MARYLAND HEALTH CARE COMMISSION

Telehealth Grants 2018-2019 Compilation

December 2020

Participating Grantees

University of Maryland Quality Care Network

Charles County Public Schools

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MARYLAND HEALTH CARE COMMISSION

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Introduction

Telehealth has gained momentum moving from the fringes of medical care to becoming an essential tool in response to the COVID-19 public health emergency (PHE). When used effectively, telehealth improves access to services and collaboration between health care providers and other professionals such as, pharmacists, speech-language pathologists (SLPs), occupational therapists, and others.[1] The PHE amplified telehealth as a safe and convenient alternative to in-person services. Providers quickly adopted or expanded telehealth programs in response to social distancing guidelines and to reduce staff and patient exposure to the disease, maintain continuity of care, and minimize surges in hospital emergency department (ED) utilization.[2]

Over the last decade, various efforts have supported the advancement of telehealth. This includes the establishment of the Telemedicine Task Force (Task Force) by the Maryland Health Quality and Cost Council (Council) in 2010 to study innovative uses of telehealth to improve health status and care delivery in the State. Task Force recommendations were completed in 2011 and resulted in legislative changes.[3] The General Assembly later enacted legislation to reconvene the Task Force in 2014, requiring the Maryland Health Care Commission (MHCC), in collaboration with the Council, to identify opportunities and develop recommendations to promote broader adoption of telehealth in the State. Since then, MHCC has awarded 17 telehealth grants[4] to demonstrate how telehealth can be leveraged to advance health care goals in various settings across the State.[5]

Telehealth has remained at the forefront and is one of MHCC's five strategic priorities (2019-2022).[6] During the PHE, MHCC made available a variety of resources to guide providers' rapid implementation of telehealth. Promotional activities raise awareness and understanding of virtual care options to consumers in Maryland.[7]

The MHCC awarded a telehealth grant in April 2018 to the University of Maryland Quality Care Network (UMQCN). The UMQCN implemented telehealth[8] to optimize medication management and reconciliation with the goals of minimizing adverse drug events (ADEs),[9] and improving care coordination and health outcomes for high risk patients with chronic obstructive pulmonary disease (COPD); the grant concluded in December 2019.[10] Subsequently, MHCC awarded another grant in

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[1] Sabharwal S. Making the right connections with telehealth. *J Spinal Cord Med*. 2016;39(1):13-14. doi:10.1080/10790268.2015.1116727. Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC4725786/.

[2] Centers for Disease Control and Prevention, *Uses of Telehealth during COVID-19 in Low Resource Non-U.S. Settings*, July 2020. Available at: www.cdc.gov/coronavirus/2019-ncov/global-covid-19/telehealth-covid19-nonUS.html.

[3] Maryland Health Care Commission, *Maryland Telemedicine Task Force Interim Report,* December 2013. Available at: mhcc.maryland.gov/mhcc/pages/hit/hit_telemedicine/documents/TLMD_TTF_Interim_rpt_20131201.pdf.

[4] Awarded grant funds total $940,715.

[5] Maryland Health Care Commission, *Maryland Telemedicine Task Force Final Report,* October 2014. Available at: mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/tlmd/tlmd_ttf_rpt_102014.pdf.

[6] Maryland Health Care Commission, *The Maryland Health Care Commission 2019-2022 Strategic Report*. Available at: mhcc.maryland.gov/mhcc/pages/home/mhcc_overview/documents/MHCC_2019_2022_Strategic_Rpt.pdf.

[7] Maryland Health Care Commission, *Telehealth Initiatives,* September 2020. Available at: mhcc.maryland.gov/mhcc/pages/hit/hit_telemedicine/documents/All_Things_Telehealth_Table.pdf.

[8] For the purposes of this grant, telehealth refers to the use of real time audio-video technology to connect a pharmacist to a patient in a different location.

[9] An ADE is when someone is harmed by a medication, this includes medication errors, adverse reactions, allergic reactions, and overdoses. More information is available at: www.cdc.gov/medicationsafety/adult_adversedrugevents.html.

[10] Target population included patients (1) with multiple morbidities, (2) on a complicated drug regimen, (3) with frequent emergency department visits and/or admissions, (4) on pain management, or (5) on high-risk medications.

January 2019 to Charles County Public Schools (CCPS).[11] The CCPS implemented teletherapy to increase access to SLPs and ensure students received special education and related services[12] as federally mandated;[13] the grant concluded in April 2020.

About this Compilation

This compilation highlights telehealth projects implemented by UMQCN and CCPS[14] and overviews how telehealth addressed barriers to access and supported care coordination. In addition, lessons learned that supported grantees' ability to scale telehealth services to meet the demands brought on by the PHE are highlighted. The information is intended to inform future telehealth initiatives.

Limitations

Outcomes data was self-reported by the grantees and not validated for accuracy by MHCC. The relatively small sample sizes for the interventions limit the generalizability of the findings of the respective use cases. The level of family and caregiver support and involvement, presence of other health conditions, and ability and comfort with the technology may have impacted grant outcomes.

MHCC 2018 and 2019 Projects

University of Maryland Quality Care Network

Project Overview

The UMQCN implemented a telehealth project to provide patients with COPD remote access to a pharmacist for medication therapy management (MTM) services.[15] This use case was designed to examine the effect of increasing access to a pharmacist on the management of patient medication regimens, improvements in therapeutic outcomes, and reductions in ADEs. Grant objectives included:

1. Improve patient medication adherence;[16]
2. Identify and resolve COPD drug related problems (DRPs);[17]
3. Reduce unnecessary hospitalizations and ED visits for the same patients six and twelve months prior to the telehealth intervention; and

[11] Award decisions were based on a competitive evaluation process that included a review by a panel comprised of external subject matter experts and MHCC staff on select criteria, including the project plan, approach to the telehealth intervention, proposed objectives, and qualifications and partnerships, among other things.
[12] Related services refer to developmental, corrective, and other supportive services required to assist a student with a disability to benefit from special education (e.g., speech-language pathology, audiology services, physical therapy, etc.). More information is available at: sites.ed.gov/idea/regs/b/a/300.34.
[13] IDEA and Maryland regulations (COMAR 13A.05.01 *Provision of a Free Appropriate Public Education to Students with Disabilities*, and COMAR 13A.08.03 *Discipline of Students with Disabilities*) require that each child with a disability has an Individualized Education Program (IEP) designed to meet their unique and individual needs.
[14] As of November 2020, one grant is still active, *Expanding Telehealth Adoption in Ambulatory Practices*, awarded in May 2020. More information is available at: mhcc.maryland.gov/mhcc/pages/hit/hit/documents/HIT_Coach_Flyer.pdf.
[15] MTM encompasses comprehensive medication reviews, disease support and coaching, medication safety surveillance, and prevention or wellness services; it supports improvements in medication utilization and patient education and reductions in health care utilization.
[16] The degree to which a patient's behavior corresponds with the provider's medication recommendations.
[17] An event or circumstance involving medication therapy that actually or potentially interferes with desired health outcomes.

4. Achieve an average patient rating between satisfied and highly satisfied for the telehealth visit.[18]

The UMQCN was awarded $150,000 and provided matching funds; the combined grant total was $342,944. The project included five practices (four primary care practices and one pulmonology practice) located on the Maryland Eastern Shore in Caroline, Talbot, and Queen Anne's counties. A total of 73 patients with COPD participated in the project, the average age was 73 and about 53 percent were female.[19] During the grant period,[20] 126 video visits were completed.

A Word About COPD

COPD is an umbrella term that covers several respiratory disorders such as emphysema, chronic bronchitis, and refractory asthma – all of which restrict air flow and cause trouble breathing.[21] Such disorders can be debilitating and are associated with an increased risk of exacerbations and a worsened prognosis of the disease over time.[22] Symptoms oftentimes have a detrimental impact on individuals' quality of life, health status, physical activity, and medical costs.[23]

In general, respiratory diseases, including COPD, are among the most expensive health conditions in the nation.[24] The proportion of individuals with COPD increases with age, affecting nearly 10 percent aged 65-74 and 15 percent aged 75 and older.[25] About 285,000 (or six percent) of Marylanders have been diagnosed with COPD.[26] COPD is the fifth leading cause of death in the State.[27]

Expanding Access to MTM

Medication errors result in poorer health outcomes and higher health care utilization, especially for patients with comorbidities.[28] MTM is a group of services[29] provided by a pharmacist that help identify, prevent, and resolve DRPs.[30] MTM benefits those who have been hospitalized, take high-risk medications[31], have multiple health conditions and questions or problems with their medications, or obtain medications from more than one prescriber.[32]

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[18] See Appendix A for more information on grant outcomes.
[19] Race and ethnicity were not screeners for participation.
[20] Data collection occurred from September 2018 to December 2019.
[21] Disability Benefits Help, *COPD Resources in Maryland*. Available at: www.disability-benefits-help.org/condition-resources-by-state/copd-maryland.
[22] Miravitlles, M., Ribera, A. Understanding the impact of symptoms on the burden of COPD. *Respir Res* 18, 67 (2017). Available at: doi.org/10.1186/s12931-017-0548-3.
[23] *Ibid.*
[24] National Health Council, *About Chronic Diseases*, July 2014. Available at: nationalhealthcouncil.org/wp-content/uploads/2019/12/AboutChronicDisease.pdf.
[25] National Center for Health Statistics, *Stats of the State of Maryland,* April 2018. Available at: www.cdc.gov/nchs/pressroom/states/maryland/maryland.htm.
[26] Centers for Disease Control and Prevention, *COPD among Adults in Maryland*. Available at: www.cdc.gov/copd/maps/docs/pdf/MD_COPDFactSheet.pdf.
[27] Maryland Department of Health, *Chronic Obstructive Pulmonary Disease Prevention 2016 Joint Chairmen's Report,* December 2016. Available at: phpa.health.maryland.gov/Documents/Chronic-Obstructive-Pulmonary-Disease-2016-Report.pdf.
[28] Patient Safety Network, *Medication Errors and Adverse Drug Events,* September 2019. Available at: psnet.ahrq.gov/primer/medication-errors-and-adverse-drug-events.
[29] Services are centered on medication therapy review, a personal medication record, a medication-related action plan, intervention or referral, and documentation and follow-up. More information is available at: www.pharmacist.com/medication-therapy-management-services.
[30] American Pharmacists Association, *Medication Therapy Management (MTM) Services*. Available at: www.pharmacist.com/medication-therapy-management-services.
[31] High risk medications are drugs that have a heightened risk of causing significant patient harm when used in error.
[32] See n. 29, *Supra.*

The use of multiple medications increases with age and the presence of comorbid conditions; approximately 54 percent of adults aged 65 and over take four or more prescription medications per day.[33] In adults aged 65 and over with COPD, between 36 to 50 percent have at least one comorbid condition.[34, 35] MTM can optimize therapeutic effectiveness, prevent ADEs, and support achievement of medication therapy goals.[36] Collaboration between pharmacists and providers improves the provision of MTM to identify and resolve medication discrepancies.[37] This helps ensure medications are appropriate for the patient's needs and conditions, and the best possible outcomes are achieved.[38]

The UMQCN identified COPD as one of the top five chronic conditions within its network that results in multiple hospitalizations and increased costs annually. Physical limitations in patients with COPD, transportation challenges, and provider shortages are some of the leading barriers to accessing MTM services in-person. The UMQCN implemented telehealth to expand pharmacists' capacity to support care teams and reach patients with COPD timely and regularly. Telehealth interventions consisted of comprehensive medication reconciliations,[39] a COPD assessment, and counseling on proper inhaler technique. Providers caring for the patients were contacted for issues deemed urgent.

Project Snapshots

1. Delivery of MTM services by a pharmacist using telehealth improves care coordination to minimize the risk of ADEs and unnecessary health care utilization.

   The use of telehealth provided an opportunity for pharmacists to identify signs of patient exacerbations from DRPs and address them more promptly (e.g., adjusting treatment). Patient information was recorded in their electronic health record following an encounter and a message was sent notifying the care team of the encounter. In total, over 200 opportunities for medication improvement (e.g., adverse reaction, inadequate therapy, dose too high, more effective drug available, and unnecessary therapy[40]) were identified by pharmacists, averaging about three DRPs per patient over the course of 15-months.[41] Among the DRPs identified, 42 percent were resolved during the grant period.[42] Some DRPs identified required additional time for resolution where medication required tapering, additional monitoring of clinical outcomes, or a meeting with the pharmacist and provider.[43]

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[33] Kaiser Family Foundation, *Data Note: Prescription Drugs and Older Adults,* August 2019. Available at: www.kff.org/health-reform/issue-brief/data-note-prescription-drugs-and-older-adults/.

[34] Yin HL, Yin SQ, Lin QY, Xu Y, Xu HW, Liu T. Prevalence of comorbidities in chronic obstructive pulmonary disease patients: A meta-analysis. *Medicine (Baltimore)*. 2017;96(19):e6836. Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC5428602/.

[35] Chatila WM, Thomashow BM, Minai OA, Criner GJ, Make BJ. Comorbidities in chronic obstructive pulmonary disease. *Proc Am Thorac Soc*. 2008;5(4):549-555. Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC2645334/.

[36] Leadership for Medication Management, *What is Medication Therapy Management (MTM)?* Available at: www.accp.com/docs/govt/advocacy/Leadership%20for%20Medication%20Management%20-%20MTM%20101.pdf.

[37] Drug Topics, *Why Pharmacists Should Be in a Primary Care Setting*, July 2018. Available at: www.drugtopics.com/view/why-pharmacists-should-be-primary-care-setting.

