

# OPERATIVE NOTES

American Academy of Pediatrics - Section on Surgery Newsletter

## Register for the NCE - October 20-22, 2023 in Washington DC

**R**egistration is now open for the fall NCE Meeting in Washington DC. This will be sure to be a meeting that you will want to attend as we mark the AAP Section on Surgery's 75th Anniversary. Many events are planned related to this important event in the history of the Section. Add to that our outstanding series of presentations, symposia, award presentations, and the focus on advocacy in the nation's capital. Circle the dates, register now, and get your hotel rooms early before they fill up. For those planning on attending the ACS this year, remember that the meeting is also on the East coast in Boston meaning a combined trip is certainly possible.

[Link to register for NCE meeting](#) **HERE**

[Link for hotels](#) **HERE**



## AAP Hosts Virtual Gun Violence Prevention Town Hall on July 25, 2023

**G**uns are now the leading cause of death for US children and teens, surpassing car accidents in 2020. Firearms accounted for nearly 19% of childhood deaths (ages 1-18) in 2021, according to the CDC. Nearly 3600 children died in gun-related incidents that year. The American Academy of Pediatrics will hold a virtual town hall on gun violence prevention. This will be open to all interested AAP members. We believe strongly that surgeons who are often on the front lines caring for those injured will be interested in joining this important event. This interactive virtual event will be a chance to hear from AAP leaders and issue experts, connect with others who are passionate about gun violence prevention, and share your input to inform AAP's expanding work on this critical issue. Please be prepared to bring stories that will illustrate the major impact that gun violence is having on our patients today. It will be held on July 25, 2023 at 7:00 PM to 8:30 PM EDT. Please click [HERE](#) to register for this important town hall.

# AAP Issues Guidance on Pediatric Organ Donation and Transplantation

Each year, more than 1,700 children and teens receive organ transplants to extend their lives. Hundreds of others remain on waiting lists for life-saving transplants.

In an updated policy statement, “**Pediatric Organ Donation and Transplantation: Across the Care Continuum**,” the AAP offers guidance to pediatricians who work with families as they navigate difficult questions and decisions surrounding organ donation and transplantation.

*“These are important conversations, and it’s best that pediatricians are prepared and comfortable in providing anticipatory guidance about organ donation,”* said Benson Hsu, MD, MBA, FAAP, an author of the statement, written by the Committee on Hospital Care, Section on Critical Care, Section on Surgery, and Committee on Bioethics.

*“This may come up during a regular office visit with a teenager who is asked about organ donation when registering for a first driver’s license. In other cases, a pediatrician may be helping support a family facing end-of-life care.”*

The statement, published in the August 2023 issue of *Pediatrics*, (published online July 24, 2023) addresses organ donation and indications for transplant, the structure of transplant teams, the need for both medical and psychosocial support for recipients and their families, and important ethical issues that frequently arise in organ donation and transplantation.

While a clinician may be hesitant to introduce the topic, few families of either adults or children or adolescents appear to suffer psychological harm by having the option of donation presented to them, according to research cited in the statement.

## The American Academy of Pediatrics recommends:

- Pediatric health care professionals need to be aware of basic and current knowledge of donation and transplantation medicine, ethics, and policies.
- Teens and older children should be engaged in discussions about organ donation and transplantation, to the extent that their medical condition allows.
- Children and teens with intellectual and developmental disabilities are not categorically excluded from organ donation or as transplant recipients.
- Organ donors and organ transplant recipients and their families will require support from a multidisciplinary care team that includes a variety of primary and specialist care providers and surgeons, critical care team, child life specialists, spiritual support providers, and others.
- Discussions should respect the child’s or adolescent’s emerging autonomy while acknowledging the important role of parents

In 2021, nearly half of children waiting for an organ transplant had waited for more than one year. Some children and teens die waiting for a life-saving organ transplant, and children younger than one year of age have the highest death rate waiting for an organ transplant. Disparities exist by race and ethnicity as well.

