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Richmond City Health District (RCHD), Bon Secours Richmond City Hospital (RCH), and Virginia Commonwealth Universities (VCU) Department of Health Behavior Policy (HBP): Partnering with Community Health Workers (CHW) to Improve Community Health Outcomes and Reduce Emergency Department (ED) Use

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Partnering with Community Health Workers to Improve Community Health Outcomes and Reduce Emergency Department Use.



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Introduction

- Inappropriate and frequent ED use is a key contributor to the overall rising cost of healthcare in America
- Inappropriate ED use often includes patients with non-emergent or primary care physician treatable health issues
- Frequent ED use accounts for under 5% of the ED population but is responsible for up to 20% of the visits.
- Social Determinants of Health are a common thread among frequent and inappropriate ED users

The Richmond City Health District and Richmond City Hospital pilot study aimed to implement processes allowing the Community Health Worker program to initiate outreach to improve health knowledge and outcomes and to reduce non-emergent ED use by addressing key social determinants of health in eight public housing areas.

Access to Health Care	General Healthy Living	Chronic Disease Management
PCP	Housing Resources	Hypertension
Health Insurance	Food Resources	Diabetes
Mental, Dental, and Specialty Healthcare	Health Literacy	Asthma

Methods

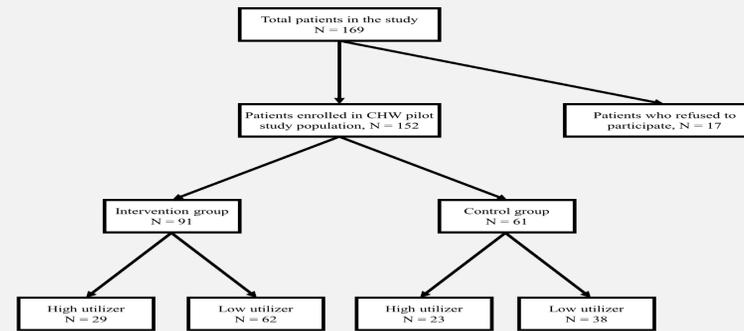
• Randomized experimental pre-post design to assess the differences in outcomes between intervention and control groups both before and during exposure to the intervention program.

• High Utilizers were defined as study participants with 2 or more visits in the Pre-Intervention Period

Data Collection

- Richmond City Hospital ED Visit date, charges, and diagnosis codes
- Treatment Group Surveys at baseline, midpoint, and post-intervention
- Community Health Worker Encounters, ED follow-up, social support referrals

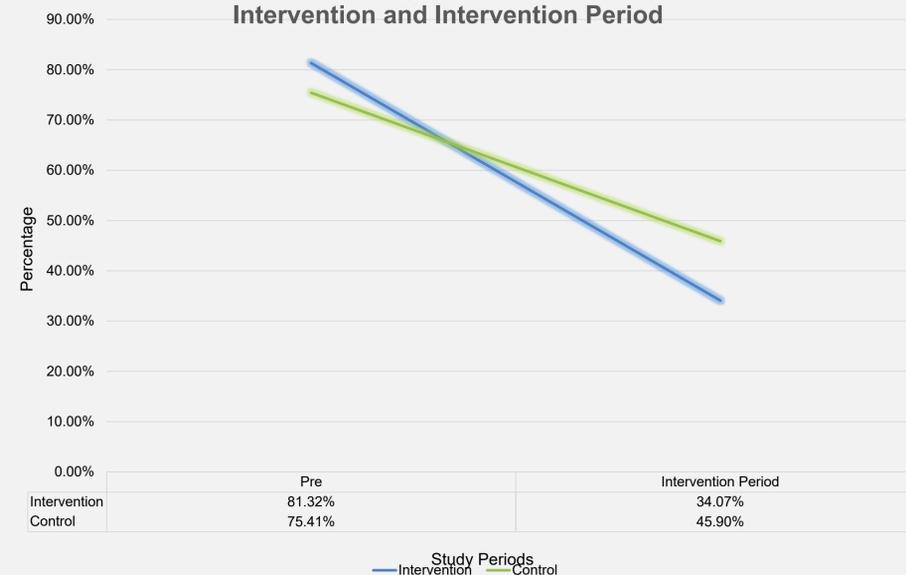
Process for the Community Health Worker ED Follow-Up and Social Supports Intervention



