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Table of

Contents



- Message from Pre-Dental Outreach Chairs
- Message from Editors-In-Chief
- Message from Newsletter Committee
- **Meet the Newsletter** Team

FEATURES

- **Balancing a Heavy Workload**
- 10 Special Needs Dentistry
- The Purpose & Importance of Community Dental Clinics
- 11 Innovations in Dentistry
- Correlation between Oral **Health and Systemic Health**
- Redefining Research as a Requirement

KEEP IN TOUCH

13 How to Keep in Contact with Us





Message from Pre-Dental Outreach Chairs

Hello Everyone!

Welcome to the Fall 2023 issue of Leeway Space. We are very proud of this newsletter – the only dental newsletter created by pre-dental students for pre-dental students! We have an incredible team of pre-dents this year that have worked tirelessly to bring you articles that explore the ever changing and evolving field of dentistry. Whether it be new technology and advancements that will shape the future, or information on balancing the busy schedule of being a pre-dental student, we aim to be your mentors through the journey. Our newsletter is crafted specifically for you – to guide you through the complexities of applying to dental school and support you as you are introduced into the vast array of dental specialties and career options. We hope you enjoy!



Caitlin Mispagel UCLA D2

Hello Everyone!

We sincerely hope you enjoy the Fall 2023 issue of Leeway Space. We received a great number of applications from awesome pre-dents and this team consists of an amazing culmination of writers, editors, and graphic designers. The team is led by editors-in-chief, Jessy and Sunali, who have continued to emphasize the purpose and mission of Leeway Space which is to bring together pre-dents and share the amazing field of dentistry through stories and areas of excitement. We are so proud of this brilliant issue and all the time and effort that brought it into fruition. We are confident that these varying perspectives and articles can offer comfort in times of challenge and struggle knowing that there are many others who are facing similar experiences in their predental endeavors. Most of all we hope you can be encouraged, empowered, and inspired as you read our newsletter and carry on in your predental journey! Our UCLA ASDA Pre-Dental Outreach Committee encourages you to partake in our many events and we want to walk alongside you on your journey towards dental school!



Sincerely,

Caitlin Mispagel and Brendan Co

Caitlin Mispagel and Brendan Co

ASDA Pre-Dental Outreach Committee Co-Chairs 2023-2024

Message from Newsletter committee



Jessica Mele UCLA D2

Hi everyone!

We, Jessica Mele and Julia Noguchi, are serving as the chairs of the UCLA ASDA Communications and Newsletter Committee for 2023–2024. We are beyond lucky to have the privilege of working with the amazing ASDA pre-dental committee on Leeway Space. I, Jessica Mele, had the pleasure of being the first pre-dental editor-in-chief in 2020, and I am so thrilled to continue contributing to the magazine, working on the other side, this time in the publication process. Both of us are so ecstatic to help create another publication of Leeway Space.

Leeway Space offers a unique and engaging opportunity for pre-dental students to share their experiences and connect with other pre-dentals from universities nation-wide, and even worldwide. We are so proud of the Leeway Space team for their dedicated contributions to the magazine and their promotion of excellence, involvement, and creativity. We invite our readers to obtain inspiration from the Leeway team's diverse experiences, and we hope this edition of Leeway Space offers plenty of advice, whether you're considering dentistry as a career or simply have an interest in the dental field. Enjoy!



Julia Noguchi UCLA D2

Best,

Jessica Mele and Julia Noguchi

Jessica Mele and Julia Noguchi

Class of 2026

Message from Editors-in-Chief

Dear readers,

We are thrilled to present to you Volume 9: Issue 1 of Leeway Space! Leeway Space is a student-run magazine that offers a platform for pre-dental students from diverse backgrounds to share their personal stories and prospects on their path to dentistry. By uniting the diverse perspectives of our team, we aim to illustrate the multifaceted nature of dentistry and how the myriad paths to this profession are shaped by personal narratives and individual experiences.

