

# Ignite

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*Magazine*



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**On the road with the OHSU Casey Eye Institute**

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**The next generation of health care providers**

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**On the Cover: Harley Goss, age 3, alum of the Doernbecher Growing @ Home program.**  
Laurie Carter

Laurie Carter





On a milestone birthday last year, my adult children gave me a gratitude journal.

I will admit I have filled many pages remembering the grateful moments I have enjoyed during my time leading the OHSU Foundation and connecting with so many committed and caring members of the OHSU and philanthropic communities.

In addition to gratitude, my time at the Foundation has left me hopeful about the growing importance of philanthropy in OHSU's future. The pandemic has dramatically underscored the need to urgently expand our hospital capacity to serve the region's growing population, and it has also demonstrated that OHSU is up to the challenge. As Oregon's only public academic health center, OHSU will lead the way forward in addressing this challenge and the other profound changes coming to Oregon's health care landscape in the decades ahead.

We cannot do this alone. We need to partner with our current donors and identify new, prospective donors who believe in OHSU's mission. Additional philanthropic support will be vital to our collective future and growth, as well as to the OHSU Hospital Expansion Project. The in-patient addition has broken ground on Marquam Hill to expand both specialized and high-acuity care, continue to meet the needs of our expanding and aging population and keep up with growth in the Portland metro area and beyond.

I hope you will join us on this journey to grow OHSU's hospital capacity to continue delivering the highest quality health care and discoveries and educating the next-generation workforce, now and into the future.

I am reminded time and again of what one of our beloved trustees and volunteers on the OHSU Foundation Stewardship Committee always says, "You can never say thank you enough." Thank you for allowing me to serve the OHSU Foundation and welcoming me to this amazing community of leaders, donors and colleagues. And thanks to each and every supporter who advocates for OHSU and



its missions. The long-lasting impact of your giving is felt by so many people who turn to OHSU to address their health care needs and challenges.

With gratitude,



**Have questions or comments?** Please contact Leslie Constans, AVP of Foundation Communications:

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Oregon Health  
& Science University  
**FOUNDATION**

Donor support of Oregon Health & Science University sparks the flame of hope for a healthier future for all. *Ignite Magazine* captures those sparks and turns them into stories of impact, inspiration and innovation — stories of lives made brighter by OHSU's exceptional people and programs, and by our community of generous supporters.

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## Message from OHSU President Danny Jacobs

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# Fortifying the Flames of Excellence



The OHSU flame depicted in our logo represents our three missions — patient care, research and education. One of the most inspiring aspects of OHSU is the degree to which our members and our community are invested in serving and supporting those

missions. The flame also represents the light and hope that OHSU offers to those we serve in Oregon and beyond. Thanks to the generosity of people like you, that flame continues to shine brighter than ever before, allowing us to reach more people and expand the impact we have on the lives of others. Indeed, when innovation, philanthropy and a desire to serve converge, beautiful things happen across all 98,000-plus square miles of our state.

For example, the Doernbecher Growing @ Home Program featured in this issue is a unique neonatal intensive care unit program that helps families with NICU patients return home more quickly. It's the best of both worlds: new families can bond with their newborns in the comfort of their homes while still receiving top-of-the-line care from Doernbecher's providers through an innovative remote-monitoring app.

The Casey Eye Institute Community Outreach Program is another example that combines the best of technology, community outreach, partner education and data to serve more people throughout the state. With philanthropic support, this program performs thousands of vision screenings and interventions, trains community health providers in conducting ophthalmologic exams where vision care is scarce and uses state-of-the-art data collection during outreach visits to train the artificial intelligence behind oculomics — all in the hopes of detecting disease much earlier.

As we fortify the flames of excellence across all our missions and expand our reach, we continue to position ourselves amongst the national and international exemplars of health science universities and academic health centers. Thank you for your commitment and the role you play in helping OHSU pursue its mission of improving health and well-being for all.

Sincerely yours,

A handwritten signature in black ink that reads "Danny Jacobs". The signature is fluid and cursive.

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*“Thank you for your commitment and the role you play in helping OHSU pursue its mission of improving health and well-being for all.”*

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**Danny Jacobs, M.D., M.P.H., FACS**





Aaron Bieleck









# HOME at Last

**Remote monitoring program helps  
NICU babies go home sooner**

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*by Willow Bacon*

**F**or parents with an infant in the neonatal intensive care unit (NICU), only one thing matters: bringing their baby home.

No one knows this better than Brittney and Austen Goss, whose daughter Harley was born at 32 weeks after an anguishing loss. ▶

Original photography by Laurie Carter

**Austen Goss holding Harley in the NICU in 2020.**



Image provided by the Goss family

“I was originally pregnant with twins, but we lost Baby B at 31 weeks,” Brittney said. “I remember it was on a Friday, and by Monday it became clear that Harley was in jeopardy, too. She was delivered by C-section on February 12, 2020.”

Although Harley was relatively healthy, she was too small to be fed via breast or bottle and required the support of extra oxygen. So rather than taking their tiny daughter back to their home near Salem, Oregon, Brittney and Austen settled in for a long vigil in the NICU at OHSU Doernbecher Children’s Hospital.

“The doctors and nurses did an exceptional job, but it was hard for us to be away from our home, our extended family, even our dogs for such a long period of time,” Brittney said. “It was an odd mix of feeling disconnected from everything, yet hyperfocused on Harley and what she needed.”

Four weeks later, Harley was growing stronger, but still needed to be on a feeding tube to help her gain weight. The Gosses had resigned themselves to continuing their hospital stay — then they learned that their daughter was eligible for a new, at-home monitoring program that would allow

her to go home in a matter of days rather than months.

### Updating the discharge process

Before a baby can be discharged from the NICU, they need to be able to breathe on their own, maintain a stable body temperature without the use of an external heater and eat everything needed for growth by mouth. Newborns often achieve stable breathing and body temperature before learning how to fully feed orally, which can extend a hospital stay significantly. Though a baby might be almost fully healthy, staff still need to feed them, record how much they ate and weigh them at regular intervals.

Realizing that parents could easily perform many of these tasks on their own and seeing the success of the Doernbecher pediatric cardiology Interstage Remote Monitoring program, providers in the Doernbecher NICU discovered a way to use similar technology to manage babies who required neonatal intensive care. In 2019, generous pilot funding from Mark and Debra Madden made the creation of the NICU remote monitoring program a reality.

**“Research has proven that infants develop better in their home environment, so that’s where we want them to be.”**



**Jamie Warren, M.D., M.P.H.**



Called Growing @ Home, it uses an innovative digital platform to help parents do the feeding and monitoring at home that would typically be done at the hospital.

