

The mission of the MACVPR is to promote the practice of high standards of care in cardiovascular and pulmonary rehabilitation in Massachusetts

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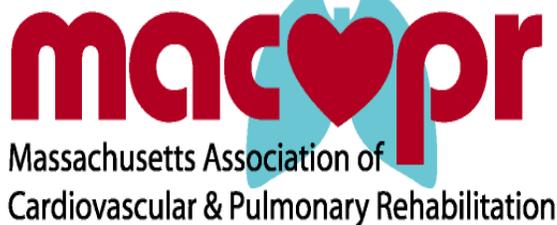
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Ann Stone

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of Cardiovascular and
Pulmonary Rehabilitation**



News

Winter 2015

President's Message

I hope this update finds you all staying ahead of the unpredictable and difficult winter weather that has virtually turned our celebratory "Heart Month" into a "Snow Month". As was my experience, I can imagine that some of your planned program activities may have been postponed or cancelled due to the weather. With the 2015 "snow month", it makes me want to think about planning a few spring activities to extend our Heart Month Awareness campaign ideas. Let me know how you all were able to celebrate at your facility with your staff and patients.

Starting off our new fiscal year for MACVPR, as well as beginning my second year in this leadership role for our organization, I wanted to update you on some of the exciting ideas and offerings that the Executive Committee members have been working on for our membership.

CCRP:

On April 30th, we will be hosting as an AACVPR Regional site, the CCRP exam for any qualified cardiac rehab professional who is interested in taking their current practice up to the next level. I encourage any of you who would like to consider taking advantage of this great opportunity for professional certification in your specialized field, in our local regional area. Having had the experience of taking the CCRP exam last Fall in Denver, I can recommend that the resources that are available through the AACVPR were very helpful as part of my preparatory process. As of today, we have at least 15 of our colleagues preparing to take the exam at the ACS location in Framingham. That is a great tribute to the commitment and dedication to enhancing our current practice.

AACVPR Joint Affiliate:

Over the last several years, we have seen a decline in our individual MACVPR membership numbers. Many of our colleagues have joined the AACVPR for several valid reasons. For many of them, holding two separate memberships may not be possible or desirable.

Therefore we will need to consider the joint affiliate option with the AACVPR which would allow all of our colleagues an opportunity to hold both the AACVPR and MACVPR membership for one annual membership fee (which is a reduced fee from current AACVPR rate of \$265 to \$210). We also feel that this joint affiliate option would enable more of our colleagues in both CR and PR to participate more fully on a state level. As part of our Executive Committee discussions, this was an identified need for our organization. We plan to make a final decision on this option this coming Spring. Please look for a mailing that would provide you with more details and a response card that you can complete and return to Ann Stone, our administrative assistant.

DOTH:

As I complete this address, I am preparing to attend the annual DOTH in Washington DC next week with several of our MACVPR colleagues. Thanks to all of you who took the few moments to sign the letter that I will bring to our senatorial meetings in support of the most recent legislative issues around physician supervision utilizing PA's and NP's in this role. We are very hopeful that this years meetings will make the difference with the passing of this much needed legislation.

Hope to see many of you are at our next educational meeting in May. We are planning to respond to your suggestions for making the meeting more interactive and helpful to your current practice.

I look forward to your continued feedback so that the Executive Committee can better meet your needs.

As always, looking for more of you to get involved in the organization and please reach out to any of our EC members to learn more about the different roles that are available to you.

Best regards and hoping for an early spring,

Karen LaFond, MSN RN

President MACVPR

karen_lafond@sshosp.org

MACVPR

Program Directory

Please register your programs, both cardiac and pulmonary, on the newly updated Program Directory on the MACVPR website. There is a nominal charge of \$25 per year, per program.

This is an excellent way to “advertise” your program to increase referrals. Many of the Boston hospitals, in particular, utilize this to make referrals to community hospitals.

To register, go to macvpr.org and click on Program Directory then submit a listing

Listings effective December 1, 2014 thru November 30, 2015

MACVPR does not accept responsibility for the accuracy of the information produced herein. The statements and opinions contained in the articles of the MACVPR Newsletter are solely those of the individual authors and contributors and not of MACVPR. We do encourage comments, articles, and other contributions while reserving the right to reject or edit the material. The articles in the newsletter are for readers to use as they deem necessary in their programs of clinical practice and are not necessarily standards of care by MACVPR.

Letter From the Editor

“No matter how much falls on us, we keep plowing ahead. That's the only way to keep the roads clear.”

— Greg Kincaid

How appropriate this quote is to life in general but also to the snow filled life we in the Boston area are dealing with! I hope you are all surviving this extreme weather without too much stress. As we teach our patients, we can't change the stressors, we can only change how we **react** to the stress. Hoping you all are using your stress management techniques.

Inside this edition you will find numerous informative articles:

Pam Ressler has given us an informative article on Resilience. How appropriate for all of us who are trying to cope with this weather.

Kathryn Seamans, RN, BSNc and Deborah Sullivan, MS, APRN contributed an interesting EKG Challenge article.

Holly Brassett MS, RD, LDN, has contributed another article in her column “**Tidbits From the Dietitian**” This time she discusses **CHOCOLATE**. She is happy to take requests for article topics that would be helpful to your programs.

We also have another contribution to our **Student Corner**, where we are asking students to share their experiences i.e. in their internships and even job search etc. or research material that they have written. This time we have a well written article on High Intensity Interval Training

We have a contribution from Ginny Dow, RN, BSN, BC for our Tales From the Trenches column on marketing your CHF programs.

We also have our usual President's Address, committee reports and summaries of our January Meeting.

I am always looking for more ideas and input to the newsletter. I urge each of you to get more involved and share your time and talents. It is a great experience.

