

Introduction to Special Populations in Paramedicine

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Purpose: Provide a quick-reference guide for paramedics who encounter patients with unique physiological, cultural, or situational needs.

1. Why “Special Populations” Matter

Reason	Impact on Care
Physiological differences	Alter drug dosing, assessment norms, and transport decisions.
Communication barriers	Increase risk of misdiagnosis and delayed treatment.
Legal/ethical considerations	Consent, capacity, and confidentiality may differ.
Environmental factors	Heat, cold, altitude, or confined spaces affect patient presentation.

2. Core Assessment Modifications

Population	Key Assessment Changes	Typical Pitfalls
Pediatrics (<18yr)	- Use age-appropriate vital sign norms. - Size-adjusted equipment (cannulas, airway adjuncts). - Look for “silent” signs of shock (e.g., pallor, lethargy). - Baseline functional status (ADLs, cognition).	Over-reliance on adult norms; using adult-size equipment.
Geriatrics (>65yr)	- Assess for polypharmacy effects (e.g., anticoagulation). - Watch for atypical presentations (e.g., MI without chest pain).	Assuming “normal aging” explains all findings; missing subtle deterioration.

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Population

Key Assessment Changes

Typical Pitfalls

Paramedicine

Pregnant patients

- Identify gestational age (trimester).
- Position supine patients with left lateral tilt after 20 wks.
- Prioritize maternal oxygenation & perfusion.

Ignoring fetal considerations; improper positioning leading to aortocaval compression.

Patients with disability (physical, sensory, cognitive)

- Use alternative communication (signs, picture boards, interpreter).
- Check for equipment (wheelchairs, prostheses) that may affect positioning.

Assuming "normal" baseline; neglecting assistive devices.

Culturally diverse groups

- Ask about religious or cultural practices that affect care (e.g., blood products, gender preferences).
- Use culturally appropriate language or interpreter services.

Stereotyping; failing to obtain consent in a culturally sensitive way.

Patients with mental health disorders

- Assess safety (risk of self-harm, aggression).
- Determine decision-making capacity.

Overlooking medical emergencies because of "behavioral" label.

Substance use patients

- Look for altered mental status, respiratory depression, or hyperthermia.
- Anticipate withdrawal syndromes during transport.

Assuming all symptoms are drug-related; missing co-existing trauma.

Obese patients (BMI ≥ 30 kg/m²)

- Adjust lift techniques, use bariatric-rated equipment.
- Consider deeper tissue injuries, altered pharmacokinetics.

Inadequate staffing or equipment leading to injury.

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Population	Key Assessment Changes	Typical Pitfalls
Patients in confined or extreme environments (e.g., wilderness, high altitude, maritime)	Paramedicine - Monitor for hypothermia, altitude sickness, dehydration. - Plan for limited resources and prolonged scene times.	Underestimating environmental impact on vitals and drug efficacy.

3. Pharmacology Adjustments

Population	Drug Class	Typical Adjustment	Rationale
Children	Analgesics (opioids, NSAIDs)	Weight-based dosing (mg/kg)	Metabolic rate higher; risk of overdose.
Elderly			