

How Universal Design Can Make Your Practice More Inclusive, Accessible — and Successful



INTERESTED IN MAKING YOUR DENTAL PRACTICE MORE INCLUSIVE AND ACCESSIBLE? Understanding the concept of universal design can help get you started. Universal design is the design and composition of an environment, product or service so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of their age, size or disability.

Universal design is different from accessibility standards for buildings to accommodate people with disabilities — and it doesn't replace these accessibility standards. It is a human-centered approach meant to create equitable experiences for all members of the population, including people who do not have disabilities.

For the latest ideas on how universal design can be integrated into dental practices, we turned to Henry Schein's Integrated Design Studio (IDS)'s Amy Laundre, lead designer, and Laura Seefeldt, design supervisor. IDS is comprised of more than 22 designers with expertise in dental office design.

Why universal design matters

Universal design has the potential to help individuals, society and businesses. In a dental practice, it can also advance health equity, enabling dentists to give underserved populations access to much-needed oral health care.

Unequal access to oral health care is the "number one unmet health need" for Americans with disabilities, according to The Viscardi Center, an organization that empowers people with disabilities. With one in four adults in the U.S. having some type of disability — and approximately 61 million Americans with disabilities in total, according to the U.S. Centers for Disease Control and Prevention

(CDC) — there are many patients who would benefit from a dental practice designed with universal access in mind.



First impressions count. Provide a spacious waiting area with some options for seating; include chairs with arms.

But the population that benefits from universal design is even broader. Even someone considered to be able-bodied could be affected by an injury, an unfamiliarity with a new environment or product, an inherent physical characteristic — or be part of the aging population.

"Solutions that promote accessibility and usability for special populations can lead to greater degrees of independent living," explains

Ms. Seefeldt. "Universal design can also lead to a more robust participation in society as a whole for those who might otherwise have difficulty accessing spaces and services."

Ultimately, businesses that implement universal design can increase their market reach, improve customer satisfaction and promote a positive public image. Effective universal design can also save money in the long-term if comprehensive user requirements are included as part of the initial design, rather than retrofitted later.

Universal design can also attract and engage a wider range of employees and boost employee performance

and success. And, it can help keep patients happy in an era when many feel more empowered than ever to voice their disappointment if a practice has not met their expectations.

Fortunately, for businesses that bring in \$1 million in revenue per year and have 30 or fewer employees, there is a tax credit that covers up to \$10,250 in eligible expenditures per year to improve accessibility, up to a maximum credit of \$5,000, under

Section 44 of the Internal Revenue Service (IRS) tax code. It can be used for barrier removal, altering a space to improve accessibility, providing accessible formats, including braille, as well as purchasing some types of adaptive equipment. There is also a maximum tax deduction of up to \$15,000 per year for barrier removal and building alterations at businesses of any size under Section 190 of the IRS tax code. The two tax incentives can be used together.

Understanding universal design

Contrary to what many people think, universal design isn't limited to interior and exterior spaces. It may include products or services as well. Wherever it is used, it should be both highly functional and esthetically pleasing.

"Universal design, in essence, is fundamentally good design," says Ms. Seefeldt. "It benefits a wide range of people, is highly usable, inclusive, convenient, enjoyable to use and is accessible to as many people as possible." It also aims to minimize the number of individuals who have a problem with some feature or aspect of the experience.

To understand universal design, it may be helpful to envision some examples to get a sense for how it benefits a variety of users. Here are a few:



Lever door handles benefit those with dexterity issues.

1. *Automatic sliding doors:* They improve accessibility for people who use a mobility device, parents with strollers or someone who might just struggle to grasp the door handle.



Universal design starts on the outside of the building. Curb cuts create greater accessibility to buildings, outdoor spaces, public transportation and public access ways in general.

