July Med Staff News

Dear Colleagues,

We are pleased to share the July 2018 edition of Intermountain Med Staff News, our news brief designed to keep Intermountain physicians and advanced practice clinicians (APCs) informed. Your experience and advice is very important to our collaborative efforts to make health care better for patients and for physicians and APCs. Your voice, your expertise, and your ideas are needed, and we invite you to call, email, or connect with us with anything you think we should work on together or any questions you want to have addressed.

In this edition, we are providing updates to our clinical structure, announcing physicians recently appointed to leadership roles, and providing information about a number of initiatives and projects, including Informed Consent, reducing opioid use, and People in the News. As always, please send us a note if you need more information, have questions, or have a topic or idea that is important to you and your patients. We ask that you help us tell everyone the stories of excellence in care, compassion, and service that happen every day at Intermountain.

Please stay in touch with us, and we will with you.

Thank you for being part of our medical staff and network of physicians and APCs.

With respect and appreciation,

Mark and Susan

Mark Briesacher, MD President, Intermountain Medical Group SVP - Chief Physician Executive

Susan DuBois AVP - Office of Physician/AVP Professional Affairs
New physician leadership appointments within Specialty Based Care and the Office of Patient Experience

The latest physician leadership appointments within Specialty Based Care and the Office of Patient Experience have been selected for their clinical and leadership experience, advocacy for patient centricity and clinical integration, and engagement in continuous and process improvement initiatives:

**Rob Ferguson, MD, FACS**, a practicing Plastic and Reconstructive Surgeon in the Department of Surgery at Intermountain Medical Center, has accepted the position of Senior Medical Director for Surgical Operations. This clinical leadership role falls within Specialty Based Care. Dr. Ferguson will report to Paul Krakovitz, MD, Associate Chief Medical Officer for Specialty Based Care.

Dr. Ferguson received his medical degree in his home state at the University of Virginia in Charlottesville. He completed General and Plastic Surgery residency training at the University of Kentucky, and fellowship training in microsurgery and oncologic reconstruction at Chang Gung Memorial Hospital in Taipei, Taiwan and at the University of Texas MD Anderson Cancer Center.

Dr. Ferguson joined Intermountain in 2008 and has served in leadership roles including the Division Chair, Surgical Services Medical Executive Committee and Chair, Department of Surgery.

**William Shakespeare, MD**, a practicing Anesthesiologist working primarily at Utah Valley Hospital, has accepted the position of Medical Director for Surgical Operations. This clinical leadership role falls within Specialty Based Care and Dr. Shakespeare will report to Rob Ferguson, MD, Senior Medical Director for Surgical Operations.

Dr. Shakespeare received his medical degree at the University of Utah. He completed residency training at the Mayo Clinic in Rochester, Minnesota and joined Intermountain in 2009. He worked as an Anesthesiologist at Intermountain Medical Center and Park City Hospital prior to working at Utah Valley Hospital. Dr. Shakespeare has served in leadership roles including Quality Officer for Mountain West Anesthesia, Head of the Intermountain Anesthesia Development Team, and Past Board of Managers for Mountain West Anesthesia.
Together, Dr. Ferguson and Dr. Shakespeare will oversee the functions of Surgical Operations across Intermountain with the goal of enhancing the surgical process and removing friction for both patients and providers. This will include working collaboratively with our clinically integrated networks and all disciplines in Specialty Based Care, Clinical Programs, and Shared Clinical Services.

**Nathan Richards, MD** has accepted the position of Senior Medical Director of the Surgical Specialties Clinical Program. Dr. Richards will report to Paul Krakovitz, MD, Associate Chief Medical Officer for Specialty Based Care.

Dr. Richards received a Bachelor of Science in Biological Sciences at Columbia University and graduated from the University of Utah School of Medicine. He completed his residency at Thomas Jefferson University and his fellowship in Minimally Invasive Surgery at George Washington University Hospital. He is an active member of the Society of Gastrointestinal & Endoscopic Surgeons, serving on both the Guidelines and Publication Committee and the Go Global Surgery Development Committee. Dr. Richards is currently Division Chief of General Surgery at LDS Hospital and Chairman of Intermountain’s Robotics Development Team.

Over the next several months, we will be adding additional physician leadership positions to support and collaborate with all privileged and credentialed surgical subspecialists across the Intermountain system. Nate is excited about the opportunity to make a difference in the future of healthcare—especially for our patients.

**Colin Grissom, MD** has accepted the position of Senior Medical Director for Intensive Care Operations. This clinical leadership role falls within Specialty Based Care. Dr. Grissom will report to Paul Krakovitz, MD, Associate Chief Medical Officer for Specialty Based Care.

Dr. Grissom earned his medical degree from the Yale University School of Medicine and trained in Internal Medicine at the University of Washington Medicine hospitals. He completed a fellowship in Pulmonary Medicine and Critical Care as well as a fellowship in Transthoracic and Transesophageal Echocardiography at the University of Utah. Dr. Grissom will work collaboratively with Troy Creer, Executive Nursing Director and Mark Evans, Operations Officer to oversee operations in all 13 Intensive Care Units (ICUs) across Intermountain.
Dr. Grissom began his 21-year career with Intermountain in the Shock Trauma Respiratory ICU at LDS Hospital. He transitioned to Intermountain Medical Center at its opening in 2007 as a Critical Care Physician in the Shock Trauma ICU, where he currently serves as Co-Medical Director. Dr. Grissom supervises Critical Care fellows, Internal Medicine residents, Emergency Medicine residents, and transitional interns in the care of critically ill medical and surgical patients. He also championed the transition of critical care ultrasound and echocardiography to the bedside in Intermountain Medical Center’s multidisciplinary 24-bed ICU.

Linda Venner, MD has accepted the position of Senior Medical Director for Med/Surg Operations. This clinical leadership role falls within Specialty Based Care. Dr. Venner will report to Paul Krakovitz, MD, Associate Chief Medical Officer for Specialty Based Care.

Dr. Venner received her medical degree from the University of Colorado Denver School of Medicine and her residence training from the University of Utah. She has been a Hospitalist for Intermountain’s Salt Lake Valley hospitals since 1999 and acted as Co-Director of the team since 2011 and the Director of CV Hospitalists since 2017. In addition, Dr. Venner is currently the TeleHospitalist lead for Connect Care Pro. She also serves as a fellow of the American College of Physicians and is a member of the Society of Hospitalist Medicine.

Cara Camiolo Reddy, MD, a practicing Physiatrist at the Intermountain Neurosciences Institute at Intermountain Medical Center, has been appointed as the Medical Director for Rehabilitation Services. This clinical leadership role falls within the Shared Clinical Services structure. Dr. Camiolo will report directly to Paul Krakovitz, MD, Associate Chief Medical Officer for Specialty Based Care.

Dr. Camiolo received her medical degree from Drexel University in Philadelphia and completed both her residency training in Physical Medicine and Rehabilitation and her fellowship training in Brain Injury Medicine at the University of Pittsburgh Medical Center.

Dr. Camiolo joined Intermountain in 2016 and has served as the Medical Director for the Neuro Specialty Rehabilitation Center at Intermountain Medical Center, where she’s provided leadership in standardization efforts for inpatient rehabilitation units across the organization. In her new
leadership role as Medical Director for Rehabilitation Services, Dr. Camiolo will lead the development of clinical best practices and protocols to support patient care and the work experiences of our rehabilitation clinicians and caregivers. Dr. Camiolo will collaborate with leaders across Shared Clinical Services and the system—including Clinical Programs, Specialty Based Care, and Community Based Care.

Shane Lewis, MD, FACS has accepted the position of Medical Director for Patient Safety in the Office of Patient Experience. In this role, Dr. Lewis will report to Shannon Phillips, MD, MPH, Chief Patient Experience Officer.

A graduate of George Washington University School of Medicine, Dr. Lewis did his Surgical internship and residency at Texas A&M University. He currently sits on the Intermountain Medical Group Board of Directors Executive Committee and serves as Chair of the Stewardship and Compensation Committee.

In his most recent role as Medical Director of Trauma at Alta View Hospital, Dr. Lewis developed a trauma program to provide greater consistency of care with a focus on process improvement in the injured patient. He served as the Co-Chair of the Medical Group Safety Event Review Panel and has been Chairman of the Department of Surgery at Alta View Hospital for the past three years. Dr. Lewis was a member of Alta View’s safety and quality improvement group and has served on numerous steering committees.

As Medical Director for Patient Safety, Dr. Lewis will support a high reliability culture where caregivers proactively evaluate opportunities to prevent all harm to our patients.

Mike Woodruff, MD has accepted the position of Senior Medical Director, Office of Patient Experience. In this role, Dr. Woodruff will report to Shannon Phillips, MD, MPH, Chief Patient Experience Officer.

Dr. Woodruff is a practicing Emergency Medicine Physician and received his medical degree from the Columbia University College of Physicians & Surgeons, and completed his residency training at Beth Israel Deaconess Medical Center in Boston and at the University of Utah Medical Center. He most recently served as the Medical Director for Patient Safety and Clinical Risk Management in the Office of Patient Experience. He has also collaborated on patient safety as a Medical Director for Care.
Transformation. Prior to his role with the Office of Patient Experience, he worked in quality improvement and patient safety as the Quality and Clinical Program Officer for Intermountain’s four emergency departments in the Salt Lake Valley. Working with the Emergency Department Development Team, he helped lead content development for and deployment of iCentra across Intermountain’s 21 emergency departments.

Dr. Woodruff will share in oversight responsibilities of the Office of Patient Experience, joining our Executive Leadership Team. He will work collaboratively with clinical and system leaders to guide our high reliability journey and the comprehensive development, planning, and implementation of the quality, safety, and experience of care programs across the organization.

These leaders are committed to supporting clinicians and caregivers in providing the best care possible to the patients and communities we serve through the promotion of best practices, collaboration, and collegiality. Please welcome these physicians to their new clinical leadership roles.
Internal Medicine Associate Medical Directors announced

Anne Pendo, MD, Internal Medicine Medical Director and Dave Henriksen, Internal Medicine Operations Officer are excited to announce new appointments of leaders who will oversee the clinical processes, best practices, and strategies for Internal Medicine across Intermountain. The Internal Medicine service line Associate Medical Directors have been selected for their clinical and leadership experience, patient centricity, and engagement in continuous improvement initiatives. They will be helping to lead the new service line, which falls under the Intermountain Medical Group, and work together with and champion the voice and efforts of Internal Medicine physicians and clinicians across the system.

The new leaders are:

Mark R. Lewis, MD, Internal Medicine Associate Medical Director
Dr. Lewis, a practicing Internist at Salt Lake Clinic, is a Utah native, born and raised in Ogden. He received his medical degree from the University of Utah School of Medicine and completed his internship and residency in Internal Medicine at the University of Colorado Health Sciences Center. Dr. Lewis joined the Salt Lake Clinic in 1990 and the Medical Group in 1995. He also currently serves as the Medical Director of the North Salt Lake geography of the Medical Group. He served on the Medical Group Board from 2006 to 2018 and on the Intermountain Board of Trustees from 2012 to 2015. As an Internal Medicine Associate Medical Director, Dr. Lewis will provide clinical leadership for the American Fork, Avenues Specialty, Bountiful, Cottonwood, Heber, McKay-Dee, Memorial, and Park City Clinic Internal Medicine departments.

William Daines, MD, Internal Medicine Associate Medical Director
Dr. Daines is a practicing Internist at Memorial Clinic. A New York City native, Dr. Daines received his medical degree from Weill Cornell Medical College of Cornell University. He completed his internship at the University of Utah and his residency in Internal Medicine at Stanford University. Dr. Daines joined Intermountain in 2014 as a primary care physician and was appointed Medical Director of Intermountain Connect Care in 2015. He will continue in this role as Connect Care expands to include all outpatient TeleHealth as well as maintain his active primary care clinical practice. As an Internal Medicine Associate Medical Director, Dr. Daines will provide clinical leadership for the Alta View, Budge, Holladay, Salt Lake, and Southridge Clinic Internal Medicine departments.

