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*Institute For Intergenerational Studies*
*Southern Tier Center on Aging*

# Use of Social Workers Post Discharge


Laura Bronstein, PhD, LCSWR, ACSW
Interim Dean, College of Community and Public Affairs;
Director , Institute for Intergenerational Studies;
Binghamton University, State University of New York.

Shawn Berkowitz. MD, CMD, CAQ Geriatrics, AAFP, AGS
Director of UHS Geriatrics, Binghamton, NY;
Co-Director, Geriatric Education Theme, SUNY Upstate Medical University, Syracuse, NY;
Associate Director, Institute for Intergenerational Studies, Binghamton University.

# Case Presentation- Hospital

- 67 y/o caucasian male, receiveing dialysis treatments
- Known Congestive Heart Failure (CHF) diagnosis
- Has a Primary Care Physician (PCP) in the community
- Admitted for CHF exacerbation
- Patient is the Caregiver for his spouse
- No other family in the area
- New Hypertension Diagnosis & new meds started
- Declined home care
- Declined Stay Healthy referral – RN phone monitoring

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# After going home - What happened ?

- Anxious about keeping track of his blood pressure & confused about the new medications
- Blood pressure has been high since returning home

- Transportation issues for his PCP appt. and Dialysis.
- Dialysis 3 x's weekly –misses appts.

- O2 delivery issues – O2 arrives when he is not home

- Wife has terminal cancer diagnosis

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# Where did we Fail ?

- Limited formal disease specific education
- Limited pharmacist to patient counseling
- Often inaccurate medication reconciliation
- Poor transition of care from inpatient to outpatient setting
- No standardized approach
- Little communication between providers
- Rapid follow up visits difficult to obtain

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# Background

From 2007 – 2011 the National Average Readmission Rate within 30 days was 19%.

Calendar year 2012 Readmission Rates were 18.4%

- per the CMS website- Gerhardt, G. et al. (2013).

Readmissions negatively affect patient quality and cost Medicare dollars.

CMS / Medicare is starting to penalize hospitals for readmissions within 30 days.

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# Home-Care Bound Patients

**Attributes**

- Medication Management
- Medication Education
- Medical Intervention
- Scheduled Follow Up
- LACE Score
- Payor
- Age

**Disease**

CHF, COPD, PN and AMI

- Risk of Hospitalization
- Discharge Unit

AMI

Statistically significant patient attributes are in **RED**

# LACE Scoring

Length of Stay (# days in hospital for this admit)

Acuity of Admission (emergent or urgent)

Comorbidities (# present on admission)

Emergency Department Visits (# in last 6 months)

Developed at the Ottawa Hospital Research Institute,

Institute for Clinical Evaluation Sciences,

University of Toronto, University of Ottawa, and University of Calgary (Canada).

- Gruneir et al.

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# Design a New Study with 3 Interconnected Goals:

- Re-invent the learning process to better engage students in real-world patient care as part of an interprofessional team.
- Encourage patients to take greater ownership of their care using a Social Work Strengths-Based, Patient-Empowerment Model.
- Demonstrate cost savings.

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# *Goal for Social Work Program in Preventing 30-Day Readmissions*

Designed to determine if using social work strength-based intervention techniques of patient empowerment and improved communication would reduce the likelihood of moderate and high risk patients being readmitted to the hospital within 30 days.

Concept of teaching patients to "fish for themselves" / patient empowerment and coaching to improve self-care and self-awareness of disease management (ownership of disease treatment), and encouragement to communicate early with providers when questions or concerns arise (self-empowerment).

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# Method

LACE scoring protocol was used to identify patients at moderate-high risk for re-admission

Randomized controlled trial – used hospital case management number to assign patients to control or intervention group after consent was given to be in study

Use of hospital case management database (LVM and Canopy systems) to record and track patient information for the study

Firewalled and secured Protected Health Information (PHI) HIPPA-compliant

All students trained and supervised in HIPPA compliance measures by hospital staff supervisors.

Permission to contact primary care provider and hospital providers to coordinate care and share information in consent form

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# Process

Follow-up phone call in 3-7 days post discharge

Home visit 7-14 days post discharge

Limitations of student hours made it difficult but most 75-90% within those windows

Follow-up written surveys were mailed 2 weeks after the completion of the study period (30 days post discharge) to gather patient satisfaction on quality.

Everyone in study received typical and usual care. Those in the intervention group received additional case management by MSW student thru phone and home visits.

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# Interventions

Relationship Building- started in the hospital.

Student and Patient ownership

Basic needs being met ?

Adhering to the prescribed medication regimen ?

Transportation problems ?

Home safety ?

Caregiver stress ?

Other Questions or concerns ?

