The New American Dental School

UCSF School of Dentistry

Foreword

From our founding as the lone outpost for dental education in the West to the pioneering work of our clinician-scientists during the AIDS epidemic, UCSF Dentistry has long been a health leader. For more than 140 years, UCSF Dentistry has pushed new boundaries and responded to the challenges of its time. Today we find ourselves at the precipice of another historic moment. Our challenge now is to reach across the divide that separates dentistry from the rest of health and build a new type of dental school that will define a paradigm for the future. The New American Dental School at UCSF will be a beacon of innovation, interprofessional education, integrated health, and community connection.

This report is a blueprint for the physical embodiment of the New American Dental School which will guide strategic planning and construction over the next decade. It maps a pathway that ensures UCSF Dentistry will continue to be a leader and pioneer in research, education, and patient care for generations to come.

In these pages, we provide a vision of a dental school that draws on the unique strengths of UCSF and the UC System to transform the dental landscape. It will be more than physical structures. It will create an environment that catalyzes meaningful interactions and lasting contributions to oral health and beyond.

Innovation will fuel every endeavor we undertake at the school. We will acknowledge our interconnectedness with the broader healthcare system and foster interdisciplinary education that will teach a holistic approach to human health.

Through active learning environments and mentorship, we will nurture future generations of dental professionals who will lead with skill, ethics, and a lifelong thirst for learning. The immersive and dynamic curriculum in development will prepare our students for the challenges of today and the unknown possibilities of tomorrow.

The center of the New American Dental School is our people—the vibrant and diverse community of learners, faculty, staff, and alumni whose curiosity, compassion, and drive propel us forward. In our new school, every individual will feel valued, supported, and united in a shared mission.

At UCSF School of Dentistry, we are preparing to embark on the next stage of the journey we began so long ago. The pace of change increases daily, but with excellent people and an aligned vision, we are ready to lead dentistry into the future.

Michael Reddy
Dean, UCSF School of Dentistry

TABLE OF CONTENTS

INTENT OF THIS STUDY

The vision outlined in this document is the first step in a long-range goal of creating the physical base of operations for the New American Dental School at UCSF. The existing Dental Clinics Building at 707 Parnassus Avenue, dedicated in 1980, is slated to be removed in Phase II of the 30-year Comprehensive Parnassus Heights Plan (CPHP).

With the goal of improving access to campus and providing a direct connection between Golden Gate Park and Sutro Forest, the CPHP includes extending 4th Avenue through the existing dental building site. The CPHP created an opportunity to think creatively about the School of Dentistry's physical spaces — not only what the spaces need to support but where they are located.

With 8–10 years remaining before the Dental Clinics Building is impacted, the school commissioned this study to prepare and plan for the future. Intensive research was completed in the middle of 2023 to gather the information to form a solid foundation for the architectural design work to follow. This report, "The New American Dental School," is a short summary of the research process and findings, as well as the overarching vision for the School of Dentistry's future physical spaces.

OVERVIEW

For 143 years, UCSF School of Dentistry has been committed to discovery and innovation, educating tomorrow's health care leaders, delivering exceptional patient care and passionately advocating for the community. A culture of innovation and commitment to the greater good is rooted in the school's long history. Breaking barriers was ingrained in the school's DNA from its founding in 1881 as the first dental education institution west of the Mississippi.

Today, UCSF School of Dentistry is a globally recognized leader in oral and craniofacial health and health sciences research that comprises:

- 452 faculty (including volunteers)
- 482 learners
- 297 staff members
- 7,000+ alumni

In addition to its Doctor of Dental Surgery programs, its educational programs have grown to include an array of MS, PhD, post-graduate and residency programs. Learners, faculty and staff provide care through over 130,000 patient visits yearly and are actively engaged in community health outreach and education across the San Francisco Bay Area. The school is recognized as a research powerhouse with expertise across the full research continuum, and for nearly 30 years it has been the top-ranked dental school in the country in National Institutes of Health funding.

UCSF's Parnassus Heights campus serves as the school's principal home of operations, serving as the hub for education, research, and patient care activities. Key sites at Parnassus Heights include:

- 707 Parnassus, the school's flagship building
- Medical Sciences Building
- Clinical Sciences Building
- Health Sciences East
- Health Sciences West

Over the years, the school has expanded its clinical footprint to include:

- UCSF Mission Bay Campus
- Zuckerberg San Francisco General Hospital
- Laguna Honda Hospital
- San Francisco VA Medical Center
- UCSF Benioff Children's Hospital Oakland
- Highland Hospital

Fourth-year students provide care to patients through a partner network of 25 community clinics across the Bay Area, Northern California and Alaska. The school's researchers collaborate across UCSF campuses and with scientists at various institutions across the globe.

With Phase I of the Comprehensive Parnassus Heights Plan underway, and given the school's continued expansion, it is an ideal time to build a vision for how the school's physical spaces will support the concept of the New American Dental School. Collaboration, community and innovation have long been hallmarks of UCSF's success, and the new school facilities will be designed to foster these ideals.

SETTING THE VISION

Building the New American Dental School

This vision study intends to provide a framework for building the New American Dental School and raising the quality of the physical environment to reflect the school's excellence in research, patient care and education. As space and architectural plans progress over the coming years, this framework will help ensure that plans are creative, highly functional and in line with the identified needs of the school community.

The following key concepts and design principles, identified through the extensive research process outlined in the next section of this document, represent a vision for the physical embodiment of the New American Dental School at UCSF.

Dentistry Hub at Parnassus Heights

The Parnassus Heights campus is a place of history and significance to UCSF with the schools of dentistry, medicine, and pharmacy standing on the same ground where the three original buildings of the University of California Affiliated Colleges, the original name of UCSF, opened in 1898. Today, Parnassus Heights is the hub for health professional education at UCSF and an anchor location for basic science. The overwhelming majority opinion of the stakeholders participating in this study made it clear that the School of Dentistry should maintain a significant presence on the Parnassus Heights campus. The desire is for this to serve as the key base of operations to a supporting presence at Mission Bay and a series of clinical sites in San Francisco and beyond — a clear "hub and spoke" model.

While dentistry as a discipline is integral to general health, it requires a different physical environment than other health care specialties. This strongly suggests that it needs a dedicated base of operations. The Parnassus Heights campus is the ideal location given the existing infrastructure and complementary education, research, and patient care activities.

View from Parnassus Avenue and 3rd Avenue on the UCSF Parnassus Heights Campus.

Collaboration

The unique collaborations possible at UCSF have long been seen as a core strength of the institution, and this holds true for the School of Dentistry. Collaboration is the "secret sauce" that has enabled generations of learners, faculty, researchers, administrators and alumni to achieve a remarkable level of excellence in every aspect of the UCSF mission. Indeed, when asked what words come to mind when he thinks about UCSF, Chancellor Sam Hawgood's first response was "collaboration."

The School of Dentistry values collaboration with all of the health disciplines. New facilities will enhance interprofessional education opportunities and support the coordination of patient care among providers of all specialties. Spaces will allow for physical proximity of researchers and clinicians which will enhance and accelerate the translation of discoveries into patient impact.

With collaboration being a central tenet of this framework, it is important for it to carry through to the planning processes that will commence as facilities projects move forward. A robust process of outreach and inclusion across the university is integral to the development of the design.

UCSF deans coming together to support the School of Dentistry's future vision

“The School of Dentistry’s success is a tribute to its community, which is remarkably diverse by every measure.”

Built for Belonging

The School of Dentistry’s success is a tribute to its community, which is remarkably diverse by every measure. Members come from a variety of life experiences and ethnic, racial, and geographic backgrounds. Every member values dedication, innovation, independence, and success. They operate in many buildings on both the Parnassus Heights and Mission Bay campuses as well as remote sites, and the quality of each work environment varies. New facilities must create an environment that supports the well-being and growth of each member and empowers them to do their best work. The ideal work environment will match the school’s collaborative style and provide a genuine sense of belonging in a tight-knit community.

New facilities will include indoor and outdoor collaboration and social spaces where the School of Dentistry community can gather as individuals or groups of varying sizes – S, M, L, and XL. These places will delight the mind and soul. They will be destinations for researchers to connect with each other and build new collaborations. They will provide a place for alumni returning to campus or learners and staff to participate in group activities. The fostering of chance encounters and deeper connections with colleagues will empower the users and create a lasting impression of their experience in the new school facilities.

Integration, Not Isolation

Integrating dentistry with overall health is a key aspect of the New American Dental School and is a unique strength of UCSF. New facilities will build upon the progress the school has made in this area by facilitating connections across campus to enhance health education, patient care and research.

