A PUBLICATION OF THE MARION-POLK COUNTY MEDICAL SOCIETY FALL 2019

CHART NOTES

Healthcare's Virtual Mode

DIVING INTO TELEMEDICINE

Video, e-visits and other areas of telehealth are growing in the Salem area as hospitals and clinics try to find out how it all fits in with modern medicine.

pg 4

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CHARTNOTES

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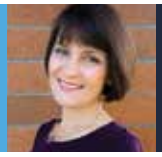
President's Message

Erin Hurley, MD, FAAP



Technology has always been hard to adjust to

"I am just a data entry person."

I heard that statement from a doctor during a recent medical exam. Can you relate? Is that why we went into medicine, to do data entry, spending up to half of our work time or more facing a computer screen? I don't think so.

When I was in residency in the '90s, I vividly remember when the nurses on the pediatric floors were made to transition to electronic documentation of patient vitals. It was a big change, and the nurses were adamant that they did not want to do it. They were worried the new process would consume more time and take away from their ability to provide direct care for the patients. Sound familiar?

At my first medical practice 22 years ago, we had paper charts and dictated most of our notes. My five pediatric partners had been practicing together for 22 years before I joined them. I remember reading chart notes that went something like this…

S: Sore throat and fever
O: Throat red
A: + Strep
P: PCN

Maybe there were a few more details in the note but not many. Can you imagine a note that simple in this day and age? I don't think any notes, even the basic ones, are less than a page or two these days.

After seven years of paper charts, I moved to Salem and joined Kaiser Permanente. They had piloted Epic for Kaiser's Northwest area in the mid-'90s, and they had electronic medical records down pat! Their Epic program was so robust it made my head spin. It would take years to learn all it had to offer. A few years later, Salem Hospital adopted Epic as well. In 2012, I joined the staff at Marion and Polk County's nonprofit child abuse assessment center, Liberty House, and it was back to paper charts. But within a few years, we joined the movement and implemented electronic health records. There are many benefits to this program, but we still are working on how to make it work better for the specialized work we do. Maybe you can relate.

I have seen the power electronic health records yield. The ability of programs to cull through a patient's electronic chart and instruct the provider what that patient is in need of to stay healthy: suggesting missing vaccines, notifying that imaging such as yearly mammograms are due, and making it apparent when it is time to order recommended laboratory tests based on the patient's diagnoses and problem list. Amazing! But there often is a downside. All that documenting and data entry can take away from the patient-doctor experience and negatively impact this important relationship.

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Jovin Panthapattu has performed more than 40 video visits at Salem Health. The ambulatory care clinical pharmacist practices at the River Road and Edgewater Clinics.

Photo Credit: Kristen Romano and Laura Reyes

DOCTORS GO VIRTUAL

BY HEATHER RAYHORN

SALEM HEALTH AND KAISER PERMANENTE AMONG THOSE MOVING FORWARD WITH TELEHEALTH OPTIONS

Going to the doctor soon may be just as dependent on WiFi as it is the freeway. With telehealth, hospitals and clinics are moving toward integrating e-visits, e-mail and video visits alongside office visits into their doctors' and nurses' schedules.

Last fall, Salem Health launched its initial phase of implementing video and e-visits into primary care using the electronic medical record system Epic. By January, the virtual services were being offered throughout all of Salem Health's primary care clinics to existing patients with access to My Chart, the platform in Epic where the virtual options are located.

Video visits let patients use a device such as their smart phone or computer – anything that has a web camera, microphone, web browser and high-speed internet connection to connect with a doctor. Patients also can get medical advice for some conditions through e-visits by filling out an online questionnaire that is then reviewed by a nurse or physician to diagnosis symptoms within 48 hours.

Just like an office visit, video visits are fit into doctors' schedules. Clinical staff greet patients, set up everything and answer questions before handing it off to the doctor. The whole process averages 15 minutes, but for patients who don't have to find childcare or take time off of work to drive in and wait in a waiting room, it can make a huge difference. Patients can connect from home, the office or in the middle of cooking dinner.

Business Development Manager and nurse informaticist Christina Kochan said she has seen video used lately —

when patients are calling to cancel because of scheduling conflicts or other reasons they can't get into the office. She said it's all about making healthcare easy and convenient for patients. Getting providers to see the value in that is one thing she and others at Salem Health have been working on since starting the virtual options.

She describes it as the modern home visit.

"We look at it as another delivery method for care," Kochan said. "It's another option."

She said obviously things like open fractures, crushing chest pain or earaches aren't appropriate for video visits, but many things work well over video including a follow up with a diabetic patient, a mental health evaluation, medicine checks or nasal problems.

As of the end of June, 12 of the 30 primary care providers within Salem Health had tried the virtual technology. In all, there have been around 100 video visits and 320 e-visits completed between the months of October and June in Salem Health's primary care.

The past year has been a learning curve. Director of Primary Care Ryan Parent, who has been a part of the virtual care team since the beginning, called the process "a little clunky," comparing it to giving a teenager a car before he or she learns how to drive. But they have learned a lot through hitting the ground running. The team has worked on making the virtual visits easier to find and use, dealt with technology issues, training and getting patients signed up for My Chart, a requirement of the virtual visits. Through aggressive campaigning, Salem Health has added 1,000 people to My Chart over the past four months, but still, only a quarter of patients are registered.

Parent said the care teams, including mental health practitioners, nurse care managers, pharmacists and dieticians, are especially taking advantage of the video visits. One clinical pharmacist at Salem Health has held more than 40 video visits.

That pharmacist, Jovin Panthapattu, said video visits allow him to routinely check in with patients.

"This is convenient given the demographics of the patients that I manage, especially with chronic disease states like diabetes, high blood pressure, high cholesterol," he said. "Disease management burden sometimes may contribute to non-adherence to a treatment plan, and follow-up and video visits allow me to continue providing support without disrupting too much of the patient's life. … For medications specifically, we may be able to identify side effects earlier and possibly avoid unnecessary urgent care or emergency room visits."

One of Panthapattu's patients who recently started on insulin and needs intensive follow up and dose adjustments lives about an hour and a half away. The patient agreed to try the video visits, logging in his blood sugar levels before the appointments. This allows Panthapattu to adjust medications during the appointment and make a follow-up plan.

