The evidence-based movement has helped focus dentistry on the importance of a sound scientific foundation for clinical decision making. In fact, the American Dental Association (ADA) Center for Evidence-Based Dentistry describes "current, clinically relevant evidence" as 1 of the 3 pillars of effective decision making in practice. Science has indeed improved dental practice, and biomedical research will continue to yield exciting new technologies and treatments. Although essential to ensure the highest quality patient care, the evidence-based movement assumes dental practitioners are primarily consumers of research findings, when in fact clinicians have also been central to advancing the science of oral health. At the National Institute of Dental and Craniofacial Research (NIDCR), part of the National Institutes of Health, we are working to capitalize on the valuable contributions practitioners can and should make to the research that will improve health.

The concept of practicing dentists advancing scientific research is hardly new. Often the practitioner first recognizes an abnormality in a patient that sparks a fruitful line of inquiry. A classic example is the permanent brown staining of enamel noted in the early 1900s by Colorado dentist Dr. Frederick McKay. On further investigation, McKay and colleagues found that people with mottled enamel were also more resistant to dental caries. Subsequent studies identified the cause: high levels of fluoride in the local drinking water. This research matured to clinical trials and resulted in the use of fluoride at lower levels for hardening of enamel and protecting against caries.

In the past decade, academic clinicians observed that certain patients taking bisphosphonates to control hypercalcemia related to cancer or to prevent osteoporosis were susceptible to osteonecrosis of the jaw (ONJ). Private dentists in the NIDCR-funded National Dental Practice-Based Research Network (PBRN) have since explored the connection between bisphosphonates and ONJ through patient interviews and reviews of dental records. The growing body of evidence on bisphosphonates and ONJ has led to guidelines stressing the importance of dental care for patients entering into antiresorptive therapy.
The National Institute of Dental and Craniofacial Research is taking steps to further integrate practitioners into the full range of research, from the laboratory bench to the academic clinic and into practice.


