods Appraisal Tool (MMAT), Version 2018. <http://mixedmethodsappraisaltoolpublic.pbworks.com/>. Accessed February 22, 2022.
 12. Higgins J, Thomas J, Chandler J, et al. *Cochrane Handbook for Systematic Reviews of Interventions Version 6.0.* Cochrane; 2019.
 13. GRADEpro GDT: GRADEpro Guideline Development Tool[Software]. 2015. grade.pro.org.
 14. Campbell M, Mckenzie JE, Sowden A, et al. Synthesis without meta-analysis (SWiM) in systematic reviews: reporting guideline. *BMJ.* 2020;368:16890.
 15. Turk-Adawi K, Supervia M, Lopez-Jimenez F, Adawi AM, Sadeghi M, Grace SL. Women-Only Cardiac Rehabilitation Delivery Around the World. *Heart Lung Circ.* 2021;30(1):135-143.
 16. Wheeler JRC. Can a Disease Self-Management Program Reduce Health Care Costs? The Case of Older Women with Heart Disease. *Med Care.* 2003;41(6):706-715.
 17. Andersson A, Sundel KL, Uden AL, Schenck-Gustafsson K, Eriksson I. A five-year rehabilitation programme for younger women after a coronary event reduces the need for hospital care. *Scand J Public Health.* 2010;38(6):566-573.
 18. Shields GE, Wells A, Doherty P, Heagerty A, Buck D, Davies LM. Cost-effectiveness of cardiac rehabilitation: a systematic review. *Heart.* 2018;104(17):1403-1410.
 19. Oldridge NB, Pakosh MT, Thomas RJ. Cardiac rehabilitation in low- and middle-income

- countries: a review on cost and cost-effectiveness. *Int Health*. 2016;8(2):77-82.
20. Moghei M, Pesah E, Turk-Adawi K, et al. Funding sources and costs to deliver cardiac rehabilitation around the globe : Drivers and barriers. *Int J Cardiol*. 2019;276:278-286.
 21. Anderson L, Sharp GA, Norton RJ, et al. Home-based versus centre-based cardiac rehabilitation. *Cochrane Database Syst Rev*. 2017;6(6):CD007130.
 22. Thomas RJ, Beatty AL, Beckie TM, et al. Home-Based Cardiac Rehabilitation: A Scientific Statement From the American Association of Cardiovascular and Pulmonary Rehabilitation, the American Heart Association, and the American College of Cardiology. *Circulation*. 2019;140(1):E69-E89.
 23. Brouwers MC, Kho ME, Browman GP, et al. AGREE II: advancing guideline development, reporting and evaluation in health care. *Can Med Assoc J*. 2010;182(18):E839-E842.
 24. Institute of Medicine. *Standards for Developing Trustworthy Clinical Practice Guidelines*. Washington, D.C; 2011.
 25. Chen Y, Yang K, Marušić A, et al. A reporting tool for practice guidelines in health care: The RIGHT statement. *Ann Intern Med*. 2017;166(2):128-132.
 26. GRADEpro GDT. interactive Summaries of Qualitative Findings. software. <https://isoq.epistemonikos.org/>. Published 2015. Accessed February 18, 2022.
 27. Tu J V., Abrahamyan L, Donovan LR, Boom N. Best practices for developing cardiovascular quality indicators. *Can J Cardiol*. 2013;29(11):1516-1519.
 28. Garner P, Hopewell S, Chandler J, et al. When and how to update systematic reviews: consensus and checklist. *BMJ*. 2016;354:i3507.
 29. Smith JR, Thomas RJ, Bonikowske AR, Hammer SM, Olson TP. Sex Differences in

