



# Addressing Polypharmacy with Medically Complex Patients

## Exploring the Oral Health Care Impact

By Gary L. Drahos, DDS, and Larry N. Williams, DDS

**A**s the world around us has changed due to new scientific advances, ever-changing demographics, cultural diversity and differential access to health resources, health care has tried to address these global changes as they impact the health of our patients. In the oral health care setting, according to the 2012 book, “The ADA Practical Guide to Patients with Medical Conditions,” these global changes will result in oral health care providers seeing patients with increasingly greater health complexities. In order to provide safe, coordinated care for our dental patients, we must better understand what defines a medically complex patient. As a direct result of the medical complexity, we will often find a coincidental increased complexity of the pharmacotherapy involved in the care of complex medical conditions (polypharmacy).

### Who Is a Medically Complex Patient?

The definition of the medically complex patient has changed from the past emphasis and focus on the morbidity and mortality of disease to the more current definition that focuses on the needs of the living patient and his or her ability to perform activities of daily life, according to “Definition of Serious and Complex Medical Conditions.” It further states that medically complex patients should

be provided support to increase their “happiness, social and emotional well-being, and quality of life.” As to the overall health care of the medically complex patient, the text states that this definition is further complicated by medically complex patients needing an extensive battery of medical and other support services to manage immediate medical issues, as well as preventing further negative medical outcomes.

The authors of the 2016 article, “Primary care physician insights into a typology of the complex patient in primary care,” which was published in *The Annals of Family Medicine*, found that when speaking to groups of primary care providers, the medically complex patients had four distinct aspects of complexity to include:

1. Multiple known or unexplained physical symptoms, illnesses and conditions
2. Adverse socioeconomic factors impacting health outcomes, such as the inability to afford medications or lack of access to consistent care
3. Mental health issues such as anxiety, depression, cognitive decline or grieving
4. Difficult patient behaviors and literacy that impact the patient’s ability to comprehend or engage the steps needed to address the complex condition





## Preparing to Treat Medically Complex Patients

As dentists, we are concerned about the medical conditions affecting our patients, especially those with complex medical problems. When you look at American Academy of Oral Medicine's 2009 "Clinician's Guide to Treatment of Medically Complex Dental Patients," the main focus is on the illnesses affecting our patients and the impact on oral health care. The authors stress that dentists should be aware of these complex medical conditions and have a full understanding of which illnesses and conditions manifest in the oral cavity. Then, the dental team can aid in the overall care for the medically complex patient. The authors note that "virtually any medical condition may affect dental treatment and vice versa." In keeping with the medical definitions noted previously, they also state that dentists must approach patient care in a comprehensive manner, with a focus on the patient's overall well-being.

One mechanism being used in health education today to better prepare dental students for caring for medically complex patients is a focus on interprofessional education (IPE). For example, Midwestern University College of Dental Medicine-Illinois has incorporated into its curriculum the One Health IPE program. This program has a strategic

focus on breaking down "the cultural isolation between the professional health disciplines." The One Health initiative also looks at uniting future health care professionals in addressing the complexity of health care, as well as incorporating an emphasis on health care being impacted by ecosystems. This initiative is also designed to help tomorrow's health care providers prepare for issues such as dealing with caregivers, developing communication skills with other health care professionals and understanding the impact of the environment on health care outcomes. Just as our patients enter our practices with complex medical needs, the education landscape has expanded to address that complexity.

As stated previously, the medically complex patient often brings an equally serious issue to the practice of dentistry: multiple levels of pharmacotherapy. This means that the dentist not only deals with the medical issues that complicate oral health care, but it also requires that he or she be aware of the impact medications can have on the oral and systemic health of the patient being seen. Often referred to as "polypharmacy," it can be defined as "the simultaneous use of multiple drugs by a single patient, for one or more conditions," according to "Preventing Polypharmacy in Older Adults," published in the journal *American Nurse Today* in 2010. In the general dentist office and dental school clinic, a rapidly growing number of patients are presenting for treatment with increased number of medications being taken (both prescription and over-the-counter). Where do we start in our medical history analysis when a patient brings a bag filled with medications to the appointment, and how do we factor this analysis into providing safe dental treatment?

## Developing an Approach to Analyzing Polypharmacy Patients

Of equal importance is making sure our patients are on legitimate regimens for their reported medical conditions. Sometimes it seems like a daunting task to wade through this list of medications and make some sense of it all. Developing a systematic, reproducible approach to analyzing polypharmacy patients is essential to patient dental treatment. Consider the steps below in taking this approach:

- **Perform a thorough oral medical history.** Paper checkbox forms are much less likely to reveal medical conditions that are not reported. Interviewing patients to obtain their medical history can lead to discovering other medical conditions (past and present) that they may have experienced, according to "Clinical Methods: The History, Physical, and Laboratory Examinations." Taking a thorough medical history also allows us to establish rapport with the patients and promote the idea that we are truly interested in their health. During this phase, all medications that the patient is taking (along with dose and frequency) will be recorded in the health record, along with all reported medical conditions, hospitalizations, physician contact numbers and a summarization of medical history.

