Medication	Mechanism of Action/Use	Nursing Considerations
Methotrexate	Methotrexate inhibits cell division and embryo enlargement, dissolving the pregnancy. Methotrexate's mechanism of action is due to its inhibition of enzymes responsible for nucleotide synthesis, including dihydrofolate reductase, thymidylate synthase, aminoimidazole carboxamide ribonucleotide transformylase (AICART), and amido phosphoribosyltransferase.1 Inhibition of nucleotide synthesis prevents cell division. Methotrexate is prescribed to dissolve the pregnancy.	Use only preservative-free formulations of methotrexate when administering high-dose therapy. Monitor CBC, chest X-ray, liver and renal function test results, and urinalysis before and during treatment. Administer subcutaneous injection into the patient's abdomen or thigh. Increase the patient's fluid intake to two to three liters daily, unless contraindicated, to reduce the risk of adverse GU reactions. Assesses patient for bleeding and infection and be aware that methotrexate resistance may develop with prolonged use.
Mifepristone	The anti-progestational activity of mifepristone results from competitive interactions with progesterone at progesterone receptor- sites. The compound inhibits the activity of endogenous all exogenous progesterone. The termination of pregnancy results. Used for the medical termination of intrauterine pregnancy through 49 days of pregnancy.	Monitor for diarrhea; diarrhea may be minimized by giving drugs after meals and at bedtime. Diarrhea is a common adverse effect that is dose-related and usually self-limiting.
Rhogam	Releases antibody-specific globulins to produce an antibody-antigen reaction that results in bacterial lysis and facilitates bacterial phagocytosis. In the treatment of ITP, immune globulin blocks ion receptors on macrophages to increase immunoglobulin action. Immune globulin also increases cytokine production and improves the B cell immune function by regulating	Know that before giving immune globulin, monitor the patient's fluid volume and bun and serum creatinine levels, as ordered, to determine the risk for acute renal failure. Expect the drug to be discontinued if renal function deteriorates. Use caution when administering immune globulin, regardless of the route of administration, because of the risk of thrombosis. Monitor patients closely with an increased

	macrophage and T cell activity. Newly formed antigen-antibody complexes produce split complement components that cause bacterial lysis. Used to treat primary immunodeficiency, massive fetomaternal hemorrhage, incompatible blood transfusions, and to suppress RH isoimmunization. it is also used to reduce the risk of infection and fetal damage in women exposed to rubella and early pregnancy.	risk of thrombosis. Ensure the patient is adequately hydrated before administration. When administering drugs intravenously, expect to infuse at the lowest rate possible. Report any signs and symptoms suggestive of a thrombotic event immediately to the provider and be prepared to administer treatment as ordered. If the drug is reconstituted outside sterile laminar airflow conditions, administer it immediately and discard unused portions.
Betamethasone	betamethasone inhibits neutrophil apoptosis and the demargintion and inhibits NF Kappa B and other inflammatory transcription factors. It also inhibits phospholipase A2, leading to decreased formation of arachidonic acid derivatives. In addition, glucocorticoids promote anti-inflammatory genes like interleukin 10. Betamethasone X through non-genomic and genomic pathways. The genomic pathway is slower and occurs when glucocorticoids activate glucocorticoid receptors and initiate downstream effects that promote transcription of anti-inflammatory genes, including phosphoenolpyruvate carboxykinase, IL-1-receptor antagonist, and tyrosine aminotransferase. Indicated for accelerating fetal lung maturity to reduce the incidence and severity of respiratory distress syndrome and treating several inflammatory conditions. As topical monotherapy, it is indicated to relieve pruritic and	Educate about the potential benefit of corticosteroid administration to the preterm neonate. Indicate that the drug cannot prevent or lessen the severity of all complications of prematurity and explain that blood frequent glucose testing is needed if diabetes is present.

