As I reflect on the co-presidency over the past year I realize that we have made significant strides. In our efforts to improve the quality of patient care our well designed educational conferences have lead the way. We have provided networking opportunities among our peers as well as with like minded organizations (the AHA and Tobacco Free Massachusetts) that created an environment to share models of care and offer educational strategies to promote adherence with lifestyle change. We have prepared our newsletter, thanks to the efforts of our newsletter editor, to keep members informed about key issues related to the field of cardiac and pulmonary rehabilitation. Additionally, our members have proudly displayed their hours of literature reviews and original research in this year’s poster session to promote some of the best evidenced based practice within our fields. Lastly, the education committee was instrumental in securing high profile speakers for our general meetings and our New England Symposium. It’s been a good year!

Behind the scenes we have revamped our entire website leading to more convenient access and features such as online conference registration and poster submissions, enhanced communication for committee members, and an alternative to mailing in your checks with the utilization of PayPal. This was an endeavor well worth the wait! Another feature that is currently being rolled out is the availability of the newly revised MACVPR program directory. If you haven’t logged onto the website recently please do so and submit your program information. This is a great way to promote your program within the medical community as well as reach out to patients who may be looking for important resources for their recovery. We have additional sections on our website that are being developed and decisions are being made about whether to support older features, such as our forum (which like cardiac rehab has been vastly underutilized) or retire them. If you have ideas or website features that you would like to see added please let us know.

Legislation pertinent to cardiac and pulmonary rehab has been quiescent over the last few months but a major issue still on the docket is the utilization of non-physician practitioners (NPP) to meet the CMS direct physician supervision requirement. Be ready to contact your legislators when asked as this remains a key issue for programs especially our CAH. On another note, low reimbursement still challenges pulmonary rehabilitation programs and using the AACVPR pulmonary rehabilitation tool kit can help our national leaders collect data and help to make sure we are reimburse fairly for the services provided. There is still work to be done on many fronts.

Identifying leadership for our organization remains a top priority and I would like to ask you if you ever said “I could have done a better job!” If so than I would like to reach out to you to help us do a better job because you have leadership potential. Our executive committee is looking at ways to recruit, prepare and mentor individuals for the continued growth and success of MACVPR. We are at an important juncture for our organization as we consider a joint affiliation with AACVPR or remain an affiliate society. No matter which direction we choose as an organization we still need our members, like you, to become the strong leaders of the future. We will work together toward success.

Thank you for the opportunity to serve as your Co-Presidents.

Deborah Sullivan, MS, ANP-BC
Deborah.Sullivan@Lahey.org
Karen LaFond, MSN RN
karen_lafond@sshosp.org
I am once again proud to say we have another informative edition of MACVPR NEWS. I couldn’t do it without all of the well written articles and input from all of you! I would love to see more members get involved with either ideas or submissions.

Inside you will find:

Deirdre Proudman MSN,RN has contributed an interesting EKG Challenge article once again.

Holly Brassett MS,RD,LDN, has contributed another article in her column “Tidbits From the Dietitian” This time she discusses “How Fiber Will Benefit You’. 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 an article on Lyme Disease and the Heart.

We also have our usual committee reports and summaries of the informative presentations at our successful 2014 New England Symposium. Once again, thank you to our many sponsors who help keep our organization strong.

Please note the article about Esther Burchinal, our 2014 winner of the Distinguished Service Award. What a deserving choice!!! And most importantly, our tributes to Ginny Dow and Esther Burchinal as they step down form their positions on the EC at the end of this year. I am sure you join me in thanking them for all of their hard work and dedication.

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

MACVPR General Meeting
January 29, 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!

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.

SAVE THE DATE
Reimbursement Update

Being aware of reimbursement issues continues to be essential for our patients, programs, and organization. Several changes have occurred this year, including those noted below. Therefore, it is highly advised that you maintain continual communication between your billing officers and your department to optimize reimbursement.

Heart Failure and Cardiac Rehabilitation: On July 18, 2014 CMS posted the National Coverage Determination (NCD), including instructions, for HF patients entering CR. This final Medicare policy states that as of February 18, 2014 patients with the diagnosis of stable, chronic heart failure with an ejection fraction of 35% or less and New York Heart Association (NYHA) class II-IV symptoms, despite being on optimal heart failure therapy for at least 6 weeks, will qualify for CR coverage. Stable patients are defined as patients that have not had a recent (≤ 6 weeks) or planned (≤ 6 months) major CV hospitalization or procedure. CMS allows for some degree of interpretation of this eligibility criteria so that physicians and Medical Directors of CR programs are involved in determining “what constitutes a major CV hospitalization or procedure”. Note that the NCD implementation date was August 18, 2014. Therefore, all MACs must have completed all changes necessary so that the appropriate HF diagnoses (ICD - 9 codes) are not denied. If CR programs have received denials for services on or after Feb 18th, they are advised to resubmit the claim(s). AACVPR has noted that some CR programs using the ICD – 9 code 428.22 (chronic systolic heart failure) have received Medicare reimbursement. However, it is important to follow up with your MAC and billing department to identify the most appropriate code for each patient.

