

Redesigning the Neonatal Intensive Care Unit

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Neonatology – Early 1900s

More sideshow than medicine

History of Neonatology – The Patrick Bouvier Kennedy Story

THEN: Born 8/7/1963 at 34 ½ weeks gestational age, 4 ½ lb. (2.11 kg.); died after 2 days

NOW: > 98% of such babies survive with normal lives

Modern Neonatal ICU

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NICUs Around the World – What Do You See and Don't See?

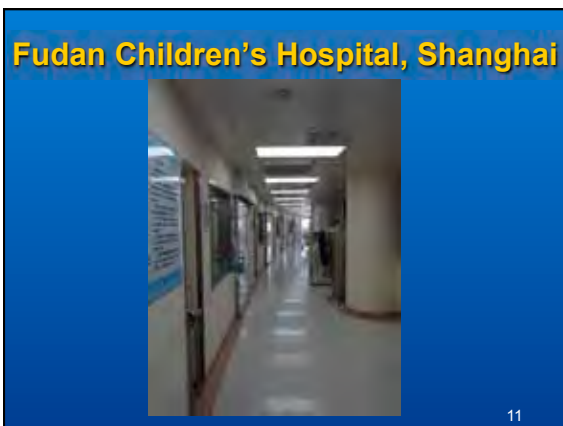
- 1) What is similar?
 - a) Patients/families
 - b) Medical staff
 - c) Equipment
 - d) Physical space
- 2) What is different?
- 3) What drives differences?

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NICUs Around the World

- ◆ China – Beijing, Hangzhou
- ◆ Lucile Packard Children's Hospital Stanford
- ◆ Children's Hospital Orange County
- ◆ Cook Children's Hospital – Fort Worth, TX
- ◆ Family Integrated Care – Estonia/Sweden

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Fudan Children's Hospital, Shanghai



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Fudan Children's Hospital, Shanghai



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Fudan Children's Hospital, Shanghai



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Fudan Children's Hospital, Shanghai



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Fudan Children's Hospital, Shanghai



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Fudan Children's Hospital, Shanghai



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Fudan Children's Hospital, Shanghai



US Version

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Fudan Children's Hospital, Shanghai



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Fudan Children's Hospital, Shanghai



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Children's Hospital of Zhejiang University, Hangzhou



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Children's Hospital of Zhejiang University,



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Children's Hospital of Zhejiang University, Hangzhou



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Children's Hospital of Zhejiang University, Hangzhou



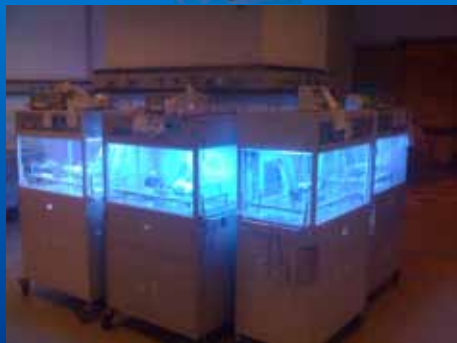
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Children's Hospital of Zhejiang University, Hangzhou



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Children's Hospital of Zhejiang University, Hangzhou



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Children's Hospital of Zhejiang University, Hangzhou



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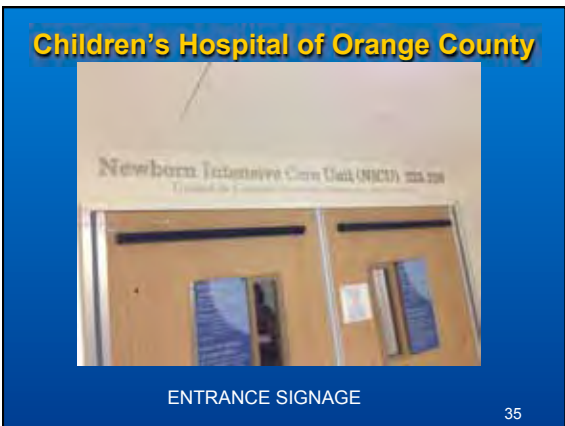


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LPCH NICU – 1980's Open bay style

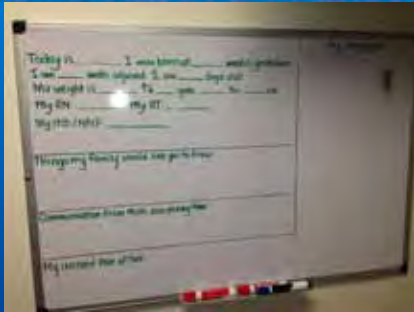


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Children's Hospital of Orange County



PATIENT INFO WHITEBOARD

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Children's Hospital of Orange County



INSPIRING MESSAGING

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INTERMEDIATE (STEPDOWN) NICU