[38] See n. 29, *Supra.*

[39] Medication reconciliation is the process of creating the most accurate list possible of all medications a patient is taking, including drug name, dosage, frequency, and route, with the goal of providing correct medications to the patient at all transition points (hospital, discharge, primary care provider, etc.). More information is available at: www.ihi.org/Topics/ADEsMedicationReconciliation/Pages/default.aspx.

[40] American College of Clinical Pharmacy, *Comprehensive Medication Management in Team-Based Care*. Available at: www.accp.com/docs/positions/misc/CMM%20Brief.pdf.

[41] Pharmacists conducted reviews of all medications prescribed, including those not related to COPD.

[42] The following are factors that could affect if a DRP was resolved during the project period: necessary follow-up from the patient's primary care provider, pharmacist evaluation of the outcome for a medication recommendation, and acceptance of the pharmacist recommendations, among others.

[43] Patients participated in the grant on a rolling basis.

The average medication adherence rate (93.8 percent) improved for patients receiving MTM services through telehealth (95.4 percent).[44]

Patients benefited from having convenient access to MTM services through telehealth, which helped establish patient trust with the pharmacist and coordinate more personalized care plans. During the visits, the need to adjust or switch medications due to uncomfortable side effects, or regimen complexity was assessed. Patients who had at least one telehealth visit with a pharmacist experienced a 21 percent reduction in ED encounters and hospitalizations[45] post intervention. In contrast, a comparator group that did not receive the telehealth intervention experienced a 27 percent increase during the same time period; the comparator group, consisting of patients with a respiratory disorder, matched on age and gender at one of the four participating practices.[46]

2. Pharmacist interventions via telehealth enabled greater relationship building with patients through continuous and structured support.

   The pharmacists used telehealth to coach patients on proper inhaler technique, set up a medication box, and ensure medications were the proper dosage and not old or discontinued. During the grant period, about half of patients (48 percent) had between two and six telehealth visits; the remaining patients (52 percent) had one. Patients were generally satisfied with the telehealth visits and appreciated the convenience of coupling the pharmacist intervention with their regular provider visit.[47] Patients reported on average an 84 percent satisfaction rate.[48] A very small portion of patients found the technology to be complicated (about four percent) or would not like to use it in the future (two percent). Continued education and support are needed to ensure patients are comfortable with the technology and promote telehealth visits from their homes, as well the provider's office.

3. Leveraging telehealth and temporarily permitted technologies expanded access to MTM services to meet new needs brought on by the PHE.

   In response to the PHE, UMQCN deployed the program to 30 additional primary care practices[49]. Services were expanded to patients with a variety of chronic conditions, including diabetes and asthma. The UMQCN was able to apply lessons learned, particularly those pertaining to practice onboarding and workflow integration, and patient scheduling preferences, to scale their program. Patients with COPD and other chronic conditions, at higher risk of contracting COVID-19 or more vulnerable to complications from the disease, were able to continue receiving MTM services safely from their homes.

   On occasion, UMQCN leveraged use of applications temporarily permitted by the Department of Health and Human Services, Office for Civil Rights (e.g., Apple FaceTime and Facebook

[44] Medication adherence was self-reported by patients.
[45] Average costs of an ED visit and a hospitalization for patients in the University of Maryland Community Medical Group are $6,170 and $13,323 per patient, respectively.
[46] Health care utilization based on emergency department and in-patient visits at one, three, six-, and twelve months post intervention.
[47] The majority (82 percent) of telehealth visits were conducted in the provider's office, the remainder (12 percent) were from the patient's home.
[48] Satisfaction survey inquired about patients' satisfaction as it relates to addressing their health concerns, convenience of the service, and the likelihood of having one in the future. About 66 percent (48 patients) responded to the patient satisfaction survey.
[49] Practices are part of Transform Health MD, a Care Transformation Organization that participates in the Maryland Primary Care Program.

Messenger)[50] to conduct telehealth visits. These applications were useful to quickly tend to patients as they are often easier to use (e.g., no separate login or password).[51] The UMQCN had to modify select procedures to meet patient needs while following social distancing and treatment guidelines.

Notable Takeaways

The project enabled UMQCN to develop system-wide MTM toolkits[52] to share best practices on implementing telehealth. Toolkits are designed to assist smaller practices and contain information on technology needs, workflow redesign considerations, processes for patient referrals, and staff and patient training resources. Greater diffusion of telehealth has supported UMQCN's response to COVID-19 and will be key in assessing its future impact system-wide.

Charles County Public Schools

Project Overview

The CCPS implemented a teletherapy[53] use case to increase remote access to Maryland licensed SLPs[54] (or teletherapist) for students with disabilities who require speech-language services as determined in their individualized education program (IEP).[55] The project addressed shortages of SLPs, whose role is to assess, diagnose, and treat student communication problems and speech disorders. Grant objectives included:

1. Complete speech-language sessions using telehealth technology;
2. Progress towards achievement of IEP goals using telehealth compared to similar students receiving in-person services; and
3. Achieve an average rating of satisfied to highly satisfied from student and parent/guardian surveys with the teletherapy.[56]

The CCPS was awarded $97,567 and provided matching funds; the combined grant total was $142,670.[57] Teletherapy was implemented in three public schools – General Smallwood Middle School, Westlake High School, and Maurice J. McDonough High School. A total of 59 students, ranging from 11 to 18 years in age, were provided speech-language services. During the grant period,[58] 601 teletherapy sessions were completed.

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[50] U.S. Department of Health & Human Services, *OCR Announces Notification of Enforcement Discretion for Telehealth Remote Communications During the COVID-19 Nationwide Public Health Emergency*, March 2020. Available at: www.hhs.gov/about/news/2020/03/17/ocr-announces-notification-of-enforcement-discretion-for-telehealth-remote-communications-during-the-covid-19.html.

[51] This included trouble logging in to the telehealth platform, equipment failures, and issues operating the technology.

[52] Toolkits contain information on technology needs, processes for referrals, training for staff and patients (e.g., sample instructions for patients on how to use the technology), and workflow redesign considerations.

[53] Teletherapy refers to the use of telecommunications technology to deliver speech-language services at a distance by connecting a student to a SLP.

[54] Speech-language therapy is a related service provided to assist students with special needs so they may benefit from special education. More information is available at: sites.ed.gov/idea/regs/b/a/300.34.

[55] The IEP is a written plan that describes the special education and related service support needed for a student with a disability. The IEP defines the type, amount, and delivery setting for the services needed. School staff is responsible for the implementation of the IEP.

[56] See Appendix B for more information on grant outcomes.

[57] The original awarded and match amounts were $200,000 and $63,600 respectively; the project concluded three months early due to the COVID-19 PHE.

[58] Data collection occurred between April 2019 and March 2020.

A word About Speech-Language Disorders

Speech-language disorders (SLDs) involve difficulties forming or sounding words correctly, making words or sentences flow smoothly, or reading comprehension; these can exist in combination or by themselves.[59] They often start at a young age and affect various aspects of children's lives, including academic outcomes, self-esteem, social interactions, and overall quality of life.[60] SLDs may persist beyond youth.[61] Language and speech impairments can be particularly limiting for adolescents as older students with an SLD are in need of therapy to improve writing skills, use complex sentences, and develop advanced communication skills.[62]

SLDs affect nearly 10 percent of children between the ages of three and 17 nationally.[63] Among children between the ages of 11 to 17 with a SLD, about 25 percent have multiple SLDs.[64] Causes of SLDs are frequently unknown; in some cases these disorders may be due to hearing loss, neurological disorders, brain injury, intellectual disabilities, drug abuse, or physical impairments.[65] Children with SLDs often need additional help and special instruction; nearly 20 percent of the children who receive special education are served under the category of speech-language impairment.[66] Increased awareness on early identification and diagnosis of SLDs contributes to greater need for services.[67]

Expanding Access to Speech-Language Services

Schools nationwide are faced with a shortage of SLPs, in part due to expanded roles and responsibilities driven by educational reform, federal mandates, and evolving professional practices to meet demands of a diverse population.[68] The scope of practice for school-based SLPs has grown to support broader educational goals that serve the entire student population. These include broader evaluation and treatment focus areas; prevention activities for students beyond the SLPs' caseload[69]; and collaboration with school personnel on curriculum and program design.[70, 71]

Shortages of SLPs create barriers in providing speech language services in all regions of the nation[72] and are amplified in rural areas.[73] Locally, about many school systems, including CCPS, report a

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[59] Centers for Disease Control and Prevention, *Language and Speech Disorders in Children*, March 2020. Available at: www.cdc.gov/ncbddd/childdevelopment/language-disorders.html.
[60] American Speech-Language-Hearing Association, *Spoken Language Disorders*. Available at: www.asha.org/Practice-Portal/Clinical-Topics/Spoken-Language-Disorders/.
[61] *Ibid*.
[62] See n. 58, *Supra.*
[63] National Institute on Deafness and Other Communication Disorders (NIDCD), *Quick Statistics About Voice, Speech, Language*, May 2016. Available at: www.nidcd.nih.gov/health/statistics/quick-statistics-voice-speech-language.
[64] *Ibid.*
[65] Center for Parent Information & Resources, *Speech and Language Impairments*, July 2015. Available at: www.parentcenterhub.org/speechlanguage/#:~:text=Some%20causes%20of%20speech%20and,and%20vocal%20abuse%20or%20misuse.
[66] *Ibid.*
[67] American Speech-Language-Hearing Association, *Market Trends.* Available at: www.asha.org/Careers/Market-Trends/.
[68] American Speech-Language-Hearing Association, *Roles and Responsibilities of Speech-Language Pathologists in Schools.* Available at: www.asha.org/policy/PI2010-00317/#sec1.2.
[69] Caseload refers to the number of students with IEPs served by SLPs and other professionals through direct and/or indirect service delivery options. More information is available at: www.asha.org/practice-portal/professional-issues/Caseload-and-Workload/.
[70] See n. 66, *Supra.*
[71] Southeast Education Network, *Speech Language Pathology A Rewarding Profession Filled with Shortages,* January 2018. Available at: www.seenmagazine.us/Articles/Article-Detail/ArticleId/6691/SPEECH-LANGUAGE-PATHOLOGY.
[72] American Speech-Language-Hearing Association, *Recruiting and Retaining Qualified School-Based SLPs.* Available at: www.asha.org/careers/recruitment/schools/.
[73] American Speech-Language-Hearing Association, *School Recommendations.* Available at: www.asha.org/uploadedFiles/slp/Schoolsrecommendations.pdf.

growing need for SLPs.[74] Teletherapy is uniquely positioned to expand access to speech-language therapy in a school setting as it permits SLPs to implement various service delivery methods (e.g., pull-out, classroom collaboration) utilizing telecommunication technology.[75] The CCPS contracted with a Maryland licensed SLP based in Florida to increase its staffing capacity.

Project Snapshots

1. Speech-language services delivery model (i.e., in-person, teletherapy, or a blend) should align with the needs and preferences of students, parents/guardians, and staffing arrangements.

   Teletherapy allowed CCPS to explore various service delivery models, such as direct and indirect services[76] and individual and group sessions. The added flexibility provided CCPS an opportunity to better understand how to adapt to their students' and staffing needs. Teletherapy was a good option to increase student access to services, and for students who refused in-person services[77], were under Home and Hospital instruction[78], or preferred virtual sessions with an SLP. Additional factors should be assessed to inform appropriateness and efficacy of teletherapy, such as cognitive functioning (e.g., attention), vision and hearing status, and parent and caregiver acceptance of teletherapy, among others. Generally, CCPS students were satisfied to extremely satisfied with teletherapy; parents/guardians that completed a satisfaction survey were satisfied with their child's progress.[79]

2. Teletherapists and on-site school staff meetings are critical to a successful program.

   Teletherapy in schools required a shift in communication as most teachers were used to interacting with SLPs in-person. Establishing a virtual collaborative relationship with a teletherapist was challenging for teachers and frequently resulted in scheduling conflicts. This was a predominant factor in missed teletherapy sessions. Approximately 28 percent of sessions had to be made up across the three schools.[80] Logistical issues were exacerbated for older students as classroom activities and schedules are typically more demanding. Virtual meetings at the school level involved the teletherapist, teachers, IEP facilitator, principal, and other school administrators. These meetings provided an opportunity to address unique teletherapy support challenges.

   Communication protocols were established between the teletherapist and instructional assistant (IA) for oversight and training. The IA aided the teletherapist during sessions by getting students from class, preparing equipment and materials, scheduling activities, and documenting student engagement and performance. Virtual meetings between the

[74] Teach.com, *Become a Teacher in* Maryland. Available at: teach.com/careers/become-a-teacher/teaching-credential/state-requirements/maryland/#shortage.
[75] American Speech-Language-Hearing Association, *Getting Started in School-Based Speech-Language Pathology Telepractice,* January 2018. Available at: pubs.asha.org/doi/full/10.1044/persp3.SIG18.21.
[76] In a direct service, the SLP works directly with a student on a particular IEP objective (e.g., developing swallowing skills); this can be done in a group or individually. Indirect or consultative service is a way for the SLP to help other individuals (e.g., a teacher, parent/caregiver) meet a student's IEP goals and objectives. More information is available at: www.asha.org/NJC/Types-of-Services/.
[77] For example, students who have behavioral and emotional conditions.
[78] Home and Hospital instruction is designed to provide instructional continuity to students who are unable to attend their regular school or enrollment due to physical illness or disability, emotional crisis, chronic illness, among others.
[79] Surveys were administered each academic term; number of respondents varied, particularly during the summer months. Over 39 students provided a response. Minimal data was gathered from parents and guardians; five responses were received.
[80] In-person SLPs serve several schools and typically assign certain weekdays to be present at each school, which can make rescheduling sessions more challenging.

teletherapist and IA pre- and post-teletherapy sessions enabled collaboration to track performance on goals and objectives and assist students in achieving their IEP goals; 89 percent of students receiving teletherapy met or made sufficient progress toward their IEP goals.

