

**NAVIGATING HIGH-RISK IN-PATIENT CLIENTS
USING A LAY-HEALTH WORKER MODEL IN
EASTERN KY
THE BRIDGES TO HOME PILOT PROJECT**



Disclosures

- ▶ Presentation contains results of a project funded by Passport Health (PI: R. Cardarelli)

Objectives

- ▶ To report the most common factors associated with hospital readmissions.
- ▶ To understand how CHWs can integrate into hospital-based teams to assist clients with social needs.
- ▶ To list areas of impact that CHWs may have when assisting clients with their social needs.

Background

- ▶ Roughly 20% of all Medicare fee-for-service clients are readmitted within 30 days of hospital discharge, resulting in \$17 billion annually
- ▶ 75% of these readmissions are **preventable**
- ▶ Research suggests that **team-based** approaches to healthcare, which are centered on a personal coach, yield the largest reductions in post hospital discharge costs, as well as improving client perceived quality of life

Background

- ▶ Studies which have sought to reduce hospital readmissions through a client navigator-type intervention have seen reductions in hospital readmission rates, **however, these studies employed social workers, nurses, or other skilled professionals**
- ▶ Research has demonstrated that a **broad range of socioeconomic and personal factors** impact readmission rates

Background

- ▶ Research shows that CHW's can provide psychosocial preventive interventions in community settings, and **may be the most effective strategy** for a client to obtain health education and navigate the health care system.
- ▶ A literature review on the CHW model reveals positive results on health outcomes regarding CHW's in community settings, **however a hospital-based CHW model to reduce readmissions has not been well documented.**

Background

- ▶ While successful hospital readmission reduction programs exist, **most are resource-intensive, disease-specific, and are not targeted to identify at-risk clients in need of an intervention.**
- ▶ The Bridges to Home study capitalized on existing community resources to deliver comprehensive care coordination for a broad range of diagnoses, utilizing an efficient **hospital-based** CHW model to reduce hospital readmission rates.
 - ▶ **At a time that CHW services are proposed to be reimbursed by various states.**

Bridges to Home Pilot

- ▶ Feb – Oct 2015
- ▶ St. Claire Regional Medical Center, Morehead, KY.
 - ▶ Serves the NE KY Appalachia population
 - ▶ 159 bed community-based hospital
- ▶ High rates of disparities in health behaviors (smoking, obesity) and disease (lung cancer, diabetes, heart disease).



Bridges to Home Pilot

- ▶ AIM: Identify and assist in addressing the psychosocial and health determinants of LACE-identified high-risk clients before, during, and after the time of hospital discharge using a community-health worker (CHW) model and assess its impact on client quality of life measures and 30-day readmission rates.

Identify clients

- Home dwelling;
- Med/Surg floor
- LACE ≥ 7

Complete WNA

- Social determinants
- Mood screeners
- Substance use

Baseline phase – 4 months

Linkages

- Community resource database
- Communicate with teams
- Resources provided/linked

Intervention phase – 5 months

CP3 Plan

- Plan of resources/linkages made during hospital stay
- Their plan after discharge based on WNA results

2-3 Day Follow-up

30-day reassessment

Bridges to Home Pilot

- ▶ Participants
 - ▶ **1,048 patients with eligible LACE index scores.**
 - ▶ Of these, 660 patients (63%) met all other eligibility criteria.
 - ▶ Only 506 were approached as others were in isolation rooms, participated in the same phase of the study or were discharged before the CHW was able to approach them about the study.
 - ▶ 145 participants who were eligible and available for the study agreed to participate in the study representing a 28.7% recruitment rate.
 - ▶ 107 completed all steps of the study (73.8% retention rate).
 - ▶ The 38 not completing the study either refused/did not answer to complete the 30-day evaluation (29) or passed away (9). (Did not differ in any characteristic to those completing the study)

Demographics

	Total	(N=107)
	n	%
Age (mean, sd)	58.77	13.60%
Gender		
Male	45	42.10%
Female	62	57.90%
Race/Ethnicity		
Caucasian	106	99.00%
Other	1	1.00%
Highest Grade		
Did not graduate high school	42	39.30%
Graduated high school	33	30.80%
Some college or higher	32	29.90%
Marital Status		
Married/ in a relationship	54	50.50%
Single/widowed/separated/divorced	53	49.50%

