



**Member Risk Model: A  
method to reduce over  
utilisation by predicting  
high cost claimants**

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# Introduction

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Within the private medical insurance industry, there is growing concern that private healthcare provisions may encourage over use of medical services.



Is the efficiency and ease of access associated with private care responsible for over-diagnosis that results in excessive or inappropriate medical treatment?

# Care management initiatives

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Our interest in a [member risk model](#) is related to suitably identifying members most likely to incur [high cost claims](#), who would benefit from targeted [care management](#).

# Case study: Complex Case Management

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## Key features

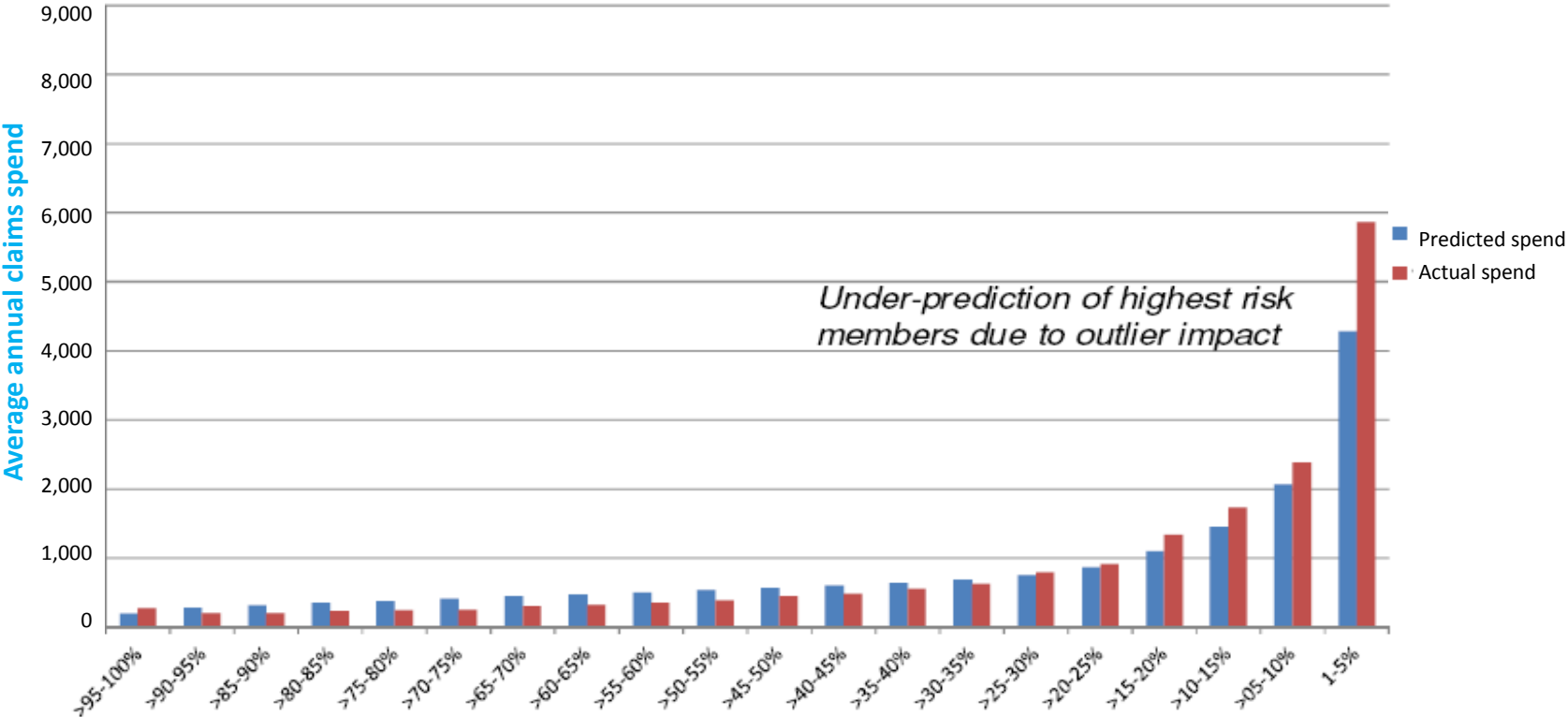
- **Complex care nurse** delivers **face-to-face** member outreach and tailored support.
- **Care assessment** provides overall view of healthcare needs, **coordinating care** with healthcare professionals.
- Members identified in the **top 0.5%** of predicted claims spend, with two or more **long-term conditions**.

