2019 Maryland Patient Safety Center Minogue Application Submission

Organization: Shady Grove Medical Center – Adventist Healthcare

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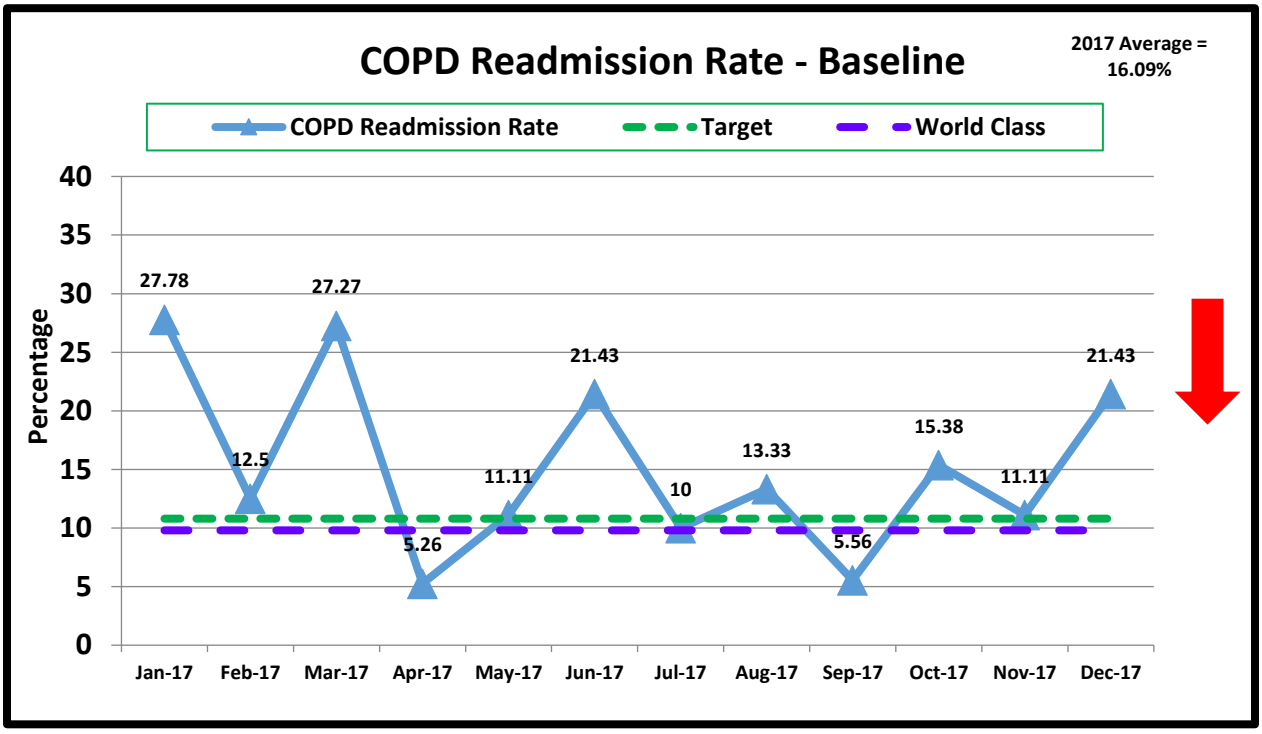
Solution Title: Reducing Chronic Obstructive Pulmonary Disease (COPD) Readmission Rate

Program/Project Description, including Goals: In alignment with the Readmission Reduction Incentive Program (RRIP) for the state of Maryland, our team at SGMC realized we were not immune to the increased readmissions rates for our COPD patient population. In 2017, COPD readmission average rate was at an all-time high of 16.09%. The Health Services Cost Review Commission (HSCRC), the readmission rate was set for neutral zone <10.8% and penalty zone >10.8%. In addition to the financial implications by the Quality-Based Reimbursement (QBR), unnecessary hospital stays also increase the risk of hospital-acquired infections, increased lengths of stay, and increased medical costs for both patients and our organization. Our SGMC team's goal was to mitigate readmissions and improve patient care/outcomes via education on their plan of care, infection prevention, and improving patient adherence and compliance. Using our DMAIC graph, the HSCRC set our target goal to 10.7%, and our world-class goal to 10.2%.

