PACT COPD

PARTNERS in ACTION FOR COPD IN TENNESSEE

A Strategic Framework for COPD Action in Tennessee December, 2015

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At a Glance: A Strategic Framework for COPD Action in Tennessee

Tennessee has the **3rd highest rate** of COPD in the U.S.
COPD is the **3rd leading cause of death**
Over **450,000 people** in Tennessee are **diagnosed** with COPD
COPD rates are **higher in lower income** communities
COPD **treatment costs** alone topped **nearly $800 million** in 2010

What do patients need?

- **Earlier diagnosis**
- **Better tools & education about their condition**
- **Access to quality patient-centered care that keeps them healthy & out of the hospital**

What does the healthcare system need?

- **Policies that support team based coordinated care across the continuum**
- **Quality educational resources about care guidelines & best practices**
- **A place to go for resources to help their patients**

What do purchasers and payers need?

- **Help lowering the costs of COPD care**
- **Resources to help keep their employees and members healthy**

What Can We Do About It?

1. **Reduce Risk Factors**
2. **Diagnose the Disease Earlier & Correctly**
3. **Better Educate Patients, Caregivers & Healthcare Providers**
4. **Remove Barriers to Care**
5. **Improve COPD Care Delivery**

3 Critical Factors for Success

- Platform for Collaboration
- Integration with existing infrastructure
- Multi-level policy change

HOW WILL WE MOVE FORWARD?

1 REFINE & PRIORITIZE

- Refine the framework with broader community input
- Establish metrics of success
- Prioritize implementation efforts
- Introduce the effort to policy makers

2 SEEK RESOURCES

- Identify state based funding partners
- Secure the commitments of members who support the PACT mission
- Align implementation plans with potential funding opportunities and submit applications

3 LAUNCH WHAT WE CAN!

- Design and launch an online platform for collaboration
- Assemble resources for a repository
- Begin hosting community forums
- Grow the base of partners throughout the year
- Plan for a 2016 COPD Awareness Month to remember

Planning while implementing-lets make progress while we build the groundwork for long term success!

What is COPD?

Chronic obstructive pulmonary disease (COPD) is an umbrella term used to describe progressive lung disease including emphysema, chronic bronchitis, refractory (non-reversible) asthma, and some forms of bronchiectasis. The symptoms of COPD can include increased breathlessness, frequent coughing, wheezing and tightness in the chest.

Most cases of COPD are caused by inhaling pollutants including smoking and second-hand smoke. Fumes, chemicals and dust found in many work environments and outdoor air pollution are contributing factors for many individuals who develop COPD. Genetics can also play a role in COPD, even if the person has never smoked or has never been exposed to other lung irritants.

COPD in the U.S.

Chronic obstructive pulmonary disease (COPD) is a remarkably common, progressive and debilitating disease that is vastly underdiagnosed, mistreated and understudied. 15 million Americans have been diagnosed with COPD and another 12 million likely have symptoms but remain undiagnosed. COPD is a health disparities issue, affecting more Americans from lower socio economic status and with low education levels and adversely impacting populations such as the American Indian communities at almost double the rates of the white and black population.

COPD causes nearly 800,000 hospitalizations a year and is a secondary diagnosis on another 3.8 million. 1 in 5 hospitalizations for COPD results in a readmissions within 30 days. Some studies suggest that individuals with COPD receive evidence based care only 55 percent of the time. With each potentially preventable exacerbation of COPD, patients experience faster declines in lung function and report being able to do less than they used to in day to day life.

