Title: The Impact of a GP-led Community Paediatric Allergy Clinic: A Service Evaluation.

Short running title: The Impact of a GP-led Community Paediatric Allergy Clinic

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Abstract

Background: The NHS is not meeting the nation's allergy needs. There are insufficient allergy specialists, with variable care across the country. General Practitioners (GPs) are lacking in allergy training. London's Whittington Hospital created a GP with Special Interest (GPwSI) community paediatric allergy clinic, running alongside pre-existing hospital clinics, to address local unmet needs, aiming to provide equity for patients, improve patient experience and decrease secondary care burden. **Objectives**: To establish whether improvements have occurred within the service by introducing a GPwSI-led community paediatric allergy clinic alongside providing GP education and referral pathways. This study asks: 1: Have allergy-related hospital attendances decreased with the provision of the community service? 2: Are patients seen in the appropriate clinic? 3: What proportion of patients require GPwSI follow-up? 4: Is there good patient satisfaction? 5: Have allergy clinic waiting times changed? **Methods**: Numbers of allergy-related hospital attendances and waiting times in 2013, 2014 and 2016 were assessed. Data was analysed regarding proportions of patients requiring GPwSI follow-up or referral from the GPwSI community clinic to hospital. Patient satisfaction was assessed. **Results**: Since introducing the GPwSI community service the burden on secondary care has decreased, with reduced hospital attendances for allergy clinic patients, although waiting times have increased. In 2013, 65% of allergy clinic patients attended other hospital services for allergy-related complaints prior to their first allergy clinic appointment. This was reduced to 27.3% (community) and 36.9% (hospital) in 2014 and maintained in 2016 (27.5% community and 37.5% hospital), $p<0.01$. Patient satisfaction in the hospital and community clinics is very high. **Clinical Relevance**: This integrated, multidisciplinary paediatric allergy service could provide a model to improve the unmet allergy need both in the UK and beyond. This GPwSI model could also be applied to other chronic diseases in both adults and children, improving care beyond allergy.

Introduction

Allergy affects approximately one in three of the UK population at some point in their lives,(1) and accounts for around 6% of General Practitioner (GP) consultations.(2) The NHS is not meeting the UK allergy needs,(3-5) a situation reflected in other countries across Europe.(6) The Royal College of Physicians (RCP) describes allergy as “a major public health problem”. There are too few specialists both to provide clinical care and to provide training to others.(1) The majority of allergy is managed solely in primary care. However, most GPs receive no clinical training in allergy.(1, 7) Equity is an issue; care is variable across the UK, and unfortunately, often poor.(8) In 2010, the RCP reported that there is a need for better allergy services and more allergy specialists, alongside increased training for GPs.(9)

One solution suggested by the RCP and the House of Commons, is the use of GP with Specialist Interest (GPwSI).(9) In 2000, the NHS Plan introduced the idea of GPwSIs, who would take referrals from other GPs.(10) GPs usually work in primary care and have a vital generalist role. Whilst able to take a detailed history and benefit from a more thorough knowledge of the patients’ histories, GPs are limited by shorter appointment times and are unable to perform allergy-specific tests, such as skin prick tests (SPTs). A GPwSI could add specialist knowledge to their primary care perspective.(11, 12) The RCP recommended that Allergy GPwSIs have increased consultation times compared to GPs, plus access to specialist tests. The RCP states that GPwSIs should be supported by a specialist allergy nurse, and a dietitian.(9) Importantly, as well as making allergy diagnoses, a GPwSI could rule out allergy. The first GPwSI Allergy clinic was for adults, held in in North West London.(13)

The Paediatric Allergy team at the Whittington Hospital, a District General Hospital in inner city London, noticed a wide variation in primary care allergy management . This was informally, via patient histories during consultations. The Whittington Allergy service followed the traditional model of GPs referring patients to be seen in secondary care. Patients reported seeing their GPs on multiple occasions prior to obtaining an allergy referral and once referred, they often described long waits, of up to 3 months, for allergy clinic appointments. Patients sometimes had indirect routes into the allergy service, being referred to other outpatient departments first, such as General Paediatrics or Dermatology, as well as

having Accident and Emergency (A&E) attendances. This was difficult for the patient but also increased the burden on the Whittington Hospital. Patients reported being given the wrong advice by varying healthcare professionals, and in the words of Baroness Finlay, “Bad allergy advice is worse than no allergy advice”.(14)

To address this problem, a working group was formed in 2013, consisting of the Whittington Hospital Paediatric Allergy team, local GPs and Islington Clinical Commissioning Group (CCG), who invested in the service financially. A referral pathway was produced and distributed to GPs, alongside a “paediatric food allergy early recognition and management plan” (Figure 1), based on National Institute of Clinical Excellence (NICE) guidelines.(15) This included advice on managing patients awaiting an allergy clinic appointment, aiming for consistency in care received by patients. A GPwSI in Paediatric Allergy was employed and a paediatric food allergy educational event was held for GPs. This consisted of one afternoon teaching session, where each practice in the local authority area (borough) should be represented. Informal feedback from GPs was positive but no formal feedback was collected.

The aim was to create an integrated, multidisciplinary paediatric allergy service, bridging primary and secondary care, to improve access for patients and provide consistency in patient referral and management. Reducing the divide between primary and secondary care is an important theme in the King’s Fund’s recent report.(16) The opening of the community clinic was also intended to decrease the burden on scheduled secondary care by seeing many of the patients in the community, but also to reduce emergency allergy attendances and waiting times. The underlying theme in all these aims was to improve patient experience and care.

The GPwSI-led community paediatric allergy clinic, opened in January 2014, is multi-disciplinary, consisting of a GPwSI, a Clinical Nurse Specialist and a Specialist Paediatric Dietitian. The clinic was held weekly, in a community health centre, as per RCP and NICE ideals of care close to home.(9, 15) This GPwSI community clinic is in addition to the pre-existing allergy service at the Whittington Hospital, where clinics are run in a similar fashion, with a nurse and dietitian, but with a paediatrician instead of

the GPwSI. The GPwSI community clinic's nurse and dietitian also work in the hospital, maintaining consistency. The GPwSI links in with primary care and is mentored by the lead allergy paediatrician at the Whittington Hospital. The appointment letter stated that the patient would be seen by a member of the allergy team and was the same for the community and secondary care clinic settings.