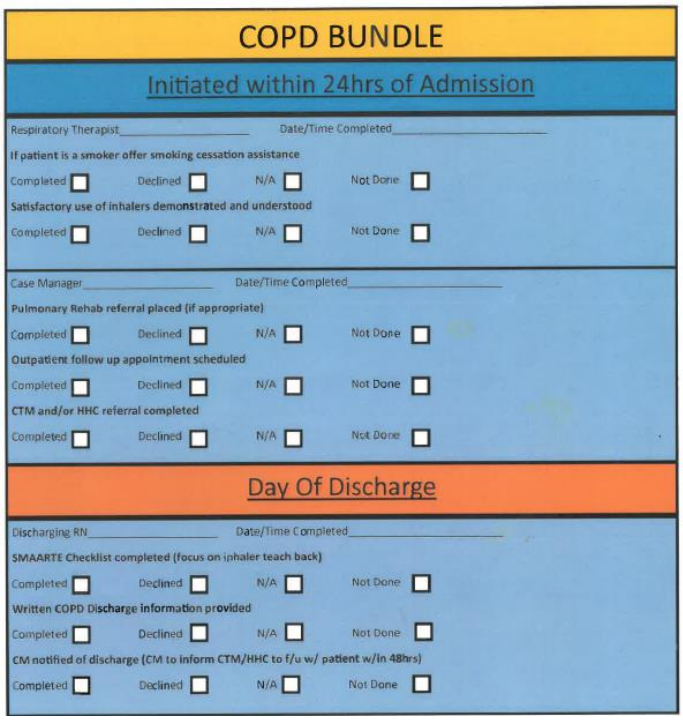
COPD Readmission Rate Data for 2017



Process: We incorporated the Lean Six Sigma approach using the DMAIC methodology process. The DMAIC process helped us focus on the defects within our education system, multidisciplinary teams, and identify gaps in care for our COPD patient population. We looked at how our processes, resources, materials, people, and electronic medical record inputs affected the readmission rates for our COPD population. The Respiratory Care Team also plotted out the process of patient education at discharge by using flowchart mapping to identify gaps and defects in care accurately. The Respiratory Care team also collaborated extensively with the Medical Director of Pulmonary Services, Dr. Joseph Ball, Case management, discharges nurses,

Informatics team, Hospitalists, the COPD multidisciplinary taskforce, and Home Health nurses. The Respiratory Care team quickly realized that we did not have a formal process in place for COPD discharge education. To be impactful, we recognized the need to focus on what was within our scope of care and reach out to other disciplines that could deliver impactful change. The task force met monthly to discuss how to implement countermeasures and identify any additional defects that may have surfaced during our DMAIC process.

Solution: We created a COPD task force, which focused on a discharge process. We developed a COPD bundle, which included inhaler education, identifying signs and symptoms of infection, COPD education management, smoking cessation, and pulmonary rehab referrals. Implementing the COPD education bundle enabled the documentation of the education plan in the patient's electronic medical record (EMR).



COPD BUNDLE

Initiated within 24hrs of Admission

Respiratory Therapist_____ Date/Time Completed_____

If patient is a smoker offer smoking cessation assistance

Completed ☐ Declined ☐ N/A ☐ Not Done ☐

Satisfactory use of inhalers demonstrated and understood

Completed ☐ Declined ☐ N/A ☐ Not Done ☐

Case Manager_____ Date/Time Completed_____

Pulmonary Rehab referral placed (if appropriate)

Completed ☐ Declined ☐ N/A ☐ Not Done ☐

Outpatient follow up appointment scheduled

Completed ☐ Declined ☐ N/A ☐ Not Done ☐

CTM and/or HHC referral completed

Completed ☐ Declined ☐ N/A ☐ Not Done ☐

Day Of Discharge

Discharging RN_____ Date/Time Completed_____

SMAARTE Checklist completed (focus on inhaler teach back)