CMS Proposed Hospital Outpatient Prospective Payment Rates for 2015: On July 2, 2014, CMS posted the 2015 Proposed Hospital Outpatient Prospective Payment System (HOPPS) regulation for hospital outpatient CR and PR. The final regulation for CY 2015 is expected to be mid November. The CMS proposed payment rates for 2015 have increased slightly to $103.42 for CR codes 93798/93797 with co-payments of $20.69. These rates will vary based on geographical location due to labor cost adjustments. The PR rates for COPD increased by 20% to $49.75 for code GO424 with co-payments of $9.95. AACVPR notes that despite the increase from 2014 these costs still do not cover the costs of delivering 1 hour of PR. Respiratory services that refer to PR for non-COPD for the 15 minute increment codes GO237 and GO238 is also $49.75. For the un-timed group exercise therapy code, GO239, the proposed rate is $28.57 with a co-pay of $7.87. Note the code GO239 is now assigned to APC 450 while the other codes remain in APC 77. All CR programs are still advised to continue to use the nonstandard cost center reporting to provide accurate cost assessments. All PR programs are strongly urged to use the Pulmonary Rehab Tool Kit to provide more accurate cost assessments that should lead to a higher payment rates in future years.

CMS 2015 Proposed Hospital Inpatient Prospective Payment System: On April 30, 2014 CMS published the proposed hospital inpatient regulations for fiscal year 2015. As CMS continues to move towards a Value-based Purchasing System, a close review of Medicare data continues to reveal unplanned readmissions within 30 days of discharge. Financial penalties are charged to hospitals with all cause readmission rates for AMI, HF, and pneumonia. It is anticipated that COPD will be added to the Hospital Readmissions Reduction Program this fall. CABG will be included in this program in 2017. Of note is the value of CR and PR in helping to reduce these readmission rates and the need to ensure that your hospital administrators are aware of this value.

KX Modifier: As of January 2010, CMS began tracking utilization of CR and PR services using a CMS eligibility inquiry system. Currently, CMS is transitioning to HETPS (HIPAA Eligibility Transition System) for tracking. For PR, there is a 72 session Medicare lifetime limit, and the counting starts from session 72 down. There is no extension beyond 72 sessions, regardless of the diagnosis. (Note that this limit does not apply to respiratory therapy/care services (GO237-39) since these codes are determined by different criteria.) For CR, the count starts from session 1 up with no upper limit. For both PR and CR, however, a KX modifier is needed for any service beyond 36 sessions. Therefore, the modifier is required at session 35 for PR and at session 37 for CR. For all denials, including the lack of KX modifier, there is a 30 day window to appeal. If a claim denial is due to a missing KX modifier, then resubmitting the claim with the missing KX modifier, provided it meets CMS criteria, within 30 days should result in reimbursement. More information can be found on the CMS and AACVPR websites.

S382 Bill: AACVPR and its affiliates continue to seek Congressional support and legislation that allows non-physician providers the ability to supervise cardiac and pulmonary rehabilitation. This is very vital to the viability of many programs, particularly in the Critical Access Hospitals. If you are interested in supporting this effort, please consider joining other MACVPR members on the Day On The Hill March 3-4, 2015 in Washington, D.C. You can contact Karen LaFond or any EC member or Wayne Reynolds for more information.

It has been an honor and privilege to serve on the Executive Committee Board these past 11 years and especially to receive the Distinguished Service Award at our October Symposium. A special thank you to you all for your support and also for your commitment, dedication, and the care you have extended to our patients, programs, and our organization. I urge anyone interested to consider joining a committee or the EC Board. Becoming more involved not only helps strengthen our programs and organization but helps with your own professional development. I have learned so much from the amazing professionals on the EC and in MACVPR and found it to be a very valuable experience. If I can be of any assistance to anyone interested, please let me know.

With all of my appreciation and best wishes,
Esther Burchinal, MS, CES, RCEP

Past Co-President
Lyme Disease and the Heart
Sarah Madden, RN

My name is Sarah Madden, I am a UMASS Lowell RN to BSN nursing student, in the Health Promotion in Nursing Practice Practicum, and I am interning at the Cardiac/Pulmonary Rehab at Lowell General Hospital (LGH), Saints Campus. As part of my community assessment class, I developed and delivered a presentation on Lyme disease at the Waltham Boys and Girls club after school program, due to the cities high rates of Lyme disease. I will be completing an interactive educational presentation, about the many components that Lyme disease can have on the heart, and presenting it to the cardiac and pulmonary rehab patients at LGH.

