Bill Norwood, the gifted congenital heart surgeon, has passed away.

Marshall Jacobs, a surgical colleague, wrote an eloquent obituary:

William Imon Norwood, Jr. was born in Camden, Arkansas April 21, 1941. Bill’s family moved to Los Alamos, New Mexico, where his father, a scientist, worked at the newly created Los Alamos Laboratory. Bill won an appointment to attend the Air Force Academy following High School graduation. He left the Academy after two years, transferring to the University of New Mexico to pursue pre-medical studies. Bill finished college in New Mexico and went on to the University of Colorado Medical School, graduating in 1967. He pursued surgical training at the University of Minnesota, where pioneer cardiac surgeons like Richard Varco and C. Walton Lillehei were on the faculty. Then, upon completion of a Ph.D. in Biophysics and a general surgery residency in 1974, he was invited by Dr. Aldo Castaneda to come to Boston for specialty training residencies
in Thoracic and Cardiovascular Surgery at Harvard Medical School. “The rest,” as they say, “is history.”

Bill went on to make countless enormous contributions to the rapidly progressing field of surgical management of congenital heart disease. He advocated for anatomic repair of transposition of the great arteries in the neonatal period, recognizing the unique but limited “window of opportunity” that existed because of the innately “prepared” nature the left ventricle of newborns with TGA, and did some of the first neonatal arterial switch operations. He went on to be the lead author of one of the early CHSS studies of intermediate results after the arterial switch repair. He pursued complete repair, rather than palliation, of more complex anomalies such as those combining interrupted aortic arch with intracardiac defects. And success was achieved, not just through technical prowess in rearranging the anatomy, but through a scientific AND intuitive approach in the operating room which included efficient use of hypothermia and of cardiopulmonary bypass, in ways that minimized its deleterious effects, based on Bill’s pursuit in the laboratory of an understanding of responses at the cellular level and the microcirculation to biochemical alterations related to anoxia and reperfusion. His care of patients in the intensive care unit was based not on a protocol but on their physiology.

Dr. Norwood’s name is known worldwide, largely in association with his personal development of staged reconstructive surgical management of Hypoplastic Left Heart Syndrome. The Stage 1 Norwood operation, once a subject of skepticism, and then of envy, is today by far the most frequently performed complex neonatal cardiovascular reconstruction. But this was much more than a technical achievement. Bill was convinced that the well-developed right ventricle, which had supported the development in utero of a complete child, could be put to efficient use postnatally to support, for a limited period of time, both the systemic and pulmonary circulations, while carefully controlling pulmonary blood flow so that the pulmonary vasculature was adequately protected in anticipation of eventual conversion to functionally univentricular circulation based on principles embraced by Fontan and Kreutzer in their management of patients with tricuspid atresia. His belief that conversion to the Fontan circulation should be done in phases, allowing the single ventricle to “remodel” in response to the initial change in loading conditions before completing the total cavopulmonary connection remains the basis for successful management of single ventricle anomalies to this day.

The lives of literally tens of thousands of families in all parts of the world have been touched by Bill’s contributions. Many thousands were direct recipients of Bill’s outstanding care, having benefitted directly from his incomparable surgical skill and his genius in harnessing the fundamentals of cardiovascular physiology to optimize the outcomes from surgical therapies. Many, many more were beneficiaries of Bill’s gifts, through the work of countless other surgeons, cardiologists, anesthesiologists, nurses and others whose careers were directly impacted by his teachings, his mentorship, and the advanced understanding of congenital heart disease that he promoted.

Bill’s belief in his patients, and in the “life force” that motivates a small baby to go living despite the enormous burden of abnormal circulatory physiology, enabled Bill to face challenge after challenge, and to create one solution after another. Bill liked to quote the late Theodore Levitt, former professor at the Harvard Business School and editor of Harvard Business Review, who said: “Creativity is thinking up new things. Innovation is doing new things.” We are all indebted to Bill Norwood for having the Curiosity, Determination and Genius that it takes to Think Up New Things.... for the Empathy, Faith and Courage that it takes to Do New Things....And For the generosity to use those gifts to improve so many, many lives.
Perry M. Butterfield, age 88, died suddenly and unexpectedly at home of natural causes (not related to COVID) on December 2, 2020. Click here to read her full obituary/tribute in The Denver Post.