- Cardiac Rehabilitation Outcomes. *Circ Res.* 2022;130(4):552-565.
30. Grace SL, Gravely-Witte S, Kayaniyil S, Brual J, Suskin N, Stewart DE. A multisite examination of sex differences in cardiac rehabilitation barriers by participation status. *J Women's Heal.* 2009;18(2):209-216.
 31. Supervia M, Medina-Inojosa JR, Yeung C, et al. Cardiac Rehabilitation for Women: A Systematic Review of Barriers and Solutions. *Mayo Clin Proc.* 2017;92(4):565-577.
 32. Reed JL, Harris JM, Cotie LM, Grace SL. What do We Know about Women Versus Men Who Attend Heart Wise Exercise Sessions? *Can J Cardiol.* 2016;32(4):s7.
 33. Reed JL, Harris JM, Midence L, Yee EB, Grace SL. Evaluating the Heart Wise Exercise™ program: A model for safe community exercise programming. *BMC Public Health.* 2016;16(1):190.
 34. Nathanail SK, Gyenes GT, Damme AV, Parent EC KM. Participant exercise attendance in community-based bridging, and hospital-based cardiac rehabilitation: a retrospective case control study. *CJC Open.* 2021;epub.
 35. Vidal-Almela S, Czajkowski B, Prince SA, et al. Lessons learned from community- and home-based physical activity programs: A narrative review of factors influencing women's participation in cardiac rehabilitation. *Eur J Prev Cardiol.* 2020;28(7):761-778.
 36. Sengupta A, Beckie T, Dutta K, Dey A, Chellappan S. A mobile health intervention system for women with coronary heart disease: usability study. *JMIR Form Res.* 2020;4(6):e16420.
 37. Pfaeffli Dale L, Dobson R, Whittaker R, Maddison R. The effectiveness of mobile-health behaviour change interventions for cardiovascular disease self-management: A systematic review. *Eur J Prev Cardiol.* 2016;23(8):801-817.

38. Maddison R, Pfaeffli L, Whittaker R, et al. A mobile phone intervention increases physical activity in people with cardiovascular disease: Results from the HEART randomized controlled trial. *Eur J Prev Cardiol.* 2015;22(6):701-709.
39. Chow CK, Redfern J, Hillis GS, et al. Effect of Lifestyle-Focused Text Messaging on Risk Factor Modification in Patients With Coronary Heart Disease: A Randomized Clinical Trial. *JAMA.* 2015;314(12):1255-1263.
40. Prestwich A, Sniehotta FF, Whittington C, Dombrowski SU, Rogers L, Michie S. Does theory influence the effectiveness of health behavior interventions? Meta-analysis. *Health Psychol.* 2014;33(5):465-474.
41. Cradock KA, ÓLaighin G, Finucane FM, Gainforth HL, Quinlan LR, Ginis KAM. Behaviour change techniques targeting both diet and physical activity in type 2 diabetes: A systematic review and meta-analysis. *Int J Behav Nutr Phys Act.* 2017;14(1):18.
42. Moore SM, Kramer FM, Moore, S M; Kramer FM. Women's and men's preferences for cardiac rehabilitation program features. *J of Cardiopulm Rehabil.* 1996;16(3):163-168.
43. Grace SL, Racco C, Chessex C, Rivera T, Oh P. A narrative review on women and cardiac rehabilitation: program adherence and preferences for alternative models of care. *Maturitas.* 2010;67(3):203-208.
44. Andraos C, Arthur HM, Oh P, Chessex C, Brister S, Grace SL. Women's preferences for cardiac rehabilitation program model: a randomized controlled trial. *Eur J Prev Cardiol.* 2015;22(12):1513-1522.
45. Ghisi GLM, Xu Z, Liu X, et al. Impacts of the COVID-19 pandemic on cardiac rehabilitation delivery around the world. *Glob Heart.* 2021;16(1):43.
46. Fernandez RS, Salamonson Y, Juergens C, Griffiths R, Davidson P. Validation of the

- revised cardiac rehabilitation preference form in patients with post-percutaneous coronary intervention. *J Cardiopulm Rehabil Prev.* 2007;27(6):390-394.
47. Ghisi GL, Grace SL, Thomas S, Evans MF, Oh P. Development and psychometric validation of a scale to assess information needs in cardiac rehabilitation: the INCR Tool. *Patient Educ Couns.* 2013;91(3):337-343.
 48. Toma J, Hammond B, Chan V, et al. Inclusion of people post-stroke in cardiac rehabilitation programs in Canada: A missed opportunity for referral. *CJC Open.* 2020;2:195-206.
 49. Ahden S, Ngo V, Hoskin J, et al. Inclusion of People With Peripheral Artery Disease in Cardiac Rehabilitation Programs: A Pan-Canadian Survey. *Hear Lung Circ.* 2021;30:1031-1043.
 50. Howes T, Mahenderan N, Freene N. Cardiac rehabilitation: are people with stroke or transient ischaemic attack being included? a cross-sectional survey. *Hear Lung Circ.* 2019;29(3):483-490.
 51. Devrome AN, Aggarwal S, McMurtry MS, et al. Cardiac rehabilitation in people with peripheral arterial disease: A higher risk population that benefits from completion. *Int J Cardiol.* 2019;285:108-114.
 52. Ambrosetti M, Temporelli PL, Faggiano P, et al. Lower extremities peripheral arterial disease among patients admitted to cardiac rehabilitation: the THINKPAD registry. *Int J Cardiol.* 2014;171(2):192-198.
 53. Jeger R V., Rickenbacher P, Pfisterer ME, Hoffmann A. Outpatient Rehabilitation in Patients With Coronary Artery and Peripheral Arterial Occlusive Disease. *Arch Phys Med Rehabil.* 2008;89(4):618-621.

