As winter approaches we are getting close to the end of our tenure as Co-Presidents of MACVPR. We thank you for the experience and found the year to be filled with challenges, opportunities, and accomplishments. When we took over as Co-Presidents we set three goals for our year and will now review what has been accomplished by the Executive Committee and MACVPR membership in 2011.

Goal 1: Retain & increase membership by 10% to continue strengthening MACVPR. Membership is now up to 116 members. In keeping with our plan to offer incentives and widen professional distribution, we added a new membership rate for any institution that has 3 members join MACVPR- the 3rd membership is 50% off. Letters have also been sent to 22 colleges with nursing programs and/or exercise physiology programs inviting them to join our association.

Goal 2: Enhance and support the quality of Cardiac and Pulmonary Rehab through MACVPR involvement by providing educational and networking opportunities. Through the hard work of the Education Committee, several educational programs have been presented at our regular meetings culminating with our annual full day symposium on October 21, 2011. The symposium attracted 86 participants from all over New England and featured speakers from AACVPR and local Cardiac and Pulmonary programs. We also sought to improve our website and increase utilization of the forum. The update of the MACVPR website has been completed by Bower Web Solutions. Ann Stone, Administrative Assistant, and Lynne MacDonald, Newsletter Editor, spent many hours planning, assisting, editing, revising, updating and working with Bower to make sure the website became the wonderful finished product. Also don’t forget to visit the Forum section to see what questions members have asked and add your own expertise to the replies.

We also hoped to increase the number of certified cardiac and pulmonary programs in MA. The 2011 AACVPR Program Certification and Recertification update reveals that we now have 27 certified Cardiac Rehab programs and 7 certified Pulmonary Rehab programs in Massachusetts.

Goal 3: Improve the use and viability of Cardiac and Pulmonary Rehab through MACVPR involvement. This goal goes hand and hand with goal #2 to improve our visibility, strengthen our membership and their involvement. Regional groups have been resurrected, and five groups have been formed. The Regional Groups give programs in the same geographic area to opportunity to connect, share ideas, visit each other programs and brainstorm. In addition, with the one log in option, the new website should be more user friendly and assist in providing more support and assistance to all members. Through increased sponsorship we have been able to further enhance our services including the website and high quality educational opportunities.

OTHER STATE UPDATES:
♦ Election of officers for 2012 occurred on October 21, 2011. We still have several positions open and are asking all our members to consider joining our Executive Committee, supporting the MACVPR and giving back to their organization. We all have talents, expertise, and skills that can be used in the MACVPR. We are looking for a Treasurer and President or Co-Presidents Elect for 2012. Please let us know if you are interested or have any questions.
♦ A special note of appreciation goes to Susan Carrigan as she steps down from her many years of service as our Treasurer. She has been a tremendous asset to our organization, keeping a keen eye on finances and lifting us back into a solvent fiscal state. Thank you, Susan! We will greatly miss you.
♦ Congratulations to several of our current and former EC members for stepping into national positions. They are Wayne Reynolds for achieving AACVPR Fellow, Kate Traynor for joining the AACVPR Clinical Applications Committee, and Debbie Sullivan for joining the AACVPR Education Committee. AACVPR is fortunate to have these dedicated, knowledgeable, experienced professionals working with them.
♦ Congratulations also to Faulkner Hospital CR and Milton Hospital CR for receiving AACVPR Program Certification and to Baystate Medical PR, Milford Regional CR, and Berkshire Medical CR and PR for Recertification! If any other program recently received recent certification or recertification, please let us know by contacting Ann and/or Robert Berry.
And more congratulations goes to our Education Chairs: Ginny Dow and Deidre Proudman and their committee for the excellent symposium that was presented October 21, 2011 at the Devens Commons. What an excellent facility for an all day conference! The speakers were all first class lecturers with admirable expertise in their fields. We were very privileged to have two speakers from ACCVPR: Gayla Oakley & Phil Ades. The Executive Committee met privately with Gayla, and we were able to present our member’s questions and concerns about the certification and recertification process. Gayla promised that she would bring our concerns back to the national committee.

MACVPR Regional Groups- We would like a report from each Regional Group at our January 2012 regular meeting. Please try to meet before the end of the year. Then prepare a short synopsis of your meetings, accomplishments, brainstorming, etc for our meeting in Jan. 2012.

Program Directory - Remember to list your program on our new website program directory. It is a great resource and benefit for patients and for your program. Please contact Ann at admin@macvpr.org for more information.

CEP licensure – progress continues as a bill is pending in the MA Legislature. MACEP initiated this effort with support from AACVPR, ACSM, CEPA, and MACVPR. Robert Berry has been actively involved with this process — please see his update on page 16.

NATIONAL UPDATES:

AACVPR 26th Annual Meeting Sept 8-10, 2011 – The meeting was an excellent opportunity to attend many informative presentations and to network with professionals from across the US and from other countries. Having the conference in California was wonderful as many of us enjoyed the beautiful sunshine and beaches nearby as well as Disneyland. We highly encourage everyone to consider attending a national meeting. With the next one scheduled for Sept 6-8, 2012 in Orlando, it should be a great location for us. We hope that you will plan on attending in 2012.

PR Outcomes Toolkit – The AACVPR conference call on 9/19/11 reviewed the changes to the PR outcome requirements effective 1/1/12 for PR programs certifying in 1/13. Ann sent an email in October to all PR members with this information so please contact her or go onto the AACVPR website at www.aacvpr.org if you did not receive this update.

PR Reimbursement – Effective 1/1/12, a significant reduction is set for 2012 reimbursements. It seems that hospitals may not be reporting accurate charges, and AACVPR is considering several recommendations to assist with this matter so that reimbursements are in line with actual service provided. See Reimbursement Update section.

CR Reimbursement – Remember to check that your hospital is reporting CR as a nonstandard cost code center to ensure that the increased reimbursement rates from CMS continue.

Modifiers for CR – AACVPR has recommended to CMS that modifier- 59 should not be needed when two CR sessions are charged per day. Remember that when two sessions are charged, one session must be for exercise and time of each session should be documented. AACVPR has also clarified with CMS that KX Modifier is needed for all Medicare claims for CR exceeding 36 sessions. This applies for an extension for an existing diagnosis and for a new course of CR for a new qualifying diagnosis.

