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Building the Framework: A National Approach to Advanced Practice Collaboration in Fetal Therapy

Kristine Ann Piraino

Lurie Childrens Hospital of Chicago Chicago Institute for Fetal Health

Objectives: Fetal therapy programs require multidisciplinary care across maternal, fetal, neonatal, and surgical teams throughout pregnancy and delivery. Advanced Practice Providers (APPs) play key roles in triage, care coordination, delivery planning, longitudinal follow-up, and interdisciplinary communication. Despite these responsibilities, limited infrastructure exists to support APP collaboration, standardization, and professional development. We established a Special Interest Group (SIG) with Fetal Therapy Nurse Network (FTNN) to promote best practices, enhance continuity of care, and advance quality and safety initiatives.

Methods: A multidisciplinary needs assessment was conducted through survey and discussions among Fetal APPs. Areas of focus included role variability, workflow standardization, education, and research engagement. SIG objectives were developed supporting standardized triage pathways, enhance longitudinal care coordination, expanding educational and mentorship resources, and promoting quality improvement and collaboration.

Results: Engagement demonstrated strong interest in APP collaboration. Priorities included shared delivery coordination frameworks, patient navigation models, and collaborative quality metrics. Participants identified opportunities to improve continuity across prenatal, surgical, delivery, and postnatal transitions to enhance patient safety and reduce fragmentation of care.

Conclusions: Formalizing an APP SIG supports standardized practices, quality improvement, professional development, and collaboration across institutions, with aim to improve care coordination, patient safety, and outcomes in fetal therapy programs.

[15-151]**Innovation and Expanding the Special Delivery Unit Model within a Fetal Center****Susan Sermarini Spinner, Lauren Heimall, Taryn Freeman, Shelly Soni**

CHOP Surgery

The Special Delivery Unit (SDU) model transformed fetal and neonatal care by integrating maternal, fetal, neonatal, surgical, and psychosocial services within a children's hospital. Built on a foundation of family-centered care and interdisciplinary collaboration, this model eliminates traditional separation of mothers and critically ill newborns while enabling immediate access to highly specialized neonatal intervention at birth. Nursing leadership has been central to development, expansion, and operational success of this innovative care model.

Over the past three decades, nursing roles have evolved from a single fetal therapy coordinator into highly specialized teams including fetal therapy coordinators, advanced practice providers, nurse midwives, clinical nurse experts, neonatal nurses, and nursing leadership focused on education, safety, and quality. Nurses lead critical functions including triage and intake, longitudinal care coordination, prenatal education, multidisciplinary delivery planning, psychosocial support, and perioperative fetal care. In parallel, nursing-driven innovations in staffing models, cross-training, and clinical data capture have supported rapid programmatic growth and increasingly complex patients.

Clinical outcomes associated with SDU models demonstrate improved stabilization and survival for neonates with congenital anomalies, decreased transport-related morbidity, and enhanced bonding by keeping mothers and infants together. This integrated nursing-centered approach has emerged as a scalable model for maternal-fetal and neonatal care.

[15-152]**Reimagining the complex delivery unit to optimize the focus on patient and family**

Julie S. Moldenhauer, Erin C O'Hara, Laura Ethridge-Morris, Lauren Michaels, Ryan Keszczyk, Nina Paidas Teefey, Eric P Bergh, Katherine J Deans

Nemours Children's Health

Background: The concept of the complex delivery unit within free standing children's hospitals was born to accommodate maternal obstetrical care and sophisticated multidisciplinary neonatal care under one roof. Here we share the evolution of this model that has been further adapted to optimize the focus on patient and family well-being.

Methods: A reimagined Advanced Delivery Unit was conceptualized to incorporate aspects of patient and family well-being in addition to establishing a state of the art medical facility. During the design phase, the idea of creating a "sanctuary of calm" for patients and families was used as a guiding principle in all aspects of facility development including space planning and material selection.

Results: The final build includes 4 LDRPs, 8 ante/postpartum rooms, 6 neonatal stabilization rooms, 3 state of the art ORs, a team center, and a conference room. Patient and family centered spaces include a laundry room, 2 nourishment rooms, and a center for family wellness. All products utilized are hospital grade and invoke an essence of natural materials.

Conclusions: The reimagined ADU focuses on patient and family well-being while providing a state of the art medical facility in a naturally blended environment. Patient feedback has been overwhelmingly positive.

[15-153]**Creating enterprise level systemness in a fetal care center**

**Julie S. Moldenhauer, Eric P Bergh, Nina Paidas Teehey, Tara Haskell,
Wendy Sullivan, Katherine J Deans**

Nemours Children's Health

Background: Integration of multiple maternal fetal medicine/fetal intervention sites operating independently into one functional program offers unique challenges. Technology and human factors were leveraged heavily to achieve an enterprise level of systemness.

