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CLINICAL BULLETIN			
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#2023-01-09-01	Use of Heated Humidified High-Flow Nasal Cannulas by EMS During Inter-facility Transport		9 Jan 2023
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This season, the increase in respiratory illnesses, such as respiratory syncytial virus (RSV) and bronchiolitis, has had an impact on pediatric care nationally, as well as in Maine. This has been very challenging for all healthcare clinicians and has prompted questions and discussion regarding EMS care and transport capability for pediatric patients requiring high-flow oxygen therapies.

Over the past weeks, the Maine EMS for Children program has held several meetings and discussions with Medical Directors, hospital Pediatricians, EMS Education Directors, DHHS, and our partner Pediatric Intensivists at Maine Medical Center and Northern Light EMMC. Specifically, these discussions focused on whether Paramedics (via 911 or PIFT) are able to transport pediatric patients on Heated Humidified High-Flow Nasal Cannula (HHHFNC) therapy, including RAM cannulas.

Heated Humidified High Flow Nasal Cannula (HHHFNC) therapy is not currently within the EMS scope of care in Maine for EMS clinicians (a Paramedic actively working a Specialty Care Transport call with LifeFlight of Maine is an exception with a different staffing model and different protocols). HHHFNC is **not** something that EMS can currently transport. This is not unique to Maine and common for all nearby state EMS systems. There are two major issues that limit HHHFNC use for 911 and PIFT Paramedics:

1. **Stability:** Interfacility Transports in Maine fall into many categories, but the most important determinant for choice of transporting at an EMS Clinician scope of practice is the patient's current stability and risk of future deterioration. Patients with HHHFNC are complicated patients and can be prone to significant changes in condition, notably in heart rates and respiratory effort. As such, unstable patients must be transported with clinicians practicing at the critical care scope, which currently includes LifeFlight, or hospital-designated staff with scope of practice to manage the changes, such as an RNs, NPs, PAs or physicians.
2. **Operational:** HHHFNC is not currently in the National Scope of Practice for EMS, nor is it taught in EMS educational licensure programs. Additionally, the devices used for delivering the volumes, heat and humidification is not equipment carried on Maine ambulances. The availability of devices is limited (due to demand and cost) and require significant extra power to run that often exceed the invertors on ambulances (as an example, the MMC Angel trucks have both an inverter and additional generator to provide power). Even providing the education and devices will not likely address the transport of pediatric patients on HHHFNC as they are still critically ill.

The consensus of the Pediatric Intensivists, EMS Educators, Maine State EMS, and Maine EMS Medical Directors is, at this time, patients requiring heated high flow nasal cannulas should be transported by a specialty care crew, which should be staffed by clinicians who are

- appropriately trained, and
- acting within their scope of practice, and
- are appropriately equipped to manage the patient condition, changes in condition and the equipment required for the therapy and transport

It is essential that EMS clinicians and other stakeholders be informed and aware of information necessary for effective decision-making regarding transportation of pediatric patients whose care involves these respiratory therapies. That information should include scope of practice for EMS transport crews, equipment carried and competent with, and if the patient is stable enough to be able to be safely and effectively transported by a given EMS crew.