CRITICAL REVIEW FORM:
THERAPY ARTICLES

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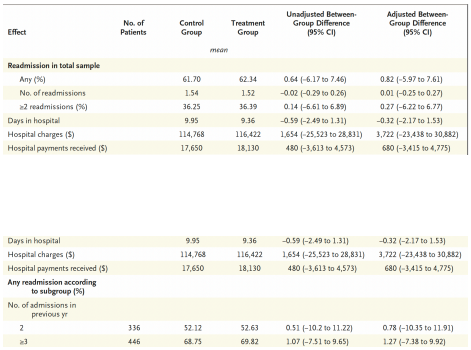
Study Objective: To assess whether the Camden Coalition reduces spending and improve health care quality among "superutilizers," (patients with very high use of health care services) by implementing and utilizing the "hotspotting" program created by the Camden Coalition of Healthcare Providers.

Study Methodology: A randomized controlled trial that screened and included 800 hospitalized patients who were randomized to either an intervention or a control group enrolled at the time of discharge. Inclusion criteria included patients with medically and socially complex conditions and at least one additional hospitalization in the last 6 months, at least two chronic conditions, at least five active outpatient medications, difficulty accessing services, lack of social support, a coexisting mental health condition, an active drug habit, and homelessness. Patients were excluded if they were uninsured, had cognitive impairment, or were receiving oncologic care or had been admitted for a surgical procedure for an acute health problem, for mental health care (with no coexisting physical health conditions), or for complications of a progressive chronic disease for which limited treatments were available. Enrolled patients were randomly assigned into 2 groups – The Intervention group got the Coalition's care-transition program (with a team of nurses, social workers, and community health workers to coordinate outpatient care and link them with social services) and the Control group got usual care (d/c to the streets or wherever you came from).

- The **primary outcome** they looked at was hospital readmission within 180 days after discharge.
- **Secondary outcomes** were the number of readmissions, the proportion of patient with 2 or more admissions, hospital days, hospital charges (patient's bill), payments received (from patients or their insurance), and mortality

GUIDE	COMMENTS
I. Are the results valid?	I think so, ye

A. Did experimental and control groups begin the study with a similar prognosis	Yes. Table 1 Age, race, prior inpatient admissions, insurance and employment status as well as mental health diagnoses at index hospitalixation were balanced. The authors did not specify specific reasons for admission, LOS, or other potential confounders.
1. Were patients randomized?	Yes. The authors in their appendix describe a randomization list and patients were assigned based upon their sequential enrollment and prespecified group based on the randomization list.
2. Was randomization concealed (blinded)? In other words, was it possible to subvert the randomization process to ensure that a patient would be "randomized" to a particular group?	Yes -- A Coalition recruiter approached patients in the hospital, confirmed eligibility, obtained consent, and conducted a baseline survey. The recruiter then used a tamper-proof and externally recorded randomization process to assign treatment or control status and informed the patient of the assignment.
3. Were patients analyzed in the groups to which they were randomized?	Yes. There was no specific mention of intention-to-treat management of lost patients but there were only 18 patients enrolled who withdrew. Authors did mention performing a sensitivity analysis to account for the 18 patients who withdrew after enrollment.
4. Were patients in the treatment and control groups similar with respect to known prognostic factors?	Uncertain. The authors did not specify specific primary diagnoses for each case at discharge. General demographic data (Table 1) was balanced. Insufficient data to assess balance of complex medical and social issues.
5. Were patients aware of group allocation?	Yes. There was no mention of blinding in this study and patients would likely be difficult to blind.
6. Were clinicians aware of group allocation?	Yes; Coalition staff had to implement the protocol and administered the intervention for patients in the treatment group but they were unaware of the results until the trial was over.
7. Were outcome assessors aware of group allocation?	Yes. Although outcome assessors could have been blinded there is no mention that was the case.