Cathleen Obray, MD

Mark R. Lewis, MD

William Daines, MD

Cathleen Obray, MD
Cathleen Obray, MD, Internal Medicine Associate Medical Director
Dr. Obray is a practicing Internist at River Road Internal Medicine in St. George. She is a native of Athens, Georgia and earned her medical degree from the Johns Hopkins University School of Medicine in Maryland. She completed her residency training in Internal Medicine at Johns Hopkins Bayview Medical Center. In 2010, Dr. Obray joined Intermountain as a primary care physician. She was appointed Medical Director of the LiVe Well Center and Senior Services Initiative in the Southwest geography in 2015. As an Internal Medicine Associate Medical Director, Dr. Obray will provide clinical leadership for the Cedar City, River Road, and Sunset Clinic Internal Medicine departments as well as the Alta View, Cottonwood, Southridge, and Utah Valley Senior Clinics.

The Internal Medicine service line Associate Medical Directors will begin meeting with Internal Medicine physicians to hear about how things are going, what needs physicians and clinic teams have, see and share best practices in patient safety and quality, and get their colleagues’ recommendations on what this specialty leadership team should focus on this year.
Urgent Care Associate Medical Directors announced

Anthony Wallin, MD, Urgent Care Medical Director and Ross Fulton, Urgent Care Operations Officer are excited to announce new appointments of leaders who will oversee the clinical processes, best practices, and strategies for Urgent Care across Intermountain. The Urgent Care service line Associate Medical Directors have been selected for their clinical and leadership experience, patient centricity, and engagement in continuous improvement initiatives. They will be helping to lead the new Urgent Care service line, which falls under the Intermountain Medical Group, and work together with and champion the voice and efforts of urgent care physicians across the system.

The new leaders are:

**Brent Smith, MD, Urgent Care Associate Medical Director – North (Cache/Weber)**
Dr. Smith graduated from the University of Utah School of Medicine and completed his Family Medicine residency at the St. Louis University/Scott Air Force Base, where he was Chief Resident. He has served at the Intermountain Cache InstaCares since 2015 and as an Associate Medical Director for the Cache area since 2017.

**Jon Hale, MD, Urgent Care Associate Medical Director – Central (Salt Lake/Wasatch Back)**
Dr. Hale graduated from the University of Utah School of Medicine, interned at LDS Hospital, and completed his Internal Medicine residency at Cedar-Sinai Medical Center/UCLA. He has served as an ER Attending Physician at Whakatane Hospital in New Zealand and as a Regional Medical Officer for the U.S. State Department in Caracas, Venezuela and Warsaw, Poland. He has worked in the Salt Lake Intermountain InstaCares for 15 years.

**Jennifer Gilbert, MD, Urgent Care Associate Medical Director – South (Utah Valley/Rural/Southwest)**
Dr. Gilbert graduated from New York Medical College and completed her Family Medicine residency at Utah Valley Regional Medical Center, where she was Chief Resident. She has worked with Intermountain InstaCares in Utah Valley for 12 years including serving as Lab Director and Clinic Lead for American Fork and Saratoga Springs InstaCares.
The Urgent Care service line Associate Medical Directors will begin meeting with InstaCare and KidsCare physicians to hear about how things are going, what needs InstaCare physicians and clinic teams have, see and share best practices in patient safety and quality, and get their colleagues’ recommendations on what this new specialty leadership team should focus on in the first 90 days.
New podcasts with Intermountain leaders available on the Intermountain Podcast page

Intermountain Podcast features conversations between Mark Briesacher, MD, Senior VP & Chief Physician Executive and President of Intermountain Medical Group, and other Intermountain medical and executive leadership about important, current topics in healthcare. Tune in to our newest podcasts below:

Episode 11: Creating an Extraordinary Patient Experience in Internal Medicine
Dr. Shannon Phillips, Intermountain’s Chief Patient Experience Officer, spoke with Dr. Anne Pendo, Internist and Medical Director of Experience of Care, to discuss their collaboration on—and resulting improvements in—the patient experience at the clinic. Listen Now

Episode 12: Outcomes data, multidisciplinary teams, and upstream interventions improve spine and neurological care
Dr. Mark Briesacher sat down with Robert Hoesch, MD, Medical Director for Intermountain’s Neurosciences Clinical Program and for the Intermountain Neurosciences Institute at Intermountain Medical Center and Stephen Warner, MD, Medical Director for the Intermountain Spine Development Team and for the Intermountain Spine Institute at The Orthopedic Specialty Hospital (TOSH) to discuss the benefits of cross-functional work and transparency. Listen Now

Episode 13: A Utah Business Healthcare Hero talks in this Intermountain podcast about his love of helping people and what sustains him 40 years into his career
Utah Business awarded Kent Jones, MD, Cardiovascular and Thoracic Surgeon at Intermountain Medical Center, their 2017 Healthcare Hero
Lifetime Achievement Award. Now, 40 years into his career, Dr. Jones talks with Anne Pendo, MD, Internist at the Intermountain Avenues Specialty Clinic, about what motivated him to become a cardiovascular surgeon, and what continues to motivate him today. **Listen Now**

**Episode 14: Aligning care teams around physicians promotes care coordination around patients**
Tim Johnson, MD, Senior Medical Director for the Medical Group, and Shauri Kagie, Clinical Manager and our Medical Group NCQA expert, spoke with Anne Pendo, MD, Internist and Intermountain’s Experience of Care Medical Director, about these patient-centered efforts. **Listen Now**

**Episode 16: Hugh West, MD talks about working together across geographies to share ideas, bring the best and right care to patients**
The Musculoskeletal Clinical Program, led by Hugh West, MD, Medical Director, is developing a model to better align clinicians and caregivers in musculoskeletal and orthopedic medicine around patients needing this specialized care. **Listen Now**

**Episode 17: An Intermountain physician reflects on his opportunities for personal and professional development throughout his 41 year career**
As Lou Moench, MD, a psychiatrist with Intermountain Healthcare, winds down his outpatient practice and volunteers his talents and experience as a consultant, he talks with Anne Pendo, MD, Medical Director for the Experience of Care in the Office of Patient Experience, about the changes he’s seen in psychiatry over the years and his personal and professional opportunities. **Listen Now**

**Episode 18: Celebrating what’s right in medicine and changing your lens**
Takiko (Taki) May, MD, Intermountain Medical Group Board Member and Hospitalist at Logan Regional Hospital, talks with Anne Pendo, MD, Medical Director for the Experience of Care in the Office of Patient Experience, on acknowledging the thank you and adjusting our mindset to celebrate what’s right, increase our joy and effectiveness in work, and prevent burnout. **Listen Now**
**Episode 19: Intermountain continues to fight the opioid epidemic**

In this podcast, Dr. Mark Briesacher sat down with Dr. David Hasleton, Senior Medical Director for Specialty Based Care and Dr. David Skarda, Medical Director for the Surgical Services Clinical Program, to discuss how physicians and clinicians can talk with their patients about opioids and offer pain management alternatives.

[Listen Now](#)

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**Episode 20: Improving resilience and optimism with a growth mindset**

Terri Flint, Intermountain Employee Wellness Director, talks with Anne Pendo, MD, Medical Director for the Experience of Care in the Office of Patient Experience, about how a small adjustment in the way we think can create huge benefits in our personal and professional lives.

[Listen Now](#)

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*If you have questions, please contact Kimberly Coudreaut at Kimberly.Coudreaut@imail.org.*
Intermountain Healthcare’s Clostridium difficile Reduction Initiative

_Clostridium difficile_ is a severe infection that can cause significant morbidity and mortality in our patients. _C. difficile_ is the most common infectious cause of antibiotic associated diarrhea and Intermountain’s most common hospital acquired infection (HAI), accounting for approximately 50% of our HAIs. _C. difficile_ was estimated to cause almost half a million infections in the United States in 2011. Approximately 83,000 of the patients who developed _C. difficile_ experienced at least one recurrence, and 29,000 died within 30 days of the initial diagnosis. Recurrent _C. difficile_ colitis may result in protracted diarrhea, recurrent hospital admissions, invasive procedures, and a profound impact on quality of life.

_C. difficile_ can cause a wide spectrum of clinical signs and symptoms. Approximately 20% of hospitalized patients and up to 50% of patients in long term acute care settings can be asymptptomatically colonized with _C. difficile_. These patients have no symptoms and should NOT be treated, as treatment results in further disruption of the gut microbiome. Alternatively, _C. difficile_ can cause severe, fulminant colitis leading to septic shock and death if not treated promptly and correctly.

Not only does _C. difficile_ infection (CDI) have a significant impact on our patients, but it also has a significant reputational and financial impact on our hospitals. CDI is a reportable infection that counts in both the Hospital Associated Conditions and Value Based Purchasing programs of CMS. Having higher than expected infection rates can lead to significant financial penalties for hospitals through a decrease in CMS reimbursement. Any positive _C. difficile_ test performed 72 hours after hospital admission counts as a HAI, regardless of clinical context or patient symptoms.

Here are 3 things you can do to ensure your patients receive the best care possible:

1. Use antibiotics wisely. Antibiotic use is still the major, modifiable risk factor for CDI. More than half of all hospitalized patients will get an antibiotic at some point during their hospital stay. When treating infections, use the narrowest spectrum antibiotic possible and for the shortest duration of time.

2. Appropriate testing. Only test patients for _C. difficile_ when they have active diarrhea (3 or more diarrheal stools a day) AND alternative causes of diarrhea have been ruled out (e.g., laxatives). In some centers, improving testing habits has lowered HAI _C. difficile_ rates by 20-50%. We are actively educating nurses on appropriate testing practices to ensure we are sending tests on patients with true diarrhea that is not caused by laxatives. Other important testing notes:
   a. CDIFF is the iCentra test code for _C. difficile_ testing. Do NOT use GIPCR for standard testing.
   b. Orders > 48 hours old without a specimen being sent will automatically be cancelled.
   c. Test of cure is contraindicated. Stool tests for _C. difficile_ can remain positive for weeks to months even with appropriate treatment. Stool consistency at the end of therapy may not be normal but this does not require extending therapy or repeat testing. Retreatment is NOT recommended if acute symptoms have resolved.

3. Contact isolation and hand hygiene. Isolate patients with _C. difficile_ immediately and follow all isolation precautions. Wear gloves and gown when treating patients with CDI, even during short visits. Hand sanitizer does not kill _C. difficile_, use soap and water after all encounters with patients with CDI.
The Infectious Diseases Society of American has recently updated the \textit{C. difficile} treatment guidelines. Importantly, metronidazole is no longer first line therapy for CDI. Vancomycin 125mg PO QID is now first line therapy for all patients. Intermountain’s \textit{C. difficile} CPM will be updated shortly to reflect these changes.

\textbf{If you have any questions, please contact Eddie Stenehjem, MD, at eddie.stenehjem@imail.org.}
The healthcare industry is going through a time of tremendous change, and nowhere is that more apparent than right here at Intermountain. While we know change is a challenge, it is more difficult for some than for others. Why is that?

Terri Flint, PhD, LCSW, Intermountain Employee Wellness Director spoke in our most recent podcast with Anne Pendo, MD, Medical Director for the Experience of Care in the Office of Patient Experience—about the growth mindset. They talked about how a small adjustment in the way we think can create huge benefits in our personal and professional lives.

Listen to Dr. Flint and Dr. Pendo discuss the growth mindset [here](#).

"Our mindset is the lens through which we view ourselves and our abilities," says Dr. Flint. "With a fixed mindset, if it doesn’t come easily, we just want to give up. A growth mindset loves to solve problems and views failure as part of the process. A growth mindset is both humble and teachable."