Kristen Nadeau, MD, was elected to the American Society of Clinical Investigation (ASCI).

Allison Kempe, MD’s article, “Parental Hesitancy About Routine Childhood and Influenza Vaccinations: A National Survey”, made the list of Pediatrics Top 10 Articles of 2020.

Dr. James Feinstein’s K23 research was featured at the top of the home page of the National Institute of Child Health and Human Development’s (NICHD)’s website.

Early this October in response to the COVID-19 pandemic and ensuing global protests, the Kempe Center for the Prevention and Treatment of Child Abuse and Neglect hosted its first international virtual conference, “A Call to Action to Change Child Welfare”. Over 1,400 people attended this groundbreaking event joining from 20 countries around the world. This diverse international community of practice convened to address issues of justice, social inequality, race equity, family leadership and oppression in the child welfare and allied systems and begin to discuss, debate and solution build on how systems, communities and individuals can begin the process of fundamentally changing the structure of these systems. It was a New York Times Opinion piece by David Brooks that planted the seed with the event organizers—he suggested—from studying pandemics from a historic perspective—that we have an opportunity to create a redemptive narrative to improve society and encouraged everyday citizens to innovate their work and use the pandemic as a motivator for change.

A Kempe Team of 10 faculty and staff collaborated over 5 months to create a highly ambitious conference agenda: 270 unique sessions were offered over this 4-day event that spanned 17 hours each day, promoting new thinking, new behaviors and new decision-making advocating that children, family, and community need to be the driving force in changing child welfare systems. Major foundations, two consulting and research firms and a large State child welfare agency also co-sponsored the conference. The event welcomed those with lived experience—parents, youth alumni and kinship care providers; child welfare practitioners, supervisors, administrators; legal, mental health, and medical professionals; community and neighborhood leaders; researchers; policymakers; advocates; and other thought leaders from around the world. Kempe believes that each of us—no matter our role—can make micro and macro changes in practice, policy, research, training, systems, and law to create an improved, socially just and fair child welfare system.

For those who missed this incredible event, you can now purchase access to the On-Demand Video archive. View the 140+ hours of groundbreaking learning generated from the conference and enjoy all keynotes & workshops on your own time. Receive notifications about future e-learning offerings exclusive to the A Call to Action international community of practice and join the movement to re-envision and rethink child welfare through mobilizing child, family, community partnerships and leadership!

Cara Mack, MD, was appointed to Scientific Program Committee, American Association for the Study of Liver Diseases.

The American Academy of Pediatrics (AAP) Section on Pediatric Trainees (SOPT) appointed Dr. Annemarie Wolfe (pulmonary fellow) to the position of Subspecialty Fellowship Trainee Delegate for Pulmonology for 2020-2021.
Six medical students from the Gold Humanism Honor Society (GHHS), **Tosin Adebiyi, Kitty Branche, Noelle Carrillo [and family!], Katherine Ketcham, Josten Overall and Delia Shash**, created a holiday caroling video at Children’s Hospital Colorado, in an effort to keep the tradition going in spite of the pandemic. This annual event is a cherished experience for patients and their families and an opportunity for our student vocalists to bring holiday music and cheer to the hospitalized children, their families and the staff caring for them. It has already been shared with the hospitalized children via Seacrest Studios. Special thanks to Josten for editing and producing this amazing video, to the CHCO and Seacrest Studios broadcast and communications specialists, Micah Bridges and Chris Coleman, and to Dr. Indira Sriram (CUSOM Class of 2019), for all their support. They made it possible to broadcast this video to patients’ rooms.

