

PCNA 15th Annual Symposium – Poster Abstracts

Poster # 1 *Category: Data-Based Research*

SECONDARY PREVENTION: VIEWPOINTS ON SELF-CARE NEEDS OF MIDDLE-AGED WOMEN FOLLOWING A HEART ATTACK

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Background Summary: Few studies have focused on the impact of a myocardial infarction (MI) on the lives and roles of middle-aged women who are committed to family, jobs and community.

Objective: As part of a pilot study designed to help women manage fatigue following a MI, women were interviewed to gain insights into their fatigue experience and self-care needs.

Methods: Ten women (age 48 to 59) were interviewed at 1, 6 and 12 weeks after their MI. The same series of open-ended questions focusing on the experience of angina and fatigue were asked at each interview. Interviews were transcribed verbatim. Life Transition Theory was used to guide the qualitative analysis.

Results: Women's stories centered on the need to maintain their sense of self as defined by previous family roles. Women highlighted stress as the reason for having the MI at this time in their lives. In the first interviews, women verbalized the importance of lifestyle changes and need for stress reduction. In addition, they expected to be back to their usual roles at 3 months. At 3 months, women changed their diets, stopped smoking, but were struggling to manage stress and find time for exercise.

Conclusion: Maintaining a productive self-image was a defining feature of women's experiences. Women wanted to quickly return to their family roles, defined as stressful in their first interviews. Women did not recognize how this goal conflicted with the self-care need for stress reduction and exercise. As prevention strategies, nurses can explore this conflict with women, provide options for reframing self-care as productive activity, teach fatigue management, and partner with women to fit stress reduction and exercise into what the woman normally does in her daily life.

Poster # 2 *Category: Data-Based Research*

COMMUNITY-BASED PARTICIPATORY RESEARCH: THE ROXBURY: HEART AND SOUL CLINICAL TRIAL

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Background: A disproportionate number of African Americans (AA) have cardiovascular (CV) risk factors/disease. Central to eliminating disparities in CV outcomes for AA are interventions that are culturally appropriate, feasible, effective and sustainable. Toward that goal, Community-Based Participatory Research (CBPR) provides a model for engaging the community in the design and conduct of relevant clinical trials, enhancing the probability of success.

Objectives: The purpose of this study is to test a heart disease prevention program (HDPP), emanating from CBPR, in the African American community.

Methods: This ongoing, randomized, clinical trial emphasizes CBPR. Pilot work at the Roxbury Heart Center enabled a strong grassroots presence in this community including a partnership with Cherishing Our Hearts and Souls (COHS), a coalition representing community residents, organizations, and health centers, as well as human and social services agencies, local government, and elected officials. In addition to feedback from COHS and the clinical pilot, focus groups were conducted with community residents. Input from the group was integrated into the curriculum and informed recruitment strategies. Participants of the pilot clinical HDPP are involved in the study as peer leaders. These strategies should enhance recruitment and retention.

Results: As of week 12, 36 AA adults have been randomized. Retention rates (73% control group; 84% intervention group) were calculated based on the mean percent attended out of 12 sessions. Recruitment is ongoing. Participant satisfaction remains high and preliminary results are encouraging.

Conclusions: CBPR methods have been integral to the conduct of this clinical trial and the successful retention of subjects to date. To ensure successful outcomes and translation of findings, collaboration between researchers and the community of interest is essential. Successful implementation of a community-based HDPP in this underserved, at-risk community could contribute to the overall goal of improving the CV health outcomes of African Americans.

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Poster # 3 Category: *Clinical Patient Management*

PREDICTIVE MODELING FOR CARDIOVASCULAR DISEASE IN ASYMPTOMATIC POPULATIONS

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Objective 1: To provide a screening program looking at primary prevention in order to identify cardiovascular risk, as well as one's ability to develop coronary heart disease in the next 10 years. This is conducted usually in a group of asymptomatic individuals with easy application, results and counseling delivered at point of care. The measurements collected are in five areas: 1. Lipid panel for hyperlipidemia; 2. Metabolic Syndrome (pre-diabetes); 3. Framingham Risk Score (ability to develop coronary heart disease in the next 10 years); 4. Blood Pressure (hypertension); and 5. Body Mass Index (obesity).

Objective 2: To provide an aggregate of the data to the organization/corporation of the participants as an assessment for future health planning.

Methods: The screening was designed and implemented in 2006 called "Metabolic Screening" in corporations, schools, and community organizations. As per this writing, we have conducted 1286 individual screenings. The testing team is made up of nurses, exercise physiologists, registered dietitians, and secretaries. The testing is performed with a drop of blood from one's finger, as well as weight, height, blood pressure, waist measurement, and several questions. Results are calculated in 5 minutes and the individual receives a booklet in which the findings are recorded. Discussion and counseling on the results and an initial plan of care is developed. The individual then meets with a registered dietitian, who reinforces findings as well as delivers appropriate nutrition counseling if needed. If an abnormality is identified, depending on severity, different plans are put in action. This may range from a referral to a physician up to a referral to a cardiologist and/or entrance into our Cardiac Prevention Program at Greenwich Hospital. Once all the screenings have been completed, an aggregate of the results are supplied to the corporation with an aftercare menu of services to address the results.

Results:

- i. Lipid Panel (percentage of the population outside normal range): Total Cholesterol- 42%, LDL- 35%, HDL- 25%, Ratio-26%, Triglycerides- 26%
- ii. Metabolic Syndrome (pre-diabetes)-15% (below percentages are outside normal range): Blood Pressure- 20% (note BP >130/85), Blood sugar- 24%, HDL- 25%, Triglycerides- 26%, Waist Circumference- 18%
- iii. Framingham Risk Score (ability to develop coronary heart disease in the next ten years): Low- 91%, Medium- 6%, High- 1%
- iv. BP >130/85- 20%
- v. Body Mass Index: (note n=525): <19% BMI underweight- 1%, 19-24.9% normal- 36%, 25-29.9% overweight- 38%, 30-34.9% obese- 5%, 35-39.9% obese (1)- 5%, ≥40 obese (2)- 0%

Discussion: This program is a form of predictive modeling dealing in the Primary Prevention of Cardiovascular Disease. It has a two fold focus: the individual cardiac health and the corporate or aggregate health. At the individual level the identification of cardiovascular risk factors as well as one's ability to develop coronary heart disease is provided at point of service with a drop of blood, a few measurements, and initial plan of care started. This is a population that may not have been captured, or identified until later in life. At the aggregate level this program is an assessment of what some of the future health care needs may be for this group as it relates to cardiovascular disease and some of the risk factors which may be chronic in nature requiring health care dollars and resulting in possible decrease productivity. A menu of aftercare services based on findings supplies the management with a plan of care, assisting in the health care needs of the corporation.

Implications for individuals, hospitals, and health care systems: This is a model of care that identifies asymptomatic individuals for Cardiovascular Disease, in a cost effective manner, with easy application and can screen large groups. Results are delivered at point of service and an initial plan is begun. It will identify individuals who may not have entered the health care system as well as counseling others on a plan of care to prevent negative outcomes of cardiovascular disease. A number of the positive findings have required different treatments, ranging from the introduction of statin therapy, identification of a genetic disorder and interventions including angioplasty. The aggregate data, followed by a menu of aftercare services, can increase the delivery of health care by the hospital/system to organized groups. Other hospitals have looked at this model and inquired about the process, application, and implementation.