Lyme disease can affect the heart in many ways, which can give patients many different symptoms. According to the Centers for Disease Control (CDC) and the American Heart Association, one of the issues is called Lyme cardiitis. Lyme cardiitis occurs when bacteria gets into the blood stream and then goes into the heart tissue. This is caused by bacteria, called Borrelia burgdorferi, which enters the tissues of the heart and can interfere with normal electrical conduction of the hearts upper and lower chambers. This bacterium is contracted via an infected tick bite. When a tick bites, it not only sucks out your blood but it releases this bacterium into your blood stream, which can travel throughout the body and cause many symptoms of illness. These symptoms include heart block and it can be mild to severe, but it can progress rapidly. Some of the other symptoms can be light-headedness, fainting, shortness of breath, heart palpitations, or chest pain. Patients with Lyme cardiitis may also experience the commonly recognized symptoms that may include fever, body aches, and a bulls-eye rash.

The treatment for cardiitis is intravenous antibiotics; the duration of antibiotics is dependent on how bad the severe the cardiitis is. Some patients may require a temporary pacemaker. Treatment can be anywhere from 14-21 days, but most symptoms are gone within one to six weeks. Between the years of 1985 and 2008, there have been only four deaths, but in year 2013, there have been three deaths.

To prevent getting bitten by a tick, you should wear long sleeved shirts and pants light in color, spray your exposed skin and clothes with a bug spray that involves DEET, take a shower within two hours of coming in from outside, and then doing a complete skin check to look for ticks.
Below is the nomination letter from Ginny Dow RN, BSN, BC

I would like to nominate Esther Burchinal for the 2014 Distinguished Service Award for MACVPR. I have known Esther both as her manager since 2004, and as a fellow MACVPR member. She has consistently shown a passion, drive and commitment toward the field of cardiac rehab in every endeavor she takes on. She has over 25 years of experience and is certified ACSM (RCEP and CES) and is certified as Yoga of the Heart practitioner, but that is not all.

As a clinician, she is compassionate beyond words, clinically an expert and always striving to improve the care she provides to the patients.

As an Executive Committee member (membership chair, President and then past President) she is the go to person when you want someone to do a thorough, complete and accurate job. She can look at the big picture for the whole organization, but also sees the little details that can be often overlooked by so many who are busy and in a hurry to “get the job done.”

Esther is the ultimate professional and in all the years working with her, does not have an unkind word or has never done an unkind action toward any person. She strives to improve all the time, making her meditation sessions different and relevant to patients in each groups. She does group warm ups but individualizes to each patient as she proceeds with the sessions. Her positive attitude and contagious enthusiasm are unlike anyone we have ever worked with here at Emerson. Her cheery “GOOD MORNING” could wake the dead at 7am (and some of the patients look almost dead when they first walk in!, but she changes all that!)

She is extremely dependable, and goes beyond what is required of her in her job here at Emerson and in MACVPR. She signs up for health fairs and Boston Heart walk. She is thinking of others before herself and is unselfish in her thoughts, words and actions. She teaches patients, students and fellow clinicians freely and with joy. She cares about each and every patient individually and sends cards when someone is sick or a family member dies.

I will end with this; that just as it says in the old testament Bible story of Esther, “everyone loves Esther!” She deserves recognition for all she has done as a consistent and dependable member of the executive committee for the past 10 years and as a compassionate and expert clinician in the field of cardiac rehab.

Thanks,

Ginny
Thank you to all MACVPR members for attending the recent symposium. I was glad to see a number of students attending also. I heard it mentioned at the meeting: “these students are the future of the MACVPR organization”.

The Executive committee has recently created the **STUDENT SCHOLAR TEAM**. The team’s objective is to provide opportunities for students in networking, collaboration and the development of leadership skills. The student team will provide a means of communication for those who share an interest in Cardiovascular and Pulmonary Rehabilitation from colleges and universities across the state. Recommendations for the team should be received from a MACVPR member based on the student’s participation in their internship program or by an academic advisor or teacher from the college or university that they are attending. Potential benefits to the MACVPR organization include an increase in student membership, the ability to provide mentorship of future leaders and identify ways to ease student transition in clinical settings. Among the student’s responsibilities will be to work with the committee to enhance means of communication including Facebook, Twitter, and Linked In. Students will also contribute to the “Student Corner” column in the MACVPR newsletter.

We welcome students into the organization so they may take advantage of the many networking and educational opportunities the MACVPR has to offer.