The patient care pathway begins when patients are referred to the Whittington Hospital Paediatric Allergy Service as a whole, on one referral form. Referrals are triaged into the appropriate clinic: GPwSI-led community clinic or paediatrician-led hospital clinic. The conditions triaged into each clinic are described in Table 1 and are based on NICE and RCPCH guidelines and individual team members' competencies. (15, 17) The GPwSI community clinic was designed to be a "one-stop-shop". Patients are assessed with the aim of leaving their first appointment with a diagnosis, where possible. When testing is necessary, SPTs are usually performed in the clinic. Systemic reactions from SPT are very rare but have been described,(18) thus the clinic is equipped with antihistamine and adrenaline, in accordance with the European Association for Allergy and Clinical Immunology (EAACI) guidelines.(19) Each clinic has the capacity to see six patients, with initial appointments with the GPwSI being 30 minutes long, compared to the 10 minutes usually allocated in most GP practices. However, patients spend additional time with the nurse and dietitian. The plan was to have minimal GPwSI follow-up, with patients being followed up by the dietitian and nurse, if necessary. The GPwSI was to liaise with the patients' own GP, giving further management advice, via clinic letters, or where necessary contacting the GP by telephone. All children with more complex needs would still be seen by the consultant in the hospital.

This service evaluation of the Whittington Hospital Paediatric Allergy Service explores whether introduction of a GPwSI-led community paediatric allergy clinic, alongside providing GP education and pathways for referral, improved the paediatric allergy service. The aim was to evaluate the new GPwSI community service when it first started, in 2014, but also to see if any changes were maintained 2 years down the line, in 2016. In particular, we assessed number of other hospital attendances for allergy-related problems, appropriate triage into community or hospital allergy clinics, follow up, patient

satisfaction and waiting times. As far as the authors are aware, this is the first GPwSI-led community paediatric allergy clinic in the country, despite various reports that have recommended their use.

Methods

This mixed methods study is a service evaluation of new referrals to doctor-led clinics for patients from the London borough of Islington. Follow-up appointments, any patient that had previously been seen in the Whittington Hospital allergy service (e.g. patients re-referred having been lost to follow-up) and patients from the recently started nurse-led clinics have been excluded. Ethical approval for this service evaluation was granted by the University of Southampton Faculty of Medicine Ethics Committee, and by the Clinical Lead at the Whittington Hospital.

To determine the efficacy of the GPwSI community service offered from 2014 compared to the original care offered in 2013, referrals to the Whittington Hospital Paediatric Allergy Service were studied. This was carried out retrospectively for 2013 data (n=89 patients, group 2013Hosp) by reviewing the clinical notes of all new patients seen in the allergy clinic during the whole of 2013, providing the baseline data prior to introduction of the new service. This data included all new patients seen in the allergy clinic regardless of their final diagnosis. Electronic Emergency Department (A&E) attendance records were also reviewed once the patients were identified. Data collected included the waiting time for the first allergy clinic appointment, and any allergy-related hospital attendance such as Accident and Emergency Department (A&E), dermatology or other paediatric outpatient visits plus any allergy-related hospital admissions that had occurred prior to the first allergy appointment. The allergy-related atendances were for any presenting complaint of allergy, including food allergy, rhinitis, eczema and wheeze. The GPwSI-led community clinic opened in January 2014 and two further datasets were compiled in 2014 (n=132 for group 2014GP, n=84 for 2014Hosp, a whole year of data) and 2016 (n=40 for 2016GP and n=48 for 2016Hosp, 6 months' of data, from July to December 2016). This data was obtained by asking the patient in clinic about previous attendances and subsequently reviewing their paper notes. In addition to the data mentioned, outcome following consultation was collected for the community clinics. Patient satisfaction data was collected using free-text comments in 2014 in the community clinic. In the 2016 service evaluations, the NHS "Friends and Family Test" (FFT) was used (figure 2).

Statistical analysis was performed as appropriate, using chi-square tests to assess if there was a difference in the percentage of patients attending other hospital services for allergy-related complaints, prior to their first allergy clinic appointment. The other hospital services assessed were A&E attendances, other outpatient attendances and hospital admissions. One-way ANOVA test followed by the least significant difference (LSD) post hoc test was used to compare means for the waiting times, with 95% confidence intervals (CIs). Numerical values were added to the FFT responses, namely Don't know = 0 through to Extremely likely = 5 (figure 2). Fisher's Exact Test was used to compare between the groups for the FFT data. Confidence Interval Analysis (CIA) was used to calculate the 95% CIs. Significance was demonstrated when $p < 0.05$.

Results

Have allergy-related hospital attendances decreased with the provision of the GPwSI community service?

The percentage of patients attending the hospital was assessed, before and after the GPwSI community service opened. This includes other hospital outpatient appointments, hospital admissions and A&E attendances for allergy-related problems, prior to a patient's first allergy clinic appointment. The results can be seen in Figure 3. Allergy-related A&E attendances (A&E) were significantly lower in 2014 and 2016, across both sites (community and hospital), compared to the Whittington Hospital in 2013 ($p<0.05$). When looking at previous allergy-related outpatient department (OPD) attendances, the percentage of patients with appointments was lower in the 2014 and 2016 groups compared to 2013. This was statistically significant ($p<0.05$) for both the community and hospital groups in 2014, but only in the hospital group in 2016.The number of allergy-related hospital admissions prior to allergy clinic appointments again was lower in all 2014 and 2016 groups compared to 2013 but this only reached statistical significance in the community data (for both 2014 and 2016),when there were no allergy-related hospital admissions.

