

Preparing to Transport

1. How to Initiate a Transport

- Call HDVCH Direct: (877) 391-2345
- A specialty transport team is indicated for any patient with impending or overt organ failure, or possible need for surgical management or intervention.
- HDVCH and Aero Med have collaborated to provide a variety of transport teams and modes of transport (ground and air) that can be matched to meet the needs of each individual patient.
- The transport team will require a copy of the patient's chart including lab reports and CD copies of radiologic studies, demographic face sheets and EMTALA form, and the patient's primary care provider's name and phone number.
- Maps and directions to HDVCH may be found at: devoschildrens.org

2. Communication

- Please be prepared to provide the patient's name, date of birth, weight of patient in kilograms, hospital name and location of patient, medication list, allergies, history of present illness, past medical history, vital signs, pertinent physical exam findings, severity and trajectory of illness, laboratory and radiologic findings, treatments provided, response to therapies, and vascular access.
- Please notify the transport team of significant changes in the patient's status.

3. Vascular Access

- Vascular access should be obtained in any patient at risk for respiratory, cardiac, metabolic, or neurologic deterioration.
 - Severity and trajectory of illness impact method of access.
- Peripheral intravenous access is the initial method of choice.
 - Perform hand hygiene, maintain aseptic technique, wear clean gloves.
- Intraosseous access (anteromedial tibia, 1.5cm below the tibial tuberosity) may be indicated during the management of patients with severe illness and inadequate venous access.
- Central venous access may be indicated for patients with hemodynamic instability requiring vasoactive medication infusions.
 - Always use sterile technique; utilize ultrasound guidance when available.

4. Fluid Management

- Please keep the patient NPO for transport.
- IVF composition and rate:

PATIENT WEIGHT (KG):	TYPICAL IVF:	RATE:
<10	D5 0.45% NS	4 mL/kg/hr
10-20	D5 0.45% NS	4 mL/kg/hr (for first 10 kg) AND 2 mL/kg/hr (for second 10 kg)
>20	D5 0.45% NS	4 mL/kg/hr (for first 10 kg) AND 2 mL/kg/hr (for second 10 kg) AND 1 mL/kg/hr (for each kg over 20 kg)

- Consider adding 20 mEq/L of potassium chloride if urine output established and no concern for hyperkalemia.
- For patients requiring fluid boluses: See Sepsis and Septic Shock section in Infectious Emergencies.

5. Supplemental Oxygen & Airway Management

- Supplemental oxygen to keep SpO₂ >92%.
 - Blow by oxygen is an unreliable method of oxygen delivery and should be avoided.
 - Nasal cannula delivers ~4% additional oxygen per liter flow (max 4 L/min).
 - Simple face mask (6-10 L/min) delivers up to 50% FiO₂.
 - Nonrebreather mask (10-15 L/min) delivers up to 95% FiO₂.
- Endotracheal intubation:
 - Consider for patients with respiratory insufficiency, septic shock, altered mental status.
 - Should be performed by a skilled proceduralist.
 - Monitor patient, preoxygenation with 100% FiO₂, gastric decompression if gastric distension or recent meal, oral suctioning, place head in “sniffing” position.
 - Medications:
 - Patients less than 1 year of age or with copious secretions:
 - Atropine (0.02 mg/kg/dose; min 0.1 mg/dose; max 0.5 mg/dose) IV once 5 min prior to intubation.
 - Analgesia/Sedation:
 - Fentanyl (1-2 mcg/kg/dose; max 100 mcg/dose) IV once; repeat PRN.
 - Midazolam (0.1 mg/kg/dose; max 4 mg/dose) IV once; repeat PRN.
 - Bag mask ventilation once to ensure patent airway prior to paralysis.
 - Paralysis:
 - Rocuronium (1 mg/kg/dose) IV once.
 - Laryngoscope size based on age:
 - Miller (straight) blade: preferred in younger children given ability to directly lift the epiglottis to expose the glottic aperture/vocal cords.
 - Macintosh (curved) blade: tip inserted into vallecula behind the tongue to indirectly lift the epiglottis to expose the glottic aperture/vocal cords.
 - 0-2 years old: Miller 1 blade.
 - >2 years old: Miller or Mac blade (size 2-4; length of blade should be at least the distance from the upper incisor teeth to the angle of the mandible).
 - Endotracheal tube size [internal diameter (mm)]= 4 + [age(yrs)/4].
 - Depth of ETT insertion (cm)= ~3x ETT size.

WEIGHT (KG)	4 kg	6 kg	8 kg	10 kg	15 kg	20 kg	30 kg	40 kg	50 kg
AGE (APPROXIMATE)	0-1mo	3 mo	6 mo	1 yr	3 yr	5 yr	9 yr	11 yr	>14 yr
RESPIRATORY RATE	30-60	30-60	30-60	25-55	20-35	20-30	15-25	15-25	12-20
HEART RATE (BPM)	110-170	110-170	110-160	100-150	80-140	80-130	70-120	60-110	60-100
SYSTOLIC BP (MMHG)	60-85	70-90	70-90	70-105	75-110	80-110	90-120	95-120	100-140
CPP (MAP-ICP) (MMHG)	>40	>40	>40	>40	>50	>50	>60	>70	>70
CARDIOVERT (0.5-1 J/KG)	2-4 J	3-6 J	4-8 J	5-10 J	8-15 J	10-20 J	15-30 J	20-40 J	25-50 J
DEFIB (2 J/KG)	8 J	12 J	16 J	20 J	30 J	40 J	60 J	80 J	100 J
LARYNGOSCOPE	1 (Mil)	1 (Mil)	1 (Mil)	1 (Mil)	2 (Mil/Mac)	2 (Mil/Mac)	2 (Mil/M)	2 (Mil/M)	3 (Mil/Ma)
ETT (SIZE)	3.5	4	4-4.5	4-4.5	4.5-5	5.5	6.5	6.5-7	7.5-8
DEPTH (CM)	9-10	10-11	11-12	11-12	12-14	15	20	20-22	22-24
CHEST TUBE	10-14	10-14	12-18	14-20	20-24	24-28	28-32	32-40	32-40
CENTRAL LINE (FR)	4	4	4	4	4	5.5	5.5	5.5	5.5
ART LINE (FR)	2.5	2.5	2.5	2.5	2.5	2.5	3	3	3
SUCTION CATHETER	6-8	8	8	8-10	10	10	12	12-14	12-14
NG TUBE (FR)	5-8	5-8	8	8-10	10	10-12	12	12-14	12-14
PIV (GAUGE)	22-24	22-24	20-24	20-24	18-22	18-22	18-20	16-20	16-20