

The delivery of chemotherapy – home, community, or hospital?

Mark Corbett¹, Morag Heirs¹, Micah Rose¹, Alison Smith¹, Lisa Stirk¹, Gerry Richardson², Daniel Stark³, Daniel Swinson⁴, Dawn Craig¹, Alison Eastwood¹

¹Centre for Reviews and Dissemination, University of York, ²Centre for Health Economics, University of York, ³University of Leeds, ⁴Leeds Teaching Hospitals Foundation NHS Trust

Background: There is an increasing focus in the NHS on delivering care closer to home. This project aimed to compare the impact of delivering intravenous chemotherapy in community, home and hospital settings across a range of outcomes, including quality of life, safety and costs.

Methods: A systematic review of clinical effectiveness, qualitative, and cost-effectiveness studies was undertaken (Figure 1).

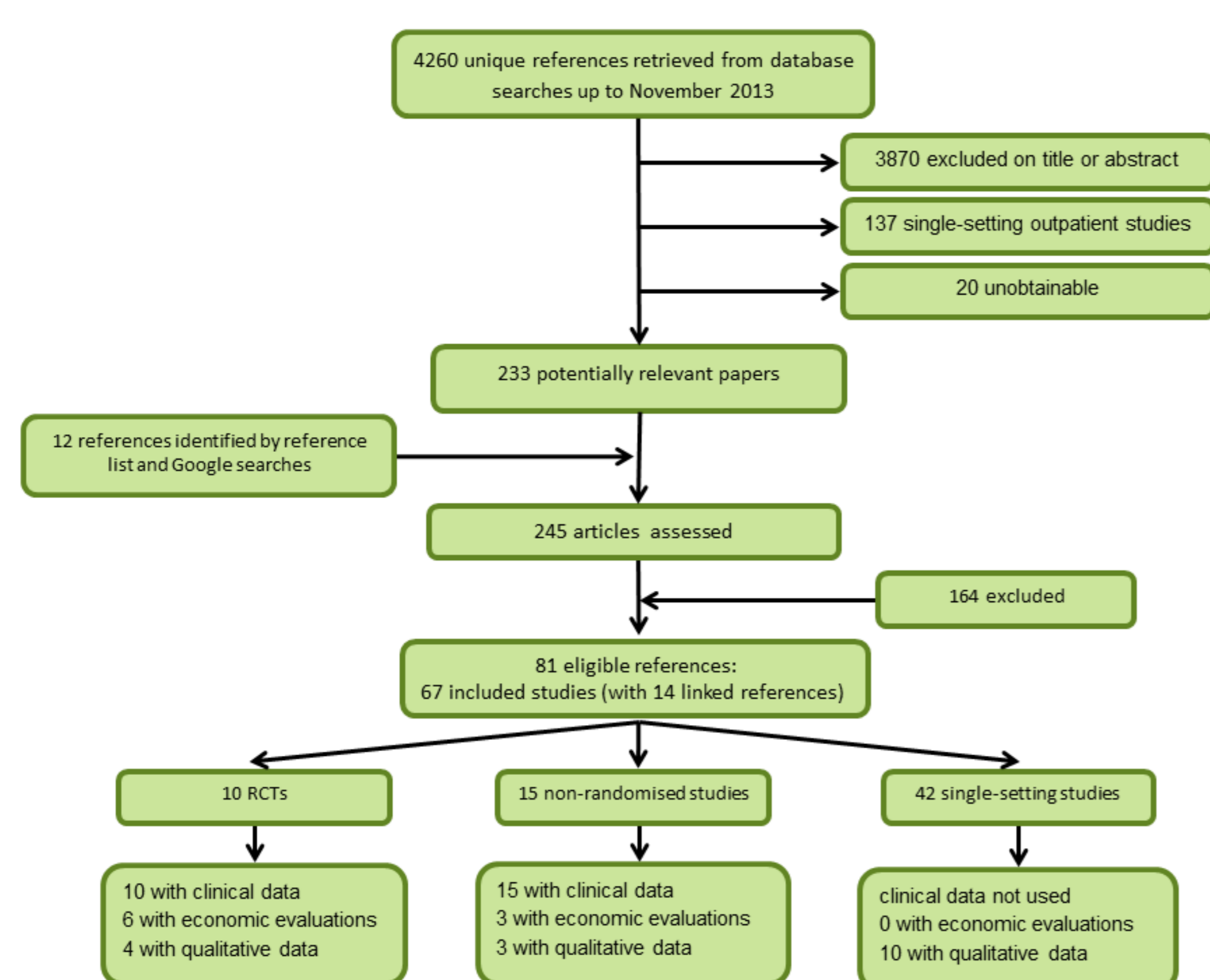


Figure 1: PRISMA flow chart

A decision model was developed, informed by the systematic review and a brief survey of current provision, to explore aspects of cost-effectiveness (Figure 2).