Combining all hospital attendances (A&E, outpatients and admissions), the percentage of patients who had any allergy-related hospital attendance was significantly lower in 2014 and 2016, in both the community and the hospital, when compared to 2013 ($p<0.01$).

Are patients seen in the appropriate clinic and what proportion of patients require GPwSI follow-up?

Patients are referred by local GPs (Islington) to Whittington Paediatric Allergy Service and are allocated, as appropriate, to the hospital or community clinic. If the patients is subsequently not suitable for the community service they are followed up in the hospital clinic.

In 2014, 1 out of 132 new patients seen in the GPwSI community clinic required follow-up in hospital by a consultant. In 2016, this occurred for 1 out of 40 patients.

The community clinic provided nurse or dietitian follow-up if necessary, but the intention was for few GPwSI follow-ups. In 2014, of 132 new patients seen in the GPwSI clinic, eight (6%) were brought back for further review with the GPwSI. All other patients had either dietitian follow-up, nurse plus dietitian follow-up, or were discharged. In 2016, two out of 40 new patients (5%) required GPwSI follow-up (Figure 4).

Is there good patient satisfaction?

Patient satisfaction indices were not collected prior to the start of the GPwSI community clinic. However, data collected in 2016 allows comparison of patient satisfaction between hospital and community clinics. Free text patient / parent quotes from feedback about the new GPwSI community clinic in 2014, were very positive both in relation to both the service itself, and the compassion of the staff (Table 2a). Completed FFT questionnaires were received from 30 patients (75% response rate) in the GPwSI clinic and 10 patients (21% response rate) in the hospital clinics. All patients gave scores of either “likely” or “extremely likely” to recommend the service to their friends and family (Table 2b). There was no statistically significant difference in the FFT scores between the two clinics; Fisher’s exact test: $p=1.00$, 95% CI: -0.357 to 0.188.

Have allergy clinic waiting times changed?

In 2013 at the Whittington Hospital, the mean wait for an allergy clinic appointment was 9.56 weeks (Figure 5). In 2014, at the Whittington Hospital this dropped to 8.71 weeks, but the reduction was not statistically significant. In the GPwSI community clinic in 2014 however, the wait was down to 6.66 weeks, and this change from 2013 was statistically significant ($p<0.01$). In 2016, the wait for the GPwSI community clinic increased to 11.45 weeks, higher than it was at baseline in 2013. This increase was statistically significant ($p<0.01$). The 2016 Whittington Hospital wait was a mean of 8.54 weeks, which remained a statistically insignificant reduction from 2013.

Discussion

This GPwSI-led community paediatric allergy clinic is the first of its kind in the UK; an integrated, multidisciplinary allergy service created by the Whittington paediatric allergy team, linking primary and secondary care. GP education and clear pathways for referral led to an improved paediatric allergy service. Hospital attendences for allergy-related problems decreased and patients were triaged appropriately into community or hospital clinics. Patient satisfaction was very high.

The number of new patients seen in the 2016 dataset for the GPwSI community clinic was low. For the first six months of 2016, 79 patients meeting the inclusion criteria were seen. However, from July to December, the time period being studied, only 40 new patients fitting the criteria were seen. This is for a combination of reasons. There was no deputising in the absence of the GPwSI and so clinics had to be cancelled in their absence. During July to December most of the GPwSI's annual leave was taken, meaning fewer clinics took place. There was a high rate for patients who did not attend (DNA) as well as multiple last minute cancellations. Further improvements to the service are needed to improve the DNA's such as introducing a new appointment reminder service.

On the face of it, numbers from the hospital clinics are low but this is actually as expected. The data looks at new patients only but as the hospital clinics see a wider range of complex allergy patients with conditions including severe eczema, faltering growth and asthma, they also see many more follow-ups. In addition, the hospital sees patients from the neighbouring boroughs of Haringey and Camden, which were not included in this study to focus on the population of Islington patients only, as seen in the Islington CCG-funded community clinic. 48 patients meeting the inclusion criteria per six months is consistent, as can be seen from the previous year's figures, with there being 89 patients in 12 months in 2013 and 84 patients in 12 months in 2014.

Have allergy-related hospital attendances decreased with the provision of the GPwSI community service?

The number of other allergy-related hospital attendances, before and after the community service opened was assessed to look for any changes. Overall, there was a significant drop across both sites in 2014 compared to the 2013 hospital data, for the population being studied. This reduction was maintained in 2016. The drop in hospital attendances is highly significant in clinical terms, not just in statistical terms. One of the main aims of opening the GPwSI community clinic was to reduce the burden on secondary care, by reducing A&E visits, other outpatient visits and hospital admissions. There was a concern that this may happen at the start of the clinic but that gradually the effect would be lost. However, this data shows that two years later, the effect remains significant. One of the roles of a GPwSI is to raise clinical standards locally. By seeing patients in the appropriate clinic first time, we are reducing the burden on other OPD clinics and this contributes significantly to the economics and sustainability of the model, acting in accordance with the "getting it right first time" ideals laid out by the King's Fund which is being adopted across the UK.(20)

The reduction in secondary care burden was achieved by starting the GPwSI clinic but also by educating GPs in allergy and creating a pathway with referral information. The pathway included practical advice for GPs to manage their patients whilst awaiting an allergy clinic appointment, so reducing the need for A&E visits or more accessible urgent general paediatric outpatient referrals. Ongoing allergy educational support for GPs now needs to be considered, as an important role of GPwSIs, especially given the lack of allergy training.(21) In the Netherlands, an allergy management support system has been developed for use in primary care.(22) Similar initiatives could be useful in the UK.

Are patients seen in the appropriate clinic and what proportion of patients require GPwSI follow-up?

Referrals are made to the Whittington Paediatric Allergy Service as a whole and then triaged into the appropriate clinic; community or hospital. Two patients were inappropriately triaged to the GPwSI community clinic, one in 2014 and one in 2016. Both had faltering growth and should have been triaged into the hospital clinic. However this was not clear from the referral form and in both cases the initial assessment and treatment was commenced so no delay was caused to the patients. They would have required a doctor follow-up, which was simply arranged in the hospital instead of the community.