National CR and PR Outcomes Data Registry – AACVPR is initiating the first comprehensive National CR and PR Outcomes Data Registry with the goal of demonstrating the positive impact that CR has on mortality, morbidity, physical function, and quality of life. The launch date for the CR Registry is scheduled for June 2012 with the PR Registry about 6-8 months later. The plan is that there will be a link to certification as well. An annual cost will be charged. More information can be found on the AACVPR website.

DATES TO REMEMBER:

January 19, 2012 – MACVPR Meeting at AHA in Framingham

Feb. 29- March 1, 2012 DOTh (Day on the Hill)

Washington, DC

Sept. 6-8, 2012 AACVPR Annual Meeting – Orlando, Florida

In keeping with the AACVPR’s motto we presented at the start of our tenure: “ Inspire yourself, inspire your patients - moving forward in a decade of change”, we hope that we have helped move MACVPR forward and have provided you, our members, support and inspiration to weather these challenging times in CR and PR. We owe much of our progress to our dedicated Executive Committee, our talented Administrative Assistant, Ann, and to you, our members. Thank you all, and we appreciate receiving any questions or comments that you may have as 2012 approaches. Best and healthy wishes to everyone and to your programs and patients.

MACVPR Co-presidents,

Esther Burchinal, MS, CES, RCEP

Judy Flannery, RN, BSN

Emerson Hospital Cardiac Rehab

Harrington Hospital Cardiac Rehab

Call to Action

The Executive Committee is still trying to fill the (Co)President Elect and Treasurer positions for 2012. We would like to invite members to get involved with your organization. It is a great opportunity for professional growth in a supportive environment. The Executive Committee always works together as a team. If interested or you just want more information please contact president@macvpr.org or any of the current EC members.

Consider joining the EC... you won’t regret it!!
The Halloween Nor’easter of 2011 is a perfect metaphor for our Reimbursement Update as it relates to PR….there is an unpleasant “forecast” with decidedly disappointing news that will have implications for awhile.

On November 1, CMS (Medicare) released their final outpatient regulations for hospitals. The full 1552 page document can be found at this link: http://www.ofr.gov/inspection.aspx

There are 3 distinct areas within this report that relate directly to PR and/or CR:

1. Pages 503-520 detail the “gloomy” decision re reimbursement for Pulmonary Rehab (PR). Although not a total surprise, it is now a fait de compli that effective 1/1/12, HCPCS code G0424 will be reimbursed at approximately $38/session. The AACVPR is currently considering next steps and coordinating efforts with pertinent pulmonary societies. We hope many of you were able to listen in on the 11/17/11 webcast concerning this very topic. We will keep you posted as we receive future communications/information about this.

2. Pages 826-831 detail policies for the supervision of CR outpatient services in hospitals and CAHs. In brief, while CAHs are still required to adhere to the direct supervision standard, CMS instructed their contractors not to enforce the standard in CY 2011 and going forward in 2012, CMS is intending to create an independent advisory review process for consideration of supervision levels for specific outpatient hospital therapeutic services.

3. Pages 1116-1122 detail specifics related to CR Measure: Pt Referral from an Outpt Setting. In brief, CMS proposes to adopt this NQF endorsed performance measure for the CY 2014 Hospital Outpt Quality Report Program. This means for pts who have a qualifying event (defined as in previous 12 mos had an MI, chronic stable angina, CABG, PCI, cardiac valve surgery or cardiac transplant), hospitals will need to begin reporting data related to this measure in 2014!

Lastly, as our tenure as Immediate Past Presidents comes to a close, this is the final Reimbursement Update we will write. We wanted to thank you again for the opportunity to serve as Co-Presidents Elect, Co Presidents and Immediate Past Presidents of MACVPR for the past 3 years. It is a great organization due in large part to you, our members. Thank you for your support.

Warm Regards,
Priscilla (PPerruzzi@partners.org) and Kate (ktraynor@partners.org)

We have another informative edition of MACVPR NEWS. Many thanks to all that have contributed.

Deirdre Proudman BSN, RN-C, CCRN has provided us with a comprehensive update on EECP Therapy that is utilized in her facility, Lowell General Hospital. She also included a Clinical Cardiology Update on the drug Ranexa, another treatment for angina.

Once again, Pamela Katz Ressler, MS, RN, HN-BC of Stress Resources has contributed another installment of our feature: Connections: Mind/Body/Spirit. She has given us timely update on ways to manage Holiday Stress. I want to once again thank Pam for her continued support of MACVPR, by providing us with informative articles for each newsletter.

Since input from our members for our “Tales from the Trenches” column is sorely lacking, I have included the abstracts from the two new poster presentations at our recent NE Symposium. Great information to share.

The Executive Committee launched the new and improved MACVPR website on October 21, 2011! We have tried to make it more user friendly and informative to our members. We are excited about our new Member Forum that is a lot more user friendly and organized. Hopefully more people will begin to utilize this great resource.

Please feel free to e-mail me as I am always interested in ideas for clinical articles or developing a new regular feature in the newsletter.

Lynne MacDonald, PT
Milton Hospital Cardiac Rehab
Newsletter Editor
newslettereditor@macvpr
Enhanced External Counterpulsation (EECP®) Therapy
A non-invasive treatment option for patients with refractory angina
Deirdre Proudman, BSN, RN-C, CCRN
Lowell General Hospital Cardiac Rehab

Introduction
Stable angina pectoris is a common and sometimes disabling disorder commonly characterized by chest pain due to ischemia of the myocardium, generally caused by obstruction of the coronary arteries. Enhanced External Counterpulsation or EECP® is a noninvasive outpatient treatment for patients who have angina refractory (RAP) or resistant to medical management, who have exhausted the standard treatments for revascularization, and remain restricted by their disease. These patients are limited in their ability to perform activities of daily living and often find it difficult to exercise which negatively affects their quality of life. EECP® is designed to relieve angina by improving perfusion in areas of the heart deprived of an adequate blood supply. For these people, EECP® may develop and stimulate small branches of blood vessels, called collateral circulation, around narrowed or blocked arteries. This creation of collateral flow helps increase the supply of blood to the myocardium. EECP® has been shown to improve the patient’s quality of life by decreasing ischemic symptoms and permitting increased activity.

