

# Research paper on home maintenance of asthma

[Technology](#), [Development](#)



Quality improvement (QI) is a persistent effort to analysis performance and systematic efforts to produce better patient outcomes (Health Resources and Services Administration [HRSA], n. d.). As healthcare continues to evolve, as more research and evidence comes available, it is important that the organization makes such changes to improve patient care. QI is a tool that identifies the need for those changes and ways to eradicate patient harm by reducing technology and human errors (HRSA, n. d.). This author, identified the ineffectiveness on educating the existing strategies for diagnosing and managing asthma at home as a practice issue. This author will discuss the six dimensions of quality, theoretical underpinning of change, improvement tools, model for quality improvement projects, resources for change, and quality measures as they relate to the given practice issue.

## **Background of Practice Issue**

Asthma is a chronic lung inflammatory disorder of the lungs that require certain treatments to be managed effectively. Noncompliance or lack of educating parents on the existing guidelines for managing asthma can have adverse effects, such as increased asthma exacerbations which can lead to mortality. The underuse, overuse, compliance with inhaler spacer are some examples of medication errors many families are unaware of. The lack of follow up, primary care providers, yearly influenza vaccines, development of asthma action plan, self-management tools (spacer, peak flow meter), and recognition of asthma complications and triggers are all important factors of asthma maintenance. Education to staff on educating techniques is needed to battle this practice issue (Adler and McBride, 2010).

In 2001, the Institute of Medicine (IOM) developed six dimensions of quality:

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safety, timeliness, effectiveness, efficiency, equity, and patient-centeredness. These domains were developed to close the gap between actual care received and the perceived good care given (Institute for Healthcare Improvement [IHI], 2015). The domain of effectiveness needs to be addressed with the given practice issue. The IOM states care should be effective, meaning incorporating the most recent evidenced based care in to practice and not overly or under treating the illness (IHI, 2015). For example, every child with a slight cough does not need steroids and every child wheezing does not need to be admitted to the hospital. Secondly, timeliness is another important domain for the given practice issue. Meaning, care should be promptly so that the patient can start healing (IHI, 2015). At the first sight of an asthma attack, immediate treatment should be initiated.

## **Theoretical Underpinning of Change**

In healthcare, change is inevitable as evidence-based care and best practice evolves. It is essential that healthcare professionals effectively change their patient education and approach to embody current asthma guidelines. Kurt Lewin developed a change model with three different stages: unfreeze, change, and refreeze. The first stage of unfreeze deals with the preparation needed for the organization to get ready for change. Preparation involves creating a sense that change is necessary, motivating the team, and breaking down the existing framework. This is typically the most stressful stage because things can feel off balance. However, it forces the organization to evaluate the change, get motivated, and move. It is important that the staff in this stage become empowered and motivated, if this fails to ensue then the lack of participation may hinder the change.

The second stage of change deals with the actual process of transition. Support is needed in this stage to ease this transition such as, training, coaching, and education. Leaders need to recognize that this change does not happen instantly, but with time, motivational factors, and commination the change will ensue. It is important that the staff in this stage become committed to the transition, and start incorporating into their practice. This transition period can be hard as people are finding new ways to approach the change.

The last stage known as refreeze, deals with the stabilization of the organization once the change has been made. The changes have been accepted by the staff and are considered the norm as people start to feel comfortable again. This stage is important because it allows the staff to feel once again secure and that this change is effective. Staff should take ownership of the change at this stage, so that they do not regress back to the old way of thinking.

## **Improvement Tool**

Root cause analysis (RCA), provides an extensive analysis of potential or adverse events retrospectively, going back to the beginning of the process. The sole purpose of the RCA is to identify and understand the root of the event and causal factors. RCA is a system that discovers trends, evaluates contributing factors, and assesses risks with similar incidents. With these results, the organization may implement a plan to decrease further events by looking at enabling factors (e. g., lack of education).