“It’s truly groundbreaking,” said Jamie Warren, M.D., M.P.H., head of the Growing @ Home program and associate professor of pediatrics (neonatology) at the OHSU School of Medicine. “Because the program offers access to the same tracking capabilities available here at Doernbecher, it’s allowing parents to go home and bond with their baby in a more comfortable, private setting. Research has proven that infants develop better in their home environment, so that’s where we want them to be.”

With Growing @ Home, parents can easily log their child’s vitals into a specialized medical app, which links seamlessly to the hospital and is reviewed daily by their infant’s medical provider. They can even upload photos and videos of potential health concerns. Should a complication arise, the app provides red-flag warnings to parents and directs them on which steps to take next.

**“We wanted to feel like we had a safety net.”**

When an infant meets the criteria for early discharge through Growing @ Home, the NICU medical team approaches the parents and asks if they’d be interested in participating. Some prefer to keep their child under the watchful eye of the NICU — others,

like Amanda and Daniel Clark, are eager to transition to home monitoring.

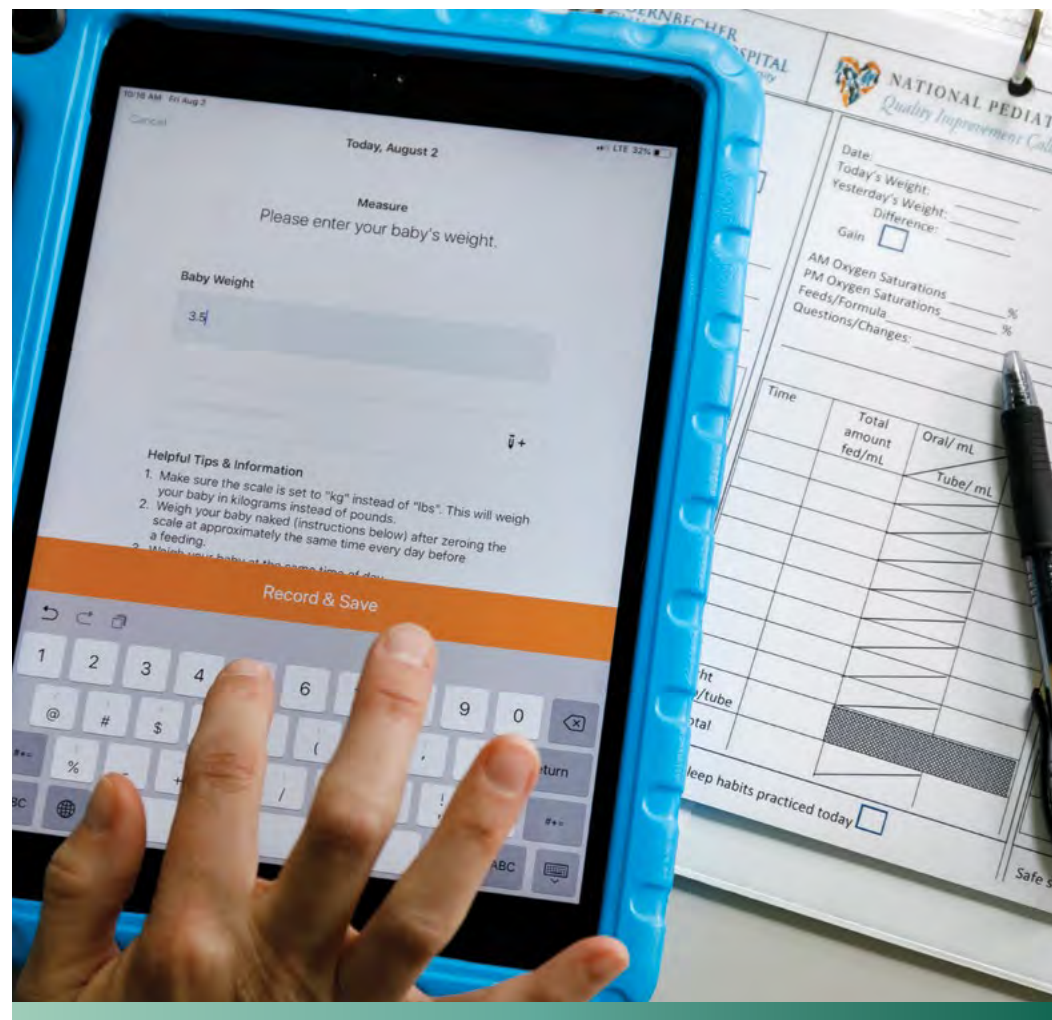
When the Clarks’ daughter Clementine was born prematurely, she weighed in at just 2 pounds and 15 ounces. To complicate matters further, COVID restrictions meant that only one of them could be in the NICU with her at a time.

“Not being able to be together with Clementine was really hard,” said Amanda. “All we could do was take turns holding her, encourage her to eat, just do anything we could think of.”

Once Clementine had stabilized, the focus turned to making the transition from hospital to home. Daniel admits that the prospect felt a little daunting. “You get used to all these doctors and nurses helping you, and we were worried about losing that built-in support network,” he said. “We wanted to feel like we would have a safety net in place.”

According to Warren, those feelings of trepidation are both normal and understandable. ►

**The Growing @ Home app interface makes it easy for parents to track milestones.**



## GROWING @ HOME BY THE NUMBERS

1,500



*Days' worth of NICU beds that are saved for patients with the greatest need*

7

*Median number of days that eligible NICU patients can be discharged sooner*

\$7,000-\$10,000

*Average cost savings per family, per week when participating in the Growing @ Home program*

150+



*Babies and families supported by the program to date*

49

*Babies who were able to go home earlier than anticipated in 2022*

“It can be hard to get comfortable with the fact that suddenly you won’t be surrounded by medical staff at all times,” she said. “That’s why a lot of the program is centered around helping parents feel confident before they go home.”

To ease their anxieties, parents are thoroughly trained on everything from how to insert and manage a feeding tube to obtaining weights and entering data.

“The feeding tube took a bit of getting used to,” said Amanda. “Clementine was barely the size of our hand — I thought there was no way we could put a tube down her nose. But once they showed us how, I was amazed at how easy it was.”

“They really prepared us so that when we brought Clementine home, we didn’t feel like ‘Oh my god, we’re on our own,’” added Daniel.

### Bringing baby home

When parents leave the hospital, they’re armed with feeding equipment, a scale and the Growing @ Home app. They also remain in constant contact with Warren and her team, who check in daily to answer questions and offer reassurance over matters both large and small.

“I could call up to the NICU day or night and ask them anything,” Brittney said. “I remember once feeling concerned because the color of Harley’s poop had changed. I was



able to literally take a picture of her poop and send it to Dr. Warren so she could tell me if it was normal or not.”

The Clark family was also grateful for the ongoing support. “We spoke with Dr. Warren literally every day, asking about everything from feeding to safe sleep,” Amanda said. “She talked to us not only as a doctor, but also as parents.”

