



HEALTHCARE
SOLUTIONS_

Stethoscope

CASE STUDY

Methods
Analytics_



REQUIREMENT

The CCG was overloaded with datasets, spending a lot of time collating data from various sources for analysis. They required assistance in navigating the vast flows of data that the NHS generates and had a requirement to

access this data through an online platform and automated reports, which could visualise benchmarked and predictive data for interpretation in a clearer way than their current and complex spreadsheets.

AIMS

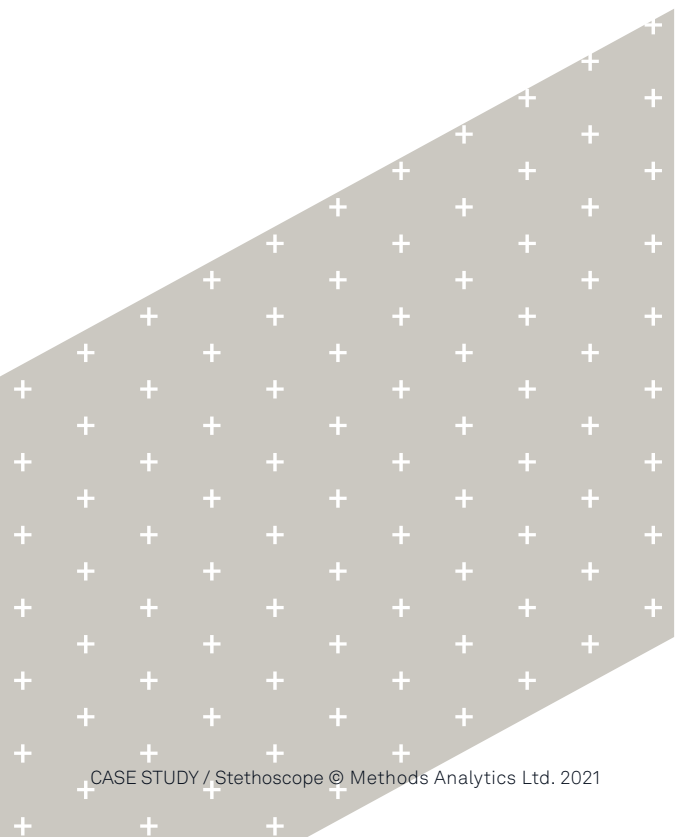
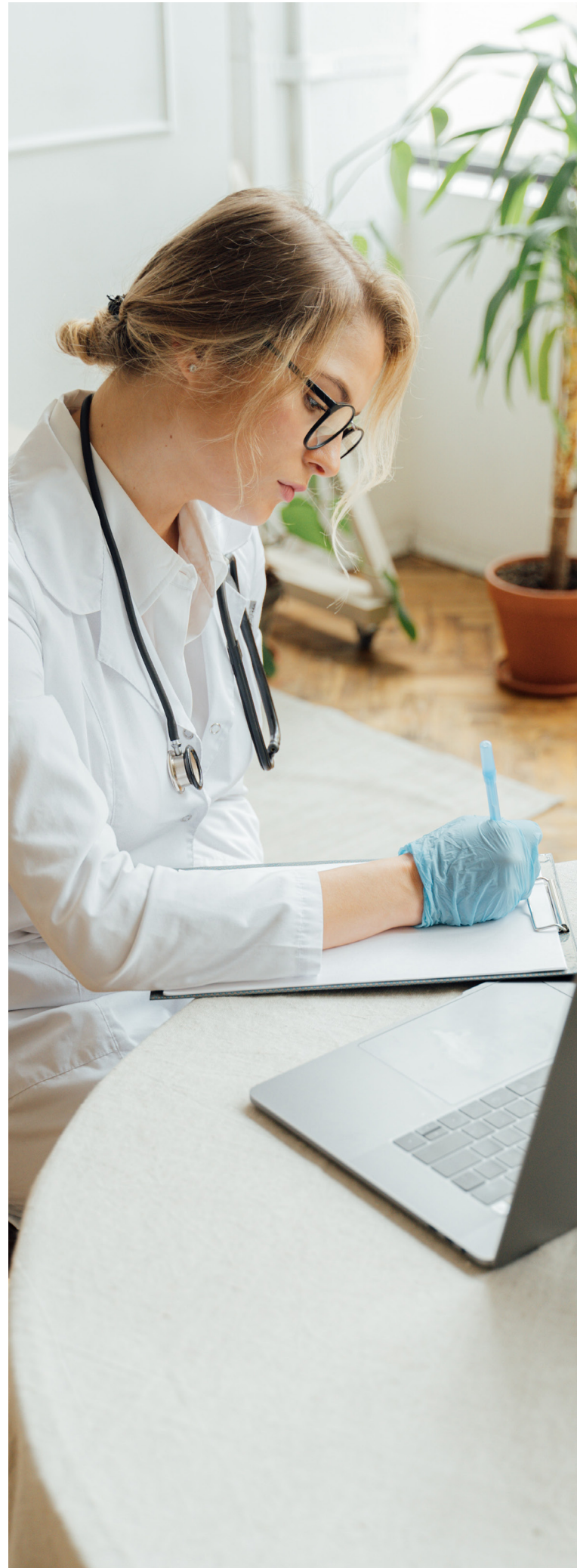
Our aim was to create a platform so simple and intuitive to use that the user can understand if there is a concern, drill down to understand that concern and what it encompasses within 60 seconds. This is achieved through careful design, selecting appropriate indicators and rigorous application of Statistical Process Control (SPC) methodology.

