National Respiratory Audit Programme (NRAP)

Wales Primary care clinical audit– methodology report

Version 1.0 –May 2024

Methodology of the audit creation and set up

The NRAP primary care audit is a snapshot audit which commenced in 2015. Including this report, there have been a total of six Primary Care audits (Wales only):

> 2015 (COPD patients only under the National COPD Audit Programme)

> 2017 (COPD patients only under the National COPD Audit Programme)

> 2017/18 (Asthma and COPD patients under National Asthma and COPD Audit Programme, NACAP)

> 2018/20 (Asthma and COPD patients under NACAP)

> 2020/21 (Asthma and COPD patients under NACAP)

> 2021/22/23 (Asthma and COPD patients under NRAP)

This report presents data describing the care during 283,495 GP records for adult patients with COPD and/or asthma and children and young people with asthma. 359 general practices submitted records to the audit across Wales.

> 83,529 records for patients with COPD between 1st August 2021 and 31st July 2023

> 175,752 records for adult patients with asthma between 1st August 2021 and 31st July 2023

> 24,214 records for children and young people with asthma between 1st August 2021 and 31st July 2023

Information governance and data storage, security and transfer

The primary care audit received approval from the Welsh DQS executive.

To find out more about the audit's information governance (IG), legal basis, data storage, security and transfer arrangements please review the primary care fair processing document, IG frequently asked questions (FAQs), and the audit's data flow diagram, all of which can be found on the NRAP primary care webpage.

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Recruitment of services and audit questions

Due to the GMS contract, participation in audit is now mandatory for GP services in Wales. An Audit+ NRAP module was deployed to all general practices in order to receive data based upon the agreed searches by the NRAP team.

The primary care query document outlines the searches that were undertaken as part of the data extraction. This can be accessed here: https://www.rcp.ac.uk/33773

Analysis methodology

Data extraction

Data for this cohort was extracted on 2nd February 2024 using the NHS Wales Audit+ system. Audit+ sits within every GP practice in Wales and undertakes analysis of data held on the host GP clinical system (EMIS Web or Cegedim Vision 3) based on query sets deployed by DHCW. Aggregate results of Audit+ analysis are then automatically submitted back to DHCW in the form of counts of patients identified by each query deployed.

For the 2021-23 NRAP report, a bespoke set of queries were developed by DHCW based on specifications developed by Imperial College London. As the initial analysis was undertaken by Audit+ within the practice setting, this removed the requirement to hold patient level clinical data centrally for analysis. The results of the Audit+ analysis were then sent to Imperial College London by DHCW for further analysis and interpretation.

Data cleaning and analysis

Further analysis was carried out in R Version 4.3.1[Ref]. Numerators and denominators for each categorical variable were calculated at the LHB level and national level by summing aggregate data provided by DHCW at the practice level for each audit query. Percentages were then calculated at the LHB and national level using the calculated numerators and denominators. Median and interquartile ranges were calculated for age at the practice, LHB and national level. The R script for this analysis can be found here:

https://github.com/NationalAsthmaCOPDAudit/primary_care2021-23.

References

R Core Team (2022). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.