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6 WAYS TO BE A GOOD VIRTUAL DOCTOR

Business Development Manager and Nurse Informaticist Christina Kochan said in the coming months Salem Health will emphasize training medical staff not just on the technology of video visits but on the nuances of communicating well over video. Here are a few of the things she said doctors should think about when using virtual care:

1. **Faking eye contact:** Position the window that you see the patient in as close to the camera as possible. When you look at the patient to converse, it will mean you also are looking in the direction of the patient.
2. **Lighting is important:** Make sure you have good lighting that is hitting your face. Lighting from the back can make you appear dark and washed out.
3. **Limit the amount of loud clothing and jewelry:** Heavy patterns and a lot of jewelry can be distracting on camera and can play tricks on your eyes.
4. **Talk the patient through what you are doing:** Apply the same techniques you use in the exam room when interacting with the patient and your electronic health records. If you will be documenting or looking at the chart during your visit, let the patient know what you are doing. Say, "I am going to look at your last labs here in the chart," "I am going to document in your chart as we are interacting" or "I am going to be ordering that for you."
5. **Physical assessment can occur** (more than you think): You can assess general appearance, agitation, positioning, range of motion, pain, shortness of breath. Have the patient assess themselves with you as their guide: "Now feel around on your neck, do you feel any lumps or tender spots?"
6. **Vital signs are still valuable**: More and more patients are taking their own vitals with home monitoring. Record them in your subjective data.

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"It saves him a three-hour roundtrip drive for every visit," Panthapattu said. "He still continues to see me in person every three months and does the routine laboratory monitoring. I consider this standard of care plus more individualized follow up to improve the patient's medication experience."

Growing Into Urgent Care

At the end of July, Salem Health expanded video and e-visits into urgent care. While the goal is to get primary care video visits scheduled within a week, urgent care video visits can be scheduled the day of. Also unlike primary care, where doctors fit video visits into their schedule, for urgent care, there are two nurse practitioners at the hospital who spend half their hours dedicated to answering questions for virtual care. That means there is someone in urgent care giving all their attention to answering e-visit questionnaires and video visit requests as they come in.

Not only are virtual visits convenient for the patient, but they also are more cost-effective for patients. Salem Health charges $39 for video visits (vs. $120 in office) whether it's for a primary care or urgent care visit, and if a patient ends up having to come in to see the doctor, that fee will go toward their in-office bill. While video visits are only available to current patients for primary care right now, urgent care visits are available to anyone who has signed up for My Chart.

Salem Health is shooting for 25 percent of minor needs to go through video visits. It also hopes to grow the usage over the next year by focusing on marketing virtual care to the public and training providers beyond how to work the technology and into how to be a good virtual doctor.

"The statistics say most younger patients don't care about a relationship with their doctor," Parent said. "They want (care) as they need it. Virtual care is becoming more popular. Instead of resisting the change, (doctors) need to realize that's where healthcare is going. Jump in."

A Few Years Ahead

Kaiser Permanente has been the leader in telehealth locally. It rolled out video visits in 2016, e-visits in 2017, and has allowed members to ask doctors questions through the kp.org app that then goes to the doctor via e-mail since the early 2000s. Phone visits, which technically fall under telehealth, may be considered the old-fashioned method, but members also love the convenience of having a phone call with their healthcare provider, said Treena M. Bello, telehealth manager at Kaiser Permanente.

E-visits, also known as online care, let members fill out a 10- to 12-minute questionnaire anytime on kp.org about their symptoms. The system is similar to what Salem Health has, but Kaiser Permanente's e-visits, through Bright.md's SmartExam, use intelligent logic to either provide a diagnosis that is reviewed and delivered to a patient by a physician within an hour of submission between the hours of 8 a.m. to 11 p.m. daily or point the patient in the direction of the best way to get the answers they need. Kaiser Permanente's e-visits were updated in June to increase the number of conditions that can be addressed from nine

WHAT IS TELEHEALTH?

The Mayo Clinic defines telehealth as "the use of digital information and communication technologies, such as computers and mobile devices, to access health care services remotely and manage your health care." Telehealth includes everything from ordering medication online, getting text reminders, uploading medical information electronically, messaging or video chatting with a doctor, using a health app, doctors consulting virtually with each other and using remote motoring such as with wearables.

Dr. George Go, NW Permanente's Director of Operations of Convenient Care, shows how video visits work. Courtesy of Kaiser Permanente

to 19, according to Bello. Examples of the conditions that can be addressed include acne, birth control, bladder infections, burn or sunburns, cough, cold, ear and eye pain, and the flu.

While e-visits and sending doctors a message through the kp.org app are currently free for members, video and telephone visits may have a fee if the member has a high-deductible health plan. The cost share is less than seeing a doctor in the office, though; telehealth visits are approximately 50 percent the cost of an in-person visit, Bello said.

All Kaiser Permanente departments are using video visits, Bello said, and usage has increased 68 percent since 2017 and is increasing month over month. She said the highest users are family practice, mental health and OBGYN, but specialties also use video for consultations and follow up.

Dr. George Go, NW Permanente's Director of Operations of Convenient Care, said, for example, that the initial evaluation for a gall bladder removal could be done via video.

Bello said virtual dermatology especially has seen big growth: 83.8 percent from 2017 to 2018.

And it's not just younger people who are interested in virtual visits.

"Some of us have the idea that this is just for the millennials or the younger, more tech-savvy generations, but we have a huge number of patients who love video," Bello said. "The older patients Skype grandkids on the iPad. They are really versed in technology or have assistance from family."

Looking forward, Kaiser Permanente soon will introduce "chat with a doc" instant messaging in our area, maybe as soon as 2020, Bello said. Chat will allow more immediate back and forth than e-mail, similar to when you chat with a salesperson on a product website.

"We have to be careful about providing too many options," Dr. Cory Ogden, the telehealth physician lead for NW Permanente, said. "We are figuring out where chat will fit."

But like with Salem Health, the overall idea is having multiple channels of care that allow for different options, letting patients and their providers choose the one that best fits the needs of the patient.

STUDIES SHINE LIGHT ON PROS, CONS OF TELEHEALTH

BY HEATHER RAYHORN

While telehealth seems to be part of the future of healthcare, there, of course, are some concerns.