In this edition, we explore a variety of topics ranging from possible extracurricular pursuits that pre-dental students can engage in like research and community services, to recent technological developments in the field of dentistry. Furthermore, a few articles centered around the concept of wellness discussing the importance of and relationship between oral health and systemic health as well as how pre-dental students should balance their heavy academic workload with extracurricular activities. We hope this diverse collection of articles will offer a new outlook on different facets of the pre-dental journey and ignite your passion to participate in extracurricular pursuits that resonate with your personal interests.



Jessy Ji UCLA '25



Sunali Patel UOP '24

We are grateful for the opportunity to lead our exceptional team of writers, editors, and graphic designers! Our previous involvement with the Leeway Space team only strengthened our desire to remain part of a community of like-minded individuals devoted to dentistry and aiding aspiring pre-dental students. We are both excited to lead and foster a positive and encouraging atmosphere where our team's diverse perspectives and experiences can benefit individuals nationwide. We would also like to extend our heartfelt appreciation to Caitlin and Brendan, the Chairs of the UCLA ASDA Pre-dental Outreach Committee. Their invaluable contributions have made all of this possible.

It is our hope that these narratives and subjects provide valuable insights as you all embark on your pre-dental journey. We would like to thank all of you for supporting Leeway Space by reading this edition, and we wish you all the best on your journey!

Kind regards,

Jessy Ji and Sunali Patel

Jessy Ji and Sunali Patel

Leeway Space Editors-In-Chief

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Meet the Newsletter Team



Amanda Zavala Pomona College '26



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Sydney (Seohyun) Min UCLA '25



Terrence Chi UCLA '25



Utsavi Kapadia Hofstra University '18



Yena Jang Pomona College '24





Riddhi Patel University of the Pacific '25

Being a pre-dental student presents a unique set of challenges, and maintaining a healthy balance is essential for staying motivated and reaching your goals. As many of us know, there are many aspects to consider in our schedule as a pre-dental student, such as a rigorous course load, positions in clubs, research, and shadowing, just to name a few. It can often be overwhelming to look at our schedules because it seems as though we are spreading ourselves thin with no room left on our plate to take a breather, but it is crucial to maintain a balance to prevent burning out.

When I began college, I knew I wanted to be involved on campus while also doing well in my classes and building connections with those around me. I thought my workload would be similar to that of high school since I came from a competitive high school, where I took many weighted classes, was actively involved in clubs, and played a varsity sport. But, I soon realized that college was much different. Tasks that were once managed for me in high school became my own responsibilities, and my todo list seemed to lengthen as the hours in day felt increasingly limited.

In my freshman year, I held a few positions in clubs and took almost a full semester course load, and managed various non-academic tasks. I felt busy all the time, and I had to start dropping some of my commitments, such as going to the gym daily and no longer maintaining active membership in clubs that did not work well in my schedule. Even though I tried my hardest to do it all, I simply couldn't because I started sacrificing significant hours of sleep and compromising my nutrition.

My freshman year posed its difficulties, but my second year has proven to be even more challenging. Taking a full course load with research, having multiple positions in clubs, working, and living in an apartment, where I cook for myself has been very challenging. But, maintaining balance has helped me get through it. Setting boundaries and creating to-do lists has helped me stay organized to stay on top of it all. My Google Calendar is updated constantly and my bullet journal has everything I need to do to ensure nothing is left forgotten.

The most effective strategy for balancing a heavy workload has been surrounding myself with supportive individuals who uplift me and hold me accountable. I would not be able to sustain this lifestyle if it weren't for my family's unwavering support and my friends who are walking alongside me in this path. It can be easy to feel alone when you are in these tough situations, but having a community to remind you of what you are doing and why you are doing all these activities can make it easier to see what the goal ahead is.