Methods: A multicenter fetal care institute is a new concept in the space. To accomplish the goal of integration, assessment of current state, equipment and space utilization, and plans for future state were developed. Technology and human factors played significant roles in the core process of development of larger scale systemness.

Results: From a human factors standpoint, alignment in roles, responsibilities, protocols and processes were developed. Large scale coordination of equipment utilization and space designation was implemented. Mental health and wellness screening is being adapted to system level, as well. Multiple databases were developed to accomplish tracking of all system goals, processes, human resources, and all aspects of patient care including outcomes and research potential, which were transparently available to all fetal care center leaders to optimize alignment.

Conclusions: Enterprise level systemness is possible in the development of fetal care centers. This requires a high level of commitment from the sponsoring healthcare system or systems, including financial and human capital.

[15-154]**Challenges in Care Coordination: A Unique Perspective on Barriers to Care at the Ontario Fetal Centre****Ingrid Larsen**

Mount Sinai Hospital Ontario Fetal Centre

The importance of a Fetal Therapy Coordinator (FTC) in the operation of a successful fetal therapy program is well established in the literature. An FTC's active role in patient care, coordination and advocacy makes significant contributions to the success of fetal centres worldwide. Through discussion of real-world workflow challenges and best practices, this presentation will highlight some of the unique challenges faced by FTC's at the Ontario Fetal Centre (OFC) in Toronto, Canada.

The OFC is a high-volume national program for fetal surgery in one of the world's largest and most ethnically diverse countries. Despite Canada's universal health care program, there are barriers to care for our fetal centre patients that include geographical distance, 6 different time zones, 2 official languages and variations in regional health care coverage. Case studies will highlight some of the unique challenges faced at our centre and insight into quality improvement initiatives that have helped to address the complex clinical and logistical needs of Canadian patients requiring specialized fetal interventions far from home. Information gained from this presentation will help other centres facing similar challenges.

[15-155]**Addressing Access Disparities in Fetal Care Through a Nursing Outreach Navigator Model****Emilie Lamberg Jones**

The Chicago Institute for Fetal Health

Objectives: Significant disparities in access to specialized fetal care have been documented in the United States, with more than 40% of women of reproductive age residing in “fetal care deserts,” which may limit access to care. Geographic and socioeconomic barriers contribute to inequities in timely diagnosis, fragmented referral pathways, and adverse outcomes among socioeconomically disadvantaged and racially minoritized populations. These disparities underscore the need for intentional, equity-focused outreach strategies.

Methods: Our institute established Nursing Outreach Navigator roles to address access gaps within our region. Through ongoing, relationship-based engagement with a diverse range of community partners, we work to increase awareness of fetal conditions, improve recognition of specialized referral indications, and provide education on available support services. These efforts foster strong working relationships that enable seamless coordination of complex care.

Results: The presentation will highlight outreach efforts, evolving referral trends, increased engagement from new and diverse referral sources, increased utilization of patient navigation services, and feedback from referring partners.

Conclusion: This model offers a feasible strategy to reduce access inequities and optimize consistent outcomes for patients from diverse backgrounds. By strengthening partnerships, facilitating education and communication, and addressing logistical barriers, this approach shows promise in improving equitable access to care.

[15-156]**Preparing Families for the Fetal Care Experience: Culturally Sensitive Somali and Spanish Video Modules****Clifton O Brock**

Childrens Minnesota Midwest Fetal Care Center

Objective: We partnered with a local community group (Inspire Change Clinic) to produce clinic-aligned and community-informed fetal care resources for our Somali and Spanish-speaking patients in their primary language. Methods: We utilized fetal care experts at our center to develop content for a series of educational videos. Before final production, feedback sessions with local community members were held to confirm cultural alignment and approachable verbiage. Final translations were filmed with native speaking actors by our community partner. Results: We created five patient-oriented video modules in Somali and Spanish to describe: (1) the initial visit to the fetal care center, including introduction of the physical space and multidisciplinary clinicians, and (2) the transition to NICU care after delivery, including an introduction to the hospital space and neonatology clinicians. All video modules are available on our center website and shared with relevant patients. Conclusions: The developed community-informed video modules foster inclusivity for our Somali and Spanish-speaking patients, as well as build patient trust and confidence in our clinic. In the future, we will evaluate the utility of these videos using brief patient and clinician surveys.

