

# **2022 Homecoming** LLUSD Student Poster Competition

# WELCOME!

Join us to celebrate the scientific research achievements of our students at the School of Dentistry! This is a great opportunity to stay up-to-date with comprehensive research, listen to the students' presentations, and actively engage in research discussions.

Mark your calendar and save the date to participate on March 3&4, 2022.

Looking forward to seeing you!

Centennial Complex 4<sup>th</sup> Floor March 3&4, 2022

# Thursday March 3, 2022 8:00 - 11:30 AM

### Poster 22001

### The Student Research Program at Loma Linda University School of Dentistry

So Ran Kwon & Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22002

### **Student Research Program Scholarly Activities**

So Ran Kwon & Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22003

### **Student Research Program Poster Competition**

So Ran Kwon & Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22004

The Use of Dynamic Navigation for the Placement of Zygoma Implants. A Cadaver Study to Compare Accuracy Omran Bishbish, Yoon Jeong Kim, Joseph Kan, Jaime Lozada Loma Linda University School of Dentistry, Loma Linda, CA

#### <u>Poster 22005</u> Life-Long Learners Program at Loma Linda University School of Dentistry John Won, Eunjoo P. Choi, Steven Powell, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda, CA

# Thursday March 3, 2022 2:00 - 4:30 PM

Poster 22006 CLIN **The Effect of CTx4 Treatment Rinse on ATP Caries Risk Testing** Samuel Altman\*, Pearl Arkusinski\*, Andrea Chilom\*, Erika Dudar\*, Dustin Higaravathn\*, Gabriel Hetrick\*, Shelly Withers Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22007 CLIN

### Self-Reported Oral Health Outcomes after Mask Wearing among Inland Empire Adults

Jany Dawi\*, Brenda Fausto\*, Diane Garcia-Solano\*, Ariella Kerendian\*, Chelsea Molato\*, Amber Orellana\*, Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22008 CLIN

Oral Health Differences Between Various Ethnic Groups

Kristina Bergeron\*, Cristian Loomis\*, Kaylene Lopez\*, Lani Sugishita\*, Katarina Supit\*, Chelsea Ticonuwu\*, Euni Cho Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22009 INFO

# Incorporating Obstructive Sleep Apnea Screening into Routine Dental Examinations for Early Awareness

Natasha Black\*, Anilu Che\*, Rachel Chung\*, Sol Lara\*, Fabiola Magana\*, Vi Mai\*, Julia Shin\*, Shelley Hayton Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22010 INFO

### Flossing: Past, Present & Future

Natalie Damargi\*, Sarah Georgian\*, Rebecca Lee\*, Rylee Nelson\*, Mana Nikjou\*, Preny Tatevosian\*, Shelly Withers Loma Linda University School of Dentistry, Loma Linda, CA

\* Students

# Friday March 4, 2022 8:00 - 11:30 AM

### Poster 22011 CLIN

### Zero Waste: Consumers' Perception on the Use of Toothpaste Tablets

Jasmine Sandhu\*, Bumsoo Park\*, Brittany Calderon\*, Jixa Patel\*, Udochukwu Oyoyo, Franklin Garcia-Godoy<sup>1</sup>, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda, CA

1 University of Tennessee Health Science Center College of Dentistry, TN

### Poster 22012 CLIN

Medical Emergency Incident 8333 Reports at LLUSD in the Past 10 years and Educational Guidelines for Hypertension Related Calls

Sarah Lim\*, Chanmee Kim\*, Lauren Barlow\*, Adlene Chang\*, Soh Yeun Kim Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22013 CLIN

### Evaluating the Effectiveness of Preclinical Data Collection Practices in Second Year Dental Students

Hyun Il Kim\*, Barnabas Kim\*, Soh Yeun Kim, Amelia David, Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22014 COM

**Impact of COVID-19 in Teaching the Tooth Morphology Course to the New Generation of Learners** *Gino Silvestre\*, Soohan Chung\*, Elvin Tolentino\*, Vincent Chee, Udochukwu Oyoyo, John Won, So Ran Kwon* Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22015 COM

### A 5-Year Retrospective Review of Dental Students' EBP Knowledge, Attitude, and Confidence

Ashley Gonzalez<sup>\*</sup>, Brandon Dudar<sup>\*</sup>, Sofia Rodriguez-Fitzpatrick, Udochukwu Oyoyo, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda CA