Classification of Angina
Functional Class/Description
Class I: Ordinary physical activity such as walking or climbing stairs does not cause pain. Angina may occur with strenuous, rapid, or prolonged exertion at work or recreation.
Class II: Slight limitation of ordinary activity. Angina occurs when walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals, in cold weather, in the wind, or under emotional stress, or only during the few hours after awakening. Angina occurs after walking more than 2 level blocks and climbing more than one flight of ordinary stairs at a normal pace under normal conditions.
Class III: Marked limitations of ordinary physical activity. Angina occurs when walking 1-2 level blocks and climbing 1 flight of stairs at a normal pace under normal conditions.
Class IV: Inability to perform any physical activity without discomfort. Symptoms of angina may be present at rest.

What is Enhanced External Counterpulsation?
Basic hemodynamic principles are the foundation of EECP®. EECP® is actually an external, noninvasive form of the intra-aortic balloon pump. Inflatable cuffs, similar to large blood pressure cuffs, are securely wrapped around the patient’s calves, medial thighs, and buttocks. Inflation and deflation of the cuffs are controlled by an electrocardiogram triggered pneumatic pump. The cuffs inflate in a distal to proximal sequence in early diastole, and deflate simultaneously in late diastole, just prior to systole. Inflation and deflation are specifically timed to the patients ECG to optimize therapeutic benefit. The degree of hemodynamic effect is monitored by the ratio of systolic to diastolic pressures, monitored by finger plethysmography. The sequential cuff inflation creates a retrograde pressure wave that augments diastolic pressure, increasing coronary perfusion pressure and venous return to the right heart increasing preload and cardiac output. The increase of blood flow increases shear stress on the walls of the arteries and improves endothelial function. Rapid simultaneous cuff deflation decreases systemic vascular resistance, afterload, and cardiac workload.

The Goals of EECP®
Increased higher augmented diastolic pressure
The increase in pressure during diastole will increase coronary blood flow and recruit dormant collateral vessels. Oxygen supply to ischemic myocardium is increased.

Lowered assisted systolic pressure
This lowered pressure decreases oxygen demand of the heart.

Lowered end-diastolic pressure
This lowered pressure in the end of diastole aids in increasing coronary blood flow and decreasing resistance before systole. Oxygen supply is decreased and demand is decreased.

Increased venous return
The cuffs squeezing the lower extremities increases blood return to the right side of the heart. This increased blood return can increase preload, increase the stretch on the myocardial fibers, and subsequently increase cardiac output.
Enhanced External Counterpulsation (EECP®) Therapy...continued

Hemodynamic Effects

Inflation
- Retrograde aortic pressure wave
- Increased diastolic pressure
- Increased intracoronary perfusion pressure
- Increased myocardial perfusion
- Increased venous return
- Increased preload
- Increased cardiac output

Deflation
- Decreased systemic vascular resistance
- Decreased cardiac workload
- Decreased myocardial oxygen consumption
- Decreased afterload

Current Clinical Practice

The EECP Lab at Lowell General Hospital opened on September 10, 2003. Vasomedical, Inc., the manufacturer of our EECP® equipment, provided a three day training program for cardiac rehabilitation staff. The program included the basics of normal heart function, the pathophysiology of myocardial ischemia, the physiology of counterpulsation, and the history of how the current EECP® treatment evolved. Similarities and differences between external counterpulsation and the IABP were reviewed. Education sessions included contraindications, precautions, and technical training and support with our first clients.

EECP can be used to treat chronic stable angina, but is usually reserved for patients whose standard medical therapy is losing its effectiveness and are not readily amenable to further intervention. Treatment is administered for one hour per day, five days per week, for seven weeks for a total of 35 hours. Patients typically begin to experience positive effects associated with angina reduction and improved exercise tolerance midway through the 7 week sessions.

Finger plethysmography waveform displaying diastolic augmentation timed with cardiac cycle

Photo courtesy of Lowell General Hospital
Each patient experiences relief at different time intervals and with varied symptom relief. Utilizing the Canadian Cardiovascular Society Classification for angina, our patients have shown improvement in their functional class with treatment. Approximately 75% improve at least one functional class and some improve two or more. Reported patient response includes reduction in the frequency of angina and reduced nitroglycerine use, and the severity of functional impairment due to angina. Patients reported improved quality of life and less fatigue while conducting activities of daily living such as carrying groceries, mowing the lawn, walking up a flight of stairs, cleaning, bathing, and shaving. Patients also state they are able to carry out leisure activities such as golf and walking with greater stamina. Most patients continue the positive effects of EECP® with enrollment in our cardiac rehabilitation program.

**International EECP Patient Registry (IEPR)**

In 1998, the International EECP® Patient Registry was established to document patient characteristics for those undergoing EECP® therapy, the safety and efficacy of EECP® therapy, and the therapy’s long term outcomes in the broader population. The IEPR is a voluntary registry of patients open to provider members.

**Duration of Clinical Benefit**

Clinical studies and data from the International EECP® Patient Registry (IEPR), coordinated by the Epidemiology Data Center at the University of Pittsburgh, continue to demonstrate that 70-80% of patients realize therapeutic benefit immediately upon completion of a course of EECP® therapy. At patient follow-up, therapeutic benefit is enhanced at six months and sustained at 36 months post treatment.

MUST-EECP and PEECH

Several descriptive and longitudinal studies of the efficacy of EECP® can be found, but only the MUST-EECP study used randomized, prospective blinded design. The study described changes in the following measures:

- Changes in the frequency of angina episodes and nitroglycerin (NTG) use
- Changes in exercise treadmill test (ETT) results as measured by exercise duration and time to ≥1-mm ST-segment depression

Two multicenter registry studies that included 978 patients from 43 centers and 2289 patients from more than 100 centers evaluated the safety and effectiveness of EECP in treating chronic stable angina. These studies found the treatment to be generally well tolerated and efficacious; anginal symptoms were improved in approximately 75% to 80% of patients. (IEPR)

In the Prospective Evaluation of EECP in Congestive Heart Failure (PEECH) trial, EECP improved exercise duration, symptom status, and quality of life in patients with mild-to-moderate heart failure who were already receiving optimal medical therapy.