- **Can physicians make accurate diagnoses without a face-to-face interview or exam?**
- **Will antibiotics be overprescribed?**
- **Will the doctor-patient relationship dissolve?**
- **Will patients feel they are getting jipped?**
- **Will patients be told they are going to die by a doctor on a teleprompter? This really did happen in Fremont, California, this past March.**

These are fair questions, and we looked to studies on telemedicine to find the answers to some of them.

The first is a University of Pittsburgh study that ran from January 2010 to May 2011, comparing the care at e-visits to physician office visits for sinusitis and urinary tract infections. An e-visit is described as when a patient logs into their secure personal health record internet portal and answers a series of questions about their condition (usually acute care) that is sent to the physician, who makes a diagnosis and orders necessary care.

The researchers concluded that follow-up was similar for both in-office and e-visits, something researchers called "reassuring, as follow-up rates are a rough proxy for misdiagnosis or treatment failure." They also noted that patients appear generally satisfied with e-visits and data supports that e-visits could lower health care spending.

But the study also points out antibiotic prescribing rates were higher at e-visits, particularly for UTI. Researchers express a worry that if physicians are not directly examining the patient, "physicians may employ a 'conservative' approach and order antibiotics."

A more recent study published in Pediatrics in May of 2019 (with data from 2016-17) found similar concerns about overprescribing. Researchers at the University of Pittsburgh School of Medicine looked at children with acute respiratory infections. They found children who used telehealth services "were more likely to receive antibiotics (52 percent versus 42 percent in urgent care and 31 percent of PCP visits) and less likely to receive guideline-concordant antibiotic management (59 percent in telehealth) compared to children at PCP visits (78 percent) and urgent care visits (67 percent)."

Another study, published in May of 2019 in the Journal of the American Medical Informatics Association, looked at adult users and nonusers of telemedicine. Telehealth users reported in the survey that they were less connected to primary care than nonusers were. The study's researchers reported "Telehealth may expand service access but risks further fragmentation of care and undermining of the primary care function absent better coordination and information sharing with usual sources of patients' care."

But there are many promising studies, as well. Researchers at Massachusetts General Hospital reported in the American Journal of Managed Care in January of 2019 that virtual video visits can successfully replace office visits for many patients without compromising the quality of care and communication.

Among the findings, collected from survey responses from 254 patients after their first visit and from 61 clinicians, the researchers found 62 percent of responding patients reported the quality of virtual video visits was no different from that of office visits, and 21 percent thought virtual visits' overall quality was better. On the clinician side, 59 percent agreed that, for the patients selected for these visits, virtual visit quality was similar to that of office visits; one third thought office visit quality was better.

Researchers said patients and health professionals differed on their perceptions of the "personal connection" they felt in these visits: 46 percent of clinicians said they thought office visits were better, compared to 33 percent of patients.

"Some of the participants in our study were parents of children who needed multiple frequent visits or older patients for whom travel was difficult to arrange. It did not surprise us that they found virtual visits more convenient, but we were impressed that nearly all perceived the quality of care or communication to be the same or better than at the traditional and familiar office visits," said Karen Donelan, ScD, a senior scientist at the MGH-based Mongan Institute Health Policy Center and lead author of the paper.

Telemedicine is not without its flaws – nobody should be told they should go into hospice by a doctor on a computer screen — but it also has its benefits, such as convenience and cost. It's up to providers using telemedicine to be aware of the downsides, find ways to overcome them and remember, as many well know, it's not made to be used in every circumstance. It's an option that is best used when in the patient's best interest.

BY HEATHER RAYHORN

TELEHEALTH AND THE OREGON HEALTH PLAN

Some telehealth appointments already are covered by the Oregon Health Plan, but the Oregon Health Policy Board's aim is to make it more consistent over the next few years.

"Currently, private payers are required to cover telehealth services provided by a contracted provider if they would have covered the service if the contracted provider had provided the service in person," according to the Oregon Health Policy Board's Appendix A of the CCO 2.0 recommended policies and implementation expectations. "CCOs, in contrast, are currently allowed to cover telehealth services in that situation but may deny coverage." Though many CCOs have aligned with private payer rules, it is not yet a requirement, the board stated.

Telehealth is not being addressed in the CCO 2.0 rulemaking taking place this summer and fall, but the CCO 2.0 recommendations do plan to address telehealth some time between 2021 and 2024, providing uniformity by requiring CCOs to cover telehealth services as private payers are required to do. Providers should refer to the Fee-for-Service Schedule for more information on current coverage.

The Oregon Health Policy Board said coverage should include delayed communications known as asynchronous communications (still images, video, audio, text files) if there is limited ability to use videoconferencing, as it acknowledges some providers and patients lack the systems or even high-speed broadband capabilities to engage in telemedicine consults through video. The board said this proposal does not address the availability of telehealth services, meaning it does not require CCOs to add new providers to ensure telehealth is broadly available.

"Multiple stakeholders expressed support for telehealth," the CCO 2.0 recommendations said. "Some input that the policy should be flexible to allow exceptions for services not clinically indicated for telehealth, and that quality of telehealth services should be monitored. Telehealth services are frequently needed when there are transportation barriers, or other SDOH-related issues (for example, poverty) creating a hardship for members to access services in person. (Behavior health) services are especially suited for telehealth approach and are used in Oregon in some rural areas."

BY HOWARD BAUMANN, MD

SALEM TRAGEDY TRIGGERS NATIONAL POISON REFORM

A look back at the Oregon State Hospital insecticide poisoning incident of 1942

Temporary morgue at the Oregon State Hospital following the accidental poisoning of 1942.
(Sunday Oregonian, Dec. 20, 1942)

Technology, whether medical or otherwise, must take care of itself. If appropriate monitoring and patient safeguards are not in place for that technology, we can only expect more stories like this preventable tragedy that occurred here in Salem in 1942 at the Oregon State Hospital.

You may have heard the story about the poisoning that abruptly killed 47 patients and sickened hundreds more; I wrote about it in the July 2013 issue of Chart Notes[1], and Capi Lynn recently wrote a nice article for the Statesman Journal commemorating the 75th anniversary of the tragedy. Her story was picked up by USA Today and appeared across the nation.[2] There also was a nicely portrayed enactment of the incident in the TV series "Mysteries at the Museum."[3]

In brief, on the evening of Nov. 18, 1942, the hospital cooks were understaffed and under pressure to get out a scrambled egg dinner. One of the cooks asked a patient-kitchen helper to run down to the storeroom in the basement to get powdered milk to reconstitute the frozen egg yolks. The patient, George Nosem, inadvertently picked up an unlabeled canister of what looked like powdered milk. The cook quickly grabbed the can and scooped 5 to 7 pounds of the powder into the cooking vat. Soon after the meal was served, many of the patients in the dining area started to become violently ill.