	inflammatory symptoms of corticosteroid-responsive dermatoses.	
Indomethacin	Indomethacin blocks cyclooxygenase activity, the enzyme needed to synthesize prostaglandins, which mediate inflammatory response and cause local vasodilation, pain, and swelling. By blocking cyclooxygenase and inhibiting prostaglandins, this NSAID reduces inflammatory symptoms and helps relieve pain. Used to treat significant patent ductus arteriosus in premature infants weighing 500 to 1750 grams.	The medicine should be avoided in patients with a recent MRI because the risk of reinfarction increases with NSAID therapy. If therapy is unavoidable, monitor the patient closely for signs of cardiac ischemia. Indomethacin should be used cautiously in patients with hypertension and monitor blood pressure closely throughout therapy. The drug may cause hypertension or worsen it. Be aware that scheduled I.V. doses may be withheld if the infant or neonate has anuria or a significant decrease in urine output less than 0.6 ml/kg/hr.
Magnesium Sulfate	Magnesium sulfate assists all enzymes in phosphate transfer reactions that use adenosine triphosphate. Magnesium is required for the normal function of the ATP-dependent sodium-potassium pump in muscle membranes. It may effectively treat digitalis glycoside-induced arrhythmias because correction of hypo magnesium improves the sodium-potassium pump's ability to distribute potassium into intracellular spaces and because magnesium decreases calcium uptake and outflow through myocardial cell membranes. As an anti-convalescent, magnesium depresses the CNS and blocks peripheral neuromuscular impulse transmission by decreasing available acetylcholine. Used to prevent and control seizures in preeclampsia or	Beware that magnesium sulfate is the elemental form of magnesium. Oral preparations are not all equivalent. Observe for and report early evidence of hypermagnesemia, bradycardia, depressed deep tendon reflexes, diplopia, dyspnea, flushing, hypertension, nausea, slurred speech, vomiting, and weakness. Beware that magnesium may precipitate a myasthenic crisis by decreasing the patient's sensitivity to heart block. Frequently assess the cardiac status of patients taking drugs that lower heart rate, such as beta-blockers, because magnesium may aggravate symptoms of heart block. Be aware that magnesium salts aren't intended for long-term use. For example, magnesium sulfate may cause fetal abnormalities if administered for more than five to seven days to pregnant women when magnesium sulfate is administered by continuous IV

	eclampsia.	infusions, especially for more than 24 hours preceding delivery to control convulsions in a toxic woman monitor newborn for signs of magnesium toxicity, such as neuromuscular or respiratory depression.
Terbutaline Sulfate	Terbutaline sulfate stimulates beta-two androgenic receptors in the lungs, which is believed to increase cAMP production. The increased cAMP level relaxes bronchial smooth muscles, thereby increasing bronchial air flow and relieving bronchospasm. Use to prevent or reverse bronchospasm from asthma, bronchitis, or emphysema.	Use terbutaline cautiously in impatience with cardiovascular disease because the drug can adversely affect cardiovascular function. Monitor the patient's heart rate and rhythm, and blood pressure, and assess for chest pain. For substance use, inject into the lateral deltoid area. Assesses patient's respiratory rate, depth, and quality oxygen saturation and activity tolerance at regular intervals because continuous use of beta2-agonists for 12 months or longer accelerates the decline in pulmonary function
Hydralazine hydrochloride	It may act in a manner that resembles organic nitrates and sodium nitroprusside comma, except that hydralazine is selective for the arteries, period. Exerts a direct vasodilating effect on vascular smooth muscles and interferes with calcium movement in vascular smooth muscles by altering cellular calcium metabolism. Dilates arteries, not veins, which minimizes orthostatic hypotension and increases cardiac output and cerebral blood flow Causes a reflex autonomic response that increases cardiac output, heart rate, and left ventricular ejection fraction and has a positive inotropic effect on the heart.	Anticipate that the drug may change color in the solution and consult the pharmacist if the color changes. Expect to discontinue the drug immediately if the patient has lupus-like symptoms such as arthralgia, fever, Malaysia, pharyngitis, and splenomegaly. Expect the provider to withdraw hydralazine gradually to avoid a rapid increase in blood pressure. Expect the provider to withdraw hydralazine gradually to avoid a rapid increase in blood pressure. Monitor blood pressure with the patient in lying, sitting, and standing positions, and watch for signs of orthostatic hypertension.