Despite the severe impact of COPD and the benefits of identifying and treating COPD, historical very little coordinated action to lower this burden is underway at the national level. The COPD Foundation was founded in 2004 to address the gap in services for COPD patients and the National Heart, Lung and Blood Institute started the *COPD Learn More Breathe Better* Campaign in 2007 to promote increased awareness about the disease and better collaboration throughout the U.S. Recently, there are signs of progress at the federal level, starting in 2014 when the Centers for Medicare and Medicaid Services added COPD exacerbations to the list of diseases included in the Hospital Readmissions Reduction Program which penalizes hospitals for excessive rates of readmissions within 30 days. This decision has sparked interest in improving care and outcomes for COPD patients at the health system level and will motivate many to participate in the implementation efforts resulting from state planning processes such as this framework.

COPD in Tennessee

The amount of data available to define the scope of the COPD problem in Tennessee is limited. However, starting in 2011, the Behavioral Risk Factor Surveillance System (BRFSS) began including a question on COPD providing invaluable data for public health planning. The BRFSS revealed that the state of Tennessee has the third highest rate of COPD in the country, with only neighboring states, Alabama and Kentucky ahead. In 2013, the age adjusted prevalence of COPD in Tennessee was 8.8 percent, equating to over 450,000 adults in the state. In 2010, there were nearly 3,500 people in Tennessee with COPD as the first listed cause of death.

COPD is adversely impacting women in TN more so than in some states. In 2014, 12.4 percent of women reported having COPD compared to 8.8 percent of men. COPD also impacts the most vulnerable Tennessee residents at significantly higher rates, with the prevalence in individuals with less than $25,000 in household income topping 17 percent. When looking at those below $15,000 in income it nears 1 out of 5 adults. Similarly, the prevalence of COPD is markedly increased in those with less than a high school diploma (24.1%) than those with a high school diploma or GED (10.6%) and those with at least some college (6.3%). While many believe COPD only occurs in the elderly population, the prevalence rates do not vary significantly between age groups 45-54 (13.7%), 55-64 (15.4%) and 65 and older (16.4%).

The utilization and quality of life statistics for COPD paint an equally severe picture. The optional module within the BRFSS showcased the room for improvement in quality, with less than 70 percent reporting they had received a breathing test to diagnose their COPD. In 2011 there were over 20,000 hospitalizations for COPD exacerbations alone, averaging 4.2 days with costs of over $20,000 per stay. Medical treatment costs topped $794 million for the state with an additional $72 million in costs associated with lost days of work. These statistics are just the tip of the iceberg and do not paint the full picture of a burdensome disease on individuals, families and the healthcare system in the state. More detailed information can be obtained over time and the framework will advocate for greater surveillance and analysis of demographic, hospitalization and cost data moving forward in order to assist in the planning and implementation efforts.

Background

Despite the severe impact of COPD on the individual and the healthcare system, relatively few programs and policies are in place to address the low awareness, late diagnosis, suboptimal treatment and other issues that lead to poor outcomes. Nearly all of the efforts to date have focused solely on prevention of risk factor exposure including tobacco control programs, clean air efforts and workplace safety programs. While these remain critical to the overall COPD fight, they are no longer enough, and attention must be paid to helping those with COPD find it earlier, diagnose it correctly and optimize health and productivity through high quality education, medical management and coordinated patient centered care.

With this in mind, the COPD Foundation embarked on an effort to document the issues related to COPD in the state of Tennessee, leading to the formation of a multi-stakeholder leadership group in August, 2015 that has guided the creation of the Partners Act for COPD in Tennessee effort and this Strategic Framework for COPD Action in Tennessee document. With the support of the National Heart, Lung and Blood Institute's *COPD Learn More Breathe Better®* Campaign, nearly 25 listening meetings with state, community, healthcare and business organizations were held and about 100 individuals throughout the state completed a robust needs assessment online to inform this framework.

Moving forward this framework will be a living, breathing document that serves as a guide for all those within the state who can in some way play a role in making the lives of patients with COPD better. While the framework will include strategies that should result in benefits for other stakeholders such as the health systems in the state and purchasers and payers, early on it was clear that this effort is about the patient and the patient's experience shaped each and every goal and strategy listed. When attention turns to prioritization and implementation, the patient will again be kept central to the process. While strategies for action may be listed underneath one goal within the document, many will support multiple goals, something that will be taken into consideration in the next phase of the effort.

