PROGRAM PROFILE

COPD CARE Academy: Design of Purposeful Training Guided by Implementation Strategies

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Background: Clinical training content for real-world care delivery is important to promote high-quality care. Clinical training promotes knowledge acquisition and additional implementation strategies are needed to translate those acquired skills into practice-based changes.
Observations: The Chronic Obstructive Pulmonary Disease Coordinated Access to Reduce Exacerbations (COPD CARE) Academy is a training initiative implemented at ≥ 49 US Department of Veterans Affairs (VA) medical centers. The Academy provides training on the implementation of COPD CARE programs and promotes complex care transitions. The Academy offers implementation strategies for local champions to leverage VA and academic institution partnerships.
Conclusions: The COPD CARE Academy represents an interprofessional collaboration among frontline clinicians and VA leadership to design a training program using quality improvement methodology for better care for patients with COPD.

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Quality improvement (QI) initiatives within the US Department of Veterans Affairs (VA) play an important role in enhancing health care for veterans.[1,2] While effective QI programs are often developed, veterans benefit only if they receive care at sites where the program is offered.[3] It is estimated only 1% to 5% of patients receive benefit from evidence-based programs, limiting the opportunity for widespread impact.[4,5]

The Chronic Obstructive Pulmonary Disease (COPD) Coordinated Access to Reduce Exacerbations (CARE) Academy is a national training program designed to promote the adoption of a COPD primary care service.[6] The Academy was created and iteratively refined by VA staff to include both clinical training emphasizing COPD management and program implementation strategies. Training programs such as COPD CARE are commonly described as a method to support adoption of health care services, but there is no consensus on a universal approach to training design.

This article describes COPD CARE training and implementation strategies (Table). The Academy began as a training program at 1 VA medical center (VAMC) and has expanded to 49 diverse VAMCs. The Academy illustrates how implementation strategies can be leveraged to develop pragmatic and impactful training. Highlights from the Academy's 9-year history are outlined in this article.

COPD CARE

One in 4 veterans have a COPD diagnosis, and the 5-year mortality rate following a COPD flare is ≥ 50%.[7,8] In 2015, a pharmacy resident designed and piloted COPD CARE, a program that used evidence-based practice to optimize management of the disease.[9,10]

The COPD CARE program is delivered by interprofessional team members. It includes a postacute care call completed 48 hours postdischarge, a wellness visit (face-to-face or virtual) 1 month postdischarge, and a follow-up visit scheduled 2 months postdischarge. Clinical pharmacist practitioners (CPPs) prescribe and collaborate with the COPD CARE health care team. Evidence-based practices embedded within COPD CARE include treatment optimization, symptom evaluation, severity staging, vaccination promotion, referrals, tobacco treatment, and comorbidity management.[11-16] The initial COPD CARE pilot demonstrated promising results; patients received timely care and high rates of COPD best practices.[11]

TABLE. Implementation Strategies Integrated Within the Academy Training Program

Strategy	Description
Implementation blueprint	Develop formal implementation blueprint with training goals, scope, and key milestones to guide implementation
Learning collaborative	Facilitate peer-mentorship groups to navigate content application
Implementation facilitation	Promote diverse perspectives and problem-solving to support individuals
Prepare champions	Elevate individuals leading implementation initiatives of clinical training content
Promote adaptability	Provide opportunities for champions to share adjustments that meet local needs
Dynamic training	Provide live training, with clinic visit examples and case-based discussion
Train-the-trainer	Allow local experts to tailor training directly to learners
Quality monitoring	Monitoring local practice and implementation
Audit and feedback	Use performance metrics to improve program delivery
Build a coalition	Cultivate professional partnerships for team-based care delivery optimization
Academic partnership	Partner with national program offices for iterative development, revision, and implementation

Academy Design and Implementation

Initial COPD CARE training was tailored to the culture, context, and workflow of the William S. Middleton Memorial Veteran's Hospital in Madison, Wisconsin. Further service expansion required integration of implementation strategies that enable learners to apply and adapt content to fit different processes, staffing, and patient needs.