APPROACH

Our approach isn't to 'name and shame' but to indicate variance. By using an SPC rule set, we inform the user that variance exists and is statistically meaningful, providing the vital initial steps in the process that are currently not easily available to most organisations the user can then ask the right questions: what does this mean? Is this variance a concern? What do I need to do?

Our ethos of transparency means that Stethoscope™ allows the user to view indicators from any perspective ranging from Trusts and their sites, Specialist Trusts, Commissioning Regions, STP's, Commissioners and GP's.

With many of our team having clinical and NHS management backgrounds we have constructed indicators to measure efficiency, quality and outcome. Utilising Agile methodologies we ensure a responsive approach to development and constantly act upon feedback from our users. Enabling us to develop a product perfectly suited to the needs of NHS organisations we work with in agreed timescales.



RESULT

Methods Stethoscope™ is an easy to use online platform that transforms a wide range of healthcare information into transparent, benchmarked, comparative, actionable intelligence – so that decision makers can understand variation and see opportunities to improve patient outcomes and organisational efficiency.

Stethoscope™ can be accessed through any modern web browser including Windows Internet Explorer (version 9 and above), Google Chrome, Safari, Mozilla Firefox and Opera. The system has been designed to be accessed using portable handheld devices such as iPads/Tablets and smart phones. There are no additional plug ins or software downloads required. It is a fully maintained solution provided over a secure web based interface.


Using HES and SUS data from NHS Digital and over 35 nationally published datasets such as Diagnostic Waits, Workforce Sickness and A&E Sitrep, Stethoscope™ currently surfaces just under 400 indicators for providers and commissioners. These are organised into the 5 domains as laid out in the NHS Outcomes Framework, with additional domains containing non-framework specific indicators. Stethoscope™ has flexibility to incorporate different clinical groupings so as to restructure this view to suit the organisational structure it is serving.

We utilise a range of indicator types including counts, ratios, percentages, Directly Standardised Ratio's and Standardised Mortality Ratio's to account for case mix adjustment, benchmarking all indicators against national, local and bespoke peers.


Stethoscope™ provides drill downs for all indicators where the granularity of data allows, including Specialty, HRG, OPCS and ICD10. Stethoscope™ Advanced has been developed using Tableau so when reviewing detailed indicators the user can further analyse the indicator and underlying data using a series of filters. This also supports the ability to create custom clusters of data by any available field.

With the NHS continually facing large volumes of data and performance information, we understand the difficulties in knowing where to focus effort and resource to deliver the greatest impact on efficiency and quality outcomes. Stethoscope™ contains alert functionality that is designed to support users through a series of guided analyses to focus on areas that will drive the biggest impact by using our unique 'Impact Factor' to order the alerts dashboard. This highlights those areas that have the largest impact on either outcome or finance. We have developed 6 rules which are run across all indicators and drilldowns within Stethoscope™ and group the results into 5 areas; Positive, Negative, Neutral, Trend and Personal.

Methods Analytics have built risk stratification models within Stethoscope™ to determine the expected level of patient outcomes including, but not limited to; hospital mortality, Length-of-Stay, standardised admissions, at provider, CCG and GP level across England. In addition to classification modelling, Holt-Winters forecasting is being used to project national means together with their control limits allowing local CDS data to be benchmarked against forecasted HES data, and therefore provide a more current picture of performance.



We have used Stethoscope™ to help identify some of the key issues affecting the CCG but then to also drill into the detail so that we can focus our analysis at the areas where we are likely to have the most influence and impact. The comparative and statistical analysis then gives us the confidence to raise and constructively challenge what the variation means.



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