Health Measures/ Factors								
	Total		Baseline		Intervention		p-value	
	n	%	n	%	n	%		
LACE score (mean, sd)	9.09	1.90	9.30	2.00	8.90	1.80	0.32	
BMI (mean, sd)	31.01	9.11	30.30	7.60	31.40	9.80	0.61	
Has a personal doctor	100	93.50%	44	95.70%	56	91.80%	0.43	
Self reported general health status:							0.55	
Excellent/very good/good	12	11.20%	4	8.70%	8	13.10%		
Fair/ poor	95	88.80%	42	91.30%	53	86.90%		
Has a will or advanced directive	32	29.90%	13	28.30%	19	31.10%		
Smoking status							0.77	
Never	76	71.00%	32	69.60%	44	72.10%		
Past/Current	31	29.00%	14	30.40%	17	27.90%		
Substance use:								
Alcohol use	7	6.50%	2	4.30%	5	8.20%	0.70	
Nonprescription recreational drug use	4	3.70%	1	2.20%	3	4.90%	0.63	
Prescription recreational drug use	1	0.90%	0	0.00%	1	1.60%	1.00	
Want help regarding your smoking, alcohol, or drug use	18	16.80%	7	15.20%	11	18.00%	0.70	
Positive screen for General Anxiety Disorder	50	46.70%	27	58.70%	23	37.70%	0.03	
Positive screen for Depression	65	32.70%	20	43.50%	15	24.60%	0.04	

Psychosocial Factors

	Total	
	n	%
Social support score (mean, sd)	10.09	2.03
Positive social factors:		
Lack of someone to check on them at home	4	3.7
Risk of losing current residence	10	9.30%
Concerned about safety in your community	4	3.70%
Concerned about environmental exposure at home	7	6.50%
Concerned about structural integrity of home	8	7.50%
Concerned about personal safety at home	0	0.00%
Transportation access has been a reason for missing medical appointments or not picking up medications	17	15.90%
Transportation cost has been a reason for missing medical appointments or not picking up medications	18	16.80%

Psychosocial Factors (cont.)

	Total	
	n	%
Cost is a reason for not going to medical appointments, such as co-pays and deductibles	16	15.00%
Cost is a reason for not getting tests done	13	12.10%
Cost is a reason for not getting the medical treatment, services or supplies you need	18	16.80%
Cost is a reason for not getting food	29	27.10%
Cost is a reason for not paying utilities	13	12.10%
Utilities are frequently/occasionally turned off because of inability to pay	17	15.90%
Has a medical condition which requires electricity	69	64.50%
Would like help with the social needs identified	41	38.30%
No home computer with internet access	57	53.30%
No cell phone with internet access	57	53.30%
Low health literacy	29	46.80%

Study Outcomes			Baseline		Intervention		p-value
	n	%	n	%	n	%	
Hospital readmission within 30 days	22.00	20.60%	13.00	28.30%	9.00	14.80%	0.09
30-day ED Utilization	22.00	20.60%	12.00	26.10%	10.00	16.40%	0.22
Adherence Rate (mean, sd)	4.16	0.90	4.05	1.01	4.24	0.80	0.30
SF36, Physical Function score (mean, sd)	316.18	260.25	Total	186.40	350.00	298.30	0.09
SF36, Limitations due to Physical Health score (mean, sd)	43.81	103.7	20.45	46.15	60.66	128.16	0.03
SF36, Limitations due to Emotional Problems score (mean, sd)	178.30	140.07	132.61	135.08	213.33	134.63	0.003
SF36, Energy/Fatigue score (mean, sd)	97.17	97.26	62.17	65.49	124.00	108.97	<0.001
SF36, Emotional Well-being score (mean, sd)	344.67	146.57	292.60	158.60	383.90	124.30	0.002
SF36, Social Functioning score (mean, sd)	144.10	61.88	113.89	64.96	166.39	49.14	<0.001
SF36, Pain measure score (mean, sd)	110.75	60.05	99.20	55.30	119.40	62.50	0.09
SF36, General Health score (mean, sd)	166.36	105.29	136.96	89.87	188.53	111.2	0.01
Chance Locus of Control (mean, sd)	18.43	5.92	19.00	5.90	18.10	6.00	0.44
Internal Locus of Control (mean, sd)	24.94	5.71	25.30	5.30	24.70	6.10	0.59
Powerful Others Locus of Control (mean, sd)	25.99	4.33	26.40	4.90	25.70	3.90	0.38

Conclusions

- ▶ Our pilot study's results are in the same range of impact as other care transitions programs and studies.
 - ▶ Programs, such as BOOST or Coleman models, have high program costs
- ▶ Our CHW model that focuses on social determinant may offer a more cost-effective alternative for resource-strapped community hospitals.