Nearly one year later, their daughter Clementine is a thriving little girl who loves to help out in the kitchen.

“She’s my little chef,” smiled Amanda. “I remember on my first Mother’s Day I got to have breakfast in bed with her. Without the Growing @ Home program, we wouldn’t have had that time together.”

And as for Harley? She’s a sassy, adventurous toddler who enjoys playing outside, cuddling the family dogs and making up fantastic stories starring her favorite toys.

### The benefits go beyond early discharge

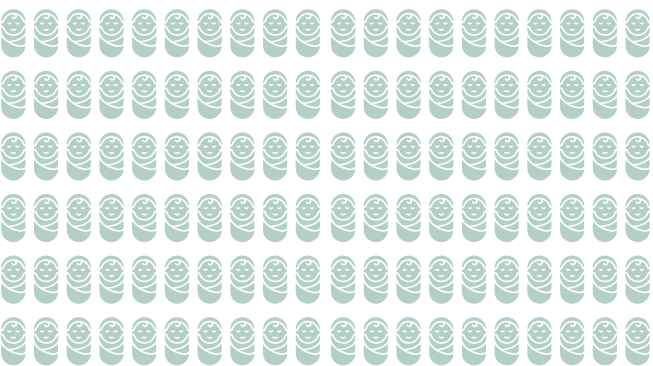
Although Warren and her team started Growing @ Home as a way to help babies go home sooner, they quickly realized that the program had another benefit: significant cost savings for both the hospital and families. The math breaks down like this: A day in Doernbecher’s NICU costs a minimum of \$1,000, and the program allows babies to go home an average of seven days sooner. ►



**(Top) Amanda, Daniel and Clementine Clark were all smiles as they left the Doernbecher NICU.**

**(Left) Clementine Clark weighed 2 pounds and 15 ounces at birth.**

Images provided by the Clark family



Since the program began, over 150 babies have been able to go home earlier. That translates to nearly 1,000 days' worth of beds in the NICU.



That's between \$7,000 to \$10,000 saved per patient every week in hospital costs that aren't being billed to insurance, Medicare or families.

The savings manifest in other ways, too. Many families live more than an hour from Portland and have jobs that they need to maintain, which would require hours of extra driving each week. There's the cost of gas, meals away from home and childcare for other kids in the family. Being able to take their baby home helps ease many of those financial burdens.

**More beds for the babies who need it most**

Doernbecher's NICU offers the most advanced neonatal care in Oregon, but only has the capacity to treat up to 50 infants at a time. When that capacity

is exceeded, it sometimes becomes necessary to send families to a different NICU in the area.

"It doesn't happen frequently, but being able to discharge just one or two babies a week through the Growing @ Home program opens up a bit of extra breathing room so that when a critically ill baby comes in, we have a bed ready for them," said Warren.


Since the program began, over 150 babies have been able to go home earlier. That translates to nearly 1,000 days' worth of beds in the NICU.


**Born out of philanthropy**

Perhaps the most remarkable aspect of the Growing @ Home program is that every aspect of it is still funded through the generosity of donors.

"We simply wouldn't be here without philanthropy," said Warren. "From the initial concept to the design of the app to ongoing operations, it's all made possible through donor funding — and will continue to be for the foreseeable future."

That's something that fills the families impacted by Growing @ Home with profound gratitude.

"It's a debt you can't repay," said Austen. "I think it's amazing that there are people out there who are willing to stand up and say, 'Hey, we've got an abundance of babies here at the hospital. What can we do to help get them home sooner?' I'd shake their hands if I could, because they changed our lives forever." 

 Watch a video interview with Jamie Warren, M.D., M.P.H., and the Goss family: [ohsufoundation.org/growing](https://ohsufoundation.org/growing)



**Austen, Brittney and  
Harley outside their home  
near Salem, Oregon.**





# Leaving an indelible mark on the field of Alzheimer's research

by Kaily Serralta

**D**aniel Gibbs, M.D, Ph.D., has a unique tattoo. After a diagnosis of early-onset Alzheimer's disease, he entered a clinical trial for an experimental treatment. An adverse reaction to the drug caused blood to leak from the vessels in his brain, sending him to the ICU for two days. He recovered from the incident, but his brain was left with permanent areas of hemosiderin pigment — tiny black spots that appear on special MRI scan sequences. This tattoo inspired the title of Gibbs's book, *A Tattoo on My Brain: A Neurologist's Personal Battle Against Alzheimer's Disease* (Cambridge University Press, 2021).

Long before his diagnosis, Gibbs had dedicated his career to the study of Alzheimer's and care for patients living with the disease. By openly sharing his unique experiences

**(Left to right) Gibbs, Silbert and Seed at the investiture ceremony for the Gibbs Family Endowed Professorship.**



and by endowing a professorship in Alzheimer's research at OHSU, he hopes to leave an indelible impression on tomorrow's patients, researchers and caregivers.

In 1986, Gibbs came to Portland for a neurology residency at OHSU. Afterwards, he and his family decided to remain in Portland, where he spent more than two decades in private practice at a community hospital before rejoining OHSU for the final three years of his career. Gibbs holds fond memories of his time at OHSU.

"I got to spend half my time in teaching. I was working with the neurology residents and medical students rotating through neurology, both in the hospital and in clinics," he recalled. "There was always something, a challenge that made me ask, 'what's going on here?' It was a detective story to follow. I never got tired of it."

In 2012, Gibbs took a DNA test for genealogical purposes, and the results confirmed he had two copies of the Apolipoprotein E4 allele (ApoE-ε4). He knew immediately what it meant. This allele is the strongest genetic risk factor currently known for Alzheimer's disease. About 60% of people with the disease carry at least one of the alleles; having two of them significantly increases one's risk of receiving an Alzheimer's diagnosis.

"In retrospect, my first symptoms were back in 2006 when I started to notice I was losing my sense of smell and I didn't think anything of it," Gibbs reflected. His wife, Lois Seed, didn't notice any symptoms either. In fact, the test was the moment it clicked.

"It's not what most people think. Most people think of Alzheimer's as late stage, where people don't recognize family members and can't care for themselves," Lois said. To manage his disease, Gibbs is a patient at OHSU. Every six months, he visits former resident classmate and neurology colleague, Joseph Quinn, M.D., the Wayne and Sandra

Ericksen Endowed Professor for Neurodegenerative Research, to maintain attention on his care.

In 2013, Gibbs retired from practicing neurology and turned his focus to raising awareness of the disease.

According to the Alzheimer's Association's 2022 estimates, 6.5 million Americans age 65 and older are living with Alzheimer's today. "At this point, I would recommend that people who have a family history of the disease consider volunteering for studies, because now they're looking for people who have underlying Alzheimer's pathology but yet don't have symptoms. There are a number of studies getting underway now for drugs, as well as for non-medical interventions," Gibbs said.

