

Primary Care Utilization and Attachment Among Burn Survivors: A Population-Based Matched Cohort Study

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Background

- Long-Term Mortality:** burn survivors face increased long-term mortality, including from preventable conditions such as cancer, heart disease, and diabetes.
- Primary Care Access:** while primary care improves survival in the general population, post-discharge primary care access and utilization among burn survivors is unknown.
- Rationale:** characterizing access to care is a key step toward understanding primary care's role in long-term outcomes after burn injury.

Objectives



To evaluate burn survivors' primary care provider (PCP) attachment and rate of primary care visits in the 2 years following discharge compared to matched controls.



Methods



Study Design: retrospective population-based matched cohort study using ICES databases (DAD, NACRS, RPDB, ORGD, CAPE, OHIP, and others).



Cohort: Adults (≥ 18 years) in Ontario discharged alive between 2010-2022 after a major burn injury hospitalization episode (discharge date = index date).



1:5 Matched Controls: hard matched on age and sex, as well as a propensity score (medical and psychiatric comorbidity, rurality, immigration status, and socioeconomic characteristics). Matched on pseudoindex dates.



Primary Outcome: rate of PCP visits over 2 years post-index
Secondary Outcome: PCP attachment in 2 years post-index



Analysis: rate of PCP visits by GEE negative binomial regression, PCP attachment by GEE log binomial regression.

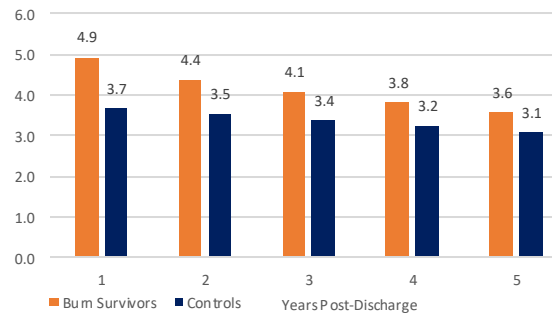
Results

Study Sample Description

- 1925 burn survivors matched to 9484 controls; no significant post-matching differences
- Median age 47 (IQR 27); 73% male; most lived in urban areas
- 77% had moderate-severe comorbidity (ADGs >3)
- 19% had psychiatric care in prior 2 years
- Over 25% were in the most marginalized quintiles of material resources, housing, and income

Burn survivors have significantly greater primary care utilization than matched controls, with a greater proportion of visits for mental health.

Mean Rate of Cumulative PCP Visits per Person-Year



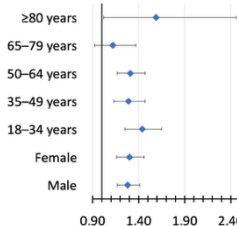
2-Year Primary Care Visit Rates

Metric	Burn Survivors	Controls
Mean Rate of Visits/Person-Year	4.4	3.5
Mean Rate of Visits/Person-Year, Excluding First 60 Days Post-Index	3.7	3.2
Median (IQR) of Visits	5 (9)	4 (9)

2-Year Primary Care Visit Rates Adjusting for Matched Design

- Adjusted rate: after adjusting for the matched design using a GEE negative binomial regression, burn survivors had a 29% higher rate of primary care visits over the 2-year follow-up compared to controls
- Rate Ratio = 1.29, 95% CI 1.20–1.39, $p < 0.001$

Stratified Analysis of PCP Visit Rate by Age and Sex



2-Year Primary Care Attachment in Burn Survivors vs Controls

- 90% of burn survivors vs. 89% of controls were attached to a PCP
- The relative risk of PCP attachment post-index did not significantly differ between groups in a GEE log-binomial model (RR = 1.01, 95% CI: 0.99–1.03, $p = 0.17$)

Primary Care Visit Fee Code Descriptions

% of PCP Visits	Burn Survivors	Controls
30 Days Post-Discharge		
Mental Health	11%	7%
Periodic Health Assessments	5%	12%
2 Years Post-Discharge		
Mental Health	7%	6%
Periodic Health Assessments	9%	14%

Conclusions



Burn Survivor Demographics: Majority male, urban-dwelling. Over three quarters had moderate-severe medical comorbidity; 1 in 5 had psychiatric history, and over a quarter were in the lowest quintiles of socioeconomic marginalization and income.



Primary Care Visits: Burn survivors had a significantly higher post-discharge PCP visit rate than controls.



Primary Care Visit Reason: Burn survivors had more visits for mental health concerns, while controls more often visited for routine health maintenance.



Primary Care Attachment: No significant difference between burn survivors and controls in the 2 years post-discharge.

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