# GAZING INTO THE CRYSTAL BALL

## Applying mortality prediction tools for early identification of patients who may require palliative care in general practice

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## Aim

To test the feasibility of computerised mortality prediction tools within GP databases as a screen for patients who may require palliative care interventions

## Method

**Ethics**
Ethics approval attained from SSW HREC

**Literature review**
Outcome tools validated in GP identified from the literature

**Data retrieval**
From data repository of 10GP practices in Sydney (ePBRN)

We are here!

**Data analysis**
Using tools to retrospectively identify patients at risk of death at time zero (Jan 2012)

**Data analysis**
Correlation of risk scores and mortality at various time points (mortality data from NSW death registry)

**Outcomes**
Performance status of each tool (sensitivity/ specificity/ positive and negative predictive value)

## Background

- Almost two thirds of patients who die expected deaths in Australia do not receive palliative care support[1], which is known to improve quality of life in these patients.
- General practitioners (GPs), while ideally placed to identify these patients, have low rates of referral to palliative care services[2].
- One of the barriers is difficulty in predicting death or poor prognosis.
- There are a number of patient mortality prediction tools which have been validated in the primary care context.
- Most require a significant time commitment from GPs.
- Running a quick computerised search tool in electronic general practice (GP) databases may help by screening for target patients.

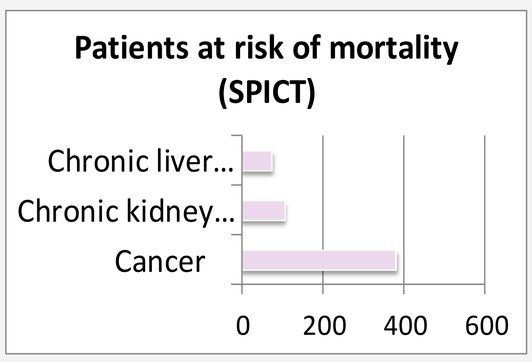

**Adapted SPICT tool (summary)**

Patients with:

- Chronic disease (e.g. chronic kidney disease, chronic liver disease)
- Cancer (or cancer treatment)
- House bound

## Results

- More than 25 outcome measures which aim to predict mortality and/or need for palliative care were identified in the literature.
- Two have been validated in the GP setting (SPICT[3], NECPAL). CriSTAL tool has not yet been validated, but has potential.
- Due to ease of adaptability, SPICT was chosen for initial analysis.
- The database contains records for 163205 patients from 2007-2016.
- SPICT tool has retrospectively identified 566 patients who had higher risk of mortality in Jan 2012




## Where to from here?

- Ethics amendment approval to gain access to mortality data from the NSW death registry, as current data appears unreliable.
- This is an exploratory study and we hope to test as many outcome tools as feasible within the limitations of the data.
- We also hope to test independent variables that have been identified in the literature as predictive of mortality.
- Depending on the outcomes of this study, the next step may be to design and prospectively test a computerised tool that is best suited to the Australian GP context.

## References

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3. Mason, B, Boyd, K, Murray, SA, Steyn, J, Cormie, P, Kendall, M, Munday, D, Weller, D, Fife, S, Murchie, P & Campbell, C 2015, 'Developing a computerised search to help UK General Practices identify more patients for palliative care planning: a feasibility study' BMC Family Practice, vol 16, no. 1, 312, 10.1186/s12875-015-0312-z

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