2. *Tactile strips along sidewalks:* These are an indicator to the visually impaired that the public access way is meeting the road.
3. *Curb cuts:* They create greater accessibility to buildings, outdoor spaces, public transportation and public access ways in general.
4. *Lever door handles and rocker style light switches:* They benefit those with dexterity issues, but are also easier for almost all individuals to use.
5. *Height adjustable desks:* By allowing customization of desk height, they offer greater comfort both to people with physical limitations and able-bodied people looking for a more ergonomic or comfortable workstation.
6. *High contrast lettering or combining text with symbols:* This makes it easier for all users to find their way to a destination.

7. *Closed captioning:* Although designed for those who are deaf or hard of hearing, closed captions are also a valuable tool for communicating with anyone in a loud environment.

Key considerations in universal design

It is important to think about your patients' abilities and limitations when embarking on accessible design. Some patients may have mobility limitations, which could include the required use of a walker, cane, wheelchair, electric scooter or crutches. Some may have dexterity conditions related to health issues such as arthritis, Parkinson's disease or cerebral palsy. Common conditions such as carpal tunnel or tendonitis can also pose challenges.

However, it is a good idea to look beyond physical challenges. Psychological limitations, such as mental health disorders, developmental and intellectual limitations or behavioral and emotional disorders, can also affect a patient's experience. So can cognitive delays. Beyond this, communication limitations, including blindness, low vision, deafness, hearing loss

or muteness, may also influence someone's experience. Language and literacy barriers can be the cause of communication issues as well.

Able-bodied people may also face physical limitations related to height, size or hand dominance. For instance, a below average-height woman might have trouble reaching high shelves in an office.

Seven key principles in universal design

To address the varied experiences people have as they go about their lives, universal design tries to achieve seven key principles:

1. *Equitable use:* The design is useful to people with diverse abilities.
2. *Flexibility in use:* The design will accommodate a range of individual preferences.
3. *Simple and intuitive use:* The design is easy to understand regardless of a user's skill level.
4. *Perceptible information:* The design communicates information effectively, regardless of the user's sensory abilities.

5. *Tolerance for error:* The design will minimize the negative consequences of unintentional actions.
6. *Low physical effort:* The design can be used comfortably and efficiently.
7. *Size and space for approach and use:* The appropriate space is being provided for users regardless of their body size or level of mobility.

How universal design looks in a dental environment

To envision how universal design might transform your dental office, it is helpful to look at how it might take

challenges. Offering communication by text or email can aid the process for the hearing impaired, but is also convenient for many other patients.

Getting to your office

When thinking about the design of your office, consider how patients will get there. Will they be using public transportation? How far is the office from the transportation? Are there accessible parking and curb cuts to allow passage? Are there ramps for entry to the office? Is the front door easily visible and are signs well-placed for visibility? Is the path to the door free of debris? All of these factors affect patients' ability to arrive for an appointment, and the more you do to ease the process, the better.

Entering the office

Making sure it is easy to come into your office is essential. Ask yourself some key questions: Are there obstructions to the clear path of travel? Do you need to allow an extended amount of time for check-in, so patients don't feel rushed? Is there clear visibility at the front desk? Is the method of updating paperwork convenient for all patients?

If the setup is less-than-ideal, here are some improvements you can make:

- Create a line of sight from the front desk to the front door.
- Maintain a clear path of travel.
- Consider moving furniture to allow for better maneuverability.
- Make sure there is open space for mobility devices, so patients and caregivers can sit together. CDC guidelines for dental practices during the pandemic recommend placing seats at least six feet apart for social distancing.
- Offer online check-in or touch-screen kiosks to free the front desk and allow extra time for patients and caregivers to check in without pressure.



From the street into your office — accessibility in these key transitions is paramount.

shape at various points in the patient's interactions with your practice. Here are some key steps in their experience.

Making an appointment

Patients may have difficulty arranging an appointment due to physical or other limitations. Adding accessibility or accommodation information to the official website can help. Extending appointment times to allow for unforeseen issues and offering phone consultations to assess patients' needs can bridge some of the

- Introduce multiple seating options (for instance, differing seat heights) and provide the flexibility to adapt the space as needed.
- Offer treatment rooms specially designed for patients who use a wheelchair. Locate them near the entrance to the practice and make sure the doors are wide enough for easier patient access. Doors to this room will also help to maintain privacy and control noise.
- Add an alcove to reduce auditory and visual stimulation.
- Design restrooms to allow room for a caregiver and mobility device and a rinse station for accidents.