[15-157]**The Impact of a Fatwa on Equitable Access to Donor Breastmilk for Muslim Families****Shukri Jumale**

Chicago Institute For Fetal Health

Objective:

Muslim families with critically ill neonates have had limited access to donor breastmilk due to religious concerns regarding milk kinship (the establishment of familial relationships through breastfeeding). In November 2023, we partnered with Islamic leaders to establish a national fatwa permitting pasteurized donor human milk (PDHM). This study evaluates its impact on PDHM use.

Methods:

We conducted a retrospective analysis of Somali/Muslim neonates (≤ 4 months) admitted to NICU, SCN, or ICC, comparing PDHM use before (2021–2023) and after (2024–2025) the fatwa. Families were identified through EMR fields (religion, language) and common Somali names.

Results:

Among 1,163 Muslim neonates, PDHM use rose from 26.7% (178/667) pre-fatwa to 29.8% (148/496) post-fatwa, though this did not reach statistical significance ($p=0.237$). Maternal milk use remained stable (74.5% vs. 75.6%; $p=0.97$).

Conclusions:

The fatwa is an important step in reducing religious barriers to PDHM use. While use increased modestly, additional education and community engagement are needed to improve awareness and uptake among families and providers. This approach was limited by incomplete/inconsistent documentation of religion in the EMR and potential misclassification when using language or names as proxies for religious identity, and more complete religious data is needed to evaluate true utilization patterns.

[15-158]

Safe, Economical, and Reproducible: A Nurse-Led Local Anesthesia Protocol for Fetoscopic Laser Photocoagulation

Fang Li, Ben Li

Chongqing Health Center for Women and Children, Chongqing, China anesthesiology department

Traditional regional anesthesia for fetoscopic laser photocoagulation (FLP) carries risks of iatrogenic hypotension and immobility, alongside higher costs. We adopted local infiltration anesthesia (LA) to preserve maternal autonomic tone and reduce expenses. From January 2022 to December 2025, 60 consecutive TTTS cases (Quintero II–IV) were managed by a standardized nursing protocol focusing on: (1) 30° left lateral tilt to relieve aortocaval compression; (2) continuous independent maternal monitoring; (3) real-time verbal guidance to reduce anxiety; (4) active shivering prevention; (5) pre-set emergency readiness. All 60 procedures were completed successfully. Zero cases required conversion to general anesthesia. Zero episodes of hypotension needed vasopressors. Left lateral tilt compliance was 100%. Intraoperative nursing interventions occurred in 8 cases and resolved promptly. This nurse-led LA protocol effectively avoids anesthesia-induced hypotension and offers significant economic advantages. Given its proven safety, cost-effectiveness, and reproducibility, we strongly advocate for the widespread adoption of this standardized nursing model in fetal medicine centers worldwide.

[15-159]**A Nursing-Led Orientation Model for L&D Nurses in Fetal Surgery****Kathleen Elizabeth McGowan**

The Chicago Institute for Fetal Health

Background:

Fetal surgery programs often rely on labor and delivery (L&D) nurses from external hospitals to support complex procedures. At our fetal center, inconsistent orientation processes created challenges with navigation, equipment familiarity, role clarity, and emergency preparedness, contributing to variable team coordination and nurse confidence.

Purpose:

To standardize orientation for external L&D nurses assisting with fetal surgeries, strengthen interinstitutional collaboration, enhance patient safety through improved preparedness and communication, and promote nursing engagement in multidisciplinary fetal care.

Methods:

A six-item pre-intervention survey assessed external nurses' comfort with navigation, equipment use, team roles, emergency processes, and follow-up support. A structured, nursing-led orientation intervention was developed using standardized written and visual materials, defined communication pathways, and escalation processes. Surveys will be redistributed post-intervention. In parallel, a national survey of fetal therapy and neonatal nursing leaders will evaluate orientation practices, barriers, and training gaps.

Results:

Data collection is ongoing at the time of abstract submission.

Conclusion:

A structured, nursing-led orientation process may improve preparedness, collaboration, nursing engagement, and patient safety among external L&D nurses supporting fetal surgery. Combined with national survey findings, this initiative may inform scalable, standardized orientation models across fetal centers.

[15-160]**Driving Excellence in Fetal Care: The Distinct Role of Nurses at the Ontario Fetal Centre****Janet Randle**

Mount Sinai Hospital Ontario Fetal Centre

The Ontario Fetal Centre (OFC) located in Toronto, Canada provides highly specialized, multidisciplinary care for people whose pregnancies are complicated by congenital anomalies and conditions requiring advanced assessment, intervention, and coordinated planning during the antenatal and perinatal periods. The unique role of nursing at the OFC is the foundation of the program's success.