Overall, the analysis is reassuring as the right patients are being seen in the GPwSI community clinic, with minimal referrals on to hospital.

Few patients were brought back for GPwSI follow-up, in line with the initial vision of the service. Those who were followed up were mainly those with eczema that needed reviewing or for those with more holisitic/social concerns.

Is there good patient satisfaction?

Data shows there is good patient satisfaction with the GPwSI community service. The number of FFTs completed at the Whittington Hospital was low, with a 21% response rate (75% in the community). Interestingly, the initial aim nationally was to achieve a response rate of 15%.(23) In 2013, the England-wide response rate for A&E and inpatients combined, was 13.1%.(24) The response rates achieved in this study were in fact higher than this, but on a background of small patient numbers, meaning actual numbers of FFTs completed were small.

There has been much debate as to whether the FFT is fit for purpose. Differences in responses have been identified amongst differing demographic groups, which could lead to certain groups being poorly represented.(25) This makes comparisons of different trusts nationally difficult. However, using it locally, such as in this study, where both clinics are serving the same local area with the same patient demographics, is more useful.(26)

The Whittington Trust wanted to be able to show that the level of patient satisfaction with the GPwSI community service was as good as the hospital service. Whilst numbers are low, the data does show that patient satisfaction levels are extremely high. No patients were unsure or unlikely to recommend our service; 100% were either “likely” or “extremely likely” to recommend us. There was no significant difference between the hospital and community clinics. Comments written on 2014 feedback forms for the GPwSI community clinic were very positive (Table 2a).

To strengthen the evidence for good satisfaction, further questionnaires will be handed out in the future, to obtain larger numbers of feedback. However, this is a starting point to show that there is an extremely high level of satisfaction amongst the patients that did take the time to complete the FFTs.

Have allergy clinic waiting times changed?

Waiting time results were initially reduced, and this was statistically significant in the GPwSI 2014 group. This was also clinically significant, with patients' waiting times being reduced by almost three weeks in this group. However, the wait to be seen in the hospital clinics was not significantly different from 2013, in either 2014 or 2016. In 2016, the GPwSI community wait was in fact significantly higher than in 2013, with patients waiting almost two weeks longer than they were in 2013. There are various possibilities for this initial drop followed by an increase. When the GPwSI community clinic first opened there was immediate accessibility, as no patients were yet booked into the brand new service, so the early patients had very little wait. However, in 2016, as mentioned above, fewer patients were seen in July to December. There were less clinics during that time so less availability and longer waits. Increased last minute cancellations meant that patients were taking up two appointment slots (their original cancelled slot that could not be filled in the short time frame, plus the new rescheduled appointment), so decreasing availability for others. More research is necessary to determine whether or not the waiting time is acceptable to patients.

However, another factor might be that by having an accessible service, and increasing GP knowledge through education, we have increased demand. This is fine if they are appropriate referrals. Future research could potentially look at whether referral rates are increasing, and whether there are more "appropriate" referrals and less "inappropriate" referrals now, compared to 2013. However, it is very difficult to define "appropriate". It may be possible to see what proportion of patients were given a diagnosis of allergy following their appointment, and to see if this has increased. However, one role of the allergy clinic is to help rule out allergy as a diagnosis, and give patients the confidence to reintroduce foods, sometimes with the ongoing support of a dietitian. This is as important as a diagnosis of allergy: either situation merits erecting an appropriate management plan. If there is increased access to allergy services, the number of children on unnecessarily restrictive diets could potentially be reduced. A

diagnosis of allergy is not necessarily the outcome that should be assessed. Simply looking at referral rates may be the way forward. If waiting times have only gone up by 2 weeks despite a large increase in referrals, that is quite different to the scenario where waiting times have gone up despite no increase in referrals.

As an integrated care service, it may be useful to triage the patients differently at different times. When there are clinically significantly longer waits for the GPwSI community clinic compared to the hospital, more patients could be triaged to be seen in the hospital clinics, so evening out the waiting times. This will allow care to be truly patient centred and not focused on place/health care professional.

Limitations

As discussed above, the number of new patients seen in the 2016 GPwSI dataset was low. There were small numbers of FFT results from the hospital setting, although this was similar to national response rates. It was also not possible to compare patient satisfaction to that prior to the opening of the GPwSI community clinic. Waiting times were difficult to interpret without information on referral rates. Cost savings resulting from decreased secondary care attendances were not considered in this study but could be included in a future study.

Conclusions

This service evaluation has shown that introducing a GPwSI-led community paediatric allergy clinic, alongside providing GP education and pathways for referral, has improved the paediatric allergy service.

We have demonstrated the impact of introducing this community clinic which has led to a decrease in burden on secondary care, by reducing the number of hospital attendances by allergy patients in other departments. Patients are highly satisfied with the service on both sites. Despite difficulties with waiting

times, this analysis of the GPwSI community allergy service shows that the other aims have been achieved.

The Whittington Paediatric Allergy service has created an integrated, multidisciplinary paediatric allergy service with clinics run both in hospital and the community, linking primary and secondary care. Our GPwSI Paediatric Allergy service is the first in the UK. We have shown the model to be effective, paving the way for other CCGs to follow suit and roll out similar services nationwide. Indeed, in 2015, the neighbouring CCG of Haringey also commissioned a GPwSI-led community service. Adoption of this model could make a significant contribution towards meeting the unmet allergy need both in this country, and internationally. This GPwSI model could also be applied to other chronic diseases in both adults and children, improving care beyond allergy.

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Figure Titles and legends:

Figure 1: Early Recognition and Management Pathway Leaflet

Leaflet distributed to Islington GPs in 2014, alongside an educational session.(15, 27) The leaflet demonstrates initial management and appropriate clinic referral, for example patients with mono-food allergy are seen in the community clinic (left of figure) and patients with food allergy plus co-existing asthma would be seen in the hospital clinic (right of figure).

