



STUDENT PROFILE:
AMANDA COLE, D'17

Studying Oral Health Literacy to Strengthen Clinical Care

Second-year student Amanda Cole (D'17) knew she wanted to do clinical research during her time at Penn Dental Medicine, yet she didn't foresee how it would play such a key role in her academic path, leading to a study that would become a community oral health honors project and guide her decision to pursue a Master of Public Health along with her DMD.

"All the pieces just came together," says Cole, who quickly took up the task of finding a clinical research project her freshman year. That pursuit led her to Dr. Betty Harokopakis-Hajishengallis, Chief of Penn Dental Medicine's Division of Pediatric Dentistry; Dr. Dafna Benadof, a visiting scholar from University Mayor in Chile, and a unique project focused on oral health literacy.

"Health literacy is a topic of growing interest across medical disciplines," says Dr. Harokopakis-Hajishengallis. "When Amanda approached me about a clinical study feasible for a first-year student and Dr. Benadof, who had done a health literacy study as part of her PhD program, happened to be here, we all talked and decided to try a similar study in our pediatric clinic — something that would not only be valuable for our clinical practice, but also for us as educators."

In close collaboration with Drs. Harokopakis-Hajishengallis and Benadof, Cole has taken the lead in the field work of the project from the onset. The first phase — a pilot/protocol

study — launched last spring, and the larger scale study, refined from the outcomes of the pilot, got underway in at the beginning of 2015. Dr. Harokopakis-Hajishengallis was awarded a grant from the American Dental Association Foundation in support of the project.

"Very few studies have been done looking at the concept of health literacy in dentistry," says Dr. Benadof, who continues to be involved in the project despite her return to Chile in June 2014, where she is a Professor and Researcher at the University Mayor School of Public Health. "There are some tools that have been developed to measure health literacy in dentistry, but nothing that has translated the use of those tools to the actual dental clinic and how it relates to the information that's being understood by the patient. That is our goal with this project."

The project is looking at two aspects — the oral health literacy level of the children's parents, defined as their ability to obtain, process, and understand oral health-related information; and the oral health literacy demand created by the

pediatric residents, meaning the level of communications and language they use to explain the children's oral health condition and needs to the parents.

The study is targeting parents coming for their child's first appointment in the clinic and includes a quick test to measure the parents' oral health literacy before their child's appointment and a survey after the appointment to gauge the parents' understanding of the information shared by the resident providing their child's care. Cole and other DMD students she helped to recruit and train as research assistants (RA) for the project conduct the surveys and literacy tests with the parents, using the Rapid Estimate of Adult Literacy in Dentistry (REALD), a previously established, standard tool adapted from a medical health literacy test. The appointment is then recorded and transcribed and the communications between the parents and the residents analyzed to determine the grade level of that conversation, measuring the demand the residents place on the parents when explaining their child's oral health care.

Cole explains that the pilot study, which included 22 parents, showed the parents exhibited a low level of oral health literacy, and that on average over 60% of the residents' dialogue during a dental appointment contained a low level complexity of words.

"We were very pleased to see our residents were using an easy-to-understand reading level, and thus placing a low demand on the parents," says Cole, "for a number of studies in the medical field have shown that practitioners are often unable to assess their patients' ability to understand certain things and tend to overreach in their explanation, resulting in a high level of demand."

"One of our goals with this study is to see if we need to spend time teaching our residents what to ask and how to ask questions in their patient interactions."

DR. HAROKOPAKIS-HAJISHENGALLIS

Cole presented the pilot study, which also served as her community oral health honors project, at the annual meeting of the American Academy of Pediatrics in October, and together with Drs. Harokopakis-Hajishengallis and Benadof, they are working on an article to submit for publication.

“While the pilot study had too few participants to draw any conclusions, it has given us some descriptive statistics about the literacy level of the parents and how the message of oral health care is being given to the parents by the residents,” notes Dr. Benadof. “It also provided ideas to build upon for our larger scale study.”

“We hope to improve residents’ ability to gauge the parents’ or patients’ understanding and tailor their communications accordingly.”

AMANDA COLE (D’17)

In this larger study now underway, Cole and the 17 other RAs she is coordinating will target 100 parents. Cole explains that a number of new protocols and elements have been added as an outcome of the pilot study, including the addition of a survey of the residents to measure if they are able to effectively gauge the literacy level of the parents. And dependent on funding, they are also exploring videotaping the appointments to evaluate the nonverbal cues that are part of the parent/resident communications.

“We are also including one of the pediatric residents in this next phase of the study,” says Cole. “She will be conducting surveys with pediatric dentistry residency program directors and pediatric dental residents across the country to ask about the level of their own training in health literacy and patient communications and whether they would find it valuable to have more.”

“One of our goals with this study is to see if we need to spend time teaching our residents what to ask and how to ask questions in their patient interactions,” adds Dr. Harokopakis-Hajishengallis.

Cole is excited by the potential impact of the study across disciplines. “Hopefully a lot of good things will come out of it,” says Cole. “We hope to improve residents’ ability to gauge the parents’ or patients’ understanding and tailor their communications accordingly. This is an unspoken aspect of care proving to be very important.”

In between this project and her dental school studies, Cole is also the Community Service Chair of her class (a role she also had her freshman year), the President of the Day of

Service Club (which she formed this year), and pursuing her Master in Public Health, which she began this past summer (this larger scale study will be her master’s capstone project). “The public health courses are giving me a better perspective on every aspect of my involvement at the School,” notes Cole. Though not sure yet where it may lead, she says, “I like how the specialty of pediatrics has a large public health component, so that really interests me as a future direction.”