One example of a fairly new obstacle our caregivers are facing is our transparency data around patients’ experience of care. "This has been a
particularly challenging piece of data to share,” says Dr. Pendo. “It’s very personal. Clinicians and teams could feel defeated, ashamed, and want to give up—or approach the new information and skill with a growth mindset.”

According to Dr. Flint, “Really competent people with years of education and great experience in providing patient care have been challenged. They can frame this challenge with a fixed mindset, in which they say they didn’t go to medical school for customer service and communication and don’t need to learn the new skills, or they can dive right in, knowing they won’t be good at it initially, but with practice, they will be.”

A key reminder about change: all experts were once beginners. “I’ve become interested in this notion of self-compassion,” says Dr. Flint. “When we have a fixed mindset and fail, we move to self-criticism and beat ourselves up. A growth mindset is optimistic and filled with self-compassion and forgiveness, allowing us to learn from that failure and move forward.”

How can I achieve a growth mindset?

A growth mindset requires confident humility: being confident that you can do anything, but also humble and realistic about the process it takes to be good. Dr. Flint says: “The key is forgiveness, and that really moves us from being fixed at home, at work, at relationships, over to forgiving ourselves and other people as we keep looking for solutions to be extraordinary.”

To hear more of this conversation, click here.

Here are some of the resources and support for clinicians and caregivers to improve the patient experience and ratings:

- The Clinician Communication Course, led by Dr. Pendo, Terri Flint, Dr. Scott Lindley, or Dr. Mark Briesacher, is a four-hour workshop held at various times and locations throughout the year that teaches communication and engagement skills. Using a model of engaging and
empathizing with patients will create a relationship that not only treats the patient but addresses their concerns/goals. Learn more and register by email at Judy.Clemans@imail.org or by phone at 801-442-3980.

• **The E4 Communication Model** gives guidance for improving interactions with patients.
• **The Office of Patient Experience and the Esprit de Corps Coalition** have teams working to improve experiences, engagement, and resilience among clinicians and caregivers.
• **Experience of Care Consultants** will be available soon to provide coaching, insight, and information around improving the patient experience.
• **Conversations and idea sharing** among colleagues is encouraged in huddles, daily work, and through commensality groups, which are being created to encourage social connections and collegiality.
Women in Medicine Caregiver Resource Group – Join now!

According to a recent study by *JAMA Internal Medicine*, female medical residents and physicians continue to endure bias and a larger burden with home duties and are more likely than their male counterparts to cut back professionally to accommodate household responsibilities. They also face a greater risk of depression. Recent studies show 80% of the US healthcare workforce is comprised of women, but women make up less than 20% of executive boards and less than 40% of middle management. C-suite roles are typically limited to chief nursing officer or human relations officer.

Today, women account for more than one-third of practicing physicians and about half of physicians-in-training.

This year, in recognition of the importance of gender equity, we have formed the Intermountain Healthcare Women in Medicine Caregiver Resource Group to improve current gender inequity and to promote the professional advancement of female physicians. Although most of the goals and objectives are yet to be developed, some potential goals are to provide a venue to evaluate and develop actionable items to close current gender gaps. Items being discussed include developing the ability to leverage strengths, creating a library of useful resources, gaining skills to maintain a sustainable work/life balance, and attaining professional positions which would powerfully impact the healthcare system.

If you are interested in participating in Intermountain’s Women in Medicine Caregiver Resource Group, please email WeAreInclusive@imail.org, Liz Joy, MD, at Liz.Joy@imail.org, or Dixie Harris, MD, at Dixie.Harris@imail.org.
Addressing Unmet Social Needs of Our Patients

It almost goes without saying that population health follows a social gradient. People who are economically and/or socially better off have better health outcomes. Social determinants of health (SDoH) are defined by the World Health Organization as “the circumstances in which people are born, grow up, live, work, and age, and the systems put in place to deal with illness” and describe the social, economic, and political processes and relationships which can influence key health outcomes. People higher on the social gradient generally have more favorable SDoH.

The Centers for Medicare and Medicaid Services (CMS) defines the core SDoH as food insecurity, housing instability, unmet utility needs (e.g., heat, air conditioning, refrigeration, transportation, and interpersonal violence). Additional SDoH include:

- financial strain
- employment
- family and community support
- education
- physical activity
- substance use
- mental health
- disabilities

Recognizing that one’s SDoH likely influence health outcomes even more than one’s medical care, Intermountain Healthcare has formed an SDoH Committee lead by Liz Joy, MD, Medical Director of Community Health, and Elizabeth Craig, Medicaid Program Manager for Social Services at SelectHealth. The committee, which has been meeting since August 2017, is charged with developing a comprehensive, consistent, and cohesive approach to SDoH across the continuum of care and across all populations we serve—patients, members, caregivers, and community. The committee will be rolling out an SBIRT (screening, brief intervention, referral to treatment) model of care in various settings in 2018, starting with community-based health screening events, Intermountain Homecare, expanded work at SelectHealth, and through Enterprise Care Management.

In addition to the SDoH Committee, Intermountain is planning a demonstration project that will address SDoH for SelectHealth Community Care (Medicaid) members in two Utah communities in Weber and Washington counties. The goal of these demonstration projects is to better understand how we can effectively and efficiently address SDoH for our higher risk patients.

Central to this work is leveraging technology and integrating new members and roles into care teams. We are vetting digital platforms that will seamlessly connect healthcare with community resources, and we are determining how we can best work with community health workers (CHWs) to expand our reach and touch with patients, members, and the community. We will use a rigorous evaluation process to determine if this work improves care, patient experience, and health outcomes, while reducing costs.
If you have questions, comments and requests, please reach out to Liz Joy, MD at liz.joy@imail.org or Elizabeth Craig at Elizabeth.craig@selecthealth.org.
Leaders in government and the healthcare industry—and consumers, as well—know that healthcare spending in the United States is not sustainable. According to Reuters (2017), 62% of Americans consider affordability to be the top issue for healthcare. To address these concerns, healthcare systems are taking increasing accountability for cost and outcomes (Smith & Keckley, 2017). The work of Intermountain’s Geographic Committees supports these objectives—and helps advance Intermountain’s progress toward high-value care.

Geographic Committees are local groups of Intermountain and affiliated physicians and advanced-practice clinicians whose central focus is on engaging affiliated and employed primary care clinicians. Geographic Committees help manage a geographic region’s population health across the continuum of care, including access, service, quality, utilization, total cost of care, and other Intermountain shared commitment objectives. This engagement includes collaboration, communication, and education, which help foster physician leadership and community alignment.

Geographic Committees were launched in November 2014 as a critical part of Intermountain’s Population Health initiative. Their charge was to support managing healthcare and outcomes, moving away from the traditional fee-for-service model. Four Geographic Committees were formed across the Intermountain system. Committee members included hospital administrators; regional operations officers; affiliated practice managers; and primary care, pediatrics, emergency medicine, OB/GYN, and surgical clinicians. Committees managed annual goals at a geographic level centered around primary and specialty care measures. Successes included improving chronic condition verification, reducing skilled nursing facility utilization, and improving hysterectomy care process model adherence. Geographic Committees have led initiatives to improve care while reducing costs.

Building on this foundation of engagement and successes—and under the One Intermountain reorganization—Geographic Committees are now moving to a primary-care only focus, aligning under the Intermountain Community-Based Care Group. Specialists align under the Specialty-Based Care group. The number of Geographic Committees has been expanded from four to eight to improve collaboration and the dissemination of information (see Figure 1). Committee membership will
consist primarily of Intermountain and affiliated family practice, internal medicine, emergency department, urgent care, and hospitalist physicians and advanced-practice clinicians. Geographic Committees will also have Intermountain and affiliated operations officers, hospital medical directors, and pharmacists (see Figure 2). Other groups and specialists will be invited to participate on an as-needed basis.

Geographic Committees will be locally directed and led by co-chairs and committee members with the support of the Intermountain Population Health team. Primary care goals and initiatives for 2018 include improving chronic condition verification; managing medication adherence in diabetes, cholesterol, and hypertension; increasing Medicaid-restricted enrollment; and supporting the Intermountain goal of reducing opioid prescriptions. The progress of each goal will continue to be measured on a geographic, clinic, and provider level through the Geographic Committee dashboard.

Geographic Committees provide a platform to bring Intermountain and affiliated groups together to address the needs of the communities we serve. Committee members will collaborate with community groups around community needs, identify best practices, and find ways to improve safety, quality, patient experience, and product performance. Intermountain is confident that the past success of Geographic Committees will continue.

If you have any questions, please contact Nick Bassett at Nick.Bassett@imail.org.
Healthy Future Medication Utilization Management Projects

Healthy Future refers to Intermountain’s priorities to further our mission, vision, and fundamentals of extraordinary care. These priorities are designed to promote safe, high-quality, patient-centered, and affordable care. A large part of this work involves optimizing the use of medications from both a clinical and financial stewardship perspective.

To this end, several focused medication-use projects have been underway since 2017. Examples include improving adherence to injectable acetaminophen (Ofirmev®) restrictions, developing clinical criteria for intravenous immune globulin (IVIG), switching to an alternative lung surfactant medication, and implementing appropriate use guidelines for calcitonin injection. Updates on these and other projects can be found on the Healthy Future Medication Utilization Initiatives Dashboard.

Overall, there has been great success with many of these projects. For instance, inappropriate use of calcitonin has decreased by more than 70%. Similarly, Intermountain has achieved a year-to-date savings of approximately $250,000 by improving prescribing of injectable acetaminophen and leveraging oral alternatives. These successes are due to the hard-work and multi-disciplinary collaboration of our caregivers. Discussions continue regarding additional efforts around other Healthy Future medication initiatives, such as IVIG and liposomal bupivacaine (Exparel®). New projects are also underway and have recently been approved by the systemwide Pharmacy and Therapeutics Committee—namely the introduction of a biosimilar version of infliximab (Remicade®).

All of our caregivers should be applauded for their continued efforts on this Healthy Future work. It is through these projects that we will ensure a comprehensive, evidence-based, fiscally responsible, and well-aligned medication management approach is used for our patients.

If you have any questions, please contact Conor Hanrahan at Conor.Hanrahan@imail.org.
The case for relationship-based care

A recent article in 4sightHealth, "Scaling Relationship-Based Care: "Different Spokes (Care Models) For Different Folks,"


talks about the benefits of building long-term, trusting relationships with patients—involving real engagement, frequent
dialogue, personal connections, and shared decision-making to proactively address and treat disease.

According to the article, factors like specialization, technology, and fee-for-service models are taking this quality one-on-
one time with doctors away from their patients. Primary care companies are stepping in to “fill America’s care management
void. The demand for relationship-based primary care services combined with aligned payment models is catalyzing the
growth of care management businesses that offer more coordinated, holistic and concierge-like services.”

One company, AbsoluteCARE in Maryland, is treating the sickest of the sick, starting engagement with patients by
addressing their basic resources such as food, clothing, shelter, addiction treatment, and behavioral health services—then
treating the longer-term chronic care needs with routine services including regular check-ins and check-ups. They provide
other care and services like nutrition counseling, diagnostics, pharmacy, medication adherence, lab, infusion, radiology,
counseling, community outreach, and education.

AbsoluteCARE and similar business models are working to evolve their systems into relationship-based healthcare to
provide “better outcomes, happier customers and lower all-in costs”—even going so far as to impact the next generation.
AbsoluteCARE CEO Alan Cohn said in the article, “If parents can do better, children do better. Ideally we can stop the
cycle of inter-generational chronic disease.”

Reimagining Primary Care at Intermountain

At Intermountain, our Patient-Centered Medical Home model works to enhance relationship-based care. We have teams of
physicians, advanced practice clinicians, care managers, health advocates, mental health partners, and clinical and office
staff working together around patients to connect their complexities of care to the right levels of support. We focus on
access, getting patients in when and where they need to be seen to promote continuity of care and care management. We
also focus on population health management and use data to identify and work with patients to better assess, manage,
and support their health needs. And we use technology, TeleHealth, and Connect Care to care for patients where they are,
keeping them in their homes or communities.