Feel free to email me at macdonald23@beld.net with your ideas or contributions. Thanks!

Lynne MacDonald, PT

Beth Israel Deaconess Hospital-Milton Cardiac Rehab

MACVPR Newsletter Editor

Reimbursement Update



Pulmonary Rehabilitation:

There has been a lot of discussion over reimbursement issues for pulmonary rehabilitation. Hopefully all programs are continuing to use the *Pulmonary Rehabilitation Tool Kit: Guidance to Calculating Appropriate Charges for G0424* to provide data to ensure that hospitals carefully consider all the services, supplies and equipment that are integral to the provision of pulmonary rehabilitation services encompassed in G0424 (Bundled code for COPD patients). Although reimbursement rates for this code have increased by 20% (as nicely summarized in the Fall newsletter) it is hopeful that by continuing to use the tool kit hospitals will have the information to establish the most appropriate charges reflective of that scope of services.

Day on the Hill (DOTH) March 3-4, 2015 in Washington DC provides constituents an opportunity to meet with their state legislators. The goal is to address the issue of supervision of Cardiac and Pulmonary Rehabilitation service. U.S. Senate bill, S.488, is intended to amend title XVIII (Medicare) of the Social Security Act to allow physician assistants, nurse practitioners, and clinical nurse specialists (Non physician providers, NPP) to supervise cardiac, intensive cardiac, and pulmonary rehabilitation programs. This change would not alter the requirement for medical direction of these programs – it would simply remove the requirement for a physician to be immediately available and accessible at all times when services are being furnished under these programs.

Pertinent reimbursement updates were posted in the Fall 2014 MACVPR Newsletter and I would encourage you to review these essential points regarding Heart Failure and Cardiac Rehabilitation, CMS proposed Hospital Outpatient Prospective Payment Rates for 2015, KX Modifiers and Hospital Readmission Reduction Programs. **You can access the Reimbursement Update on page 3 of the Fall 2014 Newsletter under archived newsletters on the website.**

Please feel free to submit questions, innovative programs or share updates on reimbursement issues that you would like to see highlighted in this section of our newsletter.

Respectfully submitted:

Deborah Sullivan, MS, APRN-BC

Immediate Past President

**SAVE THE
DATE**

**MACVPR General Meeting
May 21, 2015 9:00-12:30 AM**

**American Cancer Society Building
30 Speen Street, Framingham, MA**

**The Education Committee is working hard to
develop another informative meeting!**

Student Corner



Benefits of High Intensity Interval Training on Heart Disease Patients By Jacqueline Flaherty · Fitchburg State University

Introduction

Continuous aerobic exercise training has in the past, been a favored form of treatment to heart disease (HD) patients (Weston, Wisloff & Coombes, 2014). Recent studies have found that high intensity interval training (HIIT) may be more beneficial to HD patients than traditionally used continuous aerobic training (Amundsen, Rognmo, Hatlen-Rebhan, & Slørdahl, 2008). Although the name 'high intensity' may sound intimidating for patients with cardiac issues and some patients may not be cleared to participate due to the severity of their conditions, HIIT is capable of inducing physiological benefits superior to benefits seen in patients following continuous aerobic training programs.

HIIT Modalities

Continuous aerobic training has been commonly used to treat various forms of HD, which include but are not limited to coronary artery disease (CAD) cardiomyopathy, arrhythmia, and heart failure (HF). Aerobic training is known to have positive effects on the cardiovascular system including increases in maximal oxygen consumption ($VO_2\text{max}$). A review study by Weston et al., (2014), found that studies used maximal heart rate (HR) to prescribe exercise intensity for HIIT; using 85-95% maximal HR during high intensity bouts with patients' active recovery being between 50-75% of their maximal HR. Weston et al., (2014) also found that high intensity bouts were typically 4 minutes long followed by 3 minutes of active rest. High intensity and low intensity stages are typically repeated 3 or 4 times (Weston et al., 2014). According the American College of Sports Medicine (ACSM), moderate intensity exercise should be prescribed at 64-76% of a patient's maximal heart rate (HR) (Pescatello, 2014). The main focus in HIIT training is to stress the cardiovascular system in a timely and effort efficient way, while maintaining an intensity reasonable for HD patients. Many studies were able to compare workload between HIIT and continuous aerobic training by creating isocaloric training sessions (Weston et al., 2014). Weston et al. (2014) also concluded that HIIT required less time (38 minutes) than continuous aerobic training (46 minutes).

$VO_2\text{max}$ Improvements

$VO_2\text{max}$ has been known to improve following continuous aerobic and HIIT (Helgerud et al., 2011). $VO_2\text{max}$ is a measurement of the body's ability to deliver blood and to extract oxygen from blood; it is also a good indicator of cardiovascular health (Kemi & Wisloff, 2010). Studies have found that when compared with continuous aerobic training, HIIT elicits superior results regarding improvement of $VO_2\text{max}$ (Amundsen et al., 2008). Research done by Kemi and Wisloff (2010), found an increase in maximal oxygen uptake by 46% in patients with HF following a HIIT program; subjects of the same study participating in continuous aerobic exercise of an equivalent volume improved their $VO_2\text{max}$ by only 14%. Changes in $VO_2\text{max}$ may be dependent on the intensity and duration of training. For example, another study found improvements of VO_2

Benefits of High Intensity Interval Trainingcontinued

max following HIIT and continuous aerobic training to be 14% and 7.5% respectively (Moholdt et al., 2012). These results, along with various other studies, show the superiority of HIIT on VO_2 max, though the degree of effectiveness may vary greatly.