CMS – Centers for Medicare and Medicaid Services

In 1995, the Food and Drug Administration (FDA) approved the use of EECP® for the treatment of angina and more recently for patients with heart failure.

The Centers for Medicare and Medicaid Services (CMS) has only approved EECP® for advanced stages of angina pectoris and not congestive heart failure. The restrictions placed by CMS on EECP® reimbursement keep it out of mainstream medicine. In spite of clinical evidence that shows the efficacy of EECP® on improving angina pectoris by prompting growth of new arteries, CMS has only allowed its reimbursement for end stage angina pectoris after strict guidelines are met and costly heart surgeries have failed although the clinical evidence supports EECP® as a disease-prevention model.

Section 20.20 (formerly 35-74) of the Medicare Coverage Issues Manual was revised to provide national Medicare coverage for external counterpulsation (ECP). The Centers for Medicare and Medicaid Services currently covers treatment with EECP therapy/ECP systems for patients who have been diagnosed with disabling stable angina (Class III or IV Canadian Cardiovascular Society or equivalent classification), who in the opinion of a cardiologist or cardiothoracic surgeon, are not readily amenable to surgical intervention because:

1. Their condition is inoperable, or at high risk of operative complications or postoperative failure;
2. Their coronary anatomy is not readily amenable to such procedures; or
3. They have co-morbid states, which create excessive risk.

Patients with stable congestive heart failure of ischemic etiology are covered under the aforementioned policy if they present with concomitant angina pectoris or angina equivalent symptoms. The Medicare reimbursement for EECP® is estimated at $7,000 per full treatment course, one-third typical charges associated with angioplasty ($23,200) and one-sixth those for bypass surgery ($35,700). Because EECP® carries almost no risks or complications, costs over time are also kept down. Most private insurance companies have coverage policies similar to Medicare.

Contraindications to Enhanced Counter Pulsion Therapy

According to current FDA labeling, EECP® therapy systems should not be used for treating patients with:

- Arrhythmias that interfere with machine triggering
- Bleeding diathesis
- Active thrombophlebitis
- Moderate to severe aortic insufficiency
- Severe lower extremity vaso-occlusive disease
- Presence of a documented aortic aneurysm requiring surgical repair
- Pregnancy

Case Study

Phoebe was a 68 year old African American female, with multiple cardiac risk factors including diabetes, hypertension, hyperlipidemia, cardio renal dysfunction, and a long history of chronic stable angina. At the time of her referral for EECP, she was hospitalized at Baystate Medical Center. She presented to Mercy Hospital with chest pain. Initial EKG showed marked downsloping and global ST depression, with the EKG returning to normal after nitroglycerine (NTG). EKG changes recurred with recurring pain, resolving after treatment with nitrates. She was transferred to Baystate where catheterization revealed heavily calcified diffuse distal disease, precluding her from surgery or percutaneous coronary intervention.

Of note, she was dealing with a marked increase in her angina, requiring over 100 NTG a month, on maximum medical therapy, limiting physical activity, and conserving use of NTG in case symptoms got worse.

I had the pleasure of meeting Phoebe during our first year of opening our EECP Lab on May 18, 2004. During her nursing admission assessment, it was discovered she was hoarding NTG and limiting activity as she was only allowed 100 NTG per month. She had documented distal disease and when she went to refill her sublingual NTG, she was told it was “too soon.” She had many emergency room visits that could have been avoided if she had her NTG. With the faxed discharge summary to her case manager, Phoebe was able to get the NTG she needed. She did not need to limit her activity or hoard NTG. She was taught about premedication with NTG before strenuous activity to avoid pain or help prevent serious pain requiring several NTG.

EECP is 35 visits, 5 days per week, wrapped on a treatment table for a one hour session, so in a sense, you have a “captive” audience. She was taught about her medications, her diet, her risk factors and how it was within her power to modify some of them. Even though she did not have congestive heart failure, increased salt meant increased work of the heart and more angina for her. She didn’t add salt but would eat Chinese food and not realize the sodium content she was taking in. She was taught about premedication with NTG before strenuous activity as well as how to transport or hoard NTG. She was taught about the sodium content in the food she ate. Patients were counseled about the importance of sodium and how to reduce it. She was taught about the importance of sodium and how to reduce it.

Phoebe did very well with EECP®. Outcomes demonstrated improvement of angina by 2 functional classes. She was amenable to cardiac rehab and she was referred to a rehab in her area so she would continue to progress after EECP®. At one year, she was eligible for another 35 visits of EECP® therapy, but was experiencing maintenance of reduction in angina class, angina episodes, sublingual NTG use, and...
improvement in quality of life. She was cooking, gardening and attending a Wednesday embroidery class. She had no emergency room visits or hospitalizations. Phoebe returned for treatment in June 2006, followed by yearly therapy last in 2009 to maintain her functional capacity and improved classification of angina.

**Conclusions**

As treatments for coronary artery disease (CAD) improve, including medical therapies as well as interventional techniques, more patients will survive to the point of end stage disease. These patients are particularly challenging because they continue to experience debilitating pain despite maximal therapy. Enhanced external counterpulsation is a noninvasive outpatient treatment option for patients with chronic angina refractory to medical treatment and who are not candidates for interventional or surgical revascularization. Clinical studies over the past several years have shown that about 75% of patient treated with a single course of EECP® experience a reduction in angina and are able to return to a more active lifestyle. The American Heart Association recommends EECP® as a Class IIb (Level of Evidence: B) for treatment of refractory angina. The utilization of EECP® in earlier stages of CAD will be an area for future research.

