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Prevalence of Delayed Cord Clamping Among U.S. Hospitals by Facility Characteristics

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INTRODUCTION

Delayed cord clamping allows transfusion of placental blood to the newborn in the first minutes after birth.¹ For term newborns, this practice increases hemoglobin and iron stores, preventing or delaying iron deficiency, and may improve young children’s development.^{1,2} It is recommended by the American College of Obstetricians and Gynecologists,³ but its prevalence in the United States is not well-reported. This study describes delayed cord clamping’s prevalence in U.S. hospitals overall and by facility characteristics.

METHODS

The Maternity Practices in Infant Nutrition and Care survey is a biennial census of U.S. hospitals providing maternity care; it is completed by staff most knowledgeable about hospital neonatal feeding practices.⁴ The 2018 Maternity Practices in Infant Nutrition and Care survey asked, “How many healthy newborns at your hospital have their umbilical cord clamped more than 1 minute after birth?” Response options were most (80% or more of healthy newborns), many (50–79%), some (20–49%), or few (0–19%). Facility characteristics assessed included type, teaching status, “baby-friendly” designation,⁵ birth volume, cesarean birth rate, and location. Descriptive analyses were performed to assess the practice’s prevalence by facility characteristics. Statistical tests were not performed because the Maternity Practices in Infant Nutrition and Care survey is a census and not subject to sampling error. This activity was reviewed by Battelle; it was determined to be research that did not involve human subjects and was conducted consistent with applicable federal law

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and Centers for Disease Control and Prevention policy (eg, 45 C.F.R. part 46; 21 C.F.R. part 56; 42 U.S.C. §241(d), 5 U.S.C. §552a, 44 U.S.C. §3501 et seq).

RESULTS

Of 2,913 eligible hospitals, 2,045 (70.2%) completed the Maternity Practices in Infant Nutrition and Care survey. Three hospitals missing delayed cord clamping data were excluded, resulting in an analytic sample of 2,042. Fifty percent of hospitals reported that “most” healthy newborns received delayed cord clamping (Table 1). Prevalence was 51.9% among nonprofit hospitals, 44.0% among government or military hospitals, and 43.4% among private hospitals. Similar percentages of teaching hospitals (49.5%) and nonteaching hospitals (51.0%) reported delayed cord clamping for most healthy newborns, and 52.7% of baby-friendly hospitals and 49.1% of non-baby-friendly hospitals reported it for most healthy newborns. Its prevalence for most healthy newborns by birth volume ranged from 46.4% among hospitals with 2,000–4,999 births to 53.2% among hospitals with fewer than 500 births. This practice for most healthy newborns ranged from 37.1% among hospitals with cesarean birth rates of 35% or higher to 61.0% among hospitals with cesarean birth rates less than 25%. Across states, the median percentage of hospitals reporting this practice for most healthy newborns was 52% (range 29–100%) (Fig. 1).

DISCUSSION

This national study describes the prevalence of hospitals routinely implementing delayed cord clamping, a recommended obstetric practice.^{2,3} There is opportunity to increase its practice in U.S. hospitals. Obstetric care protocols can be modified to routinely include it for newborns, regardless of birth mode. Continued training among clinicians is encouraged, particularly in areas with low prevalence of delayed cord clamping. Greater public awareness of its health benefits may prompt discussions between patient and clinician and result in improved care.

Limitations of this study include variation in who completes the Maternity Practices in Infant Nutrition and Care survey and how the practice is tracked at each hospital. Hospitals self-report their practices, which may result in inaccuracies. There may be variability in how hospitals define “healthy newborns” and their practices. Finally, nonresponding hospitals may have different characteristics and practices than respondents, potentially affecting generalizability.

Half of U.S. hospitals report delayed cord clamping for most healthy newborns, with variation in practice by hospital location and cesarean birth rate. Interventions targeting hospitals, clinicians, and patients might increase this practice, improving short-term and long-term infant health.

