

Table 3: Potential hazards associated with medication and infusion management on labor and delivery, and suggested strategies to mitigate each hazard.

Category	Potential Hazard	Suggested Practices to Mitigate Each Hazard*
Venous access	Inappropriate access (e.g., small gauge or absent PIV)	Establish minimum IV access for all parturients (e.g., 18G or larger)
	Venous access infiltration or inadvertent PIV removal during patient transport	Nursing order sets should include the task to verify function of IV with vital sign checks during labor
IV and epidural tubing	Medication infusion lines used in error to administer a desired crystalloid bolus	Clearly label tubing for high-risk medications (oxytocin, magnesium, insulin, epidural solutions), and/or use dedicated color-coded tubing
	No blood tubing available; Kinked or broken tubing; No injection ports (only infusion pump tubing)	Maintain blood tubing in labor rooms and prepared blood tubing in labor and delivery OR(s), keeping in compliance with USP-797. Select tubing systems that do not require replacement upon transfer to the OR.
Infusion pumps	Misprogrammed pump (wrong drug, wrong concentration); Failure to start or stop medication infusion	Utilize safe pumps with preprogrammed medication libraries; utilize standard infusion pumps and tubing in both the L&D unit and all anesthetizing locations in the institution
	Pump errors preventing drug administration (e.g., "Air in line"); Error alarms that distract providers from other tasks	Deploy infusion pump training and competency assessment that includes troubleshooting, strategies to minimize air entrainment, and alarm management; maintain fleet of infusion pumps in optimal working order and budget for timely repair
Magnesium	Uncontrolled bolus administration	Discontinue magnesium prior to proceeding to OR for emergency surgery
	Failure to continue magnesium during cesarean for preeclampsia with severe features, increasing risk for postpartum eclampsia	Restart magnesium infusion for patients with preeclampsia with severe features; verify infusion pump programming with labor and delivery nurse familiar with the obstetric magnesium infusion protocol. It is not necessary to restart magnesium in OR when being used for fetal neuroprotection and delivery is imminent.
Oxytocin	Inappropriate bolus administration prior to delivery	Discontinue oxytocin prior to proceeding to OR; wait to reconnect the infusion to the IV until after delivery of the infant
	Postpartum overdose resulting in hypotension and myocardial ischemia	Consider controlled postpartum infusion via infusion pump or "Rule of Three" administration to promote postpartum uterine tone; monitor for hypotension and myocardial ischemia
Epidural solutions	Medication administered by wrong route (i.e., epidural medication given intravenously)	Consider non-luer lock epidural caps to prevent inadvertent administration of IV medication; use color-coded unique tubing for epidural solutions to discourage wrong route administration
	Dislodgment of the epidural catheter during transport to the OR; entanglement of monitor cables, intravenous lines, and epidural lines that delay transport	Discontinue and cap the epidural infusion and epidural catheter prior to transfer to the OR for emergency surgery; maintain appropriate caps at bedside in each labor room.
Insulin	Uncontrolled infusions of insulin; line entanglement that delays transport or risks PIV dislodgment	Discontinue insulin infusions prior to proceeding to OR for emergency surgery
Antibiotics	Failure to administer antibiotics prior to skin incision for cesarean	Maintain most common antibiotic (e.g., cefazolin) in OR for timely administration
	Administration of medication to patient with stated allergy	Verify allergies prior to administration of antibiotics

PIV: peripheral intravenous cannula; I: intravenous; OR: Operating room

*Additional suggested practices are included in the Emergency Cesarean Transport Procedure (Table 2 on page 24)