The study previously mentioned by Kemi and Wisloff (2010), specifically noted improvements in left ventricular dilation and mass, ejection fraction (EF), stroke volume (SV), systolic, and diastolic function in patients with HF who participated in HIIT. Noted physiological changes seen in HIIT subjects were not seen with patients participating in equivalent volumes of continuous aerobic training in this study.

Improvements in Cardiac Output

An improvement of VO_2 max directly indicates an improvement in cardiac output (CO). Cardiovascular disease is associated with decreased CO, which is associated with ventricular remodeling, decreased systolic function and decreased diastolic function (Gibala, Little, Macdonald & Hawley, 2012). Left ventricular wall remodeling is often seen in HD patients. A history of elevated BP in HD patients forces the myocardium to work harder, resulting in increased wall stiffness and thickening the myocardial walls (Gibala et al., 2012). These changes can cause decreases in SV and subsequently CO. A study by Wisloff et al. (2007) found that patients participating in HIIT experienced reversal of left ventricular wall remodeling, however no changes were noted in patients participating in continuous aerobic training of equivalent volume. Left ventricular ejection fraction was improved by 30% and SV by 17%, along with increases in ejection velocities and improved systolic function in those in the HIIT group. Diastolic function improvements included an increase in isovolumetric relaxation time by 22% (Wisloff et al., 2007). Increasing relaxation time helps to increase volume of preload, and in turn, contractility due to the Frank Starling mechanism (Heldal, Rootwelt, Sire, & Dale, 2000). This sequence of physiological adaptations results in increased CO. It is interesting and important to note that these specific improvements of cardiac function were only seen in patients who participated in HIIT.

Increased Ability to Extract and Utilize Oxygen

With improvements in VO_2 max, there is also an improved ability to extract oxygen. Mitochondrial density and capacity is suspected to increase with HIIT at a degree superior to continuous aerobic training (Hoshino, Yoshida, Kitaoka, Hatta, & Bonen, 2013). The changes in mitochondrial density following HIIT have been attributed to the level of exercise intensity being a stimulator of peroxisome-proliferator activated receptor γ coactivator, (PGC)-1 α , which is essential to mitochondrial biogenesis (Egan et al. 2010; Weston et al., 2014). Along with increasing the ability to utilize oxygen due to increases in mitochondrial function, increasing PGC-1 α also has positive effects on glucose uptake and age-related sarcopenia (Sandri et al. 2006). Although, age-related sarcopenia is not directly related to cardiovascular disease, it is indirectly related as it is partially responsible for oxygen utilization and overall health. To reiterate, these adaptations have only been noted in patients participating in HIIT when compared with continuous aerobic exercise, suggesting that increases in PGC-1 α are directly reliant on, and only stimulated by exercise of high intensity.

Improved Endothelial Function

The endothelium is a semipermeable barrier in the blood vessel wall responsible for mediating gas exchange, nutrient exchange, fluid balance, vascular tone and atherosclerosis (Smith, & Fernhall 2011). Studies have found superior improvements in endothelial function in patients following

Benefits of High Intensity Interval Trainingcontinued

HIIT compared with those participating in equivalent volumes of continuous aerobic exercise (Kemi, et al., 2005). It was suspected that HIIT would induce a level of shear stress that could be damaging to the endothelium of HD patients. This was suspected with reason since endothelial dysfunction contributes to HD, but research has shown that the short bouts of high intensity exercise will not induce significant shear stress (Guiraud et al., 2012).

Ratings of Difficulty of Exercise from Patients

Since most HD patients are older adults, it is important that the exercise prescribed to them is reasonable to their age, physical ability, and mental ability. The recent studies regarding HIIT have found excellent responses in patients following a HIIT program. Studies have found that patients who participate in HIIT find it more enjoyable than continuous exercise training (Weston et al., 2014). A study by Wisloff et al. (2007) asked patients to rate their level of effort on the Borg scale during exercise. HIIT patients and continuous aerobic training patients on average, rated their effort as 12 and 17, respectively. In the same study, patients' quality of life was measured using a questionnaire that has been deemed reliable in older populations. Both HIIT training and continuous aerobic training increased the quality of life of subjects, though the increase seen in HIIT subjects was to a greater degree. This finding led Wisloff et al. (2007) to the conclusion that higher intensity exercise leads to more physiological adaptations, and therefore the capacity and ability to function in everyday life with greater ease. Another study has found that efficiency and tolerance with exercise was higher in patients who participated in HIIT (Guiraud et al., 2012).

Safety Concerns

For many, safety is of concern for HD patients participating in HIIT. It has been noted that most HD patients can participate in HIIT without worrying about triggering cardiac events (Guiraud et al., 2012; Kemi & Wisloff. 2010). A review study found that high risk patients with stable angina were able to participate in HIIT; although studies did not include high risk patients whose conditions were erratic (Weston et al., 2014).

For other patients the relatively short duration spent participating in high intensity exercise is not long enough to cause damage to vessel walls due to shear stress (Guiraud et al., 2012). Other studies have found that high intensity exercise did not cause rhythm disturbances and there were no elevations in Troponin T, a biomarker of cardiac injury (Guiraud et al., 2012). Similar to continuous aerobic exercise prescription to HD patients, HIIT exercise prescriptions should be individualized dependent upon patient's history and current condition; communication with the patients' physicians should also be considered when prescribing HD patients HIIT programs (Weston et al., 2014).