### Poster 22016 COM

### Teledentistry Initiative during the Pandemic: Perspectives of Dental Students

Ankaa Nath\*, Sallen Aoghiz\*, Chinwendu Nnagbo\*, Steven Powell, Eunjoo P. Choi, Udochukwu Oyoyo, Heidi Christensen, John Won, So Ran Kwon

Loma Linda University School of Dentistry, Loma Linda, CA

### Poster 22017 SCIE

### Association Between Body Mass Index and Dental Caries in Young Adults

Luiz Carvalho\*, Bryant Hoyos\*, Wagner Luiz do Prado<sup>1</sup>, Steven Powell, Eunjoo P. Choi, John Won, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda, CA 1 California State University San Bernardino, CA

### Poster 22018 SCIE

**Geographic Information System in Identifying Age-Related Effects on Dental Care** *Niketa Patel\*, Udochukwu Oyoyo, Seth Wiafe<sup>1</sup>, John Won, So Ran Kwon* Loma Linda University School of Dentistry, Loma Linda, CA 1 Loma Linda University School of Public Health, Loma Linda, CA

### Poster 22019 SCIE

Resistance of 3M ESPE VS. Success Essential Anterior Strip Crowns in Primary Teeth Simrun Sandhu\*, Yekta Asadi\*, Nishan Kazazian\*, Jung-Wei Chen Loma Linda University School of Dentistry, Loma Linda, CA

\* Students

# **Poster Competition Schedule and Awards**

	Dental Hygiene Student Competition		Dental Student Competition		
	Informational	Clinical	Community	Clinical	Scientific
Date	Thursday March 3, 2022		Friday March 4, 2022		
Time	2:00 – 4:30 PM		8:00 AM – 11:30 AM		
Awards Ceremony	Friday March 4, 2022 at 1:00 – 2:00 PM (Centennial Complex Rm 3111)				
1 <sup>st</sup> Place	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00
2 <sup>nd</sup> Place	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00
3 <sup>rd</sup> Place	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00
AADR/Dentsply Sirona	A crystal engraved award to honor the individual selected to represent LLUSD in the 2023 AADR/Dentsply				
Award	Sirona Student Clinician Research Program in Portland, Oregon March 15-18, 2023.				
2022 Student Research	This award recognizes a faculty that has demonstrated a longstanding commitment to mentoring student				
Mentor of the Year	researchers that align with LLUSD's vision and mission.				

# **Poster Competition Judges**

Dental Hygiene Student Competition	<b>Dental Student Competition</b>	
Ms. Kris Marshall	Dr. Montry Suprono	
Dr. Dwight Rice	Dr. Eun-Hwi Cho	
Dr. Gina Roque-Torres	Dr. Sunee Limmeechokchai	
Dr. Sofia Rodriguez-Fitzpatrick	Dr. Mathew Kattadiyil	
Dr. Vincent Chee	Dr. Jessica Kim	
	Dr. Anupama Grandhi	
	Dr. Roberto Savignano	
	Ms. Loredana Trica	
	Dr. Robert Walter	

# **Thursday Morning Session: Faculty and Graduate Student Poster Abstracts**

Poster 22001

### The Student Research Program at Loma Linda University School of Dentistry

So Ran Kwon & Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

Scientific research is a vital driving force for health professions education and practice that pave the way for evidence-based decision making. LLUSD has always been a frontier in creating an environment to foster student research opportunities thus aiming to meet our mission "To make man whole" by integrative teaching, service, and research. Dental and dental hygiene students who are interested in conducting research are encouraged to select a topic in the area of clinical, basic sciences, or community research.

- As part of this program, we aim to,
- 1) Instill critical thinking through research experience;
- 2) Foster collaboration between students and faculty mentors that encourages students to become involved in the design, conduct, and reporting of research;
- 3) Encourage students to consider academic dentistry and research as future career options.

