# The Use of Care Pathway Analysis to Inform Health Economic Models and Evidence Generation Requirements: Practical Applications and Examples from Two Projects



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### BACKGROUND AND OBJECTIVES

The care pathway is the journey that a patient, with certain signs and symptoms, takes during an episode of healthcare. Care pathway analysis (CPA) is used to identify and map the medical decisions within the current pathway for a certain condition. This can then be compared with a pathway that includes the new technology and can be used to inform the PICO process (Figure 1).

The objective of this work was to describe two very different case studies where this methodology was useful.

### How CPA can inform PICO Figure 1: **Population** Intervention Inclusion criteria for the clinical Role(s) in the pathway studies Risks and barriers Population for the health Identification of technological economic model adaptations to align to clinical Use case for the intervention needs **Comparison or control** Outcome(s) The current pathway Value propositions Its structural variability Consequences of testing Evidence requirements Its accuracy Outcome identification The unmet needs

### **METHODOLOGICAL APPROACH**



### CASE STUDY 1: AN EARLY-STAGE MEDICAL DEVICE

### INTERVENTION

A non-surgical technology that uses light to excite the natural properties of protein in the lens of the eye to improve vision.

### **OBJECTIVE**

- To identify the care pathway for adults with cataracts in the UK.
- To identify the potential uses, value propositions, and barriers to adoption of the new technology.

### METHODS

Review of 10 international guidelines

**Endothelial count** 

Long-term efficacy and safety

 Interviews with ophthalmologists, ophthalmic surgeons, optometrists and budget holders (n=9)

### Figure 2: Key findings of case study 1 Main barrier: cataract surgery is Patients who cannot or do not want highly cost effective - cost of the or are waiting to have surgery device; identification of the payers Patients with early cataracts Could be used to improve or stabilise Complex patients with comorbidities vision to slow disease progression Setting: primary care delivered by Additional roles: screening or optometrists or clinical technicians diagnosis Visual acuity The current pathway summarised in Patient satisfaction the flow diagram Quality of life Unmet needs: Tear break-up time Long waiting time for surgery

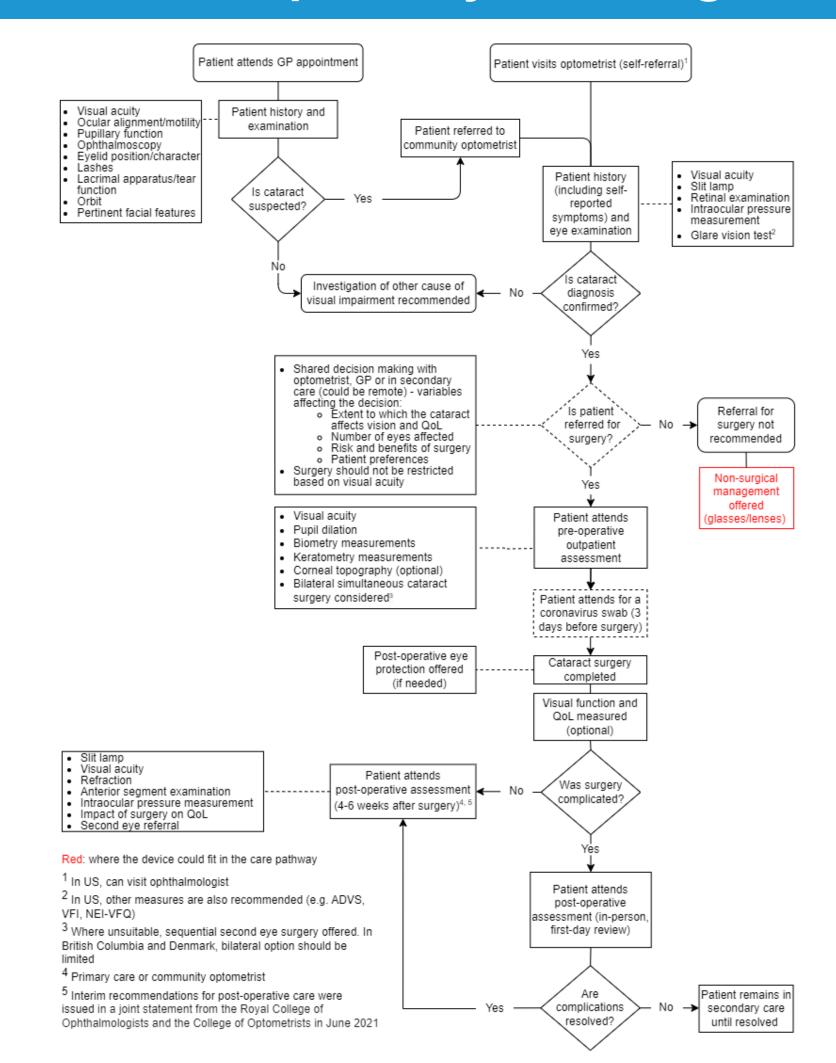
Cancellations at pre-op assessment

or later

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### Figure 3: The care pathway flow diagram

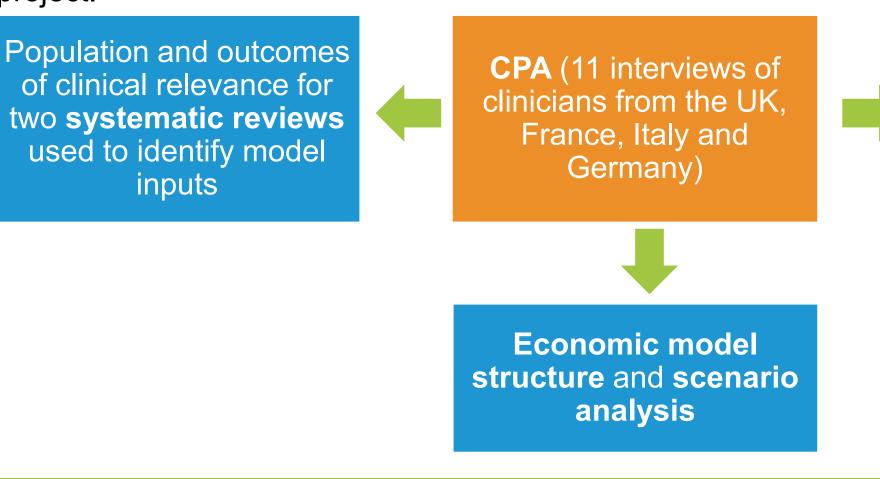


### Figure 4: CPA feedback from tech developers



## CASE STUDY 2: A LATE-STAGE COMPLEX DRUG EVALUATION

In rare diseases, like AOSD, clinical guidelines are often lacking, pathways are highly variable, and robust trials are limited. A robust methodological approach was developed to inform a cost-effectiveness model in this population; CPA informed all the elements of the project.



Data provided to the experts during the structured expert opinion elicitation used to identify unpublished model inputs



### CONCLUSIONS

CPA is a useful method to support the development of economic models. It is useful for new diagnostics and devices in early stage of development, and in more complex multiphase late-stage drug evaluations where the pathway is highly variable.

### CONTACT US





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