## Desired outcomes

- Improvement of **health outcomes** and **experience** of members with complex care needs.
- Preventing **unnecessary healthcare** use and avoiding adverse affects which might otherwise occur due to **uncoordinated healthcare** delivery.

# Exploratory analyses

Testing the existing model's performance highlighted **poor prediction** of 12-month claims costs for our **high cost claimants**.



# Review of existing Member Risk Model

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## Main objectives

- Recalibrate **model inputs** to represent current member population and **coding structures**.
- Address model discrepancies particularly for those members with **no claiming history**.

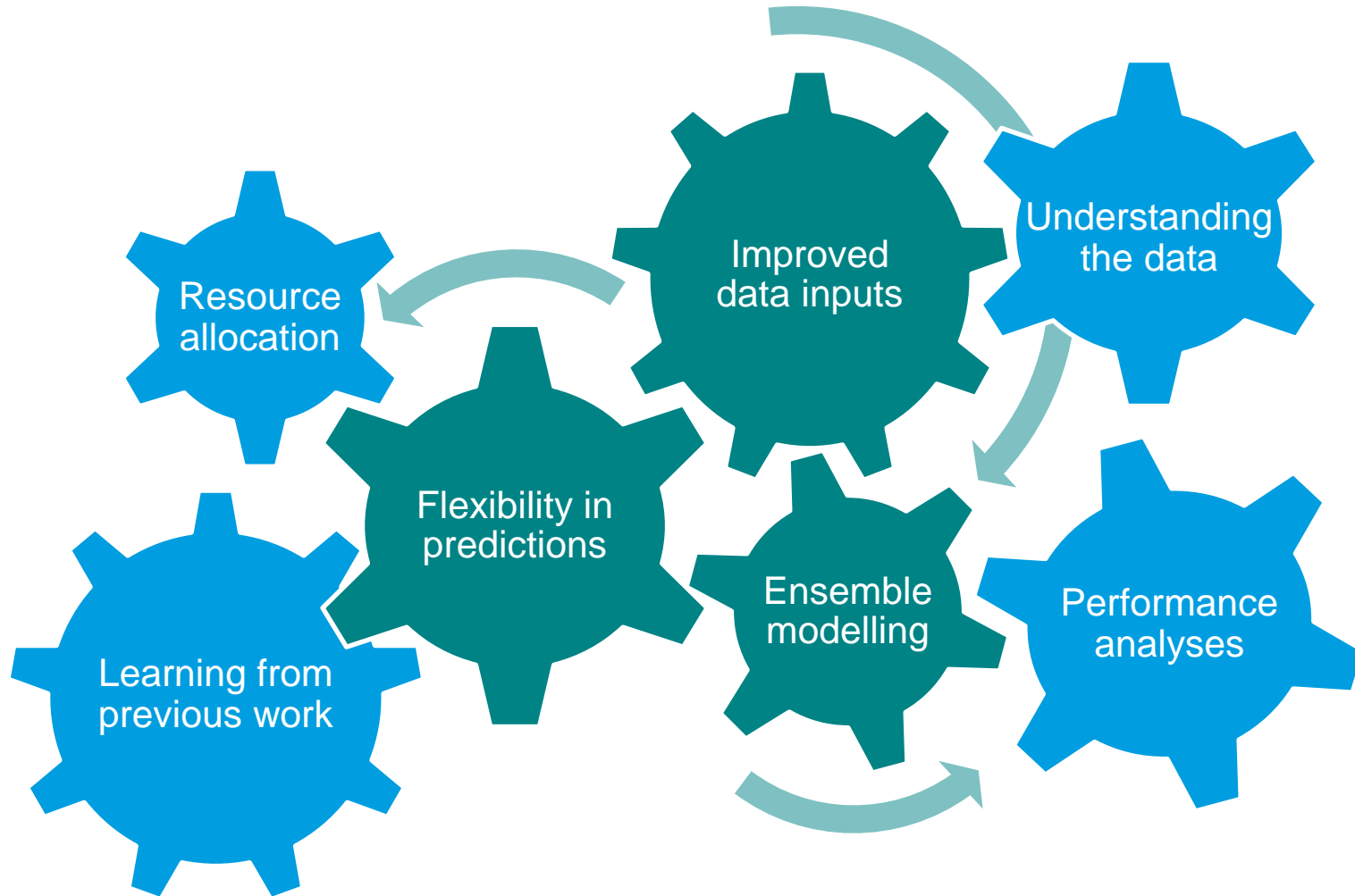


## Desired outcomes

- Provide **updated prediction** for members' 12-month claims plus view on **short-term risk** via 3-month claims prediction.
- Being able to identify members with a short-term risk means that **interventions** can be **tailored** to the member and implemented with **immediate affect**.

# Challenges and approaches

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# Data structuring