Suggested Contraindications to HIIT

- ▶ Unstable angina pectoris
- ▶ Uncompensated heart failure
- ▶ Recent myocardial infarction (<4 weeks)
- ▶ Recent coronary artery bypass graft or percutaneous coronary intervention (<12 months)
- ▶ Heart disease that limits exercise (valvular, congenital, ischaemic and hypertrophic cardiomyopathy)
- ▶ Complex ventricular arrhythmias or heart block
- ▶ Severe chronic obstructive pulmonary, cerebrovascular disease or uncontrolled peripheral vascular disease
- ▶ Uncontrolled diabetes mellitus
- ▶ Hypertensive patients with blood pressure >180/110 (or uncontrolled)
- ▶ Severe neuropathy

Weston, K. S., Wisløff, U., & Coombes, J. S. (2014). High-intensity interval training in patients with lifestyle-induced cardiometabolic disease: a systematic review and meta-analysis. *British Journal Of Sports Medicine*, 48(16), 1227-1234.

Benefits of High Intensity Interval Trainingcontinued

Other Physiological Adaptations Not Discussed

In addition to improvements in VO_2 max, HIIT provokes other physiological adaptations. A review study by Weston et al. (2014) found that at the end of HIIT programs, systolic blood pressure and diastolic blood pressure were lowered by 12 and 6 mmHg, respectively. A review article by Kessler, Sisson, & Short (2012) concluded insulin sensitivity improvements were significant in HIIT patients. Labrunee et al. (2011) found that following HIIT and continuous aerobic training, there was a decrease in premature ventricular contractions, although this decrease was significantly higher following HIIT (as cited in Guiraud et al., 2012). Other studies found that resting HR may be significantly reduced through HIIT (Guiraud et al., 2012). Recent studies have found plasma concentrations of angiotensin and aldosterone have been decreased in HD patients following HIIT, which may ultimately help reduce risk of arrhythmia (Meyer et al., 2004). This study also concluded that HIIT reduced low-density lipoprotein and that there was no significant weight loss seen following HIIT.

Conclusion

Although continuous aerobic training has been an extremely effective form of treating and preventing HD, it may be reasonable to consider the utilization of HIIT with some HD patients. There are numerous studies that have come to the conclusion that HIIT is superior to continuous aerobic training (Helgerud et al., 2011; Amundsen et al., 2008; Kemi & Wisloff, 2010; Moholdt et al., 2012). It was noted that HIIT resulted in higher increases in VO_2 max when compared with continuous aerobic exercise, which in reality could be enough reason to introduce HIIT into the field of cardiac rehabilitation more universally (Amundsen et al., 2008). Studies have noted physiological adaptations seen in HD patients following HIIT including, including but not limited to, increased cardiac output, improved endothelial function, and ability to extract and utilize oxygen. (Kemi & Wisloff, 2010; Hoshino et al., 2013). Most studies find that continuous aerobic exercise is unable to put enough stress on the body to stimulate the physiological changes that are seen with high intensity exercise (Hoshino et al., 2013; Gibala et al., 2012). Patients have also found that HIIT is more enjoyable than continuous aerobic exercise (Weston et al., 2014; Wisloff et al. 2007). HIIT requires less time, and has been perceived by patients as less difficult, all while producing the most physiological adaptations to improve their conditions and overall health. Just like any other exercise prescription given to high-risk patients, prescriptions should be made carefully and individually. As long as patients follow directions as given, concern for cardiac events during exercise should not be higher than it is with continuous exercise. HIIT provides HD patients with a superior alternative to traditional continuous aerobic exercise training and provides a more enjoyable opportunity to increase cardiovascular function and overall health.

References are too lengthy so have been made available on the website in the newsletter section.

Please
remember
to renew
your
member-
ship

Membership News

Welcome New Members

Andrea Tosi, RD
Erin Harris, RT
Susan Bernas, RN
Arlene Gaw, RN

Berkshire Medical Center
South Shore Hospital
Metrowest Medical Center
Miriam Hospital/Lifespan

If you are joining or renewing please be sure to print an application from our website or from the last page of this newsletter. Please mail your application with check or money order to:

Melessa Fox
MACVPR Membership Chair
11 Frederick B Douglas Road
North Falmouth MA 02556

Look forward to seeing you at our May meeting!

Melessa Fox, RN, BSN
Falmouth Hospital Cardiac Rehab
MACVPR Membership Chair

Treasurer's Report

Directors and Officers Liability Insurance has been paid \$559.

Taxes have been filed and accountant has been paid \$100.

I have also been working on establishing DOR access, on Web File for business.

As a reminder PAYPAL is available for all payments to MACVPR.

Current balances as of February 17, 2015 :

Citizen's Bank checking:	\$12,497.32
Citizen's Bank Money Market fund	<u>\$ 2634.36</u>
Total	\$15,131.68



Donna Hawk, RRT, AE-C
Baystate Medical Center Pulmonary Rehab
MACVPR Treasurer

MACVPR Forum Update

The MACVPR Forum is currently under construction as Ann diligently continues updating our website to provide greater ease of access to update and change the website that Ann can do (which saves the MACVPR and YOU a great deal of money!) We will notify you when the forum is up and functioning.



AACVPR Updates

Webcast Date & Time	Webcast Title	Webcast Pre-sender(s)	Educational Track(s)	Registration Status
March 17, 2015 12pm-1pm CT 	Assessing Your Registry Data for Quality and Performance	Mark Vitcenda, MS, RCEP, FAACVPR	Cardiac and Pulmonary Rehabilitation	Registration Now Open!
April 30, 2015 12pm-1pm CT 	Fall Risk Assessment and Intervention for Cardiovascular and Pulmonary Rehabilitation	Kelly Madden, DPT, MSPT; Kristin Page, DPT	Cardiac and Pulmonary Rehabilitation	Registration Coming Soon
May 2015	Blood Pressure/Hypertension	TBD	Cardiac Rehabilitation	Registration Coming Soon
June 2015	Clinical Depression	TBD	Nutrition and Behavior Change	Registration Coming Soon