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CORONARY ARTERY DISEASE HEALTH EDUCATION: BETA-BLOCKER DISCHARGE CALL PROGRAM

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Background: Horizon BCBSNJ's Coronary Artery Disease Health Education Program holds unprecedented promise for educating CAD population about their disease such as the appropriate use of medications, treatments, and the behavioral modifications of managing CAD. Since January 2003, the Program integrated the innovative application of the Beta-Blocker Discharge Call Program. Early intervention and education are critical to members' health status. Our Beta-Blocker Program furnishes members with information about their cardiac medication and treatment following discharge from the hospital with a diagnosis of Acute Myocardial Infarction (AMI). Per the American Heart Association guidelines, beta-blocker therapy is—unless contraindicated—the recommended treatment for a recent AMI. The Beta-Blocker program is an important link with the member to provide teaching and education about their recent cardiovascular event. By bridging the discharge call nurse with the CAD care specialist we are able to provide the member with a cohesive chain of information and telephonic education. The Care Specialist works with registered dietitians, social workers and behavioral health specialists to support their needs that will ultimately benefit the member's outcome and recovery

Results for three consecutive years with every member or provider contacted, show that the Beta-Blocker Discharge Call Program has 100% compliance as per Health Employer Data Information Set (HEDIS®) measures. Through the promotion of education, support and positive reinforcement, we can encourage member adherence to their providers recommended treatment regimes, thereby improving quality of life and preventing unnecessary complications resulting in hospitalization

Poster # 5 *Category: Clinical Patient Management*

COMMUNITY OUTREACH AND ENGAGEMENT THROUGH FORMALIZED SCREENING PROGRAM FOR THE EARLY DETECTION AND PREVENTION OF CARDIOVASCULAR DISEASE

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Background: Our hospital serves three of the most rural, oldest, and medically-underserved counties in our state. Market assessments indicate that our community is more at risk than the region's national counterparts with a considerably higher mortality rate for cardiovascular disease and a higher rate of end-stage heart failure. The majority gains access to care through the emergency department rather than non-urgently through physician practices.

Objective: A hospital-based cardiovascular screening and outreach program was developed to increase awareness, promote early detection, and provide risk management.

Methods: "The One Consultation That Can Save Your Life," the first outreach program of its kind in our area, was designed to provide personalized "one-stop" cardiac and vascular screening with "on-the-spot" review of results by nurses, exercise physiologists, and a cardiologist with prompt referral to support services, such as exercise/fitness programs, medical nutrition therapy, and diabetes education for aggressive risk management. No prescription is required. Immediate results-reporting to primary care physicians and participants was conducted through letters and facsimile.

Results: Of 172 persons screened, an astounding number of persons were identified with disease risks. Abnormalities included: electrocardiograms (EKGs)-47%; lipid panel-51%; fasting blood sugar-15%; body fat percentage-90%; carotid scan-30%; ankle brachial index (ABI)-12%.

Two persons screened on the initial days of the program were found to have critical results and required same-day hospitalization. A number of participants were referred for specific cardiac diagnostics which resulted in angioplasty and stents.

Other referrals included cardiac rehab exercise and fitness service-84%; medical nutrition therapy-40%; weight management-22%; and diabetes management-2%.

Conclusion: A formal, personalized screening program has a direct impact on our community through increased emphasis on prevention and the aggressive referrals for risk management.

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Poster # 6 Category: *Data-Based Research*

STATE OF THE SCIENCE: THE MAGNITUDE OF ACCULTURATION OF MEXICAN-AMERICAN WOMEN AND ITS CLINICAL IMPLICATIONS FOR CARDIOVASCULAR HEALTH PROMOTION

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Background: Acculturation of Mexican-Americans living in the United States (US) is tremendously influenced by persistent socioeconomic and racial-ethnic disparities of health status. Rapidly accruing evidence from diverse disciplines supports the hypothesis that increased acculturation is associated with adverse cardiovascular events, particularly in women of Mexican ancestry.

Objective: The primary objective aims to document a research agenda through synthesis of the state of the science relevant to the magnitude of acculturation and its clinical translation on the cardiovascular health of Mexican-American women. Secondary objectives build the science by indicating gaps in the literature and providing future recommendations.

Methods: Published research from 1983 to 2009 was located through computerized literature searches of three databases, permitting a critical review of data exclusively from US journals. Inclusion criteria limited studies to those regarding cardiovascular health-promoting lifestyle behaviors of Hispanics that included Mexican-American women.

Results: Language, nativity, age of arrival, length of US residency, and generational status mediate relationships between acculturation and health behaviors. Mexican-American women are at greater risk of declining cardiovascular health with increased acculturation, excluding those few who gained heightened awareness of therapeutic self-care management approaches. Overall cardiovascular risk alters as early as three years of US residency, but cardiovascular health profiles beyond that point are unclear. This gap in the science needs further exploration, along with establishing a universally-accepted definition, consistent measurement variables, and improved psychometrics.

Conclusion: Increased acculturation marks a particularly vulnerable sub-population of US Hispanics with a large need for cardiovascular health promotion. Observed disparity of acculturation in CHD risk, morbidity, and mortality foreshadows even greater disparities of cardiovascular disease, and other chronic illnesses, in years ahead. However, replenishing research toward understanding the interrelated processes of acculturation and Hispanic health to advance clinical practice may eliminate these disparities.

Poster # 7 Category: *Data-Based Research*

SUCCESSFUL WEIGHT LOSS INTERVENTION UTILIZING AN INTERDISCIPLINARY TEAM MODEL

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Background: Therapeutic Lifestyle Change (TLC) is the first line care for obesity; a significant risk factor for coronary heart disease (CHD). The optimal method for achieving and maintaining weight loss in TLC programs is not clear.

Objective: To assess the efficacy of an interdisciplinary team model for TLC on weight loss in 29 subjects at moderate to high risk for CHD.

Methods: A 12-hour TLC education program (Mediterranean diet and aerobic exercise) followed by 12 weekly 1-hour support group sessions. Subjects were instructed on dietary patterns, portion control, food label reading, and exercise benefits/safety. Subjects received a dietary prescription (recommended servings of the diet components) based on weight loss goals along with an exercise prescription specifying target heart rates for moderate aerobic exercise. Measures of obesity, conducted at baseline and 12-weeks, were compared using paired *t*-tests. The follow-up groups provided social support for the TLC intervention.

Results: In 29 completers (mean age=55 yrs; 59% female), significant changes in body composition were seen (see Table). Improved dietary patterns coupled with exercise resulted in a 5% reduction in weight, BMI and waist circumference (WC). Sagittal abdominal diameter (SAD) decreased by 6% and % body fat by 4%. Dietary pattern and exercise improvements may have also contributed to the 5% reduction in fasting glucose (100 ± 21 vs. 93 ± 13 ; $P=.038$) and a 10% reduction in triglycerides (131 ± 73 vs. 106 ± 51 ; $P=.035$).

	Weight (kg)	BMI	% Body Fat	WC (cm)	SAD (cm)
Baseline	86 ± 19	30 ± 5	35 ± 8	98 ± 13	23 ± 4
12-weeks	82 ± 16	29 ± 5	33 ± 8	93 ± 11	22 ± 3
P	.0001	.0001	.004	.0001	.0001

Conclusions: Early results demonstrate overall benefit in body composition parameters which if maintained long-term should favorably impact cardiovascular outcomes.

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ADDED VALUE OF AN INTEGRATIVE CARDIOVASCULAR PREVENTION PROGRAM

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Background: Early identification of disease indicators and risk factors is key to prevention. In our integrative cardiovascular prevention program, we sought to ascertain the added value of a nurse practitioner's (NP) assessment for the identification of early indicators of chronic illnesses implicated in the pathophysiology of heart disease.