**References**


Lowell General Hospital EECP Lab, 295 Varnum Ave, Lowell MA 01854 (978) 937-6326 [http://lowellgeneral.org/go/services-and-specialties/cardiac-services/services-we-offer/cardiac-treatment/eeep](http://lowellgeneral.org/go/services-and-specialties/cardiac-services/services-we-offer/cardiac-treatment/eeep)


[www.vasomedical.com](http://www.vasomedical.com)

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**Ranexa for the Treatment of Chronic Angina**

Chronic angina is characterized by chest pain or discomfort, associated with exertion or stress, and may also manifest as dyspnea or fatigue. The most recent American College of Cardiology (ACC) /American Heart Association (AHA) chronic angina guidelines state that, for most patients, the goal of treatment should be relief of anginal chest pain and return to normal activities and a functional capacity of CCS class I angina. Despite receiving maximum medical therapy, a proportion of patients will continue to experience angina. In addition, some antianginal agents may be associated with dose limiting effects such as hypotension and bradycardia. Ranexa (ranolazine) is a relatively new drug used for the treatment of angina. Ranexa has been shown to significantly improve the amount of time patients with stable angina are able to exercise before developing symptoms. Ranexa can help to reduce the number of anginal attacks if taken as prescribed, but does not stop angina once it has started.

Ranexa may be used with beta-blockers, nitrates, calcium channel blockers, anti-platelet therapy, lipid lowering therapy, ACE inhibitors, and angiotensin receptor blockers. The anti-ischemic and anti-anginal effects of Ranexa do not depend on reductions in heart rate or blood pressure. The drug has a novel mechanism of action compared with other antianginal agents as an inhibition of the late inward sodium current in cardiac cells. Blocking this sodium channel improves the metabolism in ischemic heart cells, reducing damage to the heart muscle, and also reducing angina symptoms. Ranolazine ER has demonstrated improved glycemic control in patients with diabetes mellitus.

Initially, a chief concern about Ranexa was that it can prolong the "QT interval" on the ECG. Ranexa now has been shown to actually reduce the risk of developing ventricular arrhythmias and atrial fibrillation. The most common side effects of Ranexa have been headache, constipation and nausea. Dosage and administration of Ranexa is 500 mg twice daily and may be increased to the maximum recommended dose of 1000 mg twice daily, based on clinical symptoms. Ranexa is primarily metabolized by cytochrome P450 in the liver and intestines, and is contraindicated with CYP3A inducers or strong inhibitors, and grapefruit juice or grapefruit containing products.

Ranexa was originally recommended as a second or third choice drug in treating patients with angina, but in November, 2008 it was approved by the FDA as a first-line agent.

Deirdre Proudman BSN, RN-C, CCRN
Membership News

It was great to see all of the MACVPR members at the Fall Symposium. We were very excited to have a large group of nursing students from Fitchburg State College attend the symposium.

Membership currently stands at 116 members. This includes 1 student.

Early Fall 2011, a letter was sent out to 10 Nursing schools in the greater Boston area and 12 schools of Sports Medicine and Exercise Physiology describing the MACVPR organization and how students may benefit. Flyers and applications were included in the packet mailed to each school. Student membership is $25 per year if a student carries at least 12 credits.

We continue to encourage all of you to renew your membership. The Executive Committee continues to search for methods to increase our current enrollment. We continue to provide members with updates on the local and national level relating to legislation, reimbursement and certification from meetings, newsletters and on-line networking forum.

Happy Holidays See you in 2012
Melessa Ashworth, RN, BSN
Falmouth Hospital Cardiac Rehab
membership@macvpr.org

The Executive Committee would like to thank Susan for her dedicated service for the past 7 years as Treasurer. She will be greatly missed!

Treasurer’s Report

Current balances as of Nov 6, 2011:
Citizen’s Bank checking: $8,090.60
Citizen’s Bank Money Market fund $2,630.31
Total $10,720.91

Annual report filed with the state per statute.

Susan Carrigan, BSN, RN C
UMass Memorial Med Center Cardiac Rehab
treasurer@macvpr.org

MACVPR Forum Update

Have you signed on to the new MACVPR website yet?? Check out the new Forum….it is a lot more user friendly. We created various categories to organize the posts and make it easier to participate.

This is a great but underutilized resource...so please start to take advantage of it. Sharing our thoughts and experiences with one another helps all of our programs improve the care we provide to our patients.

Contact Ann Stone at admin@macvpr.org
if you have any questions. She is happy to help :)

Membership Graph

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Holiday Stress

When you hear the word, “holidays” what comes to mind? Stress? Print and visual media bombard us with images of the way we are “supposed” to be during the holidays -- happy, healthy, successful, relaxed, uber-organized and with a perfect set of relatives and friends to join in the merrymaking. But let’s be honest, many of us feel extreme stress during the holidays brought on by these unrealistic expectations of ourselves and others. I can’t think of a better time than the holidays to integrate some tips for stress management into your life. Here are some of my favorites, and I would love to hear some of your tips (email me at pressler@stressresources.com).

Tips for Stress Less Holidays

• Lower the bar -- Do you really need to be Martha Stewart?

• Practice the fine art of saying “no” -- It is hard to do, but a necessary skill. Weigh the yes-to-stress ratio (i.e., Will saying yes to this request cause me more stress than is healthy? If yes, say no.)

• Find a source of renewal within the busyness -- For every hour that you spend on holiday tasks, take at least one to three minutes for renewal and centering. This could be gentle stretching, meditation, or simply closing your eyes and resting.

• Embrace Wabi-Sabi -- Wabi-sabi is the Japanese aesthetic principle of finding beauty in imperfection, impermanence, and simplicity. What a wonderful way to reframe the beauty.

• Allow yourself to monotask -- Studies show up to 40% more efficiency for those who perform tasks sequentially (monotasking) vs. simultaneously (multitasking).

• Prioritize Tasks -- Write down everything you feel you must do, and then eliminate at least one or two items from the list. Review your list periodically and see if you can eliminate other non-essential items.

• Acknowledge what you DID get done, and not what you have not finished.

• Delegate -- Allow others to participate in the preparation – true, you need to give up control over the outcome…can you live with that?

• Let go of expectations -- Your own expectations and expectations from others.

• De-Tribe once a day -- Take a mental and physical mini-vacation away from your “tribe”. This could be a walk by yourself in nature, a soak in the tub, disappearing for 15 minutes with a good book and a cup of tea. By consciously cultivating times of solitude, you will be more present with others when you return to your “tribe”.

• Remember to breathe -- Breathing is UNDERrated…mindfully breathe at every STOP sign.