In case of domestic maintenance of Asthma the change is applicable in quality improvement as it helps in clarifying the real issues in lack of

understanding of Asthma control and then helps to highlight the cause for it (Improving Asthma care quality, 2014). Hence, after applying RCA over the result of domestic Asthma maintenance researches, the Author came to an inference that the root cause in current Asthma control is due to lack of awareness about controlling aspects of the disease. Thus RCA, when used along with a suitable model of Quality improvement, like FADE, can result in changing the quality of overall control of Asthma in domestic maintenance. The changes in quality circles can really impact the overall longevity of Asthma patient (Schneide, Wensing , Biessecker, Quinzler, & Szescenyi , 2008).

## **Model**

FADE is a QI model broken down into four steps: focus, analyze, develop, and execute. Focus is step one, which allows one to clearly define and clarify the change of the improvement that is to occur and why. This step sets the foundation for the entire model. The second step is to analyze the collected data. Collectively, the data will allow the organization to identify trends, contributing factors, and baselines. The third step is to develop an action plan from the analyzed data. The action plans are needed to initiate the movement of the improvement change process. Execute is the last step, where the action plans are put into play. The actions are then evaluated constantly to measure the effectiveness of the change (“ What is Quality Improvement?”, 2014).

The focus of this author’s QI project is to improve staff’s effectiveness of patient education regarding at home maintenance of asthma. The author will further decide the sources and evaluation methodology of the FADE QI

applied in case of domestic Asthma maintenance. The FADE quality improvement process will be ending with an assessment of acquired leanings and their consequent impact over changed perception of Asthma control in domestic maintenance, thereby improving the overall quality of care. The model will conclude whether quality improvement will lead to changes in visit to medical centre, changes in costs of cure and sustainability of changes induced via quality improvement (Bunik, Federico, Beaty, Rannie, Olin & Kempe , 2011).

## **Resources Needed**

In a survey conducted by Ashthama G. A. P. in 2008, the most important gap found in the Asthma maintenance at home is regarding the control measures and not for the impacts (Waldron, 2013). Surprisingly, almost 97% of surveyed people realized the consequent risks due to uncontrolled asthma when more than 70% of them were unaware of the control measures for it at home (Waldron, 2013). Hence for process quality improvement using FADE, we must focus this gap to imply the change management and then finalize the needed resources, process for evaluation and final outcome displays. Hence, main resources are Human resources (trainers –physicians and nursing staff), Structural resources (An infrastructural setup for training session, practice module and evaluation exercise will be required) and the financial resources, the budget for the proposed change program will be ranging from \$10, 000 to \$ 12, 000.

## **Evaluation Methods**

The evaluation methods for the QI process will be in terms of lesser visits to the Emergency response hospital care, reduced number of Asthma attacks in

domestic maintenance, less response time cure duration to chronic patients and lesser admittance to hospitals, saving on lives and monetary resources of patients and their families, respectively.

The methods that will be used to report the success of FADE QI are by quantitative mapping of percentage of right answers after receiving training, quantitative evaluation of percentage reduction in number of people recognized with least knowledge gap, relative comparison and qualitative inferences from the change in attitude and confidence towards giving improved health care treatment in domestic maintenance. The impact of quality control can be seen in varying costs and visits to Emergency department for before and after QI scenario (Barta, 2006).

The following visual displays will be used to report the quality improvement process, Bar chart over reduced number of unaware or least aware people when compared to the awareness figures evaluated at beginning of process and Pie charts for establishing gap clearance and right options chosen in domestic maintenance for asthma control measures (Mansour, Rose, Toole & Athertin, 2008). The above two visual displays will give us a relative impact of the quality improvement changes installed over the current gaps in understanding the Asthma control measures in surveyed people.

## Conclusion

The quality improvement management in case of nursing subject for Domestic maintenance of Asthma has been implemented using FADE model of qualitative improvement (Kalighi, 2007). The author has illustrated the proposed methodology getting applied in case of awareness gaps in domestic treatment and cure options, generally referred as Asthma control

features in the given analysis. The Gaps in understanding the scope of cure and its control are to be clearly addressed, sorted and then the improved quality of changed understanding regarding Asthma control will be evaluated (Kalighi, 2007). Consequently, the intended quality improvement changes in understanding the control measures for Asthma in its domestic maintenance will be demonstrated using visual display tools like Bar graphs and pie charts. The author has tried to explain the impact of change management in quality improvement process of asthma maintenance in domestic health care.

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