Do you have a student you would like to recommend? Please email me at: capemda@gmail.com

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

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**Welcome New Student Members**

Danielle Bruyere  
Fitchburg State University

Shannon Fitzgerald  
Anna Maria College

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**Treasurer’s Report**

As a reminder, we now have a PayPal account. You will see options to pay for CEU’s and membership fees by credit card if you so choose. For those unfamiliar with Paypal, it is an easy and SAFE way to pay for any online transaction without having to give your credit card to each website. Check it out online. There is a small fee per transaction for this option to our organization but we are willing to absorb this fee to provide convenience and safety to you!

Current balances as of November 11, 2014:

- Citizen’s Bank checking: $12,216.86
- Citizen’s Bank Money Market fund: $2,634.16
- Total: $14,851.02

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

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**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.
<table>
<thead>
<tr>
<th>Webcast Date &amp; Time</th>
<th>Webcast Title</th>
<th>Webcast Presenter(s)</th>
<th>Educational Track(s)</th>
<th>Registration Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 20 12pm-1pm CT</td>
<td>Diabetes APPs: Are they right for your patients?</td>
<td>Cindy Neels MPH, RD, LDN</td>
<td>Nutrition and Behavior Change</td>
<td>Registration Now Open!</td>
</tr>
<tr>
<td>December 4 12pm-1pm CT</td>
<td>Medicare Rules and Important Regulatory Issues for 2015</td>
<td>Karen Lui, RN, MS; Phil Porte</td>
<td>Program Management</td>
<td>Registration Now Open!</td>
</tr>
<tr>
<td>January 2015</td>
<td>Smoking Cessation: New Treatments in Tobacco Control</td>
<td>TBD</td>
<td>Pulmonary Rehabilitation</td>
<td>Registration Coming Soon</td>
</tr>
<tr>
<td>February 2015</td>
<td>Registry Update (Cardiac and Pulmonary)</td>
<td>Bonnie K. Sanderson, RN, PhD, MAACVPR</td>
<td>Cardiac and Pulmonary Rehabilitation</td>
<td>Registration Coming Soon</td>
</tr>
<tr>
<td>March 2015</td>
<td>Scientific and Clinical Abstract Submission Workshop</td>
<td>Patrick Savage, MS, FAACVPR</td>
<td>All tracks</td>
<td>Registration Coming Soon</td>
</tr>
</tbody>
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### AACVPR Innovation Award

The Innovation award was designed to recognize a program that used outstanding creativity in patient care and program design to maintain excellence and expand services today and in the future.

Next year’s application is being redesigned for easier submission. Applications will be accepted beginning January 1, 2015. Consider applying and/or be thinking of creative ideas to improve your program and possibly apply to receive the award!!!

Keep an eye out for more information on the AACVPR website which will be forthcoming.

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### Save the Date

AACVPR Annual Meeting

September 9-12, 2015
Aaron L. Baggish MD, Associate Director of the Cardiovascular Performance Program at the Massachusetts General Hospital Heart Center, opened the symposium with his presentation titled *Heart Disease in the “Young” and “Old”*. Dr. Baggish’s knowledge of his topic was evident as he illustrated the cardiovascular care of the athlete beginning with a historical perspective from past to present and an overview of the relevant physiology. Although participation in sports and regular exercise promotes good health, athletes are not immune to cardiovascular disease and represent an important part of the population we see in clinical practice. Today’s athletic population is comprised of individual’s spanning broad ranges of age, athletic talent, and performance goals.

Athletes’ usually become patients in one of two ways. First, an abnormal value for one of the structural or functional parameters in the heart may be detected in an asymptomatic individual. Such findings raise concern for underlying pathology and prompt further assessment. Second, athletes may develop symptoms suggestive of cardiovascular disease during training or competition and thus seek or are referred for a symptom driven evaluation.

Risk stratification was colorfully illustrated in the “Porta Potty Conversation” slide in comparison with the Case Study for the older athlete, providing an explanation behind why exercise (specifically running) reduces all cause and cardiovascular mortality; however exercise may precipitate cardiac events if they are destined to happen. Assessment prior to cardiac rehabilitation should include maximal treadmill or bicycle exercise testing to assess their exercise capacity and the presence or absence of provokable myocardial ischemia. Enrollment and retainment is a challenge but provides the opportunity for the comprehensive rehab approach to make changes and education in lifelong self care.