3. Well planned processes are a value add to accelerating teletherapy implementation in schools.

   The CCPS leveraged its prior experience with teletherapy[81] and employed a phased in approach to implementation. Teletherapy was offered in one school in April 2019 and was expanded to two additional schools in the fall of 2019. The CCPS was assessing staff and student needs for teletherapy to continue after the grant when the COVID-19 PHE prompted school closures statewide in March 2020. School districts successfully transitioned to virtual special education services, which included speech-language therapy.

4. Providing adequate support to school onsite staff and parents/guardians is essential when converting to teletherapy.

   The CCPS developed resource tools during the grant that enabled a cohesive transition to teletherapy for 437 students at the start of the PHE. This represented roughly 23 percent of the CCPS student population, an increase of about 20 percent during the grant period.[82] Lessons learned from the grant regarding staff training, technology implementation, and parental coaching informed their PHE response. Parental coaching included education on operating the technology and ensuring child engagement in the session, and assessment of technology and internet needs.[83] Nearly all CCPS SLPs (93 percent) implemented teletherapy using a HIPAA-compliant platform.

Notable Takeaways

The CCPS developed a framework that could be used to facilitate the launch of teletherapy services in schools. This includes an IA job description and interview questions, IA training needs, tools for parent and school administration outreach on teletherapy, and digital forms to collect teacher input on processes and student academic performance. Broader adoption of teletherapy among SLPs has enabled CCPS to provide the necessary level of speech and language services during the PHE.

[81] CCPS has implemented teletherapy on a need basis since 2016.
[82] The remainder of the students were provided other digital support, including educational resources and consultations.
[83] Surveys were distributed to parents and guardians to address technology barriers; families in need were provided computers, cameras, and remote hotspots.

Appendix A: Final Deliverable Prepared by UMQCN

Comprehensive Medication Therapy Management Telehealth Project & Electronic Medication Reconciliation (CMTM)

Funded by the Maryland Health Care Commission

Dissemination plan

BACKGROUND

The University of Maryland Medical System, the UM Quality Care Network (QCN), Transform Health MD (THMD, a care transition organization) and the UM School of Pharmacy's Center for Innovative Pharmacy Solutions have developed and integrated the delivery of Comprehensive Medication Therapy Management (CMTM) telehealth services for patients with chronic obstructive pulmonary disease (COPD) in primary care and pulmonology practices in the rural Eastern Shore. This intervention has generated a practice model to integrate pharmacists in the interprofessional team within primary care practices maximizing both the role of telehealth and the pharmacist, in order to improve health outcomes for patients with a chronic disease while also increasing adherence to medications and reducing unnecessary health care costs related hospitalizations and emergency room visits.

This partnership now reports on the work products, processes, and lessons learned in the integration of telehealth services to deliver Comprehensive Medication Therapy Management care for COPD patients in an integrated care network and/or value-based payment models. The patient insurance status includes Medicare and private health insurances.

The University of Maryland Shore Medical Group primary care and pulmonary practices on the Eastern Shore, have expanded their capacity to offer innovative pharmacist-delivered medication-related patient care services. This service model is suitable for rural or inaccessible clinical care settings and/or any other region in the country.

During the grant period, the team has documented successful workflow processes and clinical protocols to support dissemination of a sustainable business model for this innovative telehealth program. Project findings from the medication-related and cost of care data are critical to demonstrating the value of telehealth CMTM to practice sites and patient care networks. In particular, the value must be not only demonstrated but also translated into improved quality metrics for COPD patients and other chronic diseases.

In this project, Telehealth delivered CMTM has supported rural practices in achieving care outcomes which will benefit patients and the practices that care for their chronic conditions. Clinical findings from this intervention are reported separately in the Outcomes Report.

Forbes magazine (Cohen, 2018) emphasized the benefit of telehealth and the journey to sustainability through Medicare payment mechanisms:

> "Starting in 2019 CMS will also reimburse telehealth services. With telehealth, patients can utilize digital information and communication technologies to remotely access healthcare services. Telehealth services are often performed under the [Medication Therapy Management or] MTM rubric. Telehealth is of particular importance in rural areas where face-to-face visits are more difficult."

With findings regarding patient outcomes and sustainability projections in hand, the task of the project team is to undertake dissemination. The current CMTM project has two distinct lines of dissemination: products and findings. The target audience includes telehealth administrators, advocates, integrated care networks, clinical practice practitioners, managers and specialists in rural areas who may benefit from the business model.

Dissemination is urgent because of the technology changes now underway. Telehealth is in a period of rapid growth. Driven by the availability of commercial-off-the-shelf technologies (COTS), the frontier for telemedicine is the reliable, proven application of COTS to high need areas. This project has been both practical and innovative; it provides a high need service using low-cost commercially available options. Lower implementation costs suggest the possibility of wider adoption of the CMTM model.

It is important to capture the value of COTS telehealth technologies as well as the clinical processes, administrative procedures, and key protections that are associated with effective use of the technology. All procedures have been activated, tested, and formalized. In addition, the interface and compatibility between and among many sources of information and communication technology (ICT) must be tested. As in any telehealth endeavor, patient privacy protection is a primary concern.

The CMTM Telehealth Project constructively addresses each of these knowledge management challenges. We have employed low-cost commercially available tablets, locked up the security settings on these tablets, and deployed HIPAA-approved technologies. Centralized mobile device management is coordinated by the hospital. We have addressed the interfaces between tablets and practice network, pharmacists and e-Reconciliation, and, perhaps most importantly between patient and technology.

Other test-cases support application of tablet technology to patient management. Samsung tablets were used by an insurer to collect patient-recorded data from inside their home (March 2016). This case demonstrated an annual savings of $3,000 per patient. Patient satisfaction increased while hospitalizations decreased.

Wearables, such as a watch, are another advancement for remote patient monitoring through an app on a smart phone. The Apple Heart Study conducted by Stanford University reported preliminary results from 400,000 patients using watches to detect early atrial fibrillation with monitoring (Turakhia, et al. 2019). This use of technology is also low cost but differs from the current project, in that wearables are passive and monitor the patient. This compares to the active collection of patient-reported data. Alerts to the patient are an effective digital biofeedback. The CMTM project uses active patient-provider interaction to formulate an evidence-based action plan and to achieve the desired clinical outcomes.

Tablet technologies are less expensive when compared with other provider managed commercial technologies, such as America Well Telemedicine carts. These carts are equipped with integrated video, displays, communications, all in one cart. Similar carts have been deployed in Maryland. Carts also deliver care at a distance through wireless connections. However, the cost of cart installation is not favorable compared to readily available tablet technology. Carts are also not usable in home by the patient.

Tablet technology is also a solution or option for electronic visit verification (EVV) for Medicaid in-home services. A Wi-Fi enabled tablet can report the type of service provided, the provider information, the patient information, the date and location of the service. EVV is required beginning January 1, 2020. Maryland, like other states, must determine their model of EVV, among these options are provider determined systems, telephonic, the state could mandate a vendor, cloud-based app with mobile device, and many other. Results are likely to be available soon. With EVV systems in place, the implementation of the CMTM model could be planned in partnership with the EVV, although only those health provider organizations with Medicaid populations.

The Veterans Health Administration undertook a large-scale project to disseminate tablets to high-need veterans, many of whom lived in rural areas (Zulman, 2019). This study used the Consolidated Framework for Implementation Research (Damschroder et al, 2009) to identify barriers preventing vets from using the technology. Findings from this study focused on the procedure and processes, but do not have results for clinical care, since none were tested in this study. These results of this large-scale implementation inform all tablet implementations now and into the future.

COST OF IMPLEMENTATION

Test-use cases are valuable in providing guidance for subsequent adopters. However, testing a technology is notably more expensive than implementation of a provided protocol. In the CMTM project, one tablet costs under $200 and the HIPAA compliant telecommunication service Zoom, was free to the project. Central device management and local device readiness can be estimated at $50 per tablet per year without the internet plan. Thus, the technology cost is $250 per tablet per year. Practices may need to purchase a camera and sound board for the in-practice exam room computer at a cost of under $250. Tablets, as implemented by the CMTM project were returned after the patient visits were completed. Thus, a tablet could serve 4-5 patient each year resulting in an estimated cost of $50 per patient. Service delivery by the pharmacist remains the same as in-person care. Patient access the telehealth service through the clinic office also requires the same check in time and exam room utilization. Travel time may be saved through patient in-home telehealth visits. Future telehealth studies may offer more specific findings on the matter of travel.

By disseminating our findings, we can help others reduce barriers to uptake and shorten the time for implementation. This dissemination plan seeks to translate research into practice for many types of patient care settings, primarily those treating patients with chronic diseases particularly those that are dependent on medications. Both successes and barriers are relevant to others attempting to replicate CMTM with this telehealth program of services.

DISSEMINATION PLAN

The aim of dissemination is to share findings and products with those who will use these tools in practice. In this way "Lessons Learned" and reported results can be effectively shared with the community-at-large. Initially this will focus on rural practices and pharmacist-enabled services, with evidence of the minimal costs for integrating CMTM into telehealth, expansion is expected to a broader population and region.

Our dissemination plan is specific and outcome-oriented. Using the *Knowledge to Action Framework* of the Centers for Disease Prevention and Control (CDC)[84], this project offers a toolkit for this innovative telehealth service set up incorporating data and outcomes from this proof of concept. The toolkit is an implementation guide for a given clinical site. The tools are aimed to be relevant, targeted and turn-key for those planning to replicate this project.

The target audience for the Dissemination Plan is foremost the QCN/THMD providers with the shared electronic medical record (EMR), EPIC, and then providers at-large with other EMRs in the Mid-Atlantic region. A second audience will be other clinicians, practice administrators, health plans and telehealth innovators who have plans to implement similar programs utilizing telehealth.

PRODUCTS FOR DISSEMINATION WITH LESSONS LEARNED

This project has delivered a number of work products which can foster replication of the service model. Together these materials serve as an implementation package to support the start-up and operation of the telehealth CMTM service in a rural health clinic and pulmonology specialist environment. With these products, the telehealth intervention by pharmacists will be more readily transferred to a similar facility. Specific work product components include:

1. Patient Identification Processes. Patient identification and analysis are an important first step. Patients were identified by the QCN/THMD population health database based on patient diagnostic codes, history of hospitalization, ER utilization, and primary care provider/pulmonologist. Access to data on patients, diagnosis and health service cost utilization data is critical to identify those patients that will benefit from the service. For best results, the telehealth practice locations should have a significant number of patients with the diagnosis to make it feasible to recruit the number of patients needed to impact outcomes. Capturing and assessing data has helped this project to establish the most economical and geographically useful location(s).

   Lessons Learned: While COPD was a specific diagnostic code used to identify patients in each selected practice site, the use of claims data provided limitations for patient selection. The greatest limitation was that upon chart review, despite a diagnosis code of COPD, not all patients had a true clinical diagnosis of COPD. There were also limitations around the lag in medical claims information to identify newly diagnosed patients. This team found that the best way for patient identification was to look at the patient lists scheduled to see their

[84] CDC (2019). Dissemination and Engagement Planning Checklist: Knowledge to Action Framework. Centers for Disease Prevention and Control, Atlanta. https://www.cdc.gov/prc/pdf/dissemination-and-engagement-planning-checklist.pdf

provider in the next 10 days with the diagnosis of COPD. The pharmacist would complete a brief review of the medical record then contact the patient prior to arrival to see if they would be available discuss medications with the pharmacist before/after their primary care/pulmonologist visit.

In addition, the most productive partnership in terms of patient recruitment resulted to be with pulmonologist offices, the specialist who are managing the COPD care. In addition, in the next iteration of the telehealth services with the care transition organization, some additional data analytics have been implemented for risk stratification to better identify patients with the right diagnosis. This extra step identifies patients with the highest risk in care management services. Certain disease states, such as diabetes or hyperlipidemia, offer clinical values in the patient chart to further assist locating patients most at risk.

Intervention visits were conducted using telehealth but coordination and informational calls were often telephonic. The video visit involves the patient's placement in a patient exam room scheduled with the practice site. The patient is checked in and escorted to the room with the video screen and other necessary technology. The pharmacist virtually connects with the patient in their exam room. These visits require that the patient is physically present for their visits. Some patients with more advanced technology skills were lent a tablet by the service and engaged in privacy-protected pharmacist video visits from their home.

2. Lifecycle of Patient Communication. Communications between the pharmacists and the patient were continuous and structured. The pharmacist provided specific information to the patient for each stage of CMTM: recruitment (pre-intervention), information gathering/interview, intervention, and follow up/adjustment.

   A variety of recruitment strategies were implemented at the practices to identify patients for the intervention. Program flyers were developed and either printed or electronically posted in waiting areas and exam rooms for patients to read. Informational sessions were scheduled at the primary care office for patients who were interested in learning more about the program before having the intervention. Information sessions were also held during provider/practice meetings to increase physician referrals. When the pharmacist was identifying patients for the intervention, depending on the provider and practice site, the pharmacist would outreach to the provider to request permission to outreach to the patient for the telehealth intervention.

   Once patients are recruited, the pharmacist would explain the program, value of telehealth CMTM to them and their health condition and options for visits prior to scheduling. Patients were asked to bring all of their medications to their visit (in home or in office). Written instructions on how to use the tablet were available to the patients using their own tablet or using a loaned tablet.