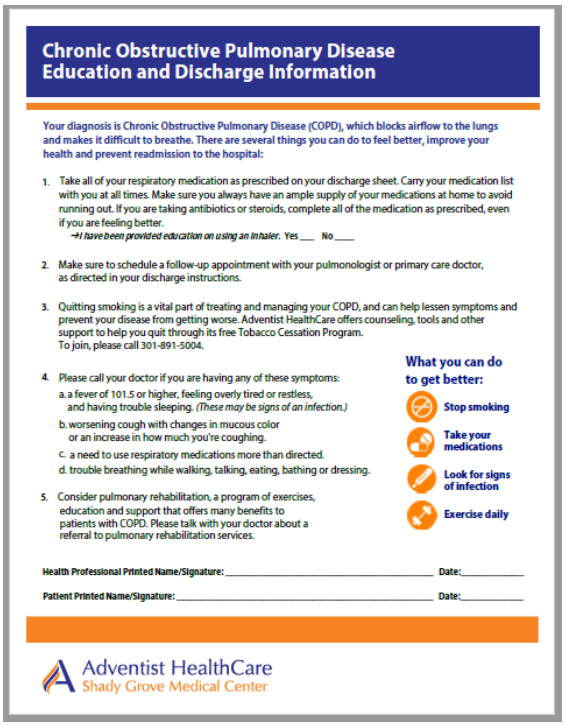
Completed ☐ Declined ☐ N/A ☐ Not Done ☐

Written COPD Discharge information provided

Completed ☐ Declined ☐ N/A ☐ Not Done ☐

CM notified of discharge (CM to inform CTM/HHC to f/u w/ patient w/in 48hrs)

Completed ☐ Declined ☐ N/A ☐ Not Done ☐



Chronic Obstructive Pulmonary Disease Education and Discharge Information

Your diagnosis is Chronic Obstructive Pulmonary Disease (COPD), which blocks airflow to the lungs and makes it difficult to breathe. There are several things you can do to feel better, improve your health and prevent readmission to the hospital:

1. Take all of your respiratory medication as prescribed on your discharge sheet. Carry your medication list with you at all times. Make sure you always have an ample supply of your medications at home to avoid running out. If you are taking antibiotics or steroids, complete all of the medication as prescribed, even if you are feeling better.
   →I have been provided education on using an inhaler. Yes___ No___
2. Make sure to schedule a follow-up appointment with your pulmonologist or primary care doctor, as directed in your discharge instructions.
3. Quitting smoking is a vital part of treating and managing your COPD, and can help lessen symptoms and prevent your disease from getting worse. Adventist HealthCare offers counseling, tools and other support to help you quit through its free Tobacco Cessation Program. To join, please call 301-891-5004.
4. Please call your doctor if you are having any of these symptoms:
   a. a fever of 101.5 or higher, feeling overly tired or restless, and having trouble sleeping. *(These may be signs of an infection.)*
   b. worsening cough with changes in mucous color or an increase in how much you're coughing.
   c. a need to use respiratory medications more than directed.
   d. trouble breathing while walking, talking, eating, bathing or dressing.
5. Consider pulmonary rehabilitation, a program of exercises, education and support that offers many benefits to patients with COPD. Please talk with your doctor about a referral to pulmonary rehabilitation services.

What you can do to get better:

- Stop smoking
- Take your medications
- Look for signs of infection
- Exercise daily