Keywords: Student Research Program, Critical thinking, Collaboration, Evidence-based dentistry

Poster 22002

### Student Research Program Scholarly Activities

So Ran Kwon & Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

Students at LLUSD are actively engaged in scholarly activities. Recent student publications are listed below,

- 1. Shaikh M\*, Sung H\*, Lopez T\*, Andra R\*, McKean B\*, Jesson J\*, Pascal C\*, Chavez C\*, Schwieterman K\*, Oyoyo U, Kwon S. Effect of charcoal dentifrices on tooth whitening and enamel surface roughness. *Am J Dent*. 2021;34(6):295-299.
- 2. Tran C\*, Choi E\*, Watu B\*, Oyoyo U, Perry C, Kwon S. Laboratory Model to Evaluate Efficacy of an Experimental Titanium Oxide Nanofibers Bleaching Agent. *Restor Dent Endodont* 2021;46:e47.
- 3. Shin Y, Lopez E\*, Bullock A\*, Chirachevin P\*, Oyoyo U, Burtch P, Tian A, Kim B, Kwon S, Li Y. Dental and Dental Hygiene Students' Knowledge and Perception on Fluoride Use in Dentistry. *J Contemp Dent Prac* 2021;22(1):4–8.
- 4. Shaikh M\*, Lund G\*, Ko J, Roque-Torres G, Oyoyo U, Kwon S. Micro Computed Tomography Analysis of Abrasivity of Toothpaste Tablets Compared to Conventional Toothpaste. *Am J Dent* 2021;34(5):235-239.
- 5. Kwon S, Lee S, Oyoyo U, Wiafe S, DeGuia S\*, Pedersen C\*, Martinez K\*, Rivas J\*, Chavez D\*, Rogers T. Oral Health Knowledge and Oral Health Related Quality of Life of Older Adults. *Clin Exp Dent Res* 2021;7(2):211-218.
- \* Students

### Poster 22003

Student Research Program Poster Competition So Ran Kwon & Udochukwu Oyoyo

Loma Linda University School of Dentistry, Loma Linda, CA

The 2022 Homecoming Research Exhibition will showcase poster presentations of research being conducted by each of the eight Loma Linda University schools. One of the major highlights are the dental hygiene and dental student poster competitions from the School of Dentistry. The students have worked hard on their research projects and are excited to share their scientific findings with their peers, faculty, staff and alumni. On behalf of the student research program we welcome you to learn together and celebrate our students' achievements.

### Poster 22004

The Use of Dynamic Navigation for the Placement of Zygoma Implants. A Cadaver Study to Compare Accuracy Omran Bishbish, Yoon Jeong Kim, Joseph Kan, Jaime Lozada Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** The aim is to evaluate and compare the angular, apical, and platform deviation for zygoma implants placed using dynamic navigation guided technique to freehand technique.

**Method:** Eight cadaver heads were used for the study. For each cadaver head, the placement of zygoma implants was assigned randomly (one side using freehand and other side using the dynamic navigation device). Post implant CBCT scans were merged with the pre-operative implant placement plan in order to evaluate and compare the accuracy of the implant placement using each technique.

**Results:** Using a simple t-test at a significance level of 0.05, the analysis showed a significant difference between the 2 techniques in angular and apical deviation. No significant difference was found in platform deviation

**Conclusion:** Zygoma implants placed with the aid of a dynamic navigation device resulted less apical and angular deviation compared to the deviation for implants placed freehand.

Keywords: Zygoma implants, Dynamic navigation, Guided surgery

Poster 22005

### Life-Long Learners Program at Loma Linda University School of Dentistry

John Won, Eunjoo P. Choi, Steven Powell, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** The objective of this study was to highlight the implementation of an innovative faculty development program that was piloted to specifically target enhancement of scholarly activities of clinical track faculty at the Division of General Dentistry Loma Linda University School of Dentistry (DGD LLUSD).

**Methods:** The Life-Long Learners Program  $(L^{3}P)$  spanned over two quarters and two faculty were provided with one session per week to work with a designated mentor on ways to promote activities that would yield qualitative and quantitative scholarly outcomes.

**Results:** The DGD  $L^{3}P$  allowed faculty to receive customized mentoring and develop projects that resulted in presentations, grant submissions, and publications to strengthen their academic career advancement. The main strengths of the program included protected time and close mentorship.

**Conclusion:** L<sup>3</sup>P provides a diverse DGD faculty to yield a collaborative spirit of lifting each other and rising together to achieve academic excellence.

Keywords: Collaboration, Faculty development, Scholarly Activities, Academic Excellence.

