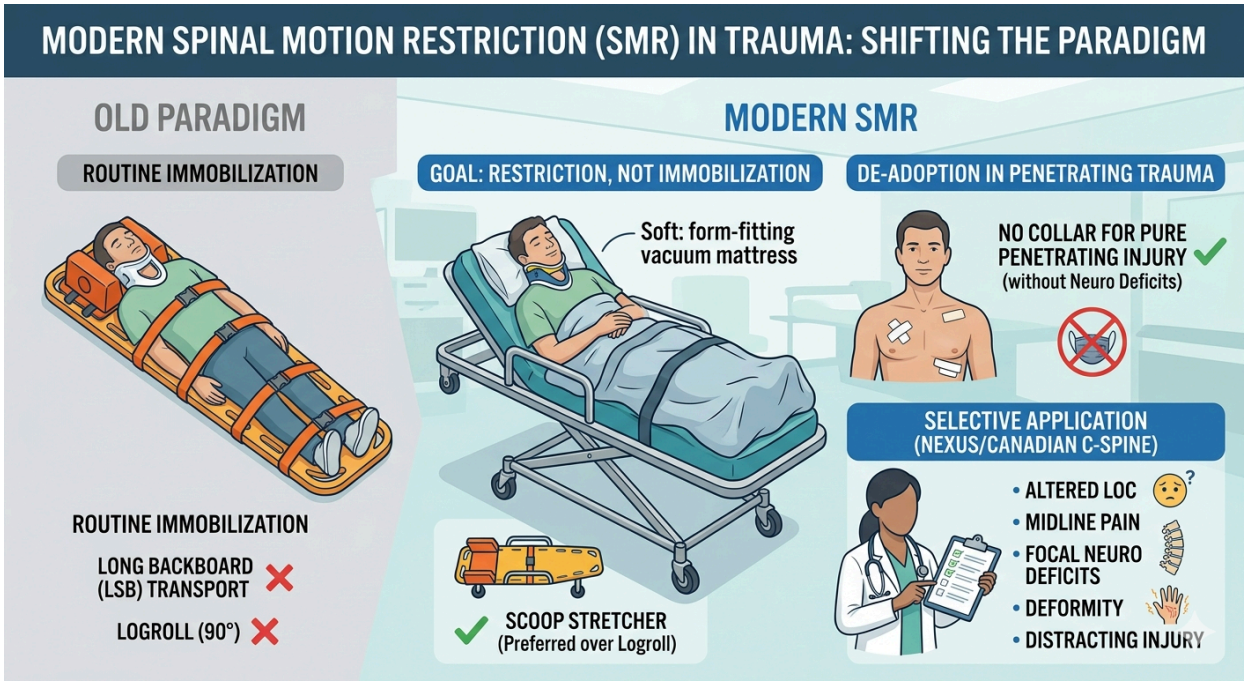

Modern trauma care has undergone a paradigm shift, moving away from "**immobilization**" and toward **Spinal Motion Restriction (SMR).** The goal is no longer to freeze the patient in place with rigid boards and straps, but rather to minimize unnecessary movement while avoiding the documented harms of traditional methods.

The following are the key updates in cervical and spinal motion restriction:

1. The Death of the Long Backboard (LSB)

Perhaps the most significant change is that the long backboard is no longer used for transport.

• **Old Way**: Patients were strapped to a hard board for the duration of the ambulance ride and ED wait.

• **New Way:** The backboard is viewed strictly as an extrication tool (a "moving device," not a "carrying device"). Once the patient is on the ambulance cot, the board should be removed immediately.

• **Why?** Backboards cause pressure ulcers (sometimes in as little as 30 minutes), respiratory compromise, and increased pain, which can actually make a patient more restless and prone to moving their neck.

2. "Restriction" vs. "Immobilization"

The terminology has changed because true "immobilization" is practically impossible.

• **Manual Stabilization:** For awake, cooperative patients, "coaching" them to stay still is often more effective and less distressing than forceful strapping.

• **The Scoop Stretcher:** Recent studies show that using a scoop stretcher involves significantly less cervical spine movement than the traditional 90-degree logroll required for a backboard. A 15–20 degree tilt is now preferred over a full logroll.

3. De-adoption in Penetrating Trauma

One of the strongest "new" recommendations is the exclusion of SMR in penetrating trauma (gunshot or stab wounds).

• **The Rule:** If the trauma is purely penetrating and there is no neurologic deficit, a cervical collar should not be applied.

• **Why?** Collars can mask life-threatening neck injuries (like expanding hematomas), delay surgery, and interfere with airway management. Data shows a higher mortality rate for penetrating trauma patients who are immobilized compared to those who are not.

4. Selective Application (Clinical Decision Rules)

Routine "collaring" of every car accident victim is over. EMS and ER providers now use validated tools like **NEXUS or the Canadian C-Spine Rule** to determine if a collar is necessary. SMR is typically reserved for:

• Acutely altered level of consciousness (GCS < 15).

• Midline neck or back pain/tenderness.

• Focal neurologic deficits (numbness/weakness).

• Obvious anatomic deformity of the spine.

• Distracting painful injuries (e.g., a femur fracture that prevents the patient from noticing neck pain).

5. Risks of the Rigid Collar

Recent research highlights that rigid cervical collars are not benign. They can:

• **Increase Intracranial Pressure (ICP):** By compressing the jugular veins, collars can increase pressure in the brain, which is dangerous for patients with head injuries.

• **Compromise Airway**: They limit mouth opening and make intubation more difficult.

• **Pad for Pediatrics**: For children, "neutral alignment" often requires padding under the shoulders to account for their relatively larger head size, preventing the chin from being pushed toward the chest.

Key Summary:

The current gold standard is to use a vacuum mattress or the ambulance cot itself for stabilization, removing the backboard as soon as the patient is moved, and skipping the collar entirely for penetrating trauma patients without neurologic symptoms.