## Cardiac Rehabilitation Enrollment/Adherence Strategy

**Incorporating Registered Dietitian Nutritionists into Cardiac Rehabilitation Programs**

*Questions should be directed to: aacvpr@aacvpr.org*

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<td><strong>Definition/Description</strong></td>
<td><em>Nutrition Strategy</em> - Establish an approach to incorporating dietitians into CR programs to increase nutrition-related knowledge and promote healthful dietary changes and nutritional adherence.</td>
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| **Key Terms/Abbreviations** | AND = Academy of Nutrition and Dietetics  
CR = Cardiac Rehabilitation  
RDN = Registered Dietitian Nutritionist |
| **Background and Purpose** | • Dietary intake habits impact blood pressure, cholesterol levels, triglyceride levels, blood glucose control, weight, and cardiovascular disease risk.\(^1,2\) Diet modification is an important lifestyle intervention in the CR setting and nutritional counseling is a recommended program component; however, the level of implementation of nutrition services is not consistent across CR programs.\(^3,4\)  
• RDNs are experts in providing medical nutrition therapy, teaching clients about therapeutic diets tailored to their needs and preferences, and providing behavior-change counseling related to diet and lifestyle.  
• CR programs are not required to include a dietitian as part of the team of healthcare professionals. Therefore, many CR programs do not currently have a dietitian, making it necessary for other healthcare professionals such as nurses and exercise physiologists to provide nutrition assessment (or screening) and education in addition to their other roles and responsibilities.  
• AACVPR recommends that CR programs offer an RDN’s services to participants who are assessed as being nutritionally at-risk and require guidance that extends beyond general nutrition. Patients who participate in CR often display nutrition risk factors and struggle with implementation and maintenance of dietary changes. If an RDN’s services are not included within a program, offering these specialized services can pose a challenge.  
• This turnkey strategy provides ways to assess local resources that are available to your program and steps for getting an RDN involved in your program. |
| **Relevant Metric** | • Programs that do not currently have an RDN may want to consider logging and tracking the number of patients who admit to CR who are assessed or screened as being nutritionally at-risk. This may involve the |
| Process Description/Processes Impacted | use of screening tools such as NutraScreen by VIOCARE®, A New Leaf Dietary Risk Assessment by Center TRT at UNC Chapel Hill, or other tools currently utilized by the program. This metric may be used to demonstrate that there is a perceived need for a dietitian’s services.  
• Programs may also wish to examine pre- and post-program data on change in weight, waist circumference, glycemic control, or other heavily nutrition-related outcomes which an RDN’s services may help improve.  
|  | • The program should decide whether or not it will bill insurance for the RDN’s services (see the Cost Concerns section below). Budget considerations such as funds available for hourly/salary costs should be considered when determining the type and breadth of nutrition services to be provided.  
|  | • Work with your program’s staff who are currently providing nutrition screening, assessment and education to identify needs and areas for improvement. For example, is your program:  
|  | 1) Utilizing a validated dietary assessment tool to characterize the diet quality of incoming participants?  
|  | 2) Tracking pre- to post-program changes in diet quality?  
|  | 3) Providing group nutrition education classes?  
|  | 4) Providing one-on-one access to an RDN for participants who are screened at high nutrition risk?  
|  | • Consider connecting with other programs through AACVPR or your state’s affiliate chapter to identify which programs are currently providing RDN services and to benchmark your planned process and product against their programs.  
|  | • When hiring, plan to post the job position to the Academy of Nutrition and Dietetics website at [www.eatright.org](http://www.eatright.org) as well as [www.nutritionjobs.com](http://www.nutritionjobs.com) as these are sites that RDNs frequently utilize when performing job searches.  
|  | • Nutrition services can be provided in a variety of formats: 1) One-on-one nutrition assessment and nutrition counseling visit(s) (i.e. initial assessment and one or more follow-up visits), 2) group education sessions, 3) a combination of these approaches.  
|  | • Be prepared to meet office and/or group teaching space requirements depending on the services you would like to see offered. Initial nutrition assessments are best performed in an area where the RDN can sit down with the participant privately and work with them for at least 30 – 60 minutes. Follow-up visits may be performed “on the floor” while the participant exercises, (i.e. on a NuStep machine or treadmill).  
|  | • If the RDN does not already have access to nutrition education materials
through the CR program’s housing health system, your program should strongly consider providing access to and continuing education opportunities with:

3. AACVPR and your state’s affiliate chapter
4. Of note, membership is not required for access to nutrition-related materials that are available through:
   - The Academy of Nutrition and Dietetics website: [www.eatright.org](http://www.eatright.org)
   - The American Heart Association: [https://healthyforgood.heart.org/](https://healthyforgood.heart.org/)

   - Consider reaching out to local universities and dietetic internships to explore ways in which dietetic students and interns may be involved in providing nutrition services in your program. Dietetic interns are required to complete clinical, outpatient, and elective rotations within their internship and can be supervised by non-RDN health professionals, making them a potential valuable (but limited) resource. These populations may be valuable in providing group education and/or preparing educational materials if your program has limited funds for nutrition services. It is imperative that nutrition students and interns have completed relevant coursework and experiential learning prior to providing education to CR participants. For example, upperclassmen undergraduate students and graduate-level nutrition students who have completed courses in nutrition assessment and medical nutrition therapy; and, dietetic interns who have completed inpatient and/or outpatient cardiac, diabetes, and weight-management rotations will likely possess the necessary knowledge and skills to provide evidence-based education. Supervision by an RDN and/or a member of the CR staff is requisite. (For example, an RDN may prepare presentations and select accompanying educational handouts and recipes which they review with the student or intern, while the student or intern then presents this material to CR participants in a group education setting.)

**Key People/Departments to Engage**

- Champion: The director of the CR program is in an ideal position to serve as a champion for this process.
- Support: The support of the Medical Director, multidisciplinary CR team, and, if applicable, the housing health system is valuable.
- Administration: The administration of the housing health system should
be aware of the value of providing multidisciplinary services to better serve participants and improve outcomes.

- If there is/are currently one or more RDNs within the housing health system, they should be approached as they may be (an) ideal candidate/s to serve as the CR RDN.

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<th>Needed Data Sources</th>
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<td>• Examining pre- and post-program measures directly related to nutrition, such as nutrition assessment scores, weight change, change in waist circumference, and glycemic control may be useful in supporting the value of providing an RDN’s services.</td>
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<td>• Individual nutrition assessment and group nutrition education sessions can be billed under the CPT code 93797 (using it as an education code) if the session is: 1) paired with an exercise component and 2) the participant’s total duration of treatment is greater than 90 minutes. If nutrition services are not billed for, net nutrition-related expenses can vary widely based on the extent of the services provided (i.e. hourly/salary costs). Programs may wish to consider group education options if they are not billing insurance for the RDN’s services; or, may wish to limit the number of individual sessions the RDN provides for each client.</td>
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<td>• Utilizing nutrition students and dietetic interns may be a cost-effective way to provide general nutrition education to participants while relieving staff teaching burden. As was noted above, it is imperative that nutrition students and interns have completed relevant coursework and experiential learning prior to providing education to CR participants, and that they receive adequate supervision from an RDN or another member of the CR staff.</td>
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<td>• Additional costs may include continuing education costs for the RDN, nutrition education materials, food costs if food demonstrations are provided, space costs if an office area is to be provided (the office may be shared with other part-time CR staff working opposite schedules to reduce costs), and any costs associated with electronic charting needs for the RDN.</td>
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<td>• Timeline for initial implementation of RDN services within a program should be similar to that for any newly-created, new-hire position. If the RDN does not have access to nutrition assessment and charting materials/systems and individual and group class materials, the process can be expedited by putting those systems in place prior to during hiring and allowing additional time after initial hire for finalization of these items.</td>
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3) Core Components of Cardiac Rehabilitation/Secondary Prevention Programs: 2007 Update. A Scientific Statement From the American Heart Association Exercise, Cardiac Rehabilitation, and Prevention Committee, the Council on Clinical Cardiology; the Councils on Cardiovascular Nursing, Epidemiology and Prevention, and Nutrition, Physical Activity, and Metabolism; and the American Association of Cardiovascular and Pulmonary Rehabilitation. Balady G., Williams M., Ades P., Bittner V., Comoss P., Foody J., Franklin B., Sanderson B. and Southard D. *Circulation*. 2007. 115:2675-2682. DOI: [https://doi.org/10.1161/CIRCULATIONAHA.106.180945](https://doi.org/10.1161/CIRCULATIONAHA.106.180945)  