Methods: Our cardiovascular prevention program is open to military healthcare beneficiaries who have free access to an assigned primary care provider and free medications. Patients may enter our program through self-referral or referral by a provider. On entry, patients are evaluated by an NP with history and physical examination, anthropometrics, ECG and a standardized panel of laboratory tests.

Results: Over 2.75 years, 436 patients were evaluated by the NP upon entry to the program.

Early Indicators of Chronic Illness	# and % of cases
New Pre-hypertension (BP > 120/80 mm Hg)	81/436 (19%)
New Pre-diabetes (Glucose > 100 mg/dL)	133/433 (31%)
New Overweight/Obesity (BMI ≥ 25 kg/m ²)	280/436 (64%)
Positive Berlin Survey (highly suggestive of new sleep apnea)	107/221 (48%)
Insufficient Sleep Syndrome (< 7 hrs sleep/24 hr period)	265/424 (63%)

Conclusions: As part of an integrative cardiovascular prevention program, our NP assessment successfully captures patients at risk for chronic disease by identifying early indicators for targeted intervention. This model for early detection of chronic illness shows promise as a way to improve quality of life and potentially reduce health care costs.

Poster # 10 Category: *Clinical Patient Management*

THE NURSE PRACTITIONER AND COMMUNITY HEALTH EDUCATOR COLLABORATIVE INTERVENTION FOR CARDIOVASCULAR RISK REDUCTION

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Background: Low-income Americans, regardless of race or ethnicity, are 2.5 times more likely to die of cardiovascular disease (CVD) than highest income Americans. Thus, there is an urgent need to develop and implement approaches that provide effective CVD risk reduction.

Objective: The purpose of this presentation is to describe a nurse practitioner (NP) – community health educator (CHE) collaborative intervention aimed at reducing CVD risk factors.

Methods: As part of a randomized controlled trial at federally qualified health centers, underserved patients with CVD, diabetes, or CVD risk factors are provided with a year-long intervention designed to capitalize on the strengths of the NP and CHE. The NP is a clinical care provider with complex medical decision-making responsibilities, managing all factors affecting CVD risk, including diabetes, hypertension, hyperlipidemia, obesity and smoking. The expertise of the NP is supplemented with the CHE's unique contribution: an indigenous awareness of ethnic, socioeconomic, and cultural factors of the patient population being served. The CHE provides goal-directed, individually tailored educational sessions on lifestyle changes and addresses medical regimen adherence and barriers to care. The interventions follow standard algorithms based on national guidelines and a strategy of health behavior change that is individualized to promote success for each patient.

Results: Currently 110 patients have completed the intervention. Results of the process evaluation of interventions will be presented, describing the percent of total effort spent on specific activities for both the NP and CHE; patient satisfaction with health care; and adherence to medications and lifestyle recommendations.

Conclusion: There is a great need for innovative approaches to CVD risk reduction in high-risk underserved communities. This NP/CHE model adds to the existing evidence that nurse-directed collaborative models of care can be effective approaches to improve patient outcomes and ensure that limited resources are allocated wisely.

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Poster # 11 *Category: Data-Based Research*

SUBOPTIMAL CARDIOVASCULAR RISK MANAGEMENT AMONG LOW INCOME URBAN DIABETICS

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Background: Diabetic patients often have multiple comorbid cardiovascular disease (CVD) risk factors that dramatically increase risk for CVD events. The purpose of this study was to examine CVD risk factor clustering and management, and predictors of uncontrolled CVD risk factors among diabetics.

Methods: Data were collected during baseline evaluation for a randomized trial of multiple risk factor intervention to reduce total CVD risk in urban community clinics. CVD risk factors were measured directly using standardized procedures. Sociodemographic characteristics, health status, and current medications were obtained via self-report questionnaire.

Results: The sample (n=201) was 71% female, 91% Black with mean age 55 ± 11 years. HgA1C was $\geq 7\%$ for 82% and $\geq 9\%$ for 39%. Over 60% had \geq four uncontrolled, modifiable risk factors. Blood pressure (BP) was uncontrolled ($\geq 130/80$ mmHg) for 71%. Of those with uncontrolled BP, 20% were not taking antihypertensive medications. Low-density lipoprotein cholesterol (LDL-C) was ≥ 100 mg/dl for 61%. Of those with LDL-C ≥ 100 mg/dl, 58% were not taking lipid-lowering medications. Only 47% were taking an ACE-I or ARB and 48% were taking ASA or other antiplatelet medication. Current smoking was reported by 27% with none reporting smoking cessation medications. Most reported inadequate physical activity (80%) or had BMI ≥ 30 kg/m² (72%). Employment and clinical characteristics were significant predictors of diabetes and BP control.

Conclusions: Despite being in care, this sample of predominantly Black, female diabetics had extensive clustering and suboptimal management of CVD risk factors including diabetes. Multifactorial interventions to manage CVD risk factors in this high risk population are needed.

Poster # 12 *Category: Data-Based Research*

WEIGHT MANAGEMENT PRACTICES AMONG AMBULATORY CARDIOLOGY HEALTH CARE PROVIDERS

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Background: In 1998 the National Heart, Lung and Blood Institute (NHLBI) released Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: Evidence Report, due to the prevalence in the United States. The guidelines provided the basic tools needed to assess and manage overweight and obese individuals. It also alerted practitioners to the accompanying health risks for many diseases and health conditions, including the following: hypertension, osteoarthritis, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, sleep apnea and respiratory problems, and some cancers .

Objective: This study examines weight management practices among providers in a heart and vascular out-patient clinic. This included assessment, interventions and barriers as compared to the guidelines suggested by the National Heart, Lung and Blood Institute. Are we familiar with and do we follow the clinical guidelines?

Methods: A convenience sample of 61 cardiovascular health care providers (as defined above) participated in a survey distributed by the research team designed to answer our question related to weight management practices of health care providers in 3 different clinic areas (General cardiology, Thoracic Cardio Vascular- TCV, and Sub-specialty).

Results: The majority of providers in ambulatory heart and vascular clinics are not familiar with the NHLBI Guidelines and there are differences by clinic in all of the areas of management. Providers in the TCV tend to address weight management and interventions less often than providers in general cardiology and less often than providers in specialty clinics. The main barrier in the TCV seems to be a perception that addressing these issues is not their role.

Conclusion: A uniform measure of obesity is needed in our heart and vascular center. Education about NHLBI guidelines is needed across all clinics and specialties. A focus on areas of weight management and work to reduce barriers would be valuable.

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USING A QUALITY IMPROVEMENT PROGRAM EMBEDDED IN AN ELECTRONIC MEDICAL RECORD TO IMPROVE MEDICATION RECONCILIATION DOCUMENTATION IN AN OUTPATIENT CARDIOLOGY CLINIC

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Background: In 2006, the Joint Commission established medication reconciliation as National Patient Safety Goal #8, stating that healthcare organizations should “accurately and completely reconcile medications across the continuum of care.” Clinicians in our cardiology clinic collaborated with our information technology department to develop an audit function within our Electronic Medical Record (EMR) to improve the documentation of medication reconciliation.

Objective: To determine if an audit function with real time feedback embedded within the EMR could improve medication reconciliation documentation in an outpatient cardiology clinic.

Methods: The process for electronic medication reconciliation was supplemented with a step to link the patient to the nurse doing the reconciliation. If medication reconciliation is not documented during the clinic visit, a message alerts the nurse of the missing documentation. After 7 days, if medications reconciliation is still not documented, the EMR will lock the user out until all required documentation has been completed, or until the user has documented “unable to define medication.”

Results: Between 2006 and 2007, Medication Reconciliation within 7 days of the patient visit improved from 70% to 100%, and these results were maintained through 2008. Based on this success, allergy medication was also added to ensure review and capture of this data at each clinic visit. Currently, allergy reconciliation within 7 days of the patient visit is also 100%.