As Dean Michael Reddy said in an interview, “The oral cavity is a window to the health of the rest of the body.” The inextricable linkages between oral health and overall health have far-reaching implications for the future, across all areas of UCSF’s mission.

Foundational education with other health sciences disciplines is critical and should be enhanced, particularly at the outset of the predoctoral years. Dental, medical, pharmacy, nursing and physical therapy learners all share basic knowledge of each other’s specialties, and the education spaces in
the new facilities can support the acquisition of this interprofessional knowledge.

Creating opportunities for members of a patient’s care team to connect and collaborate is equally important. Technology and physical co-location of care team members, including dentists, can support UCSF’s vision of providing whole-person health.

Research labs have long been co-located with labs from across the university in neighborhoods, and this physical integration has yielded extraordinary partnerships and breakthrough science. This can be enhanced through collaboration and social spaces that facilitate spontaneous encounters with researchers from across departments, while also building spaces that better connect researchers and clinicians.

“The oral cavity is a window to the health of the rest of the body."

Brand Unification

Brand unification means that when a person thinks about UCSF and their health, they know the institution offers state-of-the-art solutions for their health and wellness. Expressing the brand can take many forms including apps, signage and wayfinding, publications and other media.

Architectural expression of buildings and the design of their interiors can be a powerful expression of the UCSF brand and mission. Interior design is a good starting point given that interiors need to be refreshed frequently. Many campuses, both traditional and modern, have developed a unified architectural campus signature over long periods of time. Given the extensive rebuilding of the Parnassus Heights campus, there is an opportunity to express the brand through architecture.

Elevate the Technology

What is new today is old tomorrow. The visioning process engaged both stakeholders and forecasters in brainstorming the impact of new technologies, which will only become more profound in the future. Imaging, artificial intelligence and computational biology are just a few of the innovations that will continue shaping everything from the delivery of care to the research process.

Given the rapid pace of technological advancement, new facilities must be platforms that support change. They will have future-proofed designs that allow new technologies to be adopted with ease and efficiency. Smart buildings are designed to allow almost every system to be modified or replaced, and this design principle will be integral to the School of Dentistry's future facilities.

Significantly, existing technology can be used to improve communication between learners, faculty, and staff. Examples include supporting students as they transition from simulation to clinic and ensuring people have the supplies and equipment they need to perform their work without interruption.

“The patient experience will be enhanced with inspirational spaces designed for universal access.”

Elevate the Patient Experience

The patient experience will be enhanced with inspirational spaces designed for universal access. The arrival sequence will provide patients a sense of confidence and welcome. Artificial intelligence can be used to communicate with patients in their own language, and other wayfinding supports will allow patients to navigate the facilities efficiently. Clinical spaces will be designed to protect the patients’ medical records and provide visual privacy when undergoing a procedure.

When designing a holistic, equitable patient experience, the process of delivering the patient to their care team goes beyond signs. Developing a series of architectural monuments orients the patient and guides them to their destination. This clarity helps create a more successful initial visit and can increase the likelihood of the patient returning for follow up care.

Smart Planning

Circulation, or the movement of people through, around and between built environments, is an important consideration for the School of Dentistry. Circulation can be organized on a variety of concepts: linear circulation means everyone passes every destination; a grid means any destination can be reached through multiple paths; a hub and spoke plan allows the most efficient movement from a central point to a particular destination. A combination of approaches at differing scales can create the layers of patient privacy, learner access, and collaborative encounters to create a model of efficiency in the future.

Using a hub and spoke approach for the school’s clinical spaces would minimize contact between patients while allowing educators to quickly reach learners. Stacking hubs around vertical circulation on different floors makes this approach more effective. Creating a linear access from entry to hub for the patient provides a clear and efficient process organized to get the patient to the chair as quickly as possible, while preventing them from seeing private information of other patients.

Healthy Building and Healthy Planet

The New American Dental School’s facilities will be healthy places to work and will support a healthy planet by following the best principles of sustainable design. The University of California is committed to resilient design so buildings can remain online during seismic, climate, and health emergencies. Of equal importance is the use of biophilic design leading to human delight. Biophilia connects with people’s positive response to exposure to sunlight, daylight, and views of natural green spaces. Studies have shown this approach significantly helps recovering patients and is also a benefit to everyone working in the building.

Through every step in the process, the design team should measure success in achieving de-carbonization, biophilic, and resilient design.

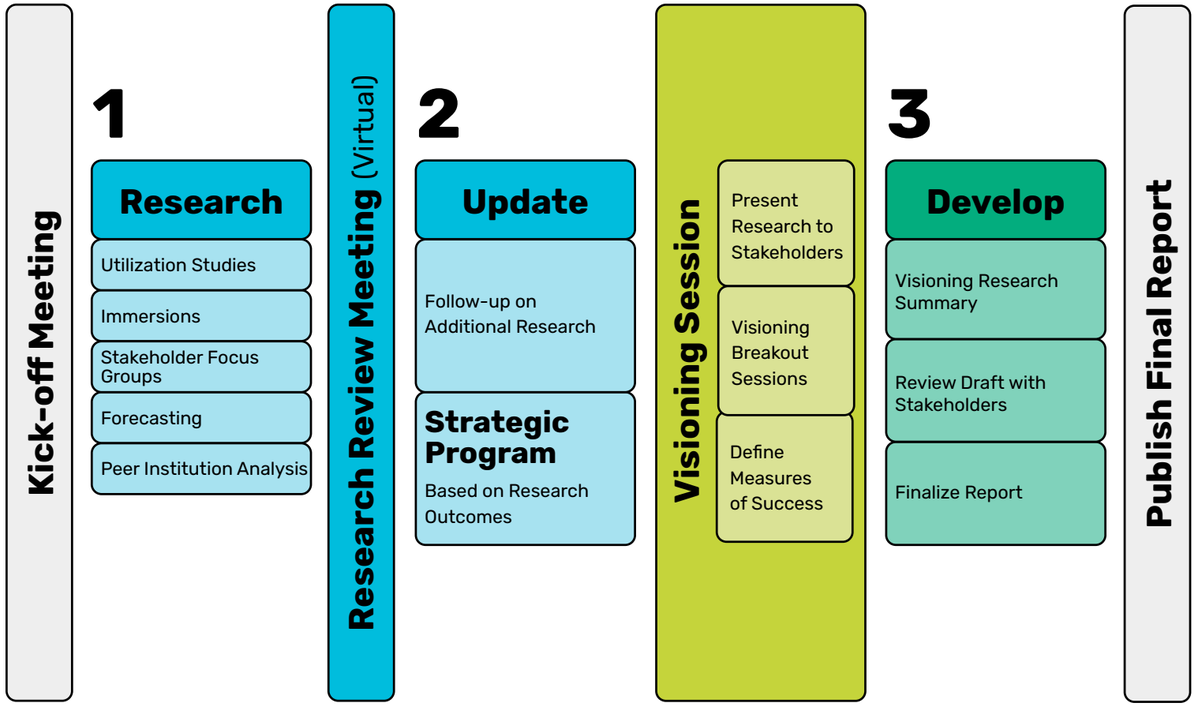
“Using a hub and spoke approach for the school’s clinical spaces would minimize contact between patients while allowing educators to quickly reach learners.”

One Measure of Success

The stakeholders engaged in the study defined a number of measures of success, one of the most touching being to make a place where all members of the School of Dentistry community want to stay when they are not working. They will be memorable places where people across the school community feel that they belong. Measuring this is as simple as adding a question to yearly surveys taken by learners, faculty and staff which capture the length of time each user on average spends in School of Dentistry facilities after normal working hours. This can then be compared with future surveys taken after the new facilities have been occupied.

METHODOLOGY

Research Goals & Study Components



Research phase flow chart

To project the direction of an enhanced School of Dentistry that can benefit current and future patients, learners, faculty, staff and alumni, the research team documented existing conditions, trends in the field, and expert opinions on how to create a more ideal environment for education, research, and patient care.

The research phase included a wide range of activities to fully understand both existing conditions and define the future direction for the School of Dentistry.

Utilization Study

The research began with a review of UCSF's space allocation report and a campus tour. The research team visited the existing Parnassus Heights campus, including the flagship Dental Clinics Building at 707 Parnassus as well as nearby research buildings. The purpose of these initial reviews was to analyze how the school utilizes its existing space to support its various programs.

Immersions

The research team immersed themselves in the School of Dentistry environment to understand the DNA of the school from the inside out while gaining deep insight into how each user group experiences the physical spaces. The team spent six weeks shadowing faculty, staff and learners to understand the typical "day in the life" of many members of the community. This exercise allowed the team to understand the culture of the School of Dentistry.

