NUH Analyst BOK

NUH Data Analysts

2025-10-03

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Welcome

This is the Nottingham University Hospitals Analyst **"Body of Knowledge"**. It is a living document, designed to serve multiple purposes.

It is:

- **A growing summary of our institutional knowledge**, searchable and easy to use as a reference.
- **An onboarding guide**, to support data analysts new to our teams or new to healthcare.
- **A practical training project**, allowing new users of git to practice by contributing to a project of real value.
- **An exercise in transparency**, and a commitment to "being the difference we want to see" in relation to open working, and open-source analytical development.
- **A searchlight**, to help guide us towards other NHS organisations and contacts who may find value here, or who may be able to help us one day.

But mostly, it is a place for us to write things, so that "future us" knows where to find them. Doing this in a public github repository ensures we create something not quick and disposable, but something considered, deliberate and of gradually accumulating value.

> **If I have seen further, it is by standing on the shoulders of giants.**
>
> - Sir Isaac Newton

You can find some of our "giants" listed in the reading list and acknowledgements sections, or start exploring the table of contents to the left.

Part I

The moving parts of an NHS hospital

1 Hospital 101

Part II

Resources

2 Physical Books

This is a list of recommended reading. Intended to capture some of the core publications which would interest any data analyst, through to more specialised material focusing on healthcare specifically, or improvement more generally.

2.1 Analysis

2.2 Visualisation

2.3 Statistics

2.4 Data Science

The StatQuest Illustrated Guide to Machine Learning

2.5 Improvement

3 E-Books

3.1 Analysis

3.2 Visualisation

3.3 Statistics

3.4 Data Science

HSMA e-books

3.5 Code

Authoring R Packages

Happy Git with R

The Big Book of R

3.6 Improvement

4 Videos

NHS-R Community YouTube Videos

The Strategy Unit YouTube Videos

Health Service Modelling Associates YouTube Videos

StatQuest with Josh Starmer

5 Acknowledgements

> If I have seen further, it is by standing on the shoulders of giants.
>
> - Sir Isaac Newton

The NHS R Community

Midlands Analyst Network Huddles

Health Service Modelling Associates

Chris Beeley & the Data Science Team at the Strategy Unit

Sam Riley & NHSE Making Data Count

Bristol, North Somerset & South Gloucestershire Analytics (github)

6 Glossary

The NHS (National Health Service) can be an alphabet soup of three-letter-acronyms. This page covers some of the main acronyms used in this book. There is also a helpful Jargon Buster maintained by the NHS Confederation.

6.1 A

6.1.1 A&G

Advice and Guidance
A quick-reaction clinical questions process designed to avoid unnecessary referrals from primary care by responding quickly to medical queries about referral options for a patient.

6.1.2 ABCD

Activity, Bottleneck, Capacity, Demand.
A common mental model used to describe demand and capacity measurement.

6.1.3 ALOS

Average Length of Stay
See also LOS. LOS is the preferred term at NUH.

6.2 B

6.2.1 BAF

Board Assurance Framework

6.2.2 BOK

Body of Knowledge

6.3 C

6.3.1 CDC

Community Diagnostic Centre

6.3.2 CT

Computed Tomography
An important diagnostic imaging process, and one of the 15 diagnostic modalities measured in the DM01 performance dataset.

6.4 D

6.4.1 DM01

A performance dataset related to the main diagnostic test modalities

6.4.2 DNA

Did Not Attend
The patient did not arrive for a scheduled appointment.
See also WNB

6.5 E

6.5.1 ECG

Electrocardiogram
One of the 15 diagnostic modalities measured in the DM01 performance dataset

6.5.2 EL

Elective

6.5.3 EPMA

Electronic Prescribing and Medicines Administration

6.5.4 EPR

Electronic Patient Records System

6.6 F

6.6.1 FDS

Faster Diagnosis Standard
A cancer performance measure, measuring the length of time from urgent referral to ruling out or diagnosis of cancer. The performance standard is 28 days.

6.6.2 FDS

First Diagnostic Scan
A timing point within diagnostic pathway tracking

6.6.3 FTE

Full-time Equivalent
See also WTE

6.7 G

6.8 H

6.8.1 HVLC

High Volume Low Complexity

6.9 I

6.9.1 ICB

Integrated Care Board

6.9.2 ICD10

International statistical classification of diseases and related health problems
See also OPCS4

6.9.3 IP

Inpatient

6.10 J

6.11 K

6.12 L

6.12.1 LOS

Length of Stay
See also ALOS. LOS is the preferred term at NUH.

6.13 M

6.13.1 MBRRACE

Maternal and Babies-Reducing Risk through Audits and Confidential Enquiries

6.13.2 MDC

Making Data Count
A data-literacy initiative led by NHSE to increase the use of Statistical Process Control techniques in hospital measurement and management processes.

6.13.3 MFFD

Medically Fit For Discharge
See also MSFT

6.13.4 MRI

Magnetic Resonance Imaging
An important diagnostic imaging process, and one of the 15 diagnostic modalities measured in the DM01 performance dataset.

6.13.5 MSFT

Medically Safe for Transfer
See also MFFD

6.14 N

6.14.1 NEL

Non-Elective
See also UEC

6.14.2 NEWS

National Early Warning Score

6.14.3 NHP

New Hospitals Programme

6.14.4 NHS

National Health Service

6.14.5 NICU

Neonatal Intensive Care Unit
See also NNU

6.14.6 NNU

Neonatal Unit
See also NICU

6.15 O

6.15.1 OP

Outpatient

6.15.2 OPCS4

OPCS Classification of Interventions and Procedures
See also ICD10

6.15.3 OPPROC

Outpatient procedure

6.16 P

6.16.1 PACS

Picture Archiving and Communication System

6.16.2 PAS

Patient Administration System

6.16.3 PCN

Primary Care Network

6.16.4 PEWS

Pediatric Early Warning Score

6.16.5 PIFU

Patient-Initiated Follow Up

6.16.6 Plain Film

Standard X-ray image taken without contrast agents (e.g. dyes or barium)

6.16.7 POC

Point Of Care

6.16.8 PTL

Patient Tracking List

6.17 Q

6.18 R

6.18.1 R

A statistical programming language used by data analysts and data scientists

6.18.2 RIS

Radiology Information System

6.18.3 RTL

Referral Tracking List

6.18.4 RTT

Referral to Treatment

6.19 S

6.19.1 SDEC

Same-Day Emergency Care

6.19.2 SITREP

Situation Report

6.19.3 SOP

Standard Operating Procedure

6.19.4 SPC

Statistical Process Control

6.19.5 SUS

Secondary Uses Service

6.20 T

6.20.1 TOC

Tranasfer of Care

6.20.2 TTO

To Take Out
A drugs prescription that the patient takes away on the day they are discharged from inpatient care.

6.21 U

6.21.1 UEC

Urgent and Emergency Care

6.21.2 US

Ultrasound
A diagnostic imaging process. Non-obstetric ultrasound is one of the 15 diagnostic modalities measured in the DM01 performance dataset.

6.22 V

6.23 W

6.23.1 WLI

Waiting List Initiative
Premium-paid working time agreed in order to reduce the size of a waiting list.

6.23.2 WNB

Was not Brought
The patient did not attend a scheduled appointment, but is dependent on others to bring them to the appointments (e.g. pediatric or elderly patients).
See also DNA

6.23.3 WTE

Whole-time Equivalent
See also FTE

6.24 X

6.24.1 XmR

A type of Statistical Process Control (SPC) chart

6.25 Y

6.26 Z

References