Conclusion: EMRs can be adapted to provide quality improvement feedback in real time. This feedback, along with the 7 day lock out feature, have been instrumental in achieving our goals of 100% documentation of medication reconciliation within one week of the patient visit. While we used this system to improve our medication reconciliation documentation, the underlying structure of feedback to the user based on a defined parameter can be assigned to a variety of quality improvement goals.

Poster # 14 *Category: Data-Based Research*

DEPRESSIVE SYMPTOMS ARE IMPORTANT CORRELATES OF DIETARY ENERGY DENSITY IN OVERWEIGHT ADULTS

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Background: Stress can precipitate or exacerbate depressive symptoms and reinforce unhealthy dietary patterns potentially leading to chronic disease. Increased dietary energy density (ED) resulting in excess intake of calories and total and saturated fat may represent cardiometabolic risk.

Objective: To examine associations among depressive symptoms, perceived stress (PSS) and ED (kilocalories/gram) in overweight (Body Mass Index [BMI] ≥ 25) adults.

Hypothesis: PSS and BDI-II will explain a significant amount of ED variation while controlling for age, race, gender, BMI and reporting adequate caloric intake (RACI).

Methods: Participants were overweight working adults (n=87), 73.6% women, 50.6% African-American, mean age 41.3 +/- 10.2 years, mean BMI 32.1 +/- 6.1kg/m². Variables and measures: Depressive symptoms (Beck Depression Inventory-II [BDI-II]), Perceived stress (Perceived Stress Scale [PSS]), Weighed 3-day food record to calculate ED (mean energy of food and beverages/mean weight of food and beverages) and RACI (predicted energy expenditure/reported caloric intake). Descriptive statistics and regression were used to explain and predict ED.

Results: Mean food and beverage ED combined was 0.75 +/- .22 and beverage ED alone was .15 +/- .10 kilocalories/gram. PSS and BDI-II were moderately correlated (r=.60, p \leq .01). Regression demonstrated younger age (p=.06), male gender (p=.06), increased BDI-II (p \leq .01), African-American race (p \leq .01), and RACI (p \leq .01) explained 35.3% of food and beverage ED variance with BDI-II explaining 5.1% of variance. Increased BDI-II (p=.04), male gender (p=.09), African-American race (p=.10) and RACI (p \leq .01) explained 10.5% of beverage ED variance with BDI-II explaining 4.4% of variance. BMI and PSS did not contribute to ED variance.

Conclusions: African-Americans, individuals with depressive symptoms and RACI consumed higher ED foods and beverages. Individuals with depressive symptoms and RACI consumed higher ED beverages. Higher stress may contribute to increased depressive symptoms, thus, higher ED. Whether a reduction in depressive symptoms could change ED in overweight adults merits evaluation.

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Poster # 15 *Category: Clinical Patient Management*

VASCULAR PATIENT INSULIN PILOT

Lori S. Giles, Heather Whitaker, BSN, Katie Schneider, RN, Athens Regional Medical Center, Athens, GA

The Cardiovascular Stepdown unit at Athens Regional Medical Center in Athens, Georgia has conducted a nurse driven pilot for managing blood glucose levels in vascular surgical patients. This nurse pilot was initiated to assist the physicians in managing blood glucose values, pre and post operatively. Recent studies have concluded that surgical patients with lower blood glucose levels, pre and post operatively, have less complications and lower mortality than those with higher blood glucose levels. Our poster will explain our findings using pre and post pilot data from a retrospective chart review. Data that shows whether or not the patients' blood glucose values were significantly lower on the protocol. Data that determines whether or not the patients' had a higher incidence of complications post operatively, pre and post insulin protocol initiation. Included in the poster, is how a hospital wide hyperglycemia protocol has been implemented with the data collected by our unit. We will show how this protocol affected the house wide decisions regarding glucose management. We will also include how integrating the use of the Glucotec Glucommander Plus has improved glycemic control of our open heart surgery patients.

Poster # 16 *Category: Clinical Patient Management*

CHANGING CLINICAL PRACTICE: THE USE OF STERILE TRANSPARENT DRESSING VS. PRESSURE DRESSINGS POST FEMORAL SHEATH REMOVAL

Theresa Castillo, MS, RN, CNL, RN-C, Morton Plant Hospital, Clearwater, FL

Purpose: To describe a clinical practice change implemented on a forty-five bed, post cardiac interventional nursing unit.

Background: The current policy of arterial/venous femoral sheath removal post a cardiac interventional procedure states; "after hemostasis achieved, apply a sterile pressure dressing." This author read an article that showed the current policy for sheath removal was not evidence based. With a pressure dressing, the wound site was not visible, palpation for hematoma was difficult, and patients complained of discomfort and skin irritation after the dressing was removed.

Goal: To change post cardiac intervention procedure to allow sterile transparent dressing post procedure to allow for easy visualization of the puncture site, access to the surrounding area for easy hematoma palpation, to provide comfort to the patient and to prevent skin breakdown to the groin site and surrounding area and to decrease supply cost to the nursing unit.

Method: After meeting with the Institutional Review Board (IRB) an outline was drafted to sketch out a plan of action. A literature review and a benchmark of Magnet status healthcare systems like ours throughout the United States were completed. The literature review and the benchmarking revealed current evidence regarding groin dressing practice post arterial and venous femoral sheath removal. Since the current hospital policy and procedure was not evidence based, the author attended Nursing Clinical Practice Council meetings to present the evidence and to suggest a policy and practice change. After Nursing Council approval, the suggested policy and procedure changes were presented to the Medical Director of Cardiac Interventional Services. He was supportive of the changes. A final approval from the Medical Directors Colleagues was approved October 30, 2008.

Outcomes: Policy and procedure has been changed as of October, 2008. An additional outcome of the policy change is a potential supply cost savings of \$5,016.00 per year

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Poster # 17 *Category: Data-Based Research*

CARDIOVASCULAR RISK FACTOR PROFILE AMONG MIAMI HISPANICS

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Mary Comerford, MSPH, University of Miami School of Medicine, Miami, Florida

Background Summary: Hispanics are the fastest and largest growing minority in the USA and account for 15% of the population; in Miami Dade, FL, 69.5% of the population is Hispanic. Most studies with Hispanics have focused on Mexican-Americans; ours is a much more diverse population. The Florida Heart Research Institute screened 3360 mainly non-Mexican Hispanics for cardiovascular risk factors. Increasing the awareness of risk factors is an essential step in the education and prevention of cardiovascular disease.

Study Objectives: To assess the cardiovascular risk factors among a Miami Hispanic sample responsive to free cardiovascular screening.

Methods: Analysis was performed of retrospective data from 3360 Hispanic participants age 18 and over who responded to free cardiovascular screenings. Data gathered included measurements of blood pressure, height, weight, fasting glucose, lipid profile, and hs-CRP.

Results: The majority of participants were women (63.7%); the average age of the entire sample was 48.9. There was a high prevalence of overweight/obesity (59.6 %), pre hypertension (33.5%) and triglyceride level >150 (33.5%). These findings were even more pronounced in men. Other relevant risk factors were hypertension (20%), and LDL >130 (40.5%). More than twenty percent of the participants had 1-2 risk factors and more than 62.5% had 3 or more risk factors for cardiovascular disease.

Conclusions: This study underscores the critical need for effective educational and preventive efforts to reduce the prevalence of cardiovascular risk factors in this ethnic minority. Hispanics in this study demonstrate a risk pattern distinct from that previously described for the Mexican American population. They are at elevated risk for obesity, pre hypertension and high triglycerides, which defines a target in this population for focused interventions.