	Use to manage essential hypertension alone or with other antihypertensives.	
Labetalol	Labetalol selectively blocks alpha-one and beta-two receptors in vascular smooth muscle and beta-one receptors in the heart to reduce blood pressure and peripheral vascular resistance. The potent beta blockade prevents reflex tachycardia. Which commonly occurs when alpha-blockers reduce cardiac output, resting heart rate, or stroke volume. Labetalol is indicated for the management of severe hypertension.	During IV labetalol use, expect to monitor blood pressure according to facility policy, usually every five minutes for 30 minutes, then every 30 minutes for two hours, and then every hour for six hours. Keep the patient in the supine position for three hours after IV administration. Be aware that labetalol masks common signs of stroke. Monitor blood glucose levels in diabetic patients because labetalol may conceal symptoms of hypoglycemia. Be aware that stopping labetalol tablets abruptly after long-term therapy could result in angina, am I, or ventricular arrhythmias.
Nifedipine	Nifedipine may slow the movement of calcium into myocardial and vascular smooth muscle cells by deforming calcium channels in cell membranes, inhibiting ion-controlled gating mechanisms, and disrupting calcium release from the sarcoplasmic reticulum. Decreasing intracellular calcium levels inhibits smooth muscle cell contraction and dilates arteries, which decreases myocardial oxygen demand, peripheral resistance, blood pressure, and afterload. Indicated for managing hypertension, chronic stable angina, and vasospastic angina.	be aware that patients with galactose intolerance should not take nifedipine because the drug contains lactose. The capsule form of the drug should not be used to treat hypertension because it affects blood pressure and is not known. Keep in mind that because of drugs' negative inotropic effect on some patients, frequently monitor heart rate and rhythm, as well as blood pressure, especially in patients who take a beta blocker or have heart failure, significant left ventricular dysfunction, or tight aortic stenosis. Monitor the patient's fluid intake and output, along with daily weights. Fluid retention may lead to heart failure, so assess for signs of heart failure, such as crackles, this manner, jugular vein distinction, peripheral edema, and weight gain.
Calcium gluconate	Calcium gluconate increases levels of intracellular and	Ensure to store medication at room temperature and protect it from

	extracellular calcium, which is needed to maintain homeostasis, especially in the nervous and muscular-skeletal systems. It also affects normal cardiac and renal function, respiration, coagulation, cell membrane, and capillary permeability. It helps regulate the release and storage of neurotransmitters and hormones. The oral form neutralizes and buffers stomach acid to relieve stomach discomfort caused by hyperacidity.	heat, moisture, and direct light. Do not freeze. Keep the patient in a recumbent position for 30 minutes after parental administration to prevent the dizziness from hypotension. Monitor serum calcium level, as ordered, and evaluate therapeutic response by assessing for chvostek and trousseau signs, which shouldn't appear. Be aware that calcium chloride injection contains three times as much calcium per milliliter as calcium gluconate injection.
Misoprostol	Misoprostol binds to smooth muscle cells in the uterine lining to increase the strength and frequency of contractions, degrade collagen and reduce cervical tone. Misoprostol is used for the management of miscarriage and the prevention of postpartum hemorrhage.	Advise the patient to avoid alcohol and foods that may cause an increase in GI irritation. Inform the patient to report bothersome side effects such as prolonged headache, menstrual irregularities, or GI problems such as nausea, diarrhea, vomiting, Constipation, heartburn, flatulence, and abdominal pain.
Cervidil	Cervidil induces urine contractions similar to those produced by the body during spontaneous labor. It also increases the amplitude and frequency of uterine contractions and reduces cervical tone, which produces cervical dilation. Cervidil is indicated for the initiation and continuation of cervical ripening in patients at or near term in whom there was an indication for the induction of Labor.	Observe the patient after the administration of the drug. Be aware that profuse bleeding may result in the expulsion of the Suppository. Instruct the patient to report wheezing, chest pain, dyspnea, and significant changes in BP and pulse.
Methylergonovine	The drug acts directly on the smooth muscle of the uterus. It increases the tone, rate, and amplitude of rhythmic	Monitor for hypertension, cramps, nausea, vomiting, and dyspnea. Monitor the patient's blood pressure, heart rate, and uterine

