



Midlands DSU Network

Decision Support Centre

Decision Support Unit Network Newsletter February 2021

The Midlands DSU Network uses applied intelligence to improve population health outcomes

Key Contacts

Gareth Wrench
gareth.wrench@nhs.net

Janine Dellar
janine.dellar@nhs.net

Publications

[DSC Guide to Evaluation, Design, Principles and Practice](#)

This guide takes you through all aspects of designing and conducting evaluation and presenting the results

[Embracing Uncertainty: A guide to support strategic decision making in health and social care](#)

This guide sets out our proposition on how to improve the quality of decisions made, and in doing so provides some tools and techniques for decision-makers to use

[Care in the last two years of life](#)

A series of reports on end-of-life health services available for the Midlands region and for each of the 11 STPs/ICSS

Introduction

Welcome to the first newsletter for the Midlands Decision Support Unit (DSU) Network.

The Midlands DSU Network brings together the 11 health and care systems in the Midlands and NHS EI Directly Commissioned Services. We are working across the network to facilitate:

- collaborative analytical projects
- sharing analytical code (for example, using R)
- evidence and literature reviews
- collaborative evaluations
- developing and sharing of ideas
- networked problem solving and peer review

We are almost at the end of our first year and we have made some great progress. All 12 members of the network have committed to the DSU model which is fantastic news.

The Network journey that we have embarked upon together places the Midlands at the forefront of the country in its approach to underpinning Integrated Care Systems as learning systems.

We want to support every member to have its DSU fully operational in 2021/2. **If there is more we can do to help your system accelerate then just let us know.**

We can facilitate a **DSU design session** with system colleagues and attend relevant strategic groups to raise awareness of the Network.

INSIGHT2020 (28 Sep – 13 Nov)

The DSU Network was launched in September with a 6-week festival of virtual events. The festival featured a mixture of events, workshops, panels and conversations at a local, national and international level.

Over 30 events with 48 different presenters from 27 different organisations, including NHSE/I, local government, primary care, voluntary sector, thinktanks, CCGs, service users, academia, the Strategy Unit and Public Health England. The festival explored some of the challenges facing decision-makers in health and care in 2020 and beyond; emerging models of practice to make best use of analysis to inform decision-making and some of the exciting work already happening in this area. We had great attendance throughout the Festival and some really brilliant feedback.

Upcoming: the **International Journal of Health Governance** is intending to publish a write up of INSIGHT2020 that places it, for its quality and value, alongside conferences provided by the World Health Summit; the European Observatory on Health Systems; and the Nordic Health Movement.

Feedback [DSC Guide to Evaluation, Design, Principles and Practice](#)

*"Could this be the **definitive guide to evaluation in the NHS?** Comprehensive, engaging, well-informed with lots of nice examples of how different approaches have been used"* **Charles Tallack** @CharlesTTHF



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Applied Analytics Projects

Chief Analyst: Steven Wyatt

Our **applied analytics** projects are taking shape. We have published the end-of-life report, [care in the last two years of life](#) for every member of the network, and we have run sessions with local analysts on how to adapt and run the code on your local databases. It sets a powerful case for change. We hope that every system is putting the analysis to work in tackling one of the most significant population health challenges of all.

Updates on the three projects in progress, selected by the Network for 20/21, are included below.

Inequalities in Access to Planned Care: Causes and Consequences

This project aims to **review the evidence relating to inequalities in access to planned care** by identifying where inequalities in access to elective care emerge and develop. It will also examine the extent to which poor access to elective care leads to increased levels of emergency hospital admissions.

We are doing this by calculating a **measure of inequity** for activities across a patient's pathway to quantify where in the pathway inequity arises. We will be modelling the relationship between access to elective care and levels of emergency hospital admissions over time using **panel data regression analysis**.

So far, our literature review and evidence map provide an at-a-glance overview of evidence on inequalities in access to elective care. We are building the datasets that we need for the analysis and will be consulting with members of the DSU network to confirm the list of conditions that we include.

Classifying Outpatient Activity by Function

This project aims to develop an algorithm to classify outpatient activity by its function; for example diagnosis, management of a long-term condition, surgical intervention, pre-operative assessment, post-operative review, urgent investigation. It will use the algorithm to quantify the relative scale of activity of each type across STPs, hospitals, and by clinical specialty to support service redesign.

