College of Respiratory Therapists of Ontario

Identification and Preparation Tool

Evaluation and Discharge Planning

Discharge Assessment

The following is a high-level approach the interdisciplinary team can use during the preliminary stages of identifying a candidate for home or community placement.

Assessment of the Home Environment

Assessment includes geographic location, available space, and accessibility.

- ✓ A home to go to
- ✓ Home environment prepared in advance to accommodate the patient's needs
- ✓ Adequate number of grounded electrical outlets
- ✓ Respiratory equipment supplier is aware of individual
- ✓ Sturdy bedside table for the ventilator placement

Assessment of Caregivers

Caregivers must be motivated and able to learn the care routines.

- ✓ Patient is able and willing to supervise/direct care
- ✓ Individual is able and willing to participate in self care, or has sufficient caregiver assistance to adequately meet medical, respiratory, and personal care needs

Education and Training

There is a comprehensive education plan with learning objectives and evaluation for individual, family and caregivers.

- ✓ Caregivers identified and trained prior to discharge (See *Home Ventilation & Tracheostomy Care, and Education Checklist and Learning Log* provided in this manual)
- ✓ Adequate nutrition program is in place
- ✓ Successful and stable trials: for at least two weeks prior to discharge with no changes
  - On home equipment ventilator prior to discharge, (e.g. ventilator, monitor, oxygen, if applicable)
  - Leaving the hospital setting with home caregivers

Assessment of Resources

This includes professional services, support systems, individual's financial resources.

- ✓ Adequate financial resources and mechanisms for reimbursement identified prior to discharge
- ✓ Potential referrals in place: Respirologist, Occupational Therapist, Physical Therapist, Social Worker, Registered Dietitian, Pharmacist, Community Care Access Centres (CCAC)
- ✓ Appropriate application forms completed:
  - Assistive Devices Program:
    - Tracheostomy
    - Ventilator
    - Enteral feeds, if applicable
  - Home Oxygen Program, if applicable
  - Special services at home
  - Handicapped parking permits
  - Wheelchair
- ✓ Contact the Ventilator Equipment Pool (VEP) to discuss the most appropriate equipment available and lead time for delivery

Plan of Care

A written management plan for respiratory, medical care, and emergencies.

- ✓ Individual is medically stable: oxygen requirement less than, or equal to 40%; stable blood gases; mature tracheostomy and no events requiring CPR for at least one month
- ✓ Comprehensive discharge plan in place
- ✓ The treatment plan for all medical conditions is in place
  - Plan does not require frequent changes
  - Plan is transferable to the community
- ✓ Discharge planning meetings in place, including the individual, caregivers, healthcare team and community services

Team Meetings

Initial team meeting are to take place while the ventilator assisted individual (VAI) is in the hospital.

First Team Meeting

Primary aims of this meeting are:

- ✓ Determine the short and long term goals
- ✓ Identify issues and potential barriers to discharge
- ✓ Create plans to manage issues and potential barriers to discharge
- ✓ Complete feasibility assessment of required community support
- ✓ Identify additional funding opportunities for the patient

Team members should include the individual, their caregivers and the inter-professional team:

- ✓ Individual
- ✓ Family and caregivers
- ✓ Most responsible physician
- ✓ Nurse (RN)
- ✓ Community Respiratory Therapist (RT)
- ✓ Social Worker (SW)
- ✓ Physical Therapist (PT)
- ✓ Speech Language Pathologist
- ✓ Occupational Therapist (OT)
- ✓ Registered Dietitian (RD)
- ✓ Pharmacist
- ✓ CCAC Case Manager
- ✓ Discharge planner

Second Team Meeting

Primary aims of this meeting are:

- ✓ Determine if discharge to home or community facility is achievable
- ✓ Prioritize goals and timelines; those to be achieved prior to discharge
- ✓ Determine a realistic discharge date
- ✓ Delineate roles and responsibilities for all team members, including the caregiver and family
  - Care plans
  - Funding applications
  - Discharge guidelines
  - Learning needs assessments
  - Education training programs
  - Equipment acquisition

