# NICU Story

#### Rae Staben, Natalie Stottler, Justin Lee

## The Team



Justin Computer Science



Rae Economics



Natalie Product Design

#### Parent Interviews

 "The NICU is everything you don't expect when walking into your baby's room."

• "It's like skimming a textbook: you're reading the chapters, but **not really understanding** anything."

Parents want to fully understand what is happening to their child, but there is **so much information** that it is hard to keep track of it all.

#### Point of View Statement

Liz needs **a way to synthesize all of the medical information** she receives in order **to feel confident** in her care of her child.

How might we **instill a sense of normalcy** in a landscape of medical jargon?



### Iteration 1: Scrappy Book



- Babies in the NICU are all in different situations. The Storybook needs to adjust to fit different needs.
- Some parents may not want medical information mixed in with their memories and mementos.
- Families at LPCH already receive a book of basic information about the NICU, made by March of Dimes.

## Iteration 2: Higher Res Google Presentation

- Digital book experience with modifiable sections
- Feedback: the daily report stinks
  - medical jargon
  - no reference point
  - progress towards the 3
    milestones

Your Baby's Care Team
Year baby's Dector is: Cohen MD, Ronald
Your baby's NNP (Neonatal Nurse Practitioner) or Resident Is: Miranda NP, Adrianna R.
Brown MD Lload Jeffrey
Your baby's primary care provider is: Brown MD, Lloyd Jeffrey
Your Baby's Respiratory Status
Your baby is receiving 21 % oxygen via CPAP as of 10/05/12 08:57
Your baby had 3 A/B/D episodes requiring intervention.
Your Baby's Nutritional Status
Your baby's current weight is 2612 gm or 5 lb. 11 oz.
Your baby has gained 27 grams since 10/04/12 06:00
Your baby had 47.0 mL of formula/breastmilk at last feeding as of 10/05/12 05:55
Your haby nippled 0.0 mL, received 376.0 mL by gavage tube
and received 0.0 ml. by IV from 10/04/12 06:00 to 10/05/12 05:59
Your baby voided 9 times and has had 1 steels in this time period
Don't forget to ask your baby's nume how much breastmilk is in the refrigerator for your baby.
Your Baby's Most Recent Lab Results (looking back 10 days)
Your baby's last hematocrit was 34.3 10/01/12 05:45
Your baby's last total bilirubin level 3.0 09/27/12 05:15
Your Baby's Current Scheduled Medications
ferrous sulfate 6 mg PO daily
multivitamin 1 mL PO daily
Your Baby's Plan for the Day

## Final Iteration Goals

- Better daily reports
  - $\circ$  allow for customized information
  - report progress towards three milestones
- Accommodate different outcomes
  - $\circ$  e.g. baby has passed away
- Paper and digital options

## Demonstration

# Our NICU Story



#### Baby Joanna "Jo"



Doctor: Dr. Cohen, "Ron"

#### Neonatal Nurse: Miranda

Resident: Adrianna

Primary Care: Dr. Brown

## Contact: Ron

#### Phone: <u>555-555-5555</u>

#### E-mail: cohen@nicu.com



# Medical Report

#### #1 EATING:

Weight: 5lb 11oz

Change since yesterday: +3.2oz

Change since birth: +13.5oz

Total milk consumed: 393mL

By stomach tube

<u>What's normal?</u>

**#2 TEMPERATURE:** Holds when removed from <u>isolette</u>

What's normal?

#3 BREATHING: Breathing on own

A/D/B episodes: 0

What's normal?

<u>View more data</u>

Based on these numbers, your baby has about 2 weeks before discharge.



#### A/D/B Episodes:

Apnea, desats, and bradycardia. Apnea is when breathing stops. Desats refer to a drop in the baby's oxygen saturation; normal saturation varies depending on your baby's age, but can range from the 80's up to 100. Bradycardia is a slowing in a baby's heartrate. A/D/B episodes often occur in preemies, but should decrease with time.

## Advantages

- economic benefits
  - save clinicians' time since parents can look up information
  - transition to home benefits: fewer ER visits
- family benefits
  - normalcy
  - record memories
  - $\circ$  information as you want it

## Next Steps

#### Parent survey

- "Opportunity to capture the good and bad during my child's NICU stay"
- Add a sharing capability via social media

## Questions?