

# **UCLA**

## **Proceedings of UCLA Health**

### **Title**

Use of Early Warning Sign Detection Protocol for a Nursing Facility Patient with Acute Severe Anemia

### **Permalink**

<https://escholarship.org/uc/item/76b915n3>

### **Journal**

Proceedings of UCLA Health, 25(1)

### **Authors**

Liu, Christine

Ahmed, Salim

Darouian, Navid

### **Publication Date**

2021-03-17

## CLINICAL VIGNETTE

---

# Use of Early Warning Sign Detection Protocol for a Nursing Facility Patient with Acute Severe Anemia

---

Christine Liu, Salim Ahmed, MD and Navid Darouian, MD

### *Introduction*

Early detection protocols are critical in identifying acute changes in clinical status for patients at nursing homes. Recognition of small changes in a patient's health status is essential for early, more effective treatment intervention, prevention of dramatic decline, and determination of appropriate rehospitalization from nursing facilities. Early illness recognition and early treatment facilitate rapid recovery after exacerbation of a chronic or acute illness, and reduces morbidity and mortality in older adults.<sup>1</sup>

The purpose of the INTERACT (Interventions to Reduce Acute Transfers) quality-improvement program is to improve care and reduce potentially avoidable transfers to the hospital. Strategies include early identification and evaluation of changes in condition as well as improved communication and documentation within the nursing home. The Stop and Watch Tool is an early warning instrument that uses simple language to identify common, non-specific changes in condition. Completion of the Stop and Watch Tool by direct care staff including certified nursing assistants, housekeeping, and physical therapists provides a clinical alert for licensed nurses to determine if further evaluation is necessary. The Situation, Background, Assessment, and Recommendation (SBAR) tool provides a template for nurses to assess a resident's condition and gather adequate information before notifying a physician of an acute change in condition.<sup>2</sup>

This case illustrates the importance of illness warning instruments to detect acute, nonspecific changes in condition in nursing home residents (NHRs) and protocols that enhance communication between direct care staff and registered nurses.

### *Case*

A 77-year-old male with a recent history of multiple lacunar strokes was discharged from the hospital to a skilled nursing

facility on aspirin and clopidogrel for ongoing rehabilitation needs. He had been at the facility for one week when he was noted by staff to have an acute change in his clinical status. The physical therapist working with the patient detected a change in his status and followed a protocol known as the INTERACT "Stop And Watch" protocol. While usually talkative and engaged during therapy sessions, the patient appeared lethargic and not his usual self. As part of the protocol, the Physical Therapist immediately alerted the charge nurse. The patient was assessed by the charge nurse who confirmed the change in clinical status and obtained immediate vital signs. The patient was noted to be hypotensive with a blood pressure of 88/60 and the on-call physician was notified. The on-call physician instructed nursing staff to contact 911 for immediate transfer to a local emergency room for further evaluation.

The INTERACT Stop and Watch and SBAR are some of the more popular early detection measures for identifying clinical status changes amongst patients at acute care facilities. In the "Stop and Watch" protocol as noted in Table 1, "Seems different than usual" and "Talks or communicates less" are early signs for staff members to identify possible changes in patient status. With the therapists noting the patient being more lethargic than baseline and less talkative, the care team was able to identify the concerning patient status change and transfer the patient promptly to the nearest emergency room.

While in the emergency room, the patient was confirmed to be hypotensive with a blood pressure of 74/49 requiring prompt intravenous fluid bolus administration. Stat lab results returned with concerns of severe anemia with a hemoglobin of 6.8 requiring blood product transfusion. He was admitted for further evaluation and endoscopic evaluation given concerns of a possible gastrointestinal bleed.

**Table 1\***

---

<b>S</b> seems different than usual
<b>T</b> talks or communicates less
<b>O</b> overall needs more help
<b>P</b> pain – new or worsening, participated in less activity
<b>A</b> ate less
<b>N</b> no bowel movement in 3 days; or diarrhea
<b>D</b> drank less
<b>W</b> weight change
<b>A</b> agitated or nervous more than usual
<b>T</b> tired, weak, confused, or drowsy
<b>C</b> change in skin or condition
<b>H</b> help with walking, transferring, toileting more than usual