Stakeholder Input

The School of Dentistry hoped to build a vision for what a dental school of the future should look like. The desire was to gain a broad view across all of the different stakeholder groups in order to set a preferred direction of the future facilities. The stakeholders were organized into nine focus groups with a total of 62 participants. The focus groups included dental students, residents, preclinical faculty, clinical faculty, clinical staff, clinical education faculty, administration, lab researchers, clinical and implementation sciences researchers, and alumni.

Forecasting

In a rigorous pursuit of the best answer, the research phase also included interviews with key leaders across dentistry, health, science, business and government. These interviews were facilitated by Dean Michael Reddy and focused on connecting current and future trends that may influence UCSF's decisions for building the School of Dentistry's future facilities. By forecasting future developments, the process not only responds to present needs but attempts to anticipate the future to discover solutions that will last over time.

Peer Institution Analysis

Another part of the research was to identify and analyze what the stakeholders thought embodied innovative dental school building design. Through researching institutions recommended by participants in the study, the team gained valuable lessons learned on different approaches to dental school design.

Visioning Workshop

A full-day workshop was held to bring together a broad range of leaders from across UCSF and the School of Dentistry. Each participant was assigned to a group with one member of the research team as a facilitator. The research team presented their findings, after which each of the five teams was given an assignment focusing on key design issues that new facilities must solve. Each of the teams reported out their top ten outcomes to the group at large, then the group voted in order to identify the most important thoughts. This report is based on those selections. Finally, the group discussed what would be important measures of success if the new building achieved all that was possible.

Programming and Design: The Next Steps

The design of new facilities for the School of Dentistry should begin with a rigorous programming phase. This vision and all the related research that supports it defines what new buildings should achieve. The design should also be informed by other drivers including changes affecting the broader culture, UCSF as an institution, revisions to the dental school curriculum, decisions on remote facilities, and the school's growth plans.

RESEARCH FINDINGS

Utilization Study

The research team first looked into the published UCSF Education Space Recommendations: Education Space Planning Task Force Report released in 2020. That report listed the four principles that guided their work as they landed on findings from the larger team. The report was put together by the Educational Space Committee, the education deans of the four health professional schools, the chair of the Program in Physical Therapy, and the Office of the Vice Chancellor for Student Academic Affairs.

This report collated what those groups want the future of their education space to be, and the values listed line up closely with what the team found in this research study.

The report states that the future of education space should be:

- The physical **embodiment of the institution's values** (ranging from excellence to innovation to diversity).
- Designed as a **comprehensive ecosystem** for learning.
- A **facilitator for interactions** between faculty, learners and peers from other schools.
- A **support mechanism** for the well-being of learners.
- An essential **resource shared equitably** amongst all schools and programs.
- Designed to **anticipate the changing landscape** of graduate and health professions education for the next four decades so future graduates are beneficiaries and their needs are met as well.

Next the research team toured various buildings utilized by the School of Dentistry and made the following observations:

Clinical and Preclinical

After touring, it was evident that clinical and simulation resources and spaces are prioritized and located in-house while didactic is outside of the Dental Clinics Building. Also, the team noticed that clinical spaces need more privacy, support spaces, and could benefit from technology to connect learner and teacher. Also, preclinical spaces are crowded and lack a seminar space.

Education Support Spaces

The research team found the education support spaces need to be more accessible for learners, and that the following spaces are insufficient: heads-down workspaces, classroom, meeting spaces, and collaboration spaces which only exist on the larger UCSF campus, but not in the main dentistry building.

Research

The team noted that wet lab research could benefit from more opportunities to collaborate with clinical colleagues. In addition, dry lab space is limited and there is a need for more. The team felt that additional studies examining research support spaces would be beneficial.

Storage

Storage spaces are undersized which sometimes leads to damaged equipment and supplies.

UCSF School of Dentistry clinical space

Immersions

The research team wanted to discover the underlying core values of the institution, so they immersed themselves in the schedules of various users and groups. The team connected with faculty, staff and learners to understand the nuances of the UCSF Dentistry culture and observe firsthand how they experience their workspaces. Through shadowing typical days, observing how users move through the space, and asking questions about what a typical week looks like, research was gathered to create a set of key observations.

Valerio Dewalt Train taking part in the operational workflow immersion

Experiences

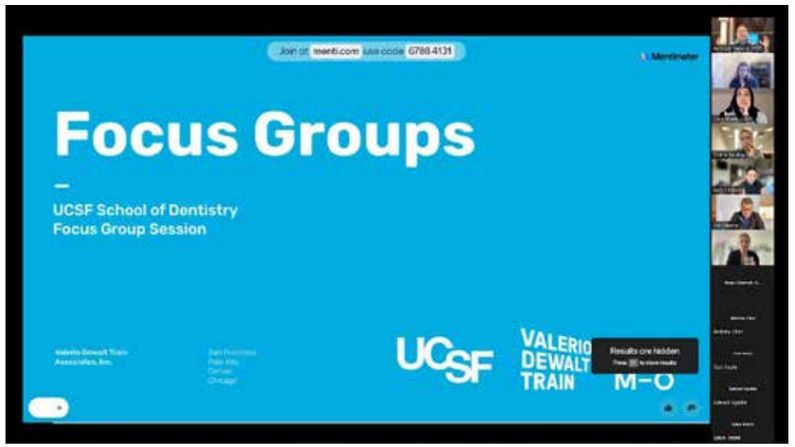
- Pediatric Clinic
- Clinical Workflow
- Endodontic Clinic
- Dean of Education Workflow
- Periodontic Clinic
- Operational Workflow
- Predoctoral Clinic
- Preclinical Lab
- Oral Surgery Clinic
- Patient Spaces
- Support Spaces
    - Medication Storage
    - Storage Room
    - Sterilization
    - Work Room

Key Observations

Spirit of Accomplishment	What shines above all else is the spirit of accomplishment throughout the school. The faculty and learners know they are a part of something special and bigger than themselves. They push to achieve great things despite their acknowledgment of the limitations of the existing facilities.
Dedication to Patient Care	The faculty, learners, and staff shadowed and interviewed are constantly looking for ways to improve the patient experience. A great level of ingenuity is used to overcome the limitations of existing space and technologies. That's not to say the care being delivered is anything short of impeccable.
Culture of Care Perfection	UCSF has the utmost respect for the patient and the care they deserve. The faculty have exceedingly high expectations of the learners before they ever see the patients. The faculty throughout simulation and clinical training have a mantra of "this is permanent every time you touch a tooth" and they push for perfection in the care given to the patients.
Culture of Reinforcement	There is also a very collegial nature among the faculty that communicates a community devoted to supporting each other. Faculty support each other, ensuring equity of time demands to facilitate their group's learning. This is evident though Preclinical, Clinical Group Practices, Residency Clinics, and Administration. Every effort is made to support the learners gaining the right experience and providing the best care for patients.
Overcoming Space Limitations	The current space for the school's education and patient care activities limits what it can achieve. Additional predoctoral clinical space and immediately accessible collaboration and respite spaces are needed within the main Dental Clinics Building. Current ergonomic concerns can be improved to increase function.

Overcoming Technology Limitations	Currently, ingenuity of the faculty and learners has spawned spontaneous solutions. There is a deficiency in the adoption of technology to improve patient experience and provide training opportunities to learners, which means that a concerted effort needs to be taken to integrate new technological advancements. The school has already sponsored the adoption of some new technologies, and this needs to be expanded further.
Facilitate Collaboration with Researchers	From day one of this study, there was consensus that having the basic science researchers in research-specific buildings, adjacent to other researchers working in similar domains, helped facilitate collaboration in research. Other research, such as social science research, can be accommodated in a variety of physical settings. Because of this, immersion subjects were focused on the clinical and education aspects of the school. The consensus going into this study is that additional programs will be targeted at bringing all researchers into the school for additional collaboration opportunities.
Elevate Learner Support	The faculty and staff focus on what they need to best instruct the learners. They share a commitment to ensuring learners receive the necessary experience. Learner support spaces (places to study, eat, socialize, etc.) are imperative to elevate the overall education experience. These support spaces not only create a community of support for the learners, but also help faculty by creating more access to learners and expanding collaboration among their learners. Current learners are resilient, but more effort should be made to elevate their experience so they can excel even more.
Elevate Patient Experience	Providing an excellent patient experience is a focus from the top to the bottom of the organization. Each member of the community understands that the mission of advancing healthcare can only go so far as their access to a patient community. While the patients receive top-notch care when they are in the chair, almost every element surrounding the patient experience outside of the chair could be elevated. Care delivery needs to be studied through the lens of positive patient experience including privacy, wayfinding, security, accessibility, comfort and oral health advocacy.