Day on the Hill

DOTH Advocacy Activities	Certification Preparation Workshop: CCRP Cardiac Core Competencies*
<p>Tuesday March 3, 2015 6:00-9:00 p.m. Washington Marriott Georgetown Hotel 1221 22nd St NW, Washington, DC 20037</p> <p>DOTH Preparatory Workshop and Dinner (Eligible for AACVPR or nursing continuing education credit)</p> <p>Wednesday March 4, 2015 Day on the Hill: Meet with your state representatives</p> <p>Those who register for Day on the Hill are invited to attend the Day on the Hill Preparatory Conference Call on Tuesday, February 24, 2015 at 1:00 p.m. EST.</p> <p>To attend this one-hour teleconference dial in to 888.430.5975 or 830.795.5906 at 1:00 p.m. EST on February 24.</p>	<p>Tuesday March 3, 2015 8:15am – 5:15pm Washington Marriott Georgetown Hotel 1221 22nd St NW, Washington, DC 20037</p> <p>Experts in the cardiac core components will present a full day workshop on high-impact topics for achieving competence in cardiac rehabilitation. Course faculty will review key areas of each of the cardiac core components covered by the CCRP exam.</p> <p>Supported by an educational grant from</p> 

Education Updates

JANUARY GENERAL MEETING

The January General Meeting was held Thursday January 29 at the American Cancer Society in Framingham following the first blizzard of 2015 dumping over two feet of snow in Boston and more in surrounding areas. Thirty members attended the three hour meeting which included an opening address from our president, Karen LaFond MSN, RN, and presentations titled *Pulmonary Hypertension Disease State* and *Overcoming Limitations of Traditional Cardiovascular Risk Assessment: the Value of Advanced Laboratory Testing*.

Rebecca Villandry, BSN, RN, Regional Nurse Specialist, Upper Northeast Medical Affairs, United Therapeutics delivered the first presentation beginning with an overview of the disease state and the remodeling of the small pulmonary vessels as well as the clinical presentation and classification of our cardiac and pulmonary patients with PAH. She provided an illustration of what happens to the right ventricle as the disease progresses and gave a non-promotional overview of the medications used in the treatment of PAH and the role of the clinician with patients enrolled in their programs on IV prostacyclin therapy. She provided attendees with a comprehensive Pulmonary Hypertension Pocket Guide as a quick reference resource.

Terry Thomas MSN, RN, Clinical Director of Population Health, Health Diagnostic Laboratory, Inc. and founding member of PCNA was snowbound after the storm and provided her presentation via the web. Terry presented an emerging individualized health management risk assessment composed of a comprehensive test menu of biomarkers for cardiovascular disease, diabetes, and related chronic diseases. She illustrated the limitations of traditional cardiovascular risk assessment compared with comprehensive biomarker testing as an opportunity to refine overall risk and management in our population of cardiac and pulmonary rehabilitation patients. Her discussion included the biology of cardio-metabolic disease as an inflammatory process and even after controlling for known risk factors in patients who would be considered low risk by conventional measures, there is a window of opportunity for early screening leading to lifestyle interventions that may delay or even halt disease progression in the future.

Following the speakers was a networking session on Joint National Affiliation, Certification/Recertification, Registry, and Professional Certification facilitated by Karen LaFond, MSN, RN / South Shore Hospital; Anne Marie Sadlowski, RN /Berkshire Medical Center; and Deborah Sullivan , MS, ANP-BC /Lahey Hospital and Medical Center.

This meeting offered 2.0 Synergy CERP Category A continuing education hours through AACN. Evaluations were paper post conference survey and fifteen were returned. There was a general response that both speakers were knowledgeable and topics were interesting and pertinent, and that the networking sessions were very helpful. Weakness included lateness of the first speaker and the absence /webinar issues of the second speaker. Thank you to Ann Stone for coordinating the webinar for our second speaker! Suggestions for further programs included: Exercise and PAH, Health Coaching Programs, Dietary Presentation referred to by speaker Terry Thomas, Lung Transplant, LVAD and Exercise Training, Resistance Training, and Core Exercise, and Staff Competencies.

Certification Preparation Workshop: CCRP Cardiac Core Competencies is available to both AACVPR members and nonmembers as a review of key areas of each of the cardiac core components covered by the CCRP exam. View online recording of audio and slides of each session. Available March 11, 2015. Includes 90 days of access from date of purchase and can be found at:

<http://www.aacvpr.org/EventsEducation/ProfessionalCertificationPreparationResources/tabid/992/Default.aspx>

Our next General Meeting is May 21, 2015 - Thursday – at the American Cancer Society Building 9:00am-12:30pm which is located next door to our previously held meetings at the American Heart Association. Please consider joining the education committee or submitting ideas for presentations or speakers to me at proudman5@aol.com.

Respectfully Submitted,
Deirdre Proudman MSN, RN-BC, CCRN
Education Committee Chair

Tales from the Trenches

Marketing Heart Failure in Cardiac Rehab: Sharing Emerson Hospital's Experience

The good news came Nov 22, 2013 that CMS covers a diagnosis of heart failure in cardiac rehab programs. This article is intended to share the efforts made in 2014 by the Emerson Cardiac Rehab Program to share, market, and inform the physicians, staff, patients and public about this news to begin the process of bringing these patients to the program.