The next presentation was “*Models of Cardiac Rehabilitation in an Era of Accountable Care including Working with the Geriatric Population*” given by Marjorie L. King MD, FAACVPR, FACC, Director of Cardiac Rehabilitation Services at Helen Hayes Hospital. Highlights below:

- discussed changes in aging population and how these are seen in cardiac rehab patients including increased co morbidities, heart failure, and post op complications
- discussed the treatment guidelines differences (not treated as aggressively)
- reviewed the research on safety, quality and outcomes in cardiac rehab including relatively low numbers of predicted deaths (one in 83 years) indicating less need for continuous ECG monitoring
- shared ideas for new models of care in accountable care era

Anne Gavic, MPA, RCEP, FAACVPR, Immediate Past President AACVPR presented “*Cardiac Rehabilitation Bridging the Gap*.” Presentation summary included:

- CR has proven effectiveness – clinical, psychosocial, and behavioral in improving morbidity and mortality
- Despite evidence of effectiveness, CR is significantly underused
- To enhance patient benefit, referral and enrollment practices must be improved
- Referral can be improved by educating providers and automating the referral process
- Multiple methods of encouraging enrollment and completion have proven successful and focus on improving accessibility and individualizing program options to meet patient needs

Resources provided included the AACVPR/ACCF/AHA 2010 Update: Performance Measures on Cardiac Rehabilitation for Referral to Cardiac Rehabilitation/Secondary Prevention Services, and embedded in her presentation was a link to *Cardiac Rehab in the New Health Care Environment*

http://circ.ahajournals.org/content/early/2011/11/13/CIR.0b013e31823b21e2.citation
Anne also provided a detailed overview of AACVPR in her afternoon lecture: Working together for the Future: An AACVPR Headquarters Update Priority Plans and Projects. Pictured with the AACVPR Board of Directors is our own Kate Traynor RN, MS, FAACVPR. Also included:

- Key strategic initiatives of AACVPR for the coming year
- Benefits of AACVPR membership including practice guidelines, resources, and publications.
- How AACVPR is aligned with changes in health care policy and reimbursement
- Education and certification of professionals
- Certification of programs
- AACVPR@30. 30th Annual meeting Sept 9-12 Washington DC
- AACVPR Research and Registry and Outcomes
- Joint Affiliation
- Advocacy and A Call to Action- Day of the Hill DOTH March 3 – 4 2015 Washington DC

The day concluded with a presentation “Teaching Your Patient to Eat Vegetarian,” given by Julia Elliott RD, LDN from Emerson Hospital followed by a cooking demo by her husband Chef Ben Elliott. Highlights of the presentation are:

- Reviewed damage caused by excessive animal fat/protein diet including inflammation and increased acidity
- Discussed need for eating variety of vegetables (whole food, not processed)
- Shared plant sources of protein including legumes, nuts, seeds, whole grains, quinoa
- Discussed importance of assessing patient's current diet and future goals and intentions in making transitions to new vegetarian diet
- Provided resources for assisting patients (books and websites)

Thank you to our sponsors for their contribution to the day’s events
Abstract title: **ALCOHOLIC CARDIOMYOPATHY (ACM): WHAT HAPPENS WHEN YOU DRINK TOO MUCH?**
Danielle Bruyere (Monica Maldari, Sponsor). Department of Exercise and Sports Science

Studies on the effects of alcohol have shown that it can be both beneficial and harmful to the cardiovascular system. Positive or negative effects of alcohol depend on the duration of use and the original physiological state of the heart. Based on the knowledge that ACM is not always detected in the asymptomatic stage or until the person starts showing signs of heart failure, the purpose of this poster is to explore the relationship between alcohol consumption and mortality rate due to alcoholic cardiomyopathy.

Abstract title: **CHEMOTHERAPEUTIC AGENT’S EFFECT ON THE HEART: ANTHRACYCLINE EFFECT ON NORMAL HEART FUNCTIONING**
Megan Macomber (Monica Maldari, sponsor), Dept. of Exercise and Sports Science

Many studies have proven that there is a large linkage between Anthracycline induced cardiac dysfunction in the adult and pediatric cancer population. Researchers gave evidence that the 10,397 pediatric cancer survivors in their study had an eight times greater risk of being diagnosed with heart disease than a healthy child due to their therapy involving Anthracyclines. Due to the amount of patients being treated for cancer, and over half of the pediatric cancer population being treated by some form of Anthracycline, it is important to explore the alternative and preventative methods that medical professionals can take in order to reduce the toxic effects chemotherapy places on the heart.

Abstract title: **DEPRESSED MOOD PREDICTS PULMONARY REHABILITATION COMPLETION AMONG WOMEN, BUT NOT MEN**
Maria L. Buckley PhD, Miriam Hospital

Depressed mood has been associated with PR non-completion. Depression is more common in women than men with COPD. The current study was designed to investigate gender specific predictors of completion of a comprehensive US community-based PR program, with a focus on investigating depressed mood. Results showed that lower depressed mood was an independent predictor of PR completion for women but not men.


Abstract title: **“TEACH-BACK” TO ENHANCE PATIENT SELF MANAGEMENT IN THE OUTPATIENT CARDIAC AND PULMONARY REHABILITATION POPULATION**
Deirdre Proudman MSN, RN-BC, CCRN Lowell General Hospital

Patient and family education is an important nursing role as well as a core competency of integrative practice in both cardiac and pulmonary rehabilitation. During the evolution of a chronic illness such as coronary artery disease (CAD), congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), or diabetes (DM), patients and their families are constantly learning new behaviors required for appropriate disease management skills. Teach-back is a way to confirm that you have explained to the patient what they need to know in a manner that the patient understands.