Health Professional Printed Name/Signature:_____ Date:_____

Patient Printed Name/Signature:_____ Date:_____

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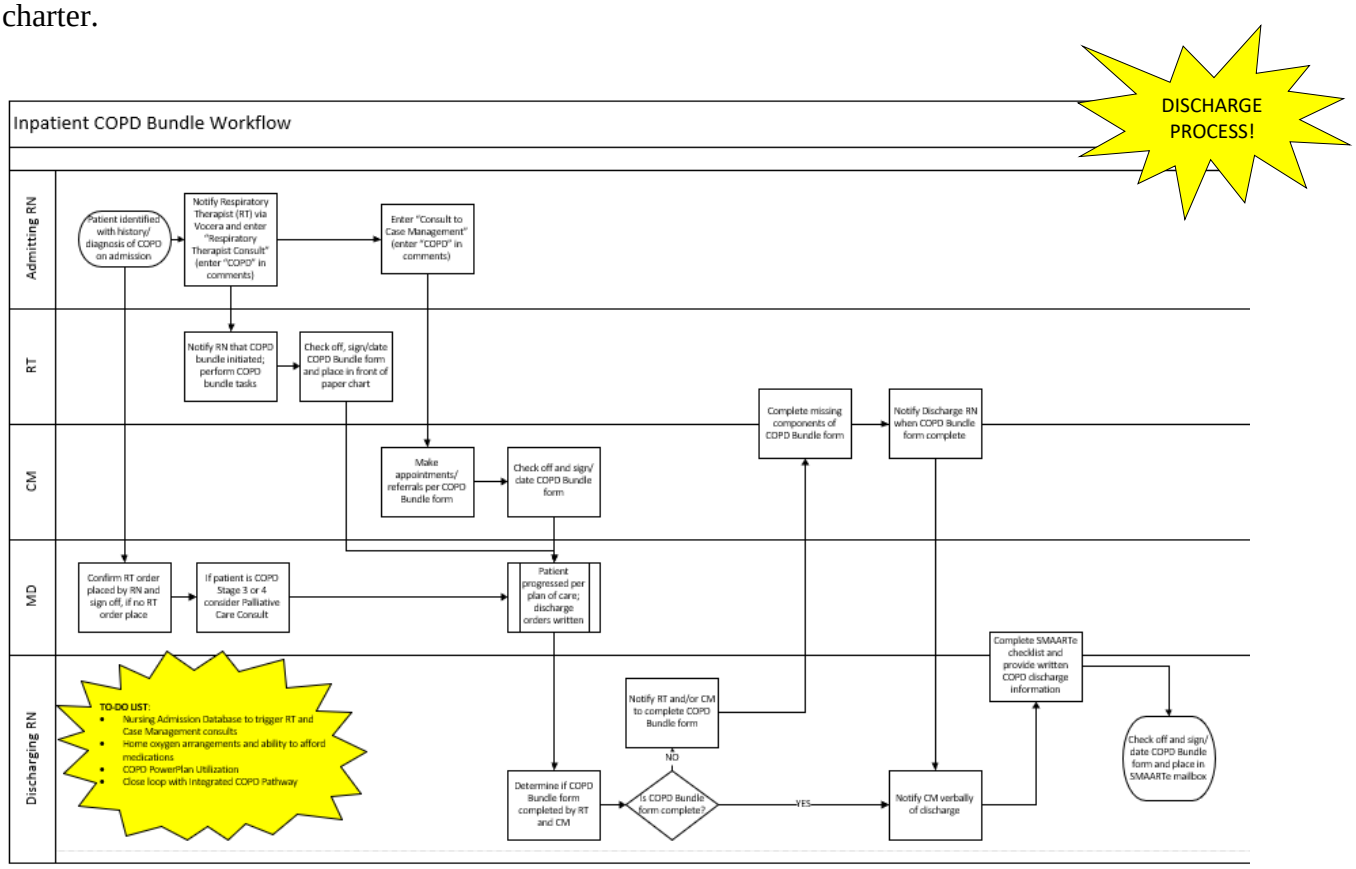
The COPD task force also developed a swim-lane process map detailing the multidisciplinary roles in the COPD bundle. By establishing this plan and using the COPD bundle checklist, we

