Title: EVIDENCE BASED ASTHMA EDUCATION INTERVENTION FOR ADULTS IN A PRIMARY CARE SETTING USING SELF MANAGEMENT GUIDLINES

Authors: Jeanette Toro-Linnehan RN, DNP MPH AE-C

Background: The plan was to promote an organizational change within a primary care practice (medical home) as a planned asthma care visit that is a non-acute reactive environment. Using the guidelines of the National Institutes of Health, Blood and Heart Institute to provide evidence-based care.

The medical home will address the patient needs from the moment of contact using self-management education as an important part of their care.

The design was a Pre and Post comparison of outcome measures. These measures will include: a decrease in acute episodes of participants by 50%, an increase in patient perceived self-efficacy as demonstrated by an increase in demonstrated knowledge of control by 50%. A decrease of 80% of patient incorrect use of rescue inhalers.

This was done as Capstone in 2013 and is currently still run as a program in our practice.

Objectives: To decrease the Use of rescue measures to maintain control of asthma through a planned educational visit and an increase in patients self-reported scoring measures To decrease misuse of inhalers and other medications prescribed to patients through their knowledge of their medications To decrease the risk of adverse events that could cause a decrease in lung function or place the patient at risk for developing long term consequences To increase in practice management of asthma care that is based on the National Asthma Education and Prevention Program(NAEPP)Guidelines

Methods: FOR THIS PROJECT 25 PATIENTS WERE INVITED TO PARTICIPATE IN ASTHMA EDUCATION WITH ASTHMA EDUCATOR AND WERE CALLED FOR A PLANNED VISIT EDUCATION WAS PROVIDED ON SELF-MONITORING, LEVEL OF ASTHMA CONTROL AND, HOW TO MONITOR SYMPTOMS, DEFINITION ON ASTHMA WAS TAUGHT, MEDICATIONS, USUAL TRIGGERS AND, AN ACTION PLAN WAS DEVELOPED WITH PATIENT INPUT, THE ASTHMA CONTROL TEST (ACT) WAS USED TO IDENTIFY ASTHMA CONTROL FOR THE LAST 4 WEEKS. SCORES BELOW 19 WOULD INDICATE THAT ASTHMA IS NOT WELL CONTROLLED .PATIENTS RECEIVED PULMONARY FUNCTION TESTS IF OVER A YEAR.

Results: Chart 2

   An examination of the project data reveals that there was a significant
improvement in the group of 25 patients that agreed to participate in the
improvement project. Chart 1 shows the use of a test of two proportions. The act
score showed a statistically significant ($p<0.05$) improvement in asthma control
except in one patient.   The mean of the before group is less than mean of the after
group at the 0.05 level of significance. This means that the change in mean ACT
scores are likely due to the intervention, not random chance.   Because there was a
negative mean difference, this signifies that the net effect of the intervention was
improvement in ACT scores. To that end, one can be 90% confident that the true
difference (improvement in ACT scores) will be between -2.8120 and -1.1046.

    Chart 2 demonstrates in the before group there were only 5-6 patients doing
what was considered needed for evidence base practice, after the intervention the
results show that almost all of the patients were doing what was needed based on
the guidelines.
    The proportions (or percent's) jumped from 20% of the group to 100%. In looking
at the statistical significance the p-values are at less than 0.05. If p-values are higher
than that, it means that the differences you observe could be attributed to random
chance. Each of those 6 measures above had p-values of 0.00, so the differences in
the outcomes can be attributed to the intervention.
    Cases of controlled asthma following the intervention increased. Acute visits
went from 7 (28%) to 0 ... with a p-value of 0.005. This is a statistically significant
difference. Since the values for Uncontrolled asthma went from 12 (48%) to 8
(32%) which is an improvement, yes, but it is not one that shows as statistically
significant, as the p-value is greater than 0.05.   What it could mean is that in any
similar group of people you might see that improvement bump, without the
intervention

Conclusion: Using the standards of treatment for asthma developed by the expert
panel reports from the National Heart, Lung, and Blood Institute allows a clear
roadmap to patient centered control
  A patient-centered practice identifies patients, and knows that the patient is the
driver of their care, and need to be more involved in decisions about their care, and
in the management of their health
    Patients need to actively engage in their healthcare and good providers of care
will use Evidence Based Asthma Education Interventions that use Self- Management
Guidelines to provide this care.