Abstract title: **UTILITY AND EFFICACY OF A SMARTPHONE APPLICATION TO ENHANCE THE LEARNING AND BEHAVIOR GOALS OF TRADITIONAL CARDIAC REHABILITATION: A FEASIBILITY STUDY**
Karen LaFond MSN, RN South Shore Hospital

Most eligible patients do not participate in traditional clinic-based cardiac rehabilitation (CR) despite well-established benefits. Novel approaches to overcome logistic obstacles and increase efficiencies of learning, behavior modification, and exercise surveillance may increase CR participation. Integrating a mobile care delivery platform into CR was feasible, safe, and agreeable to patients and clinicians. It enhanced patient perceptions of CR care and physician perceptions of the CR care giving process. Mobile-enabled technologies hold promise to extend the quality and reach of CR, and to better achieve contemporary accountable care goals.
Understanding that Cardiac Rehab is vastly underutilized, Karen LaFond RN, Nurse Manager of South Shore Hospital’s Cardiac Rehab Department decided to poll her patients to find out what factors influenced the patient the most to attend a Cardiac Rehab program. She surveyed 155 patients in August 2014 with the question:

What inspired you the most when making the decision to enroll in your Cardiac Rehabilitation Program? You can choose more than one but should rate in order of importance to you (1 – most important) The results are shown in the graphs below.

Not surprising, the most frequent response was MD recommended the program. I guess the take home from this is to make sure the physicians in your facility are strongly recommending that their appropriate patients attend Cardiac Rehab.
At this time of Thanksgiving, we would like to heartily thank both Esther Burchinal and Ginny Dow for their many years on the MACVPR Executive Committee. Both women have given their time as well as considerable talent to the MACVPR for many years. We would like to extend our gratitude as they step down at the end of this year.

Tribute to Ginny Dow, RN, BSN, BC

On behalf of the Executive Committee and MACVPR, we extend our deepest gratitude to Ginny Dow, RN, BSN, BC for her many years of service on the EC and in MACVPR. As she steps down from the EC and her current role of Education Co-Chair for the past five years, Ginny with her co-chair, Deirdre Proudman, MSN, RN-BC, CCRN, have provided our organization with pertinent, informative, interesting, and high quality education programs. Ginny has invested much time and effort to ensure that our meetings, including the symposiums, have met members needs and been a forum conducive to learning and networking. She has paid attention to every detail needed to be certain that the meetings and symposiums run smoothly. We are fortunate to have had her as Education Co-Chair and on the EC, sharing her vision, passion, dedication, commitment, and expertise with us all. Thank you, Ginny!

Esther and the MACVPR Executive Committee

Tribute to Esther Burchinal, MS, CES, RCEP

On behalf of the Executive Committee and the MACVPR, we would like to offer our sincere gratitude to Esther for her many years of service. Esther has filled many roles on the EC over the last 10 years as Certification Chair, Membership Chair, President and Immediate Past president. In each role Esther has been a valuable asset to the organization. She pays close attention to detail and has been a tremendous resource to us all. Her dedication is truly evident in everything she does. She leaves large shoes to fill!

Lynne and the MACVPR Executive Committee
An apple a day.....

Eat more fiber! Can that be true? Fruits, vegetables and whole grains are somewhat lacking in the American diet. If most individuals increased their fiber intake and decreased there servings of saturated fats, sodium and sugars the world would be much thinner. So, what is fiber and how can we make it part of a healthy diet?

To begin, it is important to understand that there are two types of fiber: insoluble and soluble fiber.

**Insoluble fiber:** Adds bulk to the stool by helping food pass more quickly through the stomach and intestines.
- Prevents or relieves constipation
- May protect against colon cancer
- Food sources: Fruit skins, root vegetables skins, bran flakes, bran muffins, & whole grain breads

**Soluble fiber:** Attracts water and turns into a gummy gel during digestion.
- Weight control
- Decreases absorption of cholesterol
- Blood sugar management
- Food sources: Oat bran, pectin (apples, citrus fruits), corn bran, rice bran, dried peas, beans, broccoli, carrots, & prunes

It is a great idea to consume your dietary fiber from a variety of plant sources. The American Dietetic Association recommends 14 grams for every 1000 calories per day or 25g/day for an adult woman and 38g/day for an adult man. To achieve this, try a variety of fruits, vegetables, whole grains, and legumes (lentils, lima beans, kidney beans, chick peas).

