

TEMPORARY EXTERNAL FIXATION

1. Assess

- a. Injury priority & casualty case mix
- b. Constraints (resources/ logistic/ tactical)
- c. Neurovascular status (before anaesthesia)
- d. Fracture imaging (if available) XR/ US/ CT
- e. Requirement for external skeletal fixation (alternatives)

2. Wound exploration/ debridement/ lavage

- a. Within limits of capability
- b. Assess fracture pattern clinically (if imaging unavailable)
- c. Extend wounds as necessary for debridement
- d. Determine limb viability
- e. Remove cortical bone fragments devoid of tissue attachment
- f. Aggressive debridement of devitalised muscle
- g. Conservative debridement of bone/ nerve/ vasculature

3. Construct uniplanar external fixator

- a. 2 percutaneous skeletal pins connected by 1 bar for the most proximal fragment. Greater pin separation is more stable
- b. Place pins outside zone of injury where possible
- c. Repeat for the most distal fragment. Tighten all connectors
- d. Span over knee or elbow if fracture is in proximity to joint and bone fragment too short to allow pin separation $\geq 5\text{cm}$
- e. Place connection bar. Leave bar-bar connectors loose
- f. Reduce fracture to restore alignment (length/ angle/ rotation)
- g. Tighten construct

4. After Care

- a. Retighten/ check connectors next day (in ward)
- b. Observe pin sites second daily