Poster # 18 *Category: Clinical Patient Management*

LEADING THE WAY IN PREVENTION: HOSPITAL BASED COMMUNITY CARDIAC OUTREACH

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Background: Comprehensive nurse managed primary prevention programs can augment risk stratification and help focus the need to optimize risk factors to reduce individual and population risk for cardiovascular disease (CVD).

Objectives: The goals of this program are to: 1) Provide a cost effective, accessible screening and education program to identify risk for CVD and atherosclerosis in the earliest stages, 2) Initiate a health plan for appropriate risk reduction strategies, 3) Facilitate follow-up for early medical management of dyslipidemia and subclinical atherosclerosis.

Methods: A hospital based Cardiac Outreach program was developed that utilizes cardiovascular nurse clinicians to coordinate specialized CVD risk assessment and early detection screening programs for community participants. Modalities include blood lipid and glucose testing, EKG, vascular ultrasound and non-invasive coronary CT calcium scoring. The clinician's role includes on-site consultations to educate participants about level of risk and provide an individual cardiovascular health plan to outline lifestyle recommendations and clinical goals. All findings are communicated to the participant identified primary care practitioner.

Results: 2708 participants were screened and received risk reduction education in the cardiac outreach program in 2008. Of those, 590 (22%) were identified as high-risk for CVD and referred for management of dyslipidemia or to follow-up a high risk result for subclinical atherosclerosis.

Conclusions: A comprehensive cardiac outreach program combines the medical model and community approach to improve CVD risk identification and stratification and provide access to primary prevention services. Our program has been recognized by our physicians and the community as an effective means to promote healthy lifestyle behaviors and appropriately targeted risk factor reduction.

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Poster # 19 Category: *Data-Based Research*

EXAMINING MEDICATION ADHERENCE IN OLDER WOMEN FOR SECONDARY PREVENTION OF CORONARY HEART DISEASE (CHD)

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Background: Medication adherence is critical to improving secondary prevention efforts among older women with CHD; however, the rate of non-adherence to medication approaches 50%.

Objectives: The purposes of this study were to examine medication adherence in older women with CHD and to identify the biophysiological, psychosocial, and economic barriers and facilitators to adherence.

Methods: We recruited hospitalized women with ICD-9 codes indicating CHD if they were ≥ 62 years old with telephone and English-speaking. We designed a mixed-method study using a semi-structured computer assisted telephone interview guide and technique to elicit a holistic description of medication-taking experiences 3 months after discharge. Medical record reviews were conducted for medical history.

Results: 32 women completed data collection (59.4% Caucasian). Mean number of medications at discharge was 10.72 (± 3.14); with 5.97 (± 1.56) specifically cardiac medications. 65.6% scored at least 80% adherent to medication therapy, with others indicating less adherence and self-modified their therapy. *Barriers:* 1) *Biophysiological:* 53.1% of the women suffered from medication side effects. 2) *Psychosocial:* 43.8% had problems with medication scheduling. 71.9% indicated ongoing worry and concern about their medications. 81.3% indicated knowledge and/or understanding barriers such as trouble remembering medication names (56.3%), medication changes (43.8%), or confusion (37.5%), and had difficulty remembering what their medications were used for (31.3%). 3) *Economic:* All reported difficulty paying for medications and had access problems to obtaining medications. 71.9% said they had to do without in order to afford medications, and 21.9% said they did not fill all medications because of cost. Regression analysis revealed physiological and psychological barriers are significant in predicting adherence. *Facilitators* included a pill-box system (85%) and discharge medication counseling (90%).

Conclusion: Results indicate many older women with CHD are not adherent to medication therapy. This study indicates tailored interventions to improve adherence in older women with CHD are needed.

Poster # 20 Category: *Clinical Patient Management*

CARDIOVASCULAR DISEASE RISK REDUCTION AND PREVENTION: DEVELOPMENT AND IMPLEMENTATION OF A GLOBAL WORKSITE CARDIOVASCULAR PROGRAM

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Background: The World Health Organization (WHO) stated by 2020 cardiovascular disease (CVD) will surpass infectious disease as the world's leading cause of mortality and disability. Chevron believes a cardiovascular program that targets lifestyle choice will mitigate our risk beyond what is achievable through managing disease, benefit claims and utilization alone.

Objectives: 1) employees understand they can improve their long-term health, 2) company leaders and employees understand link between health, productivity and safety, 3) and company reductions in illnesses and healthcare expenditures.

Methods: In 2007, Chevron Health and Medical Services developed an enterprise-wide voluntary cardiovascular health program focusing on employee education and healthy lifestyle choices. The initial program modules include blood pressure and cholesterol, weight management and nutrition, smoking, and stress. A cardiac risk assessment (CRA) stratifies employees into high, medium and low risk and generates an individually tailored program. Employees at low risk are provided with self-paced programs; additionally, those at medium or high risk have access to a telephone mentor for support and motivation. In 2008, the program was implemented in the USA, Nigeria and the Philippines with phased implementation scheduled for the remaining countries. Program tools and modules are modified for global content and are available online and in print in the language of the country. Additional program resources for implementation teams are available.

Results: Since implementation 36%, 46% and 50% of eligible employees from the USA, Nigeria and Philippines have completed the CRA respectively. Of these, 45% were stratified at high, 49% at medium and 6% at low risk for CVD. To date, 51% have completed and enrolled in follow-up program modules.

Conclusion: Participant at-risk data (93%) aligns with WHO statement and likely reflects the risk of non-participants. Program participation and follow-up data indicates significant interest in understanding and mitigating CVD risk.

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Poster # 21 *Category: Clinical Patient Management*

CARDIAC REHAB - AN EXERCISE TOOL TO HEALTH AND WELL-BEING

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Background: There are over 5 million patients and their families affected by Heart Failure (HF) with over 550,000 patients diagnosed each year, according to the CDC. Increasingly, it has been recognized that HF is a multisystem syndrome which affects the cardiovascular, humoral, neuroendocrine, renal, and musculoskeletal systems. Evidence-based healthcare research strongly supports Cardiac Rehab for patients with HF not only by reducing hospitalizations, but by dramatically increasing maximal oxygen consumption, exercise capacity, and quality of life.

Objectives: 1.) Increase enrollment in Cardiac Rehab; 2.) Reduce cardiovascular risk

Methods: We reviewed the records of patients with a diagnosis of HF who participated in our Cardiac Rehab services and examined its impact on exercise endurance and capacity. We initiated participation in HF clinic & rounds by the Cardiac Rehab RN each week for patients hospitalized with a primary diagnosis of HF, educating patients about the benefits of Cardiac Rehab.

Results: There were a total of 65 patients who participated in Cardiac Rehab from June 2006 to December 2008. Enrollment increased from 11 patients in 2006 to 29 patients in 2008. The differences among the pre and post Cardiac Rehab measurements for Metabolic Equivalents (METS) for this group overall went from an average of 4.89 to 6.93 METS, and 74% increased V_{O2}%, demonstrating the improvement in exercise endurance and oxygen capacity.

Conclusion: Engaging the Cardiac Rehab nurse in patient recruitment is an effective tool to increase enrollment. Exercise training is a cornerstone of Cardiac Rehab and a tool for health and well-being. Patients who participate in Cardiac Rehab become their own ambassadors for self-management. By participating in Cardiac Rehab, patients overcome common fears about the effects of exercise on their heart and realize the benefits of an ongoing exercise program which can mitigate their symptoms of HF and profoundly improve their health.