With a personal and professional understanding of the disease, Gibbs and Seed are committed to research. In 2017, they established the Gibbs Family Endowed Professorship to support OHSU faculty acclaimed in the field of Alzheimer's research. Endowed positions provide much-needed financial sustainability to long-term research efforts. For Gibbs, the opportunity in this gift is to support academic, non-corporate-supported research that looks at other ways of approaching Alzheimer's.

Lisa Silbert, M.D., M.C.R., FAAN, holds this prestigious professorship. Silbert is associate director of OHSU's NIH-funded Oregon Alzheimer's Disease Research Center (OADRC) within the nationally renowned C. Rex and Ruth H. Layton Aging and Alzheimer's Disease Center and leads its Neuroimaging Core. Her research focuses on the vascular origins of cognitive impairment, and her team is engaged in a number of studies that shed new light on the many factors contributing to age-related cognitive impairment.

"This gift has allowed me to dedicate more time to my research efforts," said Silbert. "My goal is to add to the literature and field to benefit others in the future."

In addition to the financial support to push research forward, Silbert reflected on Gibbs's influence as a fellow neurologist. "Dr. Gibbs has had a widespread impact, given all he has experienced and his ability to communicate that with clinicians and patients. Just being so open to share, it inspires me to work harder in this area."

## Together, we can create a healthier future



*When you include OHSU or OHSU Doernbecher Children's Hospital in your estate plan, your generosity improves the health and well-being of our community and beyond. Our experts can help you decide the giving option that works best for you.*

*Create your legacy by building a stronger tomorrow.*

**For sample bequest language and more, visit us online. Or call us directly.**



Office of Gift Planning  
503-228-1730 · [plannedgiving.ohsufoundation.org](https://plannedgiving.ohsufoundation.org)



OHSU researchers will never stop searching for new treatments that can halt, or even reverse, the devastating effects of Alzheimer's disease. But even if they discovered a truly game-changing treatment today, it would still require years — even decades — of additional study, development and regulatory review before it could help patients. For Gibbs and Seed, the long timeline doesn't change the personal importance of their gift.

"What gives me hope is that we're starting to turn towards the earlier stages, where I think our first successes will come. And I'm hopeful that we'll be able to come up with drugs, whether repurposed or new drugs," said Gibbs. "We have to keep an open mind about possibilities. It's not going happen for me, but I hope that it happens for my children's generation — the next generation to come." ●



Listen to an interview with Daniel Gibbs, M.D., Ph.D., here: [ohsuf.org/gibbs](https://ohsuf.org/gibbs)





# OHSU across Oregon



PORTLAND

SALEM

COOS

CURRY

KLAMATH FALLS

OHSU's practice and care covers the entirety of Oregon. Here are a few of the programs from OHSU that make rural health more accessible, more affordable and more impactful.



○ The Gary and Christine Rood Family Pavilion in Portland can host up to 76 families at a time.

■ “Dottie” the mobile mammography unit has traveled to 18 locations across northwestern Oregon.

■ The Knight Cancer Institute has a new mobile HPV screening and education program in western Oregon.

■ The newest NICH interventionist will serve pediatric patients in two counties on the coast.

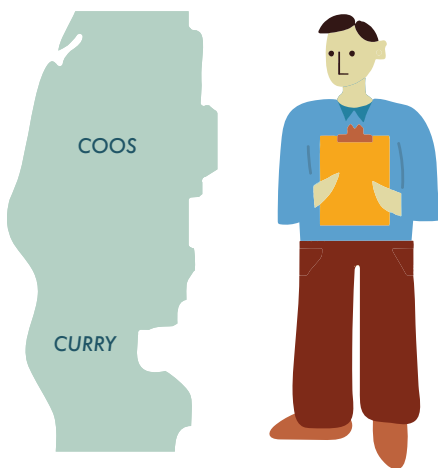
○ The pilot street nursing program treats at-risk populations with dignity in two southern cities — and soon will serve a third.

● Cascades East Family Medicine Residency Program in Klamath Falls has 24 resident physicians treating thousands of patients a year.

○ The Casey Eye Institute Community Outreach Program's mobile clinic has traveled to 70+ locations in Oregon since 2010.

Continued on the next page ►





### **NICH Interventionist – Coos and Curry Counties, OR**

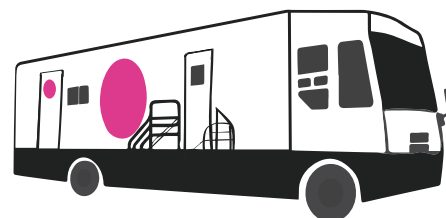
Novel Interventions in Children’s Healthcare (NICH) is a program from OHSU Doernbecher Children’s Hospital that fills the gap in the continuum of care for youth whose medical needs are compounded by social challenges. NICH

collaborates with community programs and regional insurance providers to remove barriers to care and support the healing of pediatric patients, most of whom are from underserved and underrepresented populations.

Thanks to a generous gift from the Judith Ann Mogan Foundation, totaling more than \$200,000 over the span of three years, NICH services are now available across Coos and Curry counties. Since January 2022, patients up to age 18 in these counties have 24-hour access to NICH interventionists. These interventionists serve as a “command central” in helping families manage their child’s health, find resources to meet day-to-day needs and navigate a complex — and often confusing — health care system.

### **“Dottie” the Mammogram Van**

Operated out of OHSU Health Hillsboro Medical Center, “Dottie” is a mobile mammography unit providing accessible breast cancer screening to women in underserved Oregon communities since 1987. By bringing state-of-the-art, early-detection technology — including the state’s only mobile 3D mammography capability — to women in seven partner counties, Dottie overcomes the financial, logistical and cultural barriers that prevent too many women from accessing this vital preventive care. Reminding communities breast cancer is hard to spot, Dottie empowers women to schedule mammograms to potentially detect and treat dangerous breast abnormalities early. The Dottie team is working to improve health outcomes among at-risk populations beyond the Portland area.



### **Street Nursing – Ashland, OR and Medford, OR**

Rachel Richmond, M.S.N., RN, a clinical assistant professor at the OHSU School of Nursing, began holding community foot-soak clinics in 2015 to teach her students real-world applications of population health studies. Foot-soak clinics offer safe, judgment-free spaces where people experiencing homelessness can meet with health care students and providers while receiving care for podiatric conditions, which are common among those navigating this complex challenge.



Today, the clinics have evolved into a pilot street nursing program. Small groups of nursing students and faculty visit people experiencing homelessness in Ashland and Medford — and soon Klamath Falls — to provide a range of critical services. From hygiene supplies to naloxone training, overdose prevention education to the original foot-soaks, the street nursing program has found a way for community members and students to learn from each other and create a healthier future for all. The program is funded in part through generous private donations from community members who value what it has brought to their area.