# Thursday Afternoon Session: Dental Hygiene Student Poster Abstracts

Poster 22006 CLIN

### The Effect of CTx4 Treatment Rinse on ATP Caries Risk Testing

Samuel Altman\*, Pearl Arkusinski\*, Andrea Chilom\*, Erika Dudar\*, Dustin Higaravathn\*, Gabriel Hetrick\*, Shelly Withers Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** The objective of this investigator-initiated study was to evaluate a patient's risk for caries using a tool called CariScreen Caries Susceptibility Test after rinsing with a prophylactic rinse, CTx4.

**Material and Methods:** Two CarieScreen swab tests were administered to 12 participants according to the CariFree® instructions. The baseline test was administered first without participants using the CTx4 pre-rinse. The second test was administered at least 24 hours after the initial test, immediately after participants rinsed with one pump of each CTx4 rinse, A and B, for 60 seconds. **Results:** Our results indicated that the scores were inconclusive. We received research data that showed our hypothesis was not accurate. The majority of the readings showed higher response at the second appointment.

**Conclusions:** We concluded that the CTX4 rinse resulted in mixed results that did not give us a conclusive answer to the benefit of CTX4 use in pre-procedural clinical protocols.

Keywords: CTx4 rinse, Caries risk, Caries screening

### Poster 22007 CLIN

### Self-Reported Oral Health Outcomes after Mask Wearing among Inland Empire Adults

Jany Dawi\*, Brenda Fausto\*, Diane Garcia-Solano\*, Ariella Kerendian\*, Chelsea Molato\*, Amber Orellana\*, Udochukwu Oyoyo Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** To evaluate whether extensive wearing of masks may have potential negative effects on a person's oral health such as dry mouth, halitosis, and overall decline in personal daily oral hygiene

**Materials and Methods:** A cross-sectional survey was distributed to adults that reside in San Bernardino County, specifically: Victorville, Ontario, Fontana, Redlands, Loma Linda, and Colton. Twelve questions were used in order to analyze people's knowledge and attitude on their oral health while wearing masks. The Chi-square test was used to test our hypothesis. 147 out of the 207 people approached participated in this study.

**Results:** No statistically significant correlation between duration of mask wearing and oral hygiene. However, the following findings were observed: Rates of xerostomia in this cohort [53.7% (95%CI 45.3-62.0)] were significantly higher than what is reported in the literature. The overall estimated prevalence of dry mouth is 22.0% (95%CI 17.0-26.0%).

**Conclusions:** No changes in people's perception of their oral cavity due to mask wearing, except for their oral health habits. **Keywords:** Mask wearing, Mask mouth

### Poster 22008 CLIN

### **Oral Health Differences Between Various Ethnic Groups**

Kristina Bergeron\*, Cristian Loomis\*, Kaylene Lopez\*, Lani Sugishita\*, Katarina Supit\*, Chelsea Ticonuwu\*, Euni Cho Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** The objective includes reviewing published articles, regarding key points that identify our latest understanding of calculus composition among different ethnicities. We accomplished this with a systematic review of articles on any differences in calculus composition.

**Methods:** We utilized electronic databases to obtain relevant articles. Articles were based on search terms from the university librarian. 6 students split into three groups of two. Each group filtered through 1,190 articles to determine relevance. They were discarded based on their relevance using 3 steps. 1. Included articles based on title. 2. Included articles based on abstract. 3. Included articles from reading abstract and results. After categorization, the groups compared their final articles that were relevant. **Results:** 2 out of 1,190 articles matched the chosen criteria

**Conclusion**: There is not enough evidence that indicates significant differences in calculus composition with various ethnicities. Further research would be beneficial.

Keywords: Dental Calculus, Dental Biofilm, Dental Plaque, Microbiology, Ethnicity, Race

### Poster 22009 INFO

Incorporating Obstructive Sleep Apnea Screening into Routine Dental Examinations for Early Awareness

Natasha Black\*, Anilu Che\*, Rachel Chung\*, Sol Lara\*, Fabiola Magana\*, Vi Mai\*, Julia Shin\*, Shelley Hayton

Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives**: The purpose of this informational session is to emphasize the importance of screening and early awareness of Obstructive Sleep Apnea (OSA) in patients.