Setting priorities for yourself, such as eating and sleeping, along with studying can help you stay on track to be a successful pre-dental student. There have been many instances in the past, where I would sacrifice basic life necessities in order to have more time to study. But I realized this can often take a greater toll on your physical and mental health, which can significantly affect your performance in school. The exhaustion that builds up when your well-being is sacrificed has a snowball effect, where it builds up more and more each day. Taking breaks from school might make you feel guilty, but it will refresh your mind, which can help you excel academically. To my fellow pre-dental students, hang in there, don't work yourself too hard, and your efforts will ultimately pay off!

The Purpose & Importance of Community Dental Clinics



Since 1996, the UMMA Community Clinic has provided free healthcare services through the dedication of volunteers and has been providing medical treatment for patients in the Los Angeles area. In response to the large population of uninsured South LA residents who are in great need of dental care, the UMMA established its free dental clinic in 2021. Last year, I had the opportunity to volunteer with the UMMA clinic alongside two other dentists in Skid Row, a downtown LA neighborhood known for being home to one of the largest populations of homeless people in the US. We applied fluoride varnish (to reduce the prevalence of dental caries) on our patients and directed them to UMMA's clinic to receive longer-term care.

So what's the difference between a general practice office that we're all familiar with, and a community dental clinic?

Firstly, community clinics are kept operable by utilizing government grants and community or private donations, enabling them to offer care at an exceptionally low cost compared to traditional clinics. Community dental clinics are often based in areas designated by the federal government as Dental Health Professional Shortage Areas, or Dental HPSAs. These regions face a significant shortage of dental or primary care providers in relation to the number of inhabitants in the area. California, with 7,538 HPSAs, holds the highest number in the country. It is estimated that around 12,000 more practitioners would be needed to stabilize the dentist-to-patient ratio.

What services do community clinics provide?

Generally, community dental clinics provide services focused on prevention, like the fluoride varnish mentioned above. Services such as radiographs, cleanings, fillings, extractions, and dentures are prioritized by providers, rather than cosmetic procedures like whitening, or veneers.

Volunteer dentists in community clinics also emphasize educating patients about the implications of procedures, how to maintain oral hygiene, and how to prevent dental-related issues. After all, many who receive treatment in the community care setting suffer from a lack of dental education. Many have never had cleanings or even visited a clinic at all, so educating patients is necessary for them to understand their circumstances and know how to prevent any further complications.

How can you help?

Start by finding your local dental clinics through a quick internet browse, and consider contacting them to ask about what their clinic needs. Ask if they are open to taking in more volunteers or assistants to help run treatments. Furthermore, one can donate supplies, such as toothbrushes or other equipment, and also support the clinic through monetary donations, with details usually available on their website.

We must encourage the operation of community clinics.

28 million Americans remain uninsured and go without dental care, even when in pain, due to the high costs of care. Community dental clinics like UMMA are integral to ensuring access to dental care for populations in low-income or underserved communities, those without dental insurance, and people with other constraints that prevent them from receiving needed care. Ultimately, community clinics significantly enhance the overall well-being of the communities served.







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US Department of Health and Human Services. (August 1, 2019). HPSA and MUA/P: Shortage designation types: Guidance portal. https://www.hhs.gov/guidance/document/hpsa-and-muap-shortage-designation-types.

Correlation between Oral Health and Systemic

Health

Utsavi Kapadia Hofstra University '18



Oral diseases are undeniably a global issue with significant implications for public health. Various research have found close correlation between oral health and systemic health, specifically chronic noncommunicable diseases such as diabetes and hypertension (Botelho et al., 2022).

I have personally experienced systemic diseases in my family. My grandparents, who had diabetes, encountered oral health issues, particularly periodontitis that led to tooth loss. Back then, I did not fully grasp the connection between dental and the overall health because I have not started dental school in India. When my grandmother began experiencing gum pain, we sought help from my aunt, who is a dentist. She conducted a thorough assessment, considering both medical and dental history, and utilized recent radiographs for precise diagnosis and treatment planning. This experience was an eye-opener, as I witnessed how oral health, even the minor concerns, interconnect with systemic well-being. When I later enrolled in dental school, I gained a profound understanding regarding the importance of precautions when addressing oral health issues such as gum health, carious lesions whether related to endocrine, cardiovascular, respiratory, neurological or hematological disorders.