The project will include an **evidence review** of published literature relating to functions of outpatient care and classification schemes for outpatient activity. It will **develop and test algorithms** and quantify the relative scale of activity of each type across systems, hospitals, and by clinical specialty.

The outputs will include a full documentation of the rules used for our classification scheme to enable other researchers and analysts to review and apply it to new datasets. All code will be published on GitHub and accessible to DSU Network members and we will run a workshop for DSU Network analysts to explain the methods and code.

Inequalities in Access to Mental Health Services for Children and Young People

This project will describe **inequalities in access to mental health services for children and young people** by gender, ethnicity, deprivation, geography and other sub-groups. It will estimate the **consequences of poor access** to mental health services on later health service use. It will also explore the factors influencing differential rates of access to mental health services. Our findings will include an evidence base to improve/prevent unequal access to services and support.

We have worked with two national experts who have advised on the clinical and theoretical aspects of the project design. The project will include a **rapid review of evidence** on unequal access to support, barriers and enablers in access and effective approaches to improve mental wellbeing of children and young people. We will undertake a **descriptive analysis** of current use of acute mental health services by children and young people, compared to anticipated need. We will also complete a **retrospective cohort analysis** of longitudinal data to better understand the factors that tend to impact adolescent mental health into adulthood. We are also completing a series of **semi-structured interviews** and **large-scale online surveys** with key stakeholders to identify the barriers and enablers of access to mental health and wellbeing support.

We will publish a bespoke report for every member DSU; a regional overview report; and the open-source analytical code that allows replication across the NHS. This will be supported with webinars on the interpretation of the reports and local application of the analytical code.



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Education and Development Programme

Programme Lead: Mohammed Mohammed

System Dynamics Action Learning Set (November 2020 - present)

System Dynamics is a method for modelling complex systems over time. The models can be developed to simulate the impact of changes in policy/ intervention, such as the changes to waiting lists as a result of Covid-19.

The **Action Learning Set (ALS)** includes a mix of taught and practical sessions. In the practical sessions, small teams are developing their own models based on real world case studies.

25 analysts representing most of the Network members are enrolled on the ALS.

Future Opportunities

The plans for 2021 include: quasi-experimental design, machine learning and population health management.

Leadership Development for Analysts (January to July 2021)

We are currently running our first **Leadership Development Programme** targeting analysts. Analysts are often removed from leadership roles, yet the ability to turn data into insights that can support decision-makers is essential to delivering improvements in patient care. In order to develop strong analytical teams, improve the use of data, and maximise the impact of the profession, analysts need to be working more closely with decision-makers.

The programme will develop the leadership skills of analysts and build a sense of community amongst analytical leaders. It aims to give analysts a better understanding of their role in decision making and how they can have greater impact in their organisation or local system.

16 analysts representing all DSUs are enrolled in this programme.

The DSU Networks

Analysts Network

Network Lead: Rachel Caswell

The analysts network brings together analysts working in healthcare, social care, public health and other relevant organisations in the Midlands.

We host **fortnightly 'huddles'**, one-hour webinars with 50-100 participants to share project outputs, skills and knowledge.

Examples of content so far:

Local – 'Demand and capacity modelling for Covid-19', Nisha Patel, Northants CCG

National – 'Artificial intelligence and chest imaging to support the response to Covid-19' - Dominic Cushnan, NHSX

International – 'Dynamic Causal Modelling and its use in the Covid-19 pandemic', Professor Karl Friston, UCL.

Evaluation Network

Head of Evaluation: Paul Mason

The evaluation network is working to share evaluation resources and learning so that more projects have evaluation built in from the start.

So far, the network has published the [DSC Guide to Evaluation](#) and is planning a series of events for the year, including:

- **Learning from changes under COVID**
- **Qualitative Methods** - Education and Training Sessions
- **'Huddles'** for local systems to share local evaluations

Evidence Network

Head of Knowledge: Alison Turner

The evidence network brings together people with an interest in evidence reviews and knowledge mobilisation through:

- shared resources
- developing new ideas
- providing mutual support
- training and development
- project collaboration

This network is in the early stages and seeking to connect with an evidence lead in each DSU.

What Next for the DSU Network?

We are planning our work programme for the next year and there will be opportunities for members to shape and influence that through the **DSU Operational and Strategic Groups** as well as through your regular catch-ups with the team. This will help us to shape both the education and development programme and the large-scale analytical projects.