

# Incident Reports of Naming Errors among Two Sets of Infant Twins

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## Abstract

**Introduction:** Newborns are at high risk for identification errors due to their inability to speak and indistinguishable features. To reduce this risk, The Joint Commission requires hospitals to use a distinct identification method for newborns. Most hospitals create medical records for newborns at birth using temporary naming conventions, resulting in patients with similar identifiers. Typically, multiple-birth infants are distinguished from their siblings by a single character (1, 2, or A, B), placing them at higher risk for identification errors, which can delay care and compromise patient safety. **Methods:** We present 2 unrelated cases involving naming errors in sets of infant twins receiving care in a healthcare system using Joint Commission compliant distinct temporary naming convention. **Results:** In the 2 cases, system failures contributed to naming errors in 2 sets of infant twins, which resulted in delayed care. In the first case, twins were inadvertently assigned the same temporary name. In the second case, an infant's blood specimen label did not include a single character, which distinguishes a multiple-birth infant from their sibling. Further safeguards are needed to reduce this risk. These cases illustrated the potential for misidentification related to newborn naming conventions during the registration process, especially between siblings of multiple-birth infants. **Conclusions:** Further research is needed to determine strategies to prevent newborn identification errors. Potential strategies to reduce this risk and protect newborns include improving the design of newborn identifiers, systems-level interventions such as verification alerts, and improved registration processes. (*Pediatr Qual Saf* 2020;6:e356; doi: 10.1097/pq9.000000000000356; Published online October 23, 2020.)

## INTRODUCTION

Among the 4 million live births in the United States annually, hospitalized newborns and infants are at high risk for identification errors.<sup>1</sup> In Pennsylvania, a prior study estimates that nearly 2 newborn misidentification events occur daily, which equates to one misidentification error for



every 217 live births.<sup>1</sup> Hospitals traditionally assigned newborn names using a temporary, nondistinct naming convention, such as Babyboy/Babygirl and retained the temporary name throughout the hospital stay. Yet, similar names may significantly contribute to identification errors between newborns.<sup>2</sup> More recently, the use of a distinct naming convention incorporating the mother's first name, such as Wendysboy/Wendysgirl, has been associated with a 36%

decrease in wrong-patient orders in the neonatal intensive care unit (NICU) compared with a nondistinct naming convention.<sup>3</sup> Based on this finding, The Joint Commission requires hospitals to use a distinct method of identification for newborns as part of its National Patient Safety Goals (Fig. 1).<sup>4</sup>

However, the recommended naming convention may not be protective for multiple-birth infants. Multiples pose unique identification challenges, having the same last name, nearly identical first names (eg, Wendysboy1 and Wendysboy2), the same birth date, and sometimes, sequential medical record numbers (MRNs).<sup>2</sup> Prior research demonstrated that multiple-birth infants in the NICU had nearly twice the risk of wrong-patient orders than patients in general pediatric units (odds ratio, 1.84; 95% confidence interval, 1.41–2.42).<sup>5</sup> Furthermore, in the NICU, multiple-birth infants were at significantly higher risk of wrong-patient orders compared to singletons (adjusted odds ratio, 1.75; 95% confidence interval, 1.39–2.20),

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To cite: Redman CT, Reddy P, Kneifati-Hayek JZ, Applebaum JR, Manzano W, Goffman D, Adelman JS. Incident Reports of Naming Errors among Two Sets of Infant Twins. *Pediatr Qual Saf* XXXX;X:XXXX.

Received for publication February 24, 2020; Accepted August 3, 2020.

Published online October 23, 2020

DOI: 10.1097/pq9.000000000000356



### NEW: Requirement for Distinct Identification for Newborns

National Patient Safety Goal 01.01.01  
EP3. Use distinct methods of identification for newborn patients

- Distinct naming systems could include  
Mother's first and last names and newborn's gender  
("Smith, Judy Girl" or "Smith, Judy Girl A" and "Smith, Judy Girl B" for multiples)
- Standardized practices for identification banding
- Establish communication tools among staff

Fig. 1. The Joint Commission Requirement for Newborns.

suggesting that the excess risk may be attributable to identification errors between siblings.<sup>6</sup> Failure to identify hospitalized newborns correctly can delay care and compromise patient safety in a population that is particularly vulnerable.