Gingivitis and periodontal disease are the two major oral health challenges, with periodontitis being a leading cause of tooth loss in the elderly and can lead to significant complications associated with diabetes. Xerostomia, often induced by hypertension medications, can lead to severe tooth decay, mouth sores, and infections, which demonstrate a strong correlation with elevated salivary glucose levels (Tavares et al., 2014). Gingival hyperplasia can result from specific hypertension medications, and patients on long-term anticoagulant therapy face surgery-related bleeding risks.

In this case, collaboration between dentists and physicians is essential. It would be important to consider the procedure type and monitor international normalized ratio (INR) levels (Tavares et al., 2014). If a patient is on anticoagulant medication such as Warfarin while needing to get teeth extraction, the dentist needs to first check the INR blood test obtained from the physician. The present study demonstrates that simple tooth extraction in warfarin-treated patients is safe when the INR is 3.5 or lower on the extraction day (Khalil & Abdullah, 2014).

Stroke patients, with their limited daily activities and dexterity, are at increased risk of oral diseases. Inadequate oral care and xerostomia can lead to problems such as candidiasis, dental caries, periodontitis, mucosal lesions, and teeth loss. Arthritis can affect the temporomandibular joint, impacting jaw movement, and chewing. The density of mandibular and maxillary bones, as well as alveolar bone mineral density and height, modestly correlates with other skeletal sites such as skull, spine, arms etc. (Tavares et al., 2014).

Healthy People 2030 is a vital national initiative outlining key public health goals for improving well-being. Among its priorities, oral health is designated as 1 of the 23 Leading Health Indicators (2021). Health literacy takes a prominent role in the objectives of Healthy People 2030. This is exemplified by one of the initiative's main aspirations: "Eradicate health disparities, establish health equity, and enhance health literacy in order to enhance the health and overall well-being of everyone." (Health Literacy in Healthy People 2030 - Healthy People 2030 | Health.gov, n.d.). This emphasizes proactive strategies, preventive measures, and comprehensive patient care recommendations, enhancing our understanding of how systemic diseases can affect the oral and overall health of elderly patients (Tavares et al., 2014).

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ecial Needs Dentistry

Yena Jang Pomona College '24



The ability to visit a traditional dental office is often taken for granted. Patients with disabilities ranging from cognitive and physical disabilities such as autism and cerebral palsy to more complex conditions such as Alzheimer's and Parkinson's require special treatment during dental procedures, increasing the barriers to access. There are also structural barriers to access such as the lack of equipment needed to accommodate patients in wheelchairs including specialized dental chairs and x-ray equipment (Hwang, 2022). The need for general anesthesia and other adapted technology leads to waiting lists for patients that can take up to years. When these patients are finally able to be seen, usually at dental schools, they face various financial barriers, including cost of care, cost of travel, and lost income from taking time off work.

One example of a dental school that provides specialized care is UCLA School of Dentistry's Special Patient Care Clinic (SPC Clinic) which is committed to "providing quality dental care to the entire community [including] individuals with severe developmental disabilities, and complex medical histories, like end stage organ disease, cancers and associated therapies, complex syndromes, intellectual disabled, cerebral palsy, Down syndrome, autism and dementia" (UCLA, n.d.). Patients travel from far to receive care at the UCLA SPC Clinic for a reasonable cost. Unfortunately, there is still too much demand for the limited number of seats in their clinic and for the limited number of clinics throughout California. For patient Namirah Jones, who has severe autism and an intellectual disability, the next available appointment at UCLA was 16 months out (Hwang, 2022).