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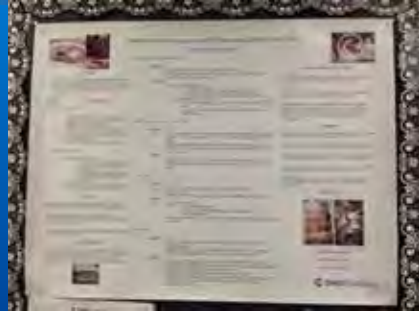
Children's Hospital of Orange County



STAFF QUALITY IMPROVEMENT POSTER

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Children's Hospital of Orange County



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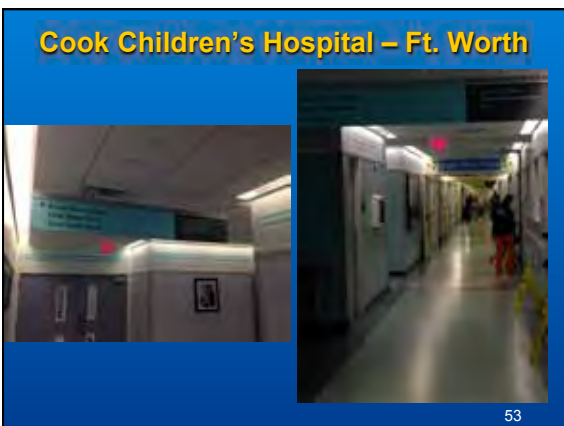
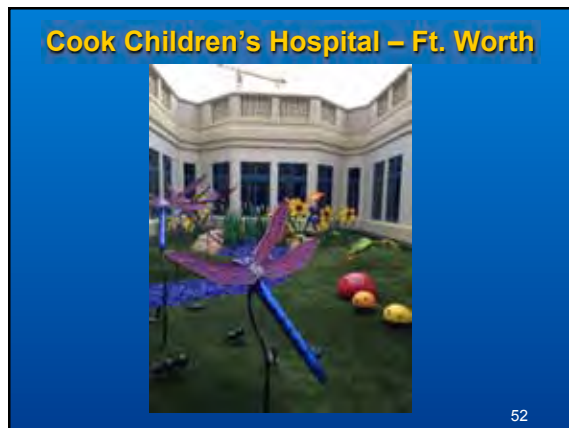
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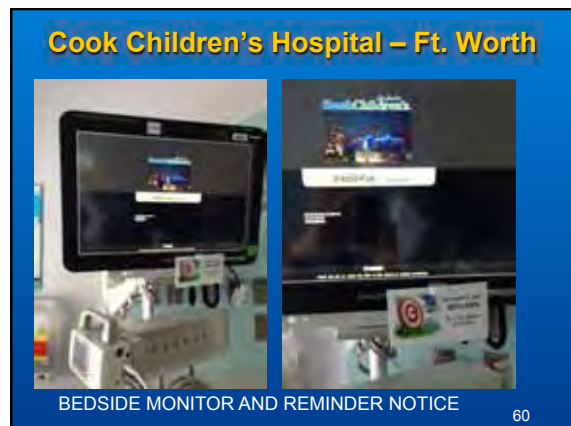
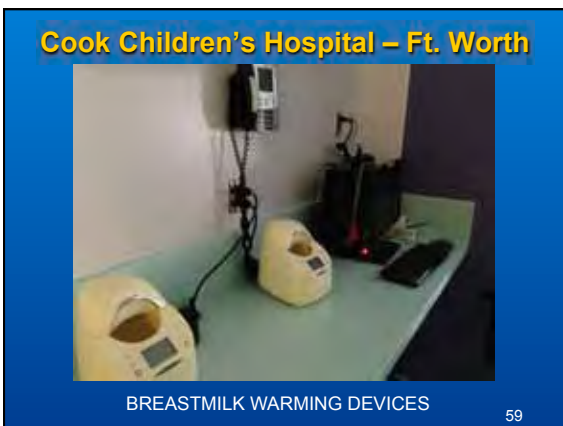
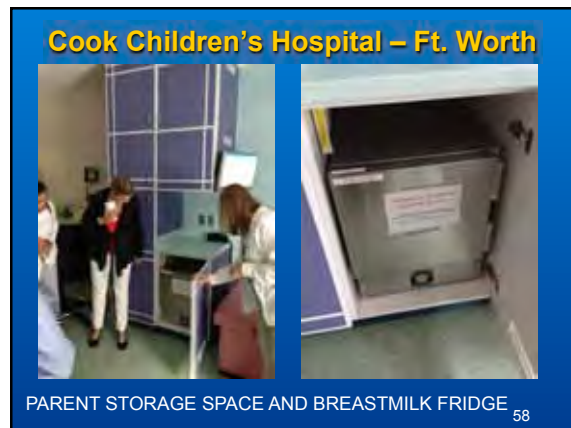
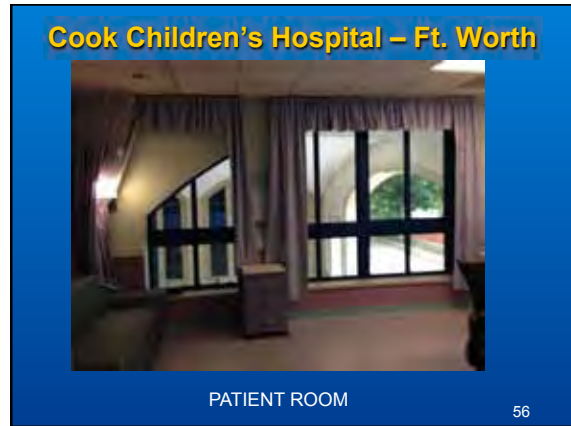
Children's Hospital of Orange County