Poster # 22 *Category: Clinical Patient Management*

THE EFFECT OF A CONCURRENT INPATIENT NURSING INTERVENTION MODEL ON HEART FAILURE OUTCOMES

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Background: An estimated 555,000 new cases of Heart Failure (HF) occur per year, and it is the leading cause of Medicare hospitalizations. Programs that utilize multidisciplinary models have the most effective process in place for decreasing hospitalizations for patients with HF.

Objective: By instituting the concurrent inpatient nursing intervention model (CINIM), the goal of the program was to: 1) decrease readmissions; 2) decrease mortality; 3) improve the quality of care; and 4) improve inpatient education for HF patients.

Methods: Advanced Practice Nurses (APN) instituted CINIM by which early case finding was utilized to begin early education and intervention. Nursing staff were formally educated on evaluation and management of HF patients, and Joint Commission Association of Hospital Organizations (JCAHO) quality measures. Core measures, readmissions, mortality, and length of stay (LOS) were measured. The relationship to disease severity, left ventricular function, mortality risk and gender were evaluated to establish whether there was a relationship to the outcomes measured.

Results: Results were compared from January 2006 to June 2008. Core measure compliance increased 27%. Six month readmission rates did not change. Days to readmission decreased from a mean of 26 to 48 for level 2 acuity patients; 29 to 43 for level 3 acuity patients, and 5 to 36 for level 4 acuity patients. Severity of disease increased. Mortality risk increased, but actual mortality decreased from 7.9% to 3.4%. LOS did not have a statistically significant change. Patients who were discharged to home rather to another facility increased from 51% to 61%.

Conclusion: Early patient identification and institution HF education pharmacologic intervention decreased readmission and mortality, improved core measure compliance, but did not significantly affect LOS. However, days to readmission was much longer indicating that patients were doing a better job at self-monitoring and managing at home. Mortality rates decreased, despite the rise in mortality risk and severity of disease.

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Poster # 23 Category: *Clinical Patient Management*

QUALITY IMPROVEMENT INITIATIVE TO ASSESS THE EFFECTS OF AN APOLIPOPROTEIN E GENE SPECIFIC DIET ON LIPID PROFILE AND BODY WEIGHT IN AN INTEGRATIVE MEDICINE PRACTICE

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Background: Healthy Nutrition is the cornerstone of lipid and weight management for the prevention of Coronary Artery Disease. The Apolipoprotein E (Apo E) gene is an important component in plasma lipid metabolism. A nutritional approach customized to individuals based on their Apo E genotype (E2/2, E2/3, E2/4, E3/3, E3/4, E4/4) was developed and implemented at an Integrative Medicine Practice.

Objective: A quality improvement initiative was implemented to assess whether this Apo E gene specific diet improved lipid profiles and body weight for patients in this practice.

Methods: The medical records of 61 patients, 38 female and 23 male (mean age 51.5 years) who were given detailed information about dietary choices to reduce cholesterol based on their Apo E gene, were reviewed. As part of the standard practice protocol, lipid profile and body weight were measured at initial evaluation and repeated between 2-6 months after receiving Apo E specific dietary instruction. Pre and post lipid profile and body weight were compared on all subjects.

Results: There were statistically significant improvements in Total Cholesterol (TC), pre/post mean= 222.6/203.4 (p= 0.000), Low Density Lipoproteins (LDL) pre/post mean= 140.4/121.2 (p= 0.001), Triglycerides pre/post mean=146.6/117.5 (p= 0.000), and body weight pre/post 172.1/166.3 (p=0.000). There were no significant differences in pre/post High Density Lipoproteins (HDL) (p=0.125). During the quality improvement assessment period, 73.8% of the subjects were exercising, and 47.5% were on previously prescribed lipid lowering medication which was unchanged during the course of the assessment period.

Conclusion: These outcomes suggest that an Apo E specific diet may be associated with improvements in lipid profile and body weight and warrant further investigation.

Poster # 24 Category: *Data-Based Research*

PRINCIPAL RESULTS OF THE EUROASPIRE III SURVEY IN GENERAL PRACTICE. LIFESTYLE, RISK FACTOR AND THERAPEUTIC MANAGEMENT IN PEOPLE AT HIGH RISK OF DEVELOPING CARDIOVASCULAR DISEASE FROM 12 EUROPEAN REGIONS.

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Guy De Backer, Dirk Be Bacquer, University of Ghent, Belgium
Ulrich Keil, University of Munster, Germany

Objectives: The EUROASPIRE III survey of general practice investigated lifestyle and risk factor management in high risk patients. It provides an audit of guidelines implementation on the prevention of CVD in clinical practice.

Methods: EUROASPIRE III survey was undertaken in selected geographical areas and general practices. Consecutive patients <80 years of age, without a history of atherosclerotic disease, either started on antihypertensive and/or lipid lowering and/or anti-diabetes treatments, were identified retrospectively. Data collection was based on a review of patients' medical notes and a prospective interview and examination at least six months after the start of medication.

Results: 4366 high risk individuals (57.7% females) were interviewed (participation rate 76.7%). Overall, 16.9% smoked cigarettes, 43.5% were obese (BMI ≥ 30 kg/m²) and 61.6% centrally obese (waist circumference ≥ 102 cm in men or ≥ 88 cm in women), 70.8% had BP $\geq 140/90$ mm Hg ($\geq 130/80$ in people with diabetes mellitus), 78.9% had total cholesterol ≥ 4.5 mmol/l and 30.2% reported a history of diabetes. Control of risk factors was poor, with only 26.3% of patients using antihypertensive medication achieving the BP goal, 30.6% of patients on lipid-lowering medication achieving the total cholesterol goal and 52.9% of patients with self-reported diabetes having an HbA1c < 6.5%. The use of medication was: aspirin or other anti-platelets 22.0%; beta-blockers 31.2%; ACE inhibitors/ ARB 55.7%; calcium channel blockers 24.0%; and statins 39.9%.

Conclusions: The EUROASPIRE III survey shows that the lifestyle of high risk patients is a major cause for concern. Risk factor control is inadequate with most patients not achieving the targets defined in the European prevention guidelines. Prevention needs a systematic, comprehensive, multidisciplinary approach, which addresses lifestyle and risk factor management by general practitioners, nurses and other allied health professionals, and a health insurance system which invests in prevention.

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Poster # 25 *Category: Clinical Patient Management*

MYACTION: A NOVEL PREVENTIVE CARDIOLOGY PROGRAMME FOR CORONARY PATIENTS (COR), THOSE AT HIGH MULTIFACTORIAL RISK (HRI) OF DEVELOPING CARDIOVASCULAR DISEASE (CVD) AND THEIR PARTNERS IN THE COMMUNITY.

Catriona Jennings, BA, Jennifer Jones, Alison Mead, Susan Connolly, David Wood, Imperial College London, UK
Elizabeth Turner, London School of Hygiene and Tropical Medicine, London, UK

Objectives: Based on the EUROACTION programme, MYACTION is a novel cardiovascular health programme managing COR and HRI and their partners in one community facility to achieve lifestyle, risk factor and therapeutic targets for CVD.

Design and methods: The programme provided professional support (nurse prescriber, dietitian and physical activity specialist) in a leisure centre. All had an initial assessment (IA) and an end of programme review (EOP) assessing changes in lifestyle and risk factors at 16 weeks. Measurement tools included self report for smoking (validated with breath CO), diet (food habit questionnaire producing a Mediterranean score) and physical activity (7 day activity recall).

