

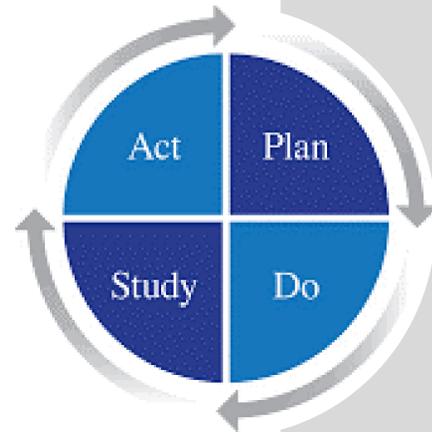
## Problem

- Hospital’s NICU and General Care Nursery have non-standardized education for providers to give to parents and families regarding early onset sepsis and the use of antibiotics.
- Inconsistent education can contribute to misunderstandings and inhibit support to the patients’ families.
- Education to caregivers is variable when there is a transfer of care for infants between units during the same hospitalization period.
- Inconsistent messaging leads to decreased family satisfaction and trust in the care provided.

## Project Implementation

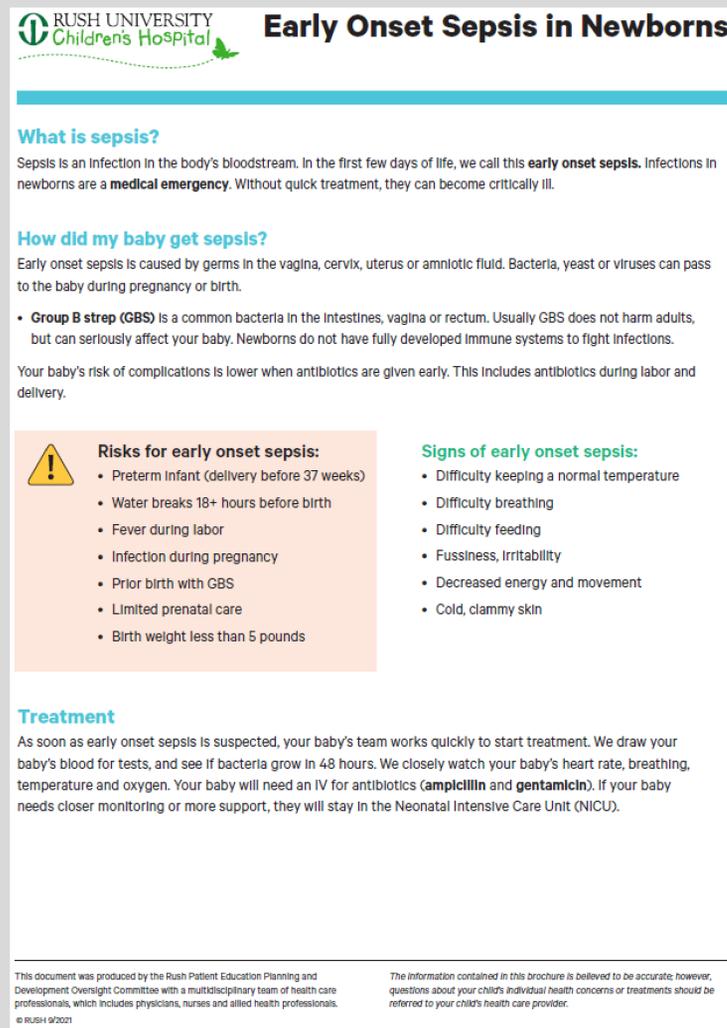
Generalist Entry Masters Nursing Students worked with NICU Leadership to create educational handouts about Early Onset Sepsis and Broad Spectrum Antibiotics.

- Process used:
  - 1. Research: Literature Review and Baseline Assessment
  - 2. Survey Key Stakeholders
  - 3. Analyze feedback and research
  - 4. Create Drafts (English and Spanish)
  - 5. Review Drafts with key Stakeholders
  - 6. Review from Family Advisory Council and Patient Education Committee
- Review and Repeat 1-6 as needed as PDSA cycles
  - 7. Approval by Quality and Safety Committee
  - 8. Education provided to staff
  - 9. “Go Live” with Printed Materials



## Results

- Steps 1-5 completed after 5 PDSA cycles
- Step 6: Handouts are on Family Advisory Council Meeting Agenda, however it was determined Go-Live plans would not be placed on hold.
- Hospital’s Patient Education Committee approved resources and started translation to Spanish while Steps 7 and 8 pending
- “Go Live” Early November 2021



**Early Onset Sepsis in Newborns**

**What is sepsis?**  
Sepsis is an infection in the body's bloodstream. In the first few days of life, we call this **early onset sepsis**. Infections in newborns are a **medical emergency**. Without quick treatment, they can become critically ill.

**How did my baby get sepsis?**  
Early onset sepsis is caused by germs in the vagina, cervix, uterus or amniotic fluid. Bacteria, yeast or viruses can pass to the baby during pregnancy or birth.

- **Group B strep (GBS)** is a common bacteria in the Intestines, vagina or rectum. Usually GBS does not harm adults, but can seriously affect your baby. Newborns do not have fully developed immune systems to fight infections.

Your baby's risk of complications is lower when antibiotics are given early. This includes antibiotics during labor and delivery.