Other types of errors are associated with temporary newborn naming conventions. Previously reported newborn identification errors include medication errors, unintended procedures, and diagnostic tests; breast milk administration errors; inaccurate clinical documentation; and errors due to incomplete or missing wristbands.<sup>1,2,7</sup> The Institute for Safe Medication Practices issued a safety alert that described several cases in which The Joint Commission compliant newborn naming convention resulted in errors between mother and newborn.<sup>7</sup> Long temporary newborn names were truncated in the electronic health record (EHR) and on identification bracelets, eliminating the distinguishing features and resulting in identical names.<sup>7,8</sup> In one case, a mother and her twin girls all had the same first and last name in the EHR and on their identification bands because the system truncated long names. Most hospitals' registration protocols do not permit changing an infant's temporary name when the given name is available,<sup>9</sup> providing greater opportunity for naming discrepancies if readmitted or returning for care. Human error, including wrong data input or wrong-patient record retrieval, can ultimately delay care or cause unintended harm.<sup>1,2</sup> A "lapse," "slip," or confusion during the registration process can lead to a missing or incorrect character used to distinguish multiple-birth infants from their siblings, leaving this population at a higher risk for identification, therapeutic, and diagnostic errors.<sup>1,2,5,6</sup> Despite these known issues, we report 2 cases of identification errors during the registration process involving sets of twins that were related to name assignments consistent with the current Joint Commission-recommended temporary naming convention.

## CASE PRESENTATION

### *Case 1: Female Twins Assigned the Same Temporary Name*

A woman presented at 38 weeks pregnant with female twins for an elective cesarean section in the setting of

breech malpresentation. Both infants emerged healthily and were transferred to the newborn nursery for routine care. During the registration process, each infant was assigned a unique MRN in the EHR system for hospital admission. However, the infants were inadvertently assigned the same temporary name in the EHR system per the hospital's newborn naming convention, sharing the same last name, sex (FC, female child; MC, male child), a character used to distinguish birth order, and mother's first name (eg, Jackson, FC A Anita). Due to the naming error, staff were delayed in placing electronic orders and documenting both infants' clinical information. Within 1 hour after delivery, the clinical team contacted multiple hospital departments and personnel (ie, admitting and registration departments, clinical staff) to resolve the naming error. Twin B was assigned a distinct temporary name corresponding with her birth order (eg, Jackson, FC B Anita) and assigned a new MRN, resulting in duplicate records. Clinical notes referred to Twin B with the correct newborn naming convention. Both infants were discharged 72 hours after birth. House staff submitted an incident report of the event.

### *Case 2: Male Twin Missing Birth Order Distinction in Temporary Name*

A woman presented at 25 weeks pregnant with male-female twins. After delivery, both infants emerged underweight and were transferred to the NICU for respiratory support and continuous monitoring. A cord blood specimen was sent from labor and delivery for Male Twin A. The blood bank notified a NICU nurse practitioner that the sample obtained from Twin A was missing the label's birth order distinction. Therefore, testing could not be performed with the incomplete patient name (eg, Smith, MC Brenda). The label was updated with the full distinct name (eg, Smith, MC A Brenda) to proceed with specimen testing. A nurse submitted an incident report of the event.

## DISCUSSION

Hospitals rely on incident reporting systems to capture patient safety events. Yet, voluntary reporting by staff is known to underestimate the frequency of events

because staff involved in the event fear retribution, have limited time or unfamiliarity with reporting systems, or doubt that meaningful action will be taken.<sup>10</sup> Likely, newborn naming errors occur frequently, but we suspect that they are underreported. These 2 patient safety events illustrate the potential for identification errors related to the use of temporary names for newborns, particularly for multiple-birth infants. In case 1, both newborns were assigned the same temporary name. In case 2, a blood specimen label did not include a single character to distinguish a multiple-birth infant from their sibling. These naming errors resulted in a duplicate record, inaccurate documentation, and delayed care. Notably, both cases occurred at an institution that has a Joint Commission compliant distinct naming convention in place to minimize wrong-patient errors. These cases suggest that existing naming convention safeguards are not fully protective. Results of a national survey conducted before The Joint Commission requirement went into effect suggest that only 30% of hospitals used distinct naming conventions, an increase from a prior report of 20%.<sup>8</sup> As hospitals adopt more distinct newborn naming conventions to meet The Joint Commission requirement, these cases highlight the need for additional safeguards to protect multiple-birth infants.