This canister of roach poison from the 1930s has no conventional red labeling, no skull and cross-bones.
(From the author's collection)

All of the 47 patients who died did so in less than 24 hours. Initially, it was speculated by the press that this poisoning had been an act of enemy sabotage, as our country had just entered WWII and the eggs were military surplus. Toxicology testing by the University of Oregon Medical School disclosed that the white powder found in the food and gastric contents of the patients was sodium fluoride (NaF), an active agent commonly used in insecticide and rat poisons. While minute quantities of NaF are harmless, the high concentrations found in the food was at a deadly level. [4]

Following this tragedy, there was plenty of finger pointing, blame and denial going around between politicians and hospital administrators. One thing that could not be denied was that the poison container had not been appropriately labeled. In fact, it was not labeled at all. Oregon had no specific poison label laws, and national regulations were inadequate. Terrible as it was, good did come out of the tragedy. There was a sudden awakening that rapidly led to poison labeling laws by the Oregon Legislature and the US Congress.

This is the timeline of poison labeling laws:

1910: The Federal Insecticide Act of 1910 ensured the quality of pesticides for farmers, but no poison label provisions were included.[5]

1927: Caustic Poison Act, endorsed by the American Medical Association, passed by Congress, signed by Calvin Coolidge. This stated that a poison warning was to be written in gothic capital letters at least as large as the largest type on the label. No specifics on coloring were given. The

list of poisons is limited to 12 poisons; sodium fluoride is not one of them.[6]

1932: Legislation is proposed nationally in 1932 to require coloring of powdered insecticides, but it does not pass. The National Wholesale Growers Association fights it, claiming that it "made these insecticides unfit for their intended purposes."[7]

Nov. 18, 1942: A cockroach poisoning at Oregon State Hospital kills 47 people and sickens many more.

Jan. 28, 1943: The Oregon Senate Agriculture Committee introduces a bill shortly after the Oregon State Hospital tragedy that all poisons bear the red skull and crossbones label and that arsenic compounds be colored pink and fluorides colored blue.
[Capital Journal, Jan. 28, 1943]

Feb. 5, 1943: The above bill was approved by the Oregon senate and sent to the house for a vote.
[Capital Journal]

March 4, 1943: The Marion County grand jury investigating the cockroach-poison incident endorses the bill.
[Capital Journal]

March 10, 1943: Governor Earl Snell signs the bill into law.
[Capital Journal]

April 3, 1943: Kentucky US Congressman Chapman, citing the Oregon tragedy, introduces a bill that would require any powdered insecticide containing arsenic or fluoride to be "distinctly colored" instead of white. The Undersecretary of Agriculture, Paul H. Appleby, wrote an endorsement to Speaker Sam Rayburn and Vice President Wallace.
[Statesman Journal]

Dec. 6, 1943: The US Senate Committee on Commerce has a hearing to amend the Insecticide Act of 1910. Oregon's 1942 insecticide episode with cockroach poison is again mentioned in the arguments. This act added red coloring and skull and crossbones provisions, as well as requiring that powdered insecticides be appropriately colored blue or pink.[8]

Today, we continue to hear repeated pleas for appropriate guidelines and safety monitoring of all our medical technologies. This includes the many devices being developed for both inpatient and outpatient use, robotic surgery, pharmaceuticals, and CRISPR gene-editing. At this moment in time, it doesn't hurt to once again hear Oregon's sad story, the lack of vigilance, as a reminder of what could happen.

1 Baumann HW. 467 Poisoned at Oregon State Hospital, 47 Confirmed Dead. Chart Notes, July 13, 2013, 14-15.
2 Capi Lynn. How one incident caused 47 patients to die at the Oregon State Hospital. Statesman Journal, November 18, 2017.
3 Mysteries of the Museum, Episode 13, Season 4, Asylum Poisoning, 21 November 2013.
4 Lidbeck WL, Hill IB, Beeman JA. Acute sodium fluoride poisoning. JAMA. 1943; 121(11): 826-827.
5 Jones M, Denrubi I. Poison Politics: A Contentious History of Consumer Protection Against Dangerous Household Chemicals in the United States. Am J Public Health. 2013. 103(5): 801-812.
6 Ibid.
7 New York Times, January 23, 1932.
8 Jones M, 801-812.

Registered nurse Jill Tillotson rolls a telemedicine unit through the emergency room at Columbia Memorial Hospital in Astoria on Sept. 28, 2017. The hospital participates in the OHSU Telemedicine Network, a regional system providing access to OHSU specialists to hospitals throughout Oregon and Southwest Washington. (OHSU)

CONSULTING WITH SPECIALISTS

OHSU uses video to bring its doctors into community hospitals

BY HEATHER RAYHORN

Several years ago, a baby being born at Silverton Hospital was not tolerating labor well. Watching the heart rate, doctors decided to perform an emergency cesarean section. The child was born blue, not breathing, and with a low heart rate. CPR was started. Four minutes after birth, an Oregon Health & Science University neonatologist was brought into the room via video. As CPR continued, the OHSU doctor noticed the seal on the baby's mouth was not working. She redirected the Silverton team to bring in a second person on the CPR, having one person hold the seal and another manipulate the air bag.

"Twelve minutes later, the child was pink and crying and goes onto a normal life," concluded Dr. Miles Ellenby, medical director of OHSU Telemedicine Network. "That wouldn't have happened over the phone. The doctor would have asked, 'Are you ventilating the baby?' and they would have been told, 'yes,' but with video, they could see what was needed to improve the technique. … It was not high-tech medicine but the ability to support the group in a high-stress situation that made all the difference for the baby."

Dr. Miles Ellenby
Medical Director of OHSU Telemedicine Network

Not only are doctors using telemedicine to confer with their patients, but doctors at community hospitals also are connecting with specialists at OHSU over video to augment their care. Bringing specialists immediately into hospitals via video gives local doctors another set of eyes and reduces the need to transport patients. Medical transport is expensive and carries risk, especially in bad weather, not to mention is hard on families who then have to drive constantly to Portland, Ellenby said.