But how can we do better at relationship-based care? We’ve trialed family medicine scheduled appointments through
virtual visits and plan to roll this out across all of primary care starting in June. We’re working to get Medicare patients in
for their annual wellness visits to drive better care management and patient engagement. But we also need to think more
broadly about what our patients need and the roadblocks that get in their way of treatment. Factors like transportation,
food, and pharmacy costs. The hidden reasons behind patients’ access of care such as loneliness that can contribute to
patients frequently visiting the emergency department.

As we begin our work on Reimagining Primary Care, we will look to you to identify patients’ care needs and issues behind
their reasons for accessing our ambulatory and hospital settings. We’ll look to you for ideas and suggestions for how we
can create new models of care with patients at the center.
Please email Mark R. Greenwood, MD, the Medical Group's Family Medicine Medical Director at MarkR.Greenwood@imail.org with your ideas.
Across Intermountain, we take an all-hands-on-deck approach to care delivery. Every clinician and caregiver plays a part in the safety, quality, and experience of care: Each works not only to incorporate and follow best practices to ensure optimal outcomes, but also is encouraged to innovate. It’s our Intermountain Operating Model that provides the framework to drive our culture of Continuous Improvement (CI), facilitating caregiver input, coordination, and implementation of paths to better care.

Our new Office of Patient Experience has been created in the CI methodology to bring teams already working on safety, quality, and experience, together—to better align ourselves around our patients. In 2018, the Office will collaborate with the CI team on a number of initiatives to improve our camaraderie and organization so that we can maximize our potential to achieve the best possible care:

Esprit de corps

“Esprit de corps” is a French term meaning “the spirit of the group.” It’s about creating a sense of cohesion and solidarity among a team. In healthcare, the people who dedicate their careers and lives to caring for others, on a daily basis navigate substantial challenges, carry heavy responsibilities, face high-risk situations, and juggle moral decisions and distress. They could benefit from a support system.

Stephen Swensen, MD, Medical Director for Professionalism and Peer Support, is partnering with the Office of Patient Experience and the CI team to improve Intermountain’s esprit de corps. “We can’t take good care of our patients if we don’t care about each other first,” he says. Stephen is working to train leaders to support their teams by promoting mutual trust and appreciation. By doing this, we create an organization that’s more connected and able to disperse best practices, ideas, and solutions more openly and quickly, with the knowledge that we have the support of our leaders and teammates.

A new Continuous Improvement structure

The CI team has redesigned to align CI Medical Directors with leaders across our new organizational structure in order to better support local leaders and front-line clinicians in our hospitals, clinics, and other facilities. Our five CI Medical Directors are:

- **Matt Pollard, MD**, an emergency physician, is the System CI Medical Director
- **Michael Broadbent, DO**, an anesthesiologist, is based out of Logan
- **Laurel Fedor, MD**, a hospitalist, is located at McKay-Dee Hospital
- **Erick Ridout, MD**, a neonatologist, is located at Dixie Regional Medical Center
- **Rusty Moore, DO**, a physiatrist, is located at Dixie Regional Medical Center
These CI Medical Directors provide education and training to hospital and specialty leaders as well as facilitate clinicians’ CI projects and idea implementations. For more information, contact any of the CI Medical Directors or visit the Intermountain Operating Model website.

**Procedural checklists**
The Office of Patient Experience is working on a CI project to enhance high reliability and predictability in the operating room and other procedural areas, both in the hospital and in the outpatient setting. These checklists will be based on the World Health Organization model of ‘Sign-in,’ ‘Time-Out,’ and ‘Sign-Out.’ By implementing guided conversations around each procedure and each individual patient, we ensure we have the right instruments, preparations, correctly labeled specimens, etc., so that we’ve verified everything appropriate for that phase of the patient’s care. Communicating these checklists among operating room teams helps ensure we cover all our bases, opens opportunities for caregivers to speak up and clarify, and promotes safety for our patients. Introducing team members to each other and sharing a unique fact about the patient improves personal connections among the team and with the patient, strengthening experiences and supporting focus on the job to be done.

**2,000 clinician ideas**
We’ve set the goal for 2018 to implement at least 2,000 physician and APC ideas. Last year we implemented 1,897 clinician ideas that were submitted and managed through our tiered-escalation huddles. Further enhancing a culture that invites all of us to voice issues and suggestions will help us improve the safety of our care and work environments; the quality, efficiency, and effectiveness of our treatments and processes; the workflows and patient flows in our clinics for better patient experiences; care access and coordination by removing barriers; and our stewardship with our resources by eliminating waste.

These are just some of the Office of Patient Experience and Continuous Improvement efforts for this year and beyond, that will strengthen our work toward extraordinary care. More to come.

If you have questions, please contact Ashley O’Brien at Ashley.OBrien@imail.org.
Care Transformation continues work to optimize iCentra for clinicians and caregivers

Optimization continues on iCentra to best support caregivers, clinical and business strategies, and—most importantly—our patients. Due to a rigorous optimization schedule, you may see subtle changes in iCentra as you perform your daily tasks. As the Care Transformation team performs upgrades and optimizations, clinicians and caregivers need to continually use iCentra to become proficient as improvements are implemented.

How can I suggest improvements or enhancements to iCentra?
Log in to the Help Desk Issues and Improvements Portal, available in the PowerChart toolbar. You may report an issue, report system slowness, or request an enhancement. You will receive email updates as a service record is changed or resolved.

The purpose of optimization is to solve problems and make improvements, reduce redundancies, support decision-making, and champion safety, quality, experience, access, and stewardship.

If you have questions, please contact any Care Transformation partner. Our commitment is to make our caregiver experience better than ever, and through our partnership, we expect to create a model that works for everyone.
New PowerChart fields capture sexual orientation and gender identity (SOGI) data to help us improve care quality and experience

Being able to access sexual orientation and gender identity (SOGI) data on the patients we serve will provide us context to deliver better, more informed, thoughtful, inclusive, and respectful care. PowerChart now includes fields that will allow providers to capture this information in both acute and ambulatory settings. Completing these fields is currently voluntary. A process is being developed to offer all patients the opportunity to answer the SOGI questions.

To access these fields in PowerChart, go to the Social History screen, click +Add, and then Orientation, Gender Identity, and Sexual. Answers should represent patients’ voluntary self-identification and preferences.

Creating these data fields is an initial step in a longer process of addressing the needs of our LGBTQ patients. Further information and education on serving our LGBTQ patients are forthcoming. For caregivers interested in learning more about working with LGBTQ patients, please visit lgbthealtheducation.org and click Education. Materials are free, and caregivers can obtain CME/CEU credit by creating a registration and password on the site. Most courses, including the
recommended introductory course, “Achieving Health Equity for LGBT People,” are available as a webinar, video, or e-learning module.

For questions about this process, please contact Jan Stucki, Health Literacy Project Manager, by email at Jan.Stucki@imail.org.
Changes to iCentra opioid defaults support safer prescribing, focus on patient care

To further assist our physicians and APCs in optimizing time with patients and finding an appropriate, safe balance with acute opioid prescribing, on Wednesday, May 23rd, a set of pre-identified opioid prescription order “favorites” within iCentra were adjusted to better align with CDC prescribing guidelines and Intermountain’s opioid initiative. Clinicians will be able to have peace of mind and rely on these new defaults as a safe and reasonable baseline for most patients—and focus energy and time on patient care. Clinicians can still adjust the quantities if clinical judgment and individual patient circumstances warrant adjustment.

The following are the changes you will see in iCentra:

**Maintenance → Acute**

Many short-acting opioid favorites with a therapy type of maintenance—but with undefined or less than 26-day supply—will be changed to acute. Prescriptions with a therapy type of acute will require a stop date or duration and will not allow auto-calculation of a 30- or 90-day supply. The CDC recommends reevaluating severe, acute pain that continues beyond the anticipated duration.

**Smaller Default Dispense Quantities**

Some short-acting opioid favorites that are or will be set to acute have larger dispense quantities than are usually needed. These default dispense quantities will be changed to a 3-day supply. CDC guidelines recommend prescribing no more pills than the number needed for usual pain associated with the condition, which is usually a 3-day supply. Quantities can be adjusted as needed.

**Refills**

A small number of short-acting opioid favorites set to acute had been saved with 1 or more refills. These are now changed to have 0 refills. The CDC recommends reevaluating any severe, acute pain that continues beyond the anticipated duration.
David Hasleton, MD, MBA, Senior Medical Director for Specialty Based Care has been meeting with physicians and APCs across the system to discuss our opioid reduction goals and how each can help our patients with appropriate pain management. The clinical expertise and experience of our clinicians has been very helpful in the development of these best processes and changes to help Intermountain address this important public health crisis. Contact Dr. Hasleton with any questions by email at David.Hasleton@imail.org.
The Advanced Training Program in Clinical Quality Improvement: A New Era

The Intermountain Healthcare Delivery Institute’s Advanced Training Program (ATP) in Clinical Quality Improvement is an in-depth course for healthcare professionals who want to know how to design, implement, and lead outcome-based quality improvement for the benefit of their patients, teams, and organization.

Since the inaugural class in 1992, over 5000 clinicians and leaders from around the world have participated in the course. The training is challenging but very interactive, and is designed to allow both learning and the development of a professional network.

We offer two programs, each of which is offered twice in the calendar year. Both are 4-session courses completed over a period of 4 months. This format gives participants time to design, implement, and demonstrate real change in meaningful clinical outcomes built around a quality improvement project. Each miniATP session is 2 ½ days long and teaches the core tools, theory, measurement, and leadership behind continuous quality improvement as applied in the clinical arena. Each ATP session is 4 ½ days long (Monday – Friday afternoon) and covers the same material as the miniATP with additional in-depth training by renowned faculty from within Intermountain and organizations nation-wide.

The Institute and the ATP are focused on transforming healthcare using Intermountain’s Operating Model and the core principles of W. Edward Deming and Joseph Juran. The traditional curriculum of the ATP has been updated to include focused learning on how the core principles of clinical process management are at work in the methods of Continuous Improvement, Telehealth, and Care Transformation Services. Similarly, we have built in discussions and education on accountable care organizations and community/population health. Our team is customer-service oriented will do everything we can to ensure the happiness and appropriate training of the students.

Clinical Program Analysts, tied closely to the Institute, support our training programs by guiding participants through improvement projects and—especially—helping them find and use necessary data. They also serve to facilitate the implementation of best practices system-wide.
As a service organization within Intermountain Healthcare, we view our core customers as the clinicians and leaders of Intermountain Healthcare, particularly those associated with Clinical Programs, Clinical Shared Services, and Community-and Specialty-Based Care. We encourage individuals and teams from these services to attend our programs, and we offer an internal discount for Intermountain employees.

We are excited to announce our move to the new Intermountain Gardner Transformation Center located adjacent to the Intermountain Medical Center Campus. This beautiful new space will serve as a home to the Institute Staff and Clinical Program Analysts. We look forward to inviting our fall participants to be the first attendees to enjoy this state-of-the-art facility.

We are currently accepting registrations for the fall 2018 and winter 2019 ATP and miniATP programs. Please visit our website to secure your spot.

For additional information on our courses please contact our coordinators, Stefanie Bowen at Stefanie.Bowen@imail.org for miniATP or Alesia Ivers at Alesia.Ivers@imail.org for ATP.
Surgeons and surgical leaders across Intermountain have shared that despite the many safety processes we have in place to prevent “never events,” near-misses were identified in which the signed consent form did not match the intended procedure. To address this safety risk they led an improvement team that developed an update to the Informed Consent Policy and Form which clarifies that the responsible practitioner is required to sign the form with the patient. This clarification supports the consent form being a simple, clear source of truth for the procedure to be performed.

