

Barriers to Electronic Health Records Uptake

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Project Background

- As of January 2020, 99.5% of 6696 GPs in NHS England have enabled the functionality of allowing patients to book/cancel appointments, order prescriptions and view their coded records online.
- However, only 30% of 60 million registered patients access their electronic health records (EHR) and make use of the online healthcare system.
- Therefore, this project aims to identify what barriers prevent widespread uptake of EHR.

Data and Methods

- Big data from publicly available sources (NHS England, Office for National Statistics, Ministry of Housing, Communities & Local Government)
- Data analysis: Leaps-and-bounds algorithm for regression
- Behavioural analysis: cost-effectiveness analysis of solutions

Key Findings

Data Analysis

- Patients aged 45-49 most actively make use of EHR out of all the other age groups, whereas the least active age group is 0-19. Female patients aged 55+ tend to utilise EHR more actively than male patients aged 55+.
- Higher uptake of EHR is evident in those who are affluent, live further away from GPs or suffer from chronic health conditions.
- Black Africans and Sikhs are least likely to make use of EHR. Smoking habits also appear to be negatively related to EHR uptake.

Behavioural Analysis

- Majority of patients are not aware of the existence of EHR - More personalised methods (e.g. SMS) can efficiently and economically raise public awareness.
- Physicians and patients are concerned about the security of personal information - Adoption of more advanced security measures (e.g. encryption) onto EHR is a possible solution.
- Given sufficient government funding, open application programming interfaces (APIs) have the potential to resolve poor EHR interoperability and improve workload for physicians.