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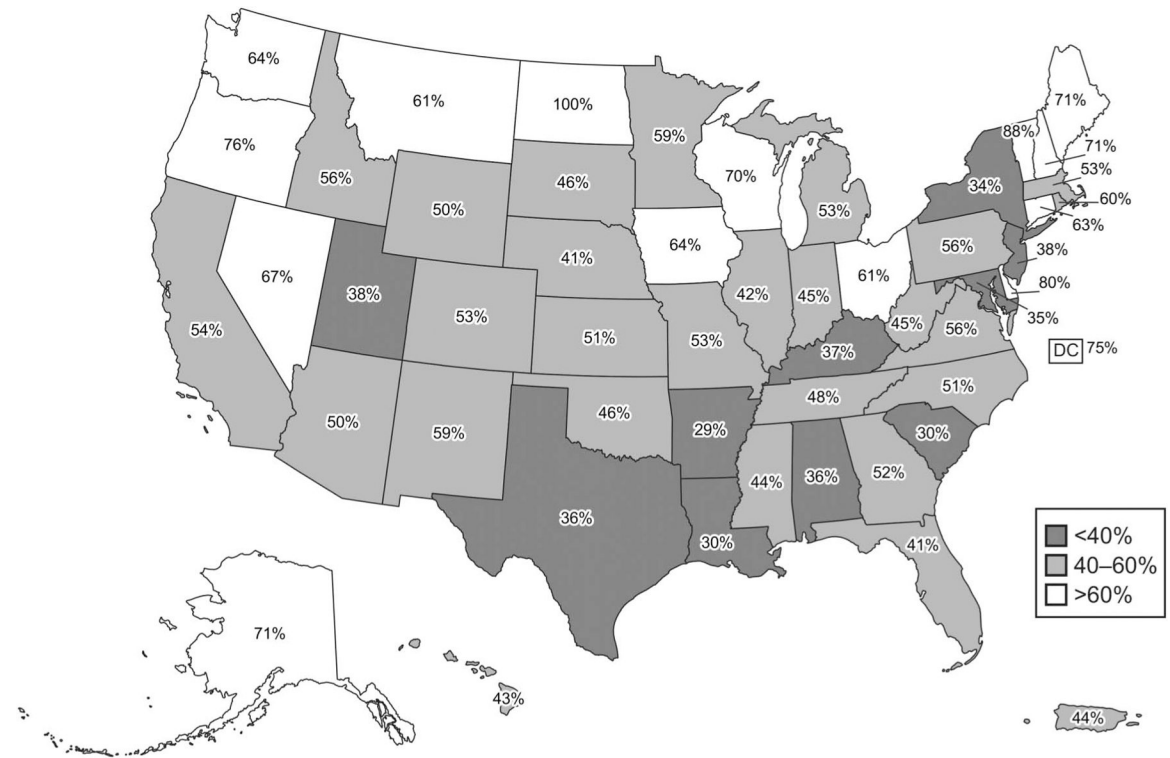


Fig. 1. Percentage of hospitals reporting that most healthy newborns receive delayed cord clamping, Maternity Practices in Infant Nutrition and Care, 2018.

Table 1.
Delayed Cord Clamping for Healthy Newborns by Facility Characteristics, Maternity Practices in Infant Nutrition and Care 2018

Facility Characteristic	No. of Hospitals Responding to “How Many Healthy Newborns at Your Hospital Have Their Umbilical Cord Clamped More Than 1 Minute After Birth?”				Total
	Most (80% or More)	Many (50–79%)	Some (20–49%)	Few (0–19%)	
Overall	1,020 (50.0)	419 (20.5)	292 (14.3)	311 (15.2)	2,042
Type					
Government or military	40 (44.0)	19 (20.9)	11 (12.1)	21 (23.1)	91
Nonprofit	813 (51.9)	326 (20.8)	220 (14.0)	207 (13.2)	1,566
Private	167 (43.4)	74 (19.2)	61 (15.8)	83 (21.6)	385
Teaching hospital					
Yes	698 (49.5)	300 (21.3)	195 (13.8)	218 (15.5)	1,411
No	322 (51.0)	119 (18.9)	97 (15.4)	93 (14.7)	631
Baby-friendly designation*					
Yes	265 (52.7)	106 (21.1)	63 (12.5)	69 (13.7)	503
No	755 (49.1)	313 (20.3)	229 (14.9)	242 (15.7)	1,539
Annual birth volume					
Less than 500	381 (53.2)	135 (18.9)	89 (12.4)	111 (15.5)	716
500–999	220 (50.5)	100 (22.9)	59 (13.5)	57 (13.1)	436
1,000–1,999	212 (47.1)	95 (21.1)	65 (14.4)	78 (17.3)	450
2,000–4,999	181 (46.4)	81 (20.8)	73 (18.7)	55 (14.1)	390
5,000 or more	26 (52.0)	8 (16.0)	6 (12.0)	10 (20.0)	50
Cesarean birth rate (%) [†]					
Less than 25	244 (61.0)	74 (18.5)	46 (11.5)	36 (9.0)	400
25 to less than 30	321 (56.3)	102 (17.9)	74 (13.0)	73 (12.8)	570
30 to less than 35	263 (47.0)	135 (24.2)	75 (13.4)	86 (15.4)	559
35 or more	188 (37.1)	108 (21.3)	96 (18.9)	115 (22.7)	507

Data are n (%) or n.

* Hospitals reported whether they were designated “baby-friendly” as part of the Baby-Friendly Hospital Initiative.⁵

[†] Proportion of cesarean births among live births. Six hospitals missing cesarean birth data were excluded from the cesarean birth rate analysis.