## HPV Vaccination Outreach Program

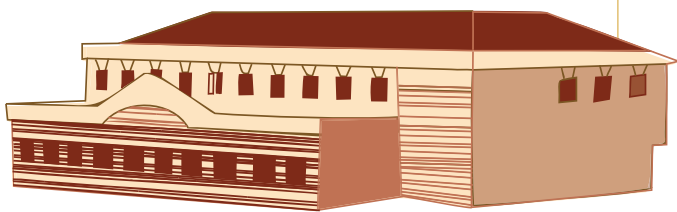
HPV, the human papilloma virus, is a common virus that can cause six types of cancer. The HPV vaccine is able to prevent 90% of those cancers. The OHSU Knight Cancer Institute Community Outreach Team is on a mission to educate and vaccinate communities across Oregon. Using teaching modules designed to increase awareness of the virus, knowledge of its risks and acceptance of the HPV vaccine as cancer prevention, the Outreach Team partners with local community organizations to disseminate evidence-based information and resources in six different languages. Additionally, the team, in collaboration with the National Cancer Institute, provides education to communities across the state and intends to host mobile vaccination events in the future.



▶ Watch “Ending the Burden of Cancer: Episode 2” here: [ohsuf.org/hpvoutreach](https://ohsu.org/hpvoutreach)

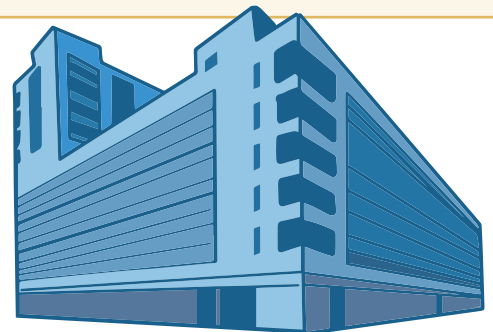
## Cascades East Family Medicine Residency Program – Klamath Falls, OR

Klamath Falls is home to a highly successful rural family medicine residency, with some of the strongest graduate outcomes for rural training. The Cascades East Family Medicine Residency Program started in 1994 as a joint effort between OHSU and Sky Lakes Medical Center. Currently, 24 resident physicians treat patients from across the Klamath Basin and Southern Oregon under the guidance of faculty from OHSU’s family medicine department, currently ranked second in the nation by U.S. News & World Report. New funding from the U.S. Centers for Medicare and Medicaid Services will enable the program to offer three more residency spots beginning July 2023. From birth to immunizations to geriatric care, Cascades East makes top-quality primary care accessible for thousands of rural Oregonians.



## Gary and Christine Rood Family Pavilion – Portland, OR

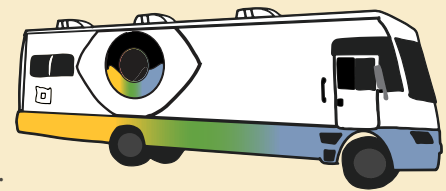
During a medical crisis requiring advanced care at OHSU or OHSU Doernbecher Children’s Hospital, many patients and families from outside the Portland metro area must navigate the complex financial and logistical challenge of finding nearby housing for an extended period of time. With 76 guest suites, the Rood Family Pavilion provides temporary accommodations for more than 1,000 patients and their family members per year. The Pavilion’s family-centered healing environment extends to its many communal spaces, including kitchens, lounges, laundry facilities, the Silver Family Children’s Park and the George and Janet Boldt Healing Garden.



Pediatric patients and their families stay free of cost thanks to a partnership with Ronald McDonald House Charities of Oregon & SW Washington. Adult patients and their families are able to stay for less than the average cost of a hotel room, and financial assistance is available to eligible families. ●

## OHSU Casey Eye Institute Community Outreach Program

*Learn more on the next page.*





# On the road with the OHSU Casey Eye Institute

The OHSU Casey Eye Institute's Community Outreach Program has a clear vision to stop preventable blindness.

*by Steve Beaven*



**G**loria\* came for a free eye exam on a warm, cloudless summer afternoon last year.

A chatty grandma in her early 70s, Gloria was nearly blinded 35 years ago in Mexico when hot cooking oil splattered her left eye, leaving her with blurry vision. She later escaped an abusive marriage and moved to Salem, Oregon, in 1994 with no job, no insurance and a left eye that wasn't going to heal itself.

Last July, an outreach coordinator with Northwest Human Services, a Salem nonprofit, helped Gloria schedule a vision exam with the OHSU Casey Eye Institute's 33-foot mobile vision clinic when it visited their city. She arrived for her 12:45 p.m. appointment, talked with friends and strangers alike, underwent a thorough eye exam and made sure to express her

thanks before she left. She lives with her daughter, Carmen\*, and relies on her for financial assistance. The free exam helps preserve her eyesight and saves her family money that can be spent on food and other necessities. Because the clinic came to their community, Carmen and Gloria didn't need to coordinate travel to Casey Eye's location in Portland.

"She believes in God and she's very positive," Carmen said. "And she's very grateful. This is a big help."

## Eliminating preventable blindness

In rural areas and underserved urban and suburban neighborhoods, eye disease is often invisible and untreated, a slow-moving medical catastrophe if not diagnosed in time. Residents in these communities face barriers to care and a greater risk of eye ailments because they, like Gloria and Carmen,

frequently endure systemic barriers that can result in limited economic mobility and poorer health outcomes. In small towns and rural areas, there might be few, if any, vision specialists. In urban and suburban areas, residents may have little access to cars. Often, these community members are also underinsured or have no insurance at all, and thus no way to access vision care. Retired ranchers from Burns or farmworkers from Hermiston aren't likely to drive hundreds of miles to Portland for an eye exam. An elderly couple in the Willamette Valley may feel that vision care from Casey Eye providers isn't available to them.

That's why the OHSU Casey Eye Institute created the Community Outreach Program. For more than a decade, the mobile clinic Gloria visited has been the anchor for the program. The mobile clinic — an enormous ophthalmology exam room on wheels — has zigged and zagged

\*Name changed for privacy



across Oregon to nearly every county in the state, from Multnomah to Malheur and Hood River to Harney, to provide free eye screenings and prescription glasses. The program is largely staffed by volunteers, including Casey Eye doctors, all working toward the same goal: eliminating preventable blindness in Oregon.

Philanthropy has made every aspect of this program possible since its earliest days in 2010. Initial funding from Heather Killough, the Roundhouse Foundation, the Oregon Community Foundation and Schnitzer Steel brought volunteer eye doctors, technicians, students and community members together in nearly every corner of Oregon. In the program's first decade, the mobile clinic hit the road nearly 40 weekends each year, did an average of 1,500 free exams, offered more than 10,000 free screenings for adults and provided more than 4,800 pairs of glasses.