**Kevin Messacar, MD,** associate professor of pediatrics, is one of the authors of the article, “**Acute Flaccid Myelitis: Cause, Diagnosis, and Management,**” published last week in The Lancet. The article is a comprehensive review of acute flaccid myelitis (AFM), a disabling, polio-like illness that mainly affects children. Kevin has been one of the leaders in diagnosing and treating cases, a cluster of which was recognized in Colorado in 2014. Infection by enterovirus D68 is believed to be the cause, but how it leads to AFM is not fully understood. The infection leads to profound muscle weakness, which can lead to respiratory failure and other severe health problems. This article collects current information about AFM, but also notes that there are critical gaps to our understanding and calls for more research.

**INVITED SPEAKERS**

**Pediatric Cardiology Tour Across America, National Institute of Cardiology, Mexico City, Mexico- December 8, 2020. (Virtual)**

- **Dr. Dunbar Ivy**- “**Pulmonary Vasodilators in the Fontan Circulation**”

- **Dr. Jenny Zablah**- “**Transcatheter Interventions in the Early Postoperative Period After Fontan**”

- **Gareth Morgan, MD**- “**Our Approach to Fenestration Device Closure: When (and how) to Close vs. When Should We Leave Open?**”

- **Michael DiMaria, MD**- “**The Long and Winding Road: Surveillance and Long-term Follow-Up of Fontan Patients**”

**CSI Neil’s challenging cases, International Webinar- December 18, 2020**

- **Gareth Morgan, MD**- moderator
- **Dr. Jenny Zablah**- presented, “**This Little Piggy Went to… the Omphalocele**”

**Katie Dorris, MD,** presented at the Annual Meeting of the American Academy of Neurological Surgery, CNS Section on Pediatric Neurological Surgery. Her presentation titled, “**Surgically Relevant Clinical Trials Being Conducted by Pediatric Neuro-Oncology Consortia**” was on December 2nd, 2020.

**Christopher McKinney, MD,** presented an oral abstract titled “**1537 Hematopoietic Cell Transplantation for Congenital Dyserythropoietic Anemia: A Report from the Pediatric**
Transplant and Cellular Therapy Consortium (PTCTC)“ at the 2020 American Society of Hematology (ASH) conference on Saturday, December 5, 2020.


Amy Smith, Arzu Onar-Thomas, David Ellison, Emily Owens Pickle, Shengjie Wu, Sarah ES Leary, Maryam Fouladi, Thomas Merchant, Amar Gajjar, Amar Gajjar, Nicholas Foreman, MD, presented their oral abstract at the International Symposium on Pediatric Neuro-Oncology (ISPNO) titled, “Phase III Randomized Trial of Post-Radiation Chemotherapy in Patients with Newly Diagnosed Ependymoma Ages 1 to 21 years” on December 14th, 2020.

Bethany Veo, Etienne Danis, Susan Fosmire, Dong Wang, Angela Pierce, Nathan Dahl, MD, Sana Karam, MD, PhD, Natalie Serkova, PhD, Sujatha Venkataraman, PhD, Rajeev Vibhakar MD, PhD, presented their oral abstract at the International Symposium on Pediatric Neuro-Oncology (ISPNO) titled, “CDK7 Mediated Transcriptional Processivity of DNA Repair Networks Regulates Sensitivity to Radiation in Myc Driven Medulloblastoma,” on December 14th, 2020.

Andrew Donson, Austin Gillen, Riemondy Kent, Ahmed Gilani, MBBS, PhD, Sujatha Venkataraman, PhD, Bridget Sanford, Andrea Griesinger, Vladimir Amani, Todd Hankinson, MD, Michael Handler, MD, Jay Hesselberth, PhD, Rajeev Vibhakar, MD, PhD, Nicholas Foreman, MD, presented their oral abstract at the International Symposium on Pediatric Neuro-Oncology (ISPNO) titled “Single-Cell Rhaseq of Childhood Ependymoma Reveals Distinct Neoplastic Cell Subpopulations that Impact Etiology, Molecular Classification and Outcome,” on December 14th, 2020.


