

Summary of Frimley Health Foundation Trust and GSK Joint Working Project: Expansion of award-winning adolescent asthma service to include ACT and patient review

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Project Overview:

The asthma bus travelled to the 16 secondary schools in Slough, delivering an education session centred around asthma control. 325 adolescents, spanning years 7-11 took part in the project (Some year groups were excluded at the schools request e.g. year 9 groups and, in some schools, only year 7s and 8's were seen). Before and after this session, each adolescent completed the Asthma Control Test and if their score was under 20 they had their Peak Flow measured.

Adolescents with an ACT score under 20 (showing partially or uncontrolled asthma) and a peak flow score above or equal to 80% predicted and were referred to their GP. Those adolescents who had a score under 20 *and* a peak flow score below 80% predicted and received a follow up review with the asthma nurse specialist and repeat ACT score 4 weeks after the asthma bus session.

The adolescents who received a follow up assessment, also had a final ACT score collected 8 weeks after the asthma bus session.

Those who took part also completed a questionnaire to understand the adolescents' view on the education session and the usefulness of the ACT as a tool to manage their asthma.

Project Objectives:

- Improve asthma control in local adolescent population by understanding baseline level of asthma control and improving asthma management. Achievement of this objective will also provide evidence to expand the bus service to a wider group of patients.
- Demonstrate the benefit of using ACT in a mobile care setting to measure asthma control so that the concept of assessing control in asthma using ACT becomes a more important factor in decision making in asthma management.

Results:

- 117 (36%) of this population had ACT scores indicating partially or uncontrolled asthma.
- The average score before the education session was 19.53 (partially controlled).
- The average score immediately after the education session was 19.97 (partially controlled).
- 62 pupils had a score under 20 *and* a peak flow score above or equal to 80% predicted and were referred to their GP.
- 55 pupils had a score under 20 *and* a peak flow score below 80% predicted and received a follow up review with the asthma nurse specialist.
- 55 of the 117 received 1:1 asthma nurse reviews:
 - At baseline, 36% of the pupils were uncontrolled, 4 weeks later this had reduced to 2% and at 8 weeks it was 26%.
 - At baseline, 64% of the pupils were partially controlled, 4 weeks later this had reduced to 21% and at 8 weeks was 26%.

- At baseline, no pupils in this group were well/totally controlled, 4 weeks later this had risen to 77% and at 8 weeks it was 47%.
- At baseline, the average ACT score in the review population was 16.2 (partially controlled). At 4 weeks this rose to 20.9 (well controlled) and at 8 weeks was 18.5 (partially controlled).
- The percentage who improved (ACT score over 20 or had an improvement of 3 points or more) was **88.5%** at week 4 and **50.9%** at week 8 (see appendix).
- 82% of the 266 respondents correctly identified the meaning of the ACT score
- 93% of the 301 respondents strongly agree or agree that the education session helped them to better understand their asthma
- 95% of the 301 respondents strongly agree or agree that their ACT score helped them to understand when they needed to ask for help with their asthma.
- 85% of the 302 respondents said they were very likely or likely to use the ACT to manage their asthma in the future.
- 89% of the 302 respondents said that they thought the education session on the bus was very good or good.
- Nearly all of the pupils reported learning something new on the bus
- The top three things respondents reported learning were from the education session were about asthma control, how to answer ACT and understanding triggers

Conclusions:

- ACT scores collected at baseline indicate that there are significant a number children with partially and uncontrolled asthma in the adolescent population in Slough.
- The education and 1:1 review interventions improved asthma control scores at the 4 week and 8 week reviews, compared to baseline, although this effect was more pronounced at the 4 week follow up.
- Children enjoyed the education session and nearly all reported learning something new and that the session helped them to better understand their asthma.
- Children responded well to the ACT, with most children correctly identifying what their ACT score meant and nearly all agreeing that their ACT score helped them to understand when they needed to ask for help and that they were likely to use it to manage their asthma in the future.
- Frimley Health Foundation Trust will continue to use community teaching to reach the teenage population, to help educate and promote optimum asthma control
- Frimley Health Foundation Trust will use ACT in conjunction with other diagnostic tools i.e lung function/peak flow/FeNO to assess the control of patients asthma

Learns:

- ACT is useful in conjunction with other tools to help improve asthma control.
- Proactive teaching in a unique setting helps learning and improves understanding.
- The knowledge and resource of a highly educated respiratory team is a vital component in improving childhood asthma.