**Risks for early onset sepsis:**

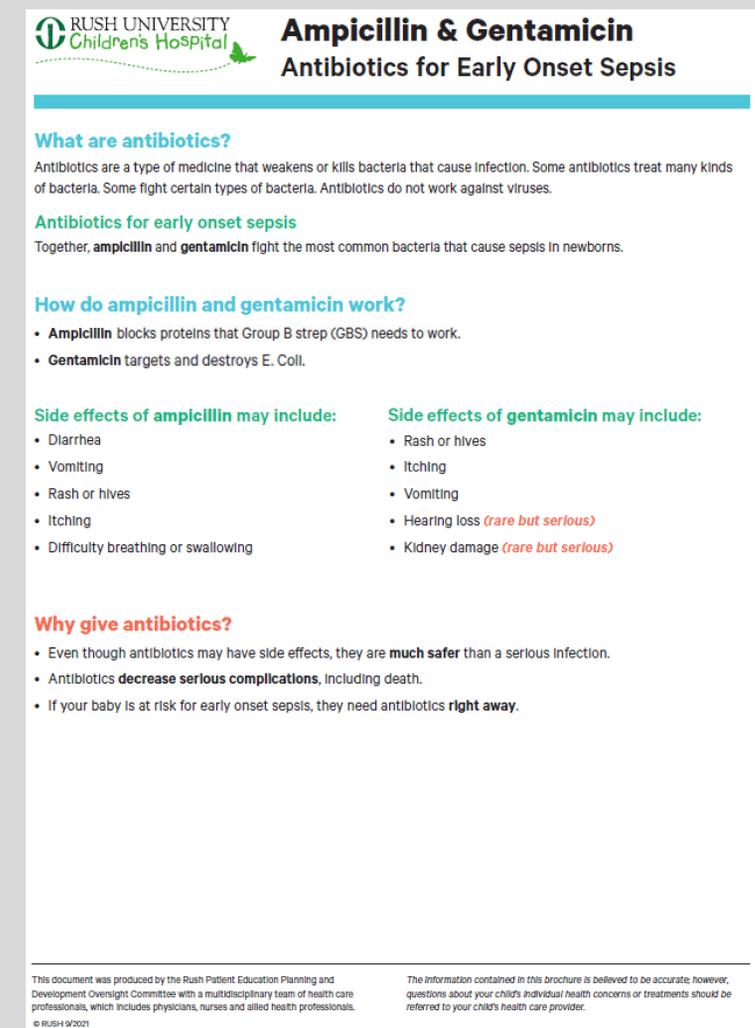
- Preterm infant (delivery before 37 weeks)
- Water breaks 18+ hours before birth
- Fever during labor
- Infection during pregnancy
- Prior birth with GBS
- Limited prenatal care
- Birth weight less than 5 pounds

**Signs of early onset sepsis:**

- Difficulty keeping a normal temperature
- Difficulty breathing
- Difficulty feeding
- Fussiness, irritability
- Decreased energy and movement
- Cold, clammy skin

**Treatment**  
As soon as early onset sepsis is suspected, your baby's team works quickly to start treatment. We draw your baby's blood for tests, and see if bacteria grow in 48 hours. We closely watch your baby's heart rate, breathing, temperature and oxygen. Your baby will need an IV for antibiotics (**ampicillin** and **gentamicin**). If your baby needs closer monitoring or more support, they will stay in the Neonatal Intensive Care Unit (NICU).

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**Ampicillin & Gentamicin Antibiotics for Early Onset Sepsis**

**What are antibiotics?**  
Antibiotics are a type of medicine that weakens or kills bacteria that cause infection. Some antibiotics treat many kinds of bacteria. Some fight certain types of bacteria. Antibiotics do not work against viruses.

**Antibiotics for early onset sepsis**  
Together, **ampicillin** and **gentamicin** fight the most common bacteria that cause sepsis in newborns.

**How do ampicillin and gentamicin work?**

- **Ampicillin** blocks proteins that Group B strep (GBS) needs to work.
- **Gentamicin** targets and destroys E. Coli.

**Side effects of ampicillin may include:**

- Diarrhea
- Vomiting
- Rash or hives
- Itching
- Difficulty breathing or swallowing

**Side effects of gentamicin may include:**

- Rash or hives
- Itching
- Vomiting
- Hearing loss (*rare but serious*)
- Kidney damage (*rare but serious*)

**Why give antibiotics?**

- Even though antibiotics may have side effects, they are **much safer** than a serious infection.
- Antibiotics **decrease serious complications**, including death.
- If your baby is at risk for early onset sepsis, they need antibiotics **right away**.

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## Conclusions

- The process to create and standardize patient/family education yielded two handouts for use by all providers. Caregivers of infants with Early Onset Sepsis or Rule-out Sepsis in the NICU and General care Nursery will receive consistent care plan and education across the institution.
- This is particularly helpful for caregivers whose babies have a transfer of care between units during hospitalization.

## Acknowledgements/Hospital Team

- Thank you to RUMC Patient Education (PEPDOG) Committee, RUMC General Entry Masters Program Students, NICU Attending Team, General Care Nursery Team and the Rush Children’s Hospital Family Advisory Council