Sydney Grob, Lianna Nobre, Kurtis Davies, Scott Ryall, Dara Aisner, MD, PhD, Lindsey Hoffman, Shadi Zahedi, Andrew Morin, Anandani Nellan, MD Adam Green, MD, Nicholas Foreman, MD, Rajeev Vibhakar, MD, PhD Todd Hankinson, MD, Michael Handler, MD, Cynthia Hawkins, Uri Tabori, BK Kleinschmidt-DeMasters, MD, and

Shikha Sundaram, MD, MSCS, was a Visiting Professor at the Children’s Hospital of Los Angeles (virtual) - Research grand rounds at the Saban Research Institute. Title: “Sleep Apnea and NASH: The Impact of Snoring on “Nashville”.

PFIC Advocacy and Research Network, Inc.
Progressive Familial Intrahepatic Cholestasis 101 Webinar for Patients and Families
December 8, 2020.

“PFIC 101: How Genetic Mutations Lead to Disease”-Cara Mack, MD
“Nutritional Management for PFIC”-Kelly Klczkiewicz, RD, CSP
“My Child is Yellow and Itches! Medical and Surgical Management of PFIC”-Amy Feldman, MD
“When to Consider Liver Transplantation for PFIC”- Dania Brigham, MD
“Clinical Trial Considerations and Future Therapies for PFIC”-Cara Mack, MD

Christian Mosimann, PhD. Johnson Chair, Associate Professor, spoke as invited speaker at the 2020 annual meeting of the International Society of Heart Research, North American Section (ISHR-NAS) on “Uncovering Mechanisms of Congenital Cardiovascular Anomalies Using Zebrafish”. December 6, 2020.

Christian Mosimann, PhD. Johnson Chair, Associate Professor, presented at the Cardiology Research Conference of the Division of Cardiology, CU Anschutz, the talk “Decoding Mechanisms of Cardiac Congenital Anomalies with Zebrafish”. December 14, 2020.


Adriana Weinberg, MD, was an invited speaker at the Mountain States COVID-19 Infectious Diseases ECHO Program on 12/8/20. Title of the talk: “Detection of SARS CoV 2 in Respiratory Specimens.”

American Headache Society (AHS) Annual Meeting – November:

Marcy Yonker, MD, virtually presented, “And the Answer Is”.

Elizabeth “Liz” Ackley, MD, a current Child Neurology Resident, received a “Frontiers in Headache Research Award” for her poster “Dots and Spots: What Do White Matter Lesions Mean?” presentation. Dr. Marcy Yonker was her co-author and mentor on the poster.

American Epilepsy Society (AES) multi-day virtual Annual Meeting – December:

Joshua Bear, MD:
- Virtually presented and was first author of the poster entitled, “Spike-Associated Networks Identify Critical Nodes and Predict Post-Surgical Outcomes in Refractory Epilepsy”
- He was co-moderator for AES2020 Platform A – Translational Research/Genetics
- He is a newly appointed member of the AES Clinical Research Committee
Kelly Knupp, MD, was the Chair of the Annual Course Committee. The overall topic was, “Advances in the Diagnosis and Treatment of Epilepsy in 2020” and had 21 speakers participate virtually.

Krista Eschbach, MD, presented the abstract entitled, “The New-Onset Refractory Status Epilepticus (NORSE / FIRES) Family Registry”.

AWARDS

Carol Okada, MD, is a recipient of the 14th Annual Faculty Professionalism Award, which will be presented at a future Faculty Senate meeting. One nomination letter read: “She elegantly weaves an ask of others that they hold themselves to a high standard as physicians and people, while simultaneously nurturing their growth and supporting them through difficult moments.”

Katie Dorris, MD, and Children’s Hospital Colorado was selected by the Children’s Oncology Group as a lead institution for her COG Autopsy Initiative Proposal.
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