Stakeholder Input



"Having teaching, research, clinic, and faculty offices under one roof means that people are close by each other, and that facilitates collegiality."

To gain consensus of the ideal vision for future School of Dentistry spaces, the research team gathered voices that represent a broad range of users within the institution. Focus groups were held with groups of learners, residents, clinical faculty, clinical staff, administration, pre-clinical faculty, clinical education faculty, clinical and implementation sciences researchers, lab researchers and alumni. Sixty-two participants shared their views and the result was a massive amount of data and thoughts on the blue-sky vision for the future school. Several clear trends emerged with multiple members in separate groups sharing similar views. Those views and trends are:

A central, identifiable presence for the School of Dentistry

There was advocacy for maintaining a "home" for the School of Dentistry: a physical space that helps the community create an identity within the University. **"Having teaching, research, clinic, and faculty offices under one roof means that people are close by each other, and that facilitates collegiality."**

Dental and medical should be more intertwined

This need came into greater focus as the team raised the subject and gained clear consensus on the concept of bringing the dental and other medical disciplines closer together in education and practice. The school has been focused on the integration of oral health and overall health, and Dean Reddy communicated to the research team that this is one of his goals moving forward. Almost everyone interviewed felt that creating an open, welcoming environment where the professions can come together to support a holistic approach to health care is important for the future. While they also celebrated the unique identity of oral health as a profession, it was widely recognized that new facilities must enhance interprofessional health integration. **"We want general medicine and dental care to be more in line. We want it to be more part of a package where you go to your primary care doctor when you hit certain ages…"** In an ideal scenario, there would be spaces for cross-disciplinary collaboration. **"For us, we should have a space where pharmacists and social workers can come through and rotate and collaborate in our space…"**

Facility flexibility needs to accommodate Artificial Intelligence (AI) and technology use increasing in the future

In supporting this large shift in how dentistry fits within the healthcare landscape, additional elements were raised that urged great flexibility in future facilities, not least of which is technology. A trend already seen is the integration of advanced imaging and production techniques that are supported by technology. This will continue to expand with the integration of AI and machine learning, haptics, and other training techniques that transform how users view the spaces. **"AI can memorize and identify if you have a diagnosis. AI can spit out the differentials and then you can decide what you want to do with it."**

Better layout and technology needed for teaching and learning

The subject of technology led the focus group to many discussions regarding how the transition and integration of preclinical education works with the clinical portion of the curriculum. The integration of technology can assist in the communication and direction of the learners. **"How do you make [educators] more effective and efficient, and manage more students in a safe and effective way?"** In addition, smart designs that support the optimal flow of users within spaces are needed.

"How do you make [educators] more effective and efficient, and manage more students in a safe and effective way?"

Places for organic conversations to discover, relax, and connect

Additional connections between faculty, learners, and staff in informal settings was also raised as key for the future facilities. While informal study spaces and places for respite are available throughout the campus, the demanding schedule of the dental community requires spaces to connect for students, faculty, residents and researchers. **"Places to have coffee and interact are nice. At a fundamental level having a space right there where you are doing benchwork to converse rather than going to a cafe is really important."** Not only do these spaces allow relaxation, they are imperative for discovery, innovation, and learning. **"There are diverse researchers and the biggest connection is they all want to discover. If we can establish places for planned and chance interactions that would be beneficial."**

"We need to be mindful of how long the patients have to wait and how big and inefficient our systems can be. "

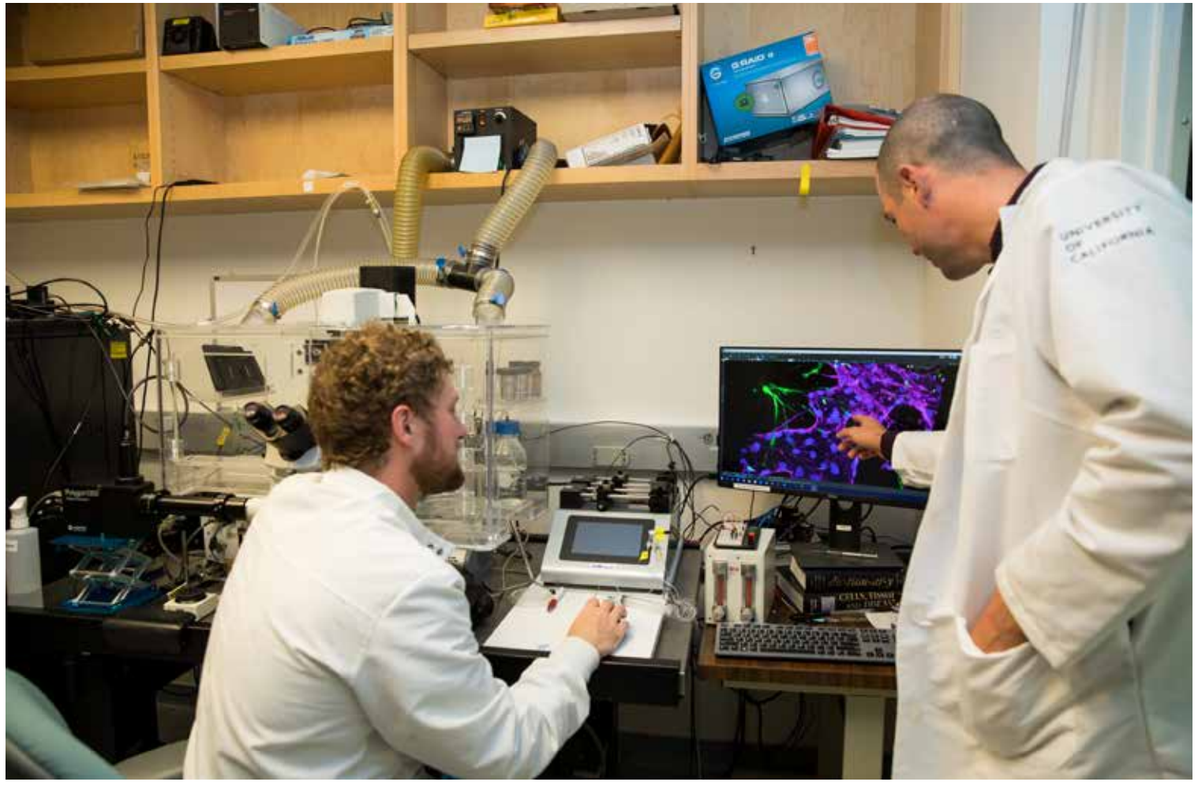
Streamlined and more comfortable patient experience

A recurring theme discussed was the patient experience, with many groups wishing for a much more connected, comfortable and thoughtful patient experience. Again, the entire community of stakeholders was well aligned on this vision for enhancing the patient experience. **"We need to be mindful of how long the patients have to wait and how big and inefficient our systems can be. Having people walk past 80 chairs where dentistry is occurring to get to their open bay cubicle is not a good patient experience. It freaks people out and creates a lot of privacy considerations."**

Facilities need to promote translation of biological research

The culture of innovation was seen strongly within the biological research groups, who have a vision of being more collaborative with the clinical faculty and learners in order to translate their research into practical procedures and diagnoses. While the basic science labs are already in an ideal location sharing space with other researchers working across biological and anatomical areas, communicating their advances to the faculty and learners is imperative to creating useful outcomes. **“Collaboration has to happen between clinic and researchers and it hasn't happened like it should.”**

“Collaboration has to happen between clinic and researchers and it hasn't happened like it should.”



The future of culture of School of Dentistry should intersect compassion and innovation

The research team asked each focus group to list five words that they felt defined the School of Dentistry currently and then five words that would define the ideal dental school of the future. The current DNA word cloud was mostly filled with words relating to the True North pillars defined by UCSF’s leadership: empowerment, innovation, discovery, exceptional care, and community engagement. There was consensus that the future school should draw on two major themes: compassion/caring and high-tech/innovation.

Word cloud of responses to the question "What five words describe the DNA of the school in the future?"

Forecasting

Inviting stakeholders from a broad range of positions within the school helped the research team gain a clear view of the operations of the school. However, to anticipate the future, the team considered what outside voices should be heard. Relevant forecasts of cultural trends in health care, health education and discovery were researched, and a series of formal interviews and requests for comments were gathered by the school. Insights gathered from thought leaders provided a macro review and helped uncover drivers that will influence the future direction of the school's facilities and growth.

View from the Kalmanovitz Library at Parnassus Heights

Health care equity is the key to a healthy California

"Oral health is a cornerstone of health care for all Californians. We must make oral health care more accessible, equitable, affordable and high-quality. Closing gaps in these areas requires strong partners like UCSF Dentistry who are committed to caring for underserved populations while bringing to bear cutting-edge expertise in research and workforce development."