54. Nguyen CH, Marzolini S, Oh P, Thomas SG. Entering cardiac rehabilitation with peripheral artery disease: a retrospective comparison to coronary artery disease. *J Cardiopulm Rehabil Prev.* 2020;40:255-262.
55. Stauber S, Guera V, Barth J, et al. Psychosocial outcome in cardiovascular rehabilitation of peripheral artery disease and coronary artery disease patients. *Vasc Med.* 2013;18(5):257-262.
56. Song P, Rudan D, Zhu Y, et al. Global, regional, and national prevalence and risk factors for peripheral artery disease in 2015: an updated systematic review and analysis. *Lancet Glob Heal.* 2019;7(8):e1020-e1030.
57. Pabon M, Cheng S, Altin SE, et al. Sex Differences in Peripheral Artery Disease. *Circ Res.* 2022;130(4):496-511.
58. Marzolini S, Fong K, Jagroop D, et al. Eligibility, Enrollment, and Completion of Exercise-Based Cardiac Rehabilitation Following Stroke Rehabilitation: What Are the Barriers? *Phys Ther.* 2020;100(1):44-56.
59. Feigin VL, Stark BA, Johnson CO, et al. Global, regional, and national burden of stroke and its risk factors, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019. *Lancet Neurol.* 2021;20(10):795-820.
60. Galati A, Piccoli M, Tourkmani N, et al. Cardiac rehabilitation in women: state of the art and strategies to overcome the current barriers. *J Cardiovasc Med.* 2018;19(12):689-697.
61. Parmenter BJ, Dieberg G, Smart NA. Exercise training for management of peripheral arterial disease: a systematic review and meta-analysis. *Sport Med.* 2015;45(2):231-244.
62. Tompra N, Foster C, Sanchis-Gomar F, de Koning JJ, Lucia A, Emanuele E. Upper versus lower limb exercise training in patients with intermittent claudication: a systematic

- review. *Atherosclerosis*. 2015;239(2):599-606.
63. Marzolini S, Oh PI, McIlroy W, Brooks D. The feasibility of cardiopulmonary exercise testing for prescribing exercise to people after stroke. *Stroke*. 2012;43:1075-1081.
 64. Glader E-L, Stegmayr B, Norrving B, et al. Sex differences in management and outcome after stroke: a Swedish national perspective. *Stroke*. 2003;34(8):1970-1975.
 65. Gray LJ, Sprigg N, Bath PMW, et al. Sex Differences in Quality of Life in Stroke Survivors. *Stroke*. 2007;38(11):2960-2964.
 66. McDermott MM, Ferrucci L, Liu K, et al. Women With Peripheral Arterial Disease Experience Faster Functional Decline Than Men With Peripheral Arterial Disease. *J Am Coll Cardiol*. 2011;57(6):707-714.
 67. McDermott MM, Greenland P, Liu K, et al. Sex differences in peripheral arterial disease: leg symptoms and physical functioning. *J Am Geriatr Soc*. 2003;51(2):222-228.
 68. Hirsch AT, Haskal ZJ, Hertzner NR, et al. ACC/AHA 2005 guidelines for the management of patients with peripheral arterial disease (lower extremity, renal, mesenteric, and abdominal aortic): a collaborative report from the American Association for Vascular Surgery/Society for Vascular Surgery, Soc. *J Am Coll Cardiol*. 2006;47(6):e1-e192.
 69. Jönsson AC, Lindgren I, Hallström B, Norrving B, Lindgren A. Prevalence and intensity of pain after stroke: a population based study focusing on patients' perspectives. *J Neurol Neurosurg Psychiatry*. 2006;77(5):590-595.
 70. Jelani Q, Mena-Hurtado C, Burg M, et al. Relationship between depressive symptoms and health status in peripheral artery disease: role of sex differences. *J Am Heart Assoc*. 2020;9(16):e014583.
 71. Breek JC, Hamming JF, De Vries J, van Berge Henegouwen DP, Van Heck GL. The

