As a veterinary team, we focus on diagnostics, treatment, and outcome. Often times nursing care is overlooked as part of the treatment plan. It is important to realize that nursing care plays a large role in patient outcome in the ICU. ICU patients are at risk for infection, additional disease processes, malnutrition, hospital induced complications, and depression. The role the nursing staff plays in the improvement of the patient is crucial. It is the job of the nursing staff to be an advocate for the patient while under their care. There are tips, tricks, protocols, and products available to enhance nursing care in the critical patient and are discussed below.

Disease prevention in the hospital is a constant battle. The ICU is ground zero. Critical care patients are vulnerable to nosocomial infections due to their compromised immune state. Pressure sores and urine scald are additional potential sources of infection in the recumbent patient. Animals on a ventilator, or those who are comatose (induced vs. pathologic) require a higher level of disease prevention through nursing care.

First and foremost, the nursing staff should have a clear understanding of the disease processes involved with each patient and their potential complications. (For example, a cardiac patient on fluids may need an hourly respiratory watch to catch signs of potential fluid overload.) Once this has been established, a protocol for patient handling and care can be set.

Patient Handling: Brightly colored cage cards can alert staff of proper patient handling. If an animal has had chemotherapy treatment, they will need to be walked in a separate area from other patients. That patient should be handled with exam gloves, and should have all bedding processed appropriately, as well as proper waste disposal. Patients who are deemed infectious or potentially infectious should have a designated technician. Gown, glove, mask, and booties not only protect staff from zoonotic disease, but also will protect other patients from transmitted disease in the hospital. Walking potentially infectious patients is not recommended. An isolation ward is recommended with proper ventilation and a separate stock of medical supplies. It is ideal to have a container of medical supplies labeled for each contagious disease, thus avoiding cross contamination. Immune suppressed patients should be handled with extreme care. These patients should only be handled while wearing exam gloves. It is recommended that they not be moved from cage to cage in order to avoid exposure to additional viruses and bacteria. Walking these patients in a separate, designated area is also advised. Contagious and immune suppressed patients should each have their own bag of saline flush and sterile water (for medication reconstitution). Re-wrapping IV catheters daily with routine IVC flushing to monitor for infection, patency, and phlebitis, can also aid in the prevention of potential patient complications. If urinary catheters are in place, it may be beneficial to aseptically clean the line with chlorhexadine and saline, wiping away from the prepuce. Also alcohol swabbing of all IV line connections and injection ports is good practice to decrease incidence of nosocomial infection while in the hospital.

Patient comfort plays a role in the health of the patient, and can decrease hospitalization time. It is crucial to recognize and address the need for patient comfort on an individualized basis. This can be
done through nursing care, kind words, owner visitation, pheromone therapy, pain management, and anxiolytics. Various tips for patient comfort are addressed below.

Bedding: Having a clean and comfortable surface for each animal is required. Comforters, pillows, and Sherpa fleece can prevent pressure sores in recumbent and ataxic patients. The Sherpa fleece also helps to wick away urine from the patient, avoiding repeated bathing and urine scald. Pillows can help facilitate keeping a patient in sternal recumbancy to avoid compromising the lungs, or elevating the head in patients with head trauma. Rolled towels between legs of laterally recumbent animals can prevent joint strain, and pressure sores.

Personal items: Though easily lost among laundry, personal items such as toys and beds can increase patient comfort and alleviate stress. It is important to relay to owners that these items are easily soiled and may get lost in laundry processing. Labeling items with the patient name can help avoid loss.

Verbal and physical communication: These animals are in a strange environment surrounded by new people. That coupled with the stress of constant treatments, procedures, and diagnostics will cause anxiety in the animal. Cats will often exhibit this anxiety when each time they are reached for they begin to drool. They may be anticipating the treatment of being medicated, as each time they have been touched in the hospital, it has been unpleasant. Speaking kind, soft words to a patient without any treatment involved creates a less stressful environment. Physical touch by petting, scratching behind the ears, or even sitting with the patient without any treatment or diagnostic performed can help create a calmer setting.

Cleanliness: Clean bedding, cages, dishes, and patients are essential in disease prevention and the overall well being of the animal. Bathing and grooming are a necessary evil in the ICU. Critical animals often times cannot tolerate a bath with water and shampoo due to the stressful nature and potential for hypothermia. Waterless shampoo and baby wipes can be helpful in patient cleanliness while avoiding the stress of a full bath. Often times clipping the soiled hair away can prevent the need for a bath, while allowing air to circulate and prevent urine scald. It is important that owners are notified of the potential of hair clipping. Diaper rash cream can also be useful in patients with diarrhea, or leaking diarrhea. The ointment can help protect the skin from stool accumulation and the rash associated with it. (Be aware of the potential for zinc toxicity in some creams). In the event an animal can tolerate bathing, blow drying the animal can alleviate the potential for hypothermia and allows for patient comfort afterwards.

Environment: The ICU is a busy, loud, bright area. Animals in the ICU rarely rest, and small environmental changes may aid in allowing the animal to rest comfortably. Dimming the lights can be soothing to some animals and allow them to rest. In more stable patients, covering part of the cage with a towel will allow privacy and may decrease stress. This works well for cats, especially those that are too scared to use the litter box and urinate where they lay. Cats also respond to “hide boxes” well, as this gives them some control in their surroundings. Covering the cage of dog aggressive patients, can alleviate the visual stress of another dog. Music can also play a part in easing stress in the ICU. Animals who hear constant beeping and loud barking in the ICU may benefit from a small radio near their cage, playing soft and soothing music. Other environmental stressors may involve simply being in a cage. These animals may be better suited on the ICU floor with an x-pen or baby gate to keep them contained. The larger area, and open feeling can help reduce stress and in turn improve patient well being.