   The pharmacist and reception desk help each patient to become acquainted with the clinical workflow for a telehealth visit. Patients appreciate an understanding of how the telehealth

service will work, what they will see and do. A folder which included COPD patient education, smoking cessation resources and important contacts was provided by the reception desk to the patient prior to their first intervention.

Ongoing communications with the patient about their health status and instructions for follow-up take place based on individual patient treatment plans. Reminders before the appointment and communication between visits helped to retain the patient through to successful completion of the pharmacist CTM service. Following each visit, a hard copy or electronic customer satisfaction survey is sent to every patient after completion.

Lessons Learned: Patients like the convenience of adding the CMTM telehealth when they were in the office for their primary care/pulmonologist appointment. However, not every patient-pharmacist contact required the enhancements available from using video technology. The study tracked the number of video visits for CMTM sessions, but did not track all patient contacts with the pharmacist that supplemented the video visits, such as telephonic follow ups between video visits. For patients wanting to complete video visits in the office, periodic follow-up by phone would reduce the time period between pharmacist-patient visits and improve patient-pharmacist relationships. Continuity was a problem when face-to-face primary care provider appointments were cancelled which led to the telehealth CMTM visit cancellation.

3. Technologies. While the tablet is the focal device for delivering CMTM within this project, our attention is also directed to the many other technologies required for start-up of the CMTM telehealth service. The service includes implementation, testing and operational use of four technologies and the interface between them. Zoom, EPIC EMR, exam room scheduling software, and office backbone and secure communications. There are multiple steps and system integration requirements for the service to be successful.

   Zoom, a HIPPA-compliant video conferencing application connects patient tablet to the pharmacist's smart device. The features in this service were integrated into the clinical workflow. The rural sites were part of the Zoom extended network at the University of Maryland School of Medicine.

   The primary care practice electronic medical record (EMR) and communication systems require a secure internet backbone with the capacity for HIPPA protected communications. Issues between the network and the technologies (Zoom and tablet) must be discussed and tested in advance of launching the service. Exam rooms, for example, do not typically have cameras yet this is an essential technical requirement for the telehealth service, unless a tablet with Wi-Fi capabilities is used.

   Lessons Learned: The patient-technology interface is important to the effectiveness of the intervention. We found that patients are more comfortable when someone sets up the Zoom appointment for them. Most patients would rather come into the office for the first visit and of those some with a high comfort level will continue to use technology at home with the tablet. Simple factors such as charging the tablets in the office and in a patient's home became

an unnecessary challenge for home visits. In addition, if the tablet is not used within a 90-day period the wireless phone line connecting the tablet, was subject to cancellation. While glitches were expected in terms of telephone and data access in the rural area, cell coverage did not emerge as a barrier.

4. Physical space needed for telehealth visit. While telehealth CMTMs may reduce the need for patients and pharmacists to travel, it does not eliminate it all together. A confidential space or exam room in a primary care office is needed to deliver telehealth as an option for patients who do not feel comfortable managing a tablet by him/herself. In the telehealth examining room, the monitor and camera are activated by practice staff to conduct the CMTMS via web visit.

   Lessons Learned: The project was planned with a specific exam room equipped with technology such as the video camera and sound board. However, we found that there was no need for this. While a smaller image size, the tablet can deliver services in any office. In fact, the tablet can be detached from an exam room to offer maximal flexibility.

   Security protections inside the practice are strictly observed. For this reason, the computer screen times out resulting in a locked "black screen". Administrative overrides were necessary. Lower cost equipment such as a tablet deemed sufficient to deliver the telehealth CMTM service, making it rather simple to implement from the technology equipment perspective.

5. Communications with providers. Physicians who refer patients to the pharmacists' service must also receive timely and relevant communications about their patients. The clinical notes must document the reason for the referral, treatment plan, changes/recommendations, observed benefit to the patient, benefit to the practice. These communications ensure proper coordination of care. Pharmacists using the EPIC EMR provided real-time data to the clinical providers while documenting directly in the office EMR. The EMR is a valuable tool for communicating with the prescribers and other providers. Specifically, staff alerts are sent to the desktop for priority consideration by the prescribers.

   Lessons Learned: Relationship building between pharmacists and physicians was perhaps undervalued in this intervention. The service could have benefitted from regular check ins with the practice providers and more faced to face interactions. There was a larger learning curve for the providers on the role and benefit of the service to their patients.

6. Documentation System (EPIC): EMR design was a barrier to full integration of the telehealth service within EPIC. Because pharmacists are not providers in the EPIC system, certain functionality is disallowed. However, when identifying pharmacists as a resource service some flexibility was allowed. The EMR was available remotely so the pharmacist can document a visit in real time, which is an important component of the service. The pharmacist messages the provider/referral after a CMTMS visit.

An appointment must be booked to the exam room in most primary care practices scheduling software. The pharmacist did not have access to the scheduling and this created miscommunications in the case of cancellations or delays. The telehealth service had to call the office staff to complete an appointment or book the room. Matching patient schedules and room schedules was a challenge.

Lessons Learned: The consent form for telehealth and documentation required additional clearance, a process which engaged many offices in order to achieve compliance. The process raised the awareness of telehealth opportunities for the entire system. Additional documentation specifically around location of the patient and provider, as well as, other caregivers taking part in the visit is now integrated into the standardized documentation template. The process spearheaded better integration of telemedicine into the EPIC system protocols. Workgroups are now in place to address any future barriers to telehealth.

7. Front desk procedures and forms. The front desk personnel are key contributors to the success of the telehealth CMTMS service in a rural practice. They are a regular information source to first time and returning patients. They can also help coordinate between on-site staff who place the patient in the telehealth room. It is critical that there is buy-in of the staff and continuous communication and reinforcement of the details and management aspects of the service.

   Lessons Learned: As with any practice site implementation, a champion is needed at the front desk. The champion watches over the telehealth's small but meaningful needs such as charging the devices, consent form completion, survey documentation, and schedule changes. Enlisting an observant advocate at the practice can reduce the number of patients lost to follow-up because of the lack of synchronization with the practice scheduling system. It is critical that there is buy-in of the staff and continuous communication and reinforcement of the details and management aspects of the service. They turned out to be one very important component of the project and the workflow.

   Patient education regarding the tablet was another role of the front desk. This includes demonstrating to the patient how to use the tablet and tracking devices for inventory.

8. Protocol for clinical care and workflow. The treatment protocol for CMTM has been tested and well established in coordination with the practice providers and administration. However, the telehealth innovation in this project protocol deserves special consideration. Technology, the patient, the provider, the check-in and "rooming" the patient, and the electronic medical charting must all be integrated into the clinical workflow. This process is complex and requires coordination and communication among many individuals.

   Lessons Learned: Each of the four practice sites had a unique workflow. We found that there are significant benefits to seeing the patient immediately before the patient- provider visit. Patients willingness to participate in the program and to keep appointments increased if the telehealth visit was coordinated around their visit to the office. Schedule delays in the

primary care appointment resulted in a loss of efficiency for the telehealth intervention. For example, if the appointment was delayed, the pharmacists had to wait until the patient was available and some patients ended up cancelling their telehealth visit due to scheduling conflicts with the delay. In addition, we found that a visit prior to the physician visit may result in increased resolution of medication related problems, making it ideal. However, some of the work the pharmacist does, such as contacting the pharmacy or insurance, cannot be done within the visit time if it is scheduled first.

To maximize the specific knowledge and skills of the pharmacist providers, collaborative practice agreements would be useful to the clinical care process.

9. The patient satisfaction survey. The telehealth patient satisfaction survey along with the project findings provide a model in continuous improvement to the CMTM service. This work product is one that can be disseminated for those in interested in replicating the service.

   Lessons Learned: The survey aspect of the telehealth service, while well established and validated, was not structured to provide meaningful feedback on this specific service. The service took place in multiple locations with an even greater number of providers, of which the survey did not account for. Also, given the majority of patients received at minimum one telehealth visit based in the practice location, the time saved in travel did not appear to be a relevant factor for the patients in the evaluation.

   Given that the survey was to be completed after the telehealth visit ended and most patients were completing the survey on paper, completion/collection rates were low. Enhancements in digital forms of the survey and workflow integration with office personnel around collecting surveys should be considered.

10. Resources list for implementation. The implementation package includes a list of resources required for successful start-up and operation. It is recommended these resources are committed prior to undertaking the project:

    - Wi-Fi enabled tablets (one for each pharmacist and 4+ depending upon the number of patients to be served). Tablets must be locked against functions outside of the telehealth functions and must have mobile device management activated.
    - Network Administrator (NA) at the practice must be onboard and prepared to participate in the project. The NA will facilitate access to the network for HIPAA compliant communications and will aid in the clinical practice installation of necessary equipment in the exam room.
    - Front desk administrator coordination with the pharmacist will be important to billing and scheduling.

    Lessons Learned: The most difficult part of implementing the intervention was to accommodate the differences of clinical flow and culture of the process within the practices. The processes and information flow were unique and nuanced for each of the four sites. This

raises the question of replicability. How can the core attributes of the service remain standardized while the adaptable characteristics allow for flexibility?

11. Billing and Sustainability of the Financial model. Payment systems are constantly changing and evolving. Telehealth, while growing in availability, has not been identified as a separate payment stream in most locations. The movement toward bundled value-based payments suggest a place for the clinical effectiveness and cost efficiency pharmacist delivered telehealth can offer but it is not universally available. The current limitations placed on pharmacists provided clinical services and their ability to bill for these services as independent providers pose challenges for the billing of these services by the practices.

    Lessons Learned: The EMR is not only a system of clinical visit notes, but it is also a source of documentation for billing. Pharmacist services were not directly billed to the insurer/payer due to the current value-based model in the practices. Because the pharmacist cannot sign off on the patient record, "dummy billing codes" in the EMR became the work around to document patient visits.

    While the financial model is considered key to sustainability, the context in which patient services are reimbursed by the payer is not a straight path. Like so many characteristics of the intervention, the payers and service contracts will determine the shape and the cost recovery.

    The model tested is pharmacist delivered telehealth in the context of an integrated network within the Maryland Primary Care Model. The service is financed through care management fees and savings in health care costs from improved quality metrics (reduced hospitalizations and fewer ER visits, as well as a decrease in medication costs). Another stream in the financial model is the direct billing for services provided for non-MDPCP practices (transition of care, incident to billing, and telehealth codes).

FRAMEWORK FOR DISSEMINATION

The package for dissemination involves all 9 intervention components, each of which has an associated work product. The clinical outcomes and findings, along with lessons learned, can add value and evidence to innovative rural practices.

The CDC Action Framework focus our dissemination efforts. Key components of dissemination include, not only the materials to be disseminated, but also a communications strategy. Using the CDC Action Framework, the CMTM telehealth intervention intends the following plan for distribution and dissemination each with the intended audience.

Goal: The telehealth CMTM delivery team has assessed the results of the intervention using measures of clinical effectiveness, cost effectiveness, and geographic reach. The goal of dissemination for this intervention is to transfer the knowledge and tools for success to other rural clinical practice sites.

Reality Check: Throughout project implementation the telehealth delivery team has engaged in open discussion with the clinical site administrator(s), the referring physicians, the front office staff,

and the patients. These exchanges allowed for adaptation of the intervention processes to accommodate the realities and preferences of the clinical site. While the CMTM pharmacist-delivered portion of the intervention remained consistent with MTM practice, the adjustments to the real-world setting ensures the results are ready for dissemination.

Target Audience: Once the remainder of the data have been analyzed, the team will assess how the intervention is applicable to service expansion in rural clinics and pulmonology practices. University of Maryland Medical System, the UM Quality Care Network, Transform Health MD and the UM School of Pharmacy's Center for Innovative Pharmacy Solutions are all positioned to announce the availability of the work product package to their members. In particular, the leverage point for action with Maryland practice sites is the president of UM Quality Care Network and THMD. The documentation and clinical workflow, especially the EMR will have to be compatible.

Leader Commitment: The principals on this project have been engaged throughout the challenging implementation that accompanies an innovative intervention. They will also be involved in engaging their respective organizations in the specific action activities bulleted below.

Stakeholders and Motivation: The value of the CMTM intervention will be articulated to align with the interests of each stakeholder group. Motivation can be achieved with convincing value statements.

- Patients find value in CMTM's results such as improved health, support for disease self-management and reduced travel time.
- Providers, including primary care and specialists find value in not only improved clinical outcomes of their COPD patients, but also in-depth medication-related support for their complex patients.
- Practice administrators and financial officer find value in the identification and activation of new billing streams. With billing plans clearly identified and cost verified, each practice can project the financial sustainability of the expanded service at their site. Secondarily, the CMTM implementation documents have been reduced to writing as work product and thus provide guidance in service implementation. Forms, protocols, and patient communication templates facilitate rapid implementation by other rural practices.
- Patients, referring providers, pharmacists, media specialists in the organizations, legislative liaisons at the university, and principals in the project will be engaged.
- Pharmacist providers find value in compensation for clinical services while also improving the health of patients through collaborative care. Reduced travel to clinical sites is also a key benefit to pharmacist providers.
- Health plans find value in the improved quality indicators for COPD, medication reconciliation, and reduction in both preventable emergency department care and inpatient hospitalizations. Patient satisfaction is also a key indicator for plans. Using aggregate plan-wide patient data such as diagnosis, geographic location, and preventable hospital services, each plan can model the potential impact of dissemination of telehealth delivery of pharmacist-provided CMTM for rural patients.

- Legislators and other public health policymakers seek a demonstrable impact on population health. With current data, the impact of statewide CMTM telehealth for COPD could be modeled using available data, as well a state support for pharmacists-delivered telehealth services.

