

The “Babyboy/Babygirl” Problem: Evaluating the Risk of Non-Distinct, Temporary First Names for Newborns and Measuring the Effect of Changing the Paradigm to Reduce Wrong Patient Orders

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Aim: Since there can be no delay in registering newborns and giving them identification wristbands, some hospitals assign newborns temporary first names such as Babyboy or Babygirl. These non-distinct naming conventions have been shown to increase the risk of misidentifying NICU patients.¹ To determine the level of risk associated with non-distinct naming conventions, we aimed to first estimate the prevalence of non-distinct naming conventions in a national sample of NICUs, and then assess if assigning a unique first name at birth would lead to a reduction in wrong-patient errors in NICUs in an interventional study.

Setting: The NICU Naming Convention Survey was conducted by the American Academy of Pediatrics Section on Perinatal Pediatrics in collaboration with Montefiore Medical Center. The Distinct Naming Convention Trial was conducted at Montefiore Medical Center, an academic medical center in the Bronx, New York, consisting of three general hospitals, one children’s hospital, and two NICUs with a total of 54 NICU beds.

Mechanisms: For the NICU Naming Convention Survey, an electronic survey inquiring about details of newborn naming conventions was emailed to the members of the American Academy of Pediatrics Section on Perinatal Pediatrics listserv. For the Distinct Naming Convention Trial, we assessed the effectiveness incorporating the mother’s first name into the newborn’s first name (e.g. Wendysgirl) to prevent wrong-patient errors (Figure 1), and used an established, automated tool for measuring the outcome of wrong-patient electronic orders.²

Methods: An electronic survey inquiring about details of naming conventions used to assign names for newborns was emailed to 3,179 members of the American Academy of Pediatrics Section on Perinatal Pediatrics listserv. The survey was conducted from July-August 2013 by email, and requested information about the naming conventions used for newborns.

In an effort to reduce wrong patient order errors, a new naming convention that incorporates the mother’s first name was put in place for all children born at Montefiore Medical Center beginning on July 1st, 2013 (Figure 2), replacing the prior non-distinct naming convention of Babyboy/Babygirl.

Measures The primary outcome measure for the intervention study were wrong-patient errors identified by the Retract-and-Reorder (RAR) tool, a validated and reliable method for identifying wrong-patient errors.² This tool identifies orders placed on a patient that are retracted within 10 minutes, and then placed by the same clinician on a different patient within the next 10 minutes. The Retract-and-Reorder order rates (number of total retracted orders/total orders) were measured from the Montefiore NICUs for one year from July 1st, 2013 through June 30th, 2014. The prior year, from July 1st 2012 through June, 30th 2013, was used as a historical control.

Data / Results: There were 339 responses from NICUs (37.8% NICU response rate; Table 1). Of these, 277 (81.7%) reported using a non-distinct naming convention, with Babyboy/Babygirl being the most common (48.4%), followed by BB/BG (26.7%) and Boy/Girl (11.2%) (Figure 2). Only 61 NICUs (18.0%) reported using a distinct naming convention that incorporated the mother’s name, while 51 NICUs (15.0%) changed the temporary name to the child’s given name once the name was available.

For the intervention study, incorporating the mother’s first name into the baby’s name to create a distinct temporary first name reduced the wrong-patient error rate by 36.3%. There were 94 wrong-patient orders amongst 157,857 total orders during the control period (error rate of 59.6 per 100,000 orders), which was reduced to 54 wrong-patient errors amongst 142,437 total orders (error rate of 37.9 per 100,000 orders) during the intervention period.

Discussion

Non-distinct naming conventions are used by the majority of NICUs in the United States. Changing from the non-distinct naming convention Babyboy/Babygirl to a distinct naming convention in our cohort led to a meaningful reduction in wrong-patient electronic orders.

References

1. Gray JE, Suresh G, Ursprung R, et al. Patient misidentification in the neonatal intensive care unit: Quantification of risk. *Pediatrics*. 2006 Jan;117(1):e43-47.
2. Adelman JS, Kalkut GE, Schechter CB, Weiss JM, Berger MA, Reissman SH, Cohen HW, Lorenzen SJ, Burack DA, Southern WN. Understanding and preventing wrong-patient electronic orders: a randomized controlled trial. *J Am Med Inform Assoc*. 2013 Mar 1;20(2):305-10.