8. Was follow-up complete	Uncertain. The authors do not provide specific comment on follow-up. There was no mention of individual patient follow-up on all enrolled patients. Instead authors followed up patients by using hospital, Camden Coalition and Medicare/Medicaid databases tracking readmissions and other data points.
What are the results ? 	**Primary outcome: No difference** The 180-day readmission rate was 62.3% in the intervention group and 61.7% in the control group. The adjusted between-group difference was not significant (0.82 percentage points; 95% confidence interval, −5.97 to 7.61). **Secondary outcomes: No difference (Table 4)** The intervention had no effect on any of the secondary outcomes or within any of the prespecified subgroups
1. How large was the treatment effect?	All CI's for all outcomes were non-significant
2. How precise was the estimate of the treatment effect? (CI's?)	Precision or narrowness of the CI's does not apply in non-statistically significant trials. All of the CI's crossed "0"
III **How can I apply the results to patient care?**	
1. Were the study patients similar to my patient?	Probably. The study included adults 18 to 80 years of age living in Camden, New Jersey, which is one of the most economically de- pressed cities in the country and has a high rate of violent crime; Sounds familiar to our patient population.
2. Were all clinically important outcomes considered?	No mention of cost of the Camden Coalition program is. Study focused primarily on readmission rates. Secondary outcomes were also

Effect	No. of Patients	Control Group	Treatment Group	Unadjusted Between-Group Difference (95% CI)	Adjusted Between-Group Difference (95% CI)
		mean			
Readmission in total sample					
Any (%)		61.70	62.34	0.64 (−6.17 to 7.46)	0.82 (−5.97 to 7.61)
No. of readmissions		1.54	1.52	−0.02 (−0.29 to 0.26)	0.01 (−0.25 to 0.27)
≥2 readmissions (%)		36.25	36.39	0.14 (−6.61 to 6.89)	0.27 (−6.22 to 6.77)
Days in hospital		9.95	9.36	−0.59 (−2.49 to 1.31)	−0.32 (−2.17 to 1.53)
Hospital charges ($)		114,768	116,422	1,654 (−25,523 to 28,831)	3,722 (−23,438 to 30,882)
Hospital payments received ($)		17,650	18,130	480 (−3,613 to 4,573)	680 (−3,415 to 4,775)
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Any readmission according to subgroup (%)					
No. of admissions in previous yr					
2	336	52.12	52.63	0.51 (−10.2 to 11.22)	0.78 (−10.35 to 11.91)
≥3	446	68.75	69.82	1.07 (−7.51 to 9.65)	1.27 (−7.38 to 9.92)

	mostly about readmission and there was no data to address questions such as impact on health problems, patient satisfaction with Camden Coalition care, compliance with outpatient visits, medication etc. In a subsequent reanalysis of this data published in 2024 the authors found an increase in ambulatory visits and use of durable medical equipment
3. Are the likely treatment benefits worth the potential harm and costs?	Unlikely, Among patients in the treatment group, 95% had at least three encounters with program staff after enrollment; on average, a patient received 7.6 home visits and 8.8 telephone calls from staff and was accompanied on 2.5 physician visits, and 90% worked with the Coalition for more than 30 days. The median duration of pro- gram participation was 92 days. One imagines that these interventions likely have benefit but within the narrow context of their primary and secondary outcomes they show no favorable impact. Three quarters of the patients received both a home visit within 14 days and a provider visit within 60 days.

Limitations:
"Staff selected potentially eligible patients" could lead to selection bias.
Only 28% of patient had both goals of visit from staff and clinician met within 14 days.
The trial was not powered to detect smaller reductions that could have been clinically meaningful, nor was it powered to analyze effects within specific subgroups, where there could be differential effects.
The data did not permit evaluation of potential nontangible benefits such as improved relationships with providers, patient compliance, satisfaction etc.
Primary and secondary outcomes were very limited.
Some inclusion and exclusion criteria were unclear and not well defined i.e. excluded with "cognitive impairment", "complications of a progressive chronic disease for which limited treatments were available" are very ambiguous as is inclusion of "medically and socially complex conditions"

Clinical Bottom Line:

"There are challenges for superutilizer programs aimed at medically and socially complex populations. It is possible that approaches to care management that are designed to connect patients with existing

resources are insufficient for these complex cases despite it being intuitive that these types of programs should have a favorable impact on patient health and system overutilization.
I attempted to launch a version of this type of warm handoff model while at Jefferson – worked on the project for 2 years and got no where. These are very complex people with complex issues and their own free will which makes coming up with a single solution very difficult!! Warm hand offs and connections to care outside of the ED and hospital in general are a great place to start if looking to decrease hospital costs but implementing these programs and getting patients to do what you want them to do is very difficult when they don't understand or appreciate why they need to listen to you.