Pamela Katz Ressler, MS, RN, HN-BC is the founder and president of Stress Resources (www.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 an adjunct faculty member at the Tufts University School of Medicine and the University of Massachusetts Boston, College of Nursing and Health Sciences, and serves on the board of directors of the Integrative Medicine Alliance. Pam’s CD, Opening the Door to Meditation, featuring tools of relaxation and meditation is available on www.StressResources.com and www.amazon.com.
Upcoming Webcasts

December 2, 2011  Pulmonary Rehabilitation Outcomes Toolkit  
Presented by: Chris Garvey, FNP, MSN, MPA FAACVPR

December 15, 2011  Pulmonary Rehabilitation Research: Translating Research into Clinical Practice  
Presented by: Brian Carlin, MD, MAACVPR

January 26, 2012  Smoking Cessation: Updates in Research and Practice  
Presented by Ana Mola, MA, RN, ANP-BC, CTTS

February 9, 2012  Updates in Cardiac Rehabilitation Research  
Presented by Murray Low, EdD, MAACVPR, FACSM
The MACVPR 2011 New England Cardiovascular & Pulmonary Rehabilitation Symposium on October 21, 2011 was a huge success! This was the highest attended MACVPR educational offering to date with 86 attendees! Kudos to Ginny Dow and Deirdre Proudmun, Education Co-Chairs as well as the entire Education Committee for their hard work in developing a well rounded and informative agenda featuring two speakers from National. Here’s a summary of the offerings in case you missed the day.

Treatment of Obesity in Cardiac Rehabilitation presented by Phil Ades MD, MS, FAACVPR Director of Cardiac Rehabilitation at Fletcher Allen Hospital and Professor at University of Vermont College of Medicine, opened the education sessions with the issue of obesity and CHD. He discussed that the “standard cardiac rehabilitation program” is ineffective for weight loss as the caloric expenditure of the exercise component is low, and behavioral weight loss programs are generally not offered. An optimal exercise program would maximize exercise related caloric expenditure and behavioral support to maximize risk factor response. “Walk daily, walk far” along with a medically supervised weight loss program would provide sensible, long term sustainable results. The LEARN Program for Weight Control by Kelly Brownell PhD was presented as a model program.

Anticoagulation Drug Update by Gail Carey, RN, manager of the Anticoagulation Clinic at Emerson Hospital, provided cutting edge information on novel anticoagulant therapy utilizing Dabigatran, Apixaban, Rivaroxaban, and Edoxaban, as well as the better known agents’ aspirin, Plavix, and Warfarin. Beginning with the epidemiology of atrial fibrillation, indications for anticoagulation and risk stratification were discussed. Advantages, disadvantages, pharmacokinetics, mechanisms of action, FDA approved indications, and efficacy were components of this information packed lecture. Strategies for patient selection in the form of case studies were engaging and ended with important patient education issues.

AACVPR Update and Outcome Measurement in Cardiac and Pulmonary Programs, a National Perspective were exceptional talks presented by Gayla Oakley, RN, FAACVPR, Co-Chair, AACVPR Certification & Recertification Committee. She presented an overview of AACVPR followed by the essentials of outcome data. She commenced with the launch of the AACVPR Outpatient Cardiac Rehabilitation Registry set for June 2012 as a powerful tool for tracking patient outcomes and performance in meeting evidence-based guidelines for secondary prevention in cardiac and vascular disease. Participation will provide cardiac rehabilitation programs with national outcomes for benchmarking and demonstrate the positive impact of cardiac rehabilitation on the morbidity, mortality, physical function, and quality of life of patients across the United States.

AACVPR Program Certification requires at least one year of outcome data prior to the application deadline in the domains of clinical, behavioral, health and service for both cardiac and pulmonary rehab. PR 2013 cycle adds evidence based outcomes of function, symptoms, and quality of life. Statutory requirements (CMS-JCAHO-MAC) require evaluation of progress as it relates to the individual’s rehabilitation which includes beginning and end evaluations based on patient centered outcomes. AACVPR web page – members only provides a cardiac rehabilitation outcomes matrix and a new pulmonary rehab outcomes toolkit. Questions? carreh@boonecohealth.org

Obstructive Sleep Apnea (OSA): Implications and Management for Cardiac and Pulmonary Rehabilitation Patients presented by Terese Hammond MD,Director of Outpatient Pulmonary Rehab/Emerson Hospital, Assistant Professor of Medicine Boston University, defined OSA and illustrated the pathophysiology and risk factors and conditions associated with OSA as it pertains to cardiac and pulmonary disease. Untreated OSA is associated with an increase in all cause mortality and contributes to the metabolic dysregulation which is impacted by treatment along with risk reduction in both the cardiac and pulmonary rehabilitation settings.

Completing the symposium lecture series was Laughter Yoga by Donna Peltier-Saxe, RN, MSN, ACM, Massachusetts General Hospital, who ended the day with the Laughter Yoga experience for all attendees. She discussed the origin, history, and purpose of Laughter Yoga, as well as the relevance of Laughter Yoga as a personal or professional practice. Clinical benefits include decreased cortisol levels, reduction in stress mediated hormones, and an increased HDL which does anybody good! The symposium ended with group chair dancing to the twist which can be easily incorporated fun to any stress management program.
MACVPR 2011 New England Cardiovascular & Pulmonary Rehab Poster Presentation Session

The 2nd Poster Presentation Session was held during the MACVPR 2011 New England Cardiovascular and Pulmonary Rehabilitation Symposium at the Devens Common Center, Devens, MA on Thursday October 21, 2011. Posters were displayed throughout the conference and provided a forum to showcase successful approaches to patient care, and highlight innovative ideas and practices. Making a return appearance from the inaugural poster presentation included:

**Animal Assisted Activity (AAA) for Stress Management** Donna Lind, RN - Lowell General Hospital

**Brief Motivational Interviewing** Patrick Schilling, BS, CEP – Cooley-Dickinson Hospital

**Cardiac Rehabilitation: Predictors of Healthy Heart Behaviors** Virginia Dow RN, BSN, BC - Emerson Hospital

**Enhanced External Counterpulsation** Deirdre Proudman RN-BC, BSN, CCRN- Lowell General Hospital

**Influenza Immunization as Secondary Prevention for Cardiovascular Disease** Deirdre Proudman RN-BC, BSN, CCRN- Lowell General Hospital

New Posters included:

**Improving Cardiac Rehabilitation Patients’ Compliance in Self Monitoring** Lynn Gatti Walton, BSN, RN - NSMC Union Hospital

**Metabolic Syndrome and Cardiometabolic Risk** Deirdre Proudman RN-BC, BSN, CCRN- Lowell General Hospital

Read Lynn’s complete abstract featured in Tales from the Trenches!!