Figure 2: The NHS Family and Friends Test (FFT)

Questionnaire used to collect anonymous patient satsifaction data, both in the hospital and in the community sites. Numerical values assigned to the FFT responses are: Don't know=0, Extremely unlikely=1, Unlikely=2, Neither likely nor unlikely=3, Likely=4, Extremely likely=5.

Figure 3: Allergy-related hospital attendances that occur prior to their first allergy clinic appointment, according to clinic type

Data collected by reviewing the clinical notes of all new patients seen in the allergy clinic shows the percentage of patients that had an allergy-related hospital attendance prior to their first allergy clinic appointment. There was a drop in attendances for each variable in both 2014 and 2016, across both sites, compared to 2013 (years on x-axis, labelled '13, '14, '16). Each of these drops were statistically significant ($p<0.05$) using chi-square testing, with the exceptions of outpatients attendances in the 2016 community group and admissions for both 2014 and 2016 in the hospital groups, which were not statistically significant.

Figure 4: GPwSI appointment outcomes

Appointment outcomes from the GPwSI community clinics in (a) 2014 and (b) 2016. In 2014, eight out of 132 patients (6%) were given GPwSI follow-up and one patient (1%) was referred on to secondary care. The remaining 123 patients (93%) were discharged or followed up by the nurse or dietitian. In

2016 two out of 40 patients (5%) were given GPwSI follow-up and one patient (2%) was referred on to secondary care. 37 patients (93%) were discharged or followed up by the nurse or dietitian.

Figure 5: Waiting times according to clinic

A one-way ANOVA test comparing waiting times in different clinics in different years was significant ($p<0.01$). Post hoc testing by the Least Significant Difference (LSD) to compare means showed significant differences, as indicated in the figure. Waiting times were calculated in full weeks, from referral until first appointment or first missed appointment. The hospital mean waiting times were 9.56 weeks in 2013, 8.71 weeks in 2014 and 8.54 weeks in 2016. The community mean waiting times were 6.66 weeks in 2014 and 11.45 weeks in 2016. Error bars are 95% confidence intervals.

Tables:

GPwSI Community Clinic	Consultant Hospital Clinic
History of immediate reaction to a single food	Food allergy and asthma
Reflux not responding to anti-reflux medication	Faltering growth and persistent gastrointestinal symptoms
Blood/mucous in an infant's stool (MC&S negative)	Anaphylaxis
	Moderate to severe eczema in under 6 months' old

Table 1

Table 1: Rules for triaging patients to different clinics

Referrals are made on one referral form and triaged into the appropriate clinic as shown in this table.

(15) The referral form is designed for GPs already planning on referring to the allergy clinic.

Theme	Patient free text comments
Clinical Service	• I thought the service was very comprehensive • Very clear communication and advice. • Excellent, very professional and receptive manner by doc and nurse • I found this very helpful today • Excellent service • All information discussion was very thorough. Thank you • A job well done, great service look forward to return visit • All questions were answered. Brilliant service
Compassion:	• All staff were fantastic, very caring, considerate and informative • Very friendly, they explained everything clearly about what they were going to do. • Very supportive and kind • The care at the allergy team is excellent

	• I felt the practitioners listened to what I have to say about my child very well. They were friendly and professional and very child friendly as well. I am very pleased with the treatment I had with my daughter.

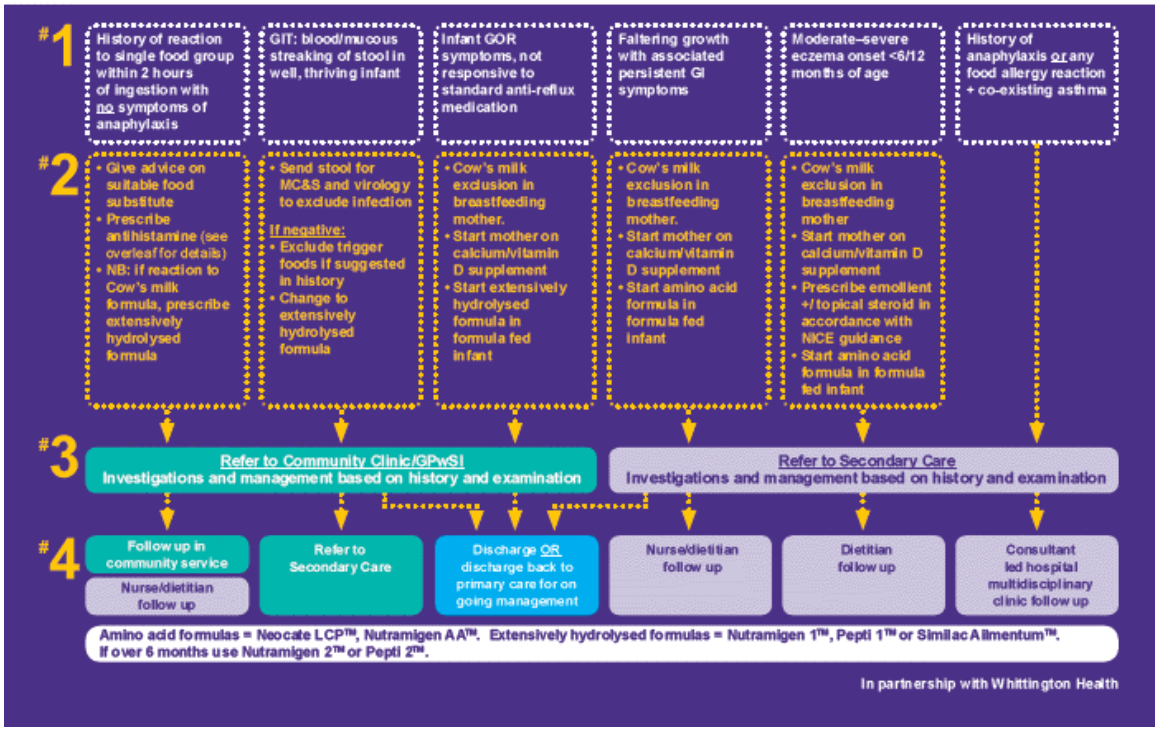
Table 2a

Clinic type	**Family and Friends Test (FFT) Score**	
	Likely	***Extremely Likely***
Whittington hospital (secondary care)	2 (20%)	8 (80%)
Community (GPwSI)	5 (16.7%)	25 (83.3%)

Table 2b

Table 2: Patient satisfaction.

