

Josh Johnson and Tanya Kavoussi B.S., Francisco Ramos-Gomez D.D.S., M.S., M.P.H.
Division of Pediatric Dentistry, UCLA School of Dentistry

Introduction

The current dental insurance model is ineffective in prioritizing the well-being and satisfaction of the patient. At this time, dental insurance companies compensate health care providers for the types of procedures that they perform rather than the maintenance and improvement of the oral health of the patient.

This system incentivizes overtreatment of patients. In order to shift the paradigm of dental treatment from the current fee-for-service model to applied prevention of dental disease, it is necessary to regulate the ways that dentists diagnose and treat patients and to reimburse them based on the effectiveness of the dental treatment in enhancing the oral health of the patient.²

ICDAS is a system that requires dentists to provide a diagnostic classification of a carious lesion, the most prevalent dental lesion, when submitting a treatment plan.³ The diagnostic classification of the carious lesion will be standardized among all dentists and certain treatments will be deemed appropriate based on the extent of the carious lesion. This will prevent dentists from over-treating patients.

Furthermore, the current dental insurance model is starting to be phased out and compensations will start being based on the enhancement and maintenance of a patient's oral health rather than the type of treatment rendered. Together, this will align a dentist's fiscal priorities with the overall well-being of the patient leading to a more comprehensive, patient-centered approach to dentistry.²

The purpose of this study is to assess how familiar UCLA dental students are with ICDAS, and what their opinions are about using this system in the UCLA clinic and in their future practices. Furthermore, the results of this survey will be used in assessing the feasibility of more thoroughly integrating ICDAS into the UCLA clinics and curriculum.

Materials & Methods

A survey was conducted and sent to all the UCLA dental students currently enrolled in the 4 year DDS program. The survey was voluntary and responders remained anonymous.

As an incentive to participate in the survey, 5 Starbucks gift cards were randomly given to students from the class with the highest response rate.

The survey consisted of 6 yes or no questions and 7 statements regarding the value ICDAS for which students expressed how strongly they agreed or disagreed on a scale of 1-5 (1 being strongly disagree and 5 being strongly agree).

The data from the survey was obtained online through Survey Monkey for 1 week in order to allow students enough time to finish the survey. After all the results were collected, there were 108 responses.

There was a 28% response rate.

Results

- 69% of students were not familiar with ICDAS.
- Only 12% of students had personally observed ICDAS being used in patient care before.
- 58% of respondents either agreed or strongly agreed that they would like to see more training on ICDAS in the UCLA curriculum.
- Of the responders, 36% of students said that they planned on using ICDAS in the future.
- However, of the students who are both familiar with ICDAS and are planning on going into general dentistry, 71% planned on using ICDAS in the future.
- Although UCLA students expressed that they saw value in the ICDAS protocol, there was concern that there would not be enough time to implement ICDAS during their appointments in the school clinic.

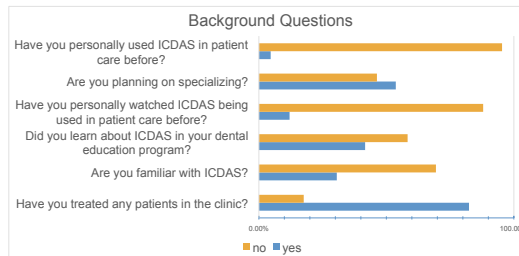


Figure 1: Familiarity and Use of ICDAS

Statement	Mean
ICDAS helps to prevent overtreatment by dentists.	3.78
Following ICDAS protocol helps inform decisions about appropriate diagnosis, prognosis, and clinical management of dental caries at both the individual and public health levels.	3.80
There is not enough time during a dental appointment to include ICDAS protocol	3.22
Implementation of ICDAS into dental practice limits the dentists ability to decide what treatment would be best for the patient	2.57
Implementation of ICDAS into dental practice enhances the dentists ability to decide what treatment would be best for the patient.	3.71
I would like to see more training on ICDAS in UCLA curriculum	3.74
I plan on using ICDAS when I become a practicing dentist	3.54