"The success of the Casey Community Outreach Program has literally changed lives," Killough said. "Many of the program's clients live in rural areas far from necessary health care services; others are underinsured. Had it not been for the program, these individuals simply may not have been able to access care and experience increased quality of life."

Killough is furthering the Casey family's impact on OHSU. Her grandfather, Henry Casey, and his sister, Marguerite, helped fund the construction of the Casey Eye Institute building in 1991. Several generations of the Casey family, in fact, have made generous gifts to Casey Eye for more than three decades.

### **Widening the lens of vision care**

Casey Eye is now in the early stages of building a far more ambitious

project, a substantial expansion of the Community Outreach Program designed to achieve three very specific goals: 1) reach more Oregonians in need of vision care, 2) build a new level of local expertise in underserved areas and 3) use emerging technology for faster and more efficient treatment. It's a community-centric approach and, if it can be replicated, it could change the way vision care is delivered in communities across the country. And just in time; the prevalence of blindness in the U.S. is expected to double in the next 30 years.

OHSU had planned to unveil the expanded program in 2021. COVID delayed that plan because the program's community partners were overwhelmed with caring for vulnerable populations during the pandemic. There were fewer community visits, which made it more difficult to work with local social service agencies to establish new ►





Verian Wedeking, Program Director

“One of the things that’s important is that when people come into that clinic, they see a familiar face.”

telehealth sites. Some of the outreach coordinators at those agencies moved on to other jobs.

“It’s taken us a while to get this [expansion] up and running because our partners have been so focused on the pandemic,” said Verian Wedeking, the program director.

But now that pandemic restrictions have been lifted, OHSU has begun

building its outreach network again and adding more telehealth sites. The program has also added staff, including a full-time research manager and training and outreach specialists.

At the heart of this plan is the vision to bring the full diagnostic prowess of a world-class eye institute to Oregonians, wherever they live, and to connect individuals found to be at risk of losing sight with ongoing eye

care as close to home as possible. The expansion is, essentially, the marriage of two disparate and sometimes conflicting elements of modern health care: advanced technology and community engagement.

“I think it’s a fundamental requirement to have these two things working reasonably well together because either approach alone is not good enough,” said Mitchell Brinks, M.D., M.P.H., medical director of the outreach program and associate professor of ophthalmology in the OHSU School of Medicine.

The expansion will meet even more Oregonians in their own communities. The aim is to increase the screening capacity in each telehealth location from 40 individuals a year to up to 500 individuals. Additionally, the program is building a second mobile eye clinic. This new clinic will be even bigger than the first, providing more room for new imaging equipment and more privacy for patients. It’s due to hit the road in the fall of 2023.

**Building local expertise**

The reconfigured outreach model will include far more than a second mobile

CASEY EYE INSTITUTE OUTREACH PROGRAM BY THE NUMBERS

13

*Years the program has served Oregon*



40

*Average weekends per year the mobile clinic is on the move*

1,500



10,000+

*Average free eye exams conducted per year*

*Free screenings for adults since 2010*

4,800+

*Glasses provided to patients since 2010*



unit. The Community Outreach Program is determined to make quality eye care a permanent fixture in their partner communities. Doing so has required a shift in mentality, from individual health services to population health care.

First, Casey Eye built on the community coalitions it has worked with throughout the state to create the Oregon Vision Health Network (OVHN), a group of local agencies that work with the Casey Eye Institute at more than 70 telehealth sites.

Second, the program is bringing community health workers onboard, expanding their roles and training them to conduct initial examinations before the mobile clinic arrives. The Casey Eye Institute developed the training; it was approved by the Oregon Health Authority Office of Equity and Inclusion.

Since 2021, about 60 community health workers from 28 agencies have been trained as Vision Health Navigators. They provide preventative education, perform basic vision screening and coordinate follow-up care. They're able to screen for diabetic retinopathy and other common eye diseases and pinpoint social and environmental factors that increase the probability for blindness. They also direct participants to additional care at the mobile clinic and to the offices of eye doctors throughout the state.

"It is truly a beautiful thing to see different organizations work in unison, motivated with the same

**(Left to right) Spector, Wedeking, mobile eye clinic driver Francisco Merino and Brinks inside the 33-foot mobile clinic.**



passion of providing respectful, excellent care," said Dove Spector, the program's community outreach research manager.

It's a true team effort that requires each and every member to contribute in a meaningful way. The hosts and staff in each community are especially critical to the program's success. They're on the front lines, and they know participants and their families better than anyone.

"I prep the doctors in advance to say, 'Hey, this individual is going to be seen at this clinic for a comprehensive eye exam,'" said Memo Plazas, who handles outreach for Northwest Human Services in Salem and scheduled the appointment for Gloria. "If they find something, it's my responsibility to make sure that individual is referred to the specialty care that was recommended."

Staff from the community health centers — and community health workers, in particular — will be the public face of the OVHN. Their presence will build trust and help bridge the gap between the community and the specialized medical care provided by the Casey Eye Institute.

"One of the things that's important," Wedeking said, "is that when people come into that clinic, they see a familiar face."

These existing relationships with community health workers and local organizations are a key driver behind the success of the Community Outreach Program. "Our community partners are the critical link to reach community members who are most at risk," said Spector. "We need [them] as they know their communities ►





**Michelle Hribar, Ph.D.**

**“It is imperative that we include these populations in our data to help build the artificial intelligence models.”**

best and have established the necessary trust.”

“Casey doesn’t go in and take over,” Brinks added. “We’re careful how we expend our resources, so we can respect the community clinics.”

### Using new technology

The biggest technological advances for the program may go unrecognized by participants who come for screenings and glasses. But if all goes as planned, the new technology will make vision care faster and more efficient.

Oculomics — an emerging technology that combines high-resolution ocular imaging, big data and artificial

intelligence — will make it easier to detect common eye diseases early, before the damage is irreversible.

OHSU is developing technology that will help create a huge database of retinal scans using optical coherence tomography, better known as OCT. Think of OCT as a CT scan for the eyes. An invisible beam captures thousands of high-resolution retinal images per second, which can be used to diagnose and monitor common eye diseases. OCT angiography, or OCTA, is a newer imaging technique that could help ophthalmologists find biomarkers of a broad range of diseases far beyond glaucoma and cataracts by giving them a better view of vascular circuitry and blood flow within the retina.

Ultimately, the OCT images will be de-identified — have any identifying information about patients removed — and stored in a database of retinal scans from patients who have already been diagnosed with other illnesses. Researchers are building artificial intelligence models that will compare those images to scans taken during routine eye exams. So, if a scan taken during a visit to the mobile clinic matches scans in the database from people with Parkinson’s, Alzheimer’s, coronary artery disease or stroke, providers could know that the patient in front of them is at risk for the same disease.

