Objective
To better understand needs at the end of life by examining association between causes of death on death certificates.

Methods
All cause of death information was utilized to determine the number of causes for each individual. This study uses previous research that indicated a minimal set of seven conditions which could potentially benefit from palliative care services.

Diseases were categorized into seven broad disease groups according to ICD-9 and ICD-10 codings. The number of causes by death trajectory was calculated.

Logistic regression was used to analyze relationships between disease types controlling for sex, age and year of death. Odds ratios indicate strength of association.

Study Population
All deaths from Nova Scotia, Canada as recorded by in Vital Statistics from 1998-2005 (n=63,431).

Limitations
Cause of death is difficult to definitively establish, especially when multiple causes are assigned.

Death certificate data were not linked to other data sources, limiting the number of variables.

Time of occurrence of diseases is not available from death certificates. Therefore, sequence of diseases from diagnosis until death could not be examined.

Nova Scotia Death Trajectories 1998 - 2005

Results
Over half (52%) the study population has 3 or more causes of death (Figure 1).

Cancer is the most frequently mentioned cause of death (33%) and is 53.7% of the seven diseases (Table 1).

Cancer has the lowest mean number of causes of death (2.43) followed by Alzheimer’s Disease (2.83) (Figure 2).

Cancer is the main terminal illness (Figure 3).

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Conclusions
Death certificates are a readily-available data source to study health conditions near the end of life. By utilizing all causes of death, associations across diseases can be analyzed.

Understanding needs at end of life is not simply focusing on a single condition but rather the interaction of multiple diseases and how that will affect trajectories of functional decline and therefore services that will be required.