- impact of walking impairment, cardiovascular risk factors, and comorbidity on quality of life in patients with intermittent claudication. *J Vasc Surg.* 2002;36(1):94-99.
72. Schepers VP, Visser-Meily AM, Ketelaar M, Lindeman E. Poststroke Fatigue: Course and Its Relation to Personal and Stroke-Related Factors. *Arch Phys Med Rehabil.* 2006;87(2):184-188.
73. Poynter B, Shuman Hon M, Diaz-Granados N, Kapral M, Grace SL, Stewart DE. Sex Differences in the Prevalence of Post-Stroke Depression: A Systematic Review. *Psychosomatics.* 2009;50(6):563-569.
74. Hirsch AT, Allison MA, Gomes AS, et al. A call to action: women and peripheral artery disease: a scientific statement from the American Heart Association. *Circulation.* 2012;125(11):1449-1472.
75. Vogel B, Acevedo M, Appelman Y, et al. The Lancet women and cardiovascular disease Commission: reducing the global burden by 2030. *Lancet.* 2021;397:2385-2438.
76. Patel T, Baydoun H, Patel NK, et al. Peripheral arterial disease in women: the gender effect. *Cardiovasc Revascularization Med.* 2020;21(3):404-408.
77. Peteler R, Schmitz P, Loher M, Jansen P, Grifka J, Benditz A. Sex-Dependent Differences in Symptom-Related Disability Due to Lumbar Spinal Stenosis. *J Pain Res.* 2021;14:747-755.
78. de Sousa ASA, Correia MA, Farah BQ, et al. Barriers and Levels of Physical Activity in Symptomatic Peripheral Artery. *J Aging Phys Act.* 2019;27(5):719-724.
79. Marzolini S, Balitsky A, Jagroop D, et al. Factors Affecting Attendance at an Adapted Cardiac Rehabilitation Exercise Program for Individuals with Mobility Deficits Poststroke. *J Stroke Cerebrovasc Dis.* 2016;25(1):87-94.

80. Pesah E, Turk-Adawi K, Supervia M, et al. Cardiac rehabilitation delivery in low/middle-income countries. *Heart*. 2019;105(23):1806-1812.
81. Grace SL, Turk-Adawi KI, Contractor A, et al. Cardiac rehabilitation delivery model for low-resource settings. *Heart*. 2016;102(18):1449-1455.
82. Gender Equality by Country 2022. <https://worldpopulationreview.com/country-rankings/gender-equality-by-country>. Accessed February 27, 2022.
83. Borg S, Öberg B, Leosdottir M, Lindolm D, Nilsson L, Bäck M. Factors associated with non-Attendance at exercise-based cardiac rehabilitation. *BMC Sports Sci Med Rehabil*. 2019;11(1):1-10.
84. Pezzulo C, Nilsen K, Carioli A, et al. Geographical distribution of fertility rates in 70 low-income, lower-middle-income, and upper-middle-income countries, 2010–16: a subnational analysis of cross-sectional surveys. *Lancet Glob Heal*. 2021;9(6):e802-e812.
85. García-Moreno C, Pallitto C, Devries K, et al. *Global and Regional Estimates of Violence against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-Partner Sexual Violence.*; 2013.
<https://apps.who.int/iris/bitstream/handle/10665/85239/?sequence=1>. Accessed February 27, 2022.
86. Sharif R. An Exploration of the Cardiac Rehabilitation Needs of Pakistani Heart Failure (HF) Patients and their Family Caregivers-A Qualitative Study. *PhD Diss*. 2020;Birmingham(City):University. [http://www.open-access.bcu.ac.uk/12133/1/RS PHD THESIS 2020.pdf](http://www.open-access.bcu.ac.uk/12133/1/RS%20PHD%20THESIS%202020.pdf). Accessed February 27, 2022.
87. Coura JR, Vias PA. Chagas disease: a new worldwide challenge. *Nature*. 2010;465(7301):S6-S7.