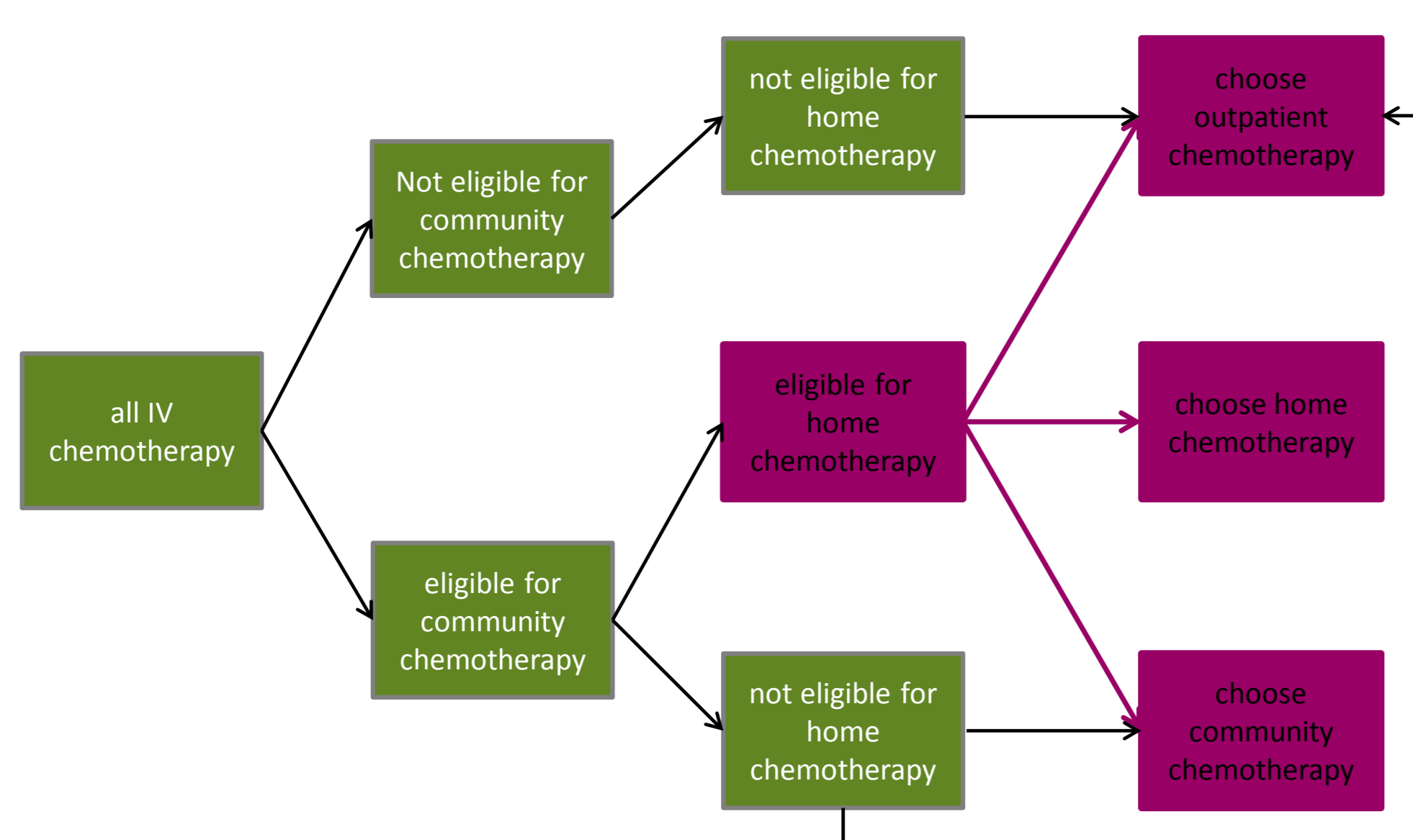


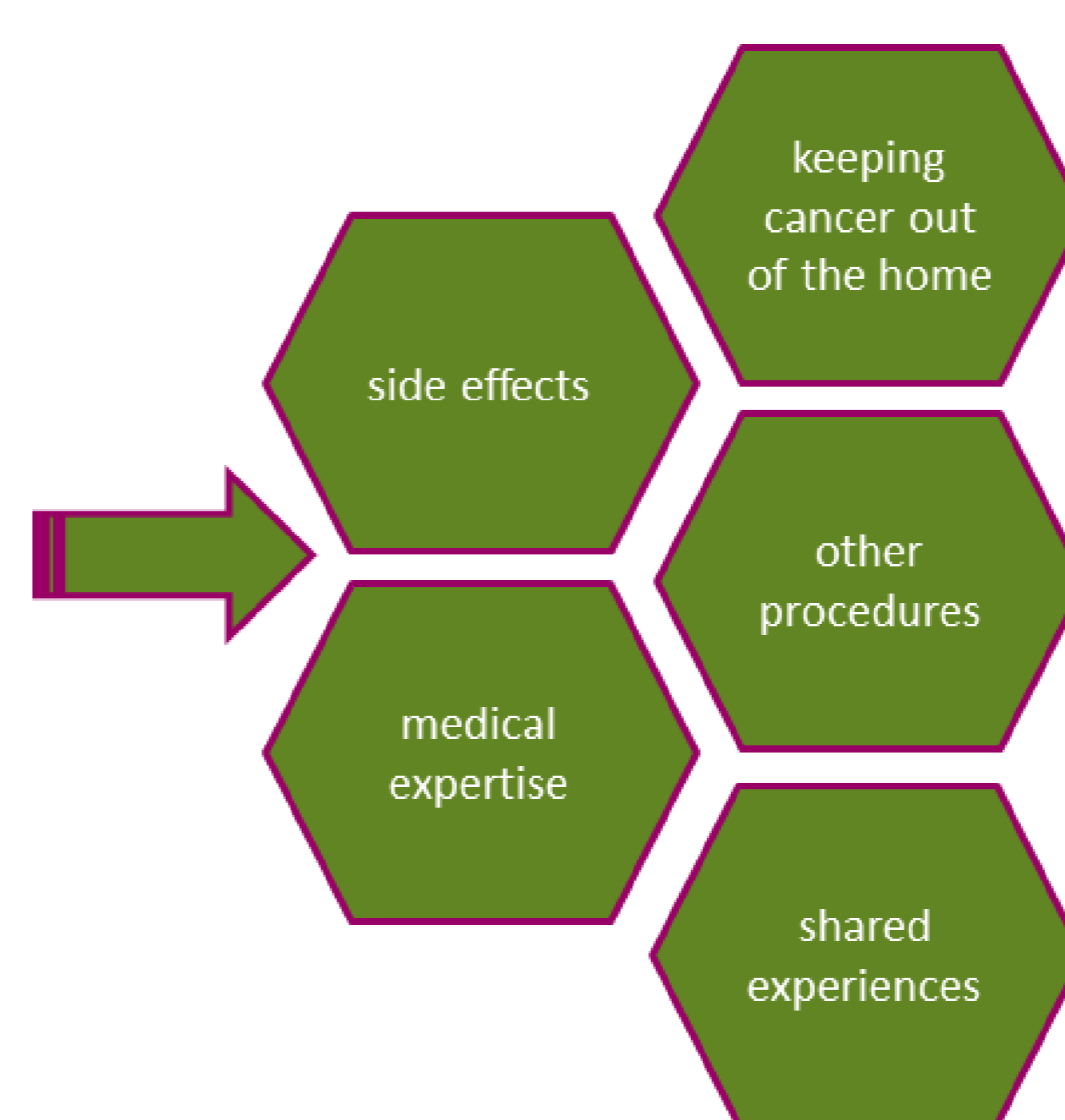
Figure 2: Patient pathway including economic model structure highlighted in purple

Results: Comparative studies identified by the review provided little evidence to suggest differences between settings. Trials were small and had populations that were inherently biased to favour home or community settings. Economic evaluations, conducted alongside these trials, additionally suffered from poor reporting and heterogeneity in the choice of perspectives making it difficult to compare across settings and providing limited evidence regarding cost-effectiveness.

The brief survey of NHS and private providers showed wide variation in the current provision of home and community chemotherapy in the NHS.

Lack of data and a clear pathway for treatment delivery in any setting limited the economic modelling. Consequently, cost-effectiveness modelling results were viewed as exploratory only; the results were highly unstable and there was significant uncertainty as to which treatment settings were cost-effective.

The qualitative studies were generally of moderate to good quality, although most studies did not appear to consider the impact of the researcher on data collection and analysis.



Three main themes emerged from these studies: barriers to service provision; satisfaction with chemotherapy; and making compromises to maintain normality.

Most patients made explicit trade-offs between the time and energy required for outpatient chemotherapy which reduced quality of life versus an increased sense of safety (Figures 3 & 4).