Additional team members at this meeting should include the community care providers:

- ✓ Community RT
- ✓ Community PT
- ✓ Community OT
- ✓ Nursing agency provider

Follow up Meetings

Primary aims of this meeting are:

- ✓ Monitor progress toward goals
- ✓ Update the patient and caregivers
- ✓ Identify other barriers to discharge and develop a resolution plan
- ✓ Communicate among the inter-professional disciplinary team

Placement Considerations in the Home

Adequate Daily Care Coverage

In addition to the care provided by the caregiver(s), the patient may receive additional care hours through CCAC. Access to immediate assistance is recommended for any individual who requires 24 hours ventilation or is fully dependent in their activities of daily living. This can be a trained community care provider, such as a Registered RT, Nurse, PSW or trained family member.

Individuals who live in Ontario who require suctioning or catheterization as part of their normal daily routine have a legislated exemption in the Regulated Health Professional Act (RHPA) allowing non-registered professionals to provide this service, provided they are competent to do so.

Additional Considerations

Mobility

A VAI may require a wheelchair with ventilator and oxygen carrying capacity. The vehicle used for mobility **must** be able to safely carry a ventilator and external battery without tipping. Home ventilators can weigh up to 35 lbs. Ventilator shelves can be attached to some standard wheelchairs, but some of these chairs may not be wide enough or balanced enough to hold the additional weight. Often a VAI has their own wheelchair that can be adapted by the supplier to carry the ventilator and battery. If this is not possible, an application for a customized wheelchair with ventilator carrying capability can be made.

Assessment and applications are usually made by the OT or PT and signed by the physician. The chair supplier will need the ventilator and battery dimensions. Information that can be obtained from the RT.

Other mobility devices may be required, such as ambulation aids and positioning devices (lifts).

Applying early in the process will reduce delays. Check with the equipment provider for the anticipated delivery date.

Equipment Acquisition

The Ministry of Health and Long-Term Care (MOHLTC) funds 75% of the cost of respiratory supplies through the Assisted Devices Program (ADP). **The remaining 25% is the responsibility of the individual.**

Contact the VEP or alternate provider for details on equipment acquisition. Note: some individuals are not eligible for equipment through the VEP. For example, patients discharged to long term care facilities do not have access to VEP equipment. See VEP website for more information on eligibility http://www.ontvep.ca.

Home Mechanical Ventilators

A VAI discharged to the community is provided with:

- ✓ Ventilator(s)
- ✓ Battery charger
- ✓ Heated humidifier
- ✓ External battery for emergency power only
- ✓ Battery cable
- ✓ Re-useable ventilator circuits

The cost of **this** equipment is 100% covered by the MOHLTC, through ADP. Applications must be signed by the physician.

The VAI should have completed several successful trials on a home mechanical ventilator, before setting them up for indefinite use.

Other Respiratory Supplies

Requests are made by the home respiratory care service, to the ADP. This equipment may include:

- ✓ Apnea cardiorespiratory monitors
- ✓ Compressors for aerosolized medication delivery
- ✓ Postural drainage boards
- ✓ Suction machines
- ✓ Tracheostomy supplies
- ✓ Percussors
- ✓ Resuscitators
- ✓ Positive airway pressure systems

75% of the cost of **this** equipment may be covered by the MOHLTC. **The remaining 25% is the responsibility of the individual**.

Some equipment, although necessary for some VAIs, may not be funded through ADP. The following equipment is **not** funded:

- cough-assist devices
- oximeters for individuals 18 years or older
- 12 volt batteries for mobility purposes

Other Medical Supplies

Other medical supplies may be necessary in the community setting and eligible for ADP funding e.g. enteral feed equipment. Check with the interprofessional healthcare team for details.

Individual, Home Care Providers and Family Education

A successful discharge requires a simplified and comprehensive transfer of care routines from healthcare team to the community provider team. Ideally the community team would receive the transfer of skills within the acute care facility. This allows them to be in direct contact with the individual and work closely with the acute care team. This training technique serves to increase the confidence and comfort of both the community care providers, the individual and the caregivers.