Regional Considerations in Tennessee

In any statewide effort there will inevitably be differences in environmental, cultural and other factors. Several of these issues present in TN including differences in the tobacco culture, air quality and occupational exposures, rural access issues and more.

It is important to be aware of the various factors that will affect the success of the efforts carried out as a result of this framework. Planning and implementation efforts should be aware of these considerations and act accordingly.

Tobacco:

Tennessee's smoking rate is 24.3% which is higher than the national rate of 18%. The Healthy People 2020 goal is to reduce the smoking rate to 12%. Smoking rates vary by area from a low of 20.4% in Shelby County to a high of 32.8% in the southwest region. An additional 24.1% of adults in Tennessee report being a former smoker and thus at risk for COPD in their lifetime.

While many have the perception that tobacco is no longer an important part of the Tennessee economy, tobacco is still grown in 66 of the 95 counties and Tennessee has the fourth highest share of cash receipts for tobacco produced in the U.S. Even where it may be a decreasing component of the livelihoods for many families in some areas, tobacco is part of the cultural identity of the region making it difficult to communicate important messages whenever they interrelate with tobacco issues.

Air Quality and Workplace Exposures:

Tennessee ranks poorly on nearly every measure of air quality. In addition, many of its top employers and industries are those that involve increased risk of exposure to harmful lung irritants. Both of these factors vary by region of the state, but each is a significant factor leading to the development of COPD. According to American Lung Association State of the Air Report Card 2015, major cities Memphis, Nashville, and Chattanooga scored F's for air quality and Knoxville rated a D. The entire state air quality average was a C, which negatively impacts the State's 470,000 COPD patients and 354,000 Adult Asthma patients.

Tennessee is the 11th worst state when measuring industrial toxic air pollution, which the report estimated accounts for 37 % of all air pollution in the state. Eastern Tennessee in particular is subject to increased air pollution caused by the thermal inversions in the valley areas and many report suffering from more severe allergies in the region. Several of the largest employers in Tennessee represent industrial occupations that historically can pose a higher risk for COPD such as chemical manufacturing, transportation workers and other manufacturing plants. The percentage of people in Tennessee working in Manufacturing is 1.3 times the national average and agriculture and forestry accounted for 14.7% of economic activity in the state.

Rural Health Access:

Of the 95 counties, 49 are considered rural by US Census standards. Statistically, they are more likely to have higher rates of chronic disease, lower income, poorer health profiles, and use tobacco. Additionally, unemployment in these areas is higher than national norms. 75% of the population of Tennessee lives in areas with a lack of primary care providers and other medical professionals.

Other Health Disparities:

While not unique to Tennessee, health disparities are pervasive throughout pockets of the state. Whether related to race, income, education level, social support structure or other factors, disparities in the care one receives and their overall health outcomes must be addressed at a regional level depending on the root causes. The prevalence of COPD is increased in individuals with lower incomes and lower education levels, adding to the importance of understanding disparities in the state and factoring this information into planning.

Emerging Issues:

Large scale planning efforts rely on data and experiences that can leave out the new and emerging considerations such as evolving trends in risk factor exposure, new policies and incentives that are

resulting in changes to how healthcare is delivered. As time goes on the leadership group will evaluate these issues and incorporate them into the framework and recommended strategies as they see fit. Open public comment ability will ensure that new issues can be raised beyond those mentioned here and that the leadership group can capture evolving public sentiment about these issues.