Cultural Adaptation: In general, the intervention package has been shaped collaboratively by pharmacists and practice sites and the adaption required for a similar site is minimal. However, each practice site has a cultural context. In addition, geography and health payer mix shape goals, expectations and processes. Practices with an on-site information technology staff and experience in electronic collaborations are likely to have fewer barriers to implementation of the CMTM intervention. The relative availability and accessibility of clinical pharmacists to providers and patients will also impact the motivation or interest in undertaking the intervention.

Action, Channels and Reach: After the submission for publication or presentation of the qualitative and quantitative findings, a number of actions may be considered as possible next steps. The vehicles for potential communication (the action, chanels and reach) could include:

- ACTION: News story on the UMSOP and UMQCN websites announcing the findings. (REACH: 200 views). This activity will be supported by the media offices in each organization.
- ACTION: Send an email thanking providers and office staff for participating include highlights of findings. (REACH: 112) This activity will be supported by the pharmacist.
- ACTION: Send email to Patient Centered Outcomes Research (PCORI) telemedicine grantees to share findings. (REACH: 50)
- ACTION: Share findings by linking to the paper, presentation or new item on the UMSOP and UMQCN website via Linked in by principals of the project. (REACH: 200 views) This activity will be supported by the media offices in each organization.
- ACTION: Submit clinical findings for a presentation at the Maryland Pharmacists Association Summer Meeting by pharmacists in the project. (REACH: 150 session attendees)
- ACTION: Explore the opportunity to present findings at the Telehealth Research Dissemination Forum at the American Telehealth Association (ATA) Conference. ATA is committed to improving the "integration of telehealth into the healthcare delivery system". Their conferences share best practices and discuss findings that document the value of telehealth interventions. (REACH: 45 session attendees and 300 resulting publication) This activity will be supported by the principal personnel on the project.
- ACTION: Prepare a factsheet on the value of CMTM telehealth for legislators representing the University of Maryland Baltimore's legislative districts through the legislative affairs office of the School of Pharmacy and the campus. (REACH: 12 includes policymakers in clinical site locations)
- ACTION: Present results at various internal clinical meetings of University of Maryland Medical System, the UM Quality Care Network, Transform Health MD. Ideally this would involve testimonials from involved clinicians and perhaps patient statements of benefit (with appropriate permissions). (REACH: 90)

Leverage Point: Previous buy-in and formal written institutional commitment will be leveraged by presenting findings to leadership and demonstrating value. In the action and outreach process, it is critical to include acknowledgements of these commitments in the statement of credits. The ideal outcome of this process is to identify and activate one or more champions for telehealth delivered CMTM. This may include expansion to additional sites or other medication dependent ambulatory sensitive conditions, such as diabetes.

Translated and Aligned: This dissemination plan was prepared with the practice site in mind. The translation of an implementation plan to the new site may require technical assistance and support. Key stakeholders, the telehealth center and the health plan, could consider providing technical assistance at specific point in the implementation process. Technical assistance would ensure the benefits of service and communication between the practice and the pharmacists is properly established. The health plan has the ability to provide targeted patient data for the site which would allow for critical assessment of the need and potential benefit for such services. Practice translation is not the only factor in continued currency of the services. Given the frequent and complex changes in Medicare payment initiatives, the health plan must provide leadership in translating these changes into the CMTM telehealth sustainability model.

Broad based Support: This project does not lend itself to crowd-sourcing at this time. Widespread demand from patient or provider is not expected. However, outreach to public health officers and legislators could broaden the discussion of telehealth expansion in Maryland.

Barriers to Dissemination: In addition to the complexities of Medicare payment systems and delays in patient-related data, all new services are faced with competing demands for the attention of plans, practices and providers. Strong value statements with substantive findings are most likely to gain attention in the rapidly changing health marketplace.

SUMMARY

The Comprehensive Medication Therapy Management Telehealth project funded by the Maryland Health Care Commission has used this opportunity to improve the health of Maryland patients with COPD through the use of commercially available, low cost technology. Primarily rural citizens have benefited from the services provided, but the clinical plans also benefit through improved quality of care and a reduction in emergency visits and hospitalizations. A single test case such as this one, multiplies the impact of the project through planned dissemination. The proposed dissemination plan presented in this document provides direction to key stakeholders share their commitment in order to extend the project impact.

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Outcomes Report

Introduction:

Chronic Obstructive Pulmonary Disease (COPD) was identified as one of the top 5 chronic conditions in the University of Maryland Quality Care Network's (UMQCN) attributed population that resulted in multiple hospitalizations and significant costs. Given that Comprehensive Medication Therapy Management (CMTM) initiatives have demonstrated that pharmacists could be part of the solution to this problem, the COPD Telehealth program was developed. The program was a grant-funded pilot with the Maryland Health Care Commission (MHCC) between the UMQCN, University of Maryland School of Pharmacy and the University of Maryland Eastern Shore Primary Care and Pulmonology Practices.

Utilizing clinical pharmacists as members of the inter-professional health care team, CMTM and disease management was provided to COPD patients via a telehealth platform. Patients were offered the ability to take part in CMTM in their provider's office or at home utilizing the HIPAA compliant Zoom healthcare platform. Pharmacists utilized the video technology to complete medication reconciliation, review inhaler technique and provide disease state management education. Patient care was documented in the EMR and therapeutic recommendations were sent to providers.

Objectives:

- Objective 1: Improve adherence rate for COPD patients who complete the intervention by a pharmacist (services delivered include CMTM and medication reconciliations during the project period).
- Objective 2: Identify and resolve COPD drug related problems (DRPs) in the COPD patients that complete the intervention by a pharmacist during the project period.
- Objective 3: Reduce hospitalizations inpatient (IP) and ER visits (where COPD is the primary diagnosis) in patients who complete the intervention by a pharmacist, compared to the same patient 6 (12) months prior to enrollment.
- Objective 4: Achieve an average rating between satisfied or highly satisfied by patients completing one or more e-health visits during the project period.

Methodology:

Implementation into each provider's office occurred in a phased approach throughout the first year of the grant. The primary care office with the largest COPD population based on data analytics was targeted first. Technology was installed and tested and individualized work flows were documented prior to doing targeted outreach.

Patient identification: Patients were identified as a possible candidate for the COPD telehealth program in several ways.

1. The pharmacy team used data analytics to identify patients with a COPD diagnosis that were attributed to each provider's office. The pharmacist then

would complete a chart review to ensure the patient had COPD and would get permission from the provider to outreach to the patient.
2. The pharmacy team would review charts of patients scheduled to come in for an appointment each week to identify possible candidates for the program and request permission from the provider.
3. Providers and office staff could directly refer patients to the pharmacy team for outreach.

Once a patient was identified, the pharmacy team would outreach to the patient, explain the program and schedule a time and place for their visit if they agreed to participate. Prior to their first visit consent forms were signed and patients were given a packet of information, of which included program information, contact information for the pharmacy team, technical support numbers, educational handouts on COPD and smoking cessation information.

During each visit, patients were asked to have their medications with them to review with the pharmacist. Although the program was limited to COPD patients, all medications were addressed and reconciled in the medical record. Medication issues/concerns were discussed with each patient, a COPD assessment test was completed, inhaler technique was reviewed and demonstrated and other disease states were evaluated as necessary. Pharmacists documented their visit in EPIC, the electronic medical record (EMR), drug related problems were assessed and their notes were forwarded to the appropriate provider through EPIC. If issues were deemed “urgent” by the pharmacist, they would also contact the appropriate provider by phone.

At the end of each visit the pharmacist and patient determined the next time/place for follow up using the telehealth technology. Patients were asked to complete the satisfaction survey in the room/via email after the visit ended. Tablets were available for the patient to take home if they wished to have their follow up at home rather than in the office. Depending on the circumstance, some patients were outreached to telephonically between telehealth visits to follow up on a drug related problems that were identified during the visit.

Results:

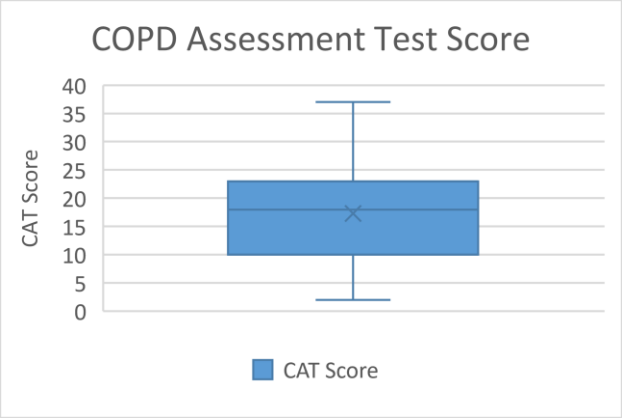
A total of 73 patients received the intervention. The following are the results of the data analysis.

Patient Demographics:

Characteristics	Total (N=73)
Age (years), Mean (SD)	72.7 (+12)
Sex	
Male, N (%)	34 (47%)
Female, N (%)	39 (53%)

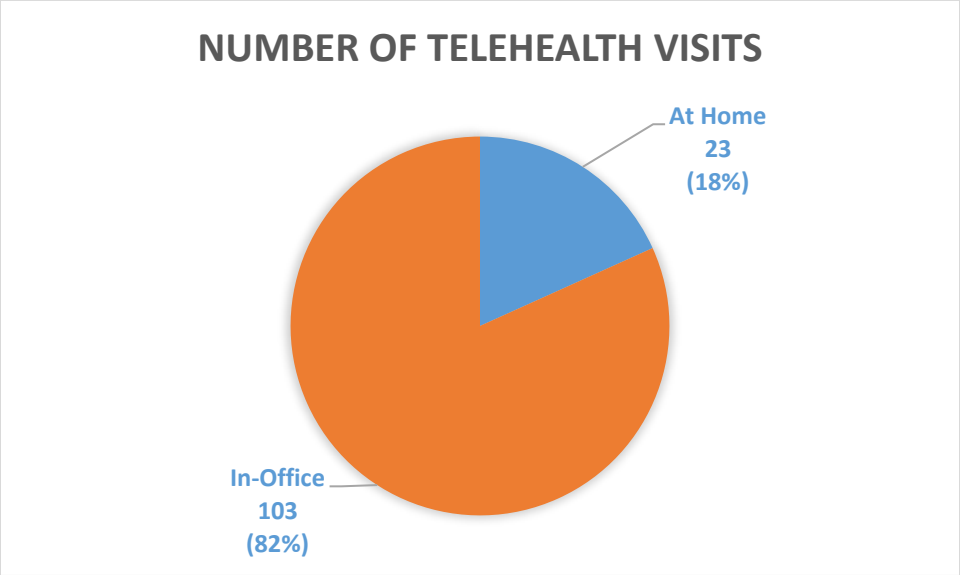
Initial Visit Characteristics: The following information was gathered during each initial session with the patients.

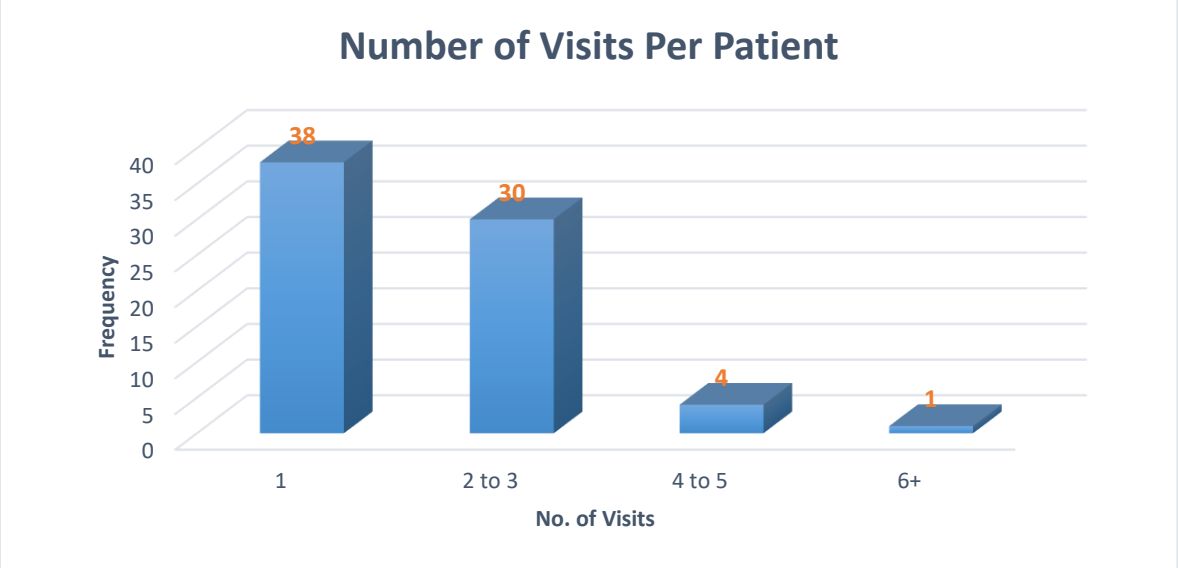
Initial Consult Baseline Data	
Adherence %, Mean (SD)	93.8(11)
CAT Score, Mean (SD)	17.3 (8.2)
Maintenance Inhaler	
Yes, N (%)	59 (81%)
No, N (%)	14 (19%)
Rescue Inhaler	
Yes, N (%)	60 (82%)
No, N (%)	13 (18%)



