THE GOLDEN HOUR OF RURAL TRAUMA

THE DIFFERENCE BETWEEN LIFE AND DEATH

Glasgow Coma Score

Activity	Score	Infant Response	Adult Response
Eye Opening	4	Spontaneous	Spontaneous
	3	To speech or sound	To speech
	2	To painful stumili	To pain
	1	None	None
Verbal	5	Appropriate words, sounds, and social smile	Oriented to person, place, month, year
	4	Cries but consolable	Confused
	3	Persistently irritable	Inappropriate words
	2	Restless / agitated	Incomprehensible
	1	None	None
Motor	6	Spontaneous movement	Obeys commands
	5	Localizes pain	Localizes pain
	4	Withdraws to pain	Withdraws to pain
	3	Abnormal extremity flexion	Abnormal extremity flexion
	2	Abnormal extremity extension	Abnormal extremity extension
	1	None	None

Trauma Centers & Air Transport Contacts

Altru Health System (Grand Forks) – 1-855-425-8781
Essentia Health (Fargo) – 701-364-8401
Sanford Health (Bismarck) – 1-855-550-1225
Sanford Health (Fargo) – 1-800-647-1225
St. Alexius Med. Center (Bismarck) – 701-530-7001
Trinity Health (Minot) – 1-800-223-1596
Air Medical (Bismarck and Minot) – 1-800-441-1310
Guardian Flight (Williston) – 1-855-291-8989
North Star Criticair (Minot) – 1-800-223-1596
Sanford AirMed (Fargo and Bismarck) – 1-800-437-6886
Valley Med (Grand Forks, Williston, Sidney MT) 1-800-828-0168

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DISABILITY

D

Baseline Exam
1. Calculate GCS
2. Pupil Exam

Maintain C-spine Precautions

GCS 14-15? —YES→ Maintain O2 sats >93% → Consider Neurologic Imaging

NO ↓

GCS 9 - 13? —YES→ Maintain sats >/= 93% & SBP>90mmHg → Neurosurgical Capabilities? —NO→ **TRANSFER**

Neurosurgical Capabilities? —YES→ Neurologic Imaging

NO ↓

GCS </= 8 → **INTUBATE** → Maintain O2 sats >93% & SBP>90mmHg → Unequal Pupils? —YES→ Mannitol 1 g/kg IV

Unequal Pupils? —NO→ Neurosurgical Capabilities? —YES→ Neurologic Imaging

Neurosurgical Capabilities? —NO→ **TRANSFER**

Medical Anticoagulation?

Coumadin?
1. Give Vitamin K
2. Give FFP if available or Factor 7

Plavix?
1. Give Platelets if available

*** INITIATE TRANSFER***

AIRWAY

A

Baseline Exam. Obstruction? —NO→ Apply 100% Oxygen **GO TO BREATHING**

YES ↓

Jaw Thrust / Chin Lift
Place oral
or nasal airway

Prepare to intubate
-BVM
100% Oxygen

INITIATE TRANSFER

Rapid Sequence Intubation

Place 7.5 or larger ETT

Intubated?
Confirm Placement
1. Check Lung sounds
2. ETCO2
100% Oxygen
GO TO BREATHING

Unable to intubate x 2 attempts?
BVM 100% Oxygen
Try endotracheal tube introducer (Bougie)
Not Successful?
Place Rescue Airway (LMA, Combitube, King LT)

Last Resort → **SURGICAL AIRWAY**

Success? → **GO TO BREATHING**

45

15

CIRCULATION

C

Baseline Exam
1. Check Carotid Pulse
2. Expose for bleeding

Bleeding? Apply pressure dressing → **Pulsatile extremity bleeding?** Place Tourniquet

No Pulse?
- CPR if viable

-Blood Pressure
-Pulse Rate

Place IV's
-2 sites if possible
-16 gauge preferred

Difficult IV access?
-consider central line
-consider interosseous

BP <90 mmHG? and/or **Pulse Rate > 120 bpm?** —YES→ Give **WARM** LR **500ml** Bolus

BP <90 mmHG? —NO→ Monitor VS Q 15min

Give **WARM** LR **500ml** Bolus → **SBP <90 mmHG?** and/or **Pulse Rate >120 bpm?** —NO→ **WARM** LR @ 150 ml/h

YES ↓

Transfuse 1 unit PRBCs if available

SBP <90 mmHG? and/or **Pulse Rate > 120 bpm?** —YES→ **INITIATE TRANSFER AND GO TO DISABILITY**

SBP <90 mmHG? and/or **Pulse Rate > 120 bpm?** —NO→ **WARM** LR @ 150 ml/h → **GO TO DISABILITY**

BREATHING

B

Intubated or Rescue Airway
BVM
100% O2
Maintain rate<=16
Get CXR
1. Check ETT placement
2. R/O Pneumothorax & Hemothorax

Clinically Evident Pneumothorax? Immediate Needle Decompression

Not Intubated
Baseline Exam
• Tachypnea?
• Labored Respirations?
• O2 sat >93%?

YES → 100% O2 NRB
Reassess airway
Consider Intubation

NO ↓

Keep O2 sats >93%
Get CXR

Pneumothorax or Hemothorax Present? —NO→ **GO TO CIRCULATION**

YES ↓

Consider Needle Decompression

Place 32 or 36 Fr. Chest Tube

INITIATE TRANSFER & GO TO CIRCULATION

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NORTH DAKOTA DEPARTMENT of HEALTH
Emergency Medical Services and Trauma

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