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LABOR of LOVE

Inside the new
St. Francis Medical
Center Level III
NICU

*St. Francis Medical Center
Level III NICU strives to
improve outcomes for smallest
of patients*

BY PAUL REU | PHOTOS BY FRED J. FUHRMEISTER

Labor of LOVE

It's no secret that Colorado's population, and that of El Paso County, in particular, is booming. The U.S. Census Bureau estimated that El Paso County's population grew by 10.6% between 2010 and 2016, with the population only continuing to grow.

St. Francis Medical Center is one of two hospitals that make up Penrose-St. Francis Health Services in Colorado Springs and serves all of El Paso County. Since 2009, the number of babies admitted per day to the SFMC Level III Neonatal Intensive Care Unit has



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The wellness garden is a bright daylit place for respite, reflection and contemplation. Down the meandering path, flanked by seated garden walls, and unique lighting fixtures and art pieces, is the reflection area. A casual soft seating area centered on a whimsical flowing tree provides a focal point of hope and allows families to reflect on their experiences.

more than doubled. Candace Garko, director of women's and children's services at St. Francis Medical Center said, "A 30-bed NICU just was not meeting the needs of this part of the community. So [in 2015] we started on a journey to discover what the biggest needs were for this facility, and the NICU really rose to the top."

To support this demand, SFMC undertook a major expansion, and what they described as a true "labor of love," resulting in a four-story, 168,000-square-foot addition and new garden level that increases the number of beds in the NICU. The expansion also provides six new operating rooms and a brand new emergency department, doubling the capacity of the previous ED. The renovated and expanded Level III NICU opened in August 2018 with the goal of further improving outcomes and reducing the length of stay for mothers and their babies through the implementation of the Family Integrated Care model.

Move to Family Integrated Care

Level III NICUs provide the highest level of care for premature or critically ill



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babies through a clinical team comprised of a wide variety of highly specialized staff. The four-year endeavor to expand and renovate the SFMC Level III NICU involved feedback and participation from all user groups of the department, as well as NICU “graduate” families.

SFMC was previously operating under the Family Centered Care model. Parents are generally in a supportive role in the NICU, with the majority of care for the infant provided by NICU staff. But after extensive research done in conjunction with the design team — including immersion in the current unit, site visits, case

study analyses, joint NICU conference attendance to understand the latest trends and outcomes of care, and NICU graduate family and staff focus groups — SFMC made the decision to move to the Family Integrated Care model. This further improves infant and maternal care outcomes, including a reduction in length of stay and an overall improved experience for mothers and newborns, through improved bonding and reduced stress.

The fundamental principle of the FIC model is parents are as fully involved as possible for the day-to-day care of their infants, working in full collaboration with



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1. Two of the rooms are mom/baby couplet care rooms where mothers and babies are kept together in the same room and cared for by the same healthcare team. The St. Francis Medical Center's NICU is the only one in Colorado, and one of the few in the United States, with two mom/baby couplet care rooms.

2. The NICU reception area serves as a transition space. Warm and welcoming, families have a place to "touch down" similar to a hotel lobby. A skylight distributes natural light and offers a level of comfort in tracking the time of day. A feature wall creates interest and highlights donor recognition for hospital patrons.

3. Biomimicry was used throughout the built environment and local artwork provides a connection to the Colorado Springs community. Large sweeps on the ceiling and floor plane mimic the light and shadow of a parting sky. Patterning on the NICU doors express the tangle of branches and helps diminish the expansive corridor. Sparkle lights mimic the night sky and create interest similar to mobiles in an infant's room.

4. The wellness garden leads to an outdoor patio and sky lobby with mountain views, seating and eating areas. The space allows families and staff to connect and decompress outside of the busy NICU.

the infant's care team. Some important aspects of the FIC model and culture include:

- > Parents assume most of the care for their baby (with the exception of IV, medications and tests)
- > Parents are an integral part of the care team and fully participate in decision making
- > The members of the care team are teachers and mentors to the parents
- > Parental education is a requirement

Because of the increased parental involvement through the lengthy weeks of development and care for the infant, the single-family





In stark contrast to a “typical” NICU where multiple babies are cared for in open wards, the St. Francis Medical Center NICU has 54 private single-family rooms, which encourage positive family interaction and parental overnight stays.

private room became the focus of the design for the expanded NICU. The single-family room encourages positive family interaction, parental overnight stays and privacy for kangaroo care (skin-to-skin holding). The Level III NICU at the St. Francis Medical Center now provides 54 single-family rooms.

The rooms feature advanced room lighting, such as tunable light to support infants’ circadian rhythm, refrigerator drawers for breast milk, a family sleeping zone with privacy curtain and a full private restroom — all with the objective of allowing parents to stay with their babies around the

clock whenever possible.

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one in Colorado, and one of the few in the United States, with two mom/baby couplet care rooms. Increased space was also designed so that multiples (twins, triplets, etc.) could be cared for in the same room.

PROJECT TEAM

St. Francis Medical Center

Owner: Penrose-St. Francis Health Services and Centura Health

Architect: RTA Architects

General contractor: GE Johnson Construction Co.

Structural engineering: MGA Structural Engineers

Mechanical, electrical and plumbing engineering: The RMH Group

Civil engineering: Kiowa Engineering

Landscape architecture: Ground Logic

Soils and testing: Kumar & Assoc.

Nurturing spaces for families

Having an infant who is premature or who has severe medical complications is extraordinarily stressful for a family. Nature-inspired finishes and local artwork provide a calming, nurturing atmosphere throughout the unit. The SFMC Level III NICU also features several special areas for families to decompress and to connect with others going through the same experience, including a wellness garden and a NICU family lounge.

The wellness garden provides a place for respite, reflection and contemplation. Down the meandering path, flanked by seated garden

walls, is the reflection area. A casual soft seating area centered on a whimsical flowing tree provides a focal point of hope and allows families to reflect on their experiences.

The contemplative stone labyrinth serves as a walk-centered spiritual tool for the heart, mind and soul. Dr. Bridget Buzzella, Neonatal Pediatric Medicine, Pediatrics remarked, “(the wellness garden) is a big open space with natural light, and it really gives our families the ability to step out of the NICU. It’s kind of like a retreat to escape from the stressful NICU environment. No matter how much we try

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to make it not stressful, when your baby’s sick sometimes you just need a place to take a big breath in and step out.”

The NICU Family Lounge is a space requested by NICU graduate families as another place to connect with other families in similar circumstances. A comfortable family room includes an entertainment wall. Dining tables and a kitchenette provide a space to dine with additional family members, while the nearby quiet room allows for solitude and prayer.

Well-being of staff is vital

With a change in the model of care of this magnitude, it is critical to recognize that a more multifaceted and complex program will add more stress to the staff in addition to that of working in

a NICU, so the unit’s design incorporates spaces for staff to recharge and connect. An outdoor patio and sky lobby with mountain views provide seating and eating areas. A staff lounge accessed from the wellness garden provides additional space to step away from the busy unit.

“For us, this is a labor of love,” said Dr. Buzzella. “We want the best outcomes for our babies, we want to support the community and we want to grow with the community (while being able) to continue to provide great care.”

Paul Reu, AIA, is principal at RTA Architects.



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