(a) Patient satisfaction free-text comments collected in 2014 in the community clinic. (b) **Frequency table of Family and Friends Test (FFT) score by clinic type.** FFT results show high patient satisfaction, with no statistical difference across the sites. General Practitioner with Special Interest (GPwSI). Numerical values assigned to the FFT responses range from Don't know=0 to Extremely likely=5.


Food Allergy Pathway
NHS Islington Clinical Commissioning Group
#1
History of reaction to single food group within 2 hours of ingestion with no symptoms of anaphylaxis
GIT: blood/mucous streaking of stool in well, thriving infant
Infant GOR symptoms, not responsive to standard anti-reflux medication
Faltering growth with associated persistent GI symptoms
Moderate–severe eczema onset <6/12 months of age
History of anaphylaxis or any food allergy reaction + co-existing asthma
#2
• Give advice on suitable food substitute
• Prescribe antihistamine (see overleaf for details)
• NB: if reaction to Cow's milk formula, prescribe extensively hydrolysed formula
• Send stool for MC&S and virology to exclude infection
If negative:
• Exclude trigger foods if suggested in history
• Change to extensively hydrolysed formula
• Cow's milk exclusion in breastfeeding mother.
• Start mother on calcium/vitamin D supplement
• Start extensively hydrolysed formula in formula fed infant
• Cow's milk exclusion in breastfeeding mother.
• Start mother on calcium/vitamin D supplement
• Start amino acid formula in formula fed infant
• Cow's milk exclusion in breastfeeding mother
• Start mother on calcium/vitamin D supplement
• Prescribe emollient +/- topical steroid in accordance with NICE guidance
• Start amino acid formula in formula fed infant
#3
Refer to Community Clinic/GPwSI
Investigations and management based on history and examination
Refer to Secondary Care
Investigations and management based on history and examination
#4
Follow up in community service
Nurse/dietitian follow up
Refer to Secondary Care
Discharge OR discharge back to primary care for on going management
Nurse/dietitian follow up
Dietitian follow up
Consultant led hospital multidisciplinary clinic follow up
Amino acid formulas = Neocate LCP™, Nutramigen AA™. Extensively hydrolysed formulas = Nutramigen 1™, Pepti 1™ or Similac Alimentum™.
If over 6 months use Nutramigen 2™ or Pepti 2™.
In partnership with Whittington Health