Nurses at the OFC are versatile clinicians, assuming a myriad of functions: conducting diagnostic ultrasounds, triaging referrals for access to care, managing speciality clinics, facilitating diagnostic testing, providing procedure and operating room support, and acting as mentors to nursing peers and medical fellows. Nurses are also integral to the OFC's operational success through their leadership in quality improvement initiatives and their ongoing contributions to program development and evolution.

This presentation explores a day in the life of an OFC Nurse Sonographer and highlights the vital role they play in maintaining the program's renowned reputation for excellence. The impact of nursing practice at the OFC is immeasurable and the value of this multi-hyphenate role is a critical driver of its effectiveness, innovation, and patient-centered success.

[15-161]

From Screening to Outcome: The Impact of Abnormal First-Trimester Biochemistry on Pregnancy Management

Louise Ryan Stirling¹, Kasper Gadsboell¹, Ida Vogel⁴, Ida Duelund Hjortshoej³, Christina Nadia Christoffersen⁵, Olav Bjørn Petersen^{1,2}

¹ Copenhagen University Hospital, Rigshospitalet, Denmark Center for Fetal Medicine, Pregnancy and Ultrasound, Department of Gynecology, Fertility and Obstetrics

² University of Copenhagen, Copenhagen, Denmark Institute of Clinical Medicine

³ Copenhagen University Hospital, Rigshospitalet, Denmark Department of Genetics

⁴ Aarhus University Hospital, Aarhus, Denmark Center for Fetal Diagnostics & Department of Obstetrics and Gynecology

⁵ Copenhagen University Hospital - North Zealand, Hilleroed, Denmark Department of Obstetrics and Gynecology

Objective: To assess residual risk of adverse outcomes in pregnancies with abnormal first-trimester biomarkers after exclusion of chromosomal and structural abnormalities.

Methods:

Nationwide retrospective cohort study of singleton pregnancies undergoing combined first-trimester screening (cFTS) in Denmark, 2008–2018. Abnormal biochemistry: low PAPP-A <0.20 MoM, low f β -hCG <0.20 MoM, or high f β -hCG >5.0 MoM. Chromosomal abnormalities and structural malformations detected before 18+0 weeks' gestation were excluded. Pregnancy loss: intrauterine fetal death, including miscarriage <24 weeks and stillbirth $\geq$ 24 weeks.

Results:

Among 533,620 pregnancies, abnormal biochemistry was associated with markedly elevated rates of chromosomal abnormalities—19.1% with low PAPP-A, 14.9% with low f β -hCG, and 2.2% with high f β -hCG, versus 0.6% with normal biochemistry. In chromosomally and structurally normal pregnancies, low PAPP-A and low f β -hCG conferred increased risks of pregnancy loss (5.3%, RR 5.96), fetal-growth-restriction (13.3%, RR 4.49), and preterm birth <34 weeks (3.9%, RR 3.25), with clear dose-response relationships. Despite elevated risks, 93.4% resulted in live birth and 73.1% in unaffected live birth.

Conclusion:

Abnormal cFTS biochemistry first signals substantially elevated chromosomal risk, and—even after excluding such pregnancies—identifies a clinically significant residual risk of adverse outcomes. These findings support individualized risk stratification and prenatal surveillance beyond NIPT and invasive testing.

[15-163]**Care pathways in prenatally diagnosed Alpha Thalassemia Major****Michael Beninati**

University of Wisconsin Fetal Intervention

Objective:

To describe the prenatal diagnosis and multidisciplinary management of alpha thalassemia major (ATM), with emphasis on the role of serial intrauterine transfusions (IUTs) and anticipated postnatal care pathways.

Case Report:

A 28-year-old G1P0 presented at 23 weeks gestation with progressive hydrops fetalis including pericardial effusion, ascites and bilateral pleural effusions. Middle cerebral artery doppler suggested severe fetal anemia (1.81 MoM). The fetus underwent serial IUTs, resulting in correction of fetal anemia and improvement of hydrops. Serial surveillance demonstrated improved cardiac function and resolution of effusions, allowing prolongation of gestation. Diagnostic evaluation excluded infectious etiologies, and both parents were ultimately newly diagnosed with Southeast Asian (-SEA) mutation, supporting a presumptive diagnosis of ATM. Multidisciplinary counseling included maternal-fetal medicine, pediatric hematology, neonatology, and palliative care teams. Postnatal options were discussed, including comfort-focused care, chronic transfusion therapy, and consideration of curative hematopoietic stem cell transplantation.

Conclusions:

ATM is no longer uniformly lethal when identified prenatally. Early diagnosis through ultrasound and Doppler assessment enables timely initiation of IUTs, which can reverse hydrops and permit fetal survival. Comprehensive counseling is essential to support individualized decision-making regarding postnatal management, ranging from palliative care to long-term transfusion support and potential curative therapy.