

Using Population Health Analytics to Translate Data into Measurable Program Impact



At a Glance

The population health team within East Kent Hospitals and East Kent HCP was tasked with evaluating their diabetic multidisciplinary team (MDT) service to find out whether the program was delivering against objectives: to improve care for complex or poorly controlled patients with diabetes. The team used the Johns Hopkins ACG® System to design an evaluation framework using causal modeling to develop a robust approach to evaluating insights.

Challenges

While the logic model had been defined before the diabetic MDT service started, there was no consistent evaluation methodology in place. This meant that it was difficult to consistently measure results or show how much difference the service was making.

Solutions

The team at East Kent worked with [Graphnet](#) and the ACG System team to carry out a proactive, whole-person evaluation approach using Propensity Score Matching. This method considers the whole population, linked datasets and ACG markers, and enables faster, more meaningful insights into the effectiveness of interventions.

The myriad of clinical markers in the ACG System enabled the team to create matched cohorts using indicators such as age, sex, clinical profile, social needs, comorbidities and count of Rx active ingredients. They were able to measure both the effectiveness of the MDT service and also create an ongoing and scalable evaluation technique. They have since rolled out the evaluation methodology across other areas, such as planned care and independent living, with great success.

What the Team is Saying



Tim Jones, Population Health Statistician at East Kent Hospitals and East Kent HCP says,

'Propensity Score Matching [using clinical markers] from Johns Hopkins enabled us to compare 'apples with apples', while allowing for case mix complexity. It has sped evaluation up by a ridiculous amount and given us a much better evidence base using statistical techniques that provide robust evidence.'

'Propensity Score Matching has made a huge difference – it really is the gold standard. We are able to keep running and rerunning reports.'



Paul Molyneux, Senior Analytics Consultant at Johns Hopkins HealthCare Solutions says,

'A strong evaluation approach is an essential tool in the population health management toolkit. Without an evaluation tool, systems run the risk of operating without vital pieces of information and almost certainly will not be making the best use of resources. Using this evaluation going forward – together with better patient and system outcomes – will lead to more effective and proactive care and will also help tackle inequalities by ensuring what works is platformed, rather than driven by bias, politics or personalities.'

Key Metrics and Benefits



Faster evaluation of clinical interventions using proven analytic methods



Creation of a repeatable, scalable and defensible evaluation method



Increased accuracy of matched cohorts



Iterative evaluation approach helped identify what was driving better outcomes and where inequalities could be reduced across different services and populations



Evaluation of the MDT service showed a reduction in hospital visits and hospital bed days

Contact us to discuss how we can help your organization translate data into measurable impact.