Universal Care Guidelines

Aliases

Patient assessment, patient history, physical assessment, primary survey, secondary survey

Patient Care Goals

Facilitate appropriate initial assessment and management of any EMS patient and link to appropriate specific guidelines as dictated by the findings within the **Universal Care** guideline.

Patient Presentation

Inclusion Criteria

All patient encounters with and care delivery by EMS personnel

Exclusion Criteria

None

Patient Management

Assessment

1. Assess scene safety.
    a. Evaluate for hazards to EMS personnel, patient, bystanders.
    b. Ensure appropriately trained and equipped rescuers. Extricate patient from any dangerous environment (examples include hazardous material, water, combustible, electrical, confined space).
    c. Determine number of patients.
    d. Determine mechanism of injury.
    e. Request additional resources if needed and weigh the benefits of waiting for additional resources against rapid transport to definitive care.
    f. Consider declaration of mass casualty incident if needed.
2. Use appropriate personal protective equipment (PPE).
3. Wear high-visibility, retro-reflective apparel when deemed appropriate (e.g. operations at night or in darkness, on or near roadways, airports, other appropriate locations).
4. Consider cervical spine stabilization**,** spinal motion restriction and/or cervical collar if trauma.
5. Conduct a primary survey.
   (Airway, breathing, circulation is cited below; although there are specific circumstances where circulation, airway, breathing may be indicated such as cardiac arrest or major arterial bleeding.)
    a. Airway (assess for patency and open the airway as indicated)
        i. Patient is unable to maintain airway patency—open airway
            1. Perform head tilt chin lift **or**
            2. Perform jaw thrust
            3. Perform suction
            4. Consider the use of the appropriate airway management adjuncts and devices: oral airway, nasal airway, non-visualized airways (supraglottic or extraglottic)***[EMR-O; EMT-R]***, endotracheal tube ***[PARA]***
        ii. Notes:
            1. For **patients with laryngectomies or tracheostomies**: Remove all objects or clothing that may obstruct the opening of these devices, maintain the flow of prescribed oxygen, and reposition the head and/or neck.
            2. For **obstructed airway, laryngectomy, or tracheostomy**, go to Airway Management guideline.
    b. Breathing

i. Evaluate rate, breath sounds, accessory muscle use, retractions, patient positioning.
ii. Administer oxygen as appropriate for dyspnea or distress with a target of achieving greater than 93% saturation for most acutely ill patients.
Note: For apnea (not breathing), go to Airway Management guideline.

c. Circulation
i. Control any major external bleeding [see Extremity Trauma/External Hemorrhage Management guideline].
ii. Assess pulse.
1. If none, refer to appropriate **Resuscitation guidelines**.
2. Assess rate and quality of carotid and radial pulses.
iii. Evaluate perfusion by assessing skin color and temperature.
1. Evaluate capillary refill.

d. Disability
i. Evaluate patient responsiveness: Glasgow Coma Scale or AVPU scale (Alert, Verbal, Pain, Unresponsive).
ii. Evaluate gross motor and sensory function in all extremities.
iii. Check blood glucose **[EMR-0, EMT-R]** in patients with altered mental status.
iv. If acute stroke suspected, go to Suspected Stroke/Transient Ischemic Attack guideline.

e. Expose patient as appropriate to complaint.
i. Be considerate of patient modesty.
ii. Keep patient warm.

6. Conduct a secondary survey.
The performance of the secondary survey should not delay transport in critical patients. See also secondary survey specific to individual complaints in other protocols. Secondary surveys should be tailored to patient presentation and chief complaint. The following are suggested considerations for secondary survey assessment:

a. Head
i. Pupils
ii. Naso-oropharynx
iii. Skull and scalp

b. Neck
i. Jugular venous distension
ii. Tracheal position
iii. Spinal tenderness

c. Chest
i. Retractions
ii. Breath sounds
iii. Chest wall deformity

d. Abdomen and Back
i. Flank and abdominal tenderness or bruising
ii. Abdominal distension

e. Extremities
i. Edema
ii. Pulses
iii. Deformity

f. Neurologic
i. Mental status and orientation
ii. Motor and sensory

7. Obtain Baseline Vital Signs (an initial full set of vital signs is required: pulse, blood pressure, respiratory rate, neurologic status assessment).

a. Neurologic status assessment involves establishing a baseline and then trending any change in patient neurologic status.
i. Use Glasgow Coma Score (GCS) **or**
ii. Use AVPU (**A**lert, **V**erbal, **P**ainful, **U**nresponsive)

b. Patients with cardiac or respiratory complaints

i. Use pulse oximetry
ii. 12-lead ECG ***[Acquisition EMT/Interpretation PARA]*** should be obtained early in patients with cardiac or suspected cardiac complaints
iii. Conduct continuous ECG cardiac monitoring ***[Acquisition EMT; Interpretation PARA]***, if available
iv. Consider waveform capnography ***[PARA]***
v. Consider waveform capnography essential for patients who require invasive airway management ***[PARA]*** or capnometry ***[Non-visualized Airway EMR]***

c. Patient with altered mental status
i. Check blood glucose
ii. Consider waveform capnography essential for patients who require invasive airway management ***[PARA]*** or capnometry ***[Non-visualized Airway EMR]***

d. Stable patients should have at least two sets of pertinent vital signs. Ideally, one set should be taken shortly before arrival at receiving facility. Ideally all patients should have a temperature obtained as part of secondary assessment.
e. Critical patients should have pertinent vital signs frequently monitored.