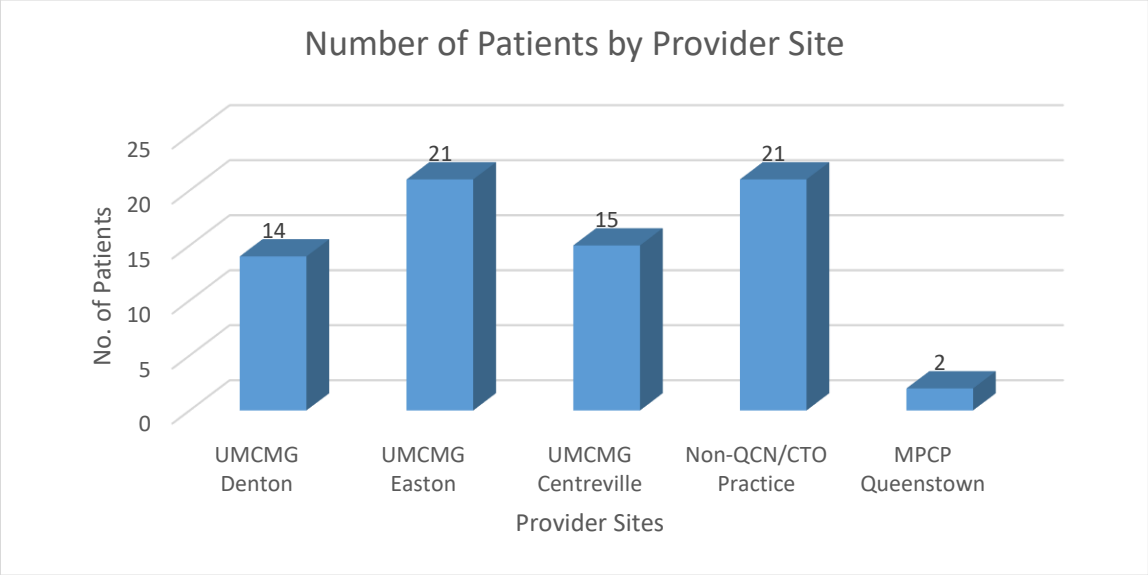
- Adherence Rate: Self-reported by the patient on a scale of 0-100, “0” meaning the patient never takes their medications and 100 meaning they never miss a dose.
- CAT Score: The COPD Assessment Test (CAT) is an 8 item questionnaire designed to quantify the impact of COPD symptoms on the health status of patients and indicate the impact of the disease. Scores can range from 0-40. Lower scores can indicate that the disease has less of an impact and higher scores indicating a higher impact.
- Maintenance inhaler: Yes/No indicates whether the patient was using their maintenance inhaler at the time of the initial consult.
- Rescue inhaler: Yes/No indicates whether the patient had a rescue inhaler to use at the time of the initial consult.

Characteristics and Number of Telehealth Visits: A total of 126 telehealth visits were completed throughout the course of the pilot.

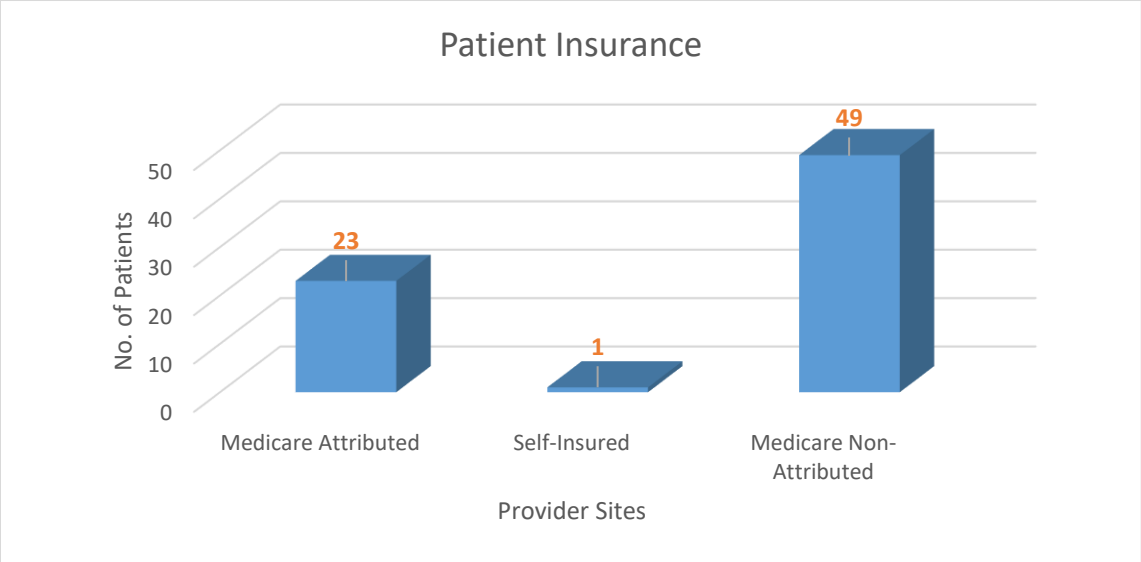




Number of patients by Provider Site



Patient Health Insurance Breakdown



Clinical and Economic Outcomes:

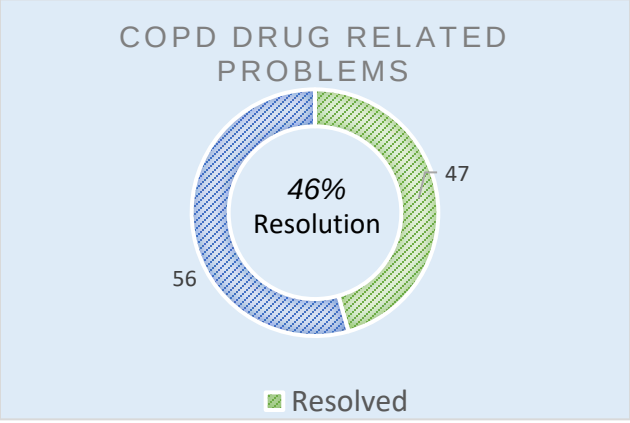
Objective 1: Improve adherence rate for COPD patients who complete the intervention by a pharmacist (services delivered include CMTM and medication reconciliations during the project period).

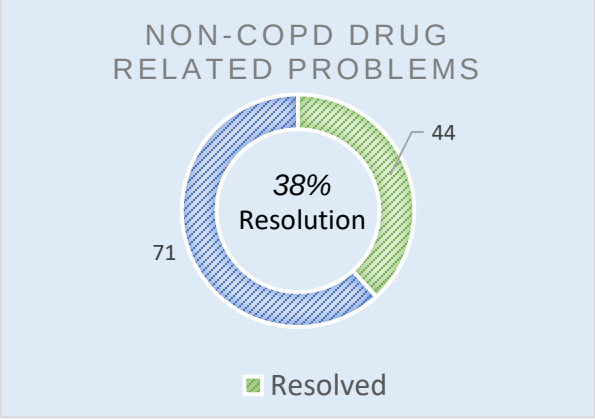
Initial Adherence Rate*, Mean (SD) N=71	Final Adherence Rate*, Mean (SD) N=43	p-value
93.8 (11.1)	95.4 (8.2)	0.172

*Self-reported

Objective 2: Identify and resolve COPD drug related problems (DRPs) in the COPD patients that complete the intervention by a pharmacist during the project period. Examples of drug related problems include adverse drug reaction/side effects, dose too low, dose too high, more effective drug available (due to high risk medications, contraindication, drug interaction), Needs additional therapy (due to untreated indication, condition not controlled), unnecessary drug therapy, therapeutic duplication, medication non-adherence, needs additional monitoring. Drug related problems were evaluated and identified at each telehealth visit.

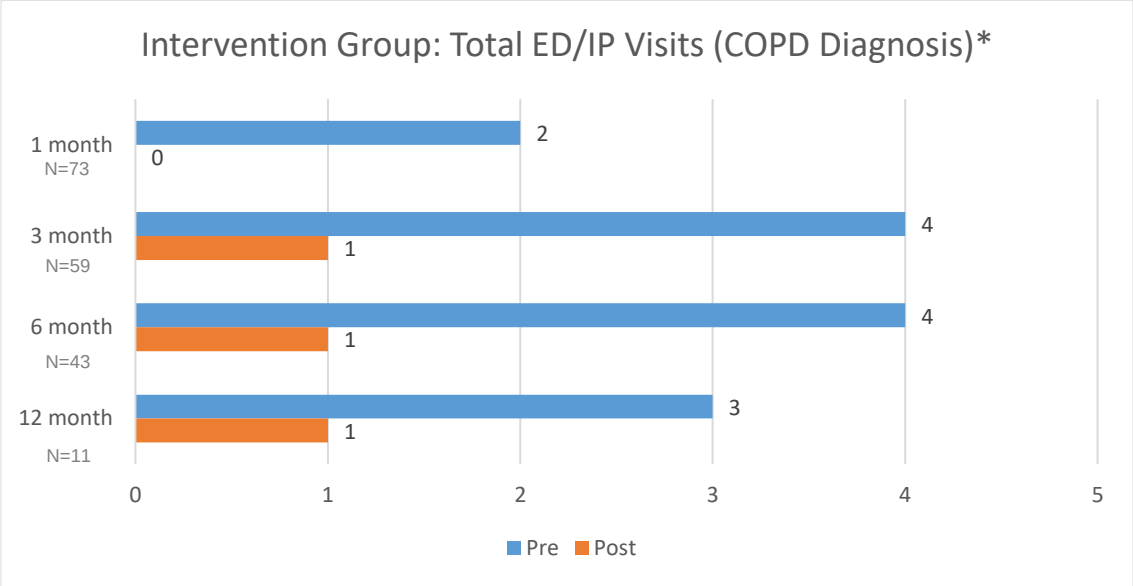
	COPD Drug Related Problems		Non-COPD Drug Related Problems
Identified (N)	103		115
Resolved (N)	47		44
Resolution %	46%		38%



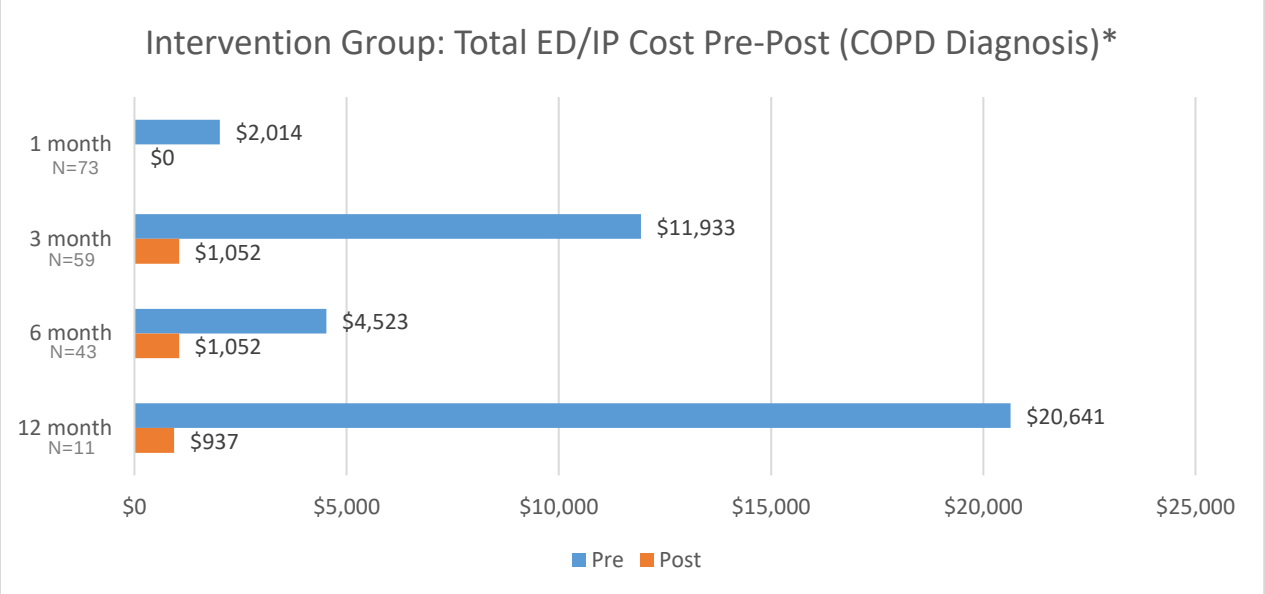


Objective 3: Reduce hospitalizations inpatient (IP) and ER visits (where COPD is the primary diagnosis) in patients who complete the intervention by a pharmacist, compared to the same patient 6 (12) months prior to enrollment.

Visits: The table below shows the total number of inpatient (IP) and emergency department (ED) visits with a primary diagnosis of COPD for the intervention group.



Costs: The table below shows the total costs for the inpatient (IP) and emergency department (ED) visits with a primary diagnosis of COPD for the intervention group.



*Please note that number of patients within each time period's analysis does change based on their enrollment date and availability of claims data in CRISP.

***Objective 4*: Achieve an average rating between satisfied or highly satisfied by patients completing one or more e-health visits during the project period.**

Program Satisfaction: The following three questions were used to evaluate overall program satisfaction. The percentage of responses to each question are seen below and their correlated mean score.

N=48

Q12: Did you feel that all of your concerns were addressed during the telehealth visit?	Percentages	Mean Score
All of my concerns were addressed	95.83%	0.96
Most of my concerns were addressed	4.17%	0.03
Some of my concerns were addressed	0.00%	0.00
None of my concerns were addressed	0.00%	0.00
	Question 12 average	99%

N=48

Q13: Did you feel the telehealth visit was more convenient than a face-to-face visit?	Percentages	Mean Score
Definitely yes	50.00%	0.50
Probably yes	25.00%	0.17
Probably no	14.58%	0.05
No	8.33%	0.00
	Question 13 average	72%

N=47

Q18: Would you like to have a telehealth visit in the future?	Percentages	Mean Score
Definitely	63.83%	0.64
Probably	23.40%	0.16
Maybe	10.64%	0.04
No	2.13%	0.00
	Question 18 average	83%

Total Mean Satisfaction Score
84%
Highly Satisfied

Technology Satisfaction: The following three questions were used to evaluate overall patient technology satisfaction. The percentage of responses to each question are seen below and their correlated mean score.