Consulting with the patient

Making sure the consult rooms are adaptable is essential. Be sure they allow space for both a patient and caregiver. Here are some changes to consider:

If you work with patients who have psychological issues, make sure furniture cannot be used as a projectile.

Ensure the space is quiet, and provide visual aids, such as a monitor on the wall, so the hearing impaired can follow the discussion.

Provide a glass door so a caregiver seated in an adjacent room can monitor the patient.

Getting an X-ray or other imaging

Many practices cram the imaging alcove into the smallest space possible. This poses challenges to patients with mobility devices or those who come with caregivers or families, who have nowhere to wait except the hallway. Senior patients or those with some physical limitations may have a hard time standing or staying still while images are taken. And, if there is nowhere to put their personal belongings, that inconveniences many patients.

It helps to think about the patient's path of travel through the hallways. Work with your designer to find the

most intuitive solution. Here are few ideas to consider:

- Resize the alcove off the main hallway and provide space immediately outside of it for guest seating and storage of personal belongings.
- Make sure the hallway is wide enough. The recommended width is 4 feet, 6 inches to 5 feet. This is beneficial for patients with mobility devices, and anyone concerned about social distancing.
- Incorporate bench seating along the corridor for patients or caregivers to sit, if needed.
- Make the alcove entry as wide as possible for easy entry by people with mobility devices.



Offer treatment rooms specially designed for patients who use a wheelchair.

Being treated

If you opt to create a treatment room for people who use wheelchairs and other mobility devices, designing it in a way that does not require the transfer of a patient from the mobility device to the chair can minimize the risk of injury. Here are some strategies to keep in mind:

- Use a wheelchair tilting device, which allows a patient to position a wheelchair on a tilting deck that would recline for treatment.
- For a room that is meant to be truly barrier-free, add extra depth to the room to accommodate a turning radius for a wheelchair or scooter. This also provides plenty of space for extra guest seating.

- Make sure there is enough turn-around room inside of the alcove for someone with a wheelchair or electric scooter.
- Add a small stool to the space for seating.
- Ensure smooth flooring changes from hallways into rooms.
- Avoid flooring that has a significant change in height and use transition strips to avoid tripping hazards.
- Provide a small prep room directly accessible to the treatment room to allow patients with behavioral issues the time and space to transition. This room can also be used by families and caregivers to wait.
- Close off the hallway to be included in the treatment room and add a door. This will create a larger room without having to take up any additional square footage from the rest of the office.

- If you opt to transfer patients, rotate the orientation of the treatment equipment to provide a turning radius that makes it easier for the patient to approach and transfer into the dental treatment chair.

Checking out

Many patients have trouble identifying where the checkout area is, and patients with low vision or blindness may experience particular challenges with this. Here are some strategies to look at:

- Position the checkout desk along the path of travel leading out of the clinical space.
- Add a tactile flooring transition to aid blind patients in locating the checkout desk.
- Create space at the checkout area to allow for a more comfortable experience for all patients, but especially for those with a caregiver, in a mobility device or for families. An additional space recessed off from the checkout area can accommodate these patients or additional patients who might just be waiting in line.
- Provide doors between the check-out and treatment areas to mitigate noise transmission and create a more private experience.
- Accessibility standards only require a low counter at one location. However, it is even better to also include it at checkout to provide a positive experience for everyone.
- Offer a chairside checkout to help patients who have physical limitations.

Additional resources

For additional resources, check out the *Construction and Design Guide: ADA and Universal Design* [link](#) that the library of the University of California at Berkeley has posted.



Offering a split-level check-in area accommodates both standing and wheelchair-bound patients.

CONCLUSION

These ideas are just a starting point for how you can incorporate universal design into your practice. Many dentists can't include all of these elements at once because of logistical or cost factors. However, even making a few of these changes can improve the experience for all patients coming to your office. Remember: you can always add more improvements as time — and your budget — allow.

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