

Childhood Vaccination and Immunisation



Introduction

Within the national childhood immunisation programme, NHS Haringey was responsible for the commissioning and implementation of the Childhood Vaccination and Immunisation programme.

In December 2010, NHS Haringey commissioned Health Intelligence to improve their data flows for childhood vaccinations. This case study details the work between Health Intelligence and NHS Haringey Childhood Vaccination & Immunisation Service, highlighting the issues, opportunities and achievements gained through their partnership. This partnership resulted in an increase of vaccination coverage, as well as an improvement in the operational processes within the call and recall service.

The Approach

Health Intelligence would assist in increasing vaccination coverage within NHS Haringey by the use of data analytics. Health Intelligence proposed:

- Introduce robust information governance to securely export childhood vaccination data (over N3). Health Intelligence would securely host and report on vaccination coverage and gaps in coverage.
- Health Intelligence would create a structured .csv file to upload vaccination data direct from GP Practices, into BT Rio using the GPIUS tool to batch up child health records.

Initial Findings

After reviewing the existing procedures, Health Intelligence identified some key areas to be addressed:

- There was no consistent process for GP Practices to notify Child Health of completed vaccinations.
- Not all GP Practices submitted their vaccination information.
- Child Health would spend over one month to manually insert the previous month's vaccination data.
- Inadequate processes for sharing patient data.

The Management of Change

Working with NHS Haringey

In order for effective improvements to take place, it was vital for Health Intelligence to form a joint working agreement with NHS Haringey, Whittington Health and GP Practices.

Health Intelligence worked closely with Helen Donovan (former Senior Health Protection Nurse and Immunisation Lead for NHS Haringey) and Hester de Graag (Head of Performance and Child Health Information Services at Whittington Health) & their respective teams, to ensure that the mechanism for electronically transferring data was quick, accurate and safe.

In addition, the system could not function properly and effectively without robust information governance. The data sharing agreement was ratified by the Local Medical Committee to ensure that the solution was secure and not breaching any data protection laws.

Implementation of Change

Health Intelligence engaged with all GP Practices within Haringey to ensure all childhood vaccination data could be exported securely direct from their practice. It was vital that this data was exported from all practices across Haringey to remove manual and inconsistent submission of vaccinations data.

Health Intelligence designed and created a structured .csv file that pre-mapped the BT Rio vaccination code to the Primary Care read codes for each vaccination given. This ensured a standardisation of vaccination codes and led to a reduction in the inaccuracy vaccination data supplied.

By uploading the .csv file via the GPIUS tool to batch update child health records in BT Rio, the services now removed the labour intensive process of manually inserting vaccination data.

Outcome

In November 2011, Health Intelligence tested the BT Rio .csv file with the assistance of Whittington Health. The test or locally known 'dry run' tested over 9,000 vaccination entries. The initial dry run encountered around 850 errors, which was 10% of the vaccinations to be uploaded. 99.9% of these errors were due to the specification of the .csv file and only 0.1% concerned data quality. In January 2012 and after these errors were rectified, Whittington Health successfully uploaded over 20,000

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vaccinations in the first live run, which took less than 2 minutes to upload and this process saved the Whittington Health nearly 15 months of a single data entry officer performing manual data entry.

“The monthly .csv file that we receive helps to significantly reduce the time in which our immunisation reporting system is updated and alleviates the risk of human error, difficult to decipher information and missed practice data, as well as allowing staff time to be reallocated to other departmental projects.

On a monthly basis, our IT Team perform two ‘dry runs’ and then a ‘live run’ of the data. Any errors received from each ‘dry run’ are assessed by the CHIA Team to ensure that the most accurate information is being pushed into our system. This entire process, from receiving the monthly data to uploading it into our system, takes between three to five days. This is a significant improvement over the previous method that required one or more members of staff to be continuously entering data throughout the month.”

Whittington Health

Health Intelligence agreed to provide this .csv file on a monthly basis to comprehensively reduce the amount of administrative burden, both from GP Practices and Whittington Health. The electronic transfer of primary care vaccinations to BT Rio contained an average of 1,750 vaccinations, which previously would have taken a full time single data entry officer over a month (each and every month) to manually insert the previous month’s vaccinations into the Child Health IT System.

The Benefits of Change

- All GP Practices within Haringey agreed to the electronic transfer of vaccination data to Whittington Health. Therefore, GPs no longer had to spend time sending this information and the information received by Whittington Health was consistent.

- Prior to the BT Rio file, Whittington Health spent over 1 month manually inserting vaccination data. So Haringey Children’s Services now only spend a few minutes per week uploading the data. A significant amount of days saved.
- As a direct consequence of the electronic transfer, Whittington had an extra month, to spend inviting or reminding parents to vaccinate their children.
- The vaccination coverage has increased an average of 1.3% up to 12 months, an average of 3.3% up to 24 months and an average of 9.3% up to 5 years.

Conclusion

The electronic transfer of vaccination data has proven to be a great success. The benefits of the tool to GP Practices, Whittington Health and most importantly, the health of the children within Haringey have been substantial. A considerable amount of time from labour intensive processes has been saved, so Whittington Health has quicker access to more accurate data and vaccination coverage has significantly increased. The results would not have been achieved without the dedication of the Public Health Immunisations Support Team, Whittington Health and the cooperation of the Haringey GP Practices.

‘Having accurate and timely data is essential to effectively manage an immunisation service. As all childhood immunisations up to the age of 5 years are given by general practices in Haringey, having data at practice level is necessary in order to identify pockets of low coverage at individual practice level. Support practices specifically with data recording or the service as appropriate. The data needs to be scrutinised at a local level and problems identified in a timely way to make sure all children are offered vaccination. Having the Health Intelligence tool in all practices in Haringey significantly improved on the reported coverage and enabled us to identify problems more accurately.’

Helen Donovan, former Senior Health Protection Nurse and Immunisation Lead, NHS Haringey