Proposed Miniprojects from the National Health Service's Commissioning Support Unit (NHS CSU), for Birmingham, Black Country and Solihull

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Project: Aligning Predicted and Actual Maternity Services

The NHS CSU conducts surveys to understand and predict utilization of the numerous NHS facilities across the country. For maternity services in particular, a detailed study was conducted with childless women of child-bearing age, those individuals who may eventually be in the market for maternity services. They were given various forced-choice (hypothetical) scenarios related to maternity care, like "Would you prefer a highly rated hospital 3 miles away, or a not-especially-renown midwife center down the block?" Using demographic and socioeconomic factors of the study participants, these results can then be used to predict the utilization of existing (actual) maternity services.

A long-standing puzzle has been why these detailed, carefully conducted studies don't do a good job of predicting the usage of actual hospital wards and non-hospital maternity clinics. There are two hypotheses: 1) The actual places people want to go are over-subscribed, and thus they are forced to go to 2nd and 3rd choice locations, or 2) Individuals, i.e. pregnant women (and partners) are not rational actors and have to make choices based on incomplete information.

The goal of this project is to use the existing survey result to build simulation models to explore various alternative explanations for the mismatch between the survey data and the actual usage data of maternity services. The desired result will be models that better explain and predict usage of NHS facilities.