Information provided in respiratory teaching packages typically should cover:

- ✓ Tracheostomy and ventilator care
- ✓ Individual-specific training checklist that must be completed prior to discharge; can also be used as a scheduling guide
- ✓ Emergency guidelines that are provided to address common problems that may arise within the home environment

Respiratory Education

The training should include, but is not limited to:

- ✓ Respiratory anatomy and physiology
- ✓ Hands-on training with tracheal suctioning
- ✓ Ventilator troubleshooting and maintenance
- ✓ Tracheostomy tube cuff care; changing if applicable
- ✓ Use of the manual resuscitator bag
- ✓ Switching to ventilator battery
- ✓ Charging the ventilator battery
- ✓ Circuit assembly
- ✓ Emergency planning
- ✓ Cleaning of equipment
- ✓ Volume augmentation manoeuvres

Emergency Plan and Recommended Physician Coverage

Emergency guidelines are provided to address common problems that may arise within the home environment. These guidelines are provided for each individual and placement situation. Included are: what should be done; who should do it; what services should be called, etc.

The individual's wishes regarding resuscitative efforts should be addressed and be available in the home for emergency response personnel.

The individual must have:

- ✓ A Family Physician who will manage day to day general medical needs
- ✓ A Respirologist or other consultant who has expertise in mechanical ventilation, to manage ventilation needs
- ✓ A “home-base” hospital location should an emergency occur that cannot be solved at home. Ideally this is the acute-care facility discharging the individual home

For those caregivers wishing for Cardiopulmonary Resucsitation (CPR) certification, discuss this training with your healthcare provider.

Guidelines are provided that include contact numbers of home care providers and support services.

Communication and Transfer of Information to Community Providers

With the individual’s consent, the discharge team should ensure the community care partners receive information on:

- ✓ Medical history
- ✓ Written consent
- ✓ Care plan, preferences, daily routines, typical patterns where interventions are required
- ✓ Transfer and discharge notes from the discharging physician
- ✓ Emergency guidelines
- ✓ Equipment and supplies list

References

Dyson, J., Vrlak, A., & Provincial Respiratory Outreach Program (PROP). (2004). *Provincial Respiratory Outreach Program discharge planning guide* (User Guide). Vancouver: BC Association for Individualized Technology and Supports for People with Disabilities (BCITS).

Long-term Ventilated Patient Transfer Working Group. (2007). *Preparation of an ICU patient for transfer to LTV Unit*. Toronto: Toronto Central Local Health Integration Network.

Make, B., Hill, N., Goldberg, A., Bach, J., Criner, G., Dunne, P., et al. (1998). *Mechanical ventilation beyond the intensive care unit. Quick reference guide for clinicians. Highlights of patient management*.

Make, B., Hill, N., Goldberg, A., Bach, J., Criner, G., Dunne, P., et al. (1998). Mechanical ventilation beyond the intensive care unit. Report of a consensus conference of the American College of Chest Physicians. *Chest, 113*(5 Suppl), 289S-344S.

Montgomery, J. (2006). *An aid for identification and considerations for community placement of the long term ventilator dependent person*. London: Respiratory Community care, London Health Sciences Centre.

Notes

College of Respiratory Therapists of Ontario

Preparation for Hospital Discharge

Hospital Discharge Checklist

	Tasks	Initials of HCP	Date Completed
Patient/client is Medically Stable	❑ Stable blood gases		
	❑ Oxygen less than, or equal to 40%		
	❑ Established tracheostomy		
	❑ No CPR required for at least one month		
Successful Trial on Home Equipment	❑ Plan for family/caregivers to do more independent care		
	❑ Home ventilator obtained		
	❑ Patient/Client set-up on home unit		
	❑ Hospital walks, off unit		
	❑ Trial car ride		
	❑ Car seat test, if applicable		
	❑ Monitors		
	❑ Oxygen		
	❑ Feeding pump		
Decrease Invasive Monitoring	❑ Remove any invasive lines		
	❑ Ensure education for lines that will remain in place at home		
	❑ Ensure feeding is established – NG tube – G-tube – J-Tube – oral		
	❑ Reduce blood work frequency		
	❑ Switch over to home ventilator		
	❑ Ensure patient is weaned on current settings		
	❑ Self inflating resuscitation bag to be with patients at all times		
Treatment Plan	❑ Use simplest ventilation settings, if possible		
	❑ Use a trach tube that is appropriate for the patient's comfort/goals		
	❑ Ensure schedule is established for other therapies		