"We knew we were unnecessarily transporting too many children to Portland," he said.

Instead, a peek into the room gives OHSU specialists a much better sense of what's going on and what's needed. A camera can move around and zoom in and help doctors make important decisions such as if a patient can safely stay in their community hospital or if they indeed need to be transported.

"A picture is worth a thousand words, but live-streaming video is priceless," Ellenby said.

Almost 50 percent of patients who have used the OHSU Telemedicine Network have been able to remain in their local community, said Erik Robinson, senior media relations specialist at OHSU. "In fact, we estimate $15 million have been saved in transport expenses alone," he said.

The history of OHSU's Telemedicine Network

OHSU started its virtual emergency care service with a 2007 pilot program at Sacred Heart Medical Center when Sacred Heart was in Eugene. In 2010, the consulting services expanded into a network of hospitals. Currently, the OHSU Telemedicine Network serves more than 20 clinics and hospitals around Oregon and Southwest Washington, including Santiam Hospital and Salem Health. It has served Santiam Hospital with 24/7 access to specialists in pediatric intensive care, stroke and neonatal services since 2013, and on June 10, Santiam added OHSU's newest offering, adult intensive care, or teleICU. Salem Health utilizes OHSU's stroke and pediatric intensive care virtual services. Silverton Health, where the baby was saved with the aid of an OHSU neonatologist, was using OHSU's virtual emergency visit services until 2016 when it joined Legacy Health. Legacy's telehealth program currently provides Silverton doctors and patients access to specialists in pediatric, stroke, neurology, neonatal and behavioral health services.

Since the OHSU Telemedicine Network started, acute virtual care from OHSU has been accessed by community hospitals around 2,500 times, Ellenby said, adding it now provides more than 400 consultations a year. That's more than one request a day from throughout the region. Among those, Ellenby said telestroke services get the most use both at OHSU and nationwide.

"There are a lot of mimickers for stroke," he explained. Prescribing the clot-breaking drug TPA can be risky if a community doctor is unsure about whether the diagnosis is a stroke or not. "It can make things worse."

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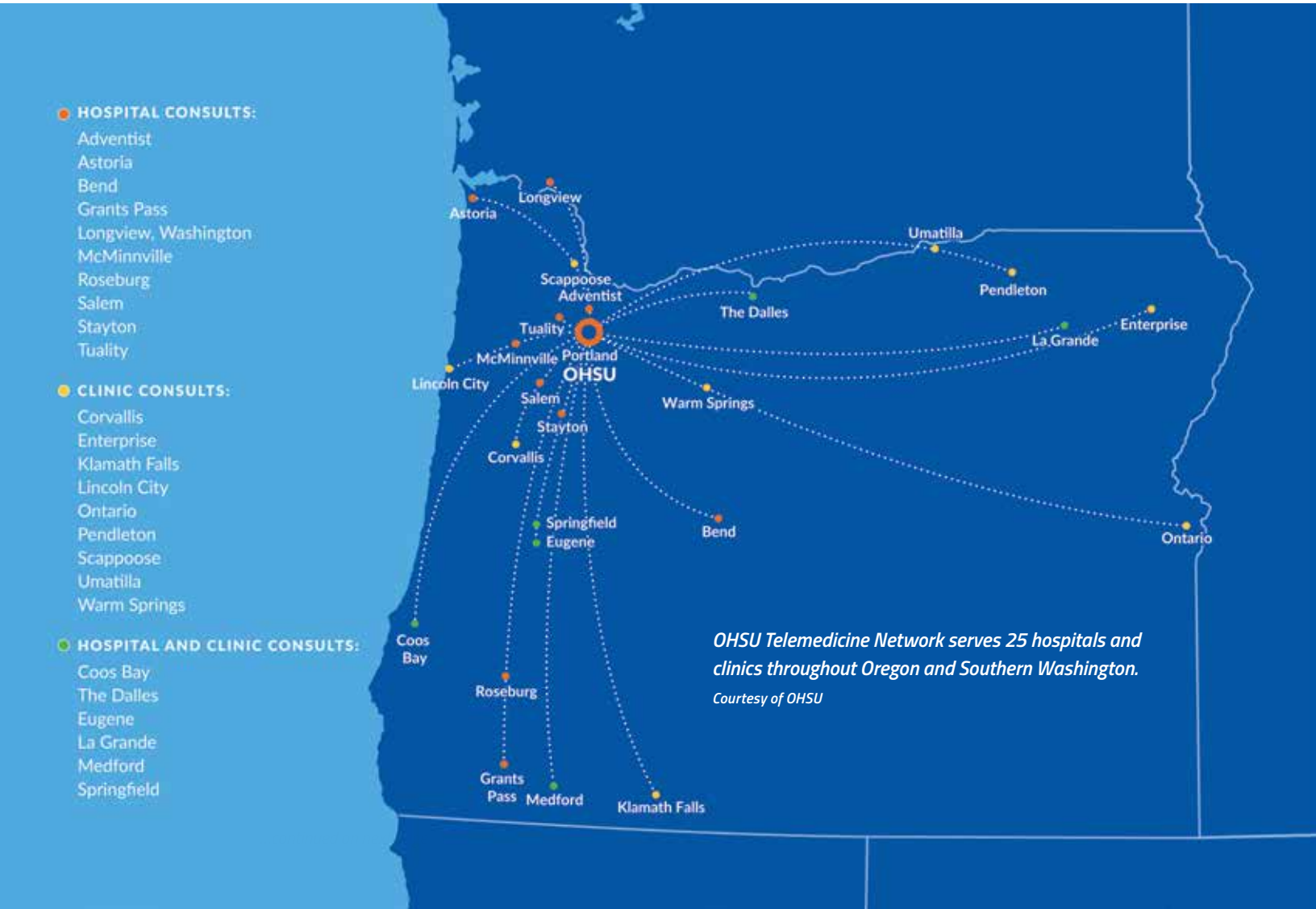

OHSU Telemedicine Network serves 25 hospitals and clinics throughout Oregon and Southern Washington.