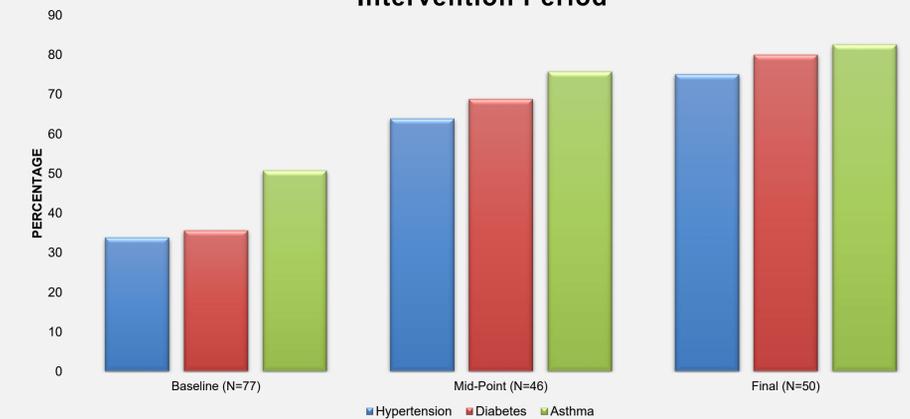
Results

Short-Term Outcomes Engage the Target Population	Intermediate Outcomes Link to Healthcare Insurance Connect with PCP Connect with Providers to Address Social Needs	Long-Term Outcomes Improve Health & Lower Inappropriate Hospital Use and Cost of Care
Process Measures	Intermediate Measures	Outcome Measures
169 Individuals met the inclusion criteria Intervention Group (n=91) Control Group (n=61) Do Not Contact (n=17) 152 Individuals signed consent forms to participate in the pilot study 97% of the individuals in the treatment group completed a baseline survey 49% of treatment group participants had at least three encounters with a CHW's 2% of treatment group participants did not engage with CHWs 47% of the individuals in the treatment group completed a final survey 51% of participants that had an ED Visit engaged with a CHW within 2 days of an ED visit (n=86)	4 Referrals were made for insurance 19 Referrals made for medical care 43 Referrals made to address social and economic needs 75% Health insurance referrals completed 79 % Medical care referrals completed 79% Social and economic support referrals completed	22% reported an improvement in physical health from baseline to 6 month follow-up 26% reported an improvement in mental health from baseline to 6 month follow-up 96% rated the community advocate as "extremely helpful" at 6 month follow-up ED Visits (Intervention Period) Intervention Group (n=43) = 88 ED Visits Control Group (n=35) = 65 ED Visits ED Charges (Intervention Period) Treatment Group Average (n=91) = \$2,893 Treatment Group Total = \$263,288 Control Group Average (n=61) = \$2,700 Control Group Total = \$164,727

Comparison of Intervention and Control Group ED Users Preventable or Non-Urgent ED Visits During the Pre-Intervention and Intervention Period



Percentage of Respondents Reporting Very or Extremely Knowledgeable in the Understanding of Chronic Diseases Before, During, and at the End of the Intervention Period



Conclusion

- Collaborations between hospitals and community health worker programs may be a viable path to mitigating the high cost associated with frequent ED use
- Notifying RCHD of participants visits to the ED created an opportunity for CHWs to reach out to community residents soon after an ED visit to educate participants on appropriate ED use and offer assistance with access to care, as well as, social and economic supports.
- Improving access to care, acquiring the necessary social and economic supports, and the general healthy living and chronic disease knowledge gained by the participants resulted in health outcomes and ED utilization improvements which should also be reflected in the long-term.

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