
Supplemental Digital Appendix 2
Example of a Student Poster Presented After Completion of All Three Quality Improvement (QI) Blocks in the QI Course, Vanderbilt University School of Medicine, Implemented in January 2015

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Improving Rates of Asthma Action Plan in School-Age Patients at the Vanderbilt PACC
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BACKGROUND
- In the state of Tennessee, it is required that every child has an Asthma Action Plan (AAP).
- AAPs are administered by the child’s pediatrician.
- They are then filled out and signed by parents before the child’s school can carry and appropriately administer the child’s medication while at school.
- Low rates of administration of both of the above tests have been observed, likely due to multiple factors:

AIM STATEMENT
To improve the rates of administration of the Asthma Action Plan in school-age children (5-18 years old) with asthma from 60 to 65% by November 2016.

MEASURES
- The unit of measurement was defined as the percentage of school-age children, ages 5-18 years old, requiring an Asthma Action Plan (AAP) that complete this form on-time in clinic.
- A random number generator was used to review two clinic days per week. The EMR was then examined for the number of patients requiring an AAP or ACR, and the number of patients with the corresponding documents scanned into the chart.
- Baseline data will be compared to post-change data to monitor the effect of the change.

INTERVENTION(S)
1. The first test of change was to streamline the process of administering AAPs such that the front desk is solely responsible for giving the proper forms to patients and marking the AAP as “ordered” in the EMR. This change resulted in a 2.3% increase in the proportion of required AAPs being completed.
2. The second test of change was a process change. The senior resident in clinic each month will draft a form for the Asthma Action Plan in the EMR (Starpanel) for all patients on the schedule that day that require an AAP per the Outpatient Whiteboard. This change is meant to serve as a second reminder to complete the AAP for residents seeing patients in clinic that day.
3. The third test of change was to add educational and reminder posters throughout the clinic and in the physician workrooms to cover an identified gap in knowledge about the need to complete AAPs in clinic yearly.

CONCLUSIONS AND LESSONS LEARNED
- Increased percentage of AAPs completed from 60% baseline, to 77% during PDSA cycle 2, to 90% during PDSA cycle 3.
- Implementation barriers included resident time and staff compliance.

FUTURE WORK
- Tiered responsibility (e.g. senior resident drafts AAP, junior resident signs out note to senior resident).
- EMR to automatically generate drafts for AAPs.
- Hard-copy “back-up” handed to parents at start of visit as an additional reminder for completion.