Owners: The pet owner plays a large role in the stress of a hospitalized patient. It is important to communicate this to the owner when the patient is admitted. Owner visitation can be beneficial to a patient or cause immense stress. Typically the owner will know if the animal will become anxious after visitation. However, if the owner is unsure of how the animal will react, a trial visitation should be set.
Report to the owner how the animal did after the visit. If they were vocal, panting, pacing, and appeared anxious, then future visits may need to be avoided. However, if the patient starts eating, appears brighter and more alert, then visitation should be encouraged. It is also important to convey to owners that their pet may react to the emotion the owner is displaying. If the owner is conveying stress, agitation or crying, it can carry over to the animal. Advising the owner to keep a calm demeanor while visiting is encouraged.

Pheromonatherapy and Anxiolytics: The use of pheromones to encourage a less stressful environment is recommended. Collars, diffusers, cage wipes, and sprays are available for use in the ICU. The use of pheromone therapy to encourage appetite has also been noted in cats, which is essential as nutrition plays a crucial role in patient health and improvement. In dogs, pheromone therapy has been seen to reduce stress perioroperatively. Anxiolytic drugs such as Alprazolam and drugs such as Trazadone can also be used to alleviate anxiety in hospitalized canine patients.

Massage and Mobility: The recumbent patient requires movement to avoid further complications. Often times massage and passive range of motion movements are crucial to prevent joint stiffness and muscle wasting. Massage increases muscle circulation and toxin elimination. Absence of massage in the recumbent patient can lead to increased fatigue through metabolic processes. When massage is routinely performed, muscle fibers can be preserved, preventing further atrophy, and healing is encouraged. Though massage is beneficial, it is contraindicated in patients with fever, shock, limb swelling/heat, limbs with masses, fractures or sprains, neoplastic areas, or if the patient is receiving steroids/NSAIDs. In ataxic animals, encouraging movement through short walks can be beneficial in gut movement as well as providing musculoskeletal benefits. Fleece lined slings, “Webmaster” harnesses and “Help ‘Em Up” harnesses can give assistance to less steady animals, while encouraging mobility.

Climate Control and Thermoregulation: Many patients in the ICU require heat/cooling support due to their inability to thermoregulate caused by many disease processes. In the event a febrile patient needs active cooling, it is important to do so in a careful and slow manner. Cooling water blankets are now available to slowly cool an animal without abruptly dropping the bodys’ temperature. This may be beneficial in head trauma patients, when a sub normal body temperature is warranted. Ice packs, tepid water baths, alcohol to the paw pads, fans, and submerging the IV line in a cool water bath can also be used to aid in lowering body temperature. If fans are used, be mindful to lubricate the patients’ eyes routinely to avoid potential ulcers. When heat is required, it is important to remember to avoid implementing hot water bottles unless the patient is mobile and can move away from the heat source. Other options to actively warm the hypothermic patient include; hot water blankets, Bair hugger, IVF line warmer, warmed IVF (typically kept in a temperature regulated incubator), warm towels, heated cages, sweaters, and infant socks over the paws.

Nutrition: Meeting caloric requirements in the ICU patient is a necessity for the metabolic processes that occur in critical patients, as well as maintaining gut health and patient well being. Our ability to address these needs can extend or shorten the hospital stay. It is first necessary to know how to calculate RER or Resting Energy Requirements (RER (kcal/day) = 30 (wt. in kg.) + 70). Once we have obtained the patients RER, we can calculate trickle feedings via NG tube, NE tube, PEG tube feedings, IV nutrition (such as TPN), and establish current calorie intake in animals willing to eat on their own. The goal is to have the animal eating willingly, to maintain gut health. This can be achieved by enticing the animal with a variety of foods. Baby food, chicken, turkey hot dogs, rice, pasta, and a buffet of dry and canned foods should be offered. Warming of the food, hand feeding, and using plates rather than bowls can increase interest in food. Offering the patient their normal diet or having the owner visit to feed the pet, can also spark interest in eating. It is important to note on the patient treatment sheet which food the animal was interested in, as well as how much the animal has eaten. Freshening up food and water every few hours is also recommended.
Pain Management: Increasing patient comfort can lead to decreased hospital stays. One way to achieve this is through good pain management. Critical patients who require pain management should be addressed not ignored. Managing their pain can improve vital signs, blood pressure, appetite, comfort level, mobility, and overall attitude. When treating pain in the ICU patient, source of pain and disease processes must be taken into account. This determines if a CRI, local infiltration, oral medication, NSAID, epidural or neuroleptanalgesia is warranted. The ability to reverse a pain medication should be considered in very critical patients. Monitoring patient response to pain management is critical in adjusting drugs and dosages. In addition to chemical intervention for pain management, nursing care should also be discussed. In order to decrease discomfort in the painful patient, coordinating treatments to minimize disturbance can reduce pain inflicted. Also, allowing for a comfortable well padded surface can increase patient comfort.

Through intelligent nursing, the ICU technician should anticipate patient needs and potential complications. This information can affect the health and well being of the patient beyond the treatment plan and diagnostics performed. Nursing care is far more than technical skill. It requires patient care and emotional need considerations. All of these aspects affect patient discharge time, and outcome.