## Liaison Report: Committee on Child Health Financing (COCHF) and Payer Advocacy Advisory Committee (PAAC)



Mike Chen, MD, FAAP

The vision of the **Committee on Child Health Financing (COCHF)** is to ensure that proper funding is available for all infants, children, adolescents and young adults to have access to comprehensive quality health insurance, and for pediatric medical providers to receive adequate payment to provide those services. The committee monitors policy changes in regards to private and public financing of children's health care services. Ongoing changes in health care financing and their implications and potential impact are carefully studied and reviewed. In response to these changes, policy recommendations are made to the AAP Board of Directors which are then published and disseminated to influence access and payment for appropriate care. This work is done through collaboration with the many parts of AAP (committees, councils, sections, and state chapters). The

goal is to influence and impact payment from all sources through policy statements and advocacy to ensure adequate funding for comprehensive quality care for the children and providers. The work is done at the national as well as the state level.

An example of this work is a Policy Statement, "***The Unique Value Proposition of Pediatric Health Care***", published in the February 2023 issue of ***Pediatrics***. A short summary of this statement is that the cost of providing comprehensive, patient- and family-centered, and culturally appropriate care results in physically and emotionally healthy adults who can contribute to their communities and strengthen the economy.

The **Payer Advocacy Advisory Committee (PAAC)** seeks to advocate for benefits coverage by private and public payers, and to work with them to ensure that the payment is appropriate for the work done. This committee works directly with payers to advocate for specific payments. PAAC works with other committees, sections, and councils to understand payment issues. Additionally, PAAC works with payers at the national as well as local/state level. There is a 'Coding Hotline' where AAP members can call to discuss issues such as inadequate payment for vaccination and lack of support and resource for mental health care. Relationships are developed between a committee member or members with specific payers. These relationships allow for direct communication about payment policies and issues. A recent issue for pediatricians has been the automatic downcoding of a visit. PAAC created resources to help members understand, identify, appeal, and prevent downcoding.

Mike Chen is the Professor and Division Director of Pediatric Surgery, Department of Surgery, UAB Heersink School of Medicine and Surgeon-in-Chief, Children's of Alabama Hospital.

His term on the COCHF and PAAC is 2019 through 2025.

# AAP Surgical Educators Workshop (SEW) for Pediatric Surgery Faculty

Last fall, the AAP SOSu Education Committee sponsored the inaugural Surgical Educator's Workshop (SEW), a one-half-day symposium designed to provide surgeons with the knowledge and skills to be effective teachers in modern surgical training programs. We are delighted to open registration for this year's SEW course immediately preceding the AAP Section on Surgery program in Washington, DC. The course will use interactive sessions to disseminate the principles of adult learning, guidance on teaching audiences of diverse educational and cultural backgrounds, both inside and outside the operating room, as well as exposure to modern simulation methods incorporating AI. We are also extremely fortunate to have **Dr. Richard Reznick**, the Gans Visiting Lecturer, share his wisdom regarding competency-based training. Due to the interactive format, the registration will be limited to **40** pediatric surgeons. To sign up, email [sosu@aap.org](mailto:sosu@aap.org). There is no fee, but you need to be registered for the AAP NCE meeting. A preliminary program follows:



Samuel M Alaish, MD, FAAP

0700 **Welcome** - Cynthia D Downard, MD, AAP Section on Surgery Chair

0710 **Logistics** - Samuel M. Alaish, MD, FAAP

0715 **Adult Learning, Feedback and Autonomy** - David Powell, MD, FAAP

0800 **Panel: Teaching Audiences of Diverse Educational and Cultural Backgrounds**

Introductory Poll

Teaching Different Levels of Training and Specialties - Clint D Cappiello, MD, FAAP

Engaging Underrepresented-in-Medicine Learners - Raquel Gonzalez, MD, FAAP

0830 **Panel: Teaching in Various Environments**

Introductory Poll

AI and Simulation - Seth D Goldstein, MD, FAAP

Teaching in the Clinic and on Rounds - Janice Taylor, MD, FAAP

Teaching in the Operating Room - Alfred Chahine, MD, FAAP

0930 **Break**

0945 **Teaching Perspectives Breakout Sessions**

Samuel M Alaish, MD, FAAP, David M Powell, MD, FAAP, Alfred Chahine, MD, FAAP, Janice A Taylor, MD, FAAP, Adam C Alder, MD, FAAP, Raquel Gonzalez, MD, FAAP, and Clint D Cappiello, MD, FAAP