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**Here’s a few of the terrific comments that were received:**

“Loved the location for an all-day meeting. “

“Devens Commons great venue! “

“Fantastic range of speakers.”

“Thank you Education Co-Chairs & Committee – Excellent Program!!”

“Great fun! Thank you. “

“More and more of the quality and scope of the AACVPR Meetings - posters and vendors – excellent. “

“MACVPR needs to apply for outstanding affiliate award.”

“Strong presenters on different areas.”

“Very informative as a student.”

“Dr. Ades & Dr. Hammond were both inspirational & motivational.”

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**We are grateful to our sponsors who support our educational programs:**

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**The next Education Committee Meeting is being held Dec 8th at 10:30 at the AHA. We welcome new committee members and any input you may have!!**
Tales from the Trenches
As there was not any articles submitted for this column, the two new abstracts form the symposium were included here. Very interesting studies.

Project Title: Improving Cardiac Rehabilitation Patients’ Compliance in Self Monitoring
Lynn Gatti-Walton RN, CCRN, Director Cardiac & Pulmonary Rehab, NSMC Union Hospital

Abstract of the project: Over the last 20 years the incidence of obesity in the U.S. population has increased. As obesity is an independent risk factor for cardiovascular disease more than 80% of patients in Cardiac Rehabilitation programs are overweight. Though research has shown that outcomes in Cardiac Rehab for weight loss have been minimal. Studies have demonstrated that programs need nutritional and behavioral weight loss counseling along with an exercise program that is geared to increasing the maximum exercise-related caloric energy expenditure. Other research has demonstrated that self-monitoring diet, exercise and self-weighing for weight loss have demonstrated successful outcomes in weight management. Our Cardiac Rehabilitation team looked at a group of 25 of our own patients and found that the patients that utilized a self-monitoring diet food log lost an average of 6.2 pounds versus the patients that did not use the food log. They lost an average of only 1.6 pounds. We also looked at compliance for food and home exercise self-monitoring logs over a 4 week period. This demonstrated only 17% compliance for both home exercise and food logs. We established a Process Improvement Team consisting of our medical director, cardiac rehab nurses, clinical exercise physiologist, registered dietitian and clinical counselor. We established our goal to increase the rate of patients doing self-monitoring for diet and exercise to 34% (doubling our current %). Utilizing both patient and staff feedback we standardized our work flow, revised our self-monitoring log, added visual reminders and increased patient staff communication as we implemented the new self-monitoring log. The new logs also have an area for patient self-reflection and a place for them to record their action plan for the week. After using the new protocol we reassessed our food record and home exercise self-monitoring compliance over 4 weeks during April - May 2011. Our compliance rate averaged 55% demonstrating the benefit of this new protocol. We continue to use this process and provide ongoing monitoring to ensure we are able to achieve our goal of > 34%. We did another analysis of our compliance rates over 4 weeks in July-August 2011. Our compliance rate of patients completing both food and home program logs averaged at 47%. We were able to meet our goal, however did not meet the previous rate. Factors influencing this were identified as: 1. Our Clinical Counselor position has been vacant from May. In this role the individual reinforced the behavior of self-monitoring and would meet with patients that were identified as having barriers to change. 2. This timeframe was during the summer and some patients were not as consistent with attendance and completing logs. Next steps: We are continuing with the consistent work flow process and reinforcing the benefit of the self-monitoring logs at each session. We are actively recruiting for a clinical counselor. We also plan to look at weight loss outcomes of the patients during these timeframes and compare their weight loss results to their use of the self-monitoring logs.

Learning objective #1: The learner will understand the benefit of a self-monitoring program for diet and home exercise to help patients improve weight loss outcomes.

Learning objective #2: The learner will understand the benefit of utilizing Process Improvement methodologies i.e. standardizing work flow, using the customers voice; to improve patient outcomes for weight loss.

Project Title: Metabolic Syndrome and Cardiometabolic Risk
Deirdre Proudman BSN, RN, CCRN – Lowell General Hospital

Abstract of the project: Cardiovascular disease is the No. 1 killer of both men and women in the United States. Stroke is the No. 3 cause of death in the United States. One reason these statistics are fact is undeniably a lack of commitment to a heart-healthy lifestyle. Your lifestyle is not only your best defense against heart disease and stroke, it is your responsibility. Risk factors that can't be changed include increasing age, male sex, and heredity. Risk factors which are modifiable or controlled by lifestyle and/or taking medication include smoking, dyslipidemia, hypertension, physical inactivity, obesity, and diabetes. Other factors which contribute to heart disease risk include stress, alcohol, and diet. Special considerations are specific to women such as oral contraceptive use, hormone replacement therapy, and polycystic ovary disease, as well as the recommendation of influenza immunization. Metabolic syndrome is a clustering of three of the five risk factors of hyperglycemia, central obesity, elevated triglycerides, decreased HDL cholesterol, and hypertension. It is a principle risk factor for cardiovascular disease and diabetes. Primary management for the metabolic syndrome is healthy lifestyle promotion. Primary risk prevention and secondary risk management and prevention for disease progression are the same.

Learning objective #1: Identify the components of metabolic syndrome

Learning objective #2: Understand that primary risk prevention and secondary risk management and disease prevention is healthy lifestyle promotion
Two cardiac rehabilitation programs, Milton and Faulkner hospitals, were successful in their AACVPR Program Certification applications this past year. A number of programs were also submitted successful re-certification applications. That brings the total of AACVPR Certified programs in the Massachusetts to 27 cardiac and 7 pulmonary. Congratulations to everyone who was successful in attaining this distinction!