## Demographic Based Variables

Basic demographics such as age and gender extended to include details of **membership**, **relationship** status and a **London treatment** indicator, to provide richer understanding of **member base**.



## Specialty Variables

Building on MSK specific classifications incorporating body part and procedures, details relating to the **medical specialty** of the lead consultant are used as an indicator of members' **medical profile**.



## Clinical Based Variables

Clinical profile including chronic conditions and types of cancer enhanced with indicators against specified **pre-existing conditions**, to provide insight into **potential claim areas** for new members.

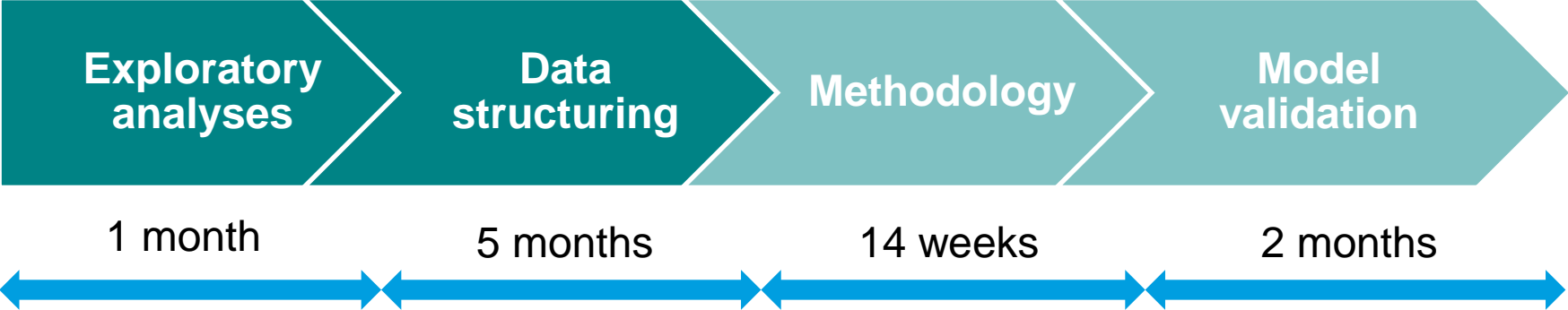


## Pre-authorisation Data Variables

For a subset of treatment areas, a measure of “time since last occurrence” are used and are supplemented by an indicator of **expected claims** for members with **no claims history**.



# Project summary: Phases of development





**QUESTIONS?**

## Contact Details

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If you have any further questions, please feel free to contact me:

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**THANK YOU**