Electronic Cigarettes and Marijuana

Electronic cigarettes and vaping have taken the state by storm and questions are swirling about their safety, their effectiveness as a smoking cessation tool, their potential to addict new generations to tobacco and their impact long term on the lungs. The FDA has proposed regulations that would treat e-cigarettes in much the same way as traditional cigarettes but state policies haven't matched up. While e-cigarettes could have a role in helping the third of COPD patients who struggle to stop smoking, that fact has not been proven and more questions remain unanswered then answered. As the framework evolves, strategies will need to be adapted to include new policies and evidence about e-cigarettes and new data about their use in Tennessee. Additionally, many states have seen a relaxation of laws related to medical and recreational use of marijuana, a trend that hasn't been as fully embraced in Tennessee, but one that should be monitored as the potential for increased lung damage for those choosing to inhale marijuana would need to be addressed.

Changes caused by Medicaid Expansion and other ACA changes in delivery, alternative payment models

Sparked by the Affordable Care Act, it is impossible to ignore the rapidly changing healthcare delivery and finance landscape and the role that these evolving changes could have on the implementation of the strategies suggested in the plan. The addition of COPD to the CMS Hospital Readmissions Reduction Program alone resulted in a major uptick in interest in COPD and many of the strategies suggested in 2015 were not considered a feasible focus area five years ago. The framework will need to monitor the adoption of new COPD related quality measures, policies that incentivize further improvements in COPD outcomes and the intense focus by CMS on the development and piloting of alternative payment models.

Technology changes-telemedicine, more precise risk stratification and personalization

Telemedicine is gaining traction in the state, fueled in part by the rapid improvement in user friendly technology solutions that allow for interactive encounters, efficient communications and remote tracking of health indicators. The President has created a landmark personalized medicine initiative that is indicative of the direction medicine will go in the future, allowing for the consideration of strategies that center around more precise risk stratification of patients and personalized management strategies.

The Backbone to Success in the Fight Against COPD:

In order to achieve the goals listed in the framework a foundation must be laid that makes this ambitious framework become one that is more than just a wish list. There are multiple components to this foundation including a platform to facilitate community collaborations, better integration within the public health infrastructure and policy changes at the health system, employer, payer and governmental levels.

Communication and Collaboration

From the beginning of the effort it was clear that the members of the leadership group most valued the interaction with each other and the information that was shared in each encounter thus far. The needs assessment revealed many were not aware of existing resources throughout the state. The first Tennessee COPD Readmissions Summit showcased the many individual COPD efforts happening at health systems statewide but revealed that in many cases lessons learned from these efforts are not shared widely.

To realize the improvement desired within the state, a platform that ensures people can talk to each other, find resources that fill their needs and share successes and failures of COPD efforts is critical. The platform should be *multi-modal*, including phone, internet and in-person interactions, *multi-stakeholder*, facilitating learning and collaboration across healthcare systems, different provider disciplines and most importantly with patients and families, and it should be *regional and statewide* in focus, ensuring resources and interactions are both relevant for individual regions and benefit from broader statewide exposures.

Specifically the framework recommends the creation of;

- A website dedicated to the framework's efforts
- A searchable repository of resources related to COPD in Tennessee
- Creation of a dedicated social interaction group within the COPD360Social infrastructure for Tennessee stakeholders
- Quarterly face to face interactions at the regional level with at least one statewide interaction annually
- Web based educational and brainstorming forums for different stakeholder groups throughout the state

Integration with the Public Health Infrastructure and Other Statewide Initiatives

The Centers for Disease Control and Prevention receive no federal funds to address COPD. As a result, state and local health departments do not receive funds designated to support public health prevention and education activities related to COPD. Until this obstacle is removed, it will be critical to focus on ways that the framework can be used to integrate COPD information, programs and resources into the already existing public health infrastructure and other statewide efforts. While some of the goals in the

plan involve the creation of new programming or resources, many can be realized fully or in part through the simple addition of COPD with little new allocated resources.

Policy Changes

Many previous state plans have included a section dedicated to policy efforts, typically at the end of the plan. Throughout the planning process, it became clear that the common thread necessary to accomplish many of the goals prioritized by Tennessee stakeholders was policy change. System wide changes in health system policies, purchaser and payer policies and state policies will drive the success of the framework.

