Simulation or “virtual reality” technology benefits health disciplines by providing life-like, hands-on experiences that familiarize health science students with the clinical practice and complex situations they will face. For the training of dental health professionals, pre-clinical simulation enhances hand-eye coordination and sharpens manual dexterity. It also results in fewer procedural errors and increased operational efficiency when dental students begin treating patients.
Leave an Enduring Mark

As a way of recognizing gifts at the leadership level, the College of Dentistry has developed these named gift opportunities.

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15,800 ft²

- **Dental hygiene student simulation clinic**
  - Naming Opportunity Available

- **Dental student simulation clinic #1**
  - Naming Opportunity Available

- **Dental student simulation clinic #2**
  - Naming Opportunity Available

- **Equipment and instrument dispensary**
  - $100,000

- **Grading room**
  - $100,000

- **Digital radiography**
  - $25,000

- **Student locker area**
  - $100,000

- **Computer-aided design/machining room**
  - $50,000

- **Wet/dry lab**
  - $250,000

- **Instructor Station Dental Hygiene Clinic**
  - $25,000

- **Instructor Station Dental Clinic #1**
  - $50,000

- **Instructor Station Dental Clinic #2**
  - $50,000

- **250 Dental Simulation workstations**
  - $15,000 (each)

- **40 Dental Hygiene workstations**
  - $10,000 (each)
The College of Dentistry’s simulation lab will be dedicated to the pre-clinical training of dental hygiene and dental students. It will mimic the environment students will experience when they enter their clinical education phase. One simulation clinic will support dental hygiene students’ training, while dental students will have two simulation clinics. The first will support learning how to prepare and restore teeth, and the second will support learning about the replacement of missing teeth with dental implants and dentures.

**Simulation Workstations**

Each dental hygiene and dental student will have their own work station. At the center of each station will be a manikin with a life-like head, a flexible mouth, movable jaws, and a full set of upper and lower teeth. These stations will be equipped with electric dental drills with water and air sprayers, fiber optic lighting, high volume suction, an overhead light, and an operator’s chair that are identical to those used by dental and dental hygiene students in the college’s student clinics. This equipment will support students’ learning about proper hand positioning, instrument placement, and posture (ergonomics), while also facilitating a smooth transition into the student clinics.

All three simulation clinics will be equipped with advanced audiovisual and computer equipment so instructors can present simulated clinical demonstrations, and students can use an electronic health record to document the treatment of their “virtual” patients. Each work station will have a computer connection, a monitor and a keyboard that support live, close-up views of their instructors’ demonstrations. Dental students will benefit from 3-D optical scanners that will evaluate their drilling skills by comparing their work to that of an “ideally” drilled tooth, and by giving them recommendations for improving their performance. These stations will also be equipped with software that will allow students to design such tooth restorations as crowns and bridges that will then be fabricated in tooth-colored materials by using 3-D printers or milling machines. Both dental hygiene and dental students will have internet access at their individual stations so they can view published dental literature and watch online videos that augment and reinforce the instruction they receive in class.

**Support Facilities**

All three simulation clinics will be supported by an equipment and instrument dispensary; Computer-Aided Design and Manufacturing (CAD/CAM) software; a wet/dry lab; a digital radiology facility; and a student locker area. These will also be similar to the environment that dental hygiene and dental students will experience when they begin their clinical education.

**State-wide Impact**

The College of Dentistry is the only state-supported dental school in Ohio, and it educates more than 60% of the state’s dentists. Because of this, the simulation clinics will have a significant impact on the education of the next generation of oral health care providers who will care for patients throughout the state. These facilities will also offer advanced technology that supports an optimal learning environment for the continuing educational needs of Ohio’s practicing dental assistants, dental hygienists, and dentists. These practitioners will have hands-on opportunities to learn new procedures and develop the skills necessary to introduce the latest treatments into their practices.
Each simulation clinic will house individual simulation workstations – one for every member of a class, with a few additional units for those students who need an increased amount of time to develop their technical skill level. For the dental hygiene class of 32 students, there will be 40 simulation workstations. For the dental class of 120 students, there will be 130 simulation workstations.

The centerpiece of each simulation workstation is a manikin with a life-like head, a flexible mouth, movable jaws, and a full set of upper and lower teeth. All simulation workstations will be equipped with dental drills, water and air sprayers, high volume suction, an overhead light, and an operator's chair that are identical to those that will be used by dental and dental hygiene students when they begin treating patients in the college's student clinics. Pre-clinical training with this equipment will support students' learning about proper hand positioning, instrument placement, and posture (ergonomics), while also supporting a smooth transition into the student clinics.

The new simulation clinics will provide dental and dental hygiene students with critical skills to make the transition from dental school to “real life” practice much easier. This will result in a better learning experience for students, and ultimately better care for the patients that they serve. Supporting the development of the simulation clinics provides a way for our alums to make a direct and meaningful impact on the educational experience and confidence level of our future grads.

I am proud that the Ohio State College of Dentistry is helping to shape the future of dental education, on a national level, and hope that our alumni will join us in completing this important and impactful aspect of our new facility.

— Dale Anne Featheringham, ’97 DDS, ’00 MS, ’05 MBA
Chair, External Campaign Committee

"The educational experience of future dental hygiene students would improve immensely with a new simulation lab. I have been able to apply skills learned in lab to my clinical training, and I am excited to see how a new lab would further assist future student growth."

Mary Lally
Dental Hygiene
Class of 2020

"A new simulation lab equipped with the latest technology would help ease students' transition into the clinical phase of dental school and allow them to provide better care for their patients. My time in the simulation lab was critical to my development as a student dentist."

Jake Falter
Dental Class of 2020

If you would like to help make this “once in a lifetime opportunity” a reality, please contact:

Ted Backus, Senior Director of Development,
Ohio State College of Dentistry Development Office
at 614-292-9307 or email DentalAlumni@osu.edu.

An Unprecedented Opportunity for our Supporters

305 W. 12TH AVENUE
COLUMBUS, OHIO 43210

THE OHIO STATE UNIVERSITY
COLLEGE OF DENTISTRY