The lack of providers who are able to serve the special needs community is rooted in the lack of Medi-Cal providers. In July of 2023, more than 15 million Californians, which is about 40% of the state population, were enrolled in Medi-Cal (Karlamangla, 2023). Medi-Cal is California's version of Medicaid which is free federal health insurance offered to low-income residents. In 2021, only 36% of active licensed dentists in California accepted Medi-Cal, meaning that some families are traveling for hours in order to be seen by a dentist (Hwang, 2022). On top of that, the sedation required to complete treatment is likely to be not covered under insurance benefits, resulting in high out-of-pocket costs for families. Allowing patients additional time can be costly for providers, further driving down the number of interested dentists. However, the California Department of Health Care Services now allows dentists to bill Medi-Cal for extra time spent on special needs patients which may help to incentivize providers (Hwang, 2022).

During my time volunteering at the San Gabriel Pomona Regional Center, I have witnessed the emotional relief families feel when their loved ones are able to receive the oral health care they need and deserve. The first Saturday of every other month, the center works with Western University School of Dentistry alumni and current students in order to provide screenings for patients with special needs and set them up with appointments for their dental treatments. The doctors work with the center to provide desensitization therapy so that patients with sensory needs can become accustomed to the sounds, sights, and smells of a dental office. Families are so excited when their children allow the doctor to use the mirror to check their teeth even if it's for a split second.

In order to provide equitable care for all patients regardless of ability or medical condition, the budget should be increased to accommodate the building of special needs clinics and surgery centers across the state of California, as well as increased funding for the Regional Centers, dental schools, and private dentists that are currently providing care to the special needs population. People with special healthcare needs have the right to timely access to dental care. Additionally, how to provide unique care to the special needs population should be further integrated into all dental school curriculums. While there isn't a dental specialty focused on special needs populations yet, with continued advocacy and educational outreach I have high hopes that there will be enough resources for this unique patient population's dental visits to be normal.

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Special needs & medically compromised individuals. Special Needs & Medically Compromised Individuals | UCIA Dentistry. (n.d.). https://dentistry.ucla.edu/community-service/special-needs-medically-compromised-individuals

Innovations

in Dentistry



The impact of technological advancements extends across numerous sectors, especially within the field of dentistry. Many new or modernized innovations have drastically transformed the level of precision and depth in patient care, allowing patients to experience state-of-the-art dental care that leaves them feeling more safe and fulfilled.

Over time, technology has improved office efficiency, and the process of diagnosing conditions, and treatment planning, which can be exemplified by Jacob G. Park's dental office setup. Dr. Park's office consists of "...a full chairside computer-aided design/computer-aided manufacturing system, including an intraoral scanner, milling machine and furnace..." and he has included a new 3-D printer along with all the other machines (Versaci, 2022). "According to Dr. Park, with his full chairside CAD/CAM system, he can complete a whole procedure—a single ceramic inlay, onlay, or crown—in 50 to 90 minutes (Versaci, 2022)". CAD/CAM systems play a crucial role in modernizing dental practices and improving the quality of restorative and prosthetic dentistry from the creation of dental restorations to the manufacturing of prosthetics. Technology being able to speed up certain steps of a patient's treatment plan allows for more time-efficient visits for the patients and also allows dentists to invest more time in other tasks while expanding their scope of work.

While shadowing my dentist during the summer, I observed the use of a Primescan, an advanced intraoral scanner that is often used to create digital impressions of a patient's dentition. This scanner allowed my dentist to provide highly accurate and efficient dental care to their patients. In doing so, the device helped my dentist with treatment planning, designing dental restorations, and monitoring changes for his patients' oral health.