88. Tibazarwa KB, Volmink JA, Mayosi BM. Incidence of acute rheumatic fever in the world: a systematic review of population-based studies. *Heart*. 2008;94(12):1534-1540.
89. James SL, Lucchesi LR, Bisignano C, et al. Morbidity and mortality from road injuries: results from the Global Burden of Disease Study 2017. *Inj Prev*. 2020;26(Suppl 2):i46-i56.
90. Tainio M, Jovanovic Andersen Z, Nieuwenhuijsen MJ, et al. Air pollution, physical activity and health: A mapping review of the evidence. *Environ Int*. 2021;147(Feb):105954.
91. Chaves G, Turk-Adawi K, Supervia M, et al. Cardiac Rehabilitation Dose Around the World: Variation and Correlates. *Circ Cardiovasc Qual Outcomes*. 2020;13(1):e005453.
92. Graetz N, Woyczynski L, Wilson KF, et al. Mapping disparities in education across low- and middle-income countries. *Nature*. 2019;577:235-238.
93. Mascayano F, Armijo JE, Yang LH. Addressing Stigma Relating to Mental Illness in Low- and Middle-Income Countries. *Front Psychiatry*. 2015;6:38.
94. Carney RM, Freedland KE. Depression and coronary heart disease. *Nat Rev Cardiol*. 2017;14(3):145-155.
95. Sawan MA, Calhoun AE, Fatade YA, Wenger NK. Cardiac rehabilitation in women, challenges and opportunities. *Prog Cardiovasc Dis*. February 2022:S0033-0620(22)00014-7.
96. Kentner AC, Grace SL. Between mind and heart: Sex-based cognitive bias in cardiovascular disease treatment. *Front Neuroendocrinol*. 2017;45:18-24.
97. Tsui CK-Y, Shanmugasegaram S, Jamnik V, Wu G, Grace SL. Variation in Patient Perceptions of Healthcare Provider Endorsement of Cardiac Rehabilitation. *J Cardiopulm*

Rehabil Prev. 2012;32(4):192-197.

98. Keteyian SJ, Grimshaw C, Brawner CA, et al. A Comparison of Exercise Intensity in Hybrid Versus Standard Phase Two Cardiac Rehabilitation. *J Cardiopulm Rehabil Prev.* 2021;41(1):19-22.
99. Khadanga S, Gaalema DE, Savage P, Ades PA. Underutilization of Cardiac Rehabilitation in Women: BARRIERS and SOLUTIONS. *J Cardiopulm Rehabil Prev.* 2021;41(4):207-213.

Supplemental Table S1: Initial Recommendations with Delphi Ratings and Panel Decisions

	Recommendations	Include? n (% yes)	Potential Positive Impact *	Feasibility of Implementation *	Panel Decision
	<u>Women's Referral to CR</u>				
1	To facilitate referral of all CR-indicated women and reduce sex/gender bias, CR programs should work with referral sources to institute systematic referral	19 (100.0)	6.6±0.7	5.5±1.3	include
2	CR programs should educate providers at the referral sources regarding the importance of encouraging women's attendance at the bedside, and tailoring that discussion to women's more-common barriers and preferences	19 (100.0)	6.7±0.5	5.7 ±1.0	include
	<u>CR Setting</u>				
3	Women should be provided the choice of a supervised or unsupervised/home-based setting where safety is not an issue and there are no concerns about depression.	16 (94.1)	6.2±1.1	4.9±1.3	include
4	CR context should be optimized to meet women's preferences with regard to: privacy (e.g., changeroom facilities, weighing), crowding, rushing	16 (88.9)	5.6±1.5	5.4±1.3	include
5	Where possible, female providers should deliver CR care to female patients	12 (66.7)	4.8±2.0	4.7±2.1	Revise substantively
6	Where unsupervised CR is delivered one-on-one, providers should attempt to tailor to women's needs and preferences, as outlined in the delivery section below.	17 (94.4)	6.2±1.1	6.1±1.1	include
	<u>Women-Focused CR Delivery</u>				
7	As women are the most populous under-represented group in CR, programs should offer some form of tailoring for women where possible. At the least a synchronous virtual session should be offered.	16 (88.9)	6.2±1.5	5.8±1.4	include
8	Women should be offered as much choice as possible in session timing	16 (88.9)	6.4±1.1	4.9±1.4	Include
9	Care should be delivered in a patient-centered manner, specific to women.	18 (100.0)	6.4±0.9	5.8±1.3	when discussing changes