	Tasks	Initials of HCP	Date Completed
	❑ Suctioning		
	❑ Tracheostomy mask		
	❑ Breath stacking		
	❑ In-Exsufflator		
	❑ Speaking valve		
	❑ Other: _____		
Caregiver and Family Education	❑ Caregiver education is complete (See *My Education Checklist and Learning Log*)		
	❑ Plan for caregivers to do more independent care (including walks off the unit and trial car rides)		
	❑ CPR Certification		
	❑ Care by parent completed (at least 24 hours unassisted) using own home equipment.		
	❑ Tour of ICU/NICU Education of community caregivers (including Daycare or School).		
	❑ Family/Caregiver visit to current home ventilated patient		
	❑ Ensure the home care company has provided all the necessary equipment and training in the use of equipment provided to the family, i.e. compressor, cardiorespiratory monitor, suction unit and their accessories		
Documents	❑ Discuss ADP funding		
	❑ Complete ADP applications (contact ADP if help is required)		
	❑ Equipment from the Ventilator Equipment Pool; Ventilators, Oximeters, Bilevel devices. Contact VEP for estimated delivery time; often takes 2-4 weeks		
	❑ For other related respiratory supplies, contact the vendor of client's choice		
	❑ Complete Assistance for Children with Severe Disability (ACSD) application with physician letter, if appropriate		
	❑ Complete HOP form with qualifying oximetry strip, if appropriate		

	Tasks	Initials of HCP	Date Completed
	❑ Insurance contacted		
	❑ Contact Ontario Disability Support Program (ODSP) or other funding agency for battery to be mounted on wheelchair, if appropriate		
	❑ Family to contact private insurance, if appropriate		
	❑ Social worker to assist in securing additional funds		
	❑ Phone contact list for family/caregivers		
	❑ "Who to call and when" list to family/caregivers		
	❑ Ensure family/caregivers have teaching material, manuals needed		
	❑ Letters given to family to provide to police, ambulance, hydro, and telephone facilities (to alert community providers)		
	❑ Application for Accessible Parking Permit		
	❑ Discharge summary		
	❑ Rehab reports and referrals; including respite care		
	❑ Prescriptions provided and medications ordered		
Equipment Needs	❑ Confirm delivery date of equipment		
	❑ Car seat test done		
	❑ Specialty seating and mobility devices set up		
	❑ Equipment set up on wheelchair or stroller		
	❑ For patients that are off their ventilators for short periods or all day, a trach hood and appropriate humidity set ups are also required		
	❑ Contact OT for assistance in mounting ventilator on wheelchair		
Follow-up	❑ Community paediatrician identified and patient summary delivered		
	❑ Follow-up appointments made		

	Tasks	Initials of HCP	Date Completed
Home and Community	❑ Home ready including electrical needs		
	❑ Emergency action plan has been devised		
	❑ Enhanced respite funding (CCAC)		
	❑ Letter to police, fire, ambulance, hydro, and telephone facilities		
	❑ Arrangements made with pharmacy		
	❑ Calendar of appointments		
	❑ Contact List: "Who to call and when" list to family/caregiver		

Healthcare Provider (HCP) Name/Designation	Signature	Initials

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Preparation for ICU Discharge

Decrease Invasive Monitoring

Lines

- ✓ Remove arterial line
- ✓ Remove Nasogastric tube (NG tube), and other invasive lines/tubes
- ✓ If patient cannot have oral intake, switch NG tube to Gastrostomy tube (G-tube) or a Jejunostomy tube (J-tube)
- ✓ Cap Peripherally Inserted Central Catheter (PICC) lines if possible