Formal Implementation Blueprint

A key aspect of the Academy is the integration of a formal implementation blueprint that includes training goals, scope, and key milestones to guide implementation. The Academy blueprint includes 4 phased training workbooks: (1) preimplementation support from local stakeholders; (2) integration of COPD CARE operational infrastructure into workflows; (3) preparing clinical champions; and (4) leading clinical training (Figure 1). Five weekly 1-hour synchronous virtual discussions are used for learning the workbook content that include learning objectives and opportunities to strategize how to overcome implementation barriers.

Promoting and Facilitating Implementation

As clinicians apply content from the Academy to install informatics tools, coordinate clinical training, and build relationships across service lines, implementation barriers may occur. A learning collaborative allows peer-mentorship and shared problem solving. The Academy learning collaborative includes attendees across multiple VAMCs, allowing for diverse perspectives and cross-site learning. Within the field of dissemination and implementation science, this process of shared problem-solving to support individuals is referred to as implementation facilitation.[17] Academy facilitators with prior experience provide a unique perspective and external facilitation from outside local VAMCs. Academy learners form local teams to engage in shared decision-making when applying Academy content. Following Academy completion, learning collaboratives continue to meet monthly to share clinical insights and operational updates.

Local Champions Promote Adaptability

One or more local champions were identified at each VAMC who were focused on the implementation of clinical training content and operational implementation of Academy content.[18] Champions have helped develop adaptations of Academy content, such as integrating telehealth nursing within the COPD CARE referral process, which have become new best practices. Champions attend Academy sessions,

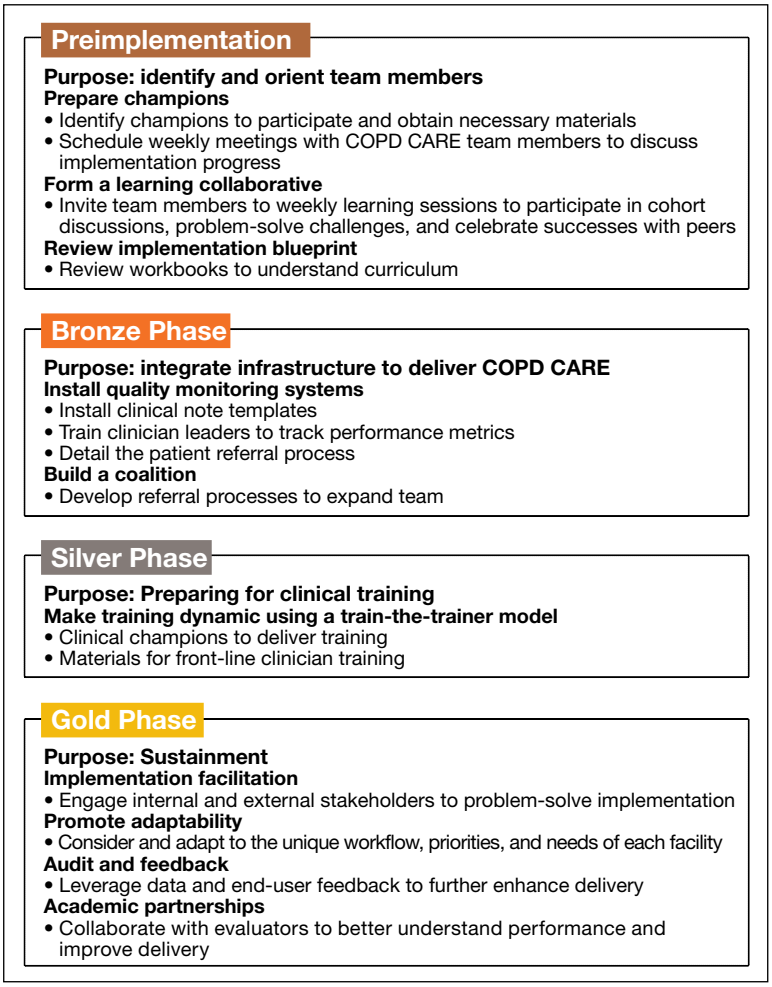

FIGURE 1. The Academy formal implementation blueprint.
Abbreviation: COPD CARE, Chronic Obstructive Pulmonary Disease Coordinated Access to Reduce Exacerbations.