8. Obtain OPQRST history:
a. **O**nset of symptoms
b. **P**rovocation—location; any exacerbating or alleviating factors
c. **Q**uality of pain
d. **R**adiation of pain
e. **S**everity of symptoms—pain scale
f. **T**ime of onset and circumstances around onset
9. Obtain SAMPLE history:
a. **S**ymptoms
b. **A**llergies—medication, environmental, and foods
c. **M**edications—prescription and over-the-counter; bring containers to ED if possible
d. **P**ast medical history
i. Look for medical alert tags, portable medical records, advance directives.
ii. Look for medical devices or implants (some common ones may be dialysis shunt, insulin pump, pacemaker, central venous access port, gastric tubes, urinary catheter).
e. **L**ast oral intake
f. **E**vents leading up to the 911 call

Treatment and Interventions

1. Administer **oxygen** as appropriate with a target of achieving 94–98% saturation and select the appropriate method of oxygen delivery to mitigate or treat hypercarbia associated with hypoventilation.
2. Place appropriate monitoring equipment as dictated by assessment; these may include:
a. Continuous pulse oximetry
b. ECG cardiac rhythm monitoring with any ALS or higher transport, ***[Acquisition EMT; Interpretation PARA].***
c. Waveform capnography ***[PARA].***
d. Carbon monoxide assessment, if available
3. Establish vascular access ***[AEMT]*** if indicated or in patients who are at risk for clinical deterioration.
a. If IO is to be used for a conscious patient, consider lidocaine with slow push through IO needle ***[PARA]*** to mitigate pain from IO medication administration.
4. Patient with provider impression of extremis, including new onset altered mental status, airway issues, severe respiratory distress/failure, signs and symptoms of shock/poor perfusion: See **Crashing Patient Protocol**
5. Monitor pain scale if appropriate.
6. Reassess patient.
a. Transports of greater than 1 hour in duration, assess patient for needs for repositioning
- Document interventions to prevent skin pressure wounds

Transfer of care

1. The content and quality of information provided during the transfer of patient care to another party is critical for seamless patient care and maintenance of patient safety.
2. Ideally, a completed electronic or written medical record should be provided to the next caregiver at the time of transfer of care.
3. If provision of the completed medical record is not possible at the time of transfer of care, a verbal report and an abbreviated written run report should be provided to the next caregiver. If the emergency medical services provider is an ambulance service provider, submit a written report to the receiving health care facility upon delivering a patient and a complete patient care report within 24 hours of patient delivery.
4. The information provided during the transfer of care should include, but is not limited to,
    1. Patient's full name.
    2. Age.
    3. Chief complaint.
    4. History of present illness/Mechanism of injury.
    5. Past medical history.
    6. Medications.
    7. Allergies.
    8. Vital signs with documented times.
    9. Patient assessment and interventions along with the timing of any medication or intervention and the patient's response to such interventions.
5. The verbal or abbreviated written run report provided at the time of transfer of care does not take the place of or negate the requirement for the provision of a complete electronic or written medical record of the care provided by EMS personnel.

Patient Safety Considerations

- Routine use of lights and sirens is not warranted.
- Even when lights and sirens are in use, always limit speeds to level that is safe for the emergency vehicle being driven and road conditions on which it is being operated.
- Be aware of legal issues and patient rights as they pertain to and impact patient care (e.g., patients with functional needs or children with special health care needs).
- Be aware of potential need to adjust management based on patient age and comorbidities, including medication dosages.
- The maximum weight-based dose of medication administered to a pediatric patient should not exceed the maximum adult dose except where specifically stated in a patient care guideline.
- Medical direction should be contacted when mandated or as needed.
- Consider air medical transport, if available, for patients with time-critical conditions where ground transport time exceeds 30 minutes

Notes and Educational Pearls

Key Considerations

Pediatrics:

- Use a weight/length-based assessment tool (length-based tape or other system) to estimate patient weight, and guide medication therapy and adjunct choice.
- Use a weight of 40kg and less to define a pediatric patient.
- Consider using the pediatric assessment triangle (appearance, work of breathing, circulation) when first approaching a child to help with assessment.

Geriatrics:

- Define geriatric patients as those who are 65 years old or more.
- Assess reduced dosage needs. In these patients, as well as all adult patients, reduced medication dosages may apply to patients with renal disease (i.e. on dialysis or a diagnosis of chronic renal

insufficiency) or hepatic disease (i.e. severe cirrhosis or end-stage liver disease)

Co-morbidities:

Reduced medication dosages may apply to patients with renal disease (i.e. on dialysis or a diagnosis of chronic renal insufficiency) or hepatic disease (i.e. severe cirrhosis or end-stage liver disease).