Table 1. NICU Naming Convention Survey: Characteristics of NICUs

Total NICUs	339
NICU Level of Care Level 1 & 2 Level 3 & 4	32 (9.4%) 304 (89.7%)
NICU Average Daily Patient Census 0-50 ≥ 50	253 (74.6%) 85 (25.1%)
% Multiples ≤ 10% multiples > 10% multiples	90 (26.5%) 249 (73.5%)
NICU Location Eastern United States Central United States Western United States Foreign (Non-United States)	147 (43.4%) 94 (27.7%) 38 (11.2%) 4 (1.2%)

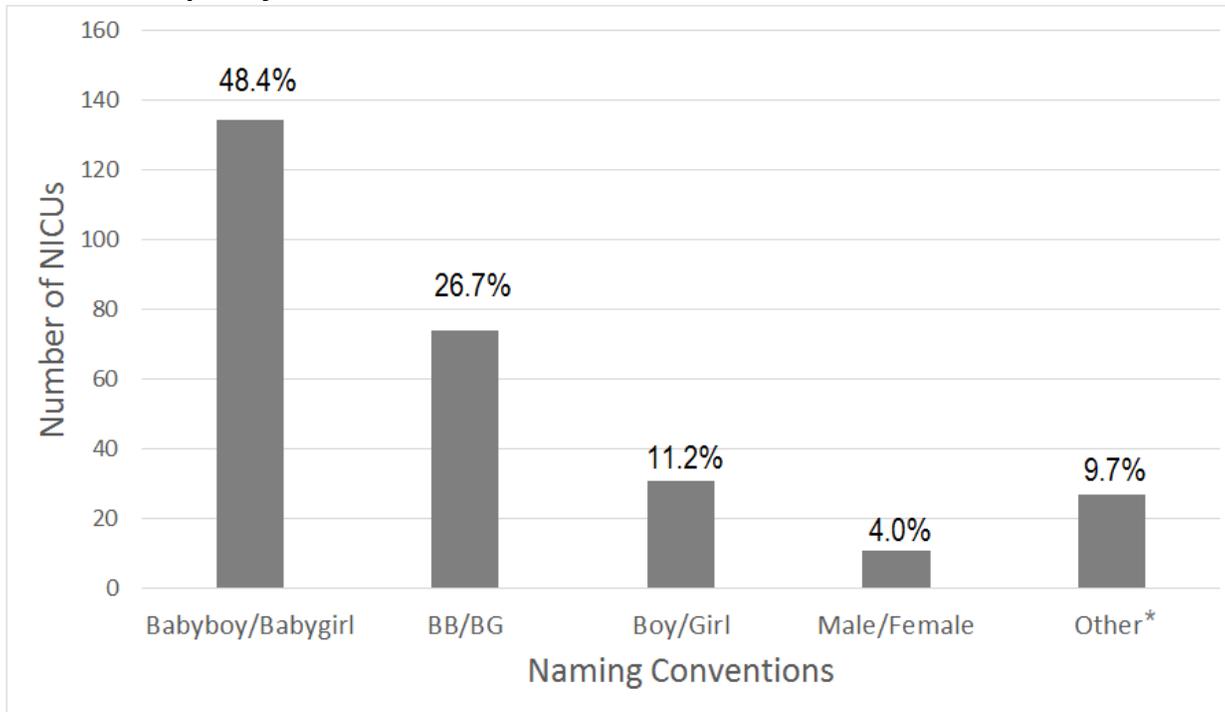
Figure 1. Distinct Naming Convention Trial: New Naming Convention

New Naming Convention for Single Births	New Naming Convention for Multiple Births
<ul style="list-style-type: none"> • No longer use Babyboy/Babygirl for the first name • For single births, newborns are given temporary names as follows: <ul style="list-style-type: none"> ○ The mother's first name (up to a maximum of 10 characters) ○ 1 character suffix ("s") ○ 3 to 4 character gender (boy or girl) • Example: Babygirl Smith → Judysgirl Smith 	<ul style="list-style-type: none"> • No longer use Babyboy/Babygirl for the first name • For multiple births, newborns will be given temporary names as follows: <ul style="list-style-type: none"> ○ First digit numbering (1, 2, etc.) ○ The mother's first name (up to a maximum of 10 characters) ○ 1 character suffix ("s") ○ 3 to 4 character gender (boy or girl) • Example: BabygirlA & BabygirlB → 1Judysgirl & 2 Judysgirl

Figure 2. Example of Non-Discrete and Discrete Naming Conventions

Non-Discrete Naming Convention		Discrete Naming Convention	
MRN	Patient Name	MRN	Patient Name
0012385	Babygirl Jackson	0012385	Wendysgirl Jackson
0012352	Babygirl Johnson	0012352	Brendasgirl Johnson
0012357	Babygirl Jones	0012357	Catherinesgirl Jones

Figure 3. Prevalence Study: Breakdown of Non-Discrete Naming Conventions by Frequency of Use



*e.g. Inf daughter/Inf son, Master/Miss, Fe/Ma, NBM/NBF, etc.