1045 **Teaching the Difficult Learner** - Samuel M. Alaish, MD, FAAP

Introductory Poll

1130 **Pearls from the 2022 Arnold M. Salzberg Mentorship Awardee** - Craig W Lillehei, MD, FAAP

1145 **Closing Remarks and Evaluations** - Samuel M Alaish, MD, FAAP

**Supported by the American Academy of Pediatrics**

## Esophageal Atresia: Epitome of Modern Surgery

Ask any pediatric surgeon what his or her favorite case is. The most likely the answer is repair of a tracheoesophageal fistula/esophageal atresia (TEF/EA). Before this procedure was established, TEF/EA carried a high mortality rate. The operation requires careful management and a delicate touch, but it can reverse this anomaly's natural history and provide a lifelong cure. Have you ever stopped to wonder who conceived of this repair?

Esophageal atresia was first described more than 350 years ago by William Durston in 1670. In 1697, Thomas Gibson first described the classic proximal EA and distal tracheoesophageal fistula. Charles Steele made the first attempt at repair in 1888 in an infant with EA under chloroform anesthesia but the gap was too large and the repair was abandoned. Harry Richter accomplished the first technically successful repair in 1913 but without IV infusion nor positive pressure ventilation, both infants that he operated upon died.



Thomas Lanman, MD

In 1940, **Thomas Lanman's** published a landmark review of the experience of the Children's Hospital of Boston with EAs. Between 1936 and 1937, Landman performed an extra pleural ligation of a fistula with primary anastomosis of the two parts of the esophagus. Lanman was the first to perform this procedure, but his first patient survived only three hours. In total, his paper documented 32 patients with no survivors. However, two infants lived nine days after repair, proving that survival after primary anastomosis was possible. While most would consider these failures, Lanman learned some hard-won lessons: i) early diagnosis and treatment are important, ii) avoid aspiration, iii) diagnosis can be

done without oral barium using a tube to define the proximal EA and air in the GI tract below the diaphragm as evidence of a distal TEF, iv) death was due to pulmonary infection, v) limit excessive fluid administration post-operatively. Lanman said, "[Every] reasonable risk should be taken to secure a primary anastomosis." Despite all in patients dying, he would go on to say, "*this method will eventually be successful I have no doubt.*"



Cameron Haight, MD

In 1941, **Cameron Haight** of Ann Arbor, fulfilled Lanman's prediction and had a baby survive a primary anastomosis of an EA. It was on March 14, 1941, that a 12-day old girl with EA/TEF was transferred from the Northern Michigan Children's Clinic in Marquette to Michigan University Hospital in Ann Arbor – a distance of about 805 km. The infant was 3.66 kg, feverish and moderately dehydrated so Haight decided not to operate immediately, but rather after improving the general condition of the child – a novel approach at the time. Thus, on the second day after the admission, Haight undertook the operation.

The procedure was performed under local anesthesia through a vertical incision in the left chest by resecting the posterior portions of the 2<sup>nd</sup> through 5<sup>th</sup> ribs, keeping the parietal pleura intact – i.e., a left extrapleural approach. The aorta and left subclavian artery were visible and retracted. He ligated and divided the TEF. The blind upper esophagus was mobilized under ether anesthesia. Using

ether anesthesia. Using silk sutures, Haight performed the esophageal anastomosis. He closed the thoracotomy over a rubber drain that he left near the anastomosis. The child received rectal sulfathiazole (the only antibiotic available at the time) to stave off perioperative infection. A few days after the repair, saliva was noted from the drain. A gastrostomy was placed through which feedings were begun. The team also probed the anastomosis with a catheter placed through the baby's mouth and which emerge through the thoracotomy incision. The volume of the gastrostomy feeds was reduced in hopes of avoiding reflux into the esophagus and out the repair. On the 21<sup>st</sup> post-operative day, the baby burped some evaporated milk from her mouth – a sign that the anastomosis was indeed patent, and that the leak had sealed. The child was eventually discharged from the hospital and Haight would proudly show her photo, aged 16, at his presidential address to the American Association for Thoracic Surgery in 1957. She was the last patient Haight saw before his death in 1970. As of review published in 2005, she was still alive – 64 years after the repair.