Courtesy of OHSU

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Dr. Jonathan Pak of OHSU checks in with a patient and her medical team (from left, Dr. Arkady Klykov, respiratory therapist Germaine Silver, house supervisor Krista Welsandt, Dr. Steve Vets and nurse manager Kristine Looper) at Santiam Hospital.
Courtesy of Santiam Hospital

Because of this, the old way was to package up patients and send them to the nearest stroke center. However, time is critical for the brain. With a video, Ellenby said now stroke specialists immediately can see the patient, look at imaging and talk to the family without the patient having to spend time en route.

That's vital for many hospitals that do not have enough specialists in areas such as stroke care.

"It's nice having access to 24/7 care for patients," Santiam Hospital ICU nurse manager Kristine Looper said. "It provides another set of eyes and a higher level of care, another resource to help us think of things we may not have thought of."

She remembers a stroke victim who wasn't able to talk. The doctors knew the patient had a stroke but couldn't communicate with the patient. The OHSU physician, after seeing the patient and his CAT scans over video, thought the patient was trying to communicate via blinking.

"He was right," Looper said. "He was able to let us know how to communicate with the patient."

She said the stroke victim ended up being transported to OHSU, and because they were able to communicate, they knew the patient was in agreement.

"Every time I see it used, it has been amazing to watch," Looper said about bringing in an OHSU specialist via video.

Looper also said connecting with a doctor over video helps facilitate transportation if necessary, as the doctor the patient is being sent to is already familiar with the patient,

has seen them and has talked to staff, the patient and family over video.

Being part of a smaller hospital, Looper said the need for bringing in OHSU specialists for stroke, pediatric intensive care and neonatal patients is "few and far between." But with teleICU that just started at Santiam Hospital, the OHSU intensivists are part of the care team for every patient who enters ICU at Santiam Hospital. The hospital, which staffs one intensivist, has four ICU beds, but critical patients need more care than one intensivist can handle. Being available 24/7 is not possible.

Santiam's Chief Nursing Officer Sherri Steele said getting intensivists in their rural hospital not only helps out their community but also the whole state, especially in the winter when there is a higher demand in ICUs across Oregon.

"We (at Santiam Hospital) can take care of some of the basic ICU patients and do it very well," she said. "The Tele-ICU program helps keep less complicated ICU patients in their community hospitals, which then keeps ICU beds open in the higher-level facilities for very complicated patients requiring multiple specialists."

During the second half of June, for example, three patients were admitted to Santiam Hospital's ICU. Each patient had an OHSU intensivist who was a part of their care team and their twice-daily rounding discussions, either over the phone or on video.

Ellenby said OHSU is planning on taking the program a step further. In the next few months, it will begin a pilot program implementing a virtual ICU model at Tuality Community Hospital in Hillsboro, which is a partner in the OHSU health system.

"Now, it's reactive," Ellenby said. "A call comes in if the provider identifies a problem." The new method would have OHSU monitoring data feeds. It would provide the ability to look at electronic health records and video if needed." After the trial, OHSU hopes to monitor multiple ICUs throughout the state, becoming more proactive.

Looking to the future

In addition to the urgent care consultations that OHSU provides throughout the state, its doctors also are currently expanding into other areas of telehealth. OHSU doctors are using video visits for follow-up care. For example, video appointments may be appropriate for a patient who needs to come in on a regular basis, say a diabetic child who needs a check-up every three months, especially if they live hours away.

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It also has entered the area of remote patient monitoring, or RPM, which allows a patient to be sent home with a device such as a tablet that the patient can then use to upload and record vital signs on. Ellenby calls this service, which has been available to OHSU patients since 2018, "the most cutting edge." Ellenby said RPMs empower patients to be involved in their health and allow providers to get ahead of the curve in preventing readmissions by seeing who is deteriorating through consistent, up-to-date information. An adult cancer patient, for example, can take daily surveys about symptom management, Ellenby said. This allows nurses to see the issues as they arise daily instead of waiting for a patient to call with a problem. In the neonatal unit, Ellenby said this has meant premature babies are able to be sent home earlier by as many as one to three weeks. With the tablet, parents can send pictures and movies of their baby.

The next step, Ellenby said, are wearables that move beyond the fitness devices. Getting data electronically from patients' bodies, he said, is part of the evolution of telehealth but also opens up a whole other discussion about how much information is too much and how do you handle the challenges of wading through it all?

Kaiser Permanente to begin on-demand video consultation program

Kaiser Permanente is designing a pilot program that will go live by year end 2020 that is similar to OHSU's Telemedicine Network. The program will provide on-demand, in-room consultations over video with regional specialists within Kaiser Permanente. The trial will start with a regional neurologist available to other Kaiser Permanente doctors as needed. Other specialties will be added in the future.

Dr. Alvaro E. Rey-Rosa and Dr. Emma Germann, pediatricians at the North Lancaster Kaiser Permanente office, check to see if any questions have come across the doctor email boxes the ghost doctor watches on a daily basis.

Credit Heather Rayhorn

Who ya gonna call? GHOST DOCTOR!

BY HEATHER RAYHORN

Salem pediatrician department finds success with virtual care option

A child wakes up with a rash. Mom and Dad both have morning meetings. There's no time to wait on hold to make an appointment, let alone go into the doctor's office. But they heard the measles have been going around. They wonder. One of them remembers they can use their Kaiser Permanente kp.org app to ask their pediatrician questions. They snap a photo of the rash and send in their question within minutes. It lands in the email box of their child's doctor. Not long after, they hear from a "ghost doctor," a doctor who is on schedule that morning to watch their colleagues' in boxes: Not measles. The parents are told there is nothing to worry about and what they can do for the rash. Their morning isn't upended.

"Every industry is doing this," Pediatrician Alvaro E. Rey-Rosa said about using the Internet to deliver services. "We are trying to catch up to the technology that exists in other industries," he said, mentioning how people shop, pay bills and watch movies online. "People can do everything else online. Why not order medications and ask (doctors) questions on an app on the phone or computer?"

To give patients an easier, quicker, and more affordable way to access medical care, Kaiser Permanente has allowed patients to ask medical questions via the kp.org app since the early 2000s. From the app, the questions land in the email box of the patient's doctor. For a long time, each provider was responsible for his or her own messages. But in the fall of 2017, Kaiser Permanente asked its service areas to come up with ideas to better implement the workflow.

Many people, especially millennials, are very comfortable with new technologies and expect answers right away. It's the world they live in. Dr. Rey-Rosa and his colleagues have seen how if a patient's kp.org question doesn't get answered

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in a short period of time, the patient will call and leave a message and then call again and make an appointment or head to urgent care, so now one task becomes three or four tasks for the medical team.