1. First, we contacted the director of Marketing to assist with identifying marketing ideas and key players (cardiologists, hospitalists, medical staff, home care and care coordination departments).
2. We issued a press release, using a patient success story (patient who recently completed program) below is link to story (this process requires time with several steps, including consent for release of information and photos and interview patient and staff). http://www.lowellsun.com/news/ci_26443109/taking-exercise-heart
3. We adapted the AACVPR referral form (use our own hospital letterhead) to bring to below meetings.
4. Next, the program manager made appointments to be included on agenda to the key departments and teams: Care Coordination, Home Care, Hospitalists, Cardiology Services Meeting. A brief info on new heart failure CMS ruling and background on benefits to patients given along with the referral form.
5. Newsletters to hospital wide, medical staff and community were identified and the press release was announced and the community wide newsletter included a major article including a patient interview. Link to story: <http://www.emersonhospital.org/en/About/Publications.aspx> (this will open to Emerson Hospital, scroll down and select Fall 2014 issue.
6. Updated marketing rack brochures to include diagnosis of heart failure. We added heart failure to website page for cardiac rehab. Hospital lobby includes big screen TV kiosk advertising "Diagnosed with Heart Failure? Cardiac Rehab can help" call 978-287-3732
7. Attended hospital heart failure meetings (ad hoc committee developing in-patient education materials) and assisted with developing in patient education materials and video (cardiac rehab staff seen as expert resource on cardiac patient education).

In the end, the process has been successful but efforts have yielded a slow growth in this population (since this began, just 7 patients have joined in 2014 with the sole diagnosis of heart failure).

This is not unlike other new programs we have begun such as the metabolic syndrome program. We have found persistence, continued marketing and patient feedback about the successes they had in their program to their physicians all lead to eventual slow and steady growth. **DO NOT GIVE UP!**

Ginny Dow RN, BSN, BC

Manager Emerson Hospital Cardiac Rehab and Prevention Department



ON THE MOVE: Doug Pederson, 65, a retired nurse, holds Freya while doing yard work at his Westford home Thursday. He's keeping active, going on daily walks and bike rides, thanks to cardiac rehab after a heart attack. Emerson Hospital's Cardiac Rehabilitation Program helped him change his lifestyle. See a video at Lowell sun.com.

Tidbits From The Dietitian

By Holly Brassett MS, RD, LDN



Holly Brassett MS, RD, LDN
Outpatient Dietitian
Lahey Hospital and Medical
Center, Burlington MA

“...it is
far from
a health
food”

Is Chocolate Considered Healthy?

The holidays have passed and many of us are living up to our New Years resolutions of eating healthier and exercising more. Now that February is here we face another detour from our heart healthy diet to indulge in something that most folks find delicious and by some folks nutritious. What is this food one might ask? CHOCOLATE! Chocolate has come a long way over the years and recently has been quite the topic of discussion in the media as having cardiovascular benefits. These protective compounds in the cocoa bean are called flavinoids and they are thought to exhibit anti-oxidant-like properties to protect the plant from environmental toxins and damage. These flavinoids not only contribute to the bitter taste of the cocoa but may also help in lowering blood pressure, improve clotting and blood flow throughout the body. Most folks who consume chocolate (preferably dark chocolate) feel that they are receiving these heart healthy benefits while enjoying this guilty pleasure. Seems perfect right?

Well, we all know that there is no perfect food, and that includes chocolate. Most foods are processed and chocolate is not unique in this matter. The processing method involved in making the decadent chocolate that we so enjoy also removes some of the flavanols that are responsible for chocolate's health benefits. Some manufacturers are trying to find ways to keep the flavanols during the processing method but even if this were to happen consuming large amounts of chocolate should be avoided. Research is inconclusive as to how much chocolate is needed to provide cardiovascular benefits and the amount necessary to consume may be a bit much on the waistline. What do you think gives chocolate its smooth creamy texture? Our not so good friend cocoa butter, a saturated fat that consists of oleic, stearic and palmitic acid. Oleic acid is a monounsaturated fat which is more of a heart healthy fat but stearic and palmitic acids are saturated fats (the kind that can raise LDL cholesterol) and increase risk for heart disease. Stearic acid does not have much of an effect on cholesterol while palmitic acid can have a negative effect on LDL.

So, to answer the question that many folks will have is chocolate can be enjoyed in moderation but it is far from a "health food." When choosing to have this decadent treat, aim for >60% dark chocolate which has more cocoa solids and flavinoids than milk or white chocolate. If you are not a dark chocolate fan do not worry. I tell my patients to have a small piece (1 ounce= 2 hershey kisses) of the chocolate you enjoy and then put the rest away. If you are truly looking to add more flavinoids to your diet try it with fruits and vegetables. You can have more than an ounce a day and it may keep your cholesterol and weight at bay.

