Preface

On February 1, 2012, they came, and they came, and they came until it was standing room only. The word had gone out to providers at the Cincinnati Veterans Administration Medical Center that there was a meeting for everyone involved in the care of Veterans with Chronic Obstructive Pulmonary Disease (COPD). We had just been awarded a grant from the Office of Specialty Care entitled, “Patient-Centered Model for the Management of Chronic Obstructive Pulmonary Disease.” The goals for that proposal were to enhance the recognition and diagnosis of COPD and implement a Patient-Centered Model for the Management of COPD. We invited providers who we knew were interested in COPD to an inaugural planning and organizational meeting and asked them to spread the word and encourage others to attend – and they did. We planned to meet in a conference room with a capacity of 10–15 people but over thirty people attended that first meeting and we had to move to a larger room. Participants included respiratory therapists, primary care providers, pharmacists, tele-health providers, nurse practitioners, researchers, hospitalists, patient-aligned care team (PACT) members, psychologists, smoking cessation counselors, and pulmonologists. In subsequent meetings, we were joined by University of Cincinnati researchers and Jack Kues, the Dean for Continuous Professional Development.

For the next three years, we met nearly every other Wednesday morning to review what and how care was being provided to Veterans with COPD; always asking what tools, new initiatives, or process changes were needed to improve that care. We traced the course of a Veteran with unrecognized, undiagnosed airflow limitation to initial COPD diagnosis including physiologic, radiographic, and laboratory testing. We identified the most appropriate next steps for starting treatment and management of outpatient and inpatient exacerbations. We recognized that optimal management of these patients would require transitions of care between primary care and subspecialists in both outpatient and inpatient settings. Best care also included the identification of pulmonary and nonpulmonary COPD manifestations and complications that in some cases would lead to palliative and end of life care. At each step, we asked how this care could be more patient-centric. Along that journey, Folarin Sogbetun developed a Veteran-specific COPD screening questionnaire that was tested, validated, and compared with other COPD screening surveys; Bill Eschenbacher created a telespirometry program with teaching modules, quality assurance reviews, and interpretation algorithms whose success triggered funding for the purchase of spirometers for every Community Based Outpatient Clinic (CBOC) nationally; we participated in a design course at the University of Cincinnati College of Design, Architecture, Art, and Planning during which students created projects to enhance patients’ management of COPD including the visual pill box designed by Siyuan Fan and presented in Figure 8.3.

During this process, we realized that providers did not have an up-to-date, comprehensive, easily read, “how to” manual for the management of COPD despite all
the advances in COPD care that have occurred over the past 5 years. Consensus documents such as the VA-DOD Guidelines were abbreviated summaries that were rarely used. From those discussions, the concept for this volume, a COPD Primer, developed. The goal was to develop a practical book that concisely presented COPD to providers with sufficient background and explanation of the physiologic and scientific rationale for various management strategies without becoming an esoteric academic work. We hope that this COPD Primer has achieved that goal and will be a useful, practical text for practitioners and medical trainees alike.

The COPD Primer begins with an examination of what COPD is; it is really a syndrome, a constellation of historical features and clinical, physiologic, and radiographic findings. However, those elements come together in many different ways to create multiple different COPD phenotypes that are only now being recognized and used to define specific management strategies. COPD research has progressed beyond the simple classification of “blue bloaters” and “pink puffers.” Next, the epidemiology and economic consequences of COPD are reviewed. Bill Eschenbacher presents an approach to the patient with respiratory symptoms with detailed discussions of pulmonary function testing and how airflow limitation/obstruction is identified by spirometry and the use of lung imaging to identify individuals with COPD. Michael Borchers and Gregory Motz summarize current evidence implicating genetics, proteolytic imbalance, oxidative stress, inflammation, occupational and environmental exposures, and innate and adaptive immune function in the pathogenesis of COPD and the implication of these findings to future treatments. The single most important intervention in the prevention and treatment of COPD is smoking cessation. Shari Altum, Katherine Butler, and Rachel Juran present a practical approach to smoking cessation utilizing motivational interviewing in combination with pharmacologic interventions. Then, they expand upon these concepts to provide practitioners with convenient, realistic suggestions to encourage patient self-management in all aspects of COPD care and overall health. Ahsan Zafar reviews the natural history, recently described COPD phenotypes, and gender differences that clearly illustrate the broad spectrum of disease that comprises the term, COPD. The cover illustration highlights Dr. Zafar’s creative and artistic talents. The extensive nonpulmonary aspects of COPD are reviewed by Ralph Panos in an examination of COPD’s multi-organ manifestations. Next, the effect of COPD on sleep and the overlap syndrome, the concurrence of COPD and obstructive sleep apnea, and its consequences are presented. Jean Elwing examines the effect of COPD on the pulmonary vasculature with a detailed discussion of the evaluation and management of pulmonary hypertension associated with COPD. COPD’s effects on psychosocial functioning and familial interactions are presented by Mary Panos and Ralph Panos.

The focus of the Primer then shifts from manifestations to treatment with a discussion of stable COPD management. With the current plethora of devices for delivering respiratory medications, it is difficult for both patients and providers to sustain knowledge of their proper use. Aaron Mulhall presents a practical guide to correct
inhaler use that reviews all the current devices. Folarin Sogbetun then reviews the management of outpatient COPD exacerbations and Nishant Gupta discusses the approach to the patient hospitalized with COPD. Because patients with COPD often see multiple subspecialty physicians in addition to their primary care providers, interdisciplinary communication and coordination of care is essential for their management; Sara Krzywkowski-Mohn reviews the interactions between primary and specialty care for the patient with COPD with suggestions for improved communication and care coordination. Finally, advance care planning including palliative care and hospice is reviewed with a discussion of how end stage COPD affects not only the patient but also their family and social network.

This COPD Primer incorporates the knowledge that we have learned over the past several years during the development and implementation of a patient-centered model for the management of COPD. It was written with an explicit goal of assisting both the practicing provider and medical trainee in the care of patients with COPD.

We thank Magdalena Wierzchowiecka, PhD, Managing Editor, Medicine, at De Gruyter Open, Ltd. for her assistance in editing and producing this work. We are grateful for all of the collaborating authors; their energy, work, and willingness to meet deadlines and quick responses to revisions and suggestions made this COPD Primer possible. We thank all the COPD working group members who participated in three years of Wednesday morning discussions that covered the spectrum of health care from the specifics of COPD to evolving national healthcare reform. The ultimate goal of this program and this book is the improvement of care for individuals with COPD and we thank all of our patients who motivate us to improve and continually strive to provide the best possible care.

We are very appreciative and thankful for the patience and encouragement of our wives, Jean and Judy, for tolerating all these months of writing, revising, and editing. Without your forbearance, this COPD Primer would never have made it to print.

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