To work on a better workflow, the pediatricians at the North Lancaster Kaiser Permanente office (Dr. Rey-Rosa, Dr. Martin Steven Altschul, Dr. Emma Germann, and Dr. Lisa Rishel), worked with the pediatricians at the Skyline office (Dr. Brian Gumbs, Dr. Michael Marlowe and Dr. Yu Cynthia Xu) to implement a version of a new idea called ghost doctor. First implemented in Mt. Scott Medical Office in Clackamas, the idea is that doctors take shifts to answer their colleagues' messages to help with response time and also physician burnout. The pediatricians in the Salem service area tweaked the idea to have one rotating doctor not only cover the doctors in their own office but between the two Salem pediatrician offices. Each pediatrician dedicates scheduled time to the tasks of answering all the questions that come in to the eight doctors' inboxes via kp.org or the telephone. Whoever is on call covers the afternoons.

The efforts paid off. The success they've had is quite an accomplishment and a testament to what a group of doctors can do when they work together and embrace a new technology. While nurses answer the inquiries that don't need doctor attention, there is a ghost doctor every day who has dedicated time to answer questions sent directly to the pediatricians on staff. The kp.org messages that come into doctors' inboxes are especially effective. With a photo, the ghost doctor can quickly tell patients what they need to know about rashes, acne, bee stin gs, even stools, everything that's visual. Rey-Rosa says he hasn't seen pink eye in the office for the past six months.

Answering the easier questions via the app also decreases the number of appointments needed. Rey-Rosa said, on average, about 19 out of 20 questions that come in can be answered via the app. This gives patients quick responses, saves them time and money (usage of the app is free to Kaiser Permanente members), and keeps the in-office schedule open for patients with more serious conditions.

Nichole Powers, practice administrator at the North Lancaster Kaiser Permanente, said "ease of schedule," which measures how easy patients report scheduling an appointment is, increased 8 percent in one year for North Lancaster since

implementing ghost doctor. "That is a huge number. If I got a 1 percent increase previously, I was thrilled."

Rey-Rosa said 80 percent to 90 percent of messages are answered within four hours, though it could be minutes.

NW Permanente Director of Operations of Convenient Care Dr. George Go said those are especially good numbers considering the expectation is for emails to be answered within 24 to 48 hours. Dr. Robert Nash, physician in charge at Kaiser Permanente's West Service Area Pediatrics is also impressed with the Salem group's success.

"What's been most helpful about Dr. Rey-Rosa's approach is the speed at which we can respond to patients' messages with physician-led advice," he said.

Not only is it good for the patients, but it's good for the providers.

"The goal was to reduce or eliminate the time physicians were spending outside of clinic hours completing kp.org and phone messages," Powers said.

Rey-Rosa calls it "one of the best things we've done here to improve quality of life for physicians."

One doctor responsible for all the doctors' inboxes for a set amount of time means there's no more trying to squeeze in answering emails between appointments, on lunch or after a hectic day. And doctors coming back from vacation are not greeted by a flood of patient questions and refill requests.

Buy-in is critical, and change can be hard. One doctor, Rey-Rosa recalls, was concerned about other doctors answering her patients' questions. Rey-Rosa encouraged her to give it a week. After three days, she was sold on how the office was handling the workload.

"We are lucky to have an excellent group of pediatricians who trust one another and are always looking to improve on the patient-care experience," Rey-Rosa said.

But he knows change is hard. Rey-Rosa remembers having concerns about answering patients' questions over an app, wondering if it would be safe and if it would work.

"We're not taught this in residency. We had never done it before," Rey-Rosa said. "Then we tried it, and 'Oh, my gosh, why didn't we try this before.'"

Now the problem is that ghost doctor is so successful, the pediatric department is trying to figure out how to make it better and deal with increased usage. They are playing with how nurses can work side by side with ghost doctors. And right now, the service is only available 8 a.m. to 5 p.m. Mondays through Fridays, leaving a gap on weekends, which they are considering covering.

"We're still learning," Rey-Rosa said. "We are experts without being experts."

BY RICK D. PITTMAN, MD, MBA

WHERE ARE WE HEADED? ONE CAN ONLY WONDER

A future of implants, telemedicine kiosks, ICU vans … and President Palin?

In 2028, Alexandria Ocasio-Cortez was elected president of the United States with Sarah Palin as her running mate. Ravages of the great depression that started in 2027 led to consolidation of the United States Healthcare industry and closure of over 45 percent of U.S. hospitals by 2030.

"That year, the Institute of Medicine released a report that suggested that in excess of one million Americans die each year in U.S. hospitals due to preventable medical errors. This led to the resignation of Ocasio-Cortez. Her successor, President Sarah Palin, made sweeping changes in the U.S. healthcare system, starting with the Abolition of Hospitals Act, which mandated that all hospitals with even a single patient death due to negligence or medical errors were to be closed and demolished. The capital city was moved to Juneau, Alaska, and the iDUMPED system (The Integrated Delivery of Universal Medicine that is Patient Centered) was introduced to replace the hospitals that were rapidly being closed." (from the Book of Mohan ca. ISQA 551, wk8)

The iDUMPED program was able to deliver high-tech personal healthcare with multidisciplinary care vans, telemedicine kiosks, phone apps, call centering, home monitoring and more. Depending on your needs, one of many differently configured care vans are dispatched. sDUMPED (specialty care) vans can be configured for tele-dermatology or mobile dialysis vans, ICU vans, operating room vans or mobile cath labs. xDUMPED … well you get it. For larger needs, semitrailers, large boats and the like are configured accordingly.

In order to make this system feasible, President Palin implemented the Universal Implant Law #1138, which requires each and every citizen in the country to have one or more implants that will allow centralized monitoring.

In addition to the implant(s), state of the art wearables enable close monitoring of any disease with regional telephonic triage centers run by Artificial Intelligence (AI) Bots connected directly to the implant neural network.

With a kiosk on every corner (like telephone booths, remember those?), you simply walk to one, get your diagnosis and the meds are dispensed on the spot. If it is a brace you need, the new quantum-quick 3D printer will have your brace ready in seconds, based on your biometric data, stored and continuously updated in the implant neural network.