Haight proved that survival after EA repair was possible. Subsequent reports would refine the technique and with the addition of ventilation, intraoperative care, antibiotic therapy, and neonatal intensive care, the operation now produces uniformly high survival rates. This tale of surgical triumph is described by one writer as the “*epitome of modern surgery*”.

### **Thomas Hinckley Lanman (1891-1961)**

Lanman was born in Boston and attended Harvard College, graduating in 1912. He would continue at Harvard Medical School, graduate in 1916, and perform his postgraduate training at the Massachusetts General Hospital. World War I interrupted his career and after serving as a first lieutenant in France with the Harvard Unit, he returned to Boston to enter the Children's Hospital. He and Dr. William Ladd represented the strength of the surgical teaching service as it began. He is best remembered for his work on TEF, extrophy of the bladder, and new methods of dealing with urological disorders. He would hold many presidencies of the region and became Chairman of the American Board of Surgery from 1953 to 1955. Lanman is considered by many to be William E Ladd's “right hand man” and would be the first recipient of the **William E Ladd Medal** in 1954.

### **Cameron Haight (1901-1970)**

Born in San Francisco, he graduated from the University of California in 1923 and Harvard Medical School in 1926. He did his surgical internship at the Peter Bent Brigham Hospital from 1926 to 1928 and did his residency at Yale from 1928 to 1931. He spent his career at the University of Michigan in Ann Arbor from 1931 onwards. He became a Professor of Surgery and led the Thoracic Surgery Division, specializing in correcting congenital abnormalities of the esophagus and performing more than 300 operation in his career. He was also the first surgeon in the Western hemisphere and the second in the world to remove an entire lung – a two stage left pneumonectomy in a 13-year-old girl for bronchiectasis and pneumonia. He was a founding member and a chairman of the American Board of Thoracic Surgery, and former president of the American Association for Thoracic Surgery. Haight received the **William E Ladd Medal** in 1967.

## AAP Section on Surgery Famous Figures: Henry Swan II (1913-1996)



Henry Swan II, MD in 1948

**B**orn in Denver in 1913, Henry Swan II graduated from Harvard Medical School in 1939. He did a Pathology fellowship at Colorado General Hospital in Denver from 1939 to 1940, a surgical internship at Peter Bent Brigham Hospital and Children's Hospital from 1940 to 1942, and a Pediatric surgery fellowship from 1942 to 1943 under Dr. Robert Gross.

Meanwhile, America had entered WWII. Many of Swan's cohorts had entered military service, thus depleting the medical staff at Children's Hospital and leaving Swan covering several surgical services at once during the final months of his training. He was assigned to active military duty as a member of the 4<sup>th</sup> Auxiliary Surgical Group. In 1944, he became Chief

Surgeon of the 5<sup>th</sup> Auxiliary Surgical Group and moved eastward with Allied forces. By the war's end in August 1945, Swan had operated on over 1400 non-transportable patients with penetrating wounds of the chest, abdomen, or major extremity. Among these cases was his first end-to-end arterial repair which succeeded in saving a soldier's foot from amputation. It was this and other successes in trauma surgery that stimulated Swan's interest in vascular surgery and shaped the direction of his post-war work.

After the war, Swan returned to Denver with a plan to set up a private surgical practice. However, the new Dean of the University of Colorado Medical School hired him as the first full time member of the surgical faculty in 1946. One of his first initiatives was to establish a small surgical research lab and obtain grants. In 1950, he would be appointed the Chairman of the Department of Surgery and continue to expand its staff, facilities, and programs for the next decade. During this time, he became one of the foremost innovators in experimental and clinical applications of vascular and cardiac surgery. One area of research included the pioneering use of hypothermia for cardiac procedures. Swan and his colleagues would perform over 600 surgeries using hypothermia alone during the next decade. As an avid aviator, Swan flew his medical team all over the county and as far as South America to demonstrate his surgical technique.

In 1960, Swan stepped down as Chair and left the following year. He would focus full time on research by accepting a post at the Colorado State University School of Veterinary Medicine. Swan would investigate the African lung-fish which had the unusual property of entering a dormant state in hot weather. He would retire in 1982 due to a slowly progressive neuromuscular disease which he eventually succumbed to on July 13, 1993.

Henry Swan was a member of the **Inaugural AAP Section on Surgery Executive Committee** from 1948 through 1952.