Figure 3: Factors pushing patients towards outpatient treatment

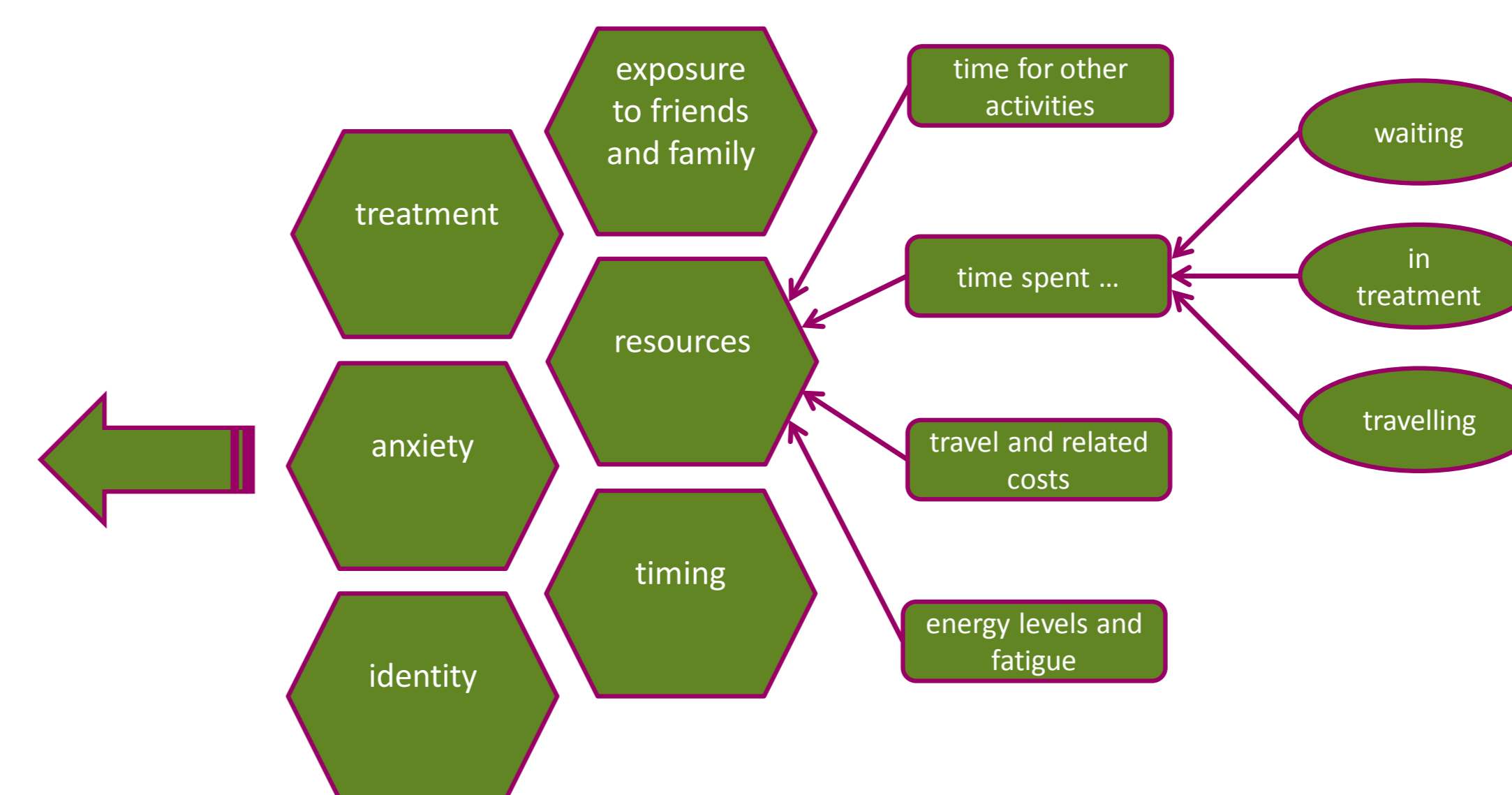


Figure 4: Factors pushing patients away from outpatient treatment

Conclusions: Studies comparing settings for administering intravenous chemotherapy appear difficult to conduct. Consequently, few robust conclusions can be made about clinical- and cost-effectiveness. Qualitative studies indicate that the patient time and energy required for outpatient chemotherapy reduces quality of life.

A nested RCT within a larger observational cohort of patients is proposed to enhance recruitment and improve generalisability of future research. Future economic evaluations require detailed patient characteristics, resource use, cost and quality data; however their results are likely to have limited generalisability.

Further information: Full details will be available in the forthcoming final report: Corbett M, Heirs M, Rose M, Smith A, Stirk L, Richardson G, Stark D, Swinson D, Craig D, Eastwood A. The delivery of chemotherapy at home: an evidence synthesis. *Health Services and Delivery Research* (forthcoming).

<http://www.nets.nihr.ac.uk/projects/hsdr/12500167>