Microcosting diabetic eye screening: estimation of personal expense, attendance and health care resource use.

James, Marilyn [School of Medicine, University of Nottingham, UK]

Sampson, Christopher James [School of Medicine, University of Nottingham, UK]

Van Eker, Diane [Royal Liverpool University Hospital, UK]

Szmyt, David [St. Paul’s Eye Unit, Royal Liverpool University Hospital, UK]

Harding, Simon P [Department of Eye and Vision Science, University of Liverpool, UK]

Design of study

Microcosting study with collection and analysis of primary and secondary data on resource use and costs.

Purpose

To estimate the cost of screening within the NHS Diabetic Eye Screening Programme from a health service and societal perspective. Findings will inform future cost-effectiveness analyses of screening programmes for diabetic retinopathy.

Methods

Data were collected from multiple sources for people with diabetes in Liverpool, UK. Within the ISDR trial, 874 participants self-completed a bespoke questionnaire at baseline screening attendance, collecting information on travel, duration and personal expenses associated with the visit. A time study was conducted for 104 screening attendances to capture associated staff costs. Data for over 50,000 screening appointments since 2013 were used to elicit attendance rates and grading activity. Additional resource use estimates, including overheads, were obtained from screening programme staff.

Results

Per visit, people spent on average 90 minutes attending screening, and had on average 32 minutes help from a friend, relative or carer. The mean travel cost associated with screening was £2.50. 18% of people took time off work to attend, and 7% received assistance from someone who took time off work. The productivity loss associated with this time was on average £5 per visit across the population. The duration of screening attendance, dilatation and photography was consistent. Dilatation took on average 4 minutes with 85% lasting 6 minutes or less. Photography took on average 3 minutes, with 93% lasting 5 minutes or less. Attendance was on average 64%.

Conclusions

The primary source of inefficiency in diabetic eye screening is non-attendance. Patients who do not attend (36%) represent a substantial opportunity cost to the health service. Costs associated with personal expense and productivity losses are small, but these must be included when evaluating screening programmes with large eligible populations and major budget impacts. An additional cost of £7.50 per visit equates to a societal burden of around £20 million in the UK.

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