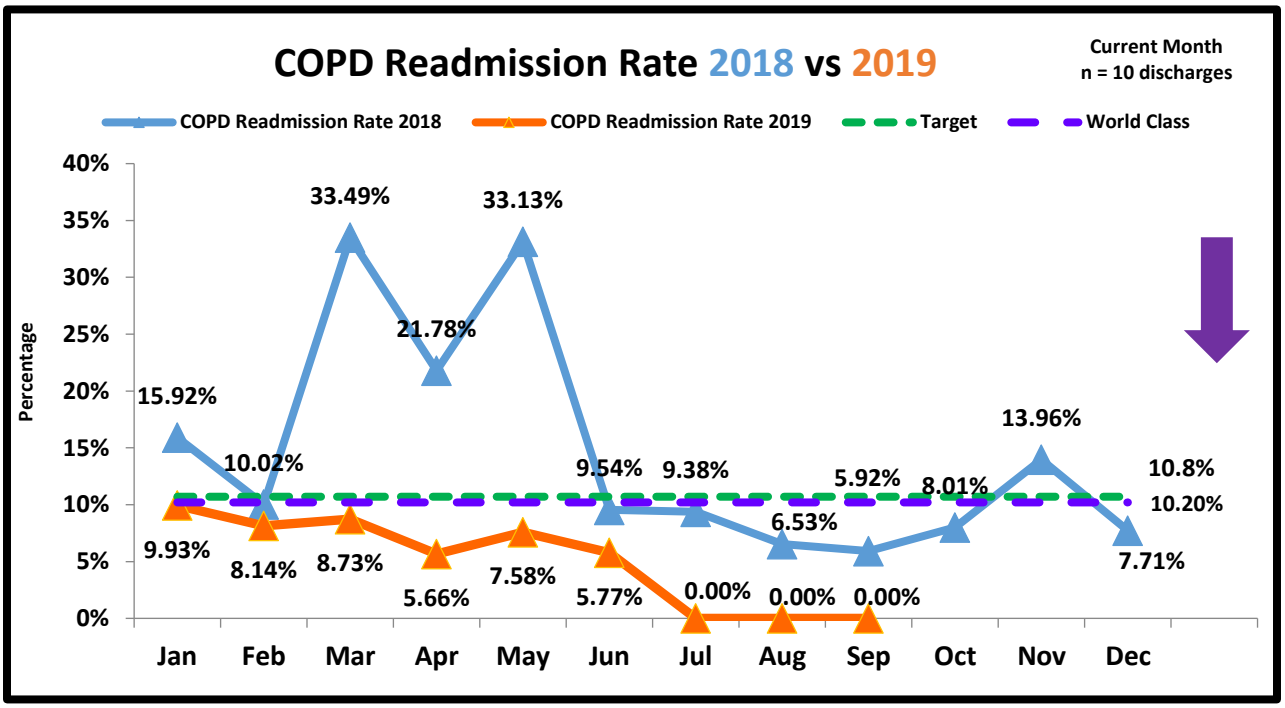
were able to assign roles and responsibilities based on disciplines, and the entire multidisciplinary team kept each other accountable of meeting the goals set in our project charter.



Measurable Outcomes: The readmission rate quickly decreased from 16.09% (2017) to 14.62% (2018. The average readmission rate after countermeasures were implemented in June (2018), dropped to 9.54%. World-class results were obtained in June 2018 and have been sustained through December 2018 and now into 2019. It was immediately evident the variability in readmission rate results had ceased. Additionally, being able to adequately maintain our desired readmission rate results also reassured the team that we were well on our way to meeting our measures of success. The creation of the COPD bundle checklist with the discharge nurse responsible for its completion was a new concept for nursing. It had been challenging to

implement consistently, but this continues to be monitored. Using the COPD bundle as an audit tool to ensure compliance was vital in the discharge education process. This project was shared with the respiratory team at White Oak Medical Center, as well. The collaboration of the multidisciplinary task force resulted in improved patient outcomes and higher reliability of care.

COPD Readmission Rate Data 2018 (Blue) & Current COPD Readmission Rate 2019 (Orange)



Sustainability: The COPD task force continues to meet quarterly to assess the maintenance of our goals, to address issues on our current countermeasures, and adjust defects as they arise in our project. One of the defects immediately identified was targeting the COPD population not in our respiratory scope of care. These are patients who are admitted for other co-morbidities, not related to COPD but have COPD in their history. Using the Better Outcomes by Optimizing Safe

Transitions (BOOST) forms as an order for consult to respiratory therapy, prompts the respiratory therapist to provide discharge education. These BOOST forms are generated at the time the provider inputs COPD diagnosis in the patient's EMR. Another defect we found is that the BOOST forms are not consistently ordered and this has posed challenges on patients receiving the discharge education during their stay in a timely manner. This issue has at times become problematic since some of the COPD patients are not routinely seen in our respiratory scope of care and due to some of the BOOST forms are ordered at the time or close to discharge, this has resulted with some patients not educated or consulted by our respiratory team. We collaborate monthly with the health coders on how best to capture these patients in real-time and be proactive in providing timely discharge education. The multi-disciplinary team continues to meet regarding these issues and work on how to best mitigate this problem, and how best to streamline BOOST forms to align with real-time discharge education for our COPD patients. If an upward trend is noticed and sustained, the multi-disciplinary team revisits the Analyze and Improve phases of our DMAIC and revise the action plan as needed.