The Office of Patient Experience and Continuous Improvement supported this work by reaching out to leaders and frontline teams across Intermountain to gather feedback and suggestions about how this change could be implemented effectively to support better communication and a safer procedural environment.

As of June 20th, Intermountain’s improved Informed Consent Form and Policy is available. Highlights of the improvements include:

**The treating clinician is required to document the patient’s consent personally.** The clinician providing the surgery, procedure, or treatment is required to sign the consent form along with the patient—**this responsibility cannot be delegated to nursing staff.** This signature is an attestation of the conversation that takes place between the treating clinician

**The new Informed Consent Form serves as an important piece of the Sign In-Time Out-Sign Out Procedural Process and accompanying Safe Procedural Checklist (similar to that of the World Health Organization checklist), which are currently being piloted by Surgical Services. These will be used throughout Intermountain to optimize our teaming and high reliability for procedures—with the aim of eliminating wrong site/side/procedure errors, retained foreign objects, and other patient harm events that can result from miscommunication and lack of team coordination. This process is currently being tested and refined by our surgical teams with the help of the simulation team, with great results.**
and patient—it is not simply a 'witness' to the signing of the form.

The patient or representative should be given the information needed in clear and understandable language to make informed decisions regarding his or her care.

Informed consent is required when a patient is receiving blood products outside the perioperative period.

The form can be uploaded directly into iCentra with the pre-op history and physical, or it can be faxed to Health Information Management for upload into the patient record. It can also be completed on the day of the procedure. Health Information Management, Care Transformation, and Surgical Services have been collaborating to create job aids and hold in-person education so staff can easily upload or fax forms at the point of care.

The form has been consolidated into a one-page document, clarifying the surgery, procedure, or treatment being performed including site and side. The simplified document also makes it easier for the treating clinician to sign and upload or fax into the patient’s record.

As previously, there are exceptions for medical emergencies when the patient or representative cannot consent.

These enhancements make the Informed Consent Form a source of truth rather than a risk for ambiguity, miscommunication, or error. This process has been adopted in several areas; for example, anesthesiologists are already engaging in the process of completing and signing Informed Consent Forms themselves upon having conversations about procedures with their patients.

“This improvement to the way we do Informed Consent strengthens mutual trust, engagement, and verification of procedures and treatments,” says Mike Woodruff, MD, Senior Medical Director, Office of Patient Experience. “It supports us in taking critical time out to listen to our patients—and clearly documenting those discussions.”

As this change rolls out, the Office of Patient Experience, Continuous Improvement, and the Surgical Services Clinical Program would
appreciate your support in taking a proactive approach to making it successful in your areas. They will be engaging in site visits and observations to ensure compliance as well as tracking safety metrics to measure success of the change. While the policy and forms will be available on June 20th, the policy will officially go into effect August 20th, 2018.

View the Informed Consent Frequently Asked Questions here.

If you have any questions, please contact:

- Mike Woodruff, MD, Medical Director for Patient Safety and Clinical Risk at Mike.Woodruff@imail.org;
- Elizabeth McKnight, Patient Safety System Director at Elizabeth.Mcknight@imail.org;
- or Rob Ferguson, MD, Chair, Department of Surgery, Intermountain Medical Center, at Rob.Ferguson@imail.org
Immunization Update and ACIP Highlights – June 2018

The Advisory Committee on Immunization Practices (ACIP) of the CDC met on June 20–21 to provide guidance on vaccines. Below are the key highlights:

2017-2018 Influenza season vaccine effectiveness was reviewed, and the 2018-2019 seasonal Influenza Vaccine recommendations were approved. Evidence about the relative effectiveness of cell culture compared to egg-based influenza vaccine in persons > 65 years was presented.

Guidance to public health agencies was provided regarding Anthrax vaccine dose sparing and antimicrobial sparing schedules for Post Exposure Prophylaxis during mass exposure events and for implementation of 3rd dose MMR vaccine during mumps outbreaks.

Future: The decision to harmonize the male and female HPV vaccine recommendation was deferred due to submission to the FDA for a BLA priority review of expanding the licensed age up to 45 years for males and females. The Zoster Work Group continues to review data about the use of RZV (Shingrix®) in immunocompromised persons and in previous ZVL (Zostavax®) recipients. Evidence to Recommendation (EtR) Framework was reviewed for the PCV13 recommendation in adults > 65 years.

CURRENT RECOMMENDATIONS

Influenza Vaccine

Preliminary Vaccine Effectiveness (VE) for medically attended outpatient influenza during the 2017-2018 season was reported as 40% for all virus types, 65% for A(H1N1), 24% for A(H3N2), 49% for B Yamagata lineage, and 78% for B Victoria lineage. Vaccination reduced influenza-associated hospitalizations by 22%. This past A(H3N2) predominate season, was considered a high severity season for all age groups.

The committee approved the 2018-2019 Influenza seasonal vaccine recommendation which includes the composition description of this season’s vaccine, reinstates the option of using LAIV4 (FluMist®), discusses the expansion of the licensed approval age for Fluarix® (D-QIV; GSK) 0.5mL dose down to 6 months, the discontinuation of Fluviron® IIV3 and Fluzone® Intradermal, and the substitution of Flublok® Quadrivalent for Flublok® Trivalent.

While ACIP has approved the use of LAIV4 for persons in the appropriate age group, the liaison representative from the AAP reiterated the organization’s stance that IIV4 should be primarily used in children, and LAIV4 may be used only when IIV4 is not available or if the child would not be vaccinated if the option of LAIV4 was not provided.

Due to concerns that egg adaptation during vaccine production may lead to lower vaccine effectiveness in seniors, the CDC conducted a study examining the relative effectiveness of cell-culture vaccine compared to egg-based vaccine provided to Medicare beneficiaries > 65 years. An advantage of their study was it was conducted in a population of millions of patients that included nearly all the vaccine recipients of that age in the US. The relative vaccine effectiveness of cell-culture vaccine compared to IIV4 for the endpoint of inpatient or ED treatment for influenza was 10.1% and was 10.0% for the outcome of an influenza related outpatient visit defined by a positive rapid influenza test and Oseltamivir therapy. The
Relative vaccine effectiveness of High-dose IIV3 compared to standard dose IIV4 was 8.4% more effective, and adjuvanted IIV3 was 3.3% more effective compared to IIV4. No difference was seen between standard dose IIV3 and IIV4 in terms of relative effectiveness. The CDC concluded that cell-culture and high-dose vaccines were marginally more effective than egg-based vaccines, but data need to be obtained from more than one season.

Seqirus has submitted a BLA to the FDA for licensure of their adjuvanted trivalent influenza vaccine (Fluad®) to be used in children age 6 through 72 months. Currently, it is only licensed for individuals age >65 years. Efficacy and immunogenicity in the younger age group were comparable to the comparator IIV3/IIV4. The adjuvanted vaccine has increased incidence of local reactions and fever, but no increase in febrile convulsions. Data is limited on co-administration with other vaccines and is not available for the sequential use of an adjuvanted vaccine in children.

Public Health Guidance – Anthrax, Mumps

During a mass exposure, Post Exposure Prophylaxis (PEP) for Anthrax may be impacted by limited supplies of vaccine, antimicrobial therapy, equipment such as syringes and staff to administer vaccine. The anthrax vaccine is licensed for persons 18-65 years and the current PEP recommendation is for 3 subcutaneous doses to be given at 0, 2, and 4 weeks along with antibiotics for 60 days. The ACIP voted to approve three mitigating strategies that could assist public health agencies responding to a mass biologic attack. First, although vaccination using a subcutaneous route is more efficacious, vaccination using an intramuscular route is approved and may result in more recipients coming back for future doses due to fewer localized injection reactions. Children and older adults outside of the licensed age range would also need anthrax vaccine and it may be administered under an Investigational New Drug (IND) protocol. Second, vaccine dose-sparing schedules of 2 full-doses at 0 and 2 weeks or 3 half-doses at 0, 2, and 4 weeks were approved. Third, antibiotic therapy duration could be shortened to 42 days or 2 weeks after the last dose of anthrax vaccine, except in immunocompromised patients or groups for which there are no data (pregnant women, children) who should continue to be treated with antibiotics for 60 days.

The number of mumps cases in the US in each 2016 and 2017 were double the total number of cases from the previous four years combined, 2012 through 2015, with 67-78% of cases occurring in outbreaks. Additional guidance was provided to public health authorities concerning the details regarding provision of a third dose of MMR during mumps outbreaks.

FUTURE RECOMMENDATIONS

Evidence was presented in the ACIP meeting to inform the committee concerning future vaccine recommendations.

Human Papilloma Virus

Harmonization of the male and female 9vHPV vaccine age indication through 26 years has been deferred due to manufacturer submission of a BLA priority review to the FDA requesting licensure up to age 45 years for males and females. FDA ruling is expected as early as October 2018. The HPV Work Group is assessing whether 9vHPV could be beneficial in adults age 27-45 years. Many of those adults are still HPV seronegative. During a 4-year study period, 3.6% of new infections progressed to CIN2+ in mid-adult women. Adults have good antibody production with HPV vaccination with good safety profiles, and efficacy of protection against cervical cancer and its precursors has duration out at least 10 years. On the other hand, HPV vaccination is most effective before the initiation of sexual activity and exposure to HPV
virus and 90% of adults are sexually active by their mid-20s. In females, 50% of HPV infection causing cancer is acquired by age 21 years while 75% of those infections are acquired by 31 years. Efficacy trials have not been conducted in males and females age 26 and older, therefore immunogenicity bridging studies will be used.

**Recombinant Zoster Vaccine (RZV) - Shingrix®**

The Zoster Work Group continues to review data about the use of Shingrix® in immunocompromised persons and in previous Zoster Vaccine Live (ZVL) - Zostavax® recipients. RZV shipping delays are expected to continue through 2018.

Note for physicians wishing to refer immunocompromised patients to a pharmacy to receive a dose of Shingrix®: Pharmacists can only provide vaccines according to ACIP recommendation, and while vaccinating an immunocompromised patient falls within the FDA approved label, there is no recommendation yet for its use in that population by the ACIP. Therefore, if you send an immunocompromised patient to a pharmacy to receive a dose of Shingrix®, you will need to write a prescription for the vaccine to allow the pharmacists to comply with their vaccination protocol. While this situation impacts all immunocompromised patients, it is particularly a problem for those patients covered by a Medicare Part D plan. With the exception of the SelectHealth Med Advantage plan which allows for Shingrix® to be administered at physician offices, most other Medicare Part D plans only reimburse for Shingrix® when administered at a pharmacy, and the pharmacy may be the patient’s only access point for the vaccine. Since vaccines are considered a medical benefit in Part D, copays and deductibles will apply.

**PCV13 – Prevnar®**

Continuing the policy of giving PCV13 to adults > 65 years will be discussed further in the October 2018 ACIP meeting, with a vote expected either in the February or June 2019 meeting.

In adults age > 65 years, 4-6% of pneumonia is caused by PCV13 serotypes with one study in hospitalized pneumonia patients showing decreased incidence of PCV13 serotype pneumonias over the 2-year period, but another study in Native Americans showing essentially no decrease in incidence of IPD following the recommendation to vaccinate seniors. Type 3 is currently the highest incidence serotype, and vaccine appears not to have much impact on reducing serotype 3. Much of the reduction in adult pneumococcal disease has occurred due to the child vaccination schedule and reduction in nasopharyngeal carriage. Nasopharyngeal carriage rate of PCV13 types in children age < 5 years was 8% in 2011, and was < 1% in 2017. Coverage of PCV13 in those > 65 years was 40% in 2017. It has been difficult to determine how much incremental decrease in PCV13 type IPD and pneumonia has been due to the added vaccination of seniors. Studies estimating all-cause and pneumococcal pneumonia incidence and vaccine impact are anticipated in October.