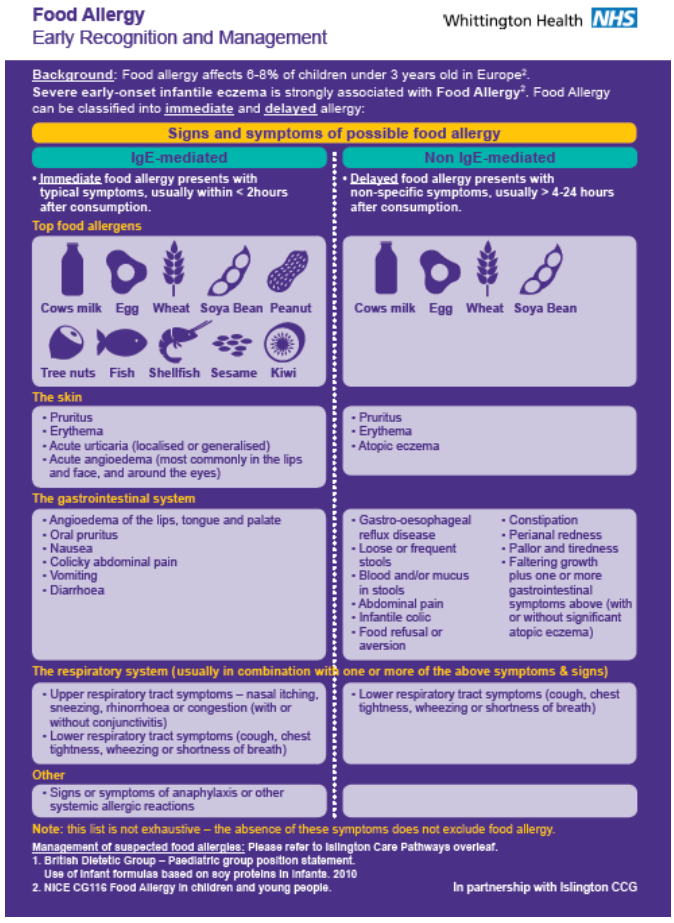

Food Allergy
Early Recognition and Management
Whittington Health NHS
Background: Food allergy affects 6-8% of children under 3 years old in Europe[2].
Severe early-onset infantile eczema is strongly associated with Food Allergy[2]. Food Allergy can be classified into immediate and delayed allergy:
Signs and symptoms of possible food allergy
IgE-mediated
• Immediate food allergy presents with typical symptoms, usually within < 2hours after consumption.
Top food allergens
Cows milk Egg Wheat Soya Bean Peanut
Tree nuts Fish Shellfish Sesame Kiwi
The skin
• Pruritus
• Erythema
• Acute urticaria (localised or generalised)
• Acute angioedema (most commonly in the lips and face, and around the eyes)
The gastrointestinal system
• Angioedema of the lips, tongue and palate
• Oral pruritus
• Nausea
• Colicky abdominal pain
• Vomiting
• Diarrhoea
The respiratory system (usually in combination with one or more of the above symptoms & signs)
• Upper respiratory tract symptoms – nasal itching, sneezing, rhinorrhoea or congestion (with or without conjunctivitis)
• Lower respiratory tract symptoms (cough, chest tightness, wheezing or shortness of breath)
Other
• Signs or symptoms of anaphylaxis or other systemic allergic reactions
Non IgE-mediated
• Delayed food allergy presents with non-specific symptoms, usually > 4-24 hours after consumption.
Cows milk Egg Wheat Soya Bean
• Pruritus
• Erythema
• Atopic eczema
• Gastro-oesophageal reflux disease
• Loose or frequent stools
• Blood and/or mucus in stools
• Abdominal pain
• Infantile colic
• Food refusal or aversion
• Constipation
• Perianal redness
• Pallor and tiredness
• Faltering growth plus one or more gastrointestinal symptoms above (with or without significant atopic eczema)
• Lower respiratory tract symptoms (cough, chest tightness, wheezing or shortness of breath)
Note: this list is not exhaustive – the absence of these symptoms does not exclude food allergy.
Management of suspected food allergies: Please refer to Islington Care Pathways overleaf.
1. British Dietetic Group – Paediatric group position statement. Use of infant formulas based on soy proteins in infants. 2010
2. NICE CG116 Food Allergy in children and young people.
In partnership with Islington CCG

Figure 1


Whittington Health NHS
Tell us what you think
Your feedback will help us improve the service and care you receive on this ward.
Please help us by taking the Friends and Family Test
For more information please visit www.whittington.nhs.uk
The Friends and Family Test
How likely are you to recommend our ward to your friends and family if they needed similar care or treatment?
(please tick ☑ the option that best indicates your view)
Extremely likely
Likely
Neither likely nor unlikely
Unlikely
Extremely unlikely
Don't know
Can you tell us the main reason for the score you have given?
Once completed, please hand in to a member of staff or alternatively post it anonymously into the sealed box on the ward. Please feel free to contact the PALS office on 020 7288 5551 or via email at whh-tr.patientexperience@nhs.net
Order Code: INPFFTV2
Serial No: INP 2506
Date: ..... /..... /.....
Ward Name: .....

Figure 2

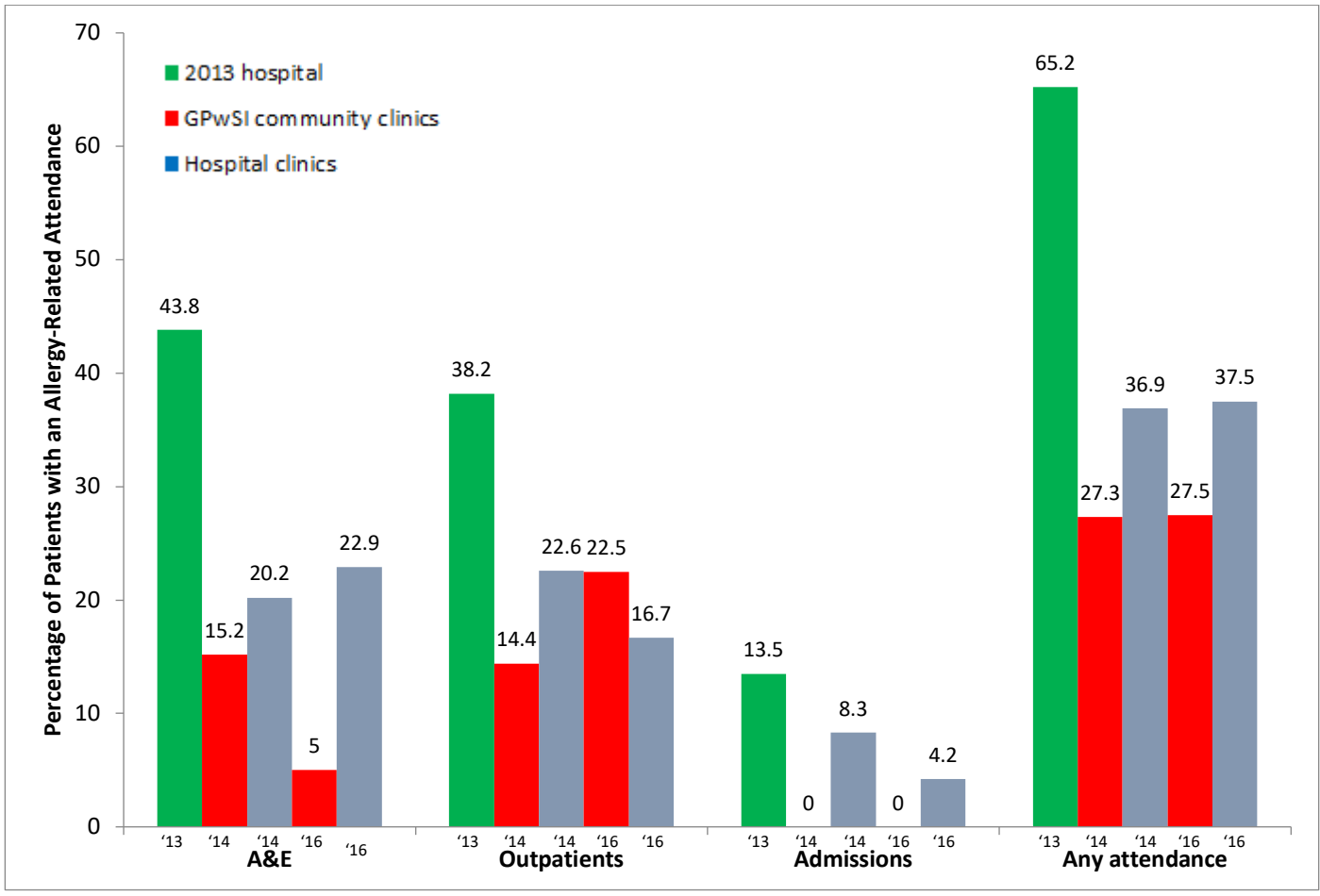

Percentage of Patients with an Allergy-Related Attendance
70
60
50
40
30
20
10
0
2013 hospital
GPwSI community clinics
Hospital clinics
43.8
15.2
20.2
5
22.9
38.2
14.4
22.6
22.5
16.7
13.5
0
8.3
0
4.2
65.2
27.3
36.9
27.5
37.5
'13
'14
'14
'16
'16
A&E
Outpatients
Admissions
Any attendance