**What is a serving of fiber?**
- Fruit is 1 medium size fruit (tennis ball) or ½ cup
- Vegetables is ½ cup cooked or 1 cup raw
- Grains is ½ cup cooked or 1 slice bread
- Legumes is ½ cup cooked

**Here are some ways to add fiber into your diet everyday:**
- Add in a serving of fruit to your whole grain cereal or oatmeal in the morning.
- Choose whole grain breads (those with 3-5 grams of fiber per serving).
- Sprinkle your salad with legumes. Add them to soups and pasta sauces.
- Aim for 5 servings of fruits and vegetables per day everyday.
  - Experiment with whole grain pasta. You can mix regular pasta with whole grain and try to do the same with brown rice and white rice.
  - Add extra vegetables to main dishes, sauces, and casseroles.
  - Aim for 1-2 vegetarian meals a week. Take your favorite meat dish and create vegetarian options with legumes, or soy proteins.
  - Aim for 5 servings of fruits and vegetables per day; choose whole grains and incorporate legumes.
  - Practice the plate method. Half of your plate during lunch and dinner should be fruits and vegetables while ¼ of your plate is protein and ¼ of your plate is a grain.

If you are monitoring your weight it is a good idea to have more of your fiber sources coming from fruits and vegetables vs. grains for calorie control.
Mr. T is a 63 year old male with a history of obesity s/p gastric bypass surgery and a family history of CAD. He had progressive SOB/DOE over several months. He underwent an ETT and TTE in July which were unremarkable and negative for ischemia. He was then admitted to a Boston Hospital in September with chest pain. EKG was unremarkable and enzymes were negative. He underwent a nuclear stress test which was notable for ischemic EKG changes and a mild area of ischemia in the anterior wall. He underwent a LHC and was found to have a 99% D2 stenosis s/p DES. He was discharged on Ticagrelor. Since discharge he has been feeling well. He is starting cardiac rehabilitation today after recent PCI.

After reviewing his baseline rhythm strip (leads II and III) you determine that he is stable and begin his exercise session.

1. What is Mr. T’s initial rhythm? What is Mr. T’s exercise rhythm? The UBE and treadmill telemetry are 6 second strips. Is the rhythm regular or irregular? What is the heart rate?

While Mr. T is exercising; a second patient in the classroom develops chest symptoms on the treadmill. Patient 2 alerts staff that stop exercise, sit him down and assess vital signs. Symptoms are associated with cool, ashen, diaphoretic skin. He is an anterior STEMI s/p PCI x2 in Sept, followed by PCI x1 in October for return of symptoms. Pain subsides with rest and there are no observable EKG changes on the monitor. Because of recent history, Patient 2 is transported to the emergency department for evaluation. With staff attention directed at a symptomatic patient, Mr. T has removed his telemetry monitor and is proceeding to leave.

2. Staff should:
   a. Thank him for being so thoughtful as a new member of a group patient care environment.
   b. Obtain a cool down BP and pulse and document as part of the Untoward Event log.
   c. Ask that he put the monitor back on and cool down for 5 minutes.
   
   At the request of staff, Mr. T. reapplies the telemetry monitor. After 5 minutes, Mr. T’s cool down strip is below. It is a 6 second strip. It remains unchanged after 10 minutes. He is asymptomatic. He has taken all his medications as prescribed.

3. What is Mr. T’s heart rate? What would you analyze his rhythm to be now? What would your next action be?
   a. Transport the patient to the emergency room for post exercise tachycardia
   b. Increased heart rate is an expected response to exercise and the patient should be discharged.
   c. Reassess the vital signs, symptoms, and ask the patient if he is sure he took all his medications
   d. Both c and e.
   e. Obtain a 12 lead EKG and notify the cardiologist

Discussion
Calculating Heart Rate — Six Second Count, multiplying the number of QRS complexes found over six seconds by a factor of 10 to get the QRS complexes found in a minute. 3 seconds is 15 large boxes across the paper or 30 boxes for 6 sec.

1. Mr. T’s initial resting strip demonstrates NSR with a heart rate of 60 and a PAC noted after the 5th complex. Mr. T’s exercise rhythm on the UBE is irregular at a rate of 85 beats per minute. On the treadmill it is irregular and the rate is 110 beats per minute. On the UBE, the second and fifth beats are followed by a PAC, followed by a pause, followed by a sinus beat. As Mr. T’s heart rate increases on the treadmill, his ventricular rate becomes irregularly irregular, a hallmark of atrial fibrillation. Is it atrial fibrillation or is it sinus rhythm with PACs in a variable pattern?

2. Best practice would be to ask Mr. T to reapply the telemetry monitor and document his exit rhythm in the Quinton.

3. Mr. T’s heart rate is 120 beats per minute. There are visible p waves or are there? Concern is that he is experiencing tachycardia post cool down. Mr. T is reassessed and a 12 lead EKG is obtained and read by the covering cardiologist. Mr. T is discharged home with session summary and EKG in hand for an 8:30 am cardiology appointment the following day.