State Policies

Death rates for several leading causes of death have steadily declined over the last decade and progress has been made in several areas such as heart disease awareness and control. This progress is a result of coordinated federal and state policies that have supported such actions as the ones listed in this framework. COPD has not experienced the progress made by others, and death rates continued to increase for years and are still increasing for women, though have recently leveled off for men.

The state of Tennessee can be a critical partner in the framework's success. There are legislative actions and regulatory actions that can be taken to take down barriers to care and facilitate implementation of COPD surveillance, promote improved quality of care and jumpstart COPD actions in the state.

These include policies that;

- Seek to reduce tobacco use, promote tobacco cessation and limit exposures to harmful second and third hand smoke;
- Promote improved air quality and decreased workplace exposures;
- Support the integration of COPD within the state health department's chronic disease programs;
- Request a formal statewide surveillance study of the impact of COPD;
- Ensure sufficient coverage within state paid programs, such as TennCare and the state employee benefit plans, for critical COPD services including testing, medications that are determined to be the best for the patient, pulmonary rehabilitation, home based care, oxygen and other treatments;
- Mandate the inclusion of COPD related quality measures within state driven healthcare improvement efforts including measures such as the use of spirometry, appropriate medication use and more;
- Expand the ability of respiratory therapists and pharmacists to be involved in COPD care management outside of the hospital;

Providers, Purchasers and Payers' Policies

Institutions that provide healthcare, payers that set the policies for how that care is paid and purchasers who are on the hook for a large share of resulting costs have tremendous power to shape outcomes for COPD patients through policy change. Purchasers of care can become advocates for good COPD care

through setting value based benefit designs that make high value care accessible with the lowest out of pocket costs for patients. They can use their power of the dollar to purchase care in networks with strong performance on COPD measures and support the shift to value based payment models. Payers can align incentives with evidence based medicine and those treatments that help keep patients healthy rather than try to heal them when an exacerbation has already occurred. They can support the use of telemedicine, home health and the use of case managers, respiratory therapists, pharmacists and others who can improve education, catch early signs of exacerbations and support the coordination of care. Health systems can ensure that institutional policies are aligned to ensure good COPD care is practiced throughout the care continuum and that technology and staffing resources are in place to support a positive patient experience and better quality care.

GOALS AND STRATEGIES FOR REDUCING THE BURDEN OF COPD IN THE STATE OF TENNESSEE

Reduce Modifiable Risk Factors for COPD & Increase the Understanding of the Burden of COPD

Mr. P. worked in the sawmill for 19 years, the automotive industry for 10 years, and has smoked for 25 years. Now, at age 48 he after being noticeably short of breath for a year (his wife says 2 years), he has visited his doctor because in addition to the shortness of breath, he is worried about the cough he has that won't go away. Even after receiving a diagnosis of COPD, Mr. P struggles to quit smoking and hasn't been able to find another job so he remains in the automotive industry. Mr. P lives in Eastern Tennessee in the valley and doesn't understand the air quality warning systems so he often struggles to breathe when he is out of the house during particularly bad inversions.

Goals related to reducing risk factors and increasing the understanding of the burden of COPD

1. Lower exposure to second and third hand smoke overall and in particular for COPD patients
2. Increase successful tobacco cessation attempts for those diagnosed with COPD and their family members
3. Increase understanding of work place exposures and how to mitigate risks based on the type of work environment
4. Increase understanding of how air quality can impact lung health and how to prevent exposures to harmful air pollutants in general and in particular for those with COPD
5. Increase the general public's awareness about the risk factors for COPD