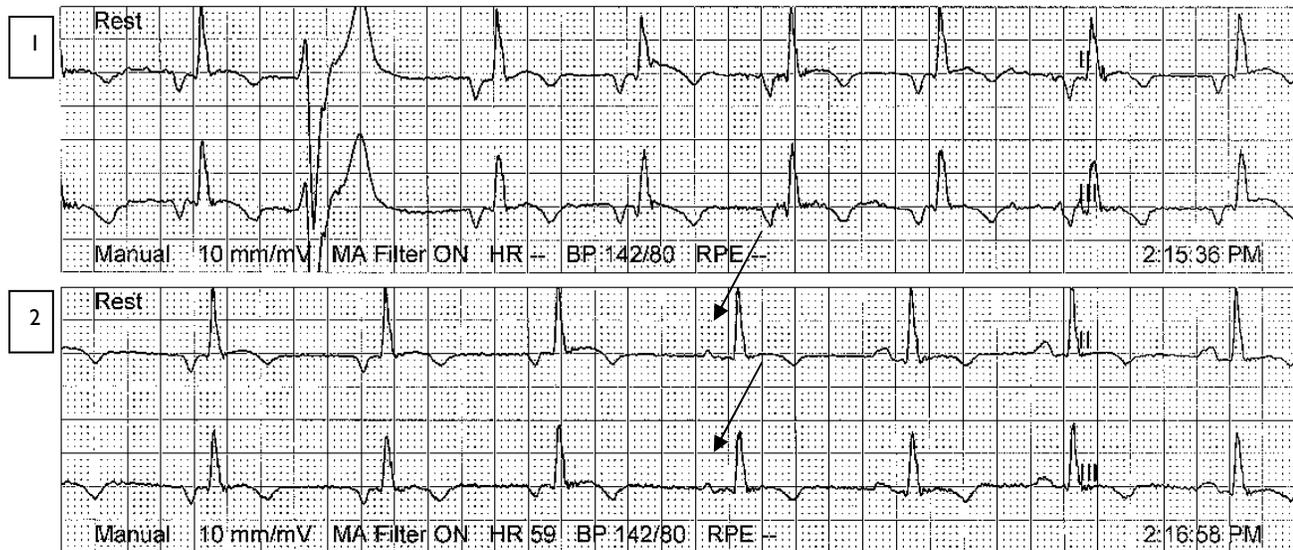


The Beat Goes On....EKG Challenge

Kathryn Seamans, RN, BSNc UMass Lowell and
Deborah Sullivan, MS, APRN Lahey Hospital and Medical Center

Mr. B is a 62 year old who is S/P STEMI (ST elevation myocardial infarction) with DES (drug eluting stent) to the right coronary artery as well as the proximal circumflex. His ejection fraction is 45%. He has a history significant for hypertension, dyslipidemia, pre-diabetes/glucose intolerance and tobacco abuse (currently smoking half a pack of cigarettes per day). His medications include aspirin, atorvastatin, clopidogrel, diovan, metoprolol tartate, nicotine patch. He has no symptoms on arrival, BP 142/80, O₂ saturation on room air is 97%. He reports that he is adherent with his medication routine. Today is his first cardiac rehabilitation session.

His monitor pattern reveals the following pattern:



- Your first action after your initial assessment and review of his monitor pattern (row 1) would be:
 - Evaluate lead placement
 - Administer atropine 0.5 mg IV
 - Call the MET team
 - Do nothing and proceed with orientation per program protocol
- After the first intervention (chosen above) you determine that the rhythm is _____:
 - Idioventricular rhythm
 - Third degree heart block
 - Junctional rhythm with retrograde P-waves
 - Ectopic atrial rhythm
 - Wandering atrial pacemaker
- You page the cardiologist covering the cardiac rehabilitation program for the day and while waiting for the return call you begin to discussing several self care strategies. What is your top priority?
 - Smoking and concurrent use of nicotine patch
 - Home blood pressure monitoring and sodium restriction
 - The importance of a healthy diet which is low in saturated and trans fat
 - Progressive strength training

Answers:

- The correct answer is (A) Evaluate for proper lead placement to rule out artifactual changes related to incorrect electrode or lead placement. (B) is incorrect because the patient is tolerating this rhythm, is hemodynamically stable and reports no symptom (C) is incorrect; the MET team is not needed because the patient is stable. (D) Is not an unreasonable choice given the tracing in row 2, the patient is stable and returns to a normal sinus rhythm. Reporting and documentation should occur per your program protocol.

Continued next page

2. The correct answer is D. This appears to be an ectopic atrial rhythm. The arrow is pointing to an atrial fusion beat and the pacemaker site changes as noted in the subsequent upright p-waves. The second beat occurring in this tracing is a PVC which is of little clinical significance at this time. (C) is incorrect but a junctional rhythm with retrograde P waves is a reasonable choice. The differentiating feature in this rhythm is the normal PR interval. A junctional rhythm with retrograde P waves normally has a PR interval that is short, usually 0.10 second or less. (A), (B), and (E) are incorrect.
3. The correct answer is A. Smoking and the concurrent use of a nicotine patch is contraindicated in the post MI patients and should be the top priority to discuss with this patient. Nicotine alone can increase blood pressure and heart rate which put a person at risk for a cardiovascular event. The risks increase greatly when a person smokes and uses a nicotine patch. You may want to refer this patient to a smoking cessation program or a behavioral medicine specialist because evidence supports counseling as an effective tobacco cessation strategy and adds to the effectiveness of tobacco cessation medications. Answer (B) and (C), are important topics to cover but not today's priority. (D) is incorrect because the initial focus of cardiac rehabilitation should be on assessing the patient's tolerance to cardiovascular exercise.

References

- <http://cardiac-research.com/reprints/094%20Rajaganeshan%20-%20Int%20%20Clin%20Pract%202008%20-%20Accuracy%20in%20ECG%20lead%20placement.pdf>
- <http://www.jems.com/article/patient-care/misleading-clinical-implicatio>
- <http://emedicine.medscape.com/article/155146-overview>
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American Heart Association Updates

Lifestyle Change and Walking Award-Tell us how you changed your heart!

The American Heart Association is seeking nominations for the 2015 Lifestyle Change Awards, which is sponsored by the CardioVascular Institute at Beth Israel Deaconess Medical Center. The awards recognize people who have made changes that have impacted their quality of life and improved their health: weight loss, lowered cholesterol, increased walking etc. No change is too big or too small and all ages are welcome!

Nominations will be accepted through **Friday, March 13** and winners will be recognized on National Walking Day, on April 1st at the BIDMC ceremony. There will be 3 awards given. One overall lifestyle change, a children's winner, and a walker award. People can either be nominated by a friend or loved one, or they can nominate themselves. The application is available online at www.heart.org/massachusetts.

Mark your calendars **National Walking Day** is **Wednesday, April 1, 2015**. This year's theme is every tie reminds us why. This American Heart Association annual event helps to promote physical activity and is a national call to action for Americans to adopt a healthy lifestyle.

