(50-64 compared to 65 years and older), sex, education, race/ethnicity, residence rurality, body mass index, presence of cardiovascular risk factors, perceived access to care, medication adherence scores based on economic factors (6 items, $\alpha=0.77$), and having visited the ER within the previous 12 months. Two independent logistic regression analyses were performed to identify variables associated with medication nonadherence and the frequency of ER visits. **Results:** Over half of respondents (54.8%; 317 of 578) self-reported having cardiovascular disease (CVD) risk factors and 14.5% (84 of 578) reported having a cardiovascular incident. Medication nonadherence was reported by 25.3% (146 of 578) of respondents and 20.1% (116 of 578) reported having visited the ER in the previous 12 months. Medication nonadherence was associated with being younger ($OR=0.431$, $P<0.001$), having cardiovascular disease risk factors ($OR=1.756$, $P<0.001$), and perceiving less access to healthcare ($OR=0.715$, $P<0.001$). Visiting an ER in the previous 12 months was associated with having risk factors for cardiovascular disease ($OR=1.441$, $P<0.05$). **Conclusion:** Medication nonadherence associated with economic constraints remains a problem for a small but significant group of community residing adults, which emphasizes a need for greater surveillance by the healthcare system. Even before the full implementation of Medicare Part D, persons age 65 years and older tended to adhere to medication regimens. The significance of CVD in this Medicare-eligible group as a predictor of ER visits suggests that additional self-management support and training are needed to recognize and address signs of disease exacerbation.

Keywords: Medication adherence, Healthcare utilization, Economic factors and medication use

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PS1-03:

Health Behaviors in Adults with Risk Factors for Cardiovascular Disease

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Background/Aims: Health behaviors of adults with cardiovascular disease (CVD) risk factors impact risk. We compared health behaviors of adults with diabetes, hypertension, high cholesterol, and obesity to those without. **Methods:** We conducted 30-minute random-digit-dial household telephone surveys in 2007 ($n=3607$). Over 92% of adults willing to answer questions completed surveys, representing their household. Protective behaviors included meeting fruit and vegetable (FV) recommendations (5+ servings/day), reporting "often/always" eating healthy diets, consuming low/very low dietary fat, eating breakfast 6-7 days/week, meeting walking and moderate physical activity (PA) recommendations (≥ 30 minutes 5+ days/week), and meeting vigorous PA recommendations (≥ 20 minutes 3+ days/week). Harmful behaviors included drinking soda $\geq$ once/week, drinking ≥ 12 ounces of soda at a time, and eating at fast food restaurants $\geq$ once/week. **Results:** Respondents included Whites (36.5%), Asians (28.5%), Hawaiians/part-Hawaiians (17.0%), female (65.3%), married (59.1%), college educated (54.7%), and mean age 54 ($sd=15.8$). CVD risk factors included obesity (18.5%), high cholesterol (16.4%), hypertension (15.9%), and diabetes (6.2%; 62.6% of those had Type II). For health behaviors, obese participants were less likely to obtain all seven protective health behaviors; they were more likely to engage in all three harmful nutrition behaviors. Participants with high cholesterol were less likely to do three protective behaviors, but also less likely to eat fast food. Participants with hypertension were less likely to do five protective behaviors. Diabetics were less likely to do three protective behaviors, but were also less likely to drink soda. Logistic regression indicated that obese participants were 1.69 times less likely to eat a healthy diet, a low fat diet ($OR=1.61$), or meet walking recommendations ($OR=2.19$), and were 4.02 times more likely to eat at fast food restaurants. Those with high cholesterol were 1.98 times less likely to meet FV recommendations, have a low-fat diet ($OR=2.21$), or meet vigorous PA ($OR=1.64$); but were 3.90 times more likely to eat breakfast and avoid fast food ($OR=1.9$). Those with hypertension were 2.17 times less likely to eat a healthy diet or meet vigorous PA ($OR=1.66$), but were also 2.01 times less likely to drink soda. Diabetics were 1.66 times less likely to eat a healthy diet

or meet vigorous PA ($OR=1.83$). **Conclusions:** Individuals with CVD risk factors reported worse health behaviors, especially those with obesity. Healthcare interventions should monitor disease progression while reducing harmful and increasing protective health behaviors in individuals at greatest CVD risk.

Keywords: Cardiovascular disease, Adult health behaviors, Cardiovascular disease risk factors

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PS1-04:

Home Blood Pressure Telemonitoring and Case Management to Control Hypertension: HyperLink Trial Design and Baseline Characteristics

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Background/Aims: Blood pressure (BP) is not controlled in the majority of people with hypertension (HTN) in the U.S. We describe a study of long-term hypertension outcomes that compares home BP telemonitoring and pharmacist case management vs. usual care. **Methods:** HyperLink is a cluster-randomized trial ($N=450$ patients) being conducted at HealthPartners Medical Group clinics. Sixteen clinics were randomly assigned to either the Telemonitoring Intervention (TI) or Usual Care (UC). Recruitment materials are mailed to adult primary care patients in these clinics whose last 2 BP measurements were uncontrolled in the previous 12 months ($>140/90$, or $>130/80$ if diabetes or kidney disease present). To be eligible, they are required to have uncontrolled BP confirmed at a research clinic visit. Other medical exclusion criteria are minimal: pregnancy, recent cardiovascular events, symptomatic heart failure, stage 4/5 kidney disease, and dementia. Participants in the TI group receive a home BP telemonitor that stores and transmits all BP measurements to the clinic pharmacist via a modem to a secure web site. Following one intake clinic visit with the pharmacist, participants and pharmacists communicate by telephone every 2-4 weeks for 6 months. HTN treatment is adjusted based on home BP according to an approved written protocol under a collaborative practice agreement with physicians. UC participants may visit a clinic pharmacist but do not receive telemonitoring. The primary outcome is BP control measured at the research clinic visit at 6 months. Secondary outcomes are BP control maintenance at 12 and 18 months, satisfaction and costs. **Results:** Recruitment began March 1, 2009, and is on track to be completed as predicted in September 2010. During the first 8 mo, 195 participants were recruited, of whom 47% were female, 17% were minority race/ethnicity and 53% were from TI clinics. Detailed baseline characteristics of participants recruited as of February 28, 2010 will be reported. **Conclusions:** Meaningful and sustained improvement in hypertension control will likely require fundamental changes in the current physician-centered office-visit based model of caring for hypertension. This novel intervention could be implemented widely in diverse and large patient populations based on performance in this randomized trial.

Keywords: Blood pressure control, Hypertension outcomes, Telemonitoring and blood pressure

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PS1-05:

Hyperglycemia Stimulates Intracellular Renin Expression in Both Cardiac Myocytes and Fibroblasts: Implications for Diabetic Cardiomyopathy

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Background / Aim: The upregulation of the renin-angiotensin system (RAS) represents a major pathological mechanism in diabetes. We have previously