It's also extremely important to note that technological development in the field of dental care has proven to not only be beneficial to the process of diagnosing or

development in the field of dental care has proven to not only be beneficial to the process of diagnosing or treating patients but also in the efforts to expand the range of patients to those who are also underserved by making dental care more affordable (Gracco et al., 2023). An example is how modern digital X-rays are utilized in treatment plans; using digital X-rays rather than film X-rays allows time-efficient projections of tissues, both hard and soft, and no longer exposes patients to radiation (Gracco et al., 2023). 3-D printing has innovatively changed dental procedures by making dental care more efficient and affordable, giving everyone more opportunities to care for their oral health regardless of their financial situation (Gracco et al., 2023).



The synergistic effect of endless dental technologies has had a huge impact on the way current dental students are being trained and taught as well. Through these technologies that allow future dentists to gain hands-on experiences, dental students can develop their skills in "safe and controlled environments" by practicing without the possibility of harming actual patients through these technologies that can mimic real-life dental procedures and visits (Gracco et al., 2023).

Overall, with the help of the vast array of technologies being improved and upgraded, dental care has become more accessible, fast-paced, and safe for both dentists and patients alike, bettering the world of oral care for all.

Redefining Research as a Requirement

Suriyen
Subramaniam
UCLA '25



Is Research Necessary?

During my conversations with aspiring pre-dental students at organized events and conventions, I often get asked the sweeping question: "Is research necessary to get into dental school?" The terse answer is that while research is not obligatory, it is highly recommended. Yet with an increasing number of dental schools across the United States beginning to revise their mission statements to emphasize commitment to research, extracurricular lab work pulls more weight with dental school admissions than ever before. Unlike standardized coursework or clinical volunteering, research experience offers a singular opportunity to showcase an academic passion. As this metric distinctly sets apart prospective dental school candidates, I firmly believe that every student should venture to explore research along their pre-dental journey.

Beyond its impact on dental school admissions, diving into research can train and equip aspiring dentists with the skills to authoritatively speak and act as industry professionals. Research exposes students to the academic vernacular of graduate school, aiding their digestion of diverse concepts that are quickly presented to professional students pursuing dentistry. Moreover, immersing oneself in minutely understanding and experimenting on a chosen topic through research prepares individuals to efficiently comprehend, synthesize, and apply knowledge in novel ways, akin to a dentist planning treatment for a new patient. Finally, laboratory teamwork and learning to build upon the findings of other researchers, near universalities to any style of research, offer great proxies to learn how to work with a staff and how to assess incoming patients with prior treatment from elsewhere.

Understanding what Research to Pursue

Quite understandably, some students worry that research unrelated to the field of dentistry may reflect uncertainty in pursuing dentistry to dental school admissions; this, however, is often not the case. Dental research, especially clinical research, is predominantly conducted by graduates or post-graduate researchers at dental institutions, thus limiting the opportunities for pre-dental student participation. Whether in dentistry or another field of study, finding a topic to research that motivates you will showcase your prowess and help define yourself upon admission's review.

Most lab work is classified as either wet lab or dry lab, involving controlled experiments manipulating biological matter or data collection and computational analysis, respectively. While the practical work in each of these settings may be different, many of the skills, including how to pose research questions and how to understand the current scientific consensus on a novel topic, are consistent and highly transferable. As most clinical research projects in medicine require a synergy of wet lab and dry lab skills, undergraduate researchers should focus their efforts primarily on understanding how to think and act like a researcher.

Due to the great variety in topics and avenues of research, most students begin their journey into research by first settling on a field of study that interests them, such as genetics, marine ecology, chemical imaging, pathological psychology. If you are currently a student at a four-year institution, asking a professor in your desired subject during office hours or after class about the lab work they conduct is an excellent next step to illustrate your passion and interest in getting involved. While it may not be feasible for some professors to offer lab positions to students, your conversations with them can lead to introductions and prospective opportunities with their colleagues. For pre-dental students without access to university laboratory opportunities, reaching out to local labs or inquiring about remote opportunities for dry-lab research via email or phone can be great ways to get involved. Asking your graduating peers about possible lab vacancies offers another avenue, especially if addressing professors directly seems too daunting or alternative options are exhausted.