Figure 3

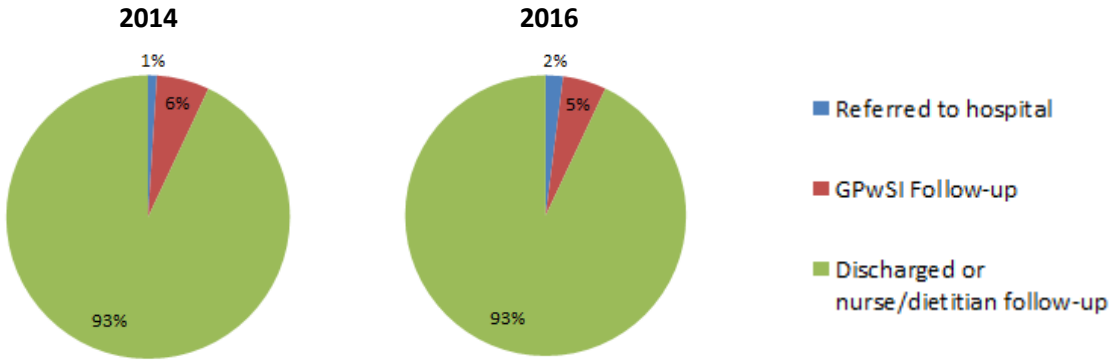

2014
1%
6%
93%
2016
2%
5%
93%
Referred to hospital
GPwSI Follow-up
Discharged or nurse/dietitian follow-up

Figure 4

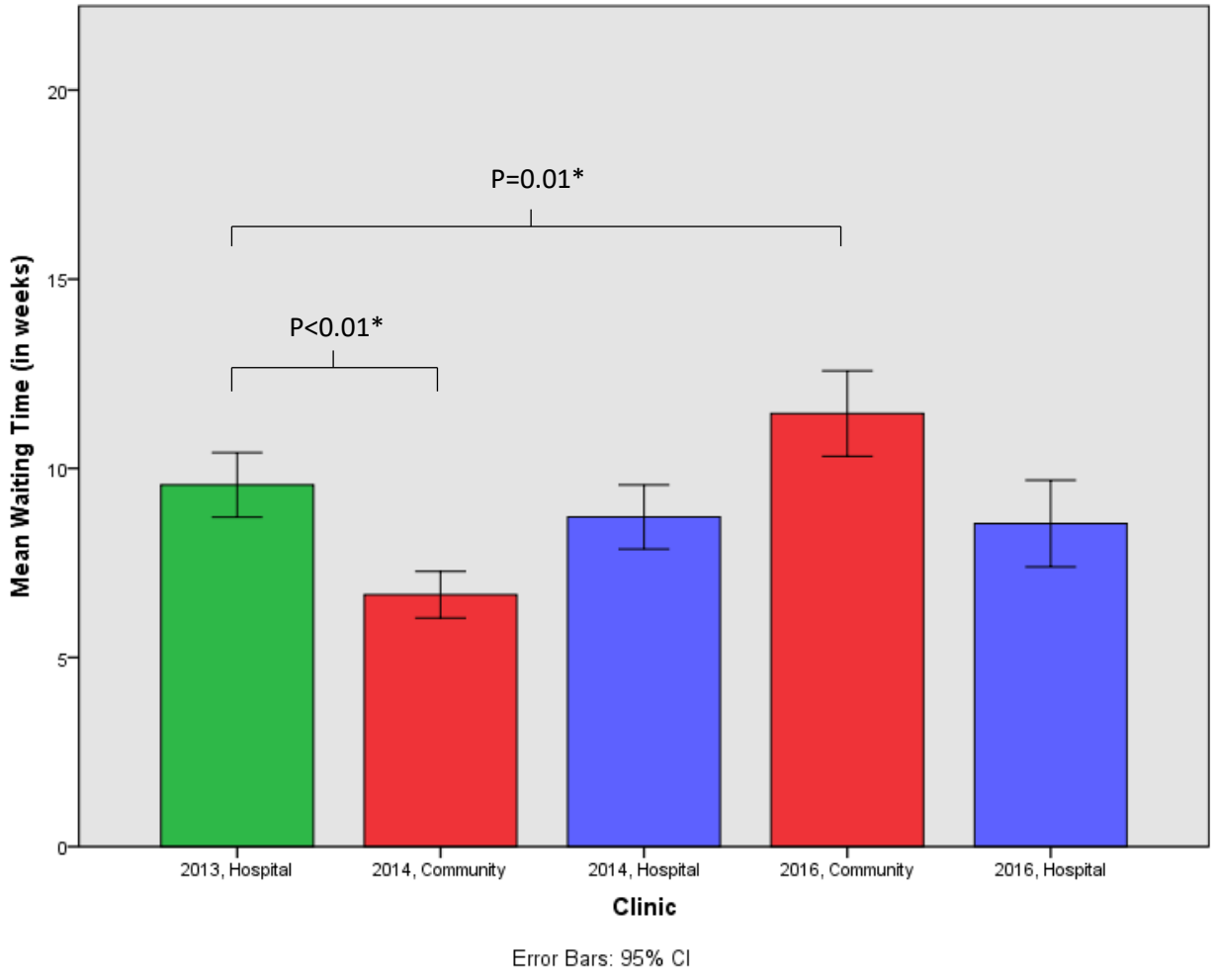

P=0.01*
P<0.01*
Mean Waiting Time (in weeks)
20
15
10
5
0
2013, Hospital
2014, Community
2014, Hospital
2016, Community
2016, Hospital
Clinic
Error Bars: 95% CI

Figure 5