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# Demographics

171 Patient Contacts were made. Feb 2011- May 2013. //

107 Consented = 62.5 % Consent rate for the study.

Intervention and Control Groups were Demographically Similar

Possible Difference in Readmission Rates likely NOT the result of differences in patient characteristics.

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# Impact

63 patients WERE enrolled into the program (Intervention group)

- 4 Patients Readmitted within 30 days that were enrolled in the Intervention group using Intention to Treat Analysis (ITT).

59 patients DID NOT Readmit who were enrolled in the Intervention.

44 patients WERE NOT enrolled into the program(Control group)

- 8 Patients Readmitted within 30 days that were enrolled in the Control group.

36 patients DID NOT Readmit who were enrolled in the Control group

6.3% Vs. 18.1%

*- A 65% reduction in readmission*

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# Notable Study Readmissions

4 Patients Readmitted from the Intervention Group.

- None of those Patients completed the designed program:
  - 1 patient Readmitted very quickly before the scheduled Home visit.
  - 1 patient Readmitted the day of the home visit (6 days post discharge) with known illness since discharge and regular team contact.
  - 2 patients did not receive home visits due to cancelling and delaying of the home visits by family.

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# Intention-To-Treat Analysis

An **Intention To Treat (ITT) analysis** of the results of an experiment is based on the initial treatment assignment and not on the treatment eventually received.

ITT analysis is intended to avoid various misleading artifacts that can arise in intervention research such as non-random attrition of participants from the study or crossover.

ITT is also simpler than other forms of study design and analysis because it does not require observation of compliance status for units assigned to different treatments or incorporation of compliance into the analysis.

Although ITT analysis is widely employed in published clinical trials, it can be incorrectly described and there are some issues to its application.[

–Gupta, S.K. (2011)

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# Intention-to-Treat Analysis 2

In order to reduce the risk of selection bias

All patients admitted into an arm of the study are mathematically included in that results analysis.

All patients entered into the control arm are measured

in the control arm and

All patients entered in the intervention arm are measured in the intervention arm.

If a patient in the intervention group were to “drop-out” it could skew results as we would not be eliminating anyone in the control arm – no drop outs. - Fisher, L.D, et al.

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# Notable

The hospital studied has an average

18% All-Cause Readmission Rate

– variable for major diagnoses (12%-22%).

-This matched our readmission rate found in the control group.

- Reassuring that our Control Group was similar to the general hospital population regarding readmission rates.

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# Interpretation

The Pilot study conservatively -

saved the hospital about 5 readmissions.

(Presuming a >50% reduction of cases in the intervention group)

The hospital conservatively calculates the average cost of a “preventable” readmission within 30 days to be:

$7500

$7500 x 5 patients =

$37,500 potentially saved from our small Pilot Study.

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# Extrapolation

If extrapolated to the hospital readmission population as a whole- the savings would be about

$ 7.5 million dollars.

Based on about 2000 readmissions per year and a 50% reduction to only 1000 readmissions.

$7500 x 1000 patients = $ 7.5 million potential cost savings.

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# Being Conservative

If we consider that a **50% reduction** in readmissions is unlikely to be maintained, and only use a

**very conservative 10% reduction rate.**

And over the next few years, we begin hiring **12 new social workers to work full time** in the primary care offices as case managers to reduce readmissions.

We estimate reducing **about 200 readmissions** per year

(there are about 2000 readmissions per year at the hospital

10% = 200 patients)

$7500 (cost per readmission) x 200 patients =

**$ 1.5 million dollars cost savings (A).**

# Balance sheet

The costs of hiring 12 social workers at a salary of $40,000/year and $13,000 in benefits =

$53,000 /year per social worker.

12 social workers x $53,000 = $636,000

plus random incidentals like phone and mileage reimbursement for home visits =

$750,000 (B) total costs to the hospital system

# Costs minus Savings (A minus B)

$1,500,000 (A) in cost savings -minus-
$750,000 (B) in added costs

= $750,000 in actual savings for the hospital with this program in place.

- This is with very conservative figures, and there exists the possibility of even higher cost savings,
- but even if the cost savings is less than expected, we have a large savings buffer.

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# Summary

Basically, each new full-time social worker just needs to **prevent 7 readmissions per year** on average to pay for themselves.

--that is approximately **one patient every 6 weeks / social worker.**

(12 social workers x 7 patients =

**only 84 patients out of 2000**

that we need to prevent readmission to break even in this cost/savings model)

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# Conclusion - Final Thoughts

If the social workers are engaging patients in a full time job to reduce the potential for readmission,

this would seem easily achievable and benefit the patients, the system, the community,

and the taxpayers.

As well as the non-measurable benefits of improved patient and provider satisfaction and increased referrals to the hospital system – based on high level care with better outcomes.

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