“It will allow the person in the clinic during the screening to immediately tell that patient, ‘Here’s what your next steps are,’ as opposed to having to call them two or three days later to say, ‘You need to follow up,’” said Michelle Hribar, Ph.D., assistant professor of medical informatics and clinical epidemiology in the OHSU School of Medicine. “It’s a lot easier to talk to them and counsel them in the moment at the clinic.”

Most of these scans are commonly captured at hospitals and eye clinics, which has resulted in a limited and somewhat homogenous sample of



**A Vision Health Navigator conducts an eye screening for a community member.**

images. By gathering images at outreach sites, researchers will be able to build a bigger and more diverse database that better reflects Oregon's communities. This expansive dataset will span the region's many races, ages and incomes, as well as populations who often don't have easy access to vision care.

"It is imperative that we include these populations in our data to help build the artificial intelligence models," Hribar said.

For now, OHSU will provide the most advanced model of OCT imaging devices for vision care at eight telehealth sites in Oregon. But developing the necessary artificial intelligence and big data to diagnose a host of illnesses through retinal scans isn't a pie-in-the-sky scenario. It won't take decades to come to fruition. These

advances will be here in a matter of years, and OHSU is at the forefront of their development.

### Paving the road ahead

The new iteration of Casey Eye Institute Community Outreach Program is far different than what was envisioned in 2010. It's bigger and more ambitious, with a team of researchers hard at work on new technology and new treatments. But the top priority hasn't changed: preventing blindness by providing first-class eye care throughout the state. An extensive network of nonprofit community centers at nearly every crossroads in the state is eager to begin anew.

None of it would be possible without the generosity of philanthropists. From

training Vision Health Navigators to maintaining the mobile clinics, it takes money and time to make expert vision care available in Oregon's isolated communities. The expansion is achievable because of \$4.15 million in gifts from the Roundhouse Foundation, Heather Killough, Rocky and Julie Dixon, S. Page Evans and the Theodore Rutherford Lilley Fund of the Oregon Community Foundation.

"Taking the time to build strong relationships," Brinks said, "and working alongside real-world populations to build these programs means those dollars and that time will be well-spent, and many people's lives will be the better for it."

That's because there is no data set or algorithm more important than the human touch to prevent blindness. ●

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SATURDAY, SEPT. 2, 2023

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# The next generation of health care providers

by Josh Friesen



## Anna Abel

School of Nursing Monmouth  
Pursuing B.S.N., Class of 2023  
Hometown: Portland, Oregon

Anna Abel is blazing her own trail and inviting others to follow. A fourth-year nursing student, Abel demonstrated her knack for caregiving from an early age while helping her mother, who had complex health challenges.

“I didn’t think nursing was ever something I could do because it was an underrepresented career,” she said. Eventually, she found inspiration: a Black nurse whose guidance laid the foundation for Abel to pursue nursing school and thrive. She chose OHSU because she resonated with its atmosphere of learning and the institution’s commitment to advancing education.

Now, Abel, who is also a doula, is one step closer to becoming a nurse midwife. Along the way, Abel co-founded and serves as president of the Black Student Nurses Umoja, an OHSU student group that provides community for Black nursing students and advocates for racial equity and justice in education and health care.



## Aria Javaheri

School of Dentistry  
Pursuing D.M.D., Class of 2023  
Hometown: Tehran, Iran

Growing up in Iran, Aria Javaheri was interested in two things: mechanics and health care. He competed in robotics competitions and worked on cars with his dad. He also had a knack for human sciences and a passion for helping others improve their health. When he combined those interests, he realized dentistry was a perfect fit. After high school, Javaheri immigrated to the United States and began pursuing his calling in dentistry.

Today, Javaheri, who recently became a naturalized U.S. citizen, is loving every second of his education. From fillings to extractions, oral surgery to root canals, Javaheri is hungry to learn everything he can about dentistry. After his upcoming graduation, Aria plans to start a general dentistry residency.

“I want to learn a lot of new things,” he said. “I’ve done a lot of volunteering here where we work with underserved populations, and every patient I’ve helped, I’ve felt a satisfaction because I helped someone improve their quality of life — even just a little bit — and that was a positive impact I had on society.”



Find more student stories on our Story Hub: [ohsufoundation.org/stories](https://ohsufoundation.org/stories)

OHSU students are the healers, caregivers and innovators of tomorrow. They come from all over the world, but they share a common goal: to create a healthier future for all.

## Meet the next generation of the health care community.



### Alex Edgell

School of Medicine  
Pursuing M.P.A.S., Class of 2023  
Hometown: Sherwood, Oregon

Alex Edgell sees two sides of OHSU. On one side, Edgell is a student in the Physician

Assistant Program set to graduate in December of 2023. On the other, he is a patient at OHSU Knight Cancer Institute.

“The place and people that saved my life and the place and people that teach my lectures, they’re all one and the same,” he said.

In 2019, Edgell was preparing to apply to OHSU when he was diagnosed with stage-four non-Hodgkin lymphoma. Edgell’s patient experience sealed his desire to attend OHSU. Despite his diagnosis, Edgell applied to the School of Medicine and was accepted. Nearly a year after his first diagnosis, Edgell’s cancer went into remission. Then, in early 2022, a different cancer was found — Hodgkin lymphoma. Last summer, he underwent an autologous stem cell transplant to treat it.

Edgell appreciates his dual connection to OHSU. He says it makes him feel like he’s at the right place.

“It’s strange, but it’s also amazing,” he said. “It’s such a full circle. That relationship completed the picture of OHSU for me.”



### Lenora Waconda, M.P.H.

School of Medicine  
Pursuing M.D., Class of 2025  
Hometown: Albuquerque, New Mexico

Lenora Waconda believes in the power of connecting with others. Her connections to her family and

hometown community inspire her educational journey, and the fellowship she’s experienced as a student in the School of Medicine has already left a lasting impact.

“When I talk to friends that go to other medical schools, they’re like, ‘Your experience is unique. You’re really close to the people in your class,’” she said. “And I’m like, ‘Yeah, I love my class.’”

Waconda had been working as a substance abuse epidemiologist in Albuquerque, but the focus on data and statistics didn’t satisfy her desire to connect with the community her work impacted. She wanted to bridge public health and medicine, and she looked to OHSU to unite the fields.

Since arriving in Portland in late 2020, Waconda has made countless connections and forged relationships across OHSU and the city. Though she aspires to return to the Southwest someday, her Pacific Northwest ties will remain.

“I love where I come from, but being involved here has helped me appreciate Portland and OHSU,” she said. “I can go back home. I can go work wherever else I want to. But this place — I’ll always be connected to it.” 🌍



# School of Nursing alumnae bring midwifery to rural communities



Sarah Paeth, B.S. '14, M.N. '16, CNM, and Lori Swain, B.S. '14, M.N. '16, D.N.P. '17, CNM, first met as classmates at the OHSU School of Nursing. Both

women had been selected by the Scholars for a Healthy Oregon Initiative (SHOI). SHOI provides full tuition for a limited number of eligible students entering specific clinical degree programs at OHSU. In return, recipients agree to serve as health care practitioners in a rural or underserved community in Oregon for a minimum of one year longer than the total years of funding received.