Vital signs:

- Oxygen
    - Administer oxygen as appropriate for dyspnea or distress with a target of achieving greater than 93% saturation for most acutely ill patients.
- Normal vital signs (see chart below)
    - Hypotension is considered a systolic blood pressure less than the lower limit on the chart.
    - Tachycardia is considered a pulse above the upper limit on the chart.
    - Bradycardia is considered a pulse below the lower limit on the chart.
    - Tachypnea is considered a respiratory rate above the upper limit on the chart.
    - Bradypnea is considered a respiratory rate below the lower limit on the chart.
- Hypertension (although abnormal, may be an expected finding in many patients)
    - Document the hypertension, **but**
    - Do not use an intervention unless it is specifically suggested based on the patient's complaint or presentation.
    - Look for the occurrence of symptoms (e.g. chest pain, dyspnea, vision change, headache, focal weakness or change in sensation, altered mental status) in patients with hypertension. These should be considered concerning, and care should be provided appropriate with the patient's complaint or presentation.

- Temperature
    - All patients, especially trauma patients, prevent hypothermia with interventions such as minimizing exposure, blankets, appropriate ambulance temperature
    - See Hypothermia and Cold Exposure protocol for hypothermic patients
    - Patients with fever/elevated temperature consider anti-pyretics and/or see Hyperthermia and Heat Exposure protocol

Secondary survey

- May not be completed if patient has critical primary survey problems

Critical patients:

- Proactive patient management should occur simultaneously with assessment.
- Ideally, one provider should be assigned to exclusively monitor and facilitate patient- focused care.
- Treatment and interventions should be initiated as soon as practical, but should not impede extrication or delay transport to definitive care.
- Patients with provider impression of extremis, including new onset altered mental status, airway issues, severe respiratory distress/failure, signs and symptoms of shock/poor perfusion need to have treatment and stabilization prior to patient movement to prevent decompensation during movement between location found to cot to ambulance. See **Crashing Patient Protocol**

Air medical transport: Wisconsin Helicopter EMS Utilization Guidelines

Pertinent Assessment Findings

This guideline is too broad to list all possible findings.

Quality Improvement

Associated NEMSIS Protocol(s) (eProtocol.01): 9914075—General-Universal Patient Care and Initial Patient Contact

Key Documentation Elements

- Document at least two full sets of vital signs for every patient.
- Document all patient interventions and responses.

Performance Measures

- Address and reassess abnormal vital signs.
- Document response to therapy provided, including pain scale reassessment if appropriate.
- Limit scene time for patients with time-critical illness or injury unless clinically indicated.
- Use air medical services appropriately.
- Obtain blood glucose ***[EMR-O; EMT-R]*** level when indicated
- *Use **EMS Compass® Measures** (for additional information, see www.emscompass.org).*

    - ***PEDS-03:*** *Documentation of estimated weight in kilograms*—frequency that weight or length-based estimates are documented in kilograms
    - ***PEDS-01:*** *Respiratory assessment*—documented evidence that a respiratory assessment was performed on pediatric patients
    - ***Hypoglycemia-01:*** *Treatment administered for hypoglycemia*—measure of patients who received treatment to correct their hypoglycemia
    - ***Stroke-01:*** *Suspected stroke receiving prehospital stroke assessment*—to measure the percentage of suspected stroke patients who had a stroke assessment performed by EMS
    - ***Trauma-01:*** *Pain assessment of injured patients*—recognizing that pain is undertreated in injured patients, it is important to assess whether a patient is experiencing pain.

Normal Vital Signs

Age	Pulse	Respiratory Rate	Systolic BP
Preterm less than 1 kg	120–160	30–60	36–58
Preterm 1 kg	120–160	30–60	42–66
Preterm 2 kg	120–160	30–60	50–72
Newborn	120–160	30–60	60–70
Up to 1 year	100–140	30–60	70–80
1–3 years	100–140	20–40	76–90

4–6 years	80–120	20–30	80–100
7–9 years	80–120	16–24	84–110
10–12 years	60–100	16–20	90–120
13–14 years	60–90	16–20	90–120
15 years or older	60–90	14–20	90–130

Glasgow Coma Scale

ADULT GLASGOW COMA SCALE		PEDIATRIC GLASGOW COMA SCALE	
Eye Opening (4)		**Eye Opening (4)**	
Spontaneous	4	Spontaneous	4
To speech	3	To speech	3
To pain	2	To pain	2
None	1	None	1
Best Motor Response (6)		**Best Motor Response (6)**	
Obeys commands	6	Spontaneous movement	6
Localizes pain	5	Withdraws to touch	5
Withdraws from pain	4	Withdraws from pain	4
Abnormal flexion	3	Abnormal flexion	3
Abnormal extension	2	Abnormal extension	2
None	1	None	1

Verbal Response (5)		**Verbal Response (5)**	
Oriented	5	Coos, babbles	5
Confused	4	Irritable cry	4
Inappropriate	3	Cries to pain	3
Incomprehensible	2	Moans to pain	2
None	1	None	1
Total		**Total**	

AVPU

A: The patients is alert

V: The patient responds to verbal stimulus

P: The patient responds to painful stimulus

U: The patient is completely unresponsive

References

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