

## ED residents adopt spooky mascot to help reduce ventilator-associated pneumonia

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Coincidentally or not, the mythological beings who subsist on blood and are the theme of a popular series of fantasy romance novels and movies are the basis for a mascot being used by residents in the emergency department to reduce cases of ventilator-associated pneumonia (VAP).

The "VAPire" appears on signs posted in key locations around the emergency department as part of UC Davis Health System's "Integrating Quality and Safety Charter," a drive to instill quality-related practices across the range of medical education. The charter requires all residency programs at UC Davis Medical Center to develop quality initiatives.



The VAPire.

Emergency medicine residents chose to focus on reducing VAP because it occurs in up to 25 percent of patients who require mechanical ventilation, said Jacob Gessin, an emergency medicine resident who is leading the VAP-reduction project. Although patients can develop VAP at any time during ventilation, it occurs most often in the first few days after intubation, a procedure frequently performed in the emergency department. Many patients are admitted into the hospital after arriving in the emergency department.

"These patients are not going to present with VAP in the emergency department," said Gessin. "But what we do could affect what happens to them in the hospital 24 to 48 hours later."

Because VAP could be a consequence of actions taken in the emergency department, Gessin and other residents designed their project to heighten awareness of the risk for VAP. Their objectives are to increase compliance with VAP order sets, initiate VAP-prevention strategies and ultimately decrease morbidity and mortality from the illness. To increase awareness of prevention strategies, the residents created the VAPire mascot and developed a slogan: "Beware of VAP."

The VAPire and the slogan are posted in key locations around the emergency department, such as airway management boxes, physician boxes and resuscitation rooms. The signs also include a list of prevention measures to follow:

- Proper handwashing
- Isolation of individuals with known resistant organisms
- Sterile/clean intubation techniques
- Raising the head of the bed to at least 30 degrees
- Antiseptic mouthwashes
- Proper and frequent tracheal suction by respiratory therapists and nurses

Preventing VAP requires limiting exposure to resistant bacteria, discontinuing mechanical ventilation as soon as possible, and taking a variety of steps to limit infection while a patient is intubated. The signs are intended to increase compliance with these actions. In addition to posting the signs, the resident group discussed the prevention measures in presentations at the emergency department's weekly

### Annual Integrating Symposium on March 6

[The Integrating Quality Symposium: Linking Clinical and Education Excellence](#), is set for March 6. It is an opportunity for the health system community to share best practices and innovations in quality initiatives that include trainees and students or that integrate into undergraduate, graduate or life-long learning programs.



Resident Jacob Gessin is leading the VAP-reduction project.

academic forums, which are attended by all residents, attending physicians and medical students.

Prior to the posting of the signs, the resident group conducted a review to determine the level of compliance with the VAP-prevention measures indicated on the signs. The review found that the only measure not being performed at a high level was elevating the head of the bed to at least 30 degrees.

The residents will conduct another review to determine if the awareness campaign increased the use of VAP-prevention steps. The results of the project will be presented at the [Integrating Quality Symposium: Linking](#)

[Clinical and Education Excellence](#), set for March 6.

"We anticipate that the project will result in a higher degree of teaching performed by emergency medicine residents, and increased teamwork within the department and the medical center," said Gessin.