Strategies:

a. Partner with existing tobacco free campaigns within the state to support their efforts and incorporate information about COPD into applicable communications and policy efforts
    a. Incorporate COPD into messaging about the risks of smoking where it is absent
    b. Pilot approaches that integrate the COPD risk screener into cessation programs
b. Identify components of tobacco and clean air campaigns that are applicable to COPD patients and make sure they are incorporated into resources for COPD patients
c. Develop and incorporate information about the added risks of tobacco use, second and third hand exposures for those living with COPD into available patient education resources
d. Create a multi-media awareness campaign focused on lung health including highlighting air quality, smoking, workplace safety and their connection to healthy lungs and COPD
e. Partner with the music industry in Tennessee to implement campaigns focused on promoting healthy lungs and changing attitudes around smoking
f. Identify Tennessee business associations, workplace safety groups and other related campaigns including those focused on the construction industry and other manufacturing

industries, focused on educating businesses and disseminate information about the relationship between healthy work environments and COPD

g. Create an ongoing mechanism to increase data collection and evaluation that will track trends in the burden of COPD, utilization of healthcare services related to COPD and costs related to COPD treatment and lost productivity

Improve Practices for COPD Screening and Diagnosis

Ms. W. was a hairdresser. Her mom and aunts were hairdressers. When Ms. W. was small, she spent her days playing in the floor of her mom's hair salon where the 'Spray Net' was heavy in the air all day, every day. For years, Ms. W. worked 6 days a week in her own shop, but was noticing that she would get tired and feel short of breath sometimes. After a few years of these worsening symptoms, her sister finally insisted she make an appointment to find out what was wrong, and it was determined that Ms. W. had severe COPD and after further testing, required oxygen at night in addition to several respiratory medications during the day. Ms. W. lost her battle with COPD at the age of 57, only 1 year after diagnosis.

Goals related to improving the screening and diagnosis for COPD:

1. Increase awareness about the early signs of COPD and what to do about them
2. Improve the percentage of people who are diagnosed in the early stage of COPD
3. Increase the percentage of people with COPD who are tested for alpha-1 antitrypsin deficiency
4. Increase the percentage of people at risk for COPD who are diagnosed with spirometry tests
5. Lower the percentage of people who receive an incorrect diagnosis or are misdiagnosed with another condition
6. Improve the diagnosis rates and communication about symptoms within primary care

Strategies:

a. Implement mass media based campaigns promoting the early symptoms of COPD and encouraging people to take the COPD risk screener and/or ask their healthcare providers about COPD
b. Identify existing community based health screening efforts and incorporate COPD risk screening, including lung function testing when appropriate
c. Develop tools promoting the importance of early diagnosis for COPD to be used in areas where individuals at-risk are likely to be including emergency departments, primary care offices, pharmacies, on-site clinics for industrial companies and more
d. Create and disseminate training modules for primary care practices detailing the importance of spirometry, the types of affordable equipment, the proper billing procedures and the techniques for conducting and interpreting the test

Address the Education Needs of Patients, Caregivers and Healthcare Providers

Ms. K has had severe COPD for 4 years and diabetes for 10 years. She takes 5 different respiratory medications. She has had 3 ER visits and hospitalizations in the past 6 months in part because she doesn't understand how to take her medicines properly. Little to no education has taken place to ensure that she is able to take her medicines and that the medicines are providing benefit to her. Her physician isn't aware that the guidelines for COPD care recommend potential ad on treatments for patients with frequent exacerbations (flare ups) like Ms. K and have little understanding of how to help her manage her other chronic health conditions.