Role of Collaboration and Leadership: We met and collaborated with Case Management to review discharge planning of high-risk COPD patients. We devised a pathway to include respiratory therapy's input in the discharge planning process. The interdisciplinary chart was review by our medical director to discuss current COPD cases as needed, and a report out was given to various COPD committees of the results. The multi-disciplinary team (case managers, respiratory leadership, medical director and, discharges nurses, and hospitalists) researched the evidence-based practice (EBP) of COPD management for devising a quick reference sheet with the RT team and Hospitalists. The RT team met with marketing to create a quick reference sheet. The Respiratory Therapists (RTs) were trained on how to distribute the quick reference

COPD bundle sheet, provide education, and document in Cerner. The team was also responsible for validating RT documentation of patient education in Cerner. The RT team and leadership collaborated with the Informatics team to create a reference sheet into the EMR. Respiratory leadership provided training to home health nurses about the educational needs supplied to all of our COPD patients. Having the opportunity for our RT team extend education to population Home Health nurses, allowed a seamless plan of care and education established from the point of discharge to home in a continuum.

COPD Team members

Innovation: What makes our project innovative is it empowered our patients' ability to become more involved in their self-care and the knowledge and management of their disease, thus reducing risk of readmissions. Another innovative aspect of our project was the ability to involve the Population home health nurses in the education process for our COPD patients in our community. Being able to impact and educate our COPD patients from the time of admission to time of stay to time of discharge and home, effectively bridged gaps of care. The project allowed us to build long-standing partnerships with our multi-disciplinary team, with our patients, and their families. Through the constant collaboration of all stakeholders with the multi-disciplinary team, this enabled for open dialogue and effective communication on how best to deliver care optimally for our COPD patients. This also effectively reduced the variability of care without sparing on the quality of care to all of our patients.

Culture of Safety: Our project focused on the needs of our patients and how best to address the safety measures in place to prevent adverse health outcomes and unnecessary readmissions. By establishing effective education methods with our patients, they were educated on their healthcare needs, disease process, and given useful tools on how best to manage their disease once they were home. The discharge nurse validated the respiratory education was done and provided additional training on medication use. The case managers provided the necessary discharge planning, follow-up appointments, and pulmonary rehab referrals when applicable. All these measures ensured a culture of safety was in place for all of our COPD patients.

Patient and Family Integration: The patients and their families were included in all therapies and educational needs of the patient. If a family member was involved with the patients care, then all education was provided to them, as well. This ensured that all parties were knowledgeable, compliant, and empowered to provide adequate and safe self-care. Moreover,

our educational materials were presented in their preferred language of understanding whenever possible, to address language barriers and health disparities.

Conclusion: The entire multidisciplinary team which included hospitalists, case managers, discharge nurses, respiratory therapists, Pulmonary medical director, Informatics team and the COPD task force committee really worked hard at collaborating and setting attainable goals to meet our patient's needs. We realized it took all of our collective efforts to be able to give value-based and evidenced-based, quality care to our COPD patients and their families. Finally, exercising a just culture initiative help each of us succeed in our measureable goals and kept us accountable at the delivering the best care possible.

Related Tools and Resources:

All Payer Refined - Diagnosis Related Groups (APRDRG, (n.d.), Retrieved from http://ahcmsdbsqlbi/BIReports/Pages/Folder.aspx?ItemPath=%2fSGMC%2fCardiology_DMAIC&ViewMode=List

Better Outcomes by Optimizing Safe Transitions (BOOST), (n.d.), Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/25010589

Cerner EMR Software, (n.d.), Retrieved from https://www.cerner.com/

Health Services Cost Review Commission (HSCRC), (n.d.), Retrieved from https://www.mhaonline.org/advocacy/regulatory/hscrc

Readmission Reduction Incentive Program (RRIP), (n.d.), Retrieved from https://hscrc.state.md.us/Pages/init-readm-rip.aspx