Gayla Oakley, RN, FAACVPR, Chair of AACVPR Program Certification spoke at the MACVPR Fall Symposium on October 21, 2011. Gayla told the MACVPR Executive Committee that AACVPR is aware that there continues to be problems with the electronic Program Certification and Re-Certification process. The Executive Committee shared specific issues encountered by MA programs, most notably the need for increased communication from AACVPR to the programs throughout the application and review process. Gayla was very receptive to the comments and vowed that she would bring MACVPR’s concerns to AACVPR leadership at the earliest opportunity.

Gayla also spoke about the upcoming certification cycle. If you are planning on applying for AACVPR Program Certification/Re-Certification in 2012, please keep these dates in mind:

- **December 1, 2011**: Certification Center opens
- **February 28, 2012**: Application Period Closes
- **March 1 – April 30, 2012**: Review Period
- **June 1 – June 30, 2012**: Certification Leadership Review
- **July 1 – July 31, 2012**: AACVPR Board of Directors reviews and approves recommendations of Program

Gayla also mentioned that programs planning on submitting applications in 2012 should be using data that was collected between January 1, 2011 and December 31, 2011. A minimum of 30 subjects needs to be submitted, unless the program is small, in which case 100% of the data should be submitted. For the 2012 certification cycle, the required domains remain the same for both cardiac and pulmonary rehabilitation: clinical, behavioral, health, and service. Beginning in 2013, the required pulmonary domains will change to include evidence based outcomes on function, symptoms and quality of life. Data on these measures will need to be collected during calendar year 2012. AACVPR will be holding a webinar on December 2, 2011 on the Pulmonary Rehabilitation Outcomes Toolkit. This webinar is available to AACVPR members for only $35, and promises to be an invaluable resource for pulmonary rehabilitation programs planning on applying for AACVPR Program Certification in 2013.

MACVPR Program Certification liaison
Robert Berry MS, RCEP
robert.berry@bhs.org

As an incentive to get members involved we would like to offer free CE’s for your contribution to the newsletter!!! Anyone who contributes an article for Tales from the Trenches or a Clinical Article can receive this…..a $20 value!

Our aim is to spotlight anything unique, innovative or creative that you are doing in your programs and share your ideas with our membership. We can all learn a lot from what each other is doing on a daily basis!! Maybe you know of a program that is doing something unique that you would like to find out more info on….well feel free to interview them and submit the findings to share in our newsletter!! If you don’t want to do the interview, pass the idea along to me and I would be happy to do it. Also feel free to write an article on anything your program is doing that you would like to share!!

Ideas for Tales might be:

- Highlighting an exceptional patient that has done very well despite difficult obstacles
- Transitioning patients to aftercare programs
- Interesting ideas for Process Improvement
- How does your program deliver education?

For more information please contact Lynne MacDonald at newslettereditor@macvpr
In January, 2011, Representative Don Humason of Westfield, MA and Sen. Gale Candaras of Longmeadow, MA introduced identical bills to the MA legislature on behalf of the MA Association of Clinical Exercise Physiology (MACEP). These bills are moving along parallel paths, one in the House, the other in the Senate. The intention of this legislation is to establish minimum standards for education and training of clinical exercise physiologists and also to define a much needed scope of practice. When passed, this bill would require clinical exercise physiologists to hold a Masters’ degree in exercise physiology, exercise science, kinesiology or applied exercise physiology and either the ACSM Clinical Exercise Specialist or the ACSM Registered Clinical Exercise Physiologist certification in order to practice in the Commonwealth. There is a “grandfather clause” which permits licensure of individuals holding a Bachelors’ degree in one of the above disciplines and who have considerable experience in the field (≥ 10,000 hours). This clause would be in effect for one year from the date of passage of the bill, after which the entry level credential will be a Masters’ degree and one of the above named ACSM certifications. The bill also defines the scope of practice for clinical exercise physiologists to include cardiovascular, pulmonary, and metabolic diseases, neoplastic (oncology)/immunologic/ hematologic conditions, along with chronic orthopedic and neuromuscular diseases and disabilities. This licensure effort has been endorsed and supported by AACVPR, ACSM, MACVPR, the Clinical Exercise Physiology Association (CEPA) and the MA Dietetic Association (MDA). The complete text of these bills can be found online at [http://www.malegislature.gov/Bills/187/Senate/S01072](http://www.malegislature.gov/Bills/187/Senate/S01072).

To date, representatives from MACEP, CEPA and ACSM have testified to joint committees in both the MA House and Senate in support of this legislation. The MA chapter of the American Physical Therapy Association testified in opposition to the bill, citing an overly broad proposed scope of practice and insufficient training of clinical exercise physiologists in neuromuscular and musculoskeletal domains as the basis of their objection. MACEP has tried to address these issues by working with representatives of the APTA of MA over the past 10 years to develop a scope of practice that is agreeable to both groups, and believes that the proposed scope of practice in the current bills represents their best effort at developing language that is flexible enough to meet the needs of the growing clinical exercise physiology profession, while not infringing on the existing physical therapy scope of practice. MACEP also offered testimony to the MA Senate detailing the Commission on Accreditation of Allied Health Education Programs (CAAHEP) educational standards (including neuromuscular and musculoskeletal domains) for the training of exercise physiologists that were developed in collaboration with multiple national professional organizations. MACEP has repeatedly stressed in hearings to both committees that the practice of clinical exercise physiology should be seen as complementary to that of physical therapy, and that the professions should collaborate with each other to achieve the best possible outcomes for the patients.

Next steps are for each committee to issue a recommendation on the bill. The committees can either elect to pass the bill in its current form to the general legislature for a vote, recommend the bill be amended then passed to the general legislature, reject the bill outright, or issue no overview recommendation at all. There is no timetable for these recommendations to be issued. MACEP is hopeful that each committee will pass the bill as is to the general legislature soon.
MEMBERSHIP APPLICATION

Or
Download application from www.macvpr.org

Name (with Credentials):
____________________________________________________
____________________________________________________

Mailing Address you want the card sent:
Home/Work (Please circle)
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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 Ann Stone
PO Box 426 Woods Hole, MA 02543
admin@macvpr.org

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PLEASE RENEW YOUR MEMBERSHIP

The following individual memberships have either expired since September 2011 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 web site which includes the newsletter and on-line forum.

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