Goals Related to Patients & Caregivers:

1. Improve patient's education level about their condition, how to mitigate risks, the available resources to support them, how to use their medications, how to spot early signs of an exacerbation and other important self-management skills
2. Increase patient compliance with their overall treatment plan including medications
3. Improve patient's education level about their condition, how to mitigate risks, the available resources to support them, how to use their medications, how to spot early signs of an exacerbation and other important self-management skills
4. Improve and expand caregiver knowledge about COPD, strategies to help the patient and the support mechanisms available to them as caregivers

Strategies:

a. Catalog available education resources for patients and make downloadable files available in an easy to understand format
b. Disseminate information about the availability of online resources and provide print resources where necessary via channels such as;
    i. Patient support groups
    ii. Pulmonary rehabilitation centers
    iii. Professional medical conferences
    iv. Senior centers
    v. Libraries and other community gathering points
    vi. Durable medical equipment companies and home health agencies
c. Host regional community education workshops designed to teach patients and caregivers how to live healthier with COPD and to forge better relationships among patients and the healthcare providers and systems in their community;
d. Convene a caregiver specific teleconference and/or webinar to provide information about strategies they can use to help those they are caring for, to provide resources designed to support their needs as caregivers and to allow questions and conversation amongst each other

Healthcare Providers

1. Increase healthcare providers knowledge of important COPD topics including diagnosis procedures, available resources, treatment guidelines, appropriate medication use, alpha-1 and more
2. Grow healthcare provider's knowledge and confidence in how to support patient's in designing and complying with comprehensive treatment plans
3. Increase healthcare providers' understanding of the comorbidities associated with COPD
4. Increase understanding of the COPD treatment guidelines among primary care providers

Strategies:

   a. Create multiple video based CME modules for different disciplines that focus on critical topics such as guidelines for diagnosis, treatment and long term management of COPD
   b. Embed COPD topics within the regional and statewide conferences for professional medical associations of all types
   c. Create co-brandable grand round presentations tailored for different types of delivery environments
   d. Create a COPD speakers bureau with experts of all types throughout the state, including patients who can speak to support groups, healthcare provider conferences, serve on health system advisory committees and engage in the design of research
   e. Customize the COPD Educator Program to meet the needs of interdisciplinary teams in Tennessee and host the one day courses throughout the state

Break Down Barriers to Care

Ms. J has moderate COPD and lives in a very rural area. She recently spent 4 days in the hospital due to a COPD exacerbation. Her discharge instructions included a follow up visit with her PCP in 1 week. Ms. J. missed her appointment because she did not have transportation to town. Unfortunately, Ms. J. called 911 three days later because her COPD symptoms had been worsening, and was readmitted to the hospital ICU. Ms. J used a nebulizer while in the hospital but was sent home with new inhaled medication prescriptions. Her insurance wouldn't cover one of the medications so she only filled one. When Ms. J was finally feeling better, she asked her primary care provider about pulmonary rehabilitation which she had heard about while in the hospital, but to her dismay the nearest rehab program was 90 minutes away.

Goals related to breaking down barriers to care

1. Address limited access (cost and availability) to resources for patients including;
   a. Those who are oxygen dependent
   b. Those in low income households
   c. Those living in rural areas of the state
2. Facilitate the development of additional pulmonary rehabilitation programs in areas where none currently exist or are above capacity

   Strategies

a. Catalog available patient assistance resources throughout the state and disseminate through statewide medical associations, community based organizations, aging organizations and other applicable venues;
b. Disseminate the oxygen patient's bill of rights throughout the state to ensure patients know what coverage is available for oxygen therapy and what rules oxygen supply companies must follow;
c. Host a webinar or other forum for home health and durable medical equipment suppliers to educate them about available resources for COPD, the importance of helping COPD patients remain mobile and to brainstorm ways the industry can assist in breaking down barriers to care;
d. Partner with rural health systems and community health centers to optimize the use of telehealth and virtual peer information and support systems in rural areas;
e. Create a free campaign to provide spirometers, training, patient education resources and peer support to patients within safety net providers such as federally qualified health centers;
f. Educate employers in the state about the importance of value based benefit design for COPD in order to help lower the out of pocket costs for important COPD treatments including medication and pulmonary rehabilitation for those patients still in the workforce;
g. Partner with the Koppel Family Foundation to explore opportunities for new pulmonary rehabilitation centers in areas without access and to do trainings for health systems on how to operate a successful rehabilitation program