If you have any questions regarding immunization, feel free to contact Tamara Sheffield, MD, MPA, MPH, Medical Director, Community Health and Prevention, Intermountain Healthcare, at (801) 442-3946.
Keep Patients Safe by Referring Only to Participating Labs

Have you noticed a pattern in your office, or perhaps been notified by SelectHealth, of your pathology services being sent to labs that are not participating on a SelectHealth network?

Why does it matter?

Using out-of-network laboratories subjects our members—your patients—to higher out-of-pocket costs in deductibles, coinsurance, and balance billing.

Members often have services denied or benefits reduced when the provider (in this case, lab) is not in the member’s network.

Receiving a bill from an unknown, out-of-network lab—especially after visiting a participating provider—causes frustration for SelectHealth members and reflects poorly on the referring provider.

Out-of-network labs are not contractually obligated to abide by our quality standards.

Did you know?

In 2017, SelectHealth received thousands of claims submitted by out-of-network labs.

Members were liable for high dollar amounts in the form of deductibles, coinsurance, and balance billing. Had participating labs been used for these claims, the member liability would have been significantly less, and balance billing could have been avoided.

SelectHealth negotiates rates with participating laboratories to keep costs affordable for our members and Intermountain.

If you are contracted with SelectHealth networks, you are contractually obligated to refer lab work to participating labs.

What can you do?
Find in-network labs on selecthealthphysician.org. Select “Provider & Facility Search,” and then “Facility Search.” Note: all participating labs are listed under the “Laboratory Draw Centers” option in the “Type of Facility” field, regardless of whether it is a draw center or pathology lab.

If you regularly refer members or order lab work for which you believe there are not adequate in-network laboratory options, please contact your Provider Relations representative to request that these services be evaluated for access.

Using in-network providers for covered services improves member satisfaction, ensures quality results, and helps control costs. We appreciate your dedication to our vision of providing extraordinary care and superior service at an affordable cost.

• If you have questions regarding participating lab use, please call Provider Development at 800-538-5054.
PharMEDium, the largest manufacturer of compounded sterile preparations in the nation, recently announced permanent product discontinuations, including several high-use items within the Intermountain system, such as patient-controlled analgesia (PCA) syringes and epidurals. This has caused a significant strain on Intermountain inpatient pharmacies as they attempt to absorb the additional compounding. Ongoing national shortages of medications used to compound has further exacerbated the issue, as medications to compound are often difficult to acquire. *The shortages have resulted in delays to patient care.*

Based on the critical nature, long-term duration, and wide-spread impact of shortages, prescribers should be aware of the challenges in managing shortages. Several commonly used injectable medications are on critical shortage, including:

- Fentanyl
- Hydromorphone
- Lorazepam
- Morphine
- Thiamine

The Drug Shortage Management Team is employing strategies specific to each shortage to help minimize the impact to our patients. Details regarding each shortage can be found on the Intermountain Drug Shortage List.

To minimize the impact to our patients, please do the following:

- Be judicious when prescribing shortage medications
- Be flexible by using alternatives based on the availability of medications at your site
- Communicate often with your pharmacy colleagues to stay informed and involved regarding the impact the shortages are having at your site
- Visit the Intermountain Drug Shortage List for the most up-to-date information on shortages throughout the system
Please contact Dave Hasleton, MD, at David.Hasleton@imail.org or Renee Pitt, PharmD, at Renee.Pitt@imail.org for additional questions or concerns.
Mark Briesacher, MD is featured in a Zeev Neuwirth, MD podcast on creating a model healthcare system

Zeev Neuwirth, MD, Senior Medical Director of Population Health for Atrium Health in North Carolina, recently featured Mark Briesacher, MD, Chief Physician Executive and President of Intermountain Medical Group as a guest in his Creating a New Healthcare podcast. The podcast series is popular among clinician leaders looking for fresh perspectives, new solutions, and inspiration for their journey to value-based care. Episode 36 with Dr. Briesacher is titled "Insights into Creating a Model Healthcare System."

Listen to the podcast on an Apple device or on an Android device or personal computer.

In the podcast, Dr. Briesacher described how Intermountain has taken our original charge to create a model healthcare system to heart. This involves, he said, our current reorganization work to create a consumer-oriented model with a community division focused on long-term health, prevention, and wellness as well as an acute, episodic-care division composed of specialty surgical/medical centers of excellence. He talked about the synergistic intersection between our Community Based and Specialty Based Care Groups, which leads to optimal decisions about appropriateness of care and world-class health outcomes.

Dr. Briesacher also gave examples of how we’re creating a model healthcare system through our innovative insurance product, SelectHealth Share, which creates shared accountability between clinicians, employers and employees, the plan itself, and patients. All of this contributes to what Dr. Briesacher referred to as a “community” of health. Lastly, Dr. Briesacher talked about our digitally powered, transformational, consistently positive patient experience that Intermountain is building, which starts with our digital front door that removes as much friction as possible for patients to access our great care and services.

Dr. Neuwirth called Intermountain the “quintessential learning organization.” Listen to the podcast to learn more about how we’re building a model health system for the nation.
Intermountain Heart Institute’s Benjamin Horne, PhD authors study on air pollution in the American Journal of Respiratory and Critical Care Medicine

Benjamin Horne, PhD, Cardiovascular and Genetic Epidemiologist at Intermountain Heart Institute, led a study that was published in the *American Journal of Respiratory and Critical Care Medicine*—on air pollution. The groundbreaking study, “Short-Term Elevation of Fine Particulate Matter Air Pollution and Acute Lower Respiratory Infection,” is the largest to date on this health concern. According to this research, air pollution, even of short duration, increases the number of lower respiratory infections and can pose serious risks to young children.

Dr. Horne and colleagues studied 146,397 individuals who were treated for acute lower respiratory infection (ALRI) between 1999 and 2016 at Intermountain facilities throughout Utah’s Wasatch Front, where approximately 80 percent of Utah’s population resides. They also tracked PM$_{2.5}$ levels from air quality monitoring stations along the Wasatch Front. The research team found that short-term periods of elevated PM$_{2.5}$ were associated with increases in healthcare visits for ALRI in both children and adults—particularly newborns and toddlers up to age two, who represented 77 percent (112,467) of those who had an ALRI diagnosis.

In theorizing about the connection between PM$_{2.5}$ and ALRI, Dr. Horne said: “The air pollution itself may make the human body more susceptible to infection or may impair the body’s ability to fight off the infectious agents. It may be that PM$_{2.5}$ causes damage to the airway so that a virus can successfully cause an infection or that PM$_{2.5}$ impairs the immune response so that the body mounts a less effective response in fighting off the infection. This could lead to longer periods of ALRI symptoms or more severe symptoms requiring a higher intensity of medical care for the infected individual.”

He also added: “There’s no reason to panic here. When air pollution is high, avoid idling cars, stay distant from highways, stay indoors or go out in the early morning when pollution is usually lower.”

Read more on the study, which was featured in the *New York Times*, [here](#).
ARRIVE Study Makes the News

The much-awaited results of the ARRIVE study were presented last month at the annual meeting of the Society of Maternal Fetal Medicine. The study, sponsored by Eunice Kennedy Shriver NIHCHD Maternal-Fetal Medicine Units Network (MFMUN), enrolled just over 6,000 nulliparous women to be randomized to elective induction of labor (IOL) at 39 weeks and 0-4 days of gestation or expectant management (EM) out to 40 weeks and 5 days. The hypothesis behind the study is that IOL at 39 weeks will improve neonatal and maternal outcomes, and the primary outcome was a composite of adverse neonatal outcomes. Though the Utah MFMUN site is but one of 12 clinical sites, practices at Intermountain facilities and the University of Utah enrolled 20% of the subjects, thus making a major contribution to this important study. Utah Valley Regional Medical Center practices were particularly helpful participants in this study, and we are grateful for their support. The salient findings of the ARRIVE study were:

- The proportion of neonates with the primary outcome was similar between the two groups (4.4% in the IOL group and 5.4% in the EM group), but the need for respiratory support was less in the IOL group compared to the EM group (3% vs 4.2%).
- The cesarean delivery rate was lower in the IOL group compared to the EM group (18.6% vs 22.2%).
- Women in the IOL group has a significantly shorter postpartum hospital stay, higher perceived control of the childbirth process, and lower labor pain scores.

Several major issues regarding the study will be the subject of further investigation. Primary among these is how IOL in nulliparous women, who have a longer average length of labor, impacts our busy labor and delivery units and cost of care. Another is how well the results translate into general obstetric practice across the country. The final manuscript will be submitted to the New England Journal of Medicine.

If you have questions, please contact Ware Branch at Ware.Branch@imail.org.
According to the National Institutes of Health, more than 30 percent of drug overdoses involving opioids also involve benzodiazepines (benzos). The sedative, commonly prescribed for anxiety, can cause an overdose fatality particularly when combined with opioids because both types of drugs suppress breathing.

Sam Weber, MD, Psychiatrist at Intermountain Logan Psychiatry, talks about the issues around prescribing benzodiazepines for anxiety in his article, "Benzodiazepines: Sensible prescribing in light of the risks," published in the February 2018 edition of Current Psychiatry. In the article, he lists the risks associated with benzodiazepines, limitations to the drug, pharmacologic and nonpharmacologic alternatives, and paths to reducing or stopping benzodiazepine treatment. Click here to access the printable PDF.

This article is a must-read and aligns with Intermountain’s 2018 Healthiest Community Partner goal: to reduce harmful opioid epidemic impact by reducing the total opioid pills prescribed for acute conditions by 40% (entry), reducing patients on combined opioid/benzodiazepine by 15% (target), and increasing the number of patients on opioid treatment using buprenorphine by 10% (stretch). To support our patients’ safety and health outcomes—as Sam recommends—it’s important that you regularly review the Utah Controlled Substance Database website to evaluate active benzodiazepine-opioid combinations prescribed for your patients. Strongly consider using non-benzodiazepine treatments and support patients in tapering reduction or cessation by communicating the benefits to stopping as well as congratulating their progress. Read more of Dr. Weber’s recommendations in the article.

Intermountain is also enhancing walk-in access to 24/7 psychiatric and crisis care with its three Behavioral Access Centers at Dixie Regional Medical Center, McKay-Dee Hospital, and LDS Hospital. Patients experiencing mental health emergencies including severe anxiety and panic attacks can walk in to these locations or be referred from outpatient clinics or other settings.

If you have questions, please contact Dr. Sam Weber at Samuel.Weber@imail.org.
April Krutka, DO, Medical Director of Palliative Care Services at McKay-Dee Hospital, authors article in the Journal of Pain and Symptom Management

February 2018’s edition of the Journal of Pain and Symptom Management featured an article co-authored by April Krutka, DO, Medical Director for Palliative Care at McKay-Dee Hospital. The article, “Determining Palliative Care Penetration Rates in the Acute Care Setting,” details a study conducted by Dr. Krutka’s team at Intermountain in collaboration with Cerner to identify patients appropriate for palliative care services and highlights their work to develop an electronic referral algorithm.

Dr. Krutka, along with the Palliative Care Team at McKay-Dee Hospital and the Cerner Development Team, built a Palliative Care Algorithm that automatically identifies patients in the emergency department or admitted to the hospital who are seriously or chronically ill and may benefit from Palliative Care Services. The algorithm involves criteria including: qualifying ICD-10 codes that indicate serious or life-threatening illnesses, high utilization rates, limited functional status, and uncontrolled medical issues that could benefit from symptom management. Using the algorithm, the teams found that more than 25% of patients at McKay-Dee Hospital are appropriate for some level of palliative care—data that identifies the community need to expand Palliative Care Services at Intermountain.

“The algorithm gives clinicians a tool to provide the right care to the right patient at the right time,” says Dr. Krutka. “The algorithm can identify patients who may need an introduction to symptom management tools as they are living with a chronic illness. It will also identify patients who could benefit from a discussion on what their personal goals are, so care teams can start to build a medical plan around what is most important to them. The algorithm helps us personalize care for our patients and provide symptom management early in a person’s disease process to help improve their quality of life. This will allow people to spend their time doing whatever it is they enjoy, rather than spending time in clinical settings because they aren’t feeling well.”

