Breakout 1

Developing a System Dynamics Model to support Waiting List Recovery

Mike Woodall (The Strategy Unit)

Working with the national collaboration to coordinate covid-related analysis, and the NHSE/I Midlands region, the Strategy Unit developed a System Dynamics model of waiting lists for planned care.

For several years prior to the pandemic, waiting lists for planned care had grown; waiting times had increased; breaches of constitutional standards had become commonplace. Yet the analytics and management of waiting list had been largely perfected. We understood the dynamics of waiting lists and times. This certainty has gone. Covid changed many of the rules of the game simultaneously and radically.

Patients' willingness to present at primary care; their ability to get an appointment; GPs' willingness to refer to secondary care; the willingness of patients to take up hospital appointments; mortality whilst waiting; hospital staffing levels; diagnostic, bed and theatre capacity. All these parameters have changed. Some will return to pre-covid levels; others will find a new natural level.

Our model was developed to help local systems test how they might respond to the new dynamics and how their assumptions of how different strategies might fair under changing circumstances.

The presentation will cover the problem we were addressing, the development of the model and how our understanding of waiting lists has changed further since we developed the model.

Mike leads a team which specialises in quantitative evaluations and linked health and social care projects. He has led several evaluation projects including, the evaluation of the 'Rapid Assessment Interface and Discharge' Plus Test Bed Programme in Birmingham and Solihull and a Case Study Evaluation of the national Stranded Patients Programme.

Mike Woodall has developed a System Dynamics (SD) model to examine the impact of Covid on elective waiting lists (see link). Users can model the potential backlog created by the lockdown and test the Impact of any initiatives to reduce the waiting list as services restart. He is leading an Action Learning Set on SD modelling that started in October 2020.

Mike has over 20 years' experience of managing and analysing data across commissioners and providers within both health and social care. He can analyse and present complex data in a clear and concise format that can be used for decision making. He has developed monitoring systems and performance targets for integrated care metrics.