Gavin Newsom
Governor of California

The distribution of dental providers results in access to care inequities across communities. Workforce numbers are decreasing for those who need dental health the most. "There is a big problem with distribution of the dental workforce in California… We have counties like Humboldt where 50% of dentists are ready to retire in the next year or so. Resolving health care access deserts is more sustainable when a cross-professional model is followed."

Dr. Jayanth Kumar
State Dental Director, California Department of Public Health

Dr. Catherine Lucey
Executive Vice Chancellor and Provost, UCSF

Cross-professional collaboration between health disciplines is trending and beneficial

The recurring theme identified in the focus groups that co-location and cooperation between health disciplines is beneficial was verified by the forecasts. Working and collaborating side-by-side to deliver more integrated, team-based care continues to trend. "Dental care is part of health care delivery - I'm not separating it out. It is 100% clear to me that this is a team sport and forevermore will be a team sport so we really need to be educating learners, supporting our faculty, and providing integrated, team-based, interprofessional care."

Dr. Michael Drake
President, University of California

The benefits of fostering this collaboration are defined in every phase of the educational environment. When all the disciplines share space that "maximizes the benefit of collaboration by having people together when they can work on the same things but give them opportunity to intermix and share as well."

"If you have a committed institution with peers who feel similarly, I think you've got a brilliant opportunity for not only interprofessional and interdisciplinary training, but candidly a more economically efficient model of training that has the size benefit of greater safety, greater quality, greater interdisciplinary understanding and frankly better, safer patient care."

Dr. Jonathan Perlin
President and CEO of The Joint Commission Enterprise

Closely locating School of Dentistry research within the broader scope of health research and alongside clinical reaps benefits

The preference for researchers to be amongst their fellow researchers across disciplines was expressed numerous times. This promotes diverse methods of thinking and ultimately more thorough research. "Discovery science research needs to be thematically driven, not driven by accreditation… disciplinary definitions. The oral cancer faculty need to be working in the cancer center, not in a segregated siloed dentistry cancer program. And your periodontal researchers need to be in the larger microbial, microbiome community, etc."

Dr. Sam Hawgood
Chancellor, USCF

"I like the idea very much of research neighborhoods, if you're a specialist in tissue culture, it doesn't matter what you're growing the tissue for. I like there being some level of cross-pollination so that the questions that you're asking don't always get the same answers"

Dr. Michael Drake
President, University of California

Dr. Kirsten Bibbins-Domingo
Editor in Chief, *Journal of the American Medical Association* (JAMA)

Pairing the research closely with education and clinic also allows for a more robust community, communication between groups, and also better mentorship and well-rounded professionals. "One of the benefits of education and research together is that more trainees in dentistry would benefit from mentorship in other schools. That is a huge advantage because each school building out [their method to] teach research and how they mentor does not play to our strengths. It's beneficial beyond just thinking about the researcher being closer to the patient. When you have the trainees there, you amplify the opportunities for mentorship, collaboration, and building out research and that ends up being super important."

Cross-professional education and practice is in its infancy

While the benefits that come from co-location and interprofessional connection are evident, this is not currently the norm in our country. As a result, these concepts have not been systematically studied, resulting in a lack of data pointing out benefits and opportunities. "We are in desperate need for high-quality evidence… for the formal recommendation that oral care is important in primary care delivery."

In addition, training a workforce in this ideal model may create challenges for graduates as they enter a professional world that adheres to the current model. "You could build an interdisciplinary center at UCSF but then [the students] graduate and dentists are spread out and not in health centers. Co-location is the dream but that is [currently] an artificial environment."

Dr. Romesh Nalliah
Associate Dean for Patient Services, University of Michigan School of Dentistry

Combination of centralized and decentralized models are needed for education and equity

A foundation of UCSF as a public institution is developing equity throughout the health care professions and providing proper health care to the community. "In terms of culture, cultivating a bio-psycho-social mentality removes the hurdles between thinking about medicine, dentistry, and public health as different… And when you have that frame you can begin to think about issues within community and addressing disparity and equity."

Dr. Jonathan Perlin
President and CEO of The Joint Commission Enterprise

Developing that model as an education element is an obvious goal, but the true need is to ensure that it is a sustainable model both culturally and financially to ensure the benefits are not fleeting. "A certain amount of training has to be done in the mothership… To deal with the equity issue, we'll need a hub and spoke model. To be the leader, you need a large referral base. And with 800,000 patients in San Francisco, you will not be the driver. You have got to have a hub and spoke model to … capture 8 million people [in the Bay Area]."

Dr. Sam Hawgood
Chancellor, UCSF

AI and technology is constantly advancing and needs to be incorporated

The continuous emergence of new technology and AI is shaping how students learn, educators teach, patients receive care, and researchers make discoveries. "A future dental school, through building and setup, should harness 3 categories: upstream in care delivery models and integration, how we are using virtual care, and how generative AI is going to change dentistry and how can you get ahead of that."

Dr. Mark Ghaly
Secretary of the California Health & Human Services Agency

Dr. Michael Drake
President, University of California

In addition to the ways technology will change health care practice, the model for educating and training the workforce is undergoing a huge transformation. "Surgical training will be largely virtualized… There was a Formula 1 race driver talking about driving his car. Their cars are massively specialized and essentially impossible for regular [people] to operate. That driver practiced on a simulator, so he could race over the weekend in a vehicle he hadn't been in before. Similarly, having simulators for students so they can learn things they have to do [will] be quite helpful."

Artificial intelligence will also greatly improve the patient experience and increase the precision with which the patient is put into contact with the right care provider. "There will be two ways that AI will be helpful for us. A lot of the entry questions that are straightforward will be managed before they have an interaction with a human being. Like when you are making an airline reservation you're shunted to international versus domestic or other things that put you in touch with people who are more in touch with your issue. I think we will be able to have program pathways so that the challenges are being met by somebody who is trained to meet the challenges, and the questions that person is answering will be specific to the circumstance of the patient at the time. There will be a lot of intake lane modification to get people more focused on what needs to be done at the time that the patient gets on site for their care."

Flexibility in building design allows longevity and wiggle room

Creating a school that is resilient for future changes is important. Thus, building for flexibility is key because flexibility allows longevity, as the space can transform over the years. "In the next 20-30 years, some of the groundwork being done now for interprofessional education will lead to interprofessional care so there needs to be an accommodating space for that. At the University of Michigan, we have one clinic where we can wheel out 19 chairs, have 1 chair in the middle, and do demonstrations with screens around."

Dr. Romesh Nalliah
Associate Dean for Patient Services,
University of Michigan School of Dentistry

Inevitable transition to a consumer and patient-driven environment

Patients are now more involved, informed, and ultimately make their own decisions when choosing a health care provider. The trend is toward more educated consumers who understand procedures, health information, insurance, and have awareness of what the best choices are for their families and themselves. "In 2050 the key defining force of healthcare will be that patients will be in complete control and in charge of their health care. The consumer becomes sophisticated and can navigate their own health. Ultimately the consumer will decide and we will have to play by their rules."

Suresh Gunasekaran
Suresh Gunasekaran, CEO
and President, UCSF Health

Suresh Gunasekaran
Suresh Gunasekaran, CEO
and President, UCSF Health

Ultimately, this will shape how practices and universities operate and whether or not patients choose to receive work from students. "If given a choice, people don't want to receive care from students. We don't have the best data on it but we know we don't deliver unsafe care within the presence of our students and our students deliver really good care as part of our care team." Compiling data that shows consumers that they can receive quality care at a reasonable price from students at universities will help in the competitive care market.

Sustainability is critical for new dental facilities

The future focus of a holistic model for health care cannot leave the consideration of our environment behind. "If healthcare were a country worldwide, it would be the 5th most polluting country. If the US were a state in that country, we would be 27% of that carbon footprint. And healthcare domestically is 9% of total greenhouse gasses. I don't think people realize that as much of a consequence of our attempt to do good socially and individually, we are doing harm. There is a huge opportunity and the next iteration has to be cognizant of how we reduce the environmental impact in terms of sustainable delivery of services."

Dr. Jonathan Perlin
President and CEO of The
Joint Commission Enterprise

Peer Institution Study

A list of dental school campuses was compiled based on comments from both stakeholder focus groups and the group of forecasters. These institutions offered lessons, both successful and unsuccessful, for the design of future UCSF School of Dentistry facilities. The institutions studied are geographically spread from coast to coast and includes one international example. In total, five dental schools were studied by the research team focusing on the clinical, education and research solutions resulting from each recent project.