Today, Paeth and Swain are colleagues at a women's health practice in Silverton, Oregon. They share a belief that all communities deserve access to quality health care, regardless

of their zip code. As such, they have dedicated their careers to caring for patients in some of the world's most remote locations. Often, they work in communities without a local physician, requiring them to solve complex problems in creative and unique ways. Currently, Paeth splits her time between Oregon and Alaska, where she cares for members of the Inupiaq community at the Maniilaq Health Center in Kotzebue, a remote village 40 miles above the Arctic circle. Swain serves patients from Molalla to Gervais, using her Spanish skills to reach underserved populations.

"My foundation of midwifery training that I got at OHSU was unparalleled. I really feel that the OHSU midwifery program is like a beacon on the rock of midwifery training," said Paeth. Swain agrees, saying OHSU students who arrive at her practice are always prepared and ready to learn.

Swain and Paeth encourage others to consider rural practice, where the rewards meet and beat the challenges. ▶

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# One day at OHSU



7:15 a.m.

“The patient is already in the operating room getting prepared for surgery. It takes a lot of time.”

**Ashok Muralidaran, M.D.**, section chief of pediatric and congenital cardiac surgery

*One day can be the difference between life-threatening symptoms and the path to recovery.*



1:38 p.m.

“On long days like this, I like to get myself a little snack or drink to enjoy while looking out the window. It gives me sense of peace and helps me re-center in preparation for the next case.”

**Olabisi Sanusi, M.D.**, skull base surgeon

*A single day doesn't seem very long. But at OHSU, one day can make all the difference.*



9:14 p.m.

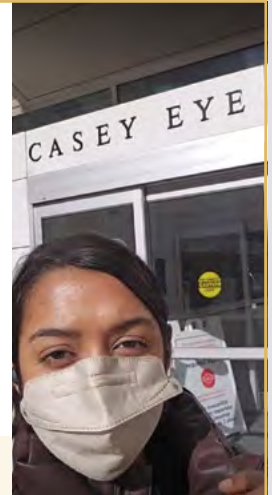
“I tend to create this supportive learning environment for myself by surrounding myself with great faculties, great mentors, a lot of great friends and peers.”

**Aria Javaheri**, School of Dentistry Class of 2023

*Within 24 hours, countless stories play out across OHSU's clinics, research labs, hospital rooms, hallways and classrooms. All kinds of stories — of knowledge learned, of patients treated and of scientific breakthrough discovered.*

“I'm conducting research at the Center for Ophthalmic Optics and Lasers Lab. Today, I am figuring out how to couple a different light source into my system to get better axial resolution.”

**Shanjida Khan**, biomedical engineering Ph.D. candidate



11:20 a.m.

*One day can be the line between an idea and action — in pursuit of better treatments, greater access and a more equitable future of health care.*

“I'm getting ready to hang some chemotherapy on a patient, and I'm going to print off a little bit of patient education for them. Patient education, I think, is extremely important. It reduces stress.”

**Kathie Phan, RN**, oncology nurse at the OHSU Knight Cancer Institute



4:23 p.m.

To read, watch and listen to these stories, visit [ohsufoundation.org/oneday](https://ohsufoundation.org/oneday)



# Jeffrey Koh, M.D., harnesses his passion for triathlons for his day job

As a pediatric anesthesiologist at OHSU Doernbecher Children's Hospital, Jeffrey Koh, M.D., takes pride in finding care plans for kids with complex care needs. As an amateur athlete, he takes joy in competing in the grueling, long-distance Ironman races. When he realized that he could leverage his races to influence people's interest in contributing to OHSU, he jumped on it. Koh recognized that philanthropic support could increase the resources available to the pediatric pain management program and other smaller programs.

For the last 17 years, Koh has joined these two passions, raising more than \$30,000 for OHSU and Doernbecher through race sponsorships.

Now as he looks towards retirement, he plans to continue his philanthropic support across OHSU. "I have a soft place in my heart for those smaller programs where raising a few thousand dollars makes a difference on a year-to-year basis. I'm keeping an open mind, and I would like to keep some form of philanthropy as a part of my journey going forward." 🌐



Read "Four questions with Jeffrey Koh, M.D." here:  
[ohsuf.org/ironkoh](https://ohsuf.org/ironkoh)



# Faculty Excellence and Innovation Award recipient developing durable biomedical implants

Carmem Pfeifer, D.D.S., Ph.D., envisions a future where biomedical implants have no expiration date. As one of three recipients of the 2023 Faculty Excellence and Innovation Award, made possible by the Silver Family Innovation Fund, Pfeifer has been awarded an additional \$750,000 over three years to expand her research in dental implants to other biomedical uses.

Pfeifer's research focuses on combining durable polymers with antimicrobial additives to create dental filling material that is both stronger and lasts twice as long as standard materials in the field. She has demonstrated some success in extending the lifespan of restorations. Pfeifer is a professor of restorative dentistry (biomaterials and biomechanics) in the OHSU School of Dentistry.

"Dentists have been bonding polymers to mineralized tissues for decades now," Pfeifer said. "Historically, a lot of biomedical materials have been developed for use first in the oral cavity, with one important example being titanium implants. We believe dental adhesives and cements are other examples ripe with innovative and entrepreneurial opportunity." 🌐

## A Look Back: Neonatal intensive care unit

1964

DR. BABSON EXAMINES TINY PREMIE WHOSE HEART BEAT IS BEING MONITORED BY MACHINE DEVELOPED AT THE MEDICAL SCHOOL.



MRS. HELEN KATAGIRI, R.N., DEMONSTRATES PREMIE TOTE USED TO TRANSPORT BABIES TO THE MEDICAL SCHOOL FROM OTHER HOSPITALS. HOT WATER BOTTLES UNDER TOTE BED PROVIDE WARMTH DURING TRIPS.

In December 1964, OHSU's campus-wide magazine, *What's Going On*, published a feature on innovations in neonatal care. At that time, neonates with special or complex needs were treated within a suite of rooms deemed the "premature nursery" inside Doernbecher Children's Hospital, then housed inside the Medical School Hospital (now OHSU Hospital).

It wasn't until 1968 that S. Gorham Babson, M.D., (top image) developed Doernbecher's Neonatal Intensive Care Center. This care center was the first neonatal intensive care unit in the state of Oregon. Babson served as its director from 1968 to 1977. The second image showcases a "preemie tote," an innovation to facilitate transporting neonate patients from the delivery room to the specialized nursery.

Image and information provided by the OHSU Historical Collections & Archives. Thank you to Meg Langford of the OHSU Library for her research and assistance.





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