Chart 7. How to give intravenous fluids to a child in shock without severe malnutrition

- Check that the child is not severely malnourished, as the fluid volume and rate are different. (Shock with severe malnutrition, see Chart 8.)
- Insert an IV line (and draw blood for emergency laboratory investigations).
- Attach Ringer's lactate or normal saline; make sure the infusion is running well.
- Infuse 20 ml/kg as rapidly as possible.

Age (weight)	Volume of Ringer's lactate or normal saline solution (20 ml/kg)
2 months (< 4 kg)	50 ml
2–< 4 months (4–< 6 kg)	100 ml
4–< 12 months (6–< 10 kg)	150 ml
1–< 3 years (10–< 14 kg)	250 ml
3–< 5 years (14–19 kg)	350 ml

Reassess the child after the appropriate volume has run in.

Reassess after first infusion:	• If no improvement, repeat 10–20 ml/kg as rapidly as possible. • If bleeding, give blood at 20 ml/kg over 30 min, and observe closely.
Reassess after second infusion:	• If no improvement with signs of dehydration (as in profuse diarrhoea or cholera), repeat 20 ml/kg of Ringer's lactate or normal saline. • If no improvement, with suspected septic shock, repeat 20 ml/kg and consider adrenaline or dopamine if available (see Annex 2, p. 353). • If no improvement, see disease-specific treatment guidelines. You should have established a provisional diagnosis by now.

After improvement at **any stage** (pulse volume increases, heart rate slows, blood pressure increases by 10% or normalizes, faster capillary refill < 2 s), go to Chart 11, p. 17.

Note: *In children with suspected malaria or anaemia with shock, rapid fluid infusion must be administered cautiously, or blood transfusion should be given in severe anaemia instead.*