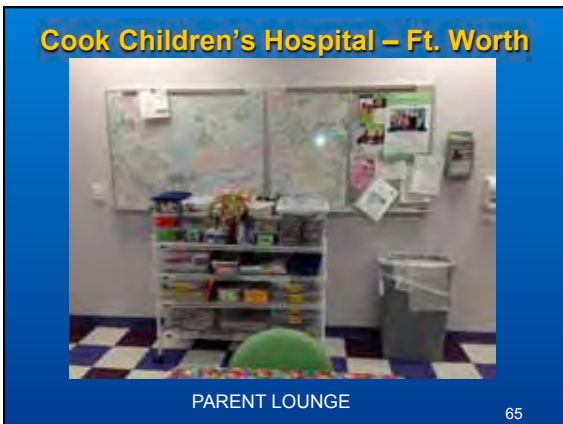
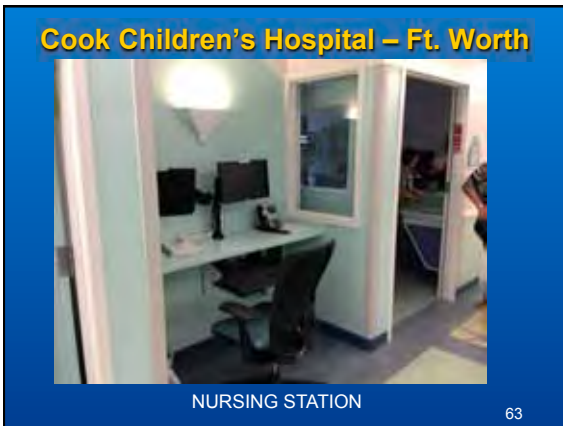
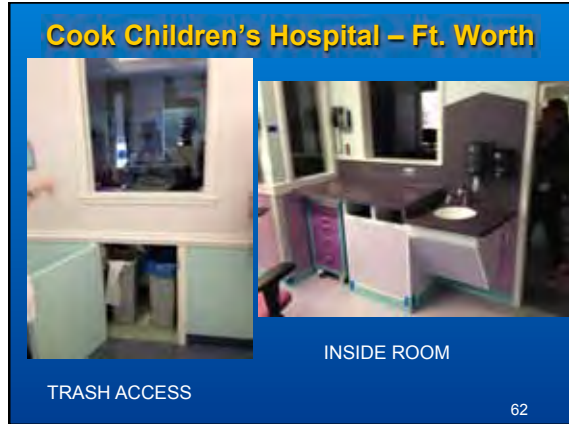


NOISE REMINDER DEVICE

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Caring for Families

- Mother's health and wellbeing is considered essential to the baby's wellbeing;
- Atmosphere of team support;
- Mother and baby are a unit;
- Nurse partners mother in the baby's care



Estonia NICU Care Model

- Parents are primary caregivers, not nurses
- Parents responsible for all care except IV, medications
- Parents participate in rounds, reports, charting
- Encourage developmental & kangaroo care
- Nurses are teachers and consultants
- Results = 30% reduction in nosocomial (hospital-acquired) infection
30% improvement in weight gain
20% reduction in LOS
50% reduction in nurse utilization
improved parent/staff satisfaction

Family Integrated Care Pilot Results Mount Sinai Hospital, Toronto

- 25% improvement in weight gain
- Decreased nosocomial infection
- from 11.5% to zero
- Reduced critical incident reports
- from 10% to zero
- Decreased parental stress

Family Integrated Care – Uppsala, Sweden



Family Integrated Care – Uppsala, Sweden

Attachment –more than a finger



Family Integrated Care – Uppsala, Sweden

Wishes from parents

Give warmth, love and nourishment
Respond to the infant's needs
Be close and have privacy
Participate in infant's care
Have near influence
Share all information

Family Integrated Care – Uppsala, Sweden



The Future NICU at LPCH



Who and what influence NICU design?