N=45

Q8: How complicated was it to use the audio-visual connect for your telehealth visit?	Percentages	Mean Score
Not complicated at all	88.89%	0.89
Slightly complicated	6.67%	0.04
Moderately complicated	0.00%	0.00
Very complicated	4.44%	0.00
	Question 8 average	93%

N=45

Q9: Did you have difficulty hearing or seeing your provider during the telehealth visit?	Percentages	Mean Score
No	82.22%	0.82
Very Little	8.89%	0.06
Some	11.11%	0.04
A great deal	0.00%	0.00
	Question 9 average	92%

N=47

Q17: Did you experience technical problems during the telehealth visit?	Percentages	Mean Score
No	85.11%	0.85
Some minor issues	14.89%	0.10
Significant issues	2.13%	0.01
I could not complete the telehealth visit	0.00%	0.00
	Question 17 average	96%

Total Mean Satisfaction Score
94%
Highly Satisfied

Grade Breakdown	***Level of Satisfaction***
0% to 33%	Not Satisfied
34% to 68%	Satisfied
69% to 100%	Highly Satisfied

Intervention Group VS Comparison Group:

A comparison group was identified using several steps. From the Crisp Reporting System (CRS), all patients attributed to the Transform Health MD population (Medicare FFS insurance) at the Easton, Denton and Centreville primary care offices were selected. Using Crisp's CCS categories, members with a "disease of the respiratory system" from the three locations were exported. Of note, members with a COPD diagnosis are included in this CCS category, but this category will also include members with other respiratory conditions.

Members from the data export were then selected at random to match similar ages and genders of the intervention group. Once a cohort of 73 patients was finalized, the panel was randomly assigned the same "enrollment" dates as the intervention group. This the same number of members were eligible for analysis.

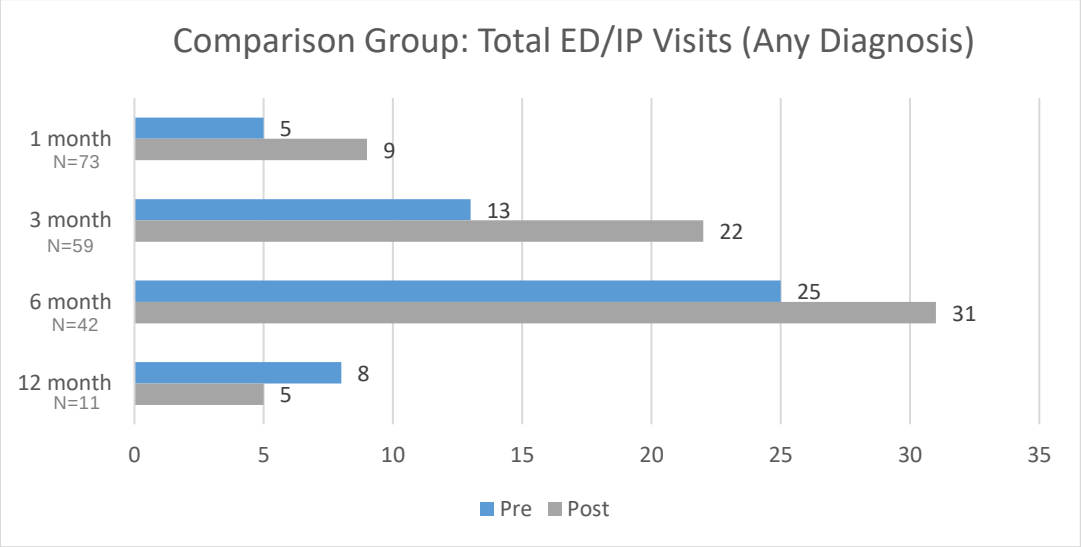
Eligible Cohort for analysis in CRISP	
1 month	73
3 months	59
6 months	43
12 months	11

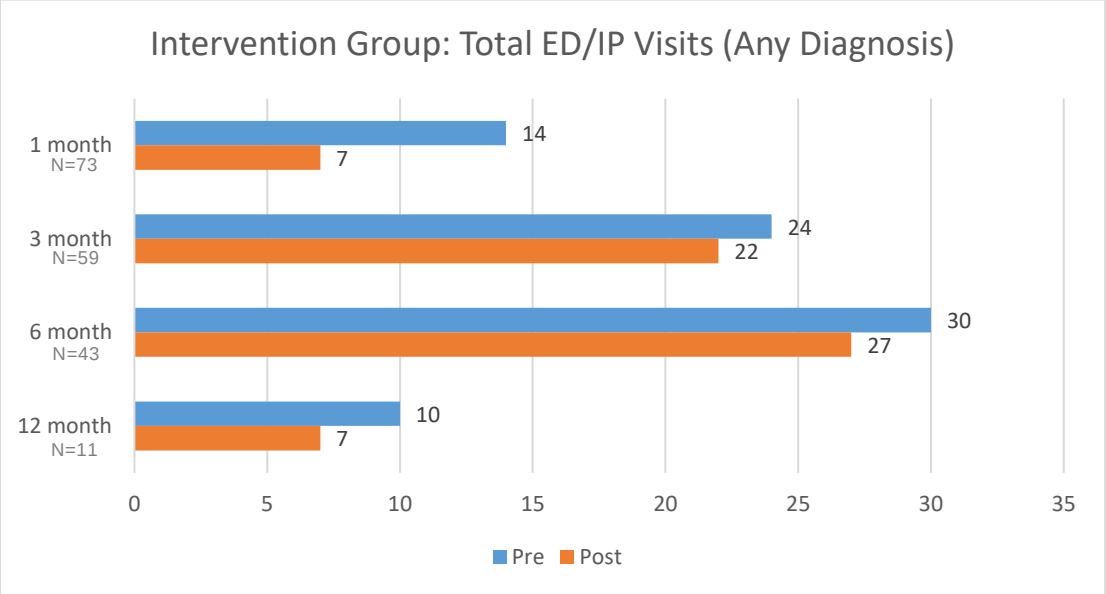
COPD - Related Data:

The selected comparison group did not have any identified COPD-related IP/ED visits within the given comparison intervals. The intervention group's COPD-related data was presented above.

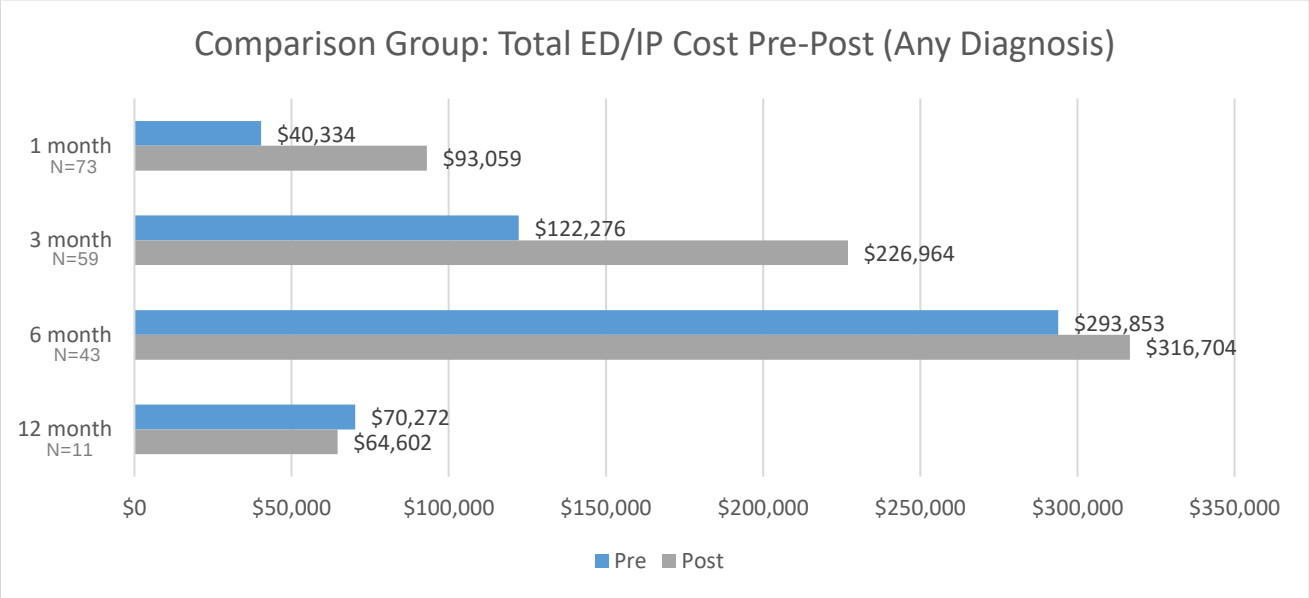
ED/IP Visits for ALL Diagnosis:

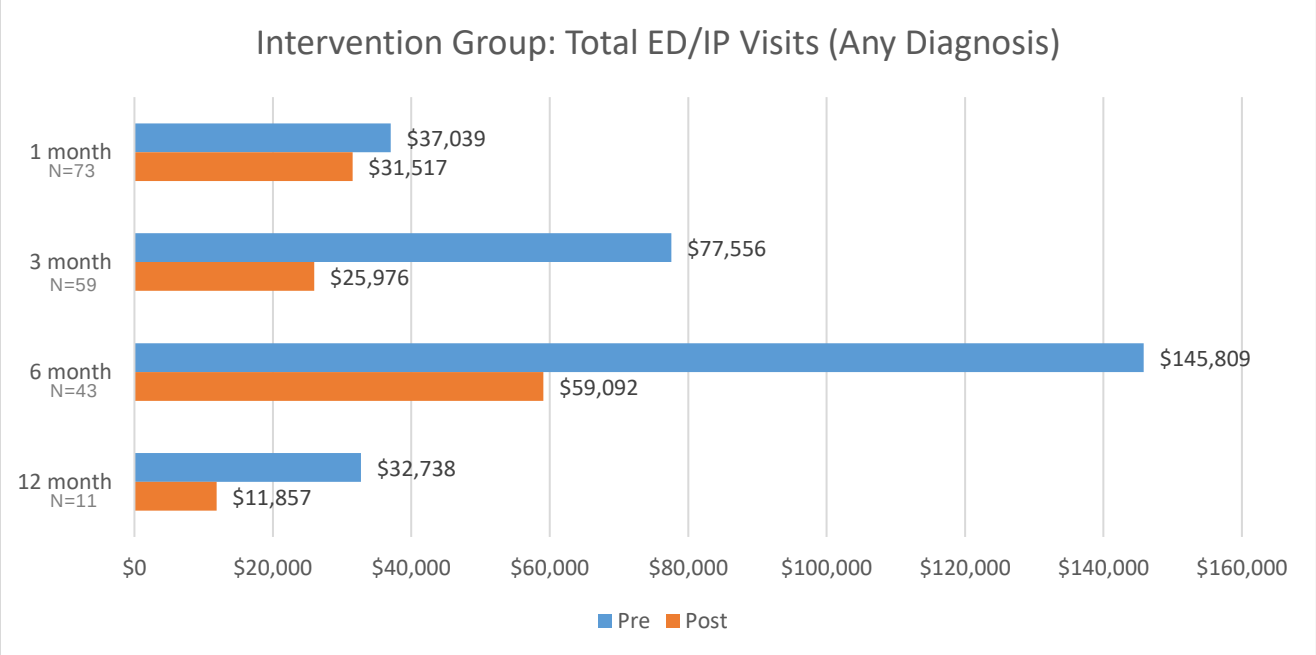
Visits:



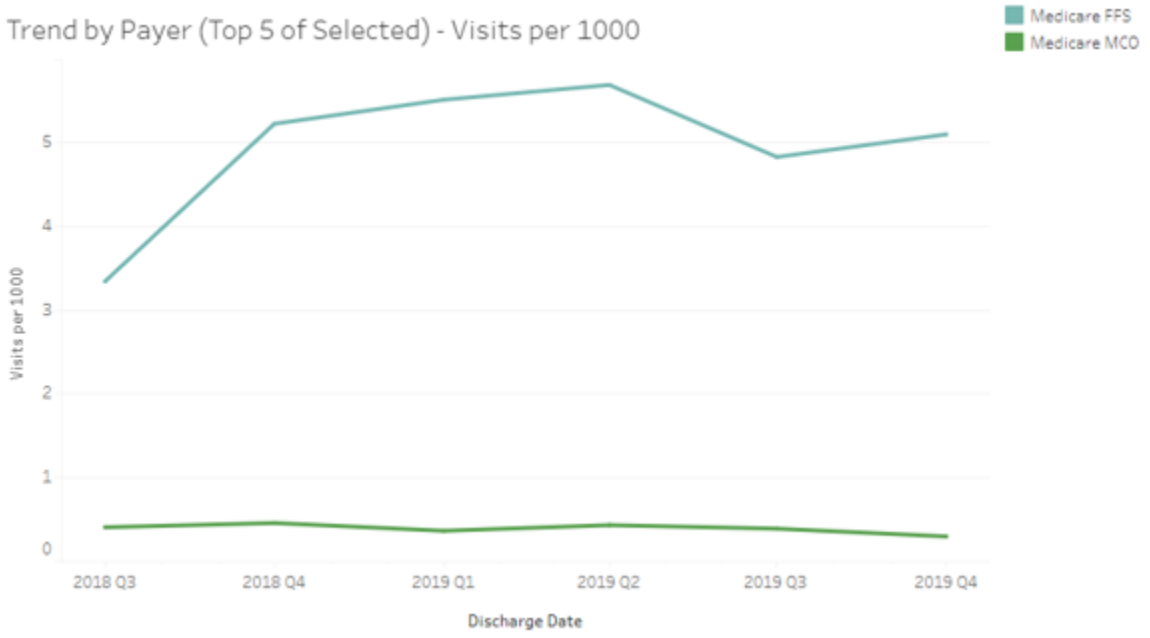


Costs:

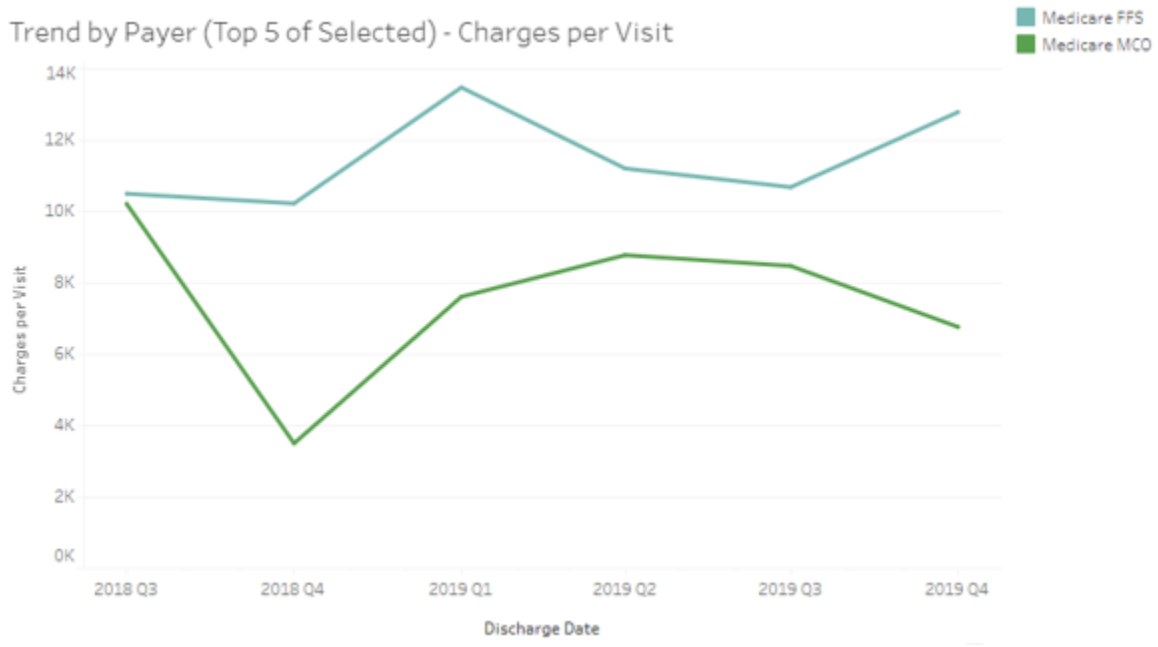

Comparison Group: Total ED/IP Cost Pre-Post (Any Diagnosis)
1 month
N=73
$40,334
$93,059
3 month
N=59
$122,276
$226,964
6 month
N=43
$293,853
$316,704
12 month
N=11
$70,272
$64,602
$0
$50,000
$100,000
$150,000
$200,000
$250,000
$300,000
$350,000
Pre
Post


Intervention Group: Total ED/IP Visits (Any Diagnosis)
1 month
N=73
$37,039
$31,517
3 month
N=59
$77,556
$25,976
6 month
N=43
$145,809
$59,092
12 month
N=11
$32,738
$11,857
$0
$20,000
$40,000
$60,000
$80,000
$100,000
$120,000
$140,000
$160,000
Pre
Post

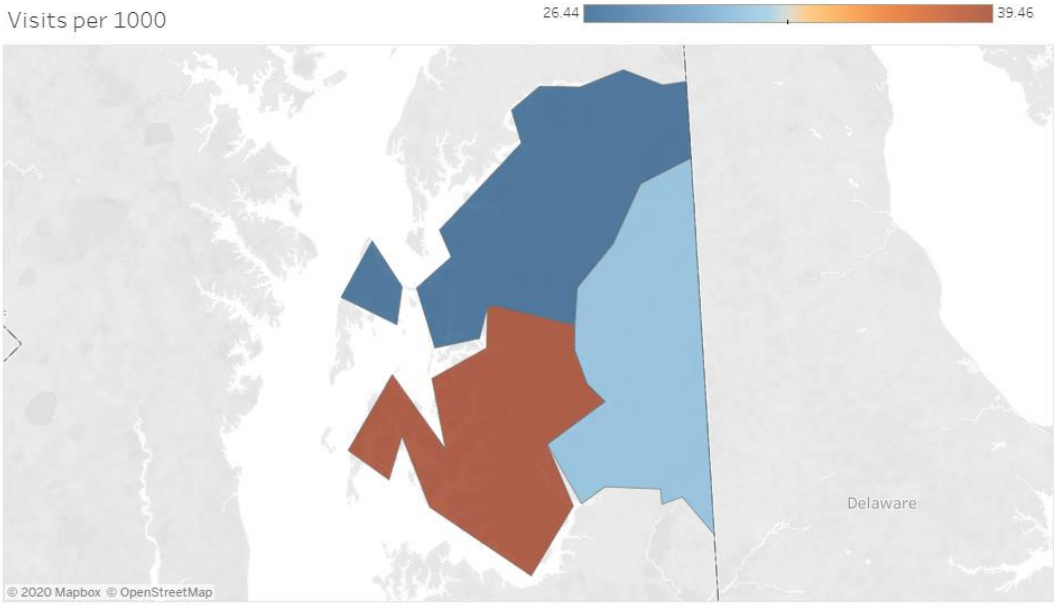
Trend IP/ED visits/1000 in patients with COPD: (note these visits may or may not have been COPD related)



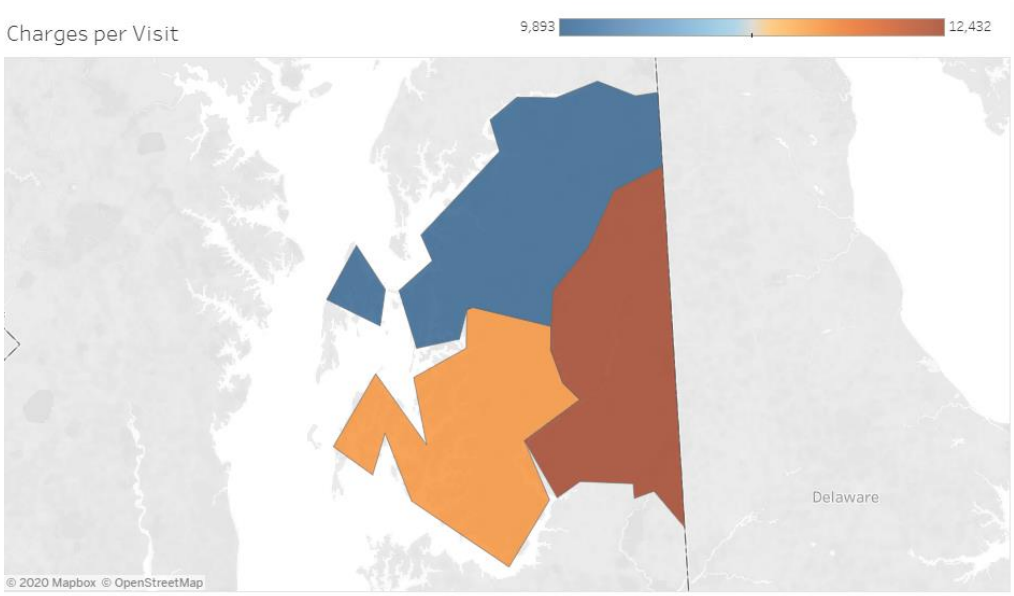
Trend IP/ED charges/visit in patients with COPD: (note these visits may or may not have been COPD related)



County level data of patients with a COPD diagnosis: (note these visits may or may not have been COPD related)



	Visits	Patients	Charges	Population	Selected Measure Visits per 1000
State	120,609	57,017	$1,603,677,974	5,773,552	21
Caroline County	1,040	503	$12,929,224	33,066	31
Queen Anne's County	1,264	609	$12,504,485	47,798	26
Talbot County	1,491	650	$17,288,463	37,782	39



	Visits	Patients	Charges	Population	Selected Measure Charges per Visit
State	120,609	57,017	$1,603,677,974	5,773,552	13,297
Caroline County	1,040	503	$12,929,224	33,066	12,432
Queen Anne's County	1,264	609	$12,504,485	47,798	9,893
Talbot County	1,491	650	$17,288,463	37,782	11,595

Appendix B: Final Deliverable Prepared by CCPS

UTILIZATION MEASURE *Number of speech and language teletherapy encounters completed successfully compared to number teletherapy encounters scheduled*					
	Term 1 (Apr - Jun 2019)	Term 2 (Aug 2019)	Term 3 (Sep - Nov 2019)	Term 4 (Nov 2019 - Jan 2020)	Term 5 (Jan - Mar 2020)
Unique students receiving services	19	2	41	39	39
Sessions scheduled	103	19	146	214	366
Sessions completed	70	16	103	145	263
Sessions missed	33	3	43	69	103
Percent sessions completed	68%	84%	71%	68%	72%
Average all terms	*72%*				

OUTCOMES MEASURE *Student progress on quarterly speech and language IEP goals/objectives from beginning of academic term*							
Progress on IEP Goals	**Speech and Language Teletherapy Group** *Number of Students*						
	Term 1 (Apr - Jun 2019)	Term 2 (Aug 2019)	Term 3 (Sep - Nov 2019)	Term 4 (Nov 2019 - Jan 2020)	Term 5 (Jan - Mar 2020)	Total Students	% of Total
5 - Achieved	0	0	8	12	5	25	18%
4 - Making Sufficient Progress	19	2	29	20	30	100	71%
3 - Not Making Sufficient Progress	0	0	3	3	4	10	7%
2 - Newly Introduced Skill	0	0	1	4	0	5	4%
1 - Not Introduced	0	0	0	0	0	0	0%
0 - No data	0	0	0	0	0	0	0%
Total Students	*19*	*2*	*41*	*39*	*39*	*140*	*100%*
Progress on IEP Goals	**Control Group** *Number of Students*						
	Term 1 (Apr - Jun 2019)	Term 2 (Aug 2019)	Term 3 (Sep - Nov 2019)	Term 4 (Nov 2019 - Jan 2020)	Term 5 (Jan - Mar 2020)	Total Students	% of Total
5 - Achieved	2	0	3	5	6	16	11%
4 - Making Sufficient Progress	15	2	36	34	32	119	85%
3 - Not Making Sufficient Progress	0	0	0	0	0	0	0%
2 - Newly Introduced Skill	2	0	2	0	1	5	4%
1 - Not Introduced	0	0	0	0	0	0	0%
0 - No data	0	0	0	0	0	0	0%
Total Students	*19*	*2*	*41*	*39*	*39*	*140*	*100%*

SATISFACTION MEASURE

Satisfaction ratings from June 2019 through March 2020

Student satisfaction ratings from June 2019 *Number of Students*					
	Extremely Satisfied	Satisfied	Moderately Satisfied	Dissatisfied	Extremely Dissatisfied
How much do you like receiving Speech Therapy services in your current format (computer/teletherapy)?		2			
How satisfied are you with Speech Therapy in helping you communicate or learn better?		1		1	
	Yes	No	Maybe		
Would you like to continue with Speech Therapy in the current format (computer/teletherapy)	1		1		

Student satisfaction ratings from January 2020 *Number of Students*			
	Yes	No	I don't know
Do you like doing Speech class on the computer?	24	5	5
Do you like Speech class?	24	5	7

Student satisfaction ratings from March 2020

Among the six students who completed the survey:

- 83 percent indicated they were Satisfied – Very Satisfied with speech therapy services using a computer.
- 50 percent indicated they would like to continue using the computer to receive speech therapy.
- 100 percent indicated that speech therapy using a computer has helped them with their IEP goals.

Parent satisfaction ratings from September 2019 to January 2020

	A	B	C	D	E	F	G	H
1	Start time	Completion time	Email	This school year, how satisfied are you with your child's progress on his/her Speech/Language goals?	This school year, how satisfied are you with communications from your child's Speech/Language Pathologist?	This school year, how satisfied are you with your child's Speech/Language Pathologist's participation in IEP meetings?	This school year, how satisfied are you with the current delivery model of your child's Speech/Language Therapy?	Your child received Teletherapy Speech/Language Services (speech therapy through a computer connection), would you recommend this method of speech/language services to other parents?
2	9/26/19 16:19:41	9/26/19 16:20:26	anonymous	4) Very satisfied	4) Very satisfied	3) Somewhat satisfied	3) Satisfied	3) Somewhat likely
3	1/6/20 12:48:50	1/6/20 12:50:12	anonymous	5) Extremely satisfied	5) Extremely satisfied	5) Extremely satisfied	5) Extremely satisfied	5) Extremely likely
4	1/7/20 20:31:19	1/7/20 20:32:03	anonymous	4) Very satisfied	5) Extremely satisfied	4) Very satisfied	4) Very satisfied	3) Somewhat likely
5	1/9/20 9:51:51	1/9/20 9:52:29	anonymous	4) Very satisfied	3) Satisfied	Not applicable. We ha	3) Satisfied	4) Very likely
6	1/17/20 14:19:47	1/17/20 14:21:37	anonymous	3) Satisfied	4) Very satisfied	Not applicable. We ha	3) Satisfied	4) Very likely

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