---

**\*INTERACT Stop and Watch Early Warning Tool**

### Discussion

This example of using the INTERACT Stop and Watch Tool to detect acute severe anemia illustrates the importance of early warning instruments to identify acute changes in condition. Nursing home residents often do not directly communicate new physical complaints due to cognitive and communicative impairment, and often have a multitude of preexisting physical, mental, and behavioral findings that obscure new signs and symptoms. Furthermore, signs and symptoms of infection in elderly patients are often atypical (i.e. falling, weight loss, cognitive decline) while specific ones, such as fever, are often absent.<sup>3</sup> Additionally, hypoactive nonspecific symptoms (i.e. lethargy, weakness, decreased appetite) in NHRs have been shown to be predictive of incipient acute illness.<sup>4</sup> Though studies have stressed the significance of detecting these atypical signs and symptoms in the elderly, their low specificity can lead to delay in diagnosis and treatment.<sup>5</sup> Nonspecific changes are difficult to recognize from baseline, especially with a backdrop of complicated medical histories common in elderly patients and are often underreported. This resident presented as “lethargic” and “not his usual self”, which are subjective behavioral changes. Direct care staff, such as nursing assistants (NAs) or the physical therapist in this case, are well positioned to detect signs of acute incipient illness because they provide most of the daily individual care. In nursing homes, NAs share these subjective observations with the registered nurse (RNs) who is responsible for assessment of residents’ conditions. However, NAs’ communication of these observations to medical staff is often informal, and RNs and physicians tend to focus more on typical/specific signs and symptoms rather than changed behavior.<sup>5</sup> In clinical practice, this unstandardized flow of communication can lead to delayed action. Studies have confirmed the validity of nursing assistants to keenly detect early signs and symptoms of infection in elderly NHRs. Their observations should be taken seriously and followed up.<sup>6</sup> An evidence-based, standardized, illness-warning instrument of possible signs and symptoms is one way of improving early identification of acute changes in NHRs.<sup>1,3,6</sup> By utilizing the Stop and Watch protocol, non-specific symptoms were detected

by frontline staff and quickly reported to the head nurse for further evaluation.

This case further emphasizes the importance of improved inter-professional communication and workflow to improve medical care in nursing homes. One early warning instrument to enhance this communication between frontline staff and licensed nursing staff is the INTERACT Stop and Watch Tool. Elderly patients often present with nonspecific, atypical signs and symptoms that can be aptly recognized by direct care staff. An illness warning protocol incorporates subjective behavioral changes and ensures further evaluation, leading to early intervention and prevention of further decline. Nursing homes should have early detection protocols to identify acute changes in patient status to prevent readmissions, morbidity, and mortality.

### REFERENCES

1. **Boockvar K, Brodie HD, Lachs M.** Nursing assistants detect behavior changes in nursing home residents that precede acute illness: development and validation of an illness warning instrument. *J Am Geriatr Soc.* 2000 Sep; 48(9):1086-91. doi: 10.1111/j.1532-5415.2000.tb04784.x. PMID: 10983908.
2. **Ouslander JG, Bonner A, Herndon L, Shutes J.** The Interventions to Reduce Acute Care Transfers (INTERACT) quality improvement program: an overview for medical directors and primary care clinicians in long term care. *J Am Med Dir Assoc.* 2014 Mar;15(3):162-170. doi: 10.1016/j.jamda.2013.12.005. PMID: 24513226; PMCID: PMC3921692.
3. **High KP, Bradley SF, Gravenstein S, Mehr DR, Quagliarello VJ, Richards C, Yoshikawa TT.** Clinical practice guideline for the evaluation of fever and infection in older adult residents of long-term care facilities: 2008 update by the Infectious Diseases Society of America. *Clin*

*Infect Dis.* 2009 Jan 15;48(2):149-71. doi: 10.1086/595683. PMID: 19072244.

4. **Boockvar KS, Lachs MS.** Predictive value of nonspecific symptoms for acute illness in nursing home residents. *J Am Geriatr Soc.* 2003 Aug;51(8):1111-5. doi: 10.1046/j.1532-5415.2003.51360.x. PMID: 12890074.
5. **Tingström P, Milberg A, Sund-Levander M.** Early nonspecific signs and symptoms of infection in institutionalized elderly persons: perceptions of nursing assistants. *Scand J Caring Sci.* 2010 Mar;24(1):24-31. doi: 10.1111/j.1471-6712.2008.00680.x. Epub 2009 Nov 30. PMID: 19954493.
6. **Tingström P, Milberg A, Rodhe N, Ernerud J, Grodzinsky E, Sund-Levander M.** Nursing assistants: "he seems to be ill" - a reason for nurses to take action: validation of the Early Detection Scale of Infection (EDIS). *BMC Geriatr.* 2015 Oct 12;15:122. doi: 10.1186/s12877-015-0114-0. PMID: 26459627; PMCID: PMC4603967.