**Influx of Patient-Supplied Equipment, CHA Response**

In the fall of 2010, CHA established the Patient Equipment Work Group to focus on various issues hospitals face relating to patient-supplied medical equipment. The goal of the patient equipment initiative was to work with the Department of Public Health (DPH) to develop evidence-based guidelines, and identify the elements that DPH and its surveyors would consider when evaluating hospitals’ policies and practices for handling patient-supplied equipment. The work group met numerous times, shared and studied literature, and engaged DPH extensively. The work group had hoped to build on available resources and gather existing evidence-based planning and best practices from a variety of sources. Ultimately, the work group determined that there is a paucity of available standards or evidence-based guidance for this increasingly challenging topic, and that any guidance must be self-developed.

This summary provides a high-level overview of the issues relating to patient-supplied equipment, as well as a brief discussion of the guidance materials that the work group has developed.

Given the lack of established resources, the work group took on the task of creating care-specific guidance, with an initial focus on noninvasive ventilation devices (NIV). The elements of that clinical and administrative guidance are contained in a separate document, titled *Guidance Related to the Use of Patient-Supplied Noninvasive Ventilation Devices*, which articulates key consensus considerations agreed to by DPH and CHA as elements that may be incorporated into a hospital’s policies and procedures.

**General Information on Patient-Supplied Equipment**

The need for clinical oversight of patient-supplied equipment used during hospitalization is an issue that is well known to hospitals, but it is not an issue on which the public, or patients, focus until a hospitalization occurs. This may cause confusion and reduce patient satisfaction, and even jeopardize patient compliance and outcomes. Both the work group and DPH agree that it is important to communicate with patients to help them, and their families, understand the various challenges involved in using non-hospital-issued equipment. This summary is not only designed to be helpful to providers, but it is also meant to speak to a broader audience of patients, their friends and families, and patient advocates, whose understanding of the challenges of patient-supplied equipment is essential to improving patient safety and quality.

The use of personal medical equipment is part of the daily lives of a growing number of people. Whether it is a simple mechanical device such as a cane, or more complex medical equipment such as an insulin pump, people are growing more accustomed to using their own personal medical equipment. Patients will often ask to use their own personal medical equipment during their stay in a hospital. This can create challenges for the hospital, and the patient, that may not be immediately obvious to the patient.

Common types of patient-supplied medical equipment include ventilators, vaporizers, glucose meters, continuous positive airway pressure units, suction machines, infusion or patient-controlled analgesic (PCA) pumps, home dialysis units, insulin pumps, orthopedic supports, transcutaneous electrical nerve stimulators, and even heating pads. Additionally, many patients have mobility and support aids, including motorized wheelchairs, crutches, canes, and walkers. Hospitals are required to evaluate whether patient-supplied equipment is safe for use in the hospital, and must ensure that personnel are properly trained on how to maintain such equipment, and how to care for patients using it. An evaluation of patient-supplied equipment is very detailed, and encompasses issues such as replacement parts, batteries, cord adapters, filters, repair work,
Summary of the Challenges Concerning Use of Patient-Supplied Equipment During Hospitalization

cleaning, and refurbishing schedules. In short, when a patient wants to use his or her own device, it puts the hospital in the difficult and sometimes impossible position of needing to ensure that the device functions properly. This can result in a hospital being unable to allow the patient to use his or her own equipment because the hospital cannot ensure its safety. Hospitals often choose to use their own, similarly effective medical devices, for which they have proper technical staff and support capabilities.

All biomedical equipment and medical devices used at a hospital, whether hospital-supplied or patient-supplied, become the hospital’s responsibility for proper testing and preventive maintenance. DPH specifically requires hospitals to have a plan, policies, and established practices that outline when patient-supplied devices can be used, under what circumstances, and how the evaluation process is managed. Hospitals have a wide degree of flexibility in how they meet these requirements, but in doing so must ensure that they follow guidance and rules from both the federal Department of Health and Human Services, as well as from The Joint Commission, which provides accreditation to all of Connecticut’s acute care hospitals.

Hospitals must also ensure that orders are properly obtained, and entered in the medical record, as required for use of equipment, regardless of whether the equipment is hospital-supplied or patient-supplied.

Initial Focus on Noninvasive Ventilation (NIV) Devices

As clinicians are aware, noninvasive ventilation is the administration of ventilatory support without using an invasive artificial airway (e.g., endotracheal tube or tracheostomy tube). The work group determined, and DPH agreed, that it would focus initially on noninvasive ventilation devices – specifically, continuous positive airway pressure (CPAP) and bi-level positive airway pressure (BiPAP) units – because these devices, which patients use at home, are the most common types of equipment that patients ask to use during hospitalization.

Many patients use continuous positive airway pressure (CPAP) at home. CPAP is a therapy frequently used in the treatment of Obstructive Sleep Apnea. CPAP works by directing single continuous positive airway pressure to the patient through a hose connected to a snug-fitting nasal mask, pumped by a machine that creates a flow of compressed air. Bi-level positive airway pressure (BiPAP) is a therapy frequently used in the treatment of both Central Sleep Apnea, as well as Chronic Obstructive Pulmonary Disease with carbon dioxide retention. Although similar to CPAP, BiPAP requires two different pressure settings (IPAP and EPAP), which allow more air into and out of the lungs without the normal muscular activity needed for that function. While home use of these devices is common, use of a patient’s home device during a hospital stay presents several challenges, such that use of the patient’s device may not be compatible with the patient’s hospitalization.

Hospitals will be provided with the Guidance Related to the Use of Patient-Supplied Noninvasive Ventilation Devices, which is the product of the work group process. The guidance is not intended to substitute for a hospital’s policies and procedures, but is offered to inform hospitals of the minimum considerations and level of detail that DPH will expect to be addressed in each facility’s policies and procedures. Hospitals may choose to adopt systems and practices that are more extensive or stringent than what is represented in the guidance document.