Make Improvements in Care Delivery

Mr. S was diagnosed with COPD 8 years ago. He used to be a very active member of society, but leaving his home had become difficult because of severe deconditioning. He was not aware that he might be a candidate for home health which could help him with coordination of care, telehealth, and physical therapy. He lives in a suburban area and sees a pulmonologist once a year in the city but there is no communication back to his primary care provider who doesn't fully understand Mr. S's COPD triggers and how his COPD impacts his other health conditions. Mr. S experienced a bad exacerbation over the holidays and wasn't able to get care quickly enough and ended up in the hospital for 4 days. Mr. S was sent home with oxygen and told to follow up with his primary care provider who received no information about Mr. S's hospitalization and recommendations for a future care plan.

Goals related to improving the delivery of care to COPD patients

1. Facilitate the adoption of strategies that will treat the whole patient including their associated psychological needs, nutrition and weight loss issues
2. Increase the practice of team based coordinated care across provider teams including the use of the medical home
3. Encourage the use of healthcare professionals such as case managers, pharmacists and respiratory therapists across the care continuum to better coordinate care and educate patients

4. Increase the implementation of across care continuum focused care plans that focus on control of COPD, early identification of exacerbations, continual evaluation and modification throughout the disease course and utilize treatment guidelines and care plans for different settings
5. Reduce the rate of readmissions after a COPD exacerbation and encourage more post discharge use of home health, telehealth and physician follow up
6. Increase the referral to and enrollment in pulmonary rehabilitation where available

Strategies

a. Host annual forums showcasing best practices for COPD care across Tennessee health systems;
b. Design and implement practice improvement focused continuing medical education content in partnership with health systems, payers and community organizations;
c. Conduct pilot projects with health systems, payers, professional associations and community organizations that explore best practices in;
    a. Using pharmacists for the purpose of increasing compliance with treatment and reconciling various medications used by COPD patients
    b. Optimizing the use of respiratory therapists in the outpatient and homecare settings
    c. Utilizing telemedicine to improve the transition after an episode of hospitalization back to the patient's community health provider, especially in rural areas
    d. Adding initiation of peer health coaching to the suite of health management services offered to COPD patients
    e. Strategies for improving patient activation including education, peer support, use of patient activation measures and more
d. Create a forum to explore methods for aligning electronic health records to support the provision of evidence based care, referral to pulmonary rehabilitation and comprehensive discharge planning for individuals with COPD in the hospital, in integrated delivery networks and in primary care settings

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Tennessee COPD Leadership Group Members

Rhonda Bilyeu, RRT-St. Thomas Health

Danielle Brown, MSPH-American Lung Association in TN

Bonnie Chakravorty, PhD

Nancy Childress-Kindred Hospitals Nashville

Chris Clarke, RN-TN Hospital Association, TN Center for Patient Safety

Rhonda Dickman, MSN, RN, CPHQ-TN Hospital Association, TN Center for Patient Safety

Zach Gant, RRT-TN Society for Respiratory Care, Encore Healthcare

Rose Grindstaff-Breathe Easy Respiratory Solutions

Amber Hensley, MBA-Wellmont Health System

Thea Jones, MSPH-TN Department of Health

Douglas Kane, MD

Liz Malmstrom, RN, MBA-St. Thomas Health

Patrice Mayo-TN Hospital Association, TN Center for Patient Safety

Susan Parsons, BS, RRT-Saint Francis Hospital Memphis

Dave Roberts, MD-West Tennessee Healthcare

Sandy Sanderson, RN, BSN-United Healthcare

B.J. Smith, MD-Mountain State Health Alliance

Treasa Strizinger, RN-Amerigroup

Jamie Sullivan, MPH-COPD Foundation

Mark Swanson, MD-Baptist Memorial Healthcare

Doug Turley-AlphaNet

Kathryn Vinson, RN, BSN-TennCare

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