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## Letter to the Editor

# Pre-calculated epinephrine dose chart for delivery room use



To the Editor,

Dosing errors can occur when calculating epinephrine (EPI) especially in emergency situation. Neonatal Resuscitation Program (NRP) recommends using mL/kg dose for epinephrine (EPI) during neonatal resuscitation.<sup>1</sup> The dose range provided is 0.1–0.3 mL/kg for intravenous (IV) use. In clinical practice, when neonatal team is called to attend the delivery, gestational age is provided (e.g. 25 week, preeclampsia in OR 1 or 31 weeks with bulging bag in LDR 4). The weight is not readily available at birth except for expected fetal weight, if provided by the obstetric team.

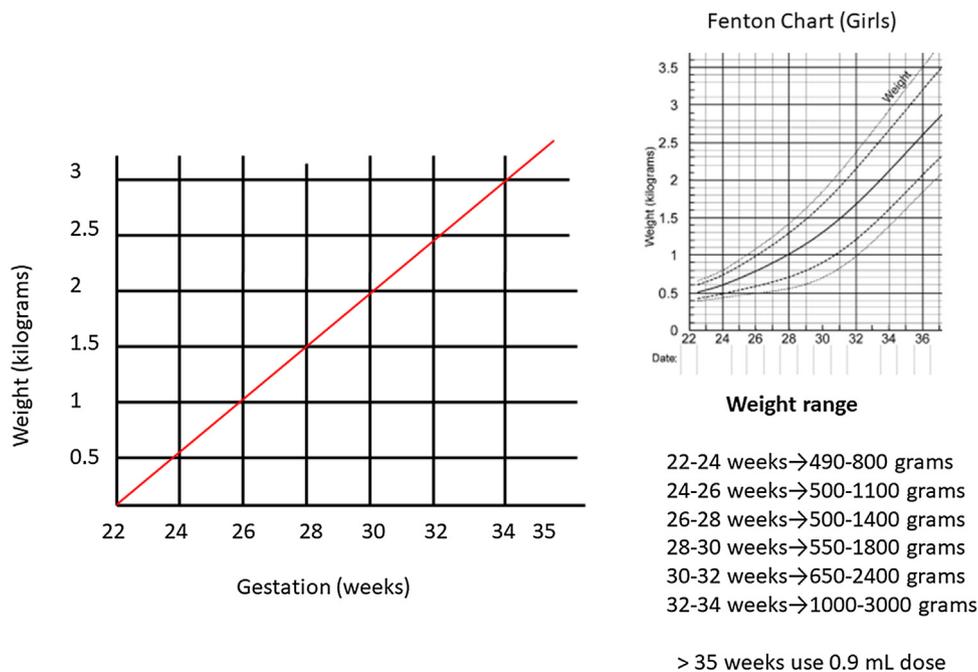
We propose a simple pre-calculated epinephrine dose chart for delivery room. This chart is based on gestation age (GA) range. As EPI dose is weight-based, it is important to match GA for the corresponding weight-based dose. We used Fenton growth chart (girls for uniformity) for that purpose.<sup>2</sup> The average predicted weight for GA range is depicted by the diagonal line (Figure ).

The pre-calculated dose would be in the range for 3–97% of weight for that GA. The dose range used was 0.2–0.3 mL/kg with total pre-calculated dose provided in mL (Epinephrine Injection, USP, 1 mg/10 mL). The chart is simple to use. For example: when the neonatal team is preparing resuscitation for an infant with GA of 25 weeks, they can use the chart (Table 1). Column 1 provides the range of 24–26 gestational weeks while column 3 gives the pre-calculated dose. Column 2 is for reference.

The use of this simple chart eliminates the need for calculation in urgent situations thereby preventing potential medication errors.

## Financial disclosure

None.



**Figure – Predicted Weight for the Gestational Age.**

**Table – Pre-calculated epinephrine dose chart for delivery room.**

Gestational age (weeks)	Estimated weight (grams)	IV Epinephrine dose (mL)
22–24	500	0.1 mL
24–26	500–1000	0.2 mL
26–28	1000–1500	0.4 mL
28–30	1500–2000	0.6 mL
30–32	2000–2500	0.7 mL
32–34	2500–3000	0.8 mL
≥35	3000–4500	0.9 mL

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### Conflict of interest

None.

### REFERENCES

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2. Fenton TR, Kim JH. A systematic review and meta-analysis to revise the Fenton growth chart for preterm infants. *BMC Pediatr* 2013;13:59. doi: <http://dx.doi.org/10.1186/1471-2431-13-59>.

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