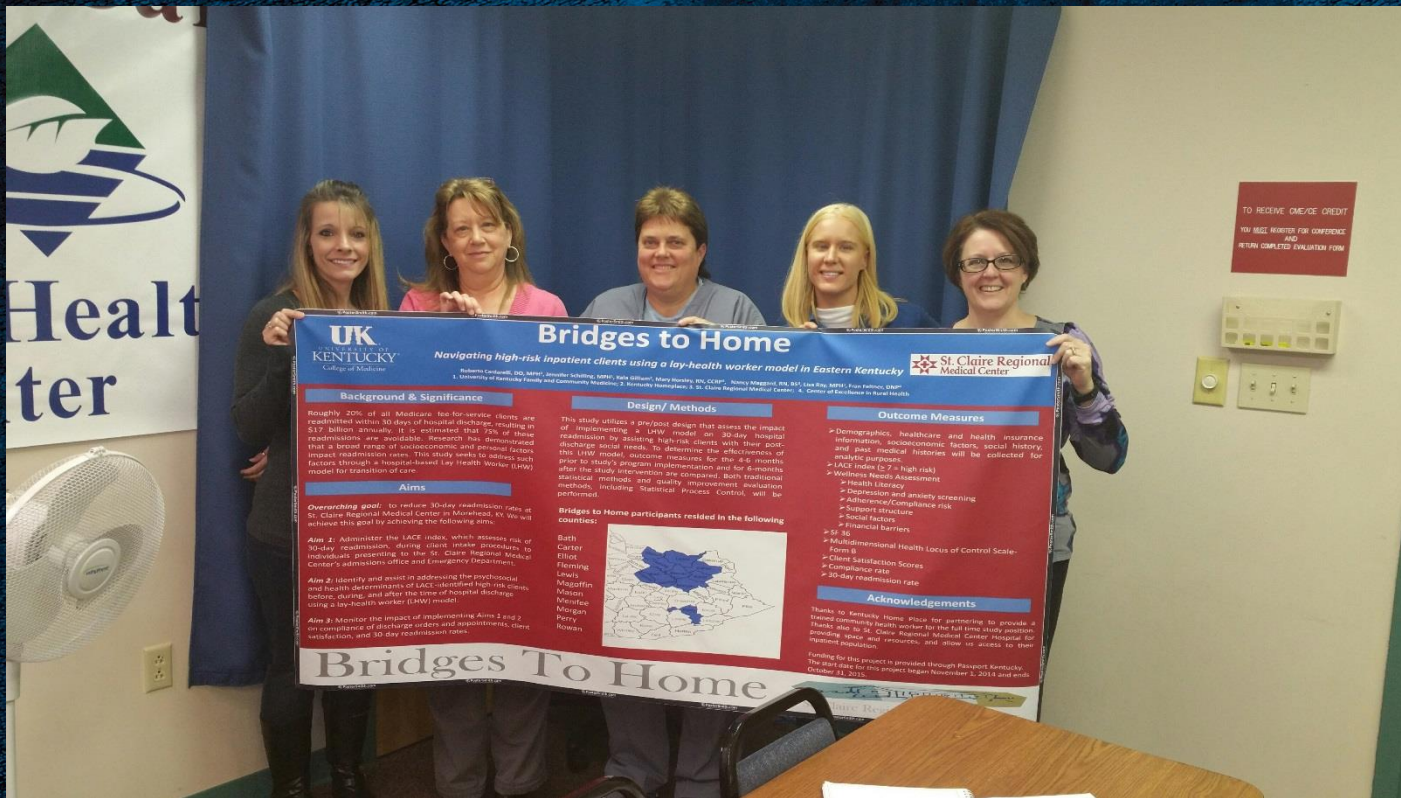


St. Claire Regional
Medical Center

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KENTUCKY
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Conclusions

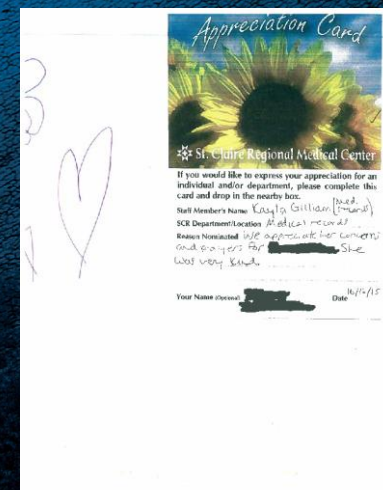
- ▶ CHWs may have a vital role in linking (and following) individuals to community resources to address the social needs
 - ▶ In care transition programs
 - ▶ In PCMH models
 - ▶ Performance measures and the penalties or rewards associated with outcomes may be **catalysts** in justifying a sustainable model to include CHW



“The wellness and health of an individual is predominately influenced and impacted by the factors **outside** the four walls of the healthcare system or clinic. The solution lies within the community.”

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Questions?

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