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QUALITY OF CARE AND OUTCOMES ASSESSMENT

HYPERTENSION MANAGEMENT IN URBAN UNDERSERVED PATIENTS USING AN INTERNET COMMUNICATION SYSTEM

ACC Poster Contributions

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Background: Inadequate control of blood pressure (BP) contributes to excess cardiovascular disease (CVD) risk, especially in underserved communities. Patient-centered care (PCC) tools that involve home monitoring of BP and Internet or telephone-based communication with a care provider may improve BP control and lower CVD risk. We compared the effectiveness of an Internet and telephone-based telemedicine communication system (T) to usual care (UC) from a primary care provider (PCP) in managing patients with hypertension.

Methods: 242 hypertensive subjects (JNC VII- Stage I and II, 16% white, 80% African American, 4% others, 62% female, age 60 ± 12 years) with systolic blood pressure >140 mmHg from two medical center were randomized to T (50%), or UC (50%). 166 patients completed 6-month follow-up. T patients reported their weight, BP, steps/day, cigarettes/day, twice weekly via an Internet or IVR (interactive voice response) phone system to our clinical center. Patients randomized to UC alone served as control. Monthly blood pressure summaries were sent to all T subjects and to their primary care providers.

Results: All patients had blood pressure above 140 mmHg; 26% had diabetes, 39% - hyperlipidemia, and 19% were smokers. There was no significant difference between T and UC in initial blood pressure, height, weight and waist circumference. After 6-months follow-up, reduction of systolic BP was greater in the T group (-18 ± 18 mmHg) compared to UC (-13 ± 18 mmHg) and trended to be significantly different ($p=0.067$). There were no significant differences between groups when comparing age, sex, BMI, fasting blood glucose, total cholesterol, HDL, and LDL.

Conclusions: The results suggest that frequent web or telephone based communications can be effective in improving BP control in patients with Stage I or stage II HTN. This asynchronous, Internet and telephone based communication system can be an important component of a patient centered care program to augment PCP management and strengthen patient to provider relationships in the setting of chronic hypertension.