Long-Term Economic Consequences of a Childhood Cancer Diagnosis

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Background

• Childhood Cancer Diagnosis
  – Often intensive therapy for protracted periods
  – A large proportion of families will limit or remove one or both parents from the labour force
What do we know?

• Literature Indicates
  – Families experience financial burden
  – Large out-of-pocket costs
  – Most work examines period immediately following diagnosis
Family Costs: Example

Tsimicalis et al (2011):

- Prospective Study, n=99
- New DX (within 21 days), in 2006-2008
- Cost diary, 1 week per month x 3 months
- Median annual after-tax income spent by families on direct and time costs was 37%
- Even with provincial health coverage the financial burden on families is large
Gaps

- Current work focuses on period immediately post-diagnosis
- Sample sizes are often small
  - Limits generalizability
  - Limits subgroup analysis
    - Focused on single disease group
    - Or not sufficient sample to stratify by cancer type
What we don’t know

• Limited work examining the long-term financial impact on families
  – No work identified that examine entire trajectory of illness
    • Diagnosis, treatment, survivorship / post-death
Objectives

• Examine longitudinal economic health of families who experience a childhood cancer diagnosis

• Evaluate patient, disease and family factors which may be associated with greater economic disparity
Data Sources

• Link POGONIS data with Canadian Tax Information

  – POGONIS Data contains details of child diagnosed with cancer (does not contain information on parents)

  – Statistics Canada holds the T1 Family File
    • Annual T1 tax returns for all Canadians linked into family units
Linkage Methods

- T1 contains the gender and age of dependents, but not the dependent’s name

- Canadian Child Tax Benefit and provincial birth files are used to augment T1 data

- Dependents who file also linked to T1FF
Population

• Children Diagnosed with cancer
  – Defined by ICCC-3
  – Ontario Residents
  – Diagnosed between 1989 and 2011

• 7,223 children sent identified for linkage
Linkage Results

• 47% linked to families (n=3,384)
  – Linked patients more likely to be...
    • Older
    • Diagnosed earlier in period
    • More likely to be alive

  – No difference by...
    • Sex
    • Type of cancer
    • Cause of death
    • Relapse status
    • Intensity of treatment (ITR-3)
On-Going Work

• Compare to similar families who did not experience pediatric cancer
  – Similar family structure, geographic location and family income during the time prior to T0

• Examine patient, disease and family factors associated with difference in family income trajectory
Question or Comments

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