Your implant will enable you to check in and pay instantly. Colonoscopies have been obsolete since 2025. One merely has to ingest a small capsule. The neural network will download and read the data from the capsule as it makes its way through the sewer system.

Like "Mission Impossible," when the information is transferred, the capsule self-destructs in order to protect your medical record rights. HIPPA laws are a thing of the past, as all medical data is only stored on the individual's implant.

Instead of blood testing, nanobot implants (also mandated by Law #1138) will continuously measure and detect anything, communicating with the neural implant network as needed.

"A sudden change in pulse rate of THX 1138 with an increase in end-tidal CO2 triggered the AI triage system. At the same time, the car THX 1138 was riding in issued an SOS. Specialty vans are dispatched immediately to the scene of the auto accident. Vital signs are monitored in real time, and the robotic surgeon, controlled remotely, is ready for the ruptured spleen detected by THX's implant."

The iDUMPED system was so popular, that by overwhelming popular mandate in the 2032 general election, the United States was restored to a monarchic state after two and a half centuries. Hail Queen Sarah I.

Have a comment?
Email rpittman@silverfallsderm.net.

President's Message

TECHNOLOGY HAS ALWAYS BEEN HARD TO ADJUST TO

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It also is a time-consuming task and has been known to add a significant amount of time to an already-long workday for the medical provider. I remember taking communication courses when I worked at Kaiser in order to learn how to chart in the EHR in the exam room and still connect and interact with my patients. I also took a multiday course on efficiency for medical providers in a room full of talented individuals, all struggling to stay afloat in an ever increasingly complex medical practice. Skills were not taught in medical school or residency.

Physicians are problem solvers by nature. They tend to be creative individuals who are committed to making a difference in people's lives. If EHRs are taking away from the patient-doctor experience, what can be done? These days, many organizations are using medical scribes to document in the chart in real time with the oversight of the medical provider. This allows the provider to focus on the patient and can decrease documentation time by half. But now there is an extra person in the room and the constant tap, tap, tap of the keyboard in the background, plus the expense of another employee. Is it worth it? Research says it is. Studies mentioned in a 2018 AMA article by Andis Robeznieks, "The Overlooked Benefits of Medical Scribes," show there was improved patient interaction, efficiency, workflow, and physician satisfaction. Quotes from one study included "I feel like I'm a real doctor again" and "I feel like I have my life back." Better teamwork also was reported, and having the scribe can pay for itself due to increased provider productivity. Even more importantly, it can help mitigate physician burnout. Sounds like a win-win solution to me!

CHART NOTES - WRITER BIOS

HEATHER RAYHORN, EDITOR

After covering the Salem area for 18 years as a journalist, Heather Rayhorn is now attending Corban University's graduate program in education to become a high school English teacher.

RICK D. PITTMAN, MD, MBA

In private vascular surgery practice for 28 years before obtaining a MBA from OHSU/PSU, Dr. Pittman works full-time as a vein and wound care specialist in the Silver Falls Dermatology Clinics and spends his spare time in the garden, behind a camera or in the workshop restoring cars.

HOWARD BAUMANN, MD

Howard Baumann retired in 2010 after 34 years practicing gastroenterology at Salem Clinic. He is a member of the American Association of the History of Medicine, the Society for the History of Navy Medicine, and is a Board Member of the Oregon State Hospital of Mental Health. He contributes regularly to Chart Notes and Historical Tidbits.

CALENDAR - SAVE THE DATE

Friday, October 25, 2019 6-8:30pm
New Provider Celebration
Location: Dye House, Willamette Heritage Center
Free to All Providers in Marion & Polk Counties + a guest
Come Celebrate Your Newest Colleagues!

Sunday, December 1, 2019 6-8pm
19th Annual Family Holiday at the Carousel
Location: Salem Riverfront Carousel
Free to Members and their families
*Children Welcome!

Thank you to those who joined us for our summer yoga series!

Many thanks to Chantal Barton for her skilled yoga instruction, to Xun Li of Lilac Wellness for his introduction to acupuncture, and to Jessica Amos for contributing to our resiliency through her lessons in mindfulness and meditation.

AUTUMN OUTINGS

BY HEATHER RAYHORN

Summer may be coming to an end, but before the rain settles in and the trees bare their branches, there is a perfect time to take in the Willamette Valley's changing colors. Here are four ways to catch fall.

Bike through Champoeg State Heritage Area. Take the 4-mile trail (8 miles round trip) from the Riverside Parking Lot to the Historic Butteville Store founded in 1863 for some ice cream. Or for a 3-mile trek (6 miles round trip), hop on the trail at the visitor's center. The paved trail goes through farm, fields and oak woodland as well as along the river and through a Douglas fir western hemlock forest. *Photo courtesy of Oregon State Parks*

Drive through Linn County to see its covered bridges surrounded by the colors of fall, including the Short Bridge (pictured) ½ mile West of Cascadia, off US Highway 20. The county to the south of Marion and Polk counties is the home to eight wooden beauties on peaceful country roads, a great place to also see many of Oregon's deciduous trees. The Albany Visitor's Association suggests taking the five-bridge loop near Albany if you only have a few hours or extending the trip into the eastern part of the county if you can make a day of it and hit up all eight covered bridges. Go to albanyvisitors.com/history/covered-bridges for a list of all the bridges. *Photo by Nick Boren*

See the trees from the Willamette River. Woodward Surf Company is a kayak and paddleboard rental company that operates at Wallace Marine Park's old boat ramp in Salem and at Riverview Park in Independence on weekends. Kayaks are $35 a day and come with dual paddle, life jacket, and invasive species permit. The company also offers shuttle service on weekends and rents car racks to transport the kayaks. The float from Wallace Marine Park to Keizer Rapids is a two-hour run, and Independence to Wallace Marine Park is a four-hour run. For more information, go to woodwardsurfco.com.

Hike Butte Creek Falls. This one-mile trail located just outside of Scotts Mills touts a blast of colors in the fall with lots of Douglas fir and hemlock trees, and, oh yeah, there are two stunning waterfalls. If it puts you in the mood to see more, Abiqua Falls is less than 4 miles away. *Photo courtesy of Travel Salem*

We want to hear from you. Do you have a story idea for ChartNotes? Maybe something about you or a fellow medical society member? Or something you want to know about? We want to hear about it. Email hrayhorn@msn.com

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