- **Correlate each medication that the patient is taking with a reported systemic problem or disease and organize the medications that are taken for each condition.** There has to be a reason for taking medications and, many times, this strategy may lead to discovering unarticulated medical conditions. (For instance, this question may arise: “Why are you using albuterol and not reporting asthma as a medical condition?”) If such a correlation cannot be made and the patient is taking medication for conditions that they are unaware they have, a medical consultation is needed. Certain medication should raise red flags and be especially scrutinized, such as COUMADIN<sup>®</sup>, albuterol, hypertension medications and chronic pain suppressant use. Of equal importance are various vitamin or herbal substances that can exert powerful effects and enhance or counteract prescription medications or affect dental treatment. During this phase of medical history-taking, be as accurate as possible. Request that the patients bring in original medications containers so that accurate medication directions can be recorded. At the end of this phase, all medication that the patient is taking should be correlated with a medical condition. The regimen that the patient is on should conform to manufacturers’ suggested dosing.
- **Select an appropriate drug search resource base to use as an aid in determining drug interactions and dental precautions.** Free online search engines can usually provide information concerning drug uses, doses, frequency and precautions for drug use.
- **Sort medications and conditions according to their impact on providing safe dental treatment.** Cardiovascular conditions that require use of blood thinners, heart arrhythmias, conditions that require premedication prior to dental treatment, chronic illnesses requiring daily pain suppressants, chronic infectious diseases, cancer therapy or hypertension medications are a few examples of medications that have oral implications and require consideration before dental treatment proceeds.
- **Determine any redundant or overprescribed medications.** Analyze if your patient is taking medications according to suggested treatment regimens and obtain physician consultations if medication directions seem inappropriate or vague. Current health insurance plans can sometime require a change in primary physicians who may prescribe different medications for the previously treated systemic disease. Patients


sometimes have up to three months’ medication left from the previous provider and are taking this medication along with the new medication. In reality, dentists may be the first health care provider to sort out the entire medication regimen for the patients and discover these redundancies. We can often determine if the patients are compliant with taking their medications by thorough questioning and analyzing refill dates of the prescriptions they present. Noncompliance with medications regimens is a huge problem possibly due to drug price, denial of illness, drug physical properties and forgetfulness.

- **Search for oral conditions that may be a result of the medication taken.** For example, some diabetes medications may have oral appearances similar to lichen planus. Hypertension, psychotropic and thyroid medications can cause xerostomia, which has many oral health implications.
- **Develop an emergency plan that is specific for common problems that may occur in the dental chair for the systemic condition or medication that the patient takes.** Conditions such as diabetes complications (hypoglycemia due to improper medication use), bronchospasms from asthma attacks, excessive bleeding from blood thinner use and dizziness from hypotension caused by high blood pressure medications all may require emergency procedures to be performed. Anticipation and preparedness are important.
- **Care must be taken when prescribing medications for our patient so that they do not interfere with other medications that have been prescribed or existing medical conditions.** An example is pain suppressants that we prescribe often can have enhancing or additive effects on anti-coagulants that the patient takes for cardiovascular problems.

In addition, always be prepared to:

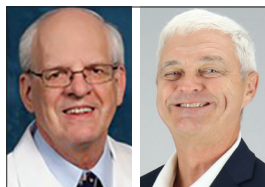
- Consult with the patient’s primary providers if anything seems out of order.
- Give advice on disposal of medications no longer used or expired.
- Advise patients on how to properly take or use their medications and conduct home testing to determine disease control. Blood pressure, diabetes and smoking cessation are a few of the systemic conditions that would benefit from constant home supervision.

Dentists need to be the sentinel for their patients who present with complex medical conditions and histories and those who are taking multiple medications. Correlating the complex medical conditions of our patients, their pharmacotherapy and their oral health needs has to be a major factor in the care we provide. ♦



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Larry N. Williams, DDS, will present the webinar, “Addressing Polypharmacy for Medically Complex Dental Patients,” Oct. 12. To learn more and to register for this continuing education opportunity, visit [www.agd.org/olc](http://www.agd.org/olc).



Gary L. Drahos, DDS, a registered pharmacist, is an associate professor in the preclinical program at Midwestern University College of Dental Medicine-Illinois. Larry N. Williams, DDS, is associate professor at Midwestern University College of Dental Medicine-Illinois. To comment on this article, email [impact@agd.org](mailto:impact@agd.org).