	contractions through binding and the resultant antagonism of the dopamine D1 receptor. It induces a rapid and sustained tetanic uterotonic effect which shortens the third stage of labor and reduces blood loss. Indicated for the prevention and control of excessive bleeding following vaginal childbirth.	response, assess for calcium levels, and notify the provider if there is uterine bleeding.
Hepatitis B vaccine	The Hepatitis B vaccine induces specific humoral antibodies against HBsAg (anti-HBs antibodies). Healthy adults, children, and neonates develop protective anti-HBs titers one month after completing a primary vaccination schedule of hepatitis B vaccine recombinant. The Hepatitis B vaccine recombinant is used to prevent infection by the hepatitis B virus.	Assess the patient for hypersensitivity reactions. Monitor for high fever (>103°F) and is younger than three months, hives or black-and-blue areas at places where the injection was not given, and a seizure. If present, inform the provider right away.
Erythromycin eye ointment	binds to the 50s subunit of the bacterial 70s rRNA complex, protein synthesis and subsequent structure + function processes critical for life or replication are inhibited. Erythromycin interferes with aminoacyl translocation, preventing the transfer of the tRNA bound at the A site of the rRNA complex to the P site of the rRNA complex; without this translocation, the A site remains occupied and, thus, the addition of an incoming tRNA and its attached amino acid to the nascent polypeptide chain is inhibited. This interferes with the production of functionally useful proteins, which is the basis of this antimicrobial action. Administered within 1 hour of delivery as a ribbon of ointment	Observe for minor ocular irritations, redness, edema, and inflammation, which usually disappear in 24-48 hrs. Administer within one hour after delivery Clean eyes before administration Apply 1 cm ribbon of ointment to the lower conjunctival sac of each eye Inner to the outer canthus Avoid contamination of applicator tip Close your eyes for 30–60 seconds Wipe away any excess ointment around the periorbital skin

	into the conjunctival sac and prevents gonorrhea and chlamydia. May wipe away excess after 1 min.	
Phytonadione	Vitamin K is a cofactor of gamma-carboxylase.7,8 Gamma carboxylase attaches carboxylic acid functional groups to glutamate, allowing precursors of factors II, VII, IX, and X to bind calcium ions.6 Binding of calcium ions converts these clotting factors to their active form, then secreted from hepatocytes into the blood, restoring normal clotting function. Oral phylloquinone is indicated to treat prothrombin deficiency.	Monitor the patient constantly. Severe reactions, including fatalities, have occurred during and immediately after IV injection. Be aware that large-dose patients may develop temporary resistance to coumarin-type anticoagulants. If oral anticoagulant is reinstituted, larger than former doses may be needed. Some patients may require a change to heparin. Monitor therapeutic effectiveness indicated by shortened PT, INR, bleeding, and clotting times, as well as decreased hemorrhagic tendencies.
Prenatal vitamins	vitamin and mineral combination used to treat or prevent a lack of vitamins or minerals before, during, and after pregnancy and during breastfeeding.	A woman should start taking a prenatal multivitamin at least ten weeks before conception and continue until she stops breastfeeding Tablets are best taken with meals. It can be crushed and mixed with juice or milk. Take exactly as prescribed. Assist with reminding women to take medication, such as a note on the fridge. Keep out of reach of children.
MMR vaccine	The vaccine works by stimulating our immune system to produce antibodies (proteins that will fight and kill the viruses against the measles, mumps, and rubella viruses). Indications: Active immunization against measles, mumps, and rubella in children older than 15 months and adults.	Allergy to gelatin or neomycin, weak immune system, pregnant, or plan to become pregnant w/in 28 days. It should not be given to clinically immunosuppressed patients. It should not be given to babies whose mothers had immunosuppressive but while pregnant or breastfeeding.