**Summary:** OSA is largely undiagnosed in adults in the U.S. Systemic diseases like cardiovascular disease, respiratory disease, diabetes, and neurodegenerative diseases are often seen in patients who are diagnosed with OSA. As dental hygienists, we perform intraoral and extraoral screenings as part of our practice as clinicians and as such, have an opportunity to observe and recognize clinical oral manifestations of OSA in patients. Early awareness and treatment of OSA can lead to prevention of systemic diseases and a better quality of life.

Keywords: Obstructive Sleep Apnea, Systemic Disease, Screening, Dental Hygiene

### Poster 22010 INFO

### Flossing: Past, Present & Future

Natalie Damargi\*, Sarah Georgian\*, Rebecca Lee\*, Rylee Nelson\*, Mana Nikjou\*, Preny Tatevosian\*, Shelly Withers Loma Linda University School of Dentistry, Loma Linda, CA

**Objective**: The purpose of this informative research is to inform our readers about the evolution of floss, the benefits of using floss, ADA recommendations, and the statistics of floss.

**Summary:** Currently, the research done on floss is very limited and we have seen that the use and study of floss has remained the same. Using credible articles, we explored the history of floss, the most common types, its benefits on the oral cavity, ADA recommendations, proper flossing technique, statistics and a new potential biodegradable style of floss. **Keywords:** Technique, Biodegradable, floss

# **Dental Student Poster Abstracts**

### Poster 22011 CLIN

### Zero Waste: Consumers' Perception on the Use of Toothpaste Tablets

Jasmine Sandhu\*, Bumsoo Park\*, Brittany Calderon\*, Jixa Patel\*, Udochukwu Oyoyo, Franklin Garcia-Godoy<sup>1</sup>, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda, CA

1 University of Tennessee Health Science Center College of Dentistry, TN

**Objectives:** To evaluate consumers' perception on the use of toothpaste tabs and evaluate whether there would be a perception difference by gender and age.

**Material and Methods:** Qualified subjects were enrolled and instructed to use toothpaste tabs (Denttabs GmbH, Berlin, DE) for 1 week. At the end, subjects filled out a 10-question survey on the "User Friendliness and Perception of Toothpaste Tabs".

**Results:** From a sample size of 112 subjects, 87.5% reported positively to ease of use and eco-friendliness. Gender had a statistically significant impact on the perception of texture and flavor, while age had a statistically significant impact on the perception of flavor and willingness to switch. Overall, 76.8% reported being satisfied with using Denttabs.

**Conclusion:** We conclude that the perception on the use of toothpaste tabs is positive and that toothpaste tabs may be a good ecofriendly alternative to conventional toothpaste.

Keywords: Toothpaste tablets, Eco-friendliness, Gender, Age, Satisfaction

Poster 22012 CLIN

Medical Emergency Incident 8333 Reports at LLUSD in the Past 10 years and Educational Guidelines for Hypertension Related Calls

Sarah Lim\*, Chanmee Kim\*, Lauren Barlow\*, Adlene Chang\*, Soh Yeun Kim Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** To analyze the type of 8333 reports made in Loma Linda School of Dentistry and propose additional hypertension emergency guidelines to aid in decision making of the students, staff, and faculty.

**Materials and Methods:** Data from the past 10 years in LLUSD were collected and categorized according to the type of medical emergencies. Identified hypertension as the most common type of emergency and further investigated the trend of hypertension related 8333 calls.

**Results:** The most common emergency calls were due to hypertension. Age group from fifty to eighty was the most prevailing population. Eleven percent of the patients were transferred to hospital by EMS.

**Conclusion:** A revised hypertension guideline is recommended to guide providers to determine when to call 8333 or when to consider medical consultation with patient's physicians to minimize reports that do not require immediate management. **Keywords:** Medical emergency, 8333, Hypertension, Guideline

#### Poster 22013 CLIN

**Evaluating the Effectiveness of Preclinical Data Collection Practices in Second Year Dental Students** *Hyun Il Kim\*, Barnabas Kim\*, Soh Yeun Kim, Amelia David, Udochukwu Oyoyo* Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** To evaluate the time taken for second year dental students to collect periodontal data along with self-confidence and patients' comfort level during two periodontal data collection pre-clinical activities.

