# Risk Factor Assessment of Hospice Patients who are Readmitted within 7 Days of Acute Care Hospital Discharge (Abstract 121)

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## ABSTRACT

**Background:** Although 20% of adults 65 and older are rehospitalized within 30 days of discharge, there is a dearth of research investigating readmission of patients discharged to hospice and the predictors of these readmissions. The study aim was to identify risk factors for hospital readmission within 7 days of discharge to home hospice.

**Methods:** This was a retrospective case control study with cases being patients discharged to home hospice that were readmitted to the hospital within 7 days. Controls were patients discharged to home hospice and not readmitted to the hospital within 7 days. Descriptive statistics were used to describe demographic and clinical characteristics. The chi-square test or Fisher's Exact test were used to compare categorical predictors between cases and controls. The two-sample t-test or the Mann-Whitney test were used to compare continuous predictors between cases and controls.

**Results:** There were 163 subjects; 46 cases (28.22%) and 117 controls (71.78%). The most frequent hospital diagnosis was cancer (56.4%). There was a significant association between 7-day readmission (i.e., case) and age (P < 0.0041), race (P < 0.0008), language (P < 0.0007) and insurance (P < 0.0001). Specifically, cases were significantly younger than controls (69.5 vs. 77.0). Cases were more likely to be Hispanic (15.2 vs. 5.1), Asian (15.2 vs. 5.1) and other (13.0 vs. 2.6) when compared to controls. Cases were more likely to speak Spanish (13.3 vs. 3.5) or other (20.0 vs. 5.3) and less likely to speak English (66.7 vs. 91.2). Cases were less likely to have Medicare (8.7 vs. 82.9) and more likely to have Medicaid (32.6 vs. 4.3), private insurance (13.0 vs. 10.3) or other form of insurance including dual eligibility (45.7 vs. 2.6). Gender, marital status, religion, hospital diagnosis, discharge day, family support at home, symptoms and emergency contact relationship were not significantly association with 7-day readmission.

**Conclusions:** Our data highlights four risk factors, namely age, race, language and insurance status as factors predicting readmission within seven days of acute care hospital discharge. Further study of these predictors may identify opportunities for interventions to obviate these readmissions.

## OBJECTIVES

Hospice care seeks to ease the severity of pain that chronically, terminally or seriously ill patients suffer with, while simultaneously attending to their emotional and spiritual needs. The goal for patients discharged home to hospice care is to remain at home for symptom management and not to return to the hospital within a week of discharge from the acute hospital inpatient setting. When patients choose hospice care, they no longer wish to receive curative treatment. Despite patient wishes and the goals of hospice care, there are many who are re-hospitalized within a week. The objectives of the present study were:

1. To identify risk factors for home hospice readmission within one week of discharge to hospice;
2. To identify risk factors for ER readmission within one week of discharge to home hospice; and
3. To identify risk factors for inpatient hospice admission within one week of discharge to home hospice.

## METHODS

This was a retrospective case control study with cases being patients discharged to home hospice that were readmitted to the hospital within 7 days. Controls were patients discharged to home hospice and not readmitted to the hospital within 7 days. Data was extracted from charts from the previous five and a half year time period (January 2009 through June 2014). All patients were 18 years and older with an acute hospitalization and subsequent discharge to hospice from the acute care hospital and then readmitted to either the acute care hospital or to inpatient hospice within seven days of discharge. Descriptive statistics were used to describe demographic and clinical characteristics. The chi-square test or Fisher's Exact test were used to compare categorical predictors between cases and controls. The two-sample t-test or the Mann-Whitney test were used to compare continuous predictors between cases and controls.

| Table 1. | Cases (n = 46) | Controls (n = 117) | P < |
|---|---|---|---|
| Age | 69.48 ± 17.68 | 77.03 ± 13.64 | 0.0041 |
| Race | | | 0.0008 |
| White | 16 (34.78) | 59 (50.43) | |
| Black | 10 (21.74) | 43 (36.75) | |
| Hispanic | 7 (15.22) | 6 (5.13) | |
| Asian | 7 (15.22) | 6 (5.13) | |
| Other | 6 (13.04) | 3 (2.56) | |
| Marital Status | | | 0.7474 |
| Married | 23 (51.11) | 52 (44.44) | |
| Widowed | 16 (35.56) | 47 (40.17) | |
| Single/Other | 6 (13.33) | 18 (15.38) | |
| Language | | | 0.0007 |
| English | 30 (66.67) | 104 (91.23) | |
| Spanish | 6 (13.33) | 4 (3.51) | |
| Other | 9 (20.00) | 6 (5.26) | |
| Religion | | | 0.1602 |
| Catholic | 12 (29.27) | 49 (42.61) | |
| Protestant | 13 (31.71) | 31 (26.96) | |
| Jewish | 5 (12.20) | 20 (17.39) | |
| Other | 8 (19.51) | 13 (11.30) | |
| None | 3 (7.32) | 2 (1.74) | |
| Insurance | | | <0.0001 |
| Medicare Alone | 4 (8.70) | 97 (82.91) | |
| Medicaid | 15 (32.61) | 5 (4.27) | |
| Private | 6 (13.04) | 12 (10.26) | |
| Other (dual eligible, etc.) | 21 (45.65) | 3 (2.56) | |

## RESULTS

- There were 163 subjects; 46 cases (28.22%) and 117 controls (71.78%).
- The most frequent hospital diagnosis was cancer (56.4%).
- There was a significant association between 7-day readmission (i.e., case) and age (P < 0.0041), race (P < 0.0008), language (P < 0.0007) and insurance status (P < 0.0001).
  - Specifically, cases were significantly younger than controls (69.48 ±17.68 vs 77.03 ± 13.64).
  - Cases were more likely to be Hispanic (15.2% vs. 5.1%), Asian (15.2% vs. 5.1%) and other (13.0% vs. 2.6%) when compared to controls.
  - Cases were more likely to speak Spanish (13.3% vs. 3.5%) or other language (20.0% vs. 5.3%) and less likely to speak English (66.7% vs. 91.2%).
  - Cases were less likely to have Medicare (8.7% vs. 82.9%) and more likely to have Medicaid (32.6% vs. 4.3%), private insurance (13.0% vs. 10.3%) or other form of insurance including dual eligibility (45.7% vs. 2.6%).
- Gender, marital status, religion, hospital diagnosis, discharge day, family support at home, symptoms and emergency contact relationship were not significantly association with 7-day readmission.

## CONCLUSION

Our data highlights four risk factors, namely age, race, language and insurance status as factors predicting readmission within seven days of acute care hospital discharge. Further study of these predictors may identify opportunities for interventions to obviate these readmissions.

## REFERENCES

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**This research study did not receive any financial support. The investigators retained full independence in the conduct of this research;** **Anthony E. Wilson, MD Email: aewilsonmd@comcast.net**