which provide an opportunity to share adaptations to meet local needs.[19]

Using a Train-The-Trainer Model

Clinical training was designed to be dynamic and included video modeling, such as recorded examples of CPPs conducting COPD CARE visits and video clips highlighting clinical content. Each learner received a clinical workbook summarizing the content. The champion shares discussion questions to relate training content to the local clinical practice setting. The combination of live training, with videos of clinic visits and case-based discussion was intended to address differing learning styles. Clinical training was delivered using a train-the-trainer model led by the local champion, which allows clinicians with expertise to tailor their training. The use of a train-the-trainer model was intended to promote local buy-in and was often completed by frontline clinicians.

Informatics note templates provide clinicians with information needed to deliver training content during clinic visits. Direct hyperlinks to symptomatic scoring tools, resources to promote evidence-based medication optimization, and patient education resources were embedded within the electronic health record note templates. Direct links to consults for COPD referrals services discussed during clinical training were also included to promote ease of care coordination and awareness of referral opportunities. The integration of clinical training with informatics note template support was intentional to directly relate clinical training to clinical care delivery.

Audit and Feedback

To inform COPD CARE practice, the Academy included informatics infrastructure that allowed for timely local quality monitoring. Electronic health record note templates with embedded data fields track COPD CARE service implementation, including timely completion of patient visits, completion of patient medication reviews, appropriate testing, symptom assessment, and interventions made. Champions can organize template installation and integrate templates into COPD CARE clinical training. Data are included on a COPD CARE implementation dashboard.

An audit and feedback process is allows for the review of performance metrics and development of action plans.[20,21] Data reports from note templates are described during the Academy, along with resources to help teams enhance delivery of their program based on performance metrics.

Building a Coalition

Within VA primary care, clinical care delivery is optimized through a team-based coalition of clinicians using the patient aligned care team (PACT) framework. The VA patient-centered team-based care delivery model, patient facilitates coordination of patient referrals, including patient review, scheduling, and completion of patient visits.[22]