**Materials and Methods:** Sample of 99 second year dental students participated in two periodontal data collection pre-clinical activities. The time that the student spent on periodontal data collection was recorded. Two post surveys were conducted after each activity to evaluate students' self-confidence and patients' comfort level. One sample t-test and Chi-squared test were performed. **Results:** There was statistical importance on time difference between first and second periodontal data collection (p<0.001), but there was no statistical importance on the difference in students' confidence and patients' comfort level. (p>0.001)

**Conclusions:** We conclude that there was statistically significant time improvement between students' 1<sup>st</sup> and 2<sup>nd</sup> data collection, however, there was no statistically significant difference between students' confidence level and patients' comfort level. **Keywords:** Periodontal data collection, Time improvement, Student's confidence, and Patient's comfort

### Poster 22014 COM

Impact of COVID-19 in Teaching the Tooth Morphology Course to the New Generation of Learners

*Gino Silvestre\*, Soohan Chung\*, Elvin Tolentino\*, Vincent Chee, Udochukwu Oyoyo, John Won, So Ran Kwon* Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** To evaluate students' learning style and relate it to their academic performance. Learning style was adapted from VARK that measures four preferences: visual, aural, read/write, and kinesthetic.

**Materials and Methods:** The study included 101 students during the tooth morphology (TOMO) class. Lectures were delivered online and students challenged with nine quizzes and one final examination. Didactic-score was calculated by averaging the scores of quizzes and the final exam. Lab-score was a combination of five lab projects and the final competency. At course completion, students received a survey on their learning style and preferred feedback method.

**Results:** There was no evidence that the four perceptual learning style groups differed in performance for didactic-scores (P=0.340) or lab-scores (P=0.845).

**Conclusions:** To match the learning styles of as many students as possible TOMO should be delivered with various teaching styles rather than focusing on a single method while making it interactive and including more demonstrations.

Keywords: COVID-19 Pandemic, Dental Education, Generation Z, Learning Style, Tooth morphology

### Poster 22015 COM

A 5-Year Retrospective Review of Dental Students' EBP Knowledge, Attitude, and Confidence Ashley Gonzalez\*, Brandon Dudar\*, Sofia Rodriguez-Fitzpatrick, Udochukwu Oyoyo, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda CA

Objectives: To evaluate changes in knowledge, attitude, and confidence of EBP in dental students over 5 years.

**Materials and Methods:** Students (Class of 2019, 2020, 2021, 2022, 2023) enrolled in the D3 research design course were required to take a pre-KACE survey on the first day of class. On completion of the 11-weeks course, a post-KACE survey was distributed to compare the differences in the three domains of EBP. Kruskal-Wallis test was used to evaluate knowledge among classes, and Friedman's test was used to evaluate the change within each class in three domains.

**Results:** There was no statistically significant difference in knowledge among the five classes. However, there were differences amongst specific questions. Attitudes and confidence of all groups significantly improved over pre and post-KACE surveys.

**Conclusions:** The study provides an EBP Mapping Guide for upgrading the EBP Curriculum to enhance students' acquisition and application of EBP skills in their future career.

Keywords: KACE Survey, Evidence-Based Practice, Research Design

### Poster 22016 COM

### Teledentistry Initiative during the Pandemic: Perspectives of Dental Students

Ankaa Nath\*, Sallen Aoghiz\*, Chinwendu Nnagbo\*, Steven Powell, Eunjoo P. Choi, Udochukwu Oyoyo, Heidi Christensen, John Won, So Ran Kwon

Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** To evaluate the outcome of LLUSD's educational teledentistry initiative through a survey based on Kirkpatrick's multidimensional model of training evaluation.

**Materials and Methods:** An IRB application was approved (# 5210385) for a cross-sectional study that included LLUSD dental students of the Class of 2022 and 2023. The 9-question survey consisted of three sections. The first section included demographic questions on gender and the graduating class. The second section was related to perceived teaching effectiveness, attitude, behavior, and significance. The third section included on open-ended question. Descriptive statistics were calculated, and categorical variables were compared using chi-squared test ( $\chi$ 2 test).

**Results:** Overall responses were positive. There were no significant differences in the frequencies of positive and negative responses to all questions (N=6) by gender and by class (P>0.05, in all instances).