The 2011 addition to Tufts University School of Dental Medicine

Tufts University

As part of their Boston campus, the dental school recently built a five-story vertical expansion on top of their nine-story urban building, focusing completely on expanding their clinical spaces. One main takeaway was that their patients face outwards towards windows. Their patients don't have to see people passing behind them which gives a better patient experience and more privacy. Although their simulation room is organized in rows, faculty have the space to make rounds and reach students when the mannequins are pulled out. Tufts also incorporates open stairs that connect different departments for collaboration.

Atrium space of ACTA

Academic Centre for Dentistry in Amsterdam (ACTA)

This academic center's dental functions are organized on either side of a large, central, vibrant atrium. A large, easy-to-find public information desk is located on the ground floor making it easy for visitors and patients to find their way. Their design team created highly innovative custom furniture for the clinic to ensure privacy and incorporate the most high-tech resources for practice areas located on each side of the main atrium.

"A large, easy-to-find public information desk is located on the ground floor making it easy for visitors and patients to find their way."

Columbia University

Within their clinical spaces, the university created a unique module for their clinic pods based on optimal ergonomic conditions. The partitions are “S” shaped and envelop the dental chair and equipment to ensure space for a group of students to watch patient care in progress, as well as for patient privacy and easy teacher access. Each clinical pod has cameras so professors can monitor multiple students at a time and efficiently identify where they are needed. Partitions are designed to be high enough to offer patient privacy but also transparent allowing faculty to see students.

Clinical space at Columbia University College of Dental Medicine

Transparent instructional space within surgical suites

Ohio State University

This new dental building is “L” shaped with a courtyard that is shared with other health care disciplines as well as basic science research facilities nearby. This was created intentionally for close collaboration between disciplines as well as researchers.

Eight of their new clinics are organized as small group practices, mimicking private practice with walls that go up to the ceiling and glass at the edge so teachers can monitor patient care in progress. These clinics integrate students across different dental classes, with faculty stationed within these clinics. An ambulatory surgery center was created with extra privacy and space to increase access for patients with disabilities who may need sedation or enhanced care with referrals from other disciplines.

University of Michigan

A major new research lab building was added in the original courtyard and the existing facility was renovated. They have four predoctoral clinics for up to 27 students each, which are smaller than UCSF's but still lack privacy. Each chair has a call button to summon the students' professor, which makes communication easier between students and faculty. The focus on patient experience is apparent, with a dedicated concierge to organize and streamline patient arrival. Lounge spaces are open and modern, creating ample opportunity for faculty and learners from different departments to interact.

The flexible clinics mentioned by forecaster Dr. Nalliah are only used for students to practice on other students, ultimately leading to loss in revenue by using valuable clinic space where patients are not able to be seen. The faculty wing is located within the former library, which creates more chances for collaboration as learners and faculty share the lounge space, increasing opportunities for informal conversations.

The most significant portion of the addition is several floors of wet labs located in the dental building, in lieu of being co-located with other research labs, and paired directly with the school. This is tied to the history of the school, where the original dental building includes a tower dedicated to basic science research.

Faculty and students connect in informal areas of respite throughout the new dental school building

Lessons Learned

Considerable thinking has gone into new school design in recent years. Some of these approaches are appropriate for UCSF to consider in the future, such as the use of technology in communications, the deep study of ergonomics, privacy in the clinics and the radial approach to distributing patient chairs to create efficient access between faculty and learners. In addition, there is clearly room for innovative thinking to solve evident problems, such as the most effective way to facilitate collaboration between clinical operations and researchers, and build in the necessary flexibility for the campus to adapt to future change.

Vision Workshop

The research phase assembled a vast array of data about every aspect of the School of Dentistry and its future, from broad cultural currents to analysis of the needs of individual departments and user groups. A key question was how to synthesize all this data into a vision for the physical manifestation of the New American Dental School. True to the intent of an inclusive process, the School of Dentistry convened a group of key leaders from across UCSF and the school community to brainstorm the meaning of all of this data.

The visioning group consisted of faculty, researchers, alumni, and administrators from the School of Dentistry, deans of the other UCSF schools, and UCSF administrators. The format for the session began with four to five participants assigned to teams seated together. Each of the five teams were pre-assigned to a specific breakout topic. The session featured a thorough review and discussion of the research conducted, which breakout teams used to brainstorm a list of goals for the future design. The workshop concluded with a group discussion on the measures of success by which all new facilities can be evaluated.

Institutional Alignment

"Working together to advance health for all in facilities that inspire community."

The teams initially broke out to discuss where the School of Dentistry's facilities currently stand and what they envision the future to be for the school. The challenge was to develop a clear statement about this future in a 10-minute session. Key concepts the teams found alignment on were:

- Creating a space that builds togetherness, community and belonging for all groups, including patients.
- Working together to advance health for all in facilities that inspire community.
- Targeting cross-professional integration to allow for collaboration with other disciplines.
- Enhancing collaboration by creating more overlap between clinical researchers, basic scientists, learners and clinicians with the overarching goal of advancing an inspirational culture of connectivity and discovery.
- Going from stagnant and static to future oriented; from siloed to connected; from cost saving to the ideal; from short-term thinking to a strategic, expandable, growable, future-proof facility; from thinking about the space to thinking about the purpose; and from obstructive to frictionless.

Breakout Teams

Vision Session participants taking part in the hot-dotting exercise

The central theme was creating a new space that fosters community and collaboration, while inspiring those who educate, learn, discover, work and receive care within the school.

Reporting of the research findings was the next step. It sparked discussion of the ways new design could empower every member of the School of Dentistry community. The master plan for the Parnassus Heights campus meant there was no need to focus on the shortcomings of the existing facility. Instead, the teams were free to generate blue-sky ideas for what the school can be and can achieve.

Breakout Teams Focusing on Critical Issues

There were a total of five breakout teams, each examining a particular topic of importance to this vision study. The teams were asked to report out up to ten ideas which to present to the group. Everyone then voted on which ideas were the most important.

Clinical Vision

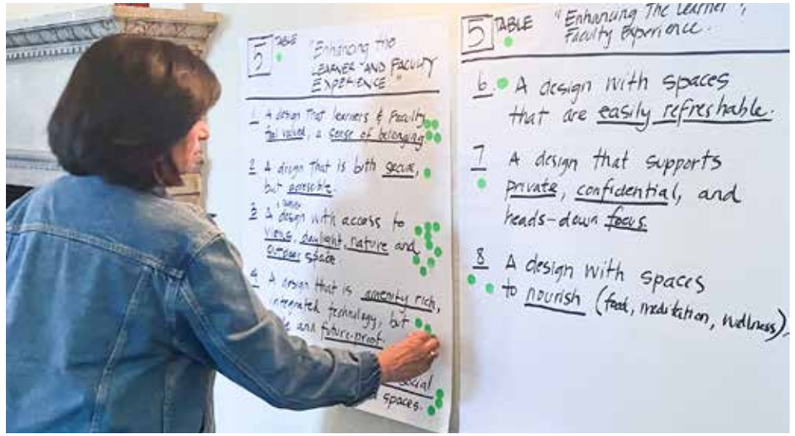
The Clinical Vision team discussed key factors to enhance the patient experience and what model of clinical outreach would create the most equity and inclusion in the delivery of care by a public institution. The discussion expanded to elements of clinical education and what is needed to facilitate the education of a well-rounded, prepared, and culturally competent workforce, and what technology will be useful to support this. The way in which students learn, including what information is taught and how the material is delivered, were topics of discussion, as well as how to best prepare graduates for all aspects of work after graduation. Ideas for cultivating a culture of belonging and acceptance with all users as well as alumni was also discussed.

The most important ideas from the Clinical Vision team included:

1. Elevate patient comfort, privacy, inclusion, quality, and accessibility needs.
2. A hub and spoke model for clinical locations is the ideal, enhancing distribution of clinical care to increase ease of access.
3. Create an inspirational space for patients that matches the unmatched level of care provided to the patients.

Integration with UCSF Health

The Health Integration team focused their discussion on areas where the care delivery model could be aligned with the successful UCSF Health system to enhance access to care and bring dentistry further into a collaborative model with medicine and other health care disciplines. The School of Dentistry should be a model for bringing the disciplines together in an integrated vision for whole-person health. Aspects of the current curriculum, the connected health records and the partnership with UCSF Health are steps in the right direction.



The visioning session highlighted a number of strategies that could fully integrate oral health care with overall health at UCSF:

1. Brand unification at UCSF / Health / Dentistry / Nursing / Pharmacy
2. Clinical care has natural fits for integration, including cancer, diabetes care, cardiology, cosmetic, and prosthodontics.
3. Technology needs to be an evolution of care delivery, not a reinvention of it. Specifically, it should enhance collaboration, rather than encouraging increased specializations that cause more isolation. Areas where this can enhance cross-professional collaboration are medical records, genomic information, environmental data, expanded data analysis (AI, for example), and technology applied in dentistry.

