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**Title: Automated Call Center to Promote Medication Adherence**

**Specific Aims**
1. To assess the effects of a behavioral intervention on rates of adherence to an HMG CoA-reductase inhibitor (atorvastatin) in patients with asymptomatic hyperlipidemia.
2. To assess the effects of a behavioral intervention on refill latency for atorvastatin in patients with asymptomatic hyperlipidemia.

**Hypothesis:** The novel behavioral intervention of an Automated Call Center (ACC) will improve adherence rates to atorvastatin in patients with asymptomatic hyperlipidemia.

**Methods:** When patients use their medication and call the ACC on schedule, they have a chance to receive Health Rewards of various values. To use the ACC, patients must have the bottle of atorvastatin in hand and twist the cap. The ACC is anonymous, accessed only by a bottle identification number. The likelihood of receiving a Health Reward is random, but the frequency approximates 35% and the monthly monetary value near 20 dollars. Health Rewards include gift certificates for healthy foods, restaurants and grocery stores; exercise equipment and active wear; and memberships at fitness facilities.

The study is a double-armed, intention-to-treat, randomized control trial that will enroll 100 patients from an academic primary care clinic from ages 55 and above with hyperlipidemia. The intervention group will be able to access the ACC and the control group will receive usual standard of care. All patients must return to the clinic for monthly refills at which time the Medication Event Monitoring System (MEMS) cap on the bottle will be interrogated and adherence rates (number of doses used on time divided by the number of doses prescribed) and refill latency (number of days elapsed from date of 30-day supply released until the following supply is released) will be measured. Pre-study and post-study fasting serum lipid panels will be reviewed if available within routine practice.

**Results from Pilot Data**
1. A series of focus groups were conducted to assess the usability of the bottle and the ACC. Participants ($n = 35$) were between 45 and 82 years old. Each call lasted 25-55 seconds. Participants felt that the system would be sufficiently rapid and convenient to support long-term use. The design of the bottle was altered to make the use of the ACC easier for patients.
2. A randomized, crossover study of an ACC intervention versus control for adherence of a twice-daily placebo pill was carried out in 4 weeks with 12 adults, aged 40-65. The ACC group showed an overall adherence rate of 74.9% compared with the control group’s adherence rate of 56.3%, a difference of 33% ($p<.001$).

**Conclusions:** Enrollment in the definitive randomized control trial will begin in June, 2007. We expect this trial to demonstrate the efficacy and feasibility of the ACC to empower patients toward better adherence and healthier lifestyles.