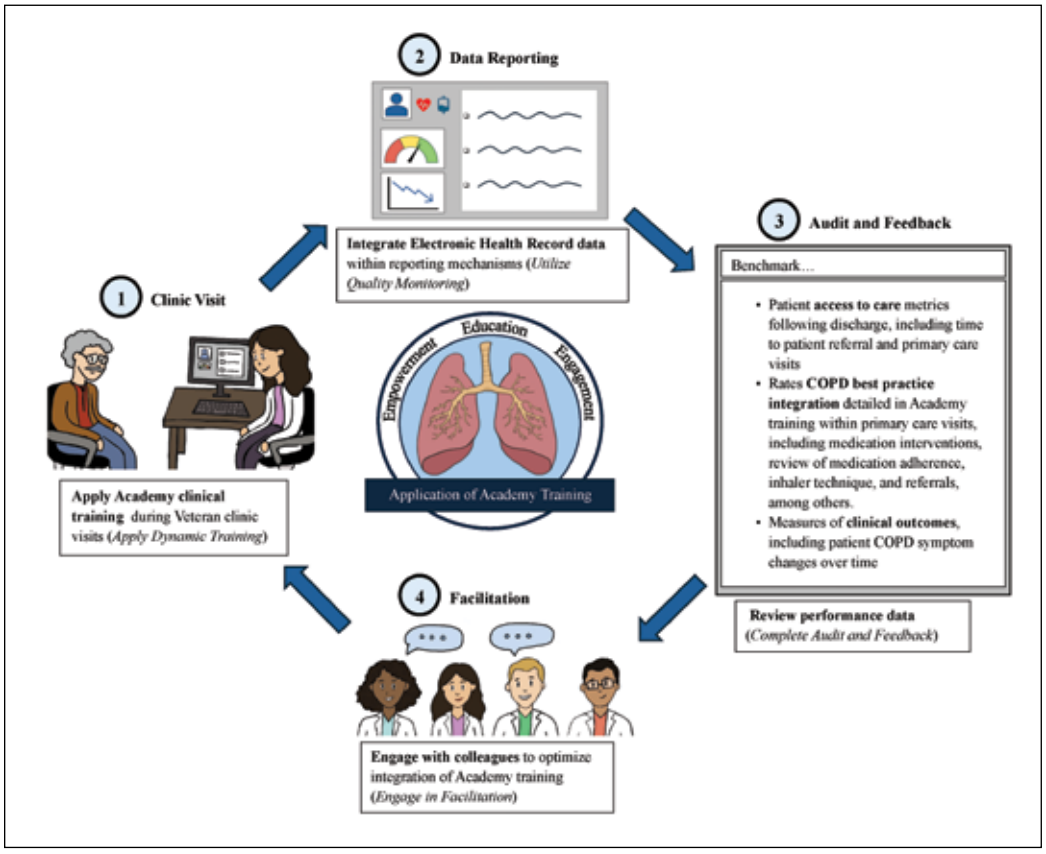

FIGURE 2. Implementation strategies were applied to (1) integrate Academy training within patient visits (2) integrate electronic health record note templates to provide data reporting (3) stratify data results by facility to allow for audit and feedback opportunities and (4) promote team-based discussions through facilitation with internal and external stakeholders.
Abbreviation: COPD, chronic obstructive pulmonary disease.

Partnerships with VA Pharmacy Benefits Manager, VA Diffusion of Excellence, VA Quality Enhancement Research Initiative, VA Office of Pulmonary Medicine, and the VA Office of Rural Health have facilitated COPD CARE successes. Collaborations with VA Centers of Innovation helped benchmark the Academy's impact. An academic partnership with the University of Wisconsin-Madison was established in 2017 and has provided evaluation expertise and leadership as the Academy has been iteratively developed, and revised.

Preliminary Metrics

COPD CARE has delivered > 2000 visits. CPPs have delivered COPD care, with a mean 9.4 of 10 best practices per patient visit. Improvements in veteran COPD symptoms have also been observed following COPD CARE patient visits.

DISCUSSION

The COPD CARE Academy was developed to promote rapid scale-up of a complex, team-based COPD service delivered during veteran care transitions. The implementation blueprint for the Academy is multifaceted and integrates both clinical-focused and implementation-focused infrastructure to apply training content.[23] A randomized control trial evaluating the efficacy of training modalities found a need to expand implementation blueprints beyond clinical training alone, as training by itself may not be sufficient to change behavior.[24] VA staff designed the Academy using clinical- and implementation-focused content within its implementation blueprint. Key components included leveraging clinical champions, using a train-the-trainer approach, and incorporating facilitation strategies to overcome adoption barriers.

Lewis et al emphasize matching implementation strategies to barriers within VA staff who identify care coordination as a key challenge.[23] The informatics infrastructure developed for Academy learners, including standardized note templates, video modeling examples of clinic visits, and data capture for audit and feedback, was designed to complement clinical training and standardize service workflows (Figure 2). There are opportunities to explore how to optimize technology in the Academy.

While Academy clinical training specifically focuses on COPD management, many implementation strategies can be considered to promote care delivery services for other chronic conditions. The Academy blueprint and implementation infrastructure, are strategies that may be considered within and outside the federal health care system. The opportunity for adaptations to Academy training enables clinical champions to promote tailored content to the needs of each unique VAMC. The translation of Academy implementation strategies for new chronic conditions will similarly require adaptations at each VAMC to promote adoption of content.

CONCLUSIONS

COPD CARE Academy is an example of the collaborative spirit within VA, and the opportunity for further advancement of health care programs. The VA is a national leader in Learning Health Systems implementation, in which "science, informatics, incentives and culture are aligned for continuous improvement and innovation."[25,26] There are many opportunities for VA staff to learn from one another to form partnerships between leaders, clinicians, and scientists to optimize health care delivery and further the VA's work as a learning health system.

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Disclaimer

The opinions expressed herein are those of the authors and do not necessarily reflect those of *Federal Practitioner,* Frontline Medical Communications Inc., the US Government, or any of its agencies.

Ethics and consent

This evaluation was deemed quality improvement by the Health Sciences Institutional Review Board of the principal evaluator using the University of Wisconsin-Madison Program Evaluation Self-Certification Tool.

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