THE EFFECT OF PHARMACY SPATIAL ACCESSIBILITY ON CARDIOVASCULAR RISK FACTORS

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Prevention: Gender, Race/Ethnicity, and Preventive Interventions
Abstract Category: 20. Prevention: Clinical
Presentation Number: 1219-146

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Background: “One-stop-shop” co-location of health services has been proposed as a model to enhance medication adherence and patient satisfaction. Prior analyses have examined the effect of proximate availability of pharmacies but patients may not necessarily be using their nearest pharmacy. We assessed the hypothesis that co-location of pharmacy services or the distance between patient’s homes and their actual pharmacy would correlate with cardiovascular risk factor control.

Methods: For this retrospective analysis, the addresses of 2,583 adult patients seen at a single academic medical center in 2012 and the addresses of their currently used local pharmacies were obtained from electronic medical records and geocoded for analysis. Each patient’s distance from their own pharmacy was calculated and analyzed by quartiles, using student t-test to compare cardiovascular risk factor control between quartiles. A separate analysis was conducted to see if on-site co-location of pharmacy services at provider locations was associated with better risk factor control. A p value of <0.05 was defined as significant.

Results: The quartile ranges for distance between home and pharmacy were Q1: 0.2-3.3 km, Q2: 3.3-5.8 km, Q3: 5.8-8.0 km, Q4: 8.0-11.6 km. Mean systolic blood pressure was 127 19 mmHg; diastolic blood pressure, 77 10 mmHg; weight, 84.0 29.6 kg; body mass index 29.1 8.8 kg/m2; HgbA1c, 6.5 1.6%; total cholesterol, 148 68 mg/dl; high-density lipoprotein, 58 18 mg/dl; triglycerides, 95 79 mg/dl. There were no significant interquartile differences. 4.8% of the patients filled their prescriptions at a pharmacy co-located with their prescribing physician. Again, there were no statistically significant differences in any of these factors between co-located and non-co-located pharmacies.

Conclusion: Co-location of health care providers with pharmacy services is not associated with improvement in cardiovascular risk factors. In addition, the distance between home and pharmacy also does not appear to be a contributor to risk factor control. Efforts to co-locate pharmacy services may not improve outcomes.