Results: 87 COR (61.3% of those referred) and 119 HRI (72.6%) attended with 93 partners (59.6%). 59 COR (67.8%), 85 HRI (71.4%) and 58 (63%) partners attended the EOP. 5 (25%) out of 20 attendees who were cigarette smokers, and attended both assessments, had stopped smoking. Mean dietary Mediterranean scores improved significantly in COR +1.56, (95% CI 1.0 – 2.1), HRI + 1.3 (0.9 – 1.7) and partners + 1.4 (1.0 – 1.9). Proportions achieving physical activity guidelines significantly improved in COR + 47.2% (95% CI 31.8 – 62.5), HRI + 54.7% (40.9 – 68.4) and partners + 44.9% (28.9 – 60.9). Mean BMI and waist circumference were significantly reduced in COR: BMI -0.3 (-0.6 to -0.6) and waist -1.0 cm (-2.0 to -0); and HRI: BMI -0.7 (-0.8 to -0.2) and waist -2.4 cm (-3.4 to -1.5); and partners: BMI -0.4 (-0.8 to -0.1) and waist -1.9 (-2.8 to -1.1). Significant improvements were also seen in both COR and HRI in BP and total cholesterol management.

Conclusion: The MYACTION programme helped coronary patients, high risk individuals and their partners to achieve healthy lifestyle changes together with corresponding reductions in BMI, central adiposity, BP and lipids which together will reduce CVD risk.

Poster # 26 *Category: Data-Based Research*

LESS WEIGHT GAIN AND A HEALTHIER LIFESTYLE AFTER QUITTING SMOKING IN EUROACTION: A FAMILY BASED PREVENTIVE CARDIOLOGY PROGRAMME FOR CORONARY PATIENTS.

Alison Mead, BSc (Hons), PGDip, AdDipDiet, SRD, Catriona Jennings, BA, RN, Jenni Jones, MSc, MCSP, PGCertEd, Elizabeth Turner, PhD, Gary Frost, PhD, RD, David Wood, MSc, FRCPE, FFPHM, FESC, Imperial College, London, UK

Background: Patients and partners attending the EUROACTION hospital programme had support of a nurse, dietitian and physiotherapist to stop smoking, eat more healthily, become physically active (PA) and lose weight.

Objective: To assess the impact of this programme on weight change at 1 year in those that quit smoking in this cluster randomised controlled trial in 6 European countries.

Methods: Patients included in this analysis had quit smoking at the time of their cardiac event, or while attending the programme. Intervention patients received a comprehensive lifestyle management programme. All quitters (validated by breath CO \leq 6ppm) were assessed for changes in weight, waist, diet and PA. Measurements included a food habit questionnaire, 7-day PA recall.

Results: Using random effects meta-analysis, anthropometric, dietary and PA changes were compared in the 142 (43.8%) patients who quit smoking in intervention with the 45 (34.9%) patients in a random sub-sample from usual care. Weight, waist and BMI increase was significantly greater in UC, difference in change between intervention and usual care was significant for weight only (-2.2kg (Δ ,95% CI -4.4 to -0.1) $p=0.05$). Data was adjusted for age, sex, diabetes and years smoked. Intervention showed significant improvements in fruit, vegetable, oily fish intake and PA levels. Difference in change between intervention and usual care was significant for fruit and vegetables (+33.0g (Δ ,95% CI 9.5 to 56.5) $p=0.015$).

Conclusions: The EUROACTION programme significantly mitigated the weight gain normally associated with smoking cessation compared with usual care and this was achieved through a healthier diet and increased PA levels. In coronary patients, smoking cessation should therefore be integrated with a comprehensive diet and PA programme.

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Poster # 27 *Category: Clinical Patient Management*

TARGETING INTENSIVE LIFESTYLE SELF MANAGEMENT IN AN INNOVATIVE, INTERACTIVE AND PATIENT FOCUSED MULTIDISCIPLINARY METABOLIC SYNDROME PROGRAM IN CANADA

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Background: Metabolic syndrome is the clustering of abdominal obesity, dyslipidemia, impaired glucose tolerance, and hypertension. It is a recognized risk factor for atherosclerosis and diabetes. Targeting risk factors and lifestyle behavior change requires complex, multifaceted approaches to care. Best practice is unknown, demanding ongoing evaluation to identify effective clinical interventions.

Objectives: We developed and implemented the first metabolic syndrome program in Canada. Focus of care is on lifestyle behavior change and self-management support. Ongoing evaluation identifies program components that can be further enhanced or changed.

Methods: This is a multidisciplinary, nurse-managed physician supported program. Team members include a clinical nurse specialist, patient educator, dietitian, exercise specialist, occupational therapist, physicians and psychology support. Behavior change strategies target physical activity, nutrition, weight management, psychosocial factors, and goal setting. This program is 18 months in duration with a minimum of 17 visits. Interactive group sessions are enhanced with prescheduled individual follow-up visits with the multidisciplinary team members. Continued patient evaluation and clinical team weekly discussions on patient care permitted identification of improvement areas. Staff confidence in delivery of program components was also targeted.

Results: Psychology collaboration generated additional content on motivation, behavior change and negative mood management. New content was incorporated into education sessions and patient logbook. Additional education and training for staff was identified and supported to strengthen team effectiveness. Formal statistical evaluation was repeated in one year. Importantly, 43% (n = 185) of participants no longer meet international Diabetes Federation criteria for the metabolic syndrome at 6 months and 40% (n = 112) at 12 months and is consistent with year one findings.

Conclusion: A combination of intensive interactive lifestyle interventions and self-management strategies are integrated to determine best program design. Ongoing program evaluation is required in the aim of best treatment of the metabolic syndrome and prevention of chronic disease.

Poster # 28 *Category: Clinical Patient Management*

STRENGTHENING DIETARY EDUCATION IN A CARDIOVASCULAR RISK REDUCTION PROGRAM

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Background: The Healthy Heart Program is a multidisciplinary program consisting of a Metabolic Syndrome Program, Cardiac Rehabilitation Program and a Prevention Clinic. This nationally recognized program is the referral centre for British Columbia. Nutrition education is a vital component in strategies targeting modifiable cardiovascular risk factors in this moderate to high-risk patient population. High patient volume, combined with patient and professional education as well as research activities, places high demand on program Registered Dietitians. Optimal patient education strategies are challenged by the diverse patient programs and a mixed client population encompassing primary and secondary prevention patients and family members.

Objective: Through an affiliation with the University of British Columbia, our program has supported both dietetic students and volunteer opportunities for the past decade. We identified the need to develop a structured program to mutually benefit the extensive needs of students, dietitians and patients.

Methods: Student volunteers were actively recruited from the Faculty of Land and Food Systems through the dietetic coordinator and student information website. Volunteers were asked to commit 4 hours every 2 weeks. Responsibilities were assigned based on interest and education levels. Duties included: opportunities to perform literature searches, develop interactive education materials, displays, present monthly cooking demonstrations, organize patient education materials, data entry on dietary outcomes, job-shadowing and provision of on-going support for the program dietitian.

Results: There was an overwhelming initial response resulting in over sixty applicants. Twelve volunteers were then chosen by an interview process.

Conclusion: This highly successful volunteer program has enhanced quality of care. This practical "hands on approach" greatly enriches the student education experience. Program dietitians have a regular dependable resource allowing more time for direct patient care, professional education and research activities. Ultimately, this new program improves patient care by facilitating lifestyle behavior change and the reduction of cardiovascular risk factors.

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Poster # 29 *Category: Clinical Patient Management*

DEVELOPING A PRIMARY PREVENTION PROGRAM FOR WOMEN USING A WOMEN'S CENTRED FRAMEWORK

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Background: Heart disease and stroke is the number one killer of women in North America. For every woman who dies of breast cancer, eight women die of heart disease, yet this fact is not widely known (Heart and Stroke Foundation, 2008). Women have lower socioeconomic status, are heads of more single parent households, and more frequently are caregivers of multiple generations of family. Their unique life experiences require a comprehensive model of care targeting both accessibility and complex life issues. Successful implementation of a new program requires in-depth planning, engagement of key stakeholders and collaborations with community partners.