Penny McGuire, MPH

Director Community Health Strategies

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Connections: Mind/Body/Spirit

By Pamela Katz Ressler, MS, RN, HN-BC



A regular column designed to help you better understand your patients' needs and promote self healing during rehabilitation and beyond...

“you don't need to be born resilient; these qualities can be cultivated and strengthened at anytime in your life.”

Cultivating Resilience

Resilience...“I am NOT what happened to me, I AM what I choose to become” (Carl Jung)

We all know that person...the one who has met with adversity and disappointment but somehow they are not only still surviving but thriving.

We also all know that brilliant leader, the one who has leapt tall buildings in a single bound but when adversity struck, the previously invincible leader crashed and burned to everyone's surprise.

So what's the difference between these individuals? Resilience.

Resilience can be defined as the capacity to recover quickly from difficult situations...the ability to bounce back from adversity.

As we care for patients who are living with chronic health challenges, their ability to cultivate resilience is often compromised. When under the stress of illness our ability to think abstractly and think outside the status quo is diminished. By encouraging our patients and clients to begin to cultivate qualities of resilience into their long-term recovery strategies, we will be supporting their holistic healing -- body, mind and spirit.

You may be surprised to learn that research in fields as diverse as medicine, nursing, business, leadership and education have shown that the most resilient people possess four distinct qualities. The qualities are not dependant on age, gender or health status. The good news is that you don't need to be born resilient; these qualities can be cultivated and strengthened at anytime in your life. Why do you want to be resilient? Resilient people are more productive, more effective, more engaged, and according to some studies even happier than those less resilient. It appears that the secret sauce of resilience is developing and supporting the following four qualities, or the 4 C's, as they have been described in literature on resiliency and stress hardiness.

1. Control -- This does not mean controlling external events or outcomes -- where many of us place our efforts, but shifting our attention and energy to an internal sense of control. This allows us to feel some authority over a situation instead of feeling a victim of circumstance.
2. Commitment -- Retaining a sense of curiosity and engagement with a situation, even if we are not sure how the situation will be resolved is essential to resiliency.
3. Challenge -- Resilient people view crises and adversity differently than many of us. They acknowledge the threat and difficulty but at the same time also acknowledge the potential for new learning or growth.
4. Connection -- Humans are pack animals and we thrive in environments of connection and communication with others. Resilient individuals do not isolate themselves in times of adversity but instead seek out connections for support.

Each of these 4 Cs of resilience leads to a place of strength, even in times of stress and crisis. A strength that is flexible and nimble, a strength that sustains us in places that we never expected to thrive.

Resilience...“We are NOT what happened to us...We ARE what we choose to become”

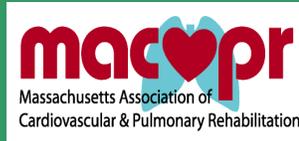
If you have any specific questions about cultivating resilience, please feel free to contact me. As always, I love comments and feedback from readers. What topics of mind/body/spirit would you be interested in exploring in future columns? Let me know at pressler@StressResources.com

Pamela Katz Ressler, MS, RN, HN-BC is the founder of Stress Resources (StressResources.com) located in Concord, MA. Stress Resources specializes in stress management, holistic healthcare education, and health communication for healthcare providers, organizations, and individuals. Pam is a frequent speaker to local, national, and international audiences on topics relating to stress management, mindfulness, resiliency strategies, therapeutic communication, patient advocacy through social media, and holistic healthcare. She is a faculty member at the Tufts University School of Medicine teaching courses in pain research, education and policy, as well as stress management and mindfulness for healthcare providers. Pam serves on the Consumer Health Council of the Massachusetts Health Quality Partners (MHQP) and on the board of directors of the Integrative Medicine Alliance.

PLEASE RENEW YOUR MEMBERSHIP

The following individual memberships have either expired or will expire before the next meeting in May. Please take a moment to renew now to avoid missing benefits such as announcements, updates and the "Members Only" section of the web site which includes the newsletter and on-line forum.

Lisa	Porazzo	10/1/2014
Carol Sue	Sanchez	10/1/2104
Regina	Stevenson	10/1/2014
Mary Ann	Riley	10/1/2014
Tracy	Wirtanen	10/1/2014
Paula	Downes Vogel	10/1/2014
Kara	Ciesielczyk	12/1/2014
Dennis	O'Brien	1/1/2015
Kate	Traynor	1/1/2015
Suzanne	O'Neil	1/1/2015
Cheryl	May	2/1/2015
Christine	Stella	2/1/2015
Diane	Koczat	4/1/2015
Sue	Molloy	4/1/2015
Peg	Neundorf	4/1/2015
Deborah	Sullivan	4/1/2015



_____ Date

Check# _____

Cash

Database

Intranet

Email

Receipt

MEMBERSHIP APPLICATION

Or

Download application from www.macvpr.org

Name (with Credentials): _____

Mailing Address you want the card sent :

Home/Work (Please circle)

Work #: _____

Home #: _____

E mail: _____

Profession: _____

Institution: _____

Cardiac Pulmonary

New or Renewing Membership

\$100 Two year membership (Begins on the first day of the month joined and ends two years from that date)

\$25 for a One Year student membership

(Students must be enrolled in a minimal of 12 credits per quarter and provide copy of schedule with membership application.)

How did you learn about the MACVPR?

Are you currently a member of the American Association of Cardiovascular and Pulmonary Rehab (AACVPR)?

Yes No

If you do not want your email and/or mailing address shared with the AACVPR please check here _____

Mail check or money order to:

MACVPR c/o Melessa Fox
11 Frederick B. Douglas Rd.
North Falmouth, MA 02556

Questions: email Melessa_capemda@gmail.com