Online Healthcare Modeling Course

- Learn how to build Decision Trees and Markov Models to accurately represent disease progression and treatment options.
- Compare strategies with Cost-Effectiveness Analysis.
- Assess the impact of uncertainty with Sensitivity Analysis.

Agenda

1. **Introduction**
   o Why do we build models?
   o To accurately represent diseases and treatments to make better health decisions.

2. **Decision Trees**
   o Set up your model to identify the most cost-effective option.
   o Create treatment strategies and patient pathways.
   o Enter and reference model input values.

3. **Cost-Effectiveness Analysis**
   o Calculate the average cost and effectiveness per patient.
   o Use those average values to determine the most cost-effective strategy (ICER/NMB).

4. **Markov Models**
   o Build Markov models to follow disease progression over time.
   o Add key health states and events.
   o Review disease progression and cost/utility accumulation over time through Cohort Analysis.
   o Add factors that change over time (probabilities, costs, etc.)

5. **Sensitivity Analysis**
   o Study the impact of parameter uncertainty on model results through Sensitivity Analysis.
   o See which parameters have the biggest impact on results through Tornado Diagrams.

6. **Probabilistic Sensitivity Analysis (PSA)**
   o Study the impact of combined parameter uncertainty on model results through Probabilistic Sensitivity Analysis.
   o Assess confidence in your model conclusions.

7. **Price Threshold Analysis**
   o Add different sets of inputs to your model.
   o Determine the maximum price that meets cost-effectiveness thresholds.