Objectives: The Heart Program for Women was developed in Vancouver, British Columbia to address this burden of cardiovascular risk. The program has four phases: a local clinic, outreach to underserved populations, community advocacy addressing the larger social determinants of health, and implementing pilot programs in remote communities across the province.

Methods: A Framework for Women-Centred Health (Vancouver/Richmond Health Board, 2001) was used to guide the program development. A steering committee was formed using key stakeholders within the community including cardiologists and nurses. Patient flow was established and program documents were developed using existing documents from local partner prevention programs. Collaboration with a local established prevention program provided knowledge and support for clinical operations and observational experience.

Summary: This abstract will present the evolution of growth from stakeholder engagement, development of the model of care to implementation. Challenges and collaborations will also be highlighted.

Conclusion: Collaboration and partnerships with other established programs provide support in program development and accessibility. Development and implementation of a women's centred model of care in British Columbia will act as a model for future prevention programs for women both provincially and nationally and minimize cardiovascular risk factors and decrease the burden of chronic disease.

Poster # 30 *Category: Clinical Patient Management*

CARDIOVASCULAR PREVENTION PROGRAM FOR INPATIENTS: TAKING THE PULSE OF CARDIOVASCULAR HEALTH STATUS AND DESIGNING INTERVENTIONAL STRATEGIES

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Cardiovascular (CV) Guidelines emphasize the identification of patients at risk. We designed a program to evaluate the cardiovascular health status of an inpatient population hospitalized for a non-cardiovascular problem and protocolize interventions accordingly.

We developed a pilot CV prevention program establishing a profile of eligible inpatients (men >45 years and women >55, non CV or cerebrovascular code for actual hospitalization, cardiologist or preventive medicine visit >1 year). An automatic database selection sent the data daily to a CV Nurse Specialist in charge of the program who visited every selected patient, and offered a no-cost CV risk evaluation. Patients that consented completed a validated questionnaire. Patients' files were reviewed, focused in CV available previous tests, blood pressure, and key lab results. If lab results were not available or valid (less than 6 months) total cholesterol and fast glucose were determined. Vascular images (Ultrasound, Angiograms, CT-Scan) database was reviewed for significant subclinical atherosclerosis. With predetermined algorithms, the nurse estimated CV risk adding information obtained from survey and image findings. Risk stratification was defined as: low, intermediate and high. Patients with CV history or diabetes were stratified as high risk. Post-discharge, a report was sent to patient's and physician's email, including education of abnormal findings and recommending a cardiologist visit at preferential cost for intermediate or high risk patients.

In the first 6 months 672 were eligible patients, 81.6% consent the evaluation. Prevalence of CVRF was: Hypertension 29%; Dyslipidemia 44%, abnormal FG 53% and Diabetes 16.1%. Over 40% of patients known to have CVRF had inadequate control. 412 (76%) had moderate to high CV risk. Up to 6 months follow-up, 42 patients (10%) had visited the cardiologist post discharge, with significant percentages of CVRF treatments initiation or adjustment and CV test requested.

This program evidences a unique opportunity for effective CV prevention in our patients.

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Poster # 31 *Category: Clinical Patient Management*

“CONTRACT LEARNING” AS A TOOL TO PROMOTE CONCEPT OF PARTNERSHIP ON PATIENT AFTER PERCUTANEOUS CORONARY INTERVENTIONS (PCI).

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Christine Ming Ming Lau, The Hospital Authority, Hong Kong, China
Connie Leung, Chi Wing Wong

Purpose of the Study: In Hong Kong, coronary artery disease (CAD) is the second killer. Most of the crucial risk factors leading to CAD can be modified with enhancement of patient education program. The favorable effects of contract learning on adult education especially among programs for health care professionals are well documented. Since 2007, Hong Kong Adventist Hospital is the first private hospital applying this concept in their Heart Program among Percutaneous Coronary Interventions (PCI) patients by nurses with favorable outcome. The purpose of this project is to examine the outcomes of the contract learning based patient education program on patients with post PCI in a multi-disciplinary approach.

Methods: The project is conducted in the Heart Centre of Hong Kong Adventist Hospital. The patients underwent a Contract Learning program that was led by Doctors, Nurses, Physiotherapists, Dietitians and Lifestyle Management Educators, who contributed their own expert area of knowledge to patients as required. The measurements of patient outcomes are the treatment compliances. Twenty-eight participants (n=28, male=68%, female=32%, mean age=59.8, SD=±10) suffering from CAD and having undergone PCI were recruited in this project. All participants received 6 to 12 weeks contract learning and telephone follow up service. Data was collected through monitoring patients' heart health knowledge, drug compliance, smoking habit, dietary compliance, exercise adherence and blood pressure control.

Results: There was significant improvement in the participants' pre and post assessment in knowledge score, drug compliance (100%), drug knowledge (Z=-6.788, p=0.000), exercise adherence (96.9%), blood pressure control (pre-test=61.7%; post-test=93.8% SBP<140mmHg), and dietary compliance (99.2%). However, there was lesser degree of improvement in smoking cessation (Z=-1.099; p=0.272) after the program.

Conclusions: As evidenced by this project, contract learning can promote healthy behavior as reflected by the high adherence to exercise and dietary regimen and patient satisfaction among our clients. Every discipline can use the concept of contract learning to share their knowledge with their clients and obtain optimal health care outcomes. The attitude as Partners among all health care providers and their clients is the key in promoting health and cohesiveness among the health care team, clients and their families.

Poster # 32 *Category: Data-Based Research*

THE EFFECT OF CARDIAC REHABILITATION ON CHANGING PATIENTS' CLINICAL OUTCOMES IN HONG KONG

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Background: Cardiac rehabilitation is an important component of a comprehensive care programme for patients with coronary artery disease. In Hong Kong, cardiac rehabilitation is a relatively new treatment approach for cardiac patients and has only been used for about a decade. Evaluations of its effectiveness in Chinese patients are limited. The results of this study built the data base of local cardiac information.

Objective: This study aimed to evaluate the effect of cardiac rehabilitation on changing patients' exercise intensity and physiological outcomes.

Methods: A pre- and post- intervention test design was used to evaluate an 8-week cardiac rehabilitation programme. The focus of this programme included supervised exercise and education on diet, physical activity, stress management and risk factor management. Patients attended three 2-hour sessions every week and outcomes were measured at entering the programme, 8-week, and 3-month.

Results: Thirty-nine patients (27 male; 12 female) completed the study. Exercise intensity (METs), systolic and diastolic blood pressure, body mass index, total cholesterol, HDL-C, LDL-C, and triglycerides were all improved at 8 weeks. However, at 3 months, only HDL-C continued to improve and triglycerides level remained the same as at 8 weeks. All other variables deteriorated slightly at 3 months. A repeated measures analysis of variance showed that exercise intensity was significantly improved across the 3-month study period (p < 0.001). In terms of physiological outcomes, only HDL-C, LDL-C and triglycerides differed significantly over time (p values < 0.05). Systolic blood pressure, diastolic pressure, body mass index and total cholesterol showed no significant difference across the 3-month study period (p values > 0.05).

Conclusion: Results indicated that cardiac rehabilitation is effective in improving patient outcomes in the short term. Other approaches, such as counseling and unsupervised exercise programmes in community settings, may be needed to maintain the long-term physiological improvements.