Blood Work

- ✓ Reduce blood work frequency

Ventilation and Oxygenation

- ✓ Reduce to lowest FiO_2 to maintain SpO_2 88-92%, and lowest PEEP (if at all required)
- ✓ Avoid using continuous pulse oximetry once Arterial Blood Gases (ABG) and oximetry have determined oxygen requirements. Use for periodic assessments of SpO_2
- ✓ If available, switch the patient from a critical care ventilator to one that would be used in the home/community setting

Treatment Plan

Ventilation & Weaning

- ✓ If weaning is an option, consult/refer to Toronto East General Weaning Centre of Excellence
- ✓ Have ICU staff and allied healthcare professionals refrain from using the word “weaning” Instead, encourage staff to use the phrase “ventilator free time”
- ✓ Encourage the patient to increase their ‘ventilator free time’, even if it is in small increments. In the event of an accidental disconnect from the ventilator at home, the longer the ventilator free time, the safer. This also reduces caregiver anxiety
- ✓ For mechanical ventilation, use the simplest settings. Use assist control mode whenever possible since it is the most widely used ‘invasive’ mode. Most home ventilators do not have a pressure support option. However, one can petition the Ministry of Health for a ventilator with pressure support, if this is the only approach to ventilate

Tracheostomy Tube

Select a tracheotomy tube that is most appropriate for the patient’s comfort and goals. The most desirable features for the new tracheostomy tube are:

- ✓ Cuffless or ‘Tight to Shaft’ Cuff: This decreases secretions caused from irritation of the cuff, increases potential for speech and increases sense of smell and taste
- ✓ Nonfenestrated Limitations: Tends to cause granulomatous tissue in the airway
- ✓ Reusable Inner Cannula: To decrease the frequency of suctioning, teach the patient to cough to the inner cannula and keep it clear
- ✓ Other tracheostomy tube models or characteristics are fully acceptable, if the above choices are not suitable
- ✓ Changing the tracheostomy tube to one of these desirable tubes is not a necessity before transferring out of the ICU, but will ease the transition
- ✓ If the caregivers in the community or the long-term care facility do not have access to or experience with alternative tracheostomy tubes, it would be best for the patient to wait before transitioning home
- ✓ If a specialty tracheostomy tube is selected, ensure that the caregivers or the long-term care facility knows how to reorder the speciality tubes
- ✓ Assess the patient for the ability to communicate/speak while ventilated
  - cuff deflation
  - cuffless tube
  - speaking valve/one way valve usage

- ✓ Ensure that the patient is well rested and there are no nutritional deficiencies
- ✓ Consider a swallowing study by a Speech-Language Pathologist, if not already completed

Increase Independence

- ✓ Discuss differences between ICU care and care in the home/community or long-term care facility e.g.:
  - Expectation that patient will dress daily
  - Radically reduced "patient/staff" ratio
  - Increased independence
- ✓ Educate and train patient/family/caregivers on manual resuscitation bagging and suctioning techniques (these will be reinforced in the community)
- ✓ Move the patient to an area of the ICU with less activity, if possible
- ✓ Step down nursing complement. Consider the patient to nurse ratio
- ✓ Encourage use of a call bell, if able
- ✓ Dress the patient in his/her own clothes
- ✓ Encourage the patient to move to an upright chair as often as possible
- ✓ Have Occupational Therapy (OT) assess and begin process for obtaining equipment necessary for mobility and increased independence
- ✓ Consider taking the patient out of ICU for short periods of time, i.e. with staff and/or family
- ✓ Establish a routine bowel/bladder plan of care – regular day/night routine
- ✓ If going to a long-term care facility have someone from the receiving facility speak with family/caregivers about the program and take a tour of the facility

Other

- ✓ Co-payment charges should be discussed with the family
- ✓ Possible equipment and service charges such as TV, telephone, chiropody, hairdressing

Notes