Development of a methodological approach to evaluate the Detect Cancer Early Programme in Scotland

Natalia Calanzani, David Weller, Christine Campbell

Background

• The overall aim of this study is to understand the role of health system level initiatives in promoting the earlier diagnosis of cancer (Fig. 1).

Figure 1: Full study diagram

Understanding the international landscape

- Systematic review
  - Characteristics and outcomes of initiatives
  - Stakeholders’ views and experiences
  - Use of a narrative synthesis approach

- In-depth interviews
  - Interviews with international cancer experts
  - Purpose sampling
  - Framework analysis

DCE evaluation

- Process evaluation (implementation and service delivery)
  - Review of programme documents and development of a logic model
  - Semistructured interviews with key stakeholders (framework analysis) and refinement of the logic model

- Outcome evaluation (effectiveness and outcomes)
  - Critically summarises evidence from (Scotland) datasets – in what setting were key objectives met?
  - Additional analyses with a focus on socio-economic factors and equity, and identified additional or unexpected outcomes
  - Nested case studies: focus on awareness, primary care and screening (TISC)

As part of this study we are evaluating the Detect Cancer Early (DCE) Programme in Scotland, assessing its processes and outcomes.

• Here we describe the methodology adopted to inform the development of this evaluation (Stage 1 of evaluation).

• Stage 1’s aims were to involve stakeholders, to enhance understanding of DCE and to help define which key aspects should be evaluated.

Methods

• Stage 1 consisted of: 1) analysis of policy documents; 2) creation of a logic model; and 3) semi-structured interviews with key stakeholders.

• Criterion sampling and maximum variation sampling were adopted to ensure inclusion of different stakeholders from a range of regions.

• Interviews were face-to-face or over the telephone, recorded, anonymised, transcribed and analysed using framework analysis.

Results

• Seventy-seven policy documents were reviewed and summarised; a logic model (Fig. 2) was developed and feedback sought from DCE managers.

Figure 2: DCE logic model

• Reviewed documents also aided the development of an interview topic guide and the creation of a list of DCE stakeholders to be interviewed.

• Nine stakeholders were invited and all took part.

• Interviews from Apr-Aug/16; duration 32-77 min.

• Identified themes: context, the logic model, development and implementation, views on DCE and its components, what to evaluate, and outcome evaluation challenges (Fig. 3).

Figure 3: Key themes

Description of the intervention and its causal assumptions

- Depiction, age and gender
- Clinical behaviour and change
- Government characteristics

What to evaluate

- Early diagnostic, referral, survival
- Impact on primary/secondary care
- Improvement in awareness and knowledge
- Cost effectiveness

Outcome evaluation challenges

- Assessing and understanding effectiveness
- Bias and confounding
- Results take time
- Challenges in relation to defined or outcomes with different definitions

Discussion

• Results are informing the design of the DCE evaluation in terms of causal assumptions to explore, implementation issues to investigate and outcomes to assess – these include:

  → Whether increase in referrals led to more cancer diagnoses and additional investment resulted in improved diagnostic capacity.

  → Investigating any workload impact of implementing the programme in primary and secondary care.

  → Assessing whether DCE was delivered as planned across different Health Boards.

  → Exploring ways to investigate system-level outcomes in addition to hard data on survival and its surrogates.

  → Assessing whether there was variation in outcomes across different population groups.

  → Importantly, challenges collecting, assessing and interpreting data should not be underestimated.

References