# AAP Report on Managing Inguinal Hernias Addresses Common Questions, Controversies

A new report from the Committee on Fetus and Newborn, Section on Surgery and Section on Urology, *Assessment and Management of Inguinal Hernias in Children*, is available at <https://doi.org/10.1542/peds.2023-062510> and was published in the July issue of *Pediatrics*. This report examines the embryology, pathophysiology and natural progression of patent processus vaginalis (PPV), as well as current evaluation and treatment approaches.

Dr. Khan, the lead author on the paper provides a summary of the findings:



Faraz A Khan, MD, FAAP

## Optimal timing of surgery, expertise of surgeon

Clinicians should consider the urgency of repair, as approximately 4% of inguinal hernias will become incarcerated. For preterm infants with low birth weight, timing continues to be debated, and data from the Timing of Inguinal Hernia Repair in Premature Infants trial are awaited. Available retrospective data, however, suggest that repair can be safely considered after discharge from the NICU.

The report highlights that optimal outcomes in pediatric inguinal hernia repair are associated with subspecialty training and high surgical volume. Ideally, pediatric general surgeons, pediatric urologists or general surgeons with significant yearly case volumes should perform herniorrhaphy.

## Which approach?

The laparoscopic approach as an alternative to the traditional open high ligation has become increasingly popular. Available data suggest that the laparoscopic approach is at least as effective, if not superior, to traditional open repair.

The need for routine contralateral exploration in patients with unilateral inguinal hernias also is addressed. Proponents of routine exploration typically emphasize a 10% to 15% risk of developing a metachronous hernia, while opponents argue that not all PPVs progress to clinically significant hernias. In the absence of strong evidence for or against repair of incidentally discovered contralateral PPV, surgeons should consider family values and engage in a nuanced preoperative discussion about the risks and benefits of each approach.

## Recurrent hernias

Recurrent inguinal hernias occur after about 1% of elective repairs, though recurrence rates can be as high as 24% in patients with risk factors such as incarceration, ascites or a ventriculoperitoneal shunt.

Based on retrospective data and the potential advantages of laparoscopy (including access to anatomic areas unexplored in an open approach, improved identification of the root cause of recurrence and ability to identify rare defects like femoral hernias), the report suggests that recurrent hernias can be addressed laparoscopically.



## General anesthesia concern

In recent years, concern about the impact of general anesthesia on pediatric neurodevelopment has been increasing, prompted by a Food and Drug Administration drug safety communication. The report reviewed data from the two most comprehensive studies available on the effects of general anesthesia on neurodevelopment: the General Anesthesia Compared to Spinal Anesthesia study and the Pediatric Anesthesia NeuroDevelopment Assessment study.

Based on these studies, the report concluded that there is no definitive evidence that exposure to a single, short duration of general anesthesia adversely affects neurodevelopmental outcomes in otherwise healthy children.

Dr. Khan is an Associate Professor of Surgery and Pediatrics at Loma Linda University Health. His clinical interests include application of minimally invasive techniques for the management of surgical conditions in children. He also has an interest in pursuing health services outcomes research using institutional data, multi-institutional partnerships and collaboratives.

The American Academy of Pediatrics Section on Surgery participated in the production of this AAP Report.

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We are looking forward to seeing everyone at the National Conference and Exhibition in Washington, DC this October. Because there are a wide array of federal policy issues that would benefit from pediatrician/pediatric subspecialty advocacy this year, the AAP is organizing a rally at the U.S. Capitol on the final day of NCE. As you make your flight and hotel arrangements, we wanted to let you know about this activity as soon as possible so that you can plan your travel accordingly. Participants will gather with child health advocates from around the U.S., hear from federal policymakers and pediatrician leaders about an array of child health policy issues, and collectively demonstrate a passion for policies that put children first. Additionally, there will be an Advocacy Action Center booth at the conference where all attendees are encouraged to create posters for the rally with their own child health messages. If there is a specific issue/s that you are passionate about, this will be a great way to amplify them!

### Details:

Date: Tuesday, October 24th

Time: 1100 to 1300 (Final time pending permit approval)

Location: U.S. Capitol Grounds (Final location pending permit approval)

## Operative Notes Staff

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