Cross-Professional Education

The Education team's discussion focused on consensus building. It was clear during the research findings report-out that there is a drive to integrate dentistry with general health care. The question was how to achieve this, not if. There was a lot of discussion about how to use space to optimize the collaboration between all of the disciplines, including the fine line between creating flexible spaces that can accommodate multiple uses, while addressing dentistry's specialized needs. Generally, flexibility won out, as it was clear that the most consistent cross-professional collaborations are those that add value to the learning process of each discipline.

The Education team's most important points included:

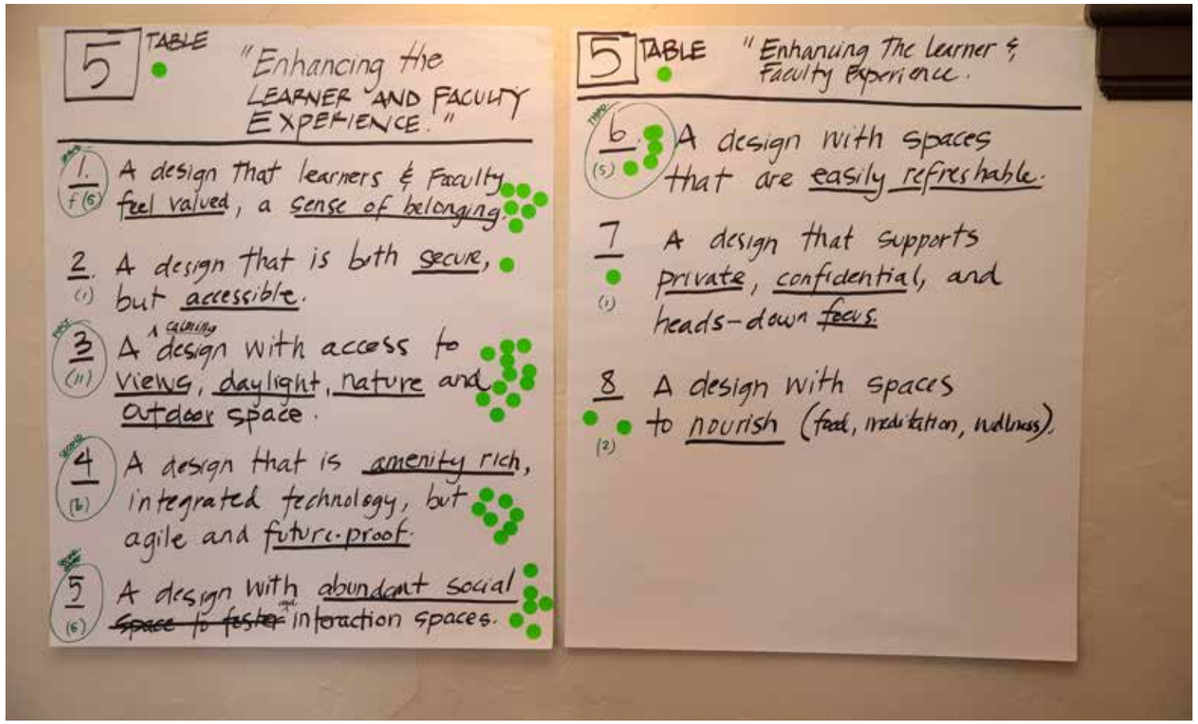
1. Build in robust technological infrastructure to facilitate better practice and better learning opportunities.
2. Ensure future facilities focus on the well-being of learners, providing functional, safe spaces with ample storage that create a home-away-from-home environment.
3. Plan clinical care and care-adjacent teaching spaces to facilitate real-time lessons from cases and collaboration with more disciplines.
4. In the hub and spoke model, have a dentistry clinical space in high-yield health areas and plan for high utilization.

Collaboration as a Catalyst for Innovation & Research

The Collaboration team's discussion was heavily rooted in the functional nature of collaboration spaces and how to create spaces that are highly leveraged across the School of Dentistry for both formal and informal interactions. This discussion started with the question: Who are we facilitating collaboration with and what do we hope to accomplish through this collaboration? By defining these parameters, it became clear that a variety of spaces, accessible to all and providing a memorable experience is the ideal:

1. Create spaces where people *want* to be.
2. Facilitate collaboration between basic, translational, clinical and public health research.
3. Provide a diversity of scales: S, M, L, XL.
4. Provide a balance of open vs. private collaboration spaces.

Enhancing the User Experience



The Experience team focused on elements that would enhance the user experience in a future facility. Subjects such as biophilia, security, nourishment, and wellness created a rich discussion about the ways we support learning, working and discovery. Priorities for the team included:

1. A calming design with access to views, daylight, nature, and outdoor space.
2. An amenity-rich design with integrated technology, but agile and future-proof.
3. A design that allows learners, faculty and staff to feel valued and a sense of belonging and community.
4. A design that facilitates chance encounters, with abundant social and interaction spaces.

Measures of Success

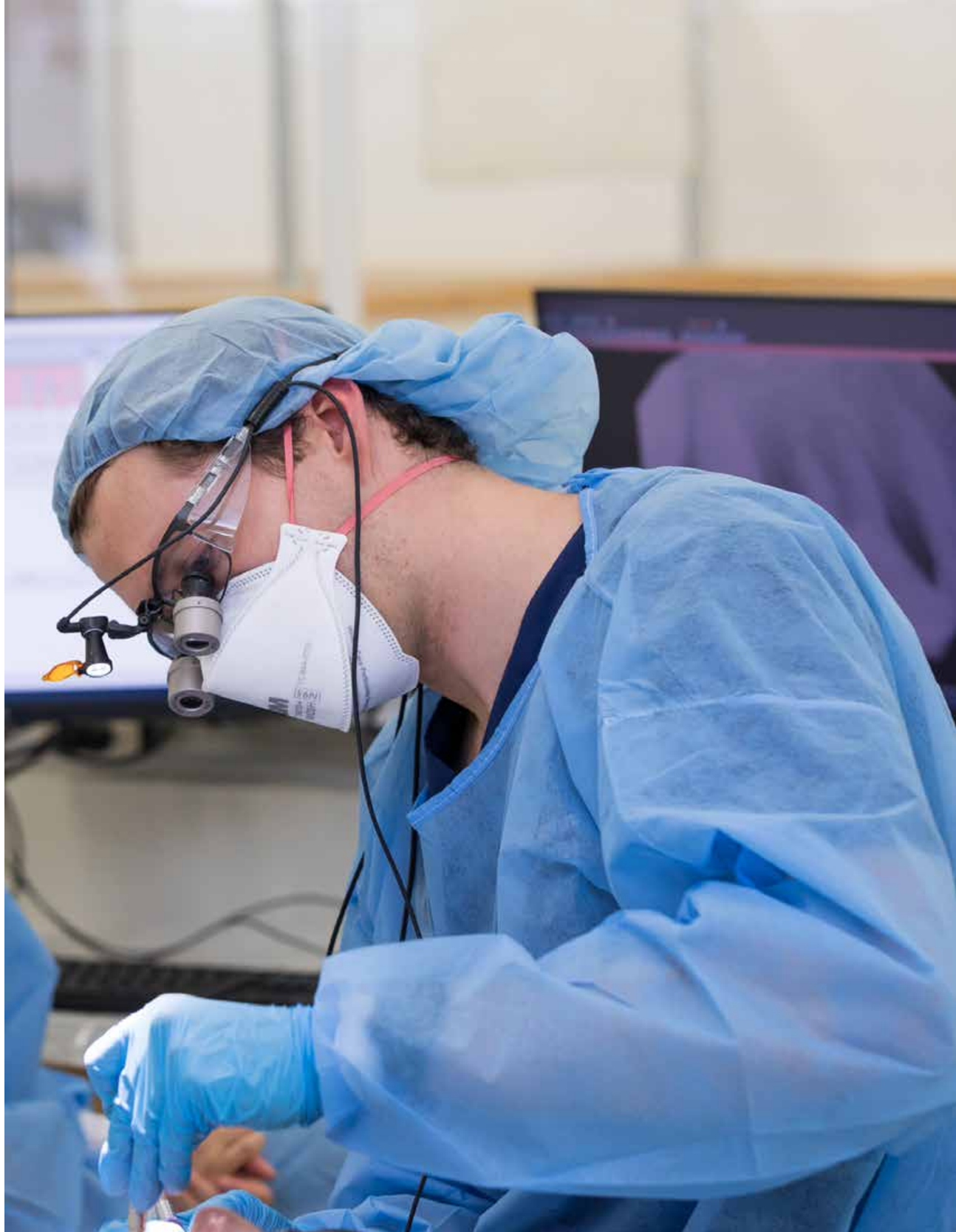
Setting goals for the future is an important step in pushing for meaningful change, but those goals need to have a quantifiable impact to ensure progress can be measured and success confirmed. Considering that the Visioning Session was formed with a group of individuals who work within a world-renowned pedagogical framework daily, a multitude of measures of success for future facilities were identified. These all start with performing a user survey to set the benchmark numbers for several of the factors. This will set comparison points to ensure that these factors can be easily reviewed upon the completion of the project.