					to recommendation 5, it was decided to exclude this related recommendation
10	Women's comorbidities and gender-related symptoms should be considered in developing their individual treatment plan, including mental health and psychosocial issues, menopausal status, cancer history, and concerns about urinary incontinence, falls risk / osteoporosis, as well as autoimmune conditions / MSK in relation to exercise.	18 (100.0)	6.5±0.8	6.0±1.2	include
11	Programs should endeavour to provide preferred forms of aerobic exercise for women (e.g., walking not on a treadmill, swimming/aquabics, dance, aerobics/zumba). If this is not possible, individually-tailored exercise prescriptions must take musculoskeletal issues and exercise history into consideration (i.e., pain and fatigue), and/or other forms of exercise preferred by women should be made available in addition to traditional treadmill / cycle ergometers (e.g., yoga).	18 (100.0)	6.7±0.7	5.3±1.6	Include , but was broken into 2 recommendations
12	The psychosocial needs of women should be assessed and addressed in an evidence-based manner (e.g., social support, relationship health, depression, anxiety, stress, socioeconomic issues, informal caregiving activities). Where issues are identified, re-assessment should be undertaken, and communication be made to the woman's primary care provider to ensure on-going monitoring and follow-up.	18 (100.0)	6.6±0.7	6.0±1.1	include
13	if it cannot be delivered directly, women should be directed to education resources on	14 (77.8)	6.1±1.4	6.1±1.3	include

	matters specific to women and cardiovascular diseases				
14	Women should be offered a means of continued support post-program.	16 (88.9)	6.4±0.9	4.8±2.0	revise substantially

CR, cardiovascular rehabilitation; MSK, musculoskeletal.

*mean and standard deviation of rating on scale from 1 to 7, with higher scores being more positive (e.g., major impact or highly feasible)

Supplemental Appendix S1



International Council of
Cardiovascular Prevention
and Rehabilitation (ICCP)

Appendix 1: Women-Focused Cardiovascular Rehabilitation Implementation Tools

Systematic Referral with Bedside Encouragement of Women Inpatients

Training in implementing: <https://takeheart.ahrq.gov/>

Resources to support, and provider talking points tailored to women:

https://sgrace.info.yorku.ca/files/2021/11/MillionHearts_CR-referral-scripts-w-tools_MDAPPs-other_women_clean.pdf?x38148

Exercise Sessions

Recorded women-focused exercise sessions in English, by type (e.g., dance, yoga, resistance):

<https://www.healthuniversity.ca/EN/CardiacCollege/Pages/Women-Learn-Online.aspx>

Patient Education

Recorded evidence-based women-focused education lectures in English, by topic (includes about heart diseases, medications, diet, psychosocial well-being etc.):

<https://www.healthuniversity.ca/EN/CardiacCollege/Pages/Women-Learn-Online.aspx>

Online sources of information on women and CVD created for patients and evidence-based:

- Go Red for Women <https://www.goredforwomen.org/> (English and Spanish)
- Heart Foundation of Australia <https://www.heartfoundation.org.au/Conditions/heart-conditions-in-women>
- Centers for Disease Control USA <https://www.cdc.gov/heartdisease/women.htm>
- Heart and Stroke Foundation of Canada <https://www.heartandstroke.ca/heart-disease/what-is-heart-disease/types-of-heart-disease/women-and-heart-disease> (English, French)
- Office of Women's Health US <https://www.womenshealth.gov/heart-disease-and-stroke/heart-disease/heart-disease-resources>
- CardioSmart US <https://www.cardiosmart.org/topics/women-and-heart-disease>

Support Groups

- US Women's Heart Foundation <https://www.womenheart.org/>
- Canadian Women's Peer Support Heart Hub <https://cwhhc.ottawaheart.ca/national-alliance/projects-and-initiatives/canadian-womens-peer-support-heart-hub>