The Salty Truth

Americans’ love for salt is having a dramatic impact on their health. The average American takes in more than 3,400 milligrams of sodium each day—almost 2,000 milligrams more than the American Heart Association recommends. While sodium is an essential nutrient and a little salt can be part of a healthy diet, the amounts we are eating are far too high and can increase the risk of high blood pressure, heart disease, stroke, and other health problems.

- Cardiovascular disease is the leading cause of death and disability worldwide, and high blood pressure is one of the major risk factors.
- High blood pressure is the leading risk factor of women’s deaths in the U.S., and the second leading risk factor for death for men.
- One-third of American adults have high blood pressure, and about 90 percent of American adults are expected to develop high blood pressure over their lifetimes.

More than 40 percent of non-Hispanic black adults have high blood pressure. Not only is high blood pressure more prevalent in blacks than whites, but it also develops earlier in life.

So, what’s the biggest contributor to our sodium consumption? It’s not the salt shaker! More than 75 percent of sodium consumption is from processed, prepackaged, and restaurant foods. This makes it hard for people to choose foods with less sodium and to limit how much sodium they are eating because it is already added to their food before they buy it. Any meaningful strategy to reduce sodium intake at the population level must involve the efforts of food manufacturers, food processors, and restaurant industries. Successful sodium reduction requires action and partnership at all levels—individuals, healthcare providers, professional organizations, public health agencies, governments, and industry.

The American Heart Association’s new sodium campaign aims to raise awareness of Americans’ excess sodium intake and its impact on health, and to motivate consumers to reduce their personal sodium intake and to demand less sodium in the food supply. The campaign’s tagline, “I Love You Salt, But You’re Breaking My Heart” conveys the concept that we all have a relationship with salt, but it’s not a healthy one—and we need to break up with excess salt so we can live healthier lives. Visit the campaign’s website at heart.org/sodium for more information about sodium and health, tips for reducing sodium intake using a quiz and other educational content.

Any questions about this campaign or any other American Heart Association/American Stroke Association programs, please contact Penny McGuire, Community Health Director at penny.mcguire@heart.org

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While we strive for equality between the sexes, the relationship between psychological stress and cardiac disease seems to differ between men and women. A recent study, "Sex Differences in Mental Stress-Induced Myocardial Ischemia in Young Survivors of an Acute Myocardial Infarction", published in Psychosomatic Medicine (2014) suggested that psychological stress, a risk factor for heart disease, seems to have different effects on the cardiovascular system in younger (< age 50) women than in either men (all ages) or women over age 50. The study observed 98 (49 women and 49 men) individuals who were post myocardial infarction, ages 38-60, and measured their cardiovascular response when exposed to a laboratory-induced emotional stressor. The findings suggested that women, under age 50, when exposed to the experimental stressor had nearly twice the levels of myocardial ischemia as compared to men the same age with similar health status. No gender difference was noted in men and women over the age of 50. Participants were also assessed during a physical exercise stress test (treadmill) and no gender difference in the levels of myocardial ischemia was noted.

Psychological stress has previously been associated with increased risk of subsequent myocardial infarctions in cardiac patients; however stratification of age and gender in relationship to mental stressors and cardiac disease have not been examined fully. This study’s findings suggested that even though women may appear to have more moderate heart disease than men (determined by degree of occlusion of the coronary arteries) there appeared to be a greater amount of microvascular dysfunction, stress-induced ischemia, in women than in men in response to emotional stressors.

My response to this study is...what are we waiting for?! We need to take these findings seriously and advocate for preventative and early introduction of mind/body interventions for young women who are at increased risk for heart disease. Identification of those at risk prior to an initial myocardial infarction is paramount. Training in mindfulness based meditation techniques, relaxation exercises and other contemplative practices may be especially helpful to add to the early phases of cardiac rehabilitation for younger women. Ultimately, younger women with risk factors for heart disease may be able to be preventively trained in ways to address and reduce their emotional stressors before they suffer a cardiac event.

I would love to hear your thoughts on this research and ways that we can work together to address these gender differences in heart disease.

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 board of directors of the Integrative Medicine Alliance and is a member of the Massachusetts Health Quality Partners (MHQP) Consumer Health Council.
Please renew your membership

The following individual memberships have either expired since June 2014 or will expire before the next newsletter. Please take a moment to renew now to avoid missing benefits such as announcements, updates and the “Members Only” section of the website which includes the newsletter and on-line forum.

Reminder:
The Executive Committee is still trying to fill the Co-President Elect position for 2015. It is a great opportunity for you to get involved with your organization. Remember we always work together as a team. Consider joining the EC… you won’t regret it!!

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