Read the full article here.

If you have questions, please contact Dr. April Krutka at April.Krutka@imail.org.
A summary of recent Intermountain research news

Researchers showcase healthcare innovation at Intermountain-Stanford Researchers' Symposium

Intermountain Healthcare/Stanford Medicine researchers and senior leaders recently gathered to showcase how both organizations are working together to transform healthcare through innovative research. Discussions centered on the current state of healthcare and the Intermountain-Stanford collaboration's role in improving patient care and reducing healthcare costs. Read More >

Minimally-invasive heart procedure dramatically improves heart patients' quality of life, Intermountain study finds

Patients who undergo a transcatheter aortic valve replacement, or TAVR — a minimally-invasive surgical procedure that repairs a damaged heart valve — experienced a significant increase in their quality of life, according to a new study by Intermountain Healthcare researchers. Read More >

Dixie Regional launches a huge fundraising campaign for their $300 million hospital expansion

Efforts to expand and consolidate Dixie Regional Medical Center onto one campus got a boost this month with the launch of a fundraising campaign. The $300 million project includes a 410,000-square-foot expansion, as well as construction of a 117,000-square-foot comprehensive cancer center, which will house Intermountain Precision Genomics' research and development laboratory. Additionally, the expansion will bring all the services currently located at the 400 East campus to the River Road campus. Read More >

CHAMP app helps caregivers stay connected with heart patients remotely

Primary Children's Hospital is one of the first sites in the nation to pioneer the CHAMP® (Cardiac High Acuity Monitoring Program) app, developed to hopefully improve outcomes for complex heart patients: babies who are born with single ventricle heart disease and are in the critical inter-stage between surgeries. Read More >
Testing for calcium in the coronary arteries provides a better way to predict heart attack events than stress testing alone, Intermountain study finds

Researchers at the Intermountain Medical Center Heart Institute in Salt Lake City have found that incorporating underused, but available, imaging technologies such as PET/CT scans, more precisely predicts who's at risk for heart attacks and similar threats — in time to prevent them.

For their study researchers measured the level of calcium in the coronary arteries of patients during stress testing using two common diagnostic tests — positron emission tomography, or PET, and computed tomography, or CT — to determine a patient's risk of heart disease. Learn More >
A new Intermountain study will determine the benefit of proactive interventions in reducing premature births. Intermountain is launching the first study of its kind that will use a new test to identify up to 10,000 women who are at risk for premature birth, and, in those with high risk, to evaluate the impact of early interventions designed to prolong their pregnancies and reduce the rate of premature delivery. Learn More >

An Intermountain study finds a new combined risk score more effectively predicts stroke risks in patients who have atrial fibrillation. Doctors know patients with atrial fibrillation are at a higher risk of having a stroke, and now a new Intermountain study finds that integrating two separate clinical risk score models more accurately helps clinicians assess the stroke risk of patients with Afib. The composite stroke decision tool studied by researchers from the Intermountain Medical Center Heart Institute combines the widely used CHA2DS2-VASc with the Intermountain Risk Scores (IMRS) to derive and validate new stroke prediction scores. The study shows the new model, IMRS-VASc, was significantly more effective in predicting stroke risk and will give clinicians a more effective and accurate tool to assess patients with cardiovascular disease. Learn More >

Critical care/pulmonary researchers take the stage at a worldwide conference. Critical care and pulmonary clinical researchers from Intermountain Healthcare were in the spotlight at the 2018 American Thoracic Society annual scientific conference held last month in San Diego. Intermountain researchers presented or were involved in more than 35 posters and oral presentations, panel discussions, education sessions, and other leadership activities at the conference, which was attended by more than 13,000 critical care and pulmonary clinicians and researchers from around the world. Learn More >

An Intermountain risk score tool is shown to effectively predict the future risk of hospitalization for patients with pulmonary disease. Intermountain researchers have developed a new tool that utilizes basic laboratory tests to effectively identify patients with chronic obstructive pulmonary disease, who are at high risk of being hospitalized due to a flare-up of the condition. The new risk-score stratification tool, developed and validated in more than 132,000 patient records by researchers at Intermountain Medical Center, is unique in that it uses laboratory tests used in routine care to determine whether patients are at high or low risk of hospital admission in real time. Learn More >
New Intermountain research suggests a genetic link to a rare, life-threatening lung condition. Chronic thromboembolic pulmonary hypertension, which is a rare but deadly condition that can occur after initial treatment of a blood clot in the lung, may be an inherited genetic disease, according to a first-of-its-kind study from researchers at Intermountain Healthcare. Learn More >

Primary Children's exhibits at a research and academic conference outside the U.S. for the first time. The Primary Children's outreach team exhibited for the first time at a conference outside the U.S. — the Pediatric Academic Society Meeting in Toronto, Canada, earlier this month. The meeting involves thousands of pediatricians and other healthcare providers united by a common mission: improve the health and well-being of children worldwide. International participants include researchers, academics, clinical care providers, and community practitioners. Read More >

A study that identifies how community hospitals with fewer than 200 beds can develop antibiotic stewardship programs — which work to prevent the growth of antibiotic-resistant organisms, or "superbugs," which are becoming more common and deadly — was completed by researchers at Intermountain Healthcare and University of Utah Health. For the 15 month-study, researchers compared the impact of three types of antibiotic stewardship programs in 15 small hospitals within Intermountain. They found the most effective program used infectious disease physicians and pharmacists at a central hospital working with local pharmacists to reduce broad-spectrum antibiotic use by nearly 25 percent and total antibiotic use by 11 percent. Read more>

A record-breaking $5.1 million raised during the recent KSL Give-A-Thon will support research and other needs at Primary Children's Hospital. Read More >

Outpatient D-dimer critical value thresholds

As of May 9, 2018, Intermountain Healthcare laboratories classified elevated D-dimer results on outpatients as critical values and will phone results to providers. The critical value thresholds are the upper limits of the age-adjusted reference intervals.

D-dimer Reference Intervals

<table>
<thead>
<tr>
<th>Age</th>
<th>Upper Limit (ng/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–50 years</td>
<td>500</td>
</tr>
<tr>
<td>51–100 years</td>
<td>10 x Age</td>
</tr>
<tr>
<td>&gt;100 years</td>
<td>1000</td>
</tr>
</tbody>
</table>

Why is this change being made?

D-dimer is frequently used as a rule-out test for venous thromboembolism (VTE) because of its high negative predictive value. Positive results are non-diagnostic of VTE and require additional studies (e.g., imaging) when VTE is suspected. Providers have asked Laboratory Services to classify positive D-dimer results as critical values to trigger expedited notification and facilitate earlier intervention.
If you have questions, please contact Sterling Bennett, MD, Medical Director of Laboratory Services Hematology Workgroup, at 801-507-2135 or sterling.bennett@imail2.org.
RxMatch, a service that uses genomic sequencing to customize medication prescriptions based on each patient’s DNA, is now available for use by all Intermountain providers. Originally launched in 2017 by Intermountain Precision Genomics to customize prescriptions for antidepressant medications, the new RxMatch comprehensive panel helps doctors better prescribe opioids, statins, immunosuppressants, anti-depressants, and many other medications.

"The objective of this project is to provide the most comprehensive and evidence-based information to the physician, thus decreasing the amount of time and money spent to deliver the correct medication," says David Loughmiller, lab manager for Precision Genomics.

How does it work? Patients supply a DNA sample using a cheek swab collected in their physician’s office. "The DNA sample is assayed and analyzed in our clinical laboratory," says Tom Neuwerth, a clinical technology consultant in the Intermountain Precision Genomics Lab. "Next, the results are used to guide proper dosage based on a patient’s specific DNA genotype. Small genetic variations impact how a patient metabolizes and responds to drugs. Our test helps ordering providers prescribe the right medication, at the right dose, at the right time."

Once the sample is received, a comprehensive report is available within about a week. One doctor who viewed an example of the report said, "We should have a report like this for all of our patients."

Benefits of RxMatch
- Reduces repeat visits for dosing and drug side effects
- Reduces money wasted on incorrect medications or doses
- Thorough reports are available for providers in iCentra, fax, or email
- Is covered by many insurance plans

Three facts about prescription medications
- 82 percent of Americans take at least one medication
- Genetic variations influence the way drugs are processed by the body
- 50 percent of medications taken by patients are ineffective

To request training or to order an RxMatch starter kit for a physician office, please call 435-251-5780 or visit Intermountain.com/RxMatch.
Implementing Precision Medicine and Genomics in Primary Care

Precision Medicine. Precision Genomics. Precision Health. It all sounds very precise. Some consider these terms interchangeable, yet a conversation with Lincoln Nadauld, MD, PhD, Chief Science Officer and Executive Director of Precision Genomics at Intermountain Healthcare helps make sense of various terms concerning precision medicine describes the path Intermountain Healthcare is on to make a difference for patients. According to Nadauld:

“Precision medicine is the application of genomic, molecular, and personal information to inform personalized health treatment plans. Precision health is the application of precision medicine principles (the use of genomic, molecular, personal health information) to entire populations. Precision medicine is reactive, precision health is preventative. Intermountain Precision Health™ is the service line of Intermountain Healthcare that considers health and wellness of the patient across their life span.

Intermountain Precision Genomics™ and Intermountain Precision Health™ utilizes genomic, molecular, inherited, and personal health information to implement comprehensive wellness strategies to help individuals and populations live the healthiest lives possible.”

CARE PROCESS MODEL

Intermountain Healthcare’s care process model of clinical implementation of precision medicine can provide patients the best care through use of new technology. According to Tyler Haberle, MD, FACP, “Intermountain Precision Genomics has already started engaging with primary care, behavioral health, and Care Transformation Services to deliver not just the clinical care and laboratory results, but an EMR solution that augments care rather than interrupts or adds cognitive burden.”

Intermountain Precision Genomics offers a range of precision medicine services directly in the iCentra environment and provides a personalized approach to patient care:
RxMatch™ Comprehensive Panel is a genomic solution to pharmacogenomics. The objective of this project is to provide the most comprehensive and evidence-based information to the physician, thus decreasing the amount of time and money spent to achieve the correct medication.

The unique ICG100™ test for late stage cancer often matches a targeted medication to specific DNA tumor mutations and the newly launched HerediGene™ test identifies gene mutations that may put patients at risk for hereditary breast cancer.

For more information about implementing genomics into your practice please email genomics@imail.org or call a Genomic Navigator at (435) 521-5780. To schedule training to integrate precision genomics with your office staff contact KC.Fisher@imail.org.
Donors bring Intermountain research projects to life

Learn how to apply for a future grant

Thanks to gifts from generous donors, the Intermountain Research and Medical Foundation (IRMF) provides seed grant funding for medical research that leads to clinical application. Since 1977, more than $13.3 million in grants has been awarded. In addition to contributing to the body of medical knowledge through publications and presentations, Foundation-funded research improves patient care, reduces medical expense, and saves lives.

There are four funding cycles per year. For the second quarter of 2018, the Foundation’s research review committee, chaired by Brent Muhlestein, MD approved the following projects, with each receiving up to $60,000:

Investigator Nathan Dean, MD received a grant to develop a way to identify patients who have a high risk for drug-resistant urinary tract infection, which requires a stronger antibiotic than the standard prescription. Knowing this information would help target antibiotic usage appropriately and prevent the development of additional antibiotic resistant strains of bacteria.

A study headed by Kismet Rasmusson, DNP, FNP received funding for a home-like simulation room that teaches post-discharge aftercare techniques to heart patients that help prevent readmission.

Investigator David S. Morris, MD, FCS will assess the advantages of using a rapid infusion device to pump whole blood into the bodies of trauma patients. In the lab, Dr. Morris will study the side effects, outcomes, and value of rapid injection of whole blood vs. platelets.