Conclusions: there is potential for this educational initiative to be more actively and comprehensively implemented in the future.

Keywords: COVID-19 Pandemic, Kirkpatrick's multidimensional model, Educational teledentistry initiative

### Poster 22017 SCIE

# Association Between Body Mass Index and Dental Caries in Young Adults

Luiz Carvalho\*, Bryant Hoyos\*, Wagner Luiz do Prado<sup>1</sup>, Steven Powell, Eunjoo P. Choi, John Won, So Ran Kwon Loma Linda University School of Dentistry, Loma Linda, CA 1 California State University San Bernardino, CA

Objectives: To assess relationship between Body Mass Index (BMI) and dental caries in young adults.

**Methods:** Charts from 1494 patients from Loma Linda University School of Dentistry were reviewed for data related to decayed, missing, and filled teeth and DMFT<sup>28</sup> index. BMI was calculated from weight and height. Patients were categorized into normal weight (NW), overweight (OW) and with obesity (OB). Oral hygiene, salivary pH, fluoride exposure and dietary habits were recorded. **Results:** BMI was positively associated with DMFT<sup>28</sup> scores (r = .113; p = 0.022). Patients with obesity presented higher DMFT<sup>28</sup> scores than NW (p = 0.005). When adjusted for classical risk factors, OW and OB patients showed higher DMFT<sup>28</sup> scores ( $\beta = 1.241$ ; 95%CI = .379 – 2.103). No associations for decayed (p > 0.05) or filled (p = 0.061).

**Conclusions:** Patients with obesity present higher DMFT<sup>28</sup> scores compared to NW and OW, even after adjustments for risk factors. **Keywords:** BMI, Body Mass Index, DMFT, Dental caries

### Poster 22018 SCIE

**Geographic Information System in Identifying Age-Related Effects on Dental Care** *Niketa Patel\*, Udochukwu Oyoyo, Seth Wiafe<sup>1</sup>, John Won, So Ran Kwon* Loma Linda University School of Dentistry, Loma Linda, CA

1 Loma Linda University School of Public Health, Loma Linda, CA

**Objectives:** To identify age-related effects on access to dental care and teledentistry and determine the role of the Geographic Information System (GIS) in identifying geographic and economic factors associated with access to dental care and teledentistry. **Methods:** The study included adults 65 years and older. Questions were selected from validated TeSS survey and adapted to include demographic information and address ease of access and satisfaction of teledentistry.

**Results:** Participants that reported poor English speaking/reading ability reported higher frequency of fair to poor access to dental care (P=0.001/P<0.001). Participants with income lower than \$ 25K had higher frequencies of self-reported poor and fair oral health (P=0.014). Participants with terrible and poor English speaking/reading ability had higher frequencies of not being comfortable with the use of electronic devices (P=0.006/0.038).

**Conclusions:** The study shows feasibility of distributing a modified TeSS survey and use of GIS in identifying age-related effects on access to dental care and teledentistry.

Keywords: Geographic Information System, Older adults, Teledentistry, Access to dental care

#### Poster 22019 SCIE

Resistance of 3M ESPE VS. Success Essential Anterior Strip Crowns in Primary Teeth Simrun Sandhu\*, Yekta Asadi\*, Nishan Kazazian\*, Jung-Wei Chen Loma Linda University School of Dentistry, Loma Linda, CA

**Objectives:** Stainless Steel crowns, known for their durability, longevity, and strength, are a common treatment modality for decayed primary teeth. However, increasing concerns for esthetics has influenced a rise in the use of Anterior strips crowns as an alternative treatment option to conventional SSC's.

**Methods:** A single master prep was scanned and 3D printed into 22 identical copies. Half were then fitted with 3M ESPE crowns and the other half with SuccessEssentials anterior strip crowns. The crowns underwent durability testing using a Lenfelder tester to stimulate 2 years of chewing, and then viewed under a microscope to assess wear and longevity. We suspect that there will be no significant difference in durability and wear between the SuccessEssentials and 3M ESPE anterior strip crowns. The goal was to assess the efficacy between two types of anterior strip crowns, promote esthetics without compromising durability and longevity. **Results:** N/A

**Conclusions:** N/A

Keywords: Stainless steel crowns, Anterior strips crowns, Durability, Longevity