Human and systems-based newborn identification errors continue to occur throughout healthcare delivery, including medication and breast milk administration, procedures (ie, laboratory, diagnostic, radiology, surgical), documentation, labeling, and registration.<sup>1,2</sup> Across healthcare systems, there is a lack of adoption of safety practices and standardization regarding the responsibilities of hospital admission, registration, and medical records departments that assign newborn temporary and given names. Some EHR systems are unequipped to provide a hard stop or visual cues to prevent these errors when caring for patients with look-alike names. Organizations must assess their system compatibility to support integrated EHR changes to prevent and reduce the risk of identification errors.

Further research on reliable newborn identification methods, particularly for multiple-birth infants, is needed to protect this vulnerable population and reduce the risk of identification errors. Potential strategies include improving the design of newborn identifiers, automated systems-level interventions, such as verification alerts for multiple births, and improved registration processes when inputting temporary newborn and given names in the EHR.<sup>1,2</sup> These solutions require changes to health information technology systems, workflows, and training, which may incur additional costs. Future strategies need rigorous evaluation methods to determine their effectiveness in reducing identification errors and in identifying any unintended consequences.

## CONCLUDING SUMMARY

Newborns are at risk for identification errors, particularly siblings of multiple-birth infants. These 2 cases illustrate potential errors during the registration process related to the use of temporary naming conventions for multiple-birth infants: in case 1, twins were inadvertently assigned the same name; in case 2, an infant's temporary name was incomplete. Further safeguards are needed to reduce this risk. To mitigate these errors, hospitals must improve and evaluate newborn identification methods, system identification alerts, and registration processes to ensure the safety of this vulnerable population.

## DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

## ACKNOWLEDGMENTS

This publication was supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the National Institutes of Health under Award Number R01HD094793. The content is solely the authors' responsibility and does not necessarily represent the National Institutes of Health's official views. The funding agency had no role in the following research activities: design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

## REFERENCES

- Wallace SC. Newborns pose unique identification challenges. *PA Patient Saf Advis*. 2016;13:42–49.
- Gray JE, Suresh G, Ursprung R, et al. Patient misidentification in the neonatal intensive care unit: quantification of risk. *Pediatrics*. 2006;117:e43–e47.
- Adelman J, Aschner J, Schechter C, et al. Use of temporary names for newborns and associated risks. *Pediatrics*. 2015;136:327–333.
- The Joint Commission. R3 report: Distinct newborn identification requirement. Available at [https://www.jointcommission.org/assets/1/18/R3\\_17\\_Newborn\\_identification\\_6\\_22\\_18\\_FINAL.pdf](https://www.jointcommission.org/assets/1/18/R3_17_Newborn_identification_6_22_18_FINAL.pdf). Updated July 2018. Accessed May 29, 2020.
- Adelman JS, Aschner JL, Schechter CB, et al. Evaluating serial strategies for preventing wrong-patient orders in the NICU. *Pediatrics*. 2017;139:28557730.
- Adelman JS, Applebaum JR, Southern WN, et al. Risk of wrong-patient orders among multiple vs. singleton births in the neonatal intensive care units of 2 integrated health care systems. *JAMA Pediatr*. 2019;173:979–985.
- Institute for Safe Medication Practices. What's in a name? Newborn naming conventions and wrong-patient errors. Available at <https://www.ismp.org/resources/whats-name-newborn-naming-conventions-and-wrong-patient-errors>. Updated April 25, 2019. Accessed June 4, 2020.
- Besagar S, Robles PLA, Manzano W, et al. A national survey on the use of temporary naming conventions for newborns: 5-year follow-up. *Clin Pediatr (Phila)*. 2020;9922820922534.
- Adelman JS, Aschner JL, Schechter CB, et al. Babyboy/babygirl: a national survey on the use of temporary, nondistinct naming conventions for newborns in neonatal intensive care units. *Clin Pediatr (Phila)*. 2017;56:1157–1159.
- Evans SM, Berry JG, Smith BJ, et al. Attitudes and barriers to incident reporting: a collaborative hospital study. *Qual Saf Health Care*. 2006;15:39–43.