A grant will help Mark Shah, MD develop an objective triage tool for use in mass disasters or emergency situations that involves identifying exacerbations of existing conditions.

All Intermountain researchers may apply for IRMF seed grants. Application information is available by contacting Jenn Mason, Foundation Office Coordinator, by email at Jenn.Mason@imail.org or by phone at 801-507-2040.
Intermountain's efforts to reduce medical waste earn praise from the World Economic Forum

Intermountain’s work to reduce medical waste is featured in a new white paper released this month by the World Economic Forum about sustainability efforts around the world. The white paper, "Circular Economy in Cities: Evolving the Model for a Sustainable Urban Future," examines the impact of industrialized waste on the environment and shares examples from around the globe of organizations taking innovative steps to reduce waste and better use resources. It shares examples of groups channeling used building materials to new building sites, water harvesting and reuse, reducing energy use and electronic waste, and limiting waste in healthcare and procurement.

Here's the Intermountain case study cited in the white paper:
"The Performance Certified HARMONIC® Program sterilely reprocesses medical devices to the original equipment manufacturer standards so they can be reused. Working with partners such as 3M and Philips Healthcare, Intermountain Healthcare has identified 800 items from areas like cardiovascular, orthopedics, general surgery, and nursing care that can be reprocessed — with an additional 350 items being evaluated. Items are marked each time they're used, and some can be reused as many as 20 times before being sent for recycling, both for plastic and metal parts. The program diverted 186,476 items, weighing 37 tons, from landfills in 2017. The biggest challenge is getting FDA approval, which also requires other healthcare providers to be on board."

Steven Bergstrom, Director of Sustainability, says: "In recent years, Intermountain has redoubled our efforts to care for the communities we serve by implementing sustainability programs and practices that reduce our impact on the environment. We realize there's still much to be done, but it's an honor to have our efforts recognized by the World Economic Forum alongside global sustainability leaders. This recognition is a result of the hard work of hundreds of caregivers throughout the system."

Click to download the entire white paper.

For more information, contact Steven Bergstrom at Steven.Bergstrom@imail.org.
Article in JAMA says Americans average $9,403 per person in annual healthcare spend. What's driving these costs?

In an essay published earlier in March in *JAMA*, healthcare policy expert Ezekiel J. Emanuel, MD said Americans average $9,403 per person in annual healthcare spending. By comparison, Germans and Dutch average $5,182 and $5,202 respectively.

Why do we have such high costs here? One reason is our high-price, high-volume surgical procedures such as caesareans, knee and hip replacements, coronary artery bypasses, and angioplasties. Americans per-capita spend two to six times more on these procedures than their peer country counterparts. Second, excessive administrative burdens in this country drive spending, with per-capita costs that are three- to five-times higher than costs in peer countries.

The third driver is medical imaging procedures, meaning mostly CT scans and MRIs, which involve both high prices and high volumes. "CT scans alone account for $220 in annual per-capita spending in the U.S., compared to $23 per-capita in the Netherlands," says Dr. Emanuel. The fourth driver is pharmaceutical spending. Americans spend $1,443 per capita on pharmaceuticals, versus $566 for Swedes, for example, yet this huge excess is almost entirely due to higher U.S. prices, not higher volume.

“The high-cost trajectory of healthcare is not a healthy or sustainable course to be on,” says Mark Briesacher, MD, Chief Physician Executive and President of the Medical Group. “At Intermountain, it is our responsibility to address high costs and help make healthcare more affordable, and therefore accessible, for our patients and communities. We’re transitioning to be more efficient, to minimize the up-and-down redundancies and maximize side-to-side workflows, coordination, and decision-making. It’s our opportunity to lower costs, to elevate healthcare to the next level.”

Read more about the high costs of healthcare here.

For more information, contact Susan DuBois at susan.dubois@imail.org.
Progress toward our opioid reduction goals

Intermountain continues to work aggressively to address opioid misuse and overdoses, and specifically to achieve our 2018 goals—to reduce harmful opioid epidemic impact by reducing the total opioid pills prescribed for acute conditions by 40%, reducing patients on combined opioid/benzodiazepine by 15%, and increasing the number of patients on medication-assisted treatment (MAT) like buprenorphine to help people with potential misuse disorder to reduce or quit opioids, by 10%.

In a recent podcast, Mark Briesacher, MD, Chief Physician Executive and President of Intermountain Medical Group, sat down with Dr. Hasleton and David Skarda, MD, Medical Director for the Surgical Services Clinical Program, to discuss how physicians and clinicians can talk with their patients about opioids and offer pain management alternatives. Listen to the podcast here.

Year to date, we have seen a 20% reduction in the number of pills prescribed for acute pain over our counts in 2017. This reduction is helping our patients manage their pain more appropriately and reducing their risk for misuse.

We have also seen a small reduction in patients being co-prescribed opioids and benzodiazepine—prescribing these medications together can be fatal so any reduction is a success both for Intermountain and the patients who trust us to care for them and keep them safe.

Watch a video on Opioid Alternatives, featuring Dr. Jay Bishoff, here.

Click here for resources, tools, and flashcards to help you manage prescription opioids.
Patients receiving MAT has increased by more than 7% percent, which is more than halfway to our goal and is helping patients find better alternatives to managing their pain.

In support of our opioid reduction goals, each clinic should continue to perform vital behaviors, including:

- Utilize the Opioid Use Dashboard, review your prescribing patterns compared to benchmarks, and identify opportunities for improvement.

- Capture dashboard information on your huddle boards and assign a team or individual to own key performance indicators and report on opioid goal updates.

- Discuss with your team high-risk patients as well as medication-assisted treatments and other approaches to reduce their opioid use while managing their pain.

- Only prescribe opioids through iCentra so that we can accurately track all opioid prescriptions.

Intermountain is raising awareness to the public in podcasts, media interviews, and community outreach and educational campaigns. Dr. David Hasleton, Senior Medical Director for Specialty Based Care, has been talking with prescribing clinicians across the system about how they can help support their patients and the system opioid goals. What’s helping, too, are the stories clinicians are sharing with each other—for example, the one about a patient who came to Intermountain for lumbar spine surgery, was identified for opioid misuse, has been helped off these medications entirely, and is on the path to health.

Keep up the good work and let’s continue to help our patients find the safest paths to being healthy and feeling well.

For more information, please contact Dave Hasleton, MD, at David.Hasleton@imail.org.
New Informed Consent Agreement and fact sheet for opioids only

This year, the Functional Restoration Development team created a new Informed Consent Agreement and Fact Sheet (for Opioids ONLY). These two documents can be used when prescribing opioids for new chronic pain patients and when the Agreement (MMA) is reviewed each year during the annual visit.

OLD Consent Form: Controlled Substance Medication Management Agreement should only be used for non-opioid medications in the future (benzos, ADHD meds, etc.); as a new MMA-Opioids ONLY Agreement was recently developed and approved this week.

NEW Consent Form: Medication Management Agreement-Opioid can be found on this link and through the iPrint store: https://kr.ihc.com/ckr/Dcmnt?ncid=529605627&tfrm=default

NEW associated Fact Sheet: Opioid Medicine for Chronic Pain should always be used in conjunction with the new Opioid Agreement. It can be found at: https://kr.ihc.com/ckr/Dcmnt?ncid=520978022&tfrm=default

Some changes include: “Get your opioid prescriptions from only one healthcare provider and one pharmacy. In an unusual situation when you have to go to a different doctor, tell your original prescribing provider right away. Never get opioid medicine from anyone who is not a healthcare provider…”

The Pain Management website also has an educational video to help educate patients on the Medication Management Agreement and opioid therapy.

Please contact Linda Caston at Linda.Caston@imail.org for additional information.

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Pain Management and Opioids: Balancing Risks and Benefits – CO*RE/REMS training opioid prescribers

CO*RE/REMS training will be held on December 1, 2018, in the Education Center at Park City Hospital, Park City, UT, and meets Utah Department of Occupational and Professional Licensing (DOPL) controlled substance prescribing requirements.

Click this link to add this activity to your calendar. Register at IntermountainCME.org or by calling the Intermountain CME office at 801-442-3930.

Training will occur during the Integrated Pain Symposium at Park City Hospital. If you plan to attend both activities, you must sign up for both.
New 2018 Utah Clinical Guidelines on prescribing opioids

In 2016, the Utah State Legislature passed House Bill 192 to appropriate funding to establish a program aimed at reducing deaths and other harm from prescription opioids. The bill directs the Department of Health to update the *Utah Clinical Guidelines on Prescribing Opioids for Treatment of Pain* and promote its use by prescribers and dispensers of opioids.

New guidelines for 2018 have been developed by the Utah Department of Health and the Utah Medical Association and can be viewed [here](https://health.utah.gov).

“It is our hope that the guidance in this document will educate both the public and clinicians about appropriate use of these medications which will, if followed, significantly reduce deaths from misuse and abuse, but at the same time allow for the control of chronic pain with proper use of opioid medications.”

If you have any questions, please contact Linda Caston at Linda.Caston@imail.org.
New 2018 Law: Checking the Utah Controlled Substance Database

In 2018, the Utah legislature signed HB 127 requiring a prescriber prescribing controlled substances to check the Controlled Substance Database for prescriptions written to a patient for the first time. The prescriber:

- Shall check the database before the first time the prescriber gives a Schedule II opioid or a Schedule III opioid;
- Shall periodically review information about the patient in the database or similar records of controlled substances filled by the patient, if a prescriber is repeatedly prescribing a Schedule II opioid or Schedule III opioid to a patient;
- May assign the access and review required to one or more employees.

Utah healthcare providers licensed to prescribe controlled substances are required to participate in the online continuing education on Schedule II and III substances.

Intermountain pain services providers will provide the required in-person continuing education on December 1st at the Blair Education Center in Park City as part of the Annual Pain Symposium. Refer to page 11 of the Prescribing Opioids for Chronic Non-Cancer Pain CPM for details on how to access the Controlled Substance Database.

Please contact Linda Caston in Pain Management Clinical Services at Linda.Caston@imail.org for additional information.

Medicare Coverage Decisions for Pain Management

Pain Management Clinical Services is a clinical service line within Intermountain Healthcare that aims to provide a multimodal approach to care that is patient-centered and evidence-based to assist with better function and quality of life.

In order to stay updated on routine Medicare coverage changes for pain management procedures, please visit the Regulatory section of the Pain Management website on Intermountain.net. You will also find a Pain and Opioid Management toolkit with educational materials, tapering guidelines, Controlled Substance Agreement, and much more.

If you have any questions, please contact Linda Caston at Linda.Caston@imail.org.
Evaluation and Treatment is now available for Opioid Use Disorder at the Layton Pain Clinic

The Layton Pain Clinic is now offering evaluation and treatment for Opioid Use Disorder. Treatment providers include Jeremiah West, MD, Joel Porter, MD, Andrew Cardon, NP, James Hellewell, MD, Ryan Horning, PA, and Grant Child, CMHC.

What is Opioid Use Disorder?
A person may have Opioid Use Disorder if they want to stop using opioids but can’t.

How are patients treated for Opioid Use Disorder?
Medication Assisted Treatment (MAT) is treatment for Opioid Use Disorder using medications like buprenorphine in addition to other modalities. Individuals treated with MAT often experience improved behavioral and psychosocial functioning. If you have questions or would like to refer for an evaluation, contact the Layton Pain Clinic at 801-779-6330.

“We know that people can and do recover from opioid use disorders when they receive appropriate treatment, and medication assisted treatment’s success in treating opioid use disorders is well documented.” – Dr. Elinore F. McCance-Katz, Assistant Secretary for Mental Health and Substance Use

View the new Intermountain Opioid Management video here.

If you have additional questions or would like information about other facilities offering these services, please contact Linda Caston, Pain Management Clinical Services, at Linda.Caston@imail.org.