While qualitative measures can be important, the group was drawn to measures that can be very easily quantified:

- The group as a whole felt that both learners and faculty leave the building as soon as their “work” is complete. If the new building is a place where people want to be, we need to prove it with “before” and “after” data.
- The new facilities should double the patient volume.
- Gallup Engagement Survey scores increase post-occupancy.
- Increased happiness scores in the yearly Student Exit Survey.
- Increased corporate investment and support based on additional innovation made possible through the new facilities.

Several qualitative measures were identified as important factors for learners and alumni:

- The “dentistry hub” building becomes a premier stop on Parnassus Heights campus tours.
- Increased alumni association interaction with the school and its learners.



CLOSING & ACKNOWLEDGMENTS

Closing

The initial exploration of the concept of a New American Dental School has demonstrated that a hub and spoke model is best suited for UCSF School of Dentistry's goals. The location of the hub could be either of the main UCSF campuses, Mission Bay or Parnassus, though the Parnassus Heights campus is the ideal choice given the School's extensive history in the location, and the existing infrastructure and complementary education, research, and patient care activities.

The next stage of the journey will determine the specifics of the design. The hub may be a single building with separate spaces for dental clinical care and education or a large clinical space located adjacent to an education hub. The spokes radiating from the hub will be various UCSF dentistry clinics, UCSF Health clinical sites, training sites and community clinics across Northern California.

This report represents the initial investigation to help UCSF better understand the elements required for their future home for dental education, research, and patient care. The next stage will move the project closer to the ultimate goal of building the New American Dental School.

Acknowledgments

THE RESEARCH TEAM

USCF School of Dentistry	Dr. Michael Reddy	Dean and Professor
	Eunice Stephens	Chief of Staff, Associate Dean for Administration and Finance
	Melissa Telli	Director of Marketing and Strategic Relations
	Jeanes Villanueva	Executive Assistant to the Dean and Chief of Staff
USCF Real Estate	Alicia Murasaki	Assistant Vice Chancellor, Campus Planning and Campus Architect
	Cara Fladd	Director Space and Capital Planning
	Sharon Priest	Assistant Director Space and Capital Planning
	Neha Diggikar	Institutional Space Planner
Valerio Dewalt Train Associates	Joe Valerio	Founding Principal
	Anthony Valerio	Senior Associate
	Alexandra Polk	Associate
	Hiba Bhatty	Research Lead
	Jane Emory	Research Assistant

STAKEHOLDER FOCUS GROUPS

Students	Samuel Aguilar	Andrew Chen	Sonja Chesnutt
	Veronica Claro Colina	Tess Foote	Kate Lindsey
	Emma Nedley	Sahm Rafati	
Residents	Dr. Abdulrhman Al Abdullateef	Dr. Chitra Priya Emperumal	Dr. Kate Lovell
	Dr. Nivethitha Nagarajan	Dr. Helena Viets	Dr. Alfred Li
Clinical Staff	Kristi Abrahamsen	Cassady Clark	Wendy Kong-Lai
	Kitty Montoya	Linda Soo-Liam	Michael Valencia
	Teresa Yip		
Administration	Amber Cobbett	Brennan Crilly	Julia Hwang
	Sindy Law	Roger Mraz	Patrick Oh
	Dr. Ramneek Rai	Richard Seefeldt	Maria Rina Simon
Clinical Faculty	Dr. Eva Bender	Dr. Ana Casal	Dr. Lloyd Harris
	Dr. Jennifer Perkins	Dr. Dawn Stock	Dr. Melissa Tuft
Preclinical Faculty	Dr. Nejleh Abed	Dr. Paul Atkinson	Dr. Chui Chan
	Dr. David Graham	Dr. Stefan Habelitz	Dr. Ronald Hennefarth
	Dr. Robert Ho	Dr. Sunita Ho	Dr. Daniel Mendoza
	Dr. William Miller	Dr. Mark Roper	
Clinical and Implementation Sciences Researchers	Dr. Sepideh Banava	Dr. Elizabeth Couch	Dr. Stuart Gansky
	Dr. Cristin Kearns	Dr. Guo-Hao (Alex) Lin	Dr. Sivappiriyai Veluppillai
Lab Researchers	Dr. Diane Barber	Dr. Jeffrey Bush	Dr. Andrei Goga
	Dr. Sarah Knox	Dr. Erica Hutchins	
Alumni	Dr. Rolando Bercasio	Dr. Irene Hilton	Dr. Ted Wong
	Dr. Kerry Carney	Dr. Carmen Hipona	

IMMERSIONS

Dr. Nejleh Abed	Associate Professor, Preventive & Restorative Dental Sciences
Kristi Abrahamsen	Predoctoral Clinic Supervisor
Dr. Eva Bender	Assistant Professor, Preventive & Restorative Dental Sciences and Predoctoral Clinic Group Practice Leader
Dr. Jean Calvo	Assistant Professor, Orofacial Sciences and Pediatric Residency Director
Kimi Lee	Predoctoral Clinic Supervisor
Dr. Guo-Hao (Alex) Lin	Associate Professor, Orofacial Sciences and Periodontics Residency Director
Dr. Mike Sabeti	Professor, Preventive & Restorative Dental Sciences and Endodontics Residency Director
Dr. Sohail Saghezchi	Associate Professor, Oral & Maxillofacial Surgery and Oral & Maxillofacial Surgery Residency Director
Dr. Joel White	Professor, Preventive & Restorative Dental Sciences and Simulation Lab Director

THOUGHT LEADERS

Dr. Kirsten Bibbins-Domingo	Editor in Chief, *Journal of the American Medical Association* (JAMA) and The JAMA Network
Dr. Michael Drake	President, University of California
Dr. Mark Ghaly	Secretary of the California Health & Human Services Agency
Suresh Gunasekaran	President and CEO, UCSF Health
Dr. Sam Hawgood	Chancellor, UCSF
Dr. Jayanth Kumar	State Dental Director, California Department of Public Health
Dr. Catherine Lucey	Executive Vice Chancellor & Provost, UCSF
Dr. Romesh Nalliah	Associate Dean for Patient Services, University of Michigan School of Dentistry
Gavin Newsom	Governor, State of California
Dr. Jonathan Perlin	President and CEO, The Joint Commission Enterprise

VISIONING COMMITTEE

Dr. Brian Bast	Chief Dental Officer, UCSF School of Dentistry and Chair, Department of Oral & Maxillofacial Surgery
Dr. Rolando Bercasio	Board member, UCSF Dental Alumni Association
Dr. Nicquet Blake	Vice Provost of Student Affairs, UCSF
Dr. Jeff Bush	Chair, Department of Cell & Tissue Biology
Dr. Stuart Gansky	Associate Dean for Research, UCSF School of Dentistry
Dr. Kathy Giacomini	Dean, UCSF School of Pharmacy
Dr. Effie Ioannidou	Chair, Department of Orofacial Sciences
Dr. Kent Knoernschild	Chair, Department of Preventive & Restorative Dental Sciences
Dr. Sarah Knox	Assistant Dean for Research, UCSF School of Dentistry
Dr. Catherine Lucey	Executive Vice Chancellor and Provost, UCSF
Dr. Sunita Mutha	Associate Dean for Academic Affairs, UCSF School of Dentistry and Director, Healthforce Center at UCSF
Dr. Jennifer Perkins	Assistant Dean for Education, UCSF School of Dentistry
Dr. Michael Reddy	Assistant Vice Chancellor and Chief of Staff, UCSF Office of Diversity & Outreach Dean, UCSF School of Dentistry
Dr. Alejandra Rincón	Assistant Vice Chancellor and Chief of Staff, UCSF Office of Diversity & Outreach
Eunice Stephens	Associate Dean for Administration & Finance and Chief of Staff, UCSF School of Dentistry
Dr. George Taylor	Associate Dean for Diversity, Equity & Inclusion, UCSF School of Dentistry
Melissa Telli	Director of Marketing & Strategic Relations, UCSF School of Dentistry
Dr. Torsten Wittmann	Assistant Dean for Academic Affairs, UCSF School of Dentistry