Figure 2: Student Attitudes towards ICDAS

Epidemiology	Practice	Research	Education					Carries	Caries	
			Pre	1	2	3	4			
Severe decay	Preventive care with fluoride varnish	X	6	p/a/r	-	-	-	-	Severe	PCA
Severe decay	Dental cavity	C	5	p/a/r	-	-	-	-	Severe	PCA
Severe decay	Restoration	N	4	p/a/r	-	-	-	-	Severe	PCA
Severe decay	Restoration	L	3	p/a/r	-	-	-	-	Severe	PCA
Severe decay	Restoration	E	2	p/a/r	-	-	-	-	Severe	PCA
Severe decay	Restoration	V	1	p/a/r	-	-	-	-	Severe	PCA
Severe decay	Restoration	S	0	p/a/r	-	-	-	-	Severe	PCA

Key: p = progressing, a = arresting, r = remineralizing; h = high risk, m = medium risk, l = low risk; PCA = Preventive Care Advised; OCA = Operative Care Advised.

Figure 3: Decision Table for ICDAS 1

Discussion

The problems stemming from prioritizing fee for service and, often times, more aggressive treatments cannot be solved with the ICDAS protocol alone. However, when used effectively, the ICDAS protocol will encourage dentists to strive for more preventative care and potentially decrease unnecessary aggressive treatment plans. Using the ICDAS system allows the dentist to better communicate the extent of carious lesions to the patient in lay terms. This facilitates more patient involvement in the treatment of the carious lesion, thus increasing transparency and preventing overtreatment. Integration of ICDAS into a dental insurance reimbursement system that compensates dentists based on the value of his/her work measured through positive outcomes will also discourage overtreatment. We are currently seeing a trend towards this type of compensation.²

ICDAS is becoming increasingly prevalent and it is important for dental schools to properly integrate this system into the curriculum so students can be familiar with it before entering the workforce. The results of our survey have shown that students would favor further integration of ICDAS into their curriculum. Although ICDAS was familiar to 3rd and 4th year UCLA dental students, we believe that it is important to increase exposure to ICDAS in preclinical years. Doing so will allow students to become proficient in identifying carious lesions based on the ICDAS system before they start seeing patients in clinic. In this way, students can implement ICDAS in a more time efficient manner during their clinic appointments. It is worth noting that not having enough time in clinic to perform ICDAS was a concern for the students.

Limitations

- Not all students responded in the survey (28% response rate)
- Students in school are not being compensated for the procedures they do so their thoughts on ICDAS might shift once they start practicing and financial compensation becomes a larger issue.
- Since appointment times during dental school are fixed, performing a procedure faster does not mean a student can see more patients; however, it may not be realistic to expect dentists to continue ICDAS protocol after dental school if it increases appointment length because this may negatively affect their bottom line

Into the Future

Some problems that need to be addressed before ICDAS can be implemented into the curriculum at UCLA and in our future dental offices:

- Ability to integrate ICDAS effectively into the Axiom program
- ICDAS must be made time efficient in order for students to be able to use it within their allotted appointment time frame
- Integration of ICDAS into insurance reimbursements will allow for clinicians to play a greater role in prevention of disease

References

- 1 Banting, D., et al. "Rationale and evidence for the international caries detection and assessment system (ICDAS II)." *Ann Arbor* 1001 (2005): 48109-1078.
- 2 Rubin, Marcie S., and Burton L. Edelstein. "Perspectives on evolving dental care payment and delivery models." *The Journal of the American Dental Association* 147.1 (2016): 50-56.
- 3 Young, Douglas A., et al. "The American Dental Association caries classification system for clinical practice: a report of the American Dental Association Council on Scientific Affairs." *The Journal of the American Dental Association* 146.2 (2015): 79-86.