Validating the Veteran's Administration Post Anesthesia Discharge Score (VA-PAS)

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BACKGROUND

▪ When a patient is recovering from anesthesia or sedation in a recovery room, nursing often utilizes an objective scoring method to assess a patient's readiness to safely transition to the next phase of care.

▪A large proportion of Phase I recovery units use the Aldrete Scoring System, Modified Aldrete Scoring System, the Respiration, Energy, Alertness, Circulation, and Temperature (REACT) or other scoring method to assess if a patient is ready to transfer to the next phase of care. These scoring systems do not include critical items necessary to assess a patient's readiness to safely transition. Of the existing tools utilized, only one, the Danish Society of Anaesthesiology and Intensive Care Medicine assessment tool, has been truly validated. Review of literature indicated the absence of any widely accepted standards for PACU discharge criteria (Ecoff et al., 2021)

BACKGROUND

- The Veteran's Health Administration (VHA) assembled a multi-disciplinary group to design a tool to evaluate a patient's readiness to transition from phase 1 sedation/anesthesia, titled the VA-Post Anesthesia Score (VA-PAS). To date, the VA-PAS is not a validated tool and has no published evidence to support the development or its use. Various VA facilities are deploying the use of the VA-PAS in their post surgical/sedation units.

- More research is needed on the VA-PAS to provide nursing with a validated and reliable post anesthetic discharge tool. With standardization of criteria, assists in determining the safety of a patient's readiness to transfer to the next level of care.

PICO(T) QUESTION

- Does the Veteran Affairs' Post Anesthesia Score (VA-PAS) (I) tool safely and effectively measure the post-anesthesia patient's (P) readiness to transition from a phase 1 care area to the next level of care (O)?

Evidence Retrieved
(# / Quality per JHNEBP Criteria)

§ Databases searched: CINAHL Complete, EBSCO Host, PubMed, Ovid

§ Key words used: Discharge tool, post operative, post anesthetic discharge score/tool, discharge criteria

§ Limits: phase 1, adults,

Research Evidence				
Non-experimental	Quasi-experimental	Experimental	Systematic Reviews	Meta-analysis/ Meta-synthesis
0		1 Good	4 High	0

Non-Research Evidence		
Expert Opinion	Organizational (QI/financial data)	Clinical Practice Guidelines
	LOS data	2 (Good)
0		2 Good

Evidence Summary

- The American Society of Anesthesiologists (ASA) & the American Society of Perianesthesia Nurses (ASPAN), discuss that any scoring method must include evidence-based components to help assess a patient following anesthesia to safely transition from Phase I to their next level of care. However, "The review of literature indicated the absence of any widely accepted standards for PACU discharge criteria (Ecoff et al., 2021).

- Per Philips et al., a systematic review found "limited evidence and consensus on criteria for PACU discharge assessment. However, blood pressure, conscious state, pain, nausea and vomiting were identified as essential criteria to be assessed" and were supported by evidence. They also stated other vital signs should be considered for patient assessment (Phillips et al., 2014).

Evidence Summary

- A systematic review performed by Hawker et. al., stated that the literature supports use of traditional score components such as airway support, oxygenation, sedation and circulation; while also considering new elements such heart rate, temperature, pain, post operative nausea and vomiting, urinary output and surgical site bleeding. (Hawker R. et al., 2017)

- Brown et al., also performed a study on criteria to use in a post anesthesia discharge score which yielded a 10-item discharge criteria tool including (1) level of activity, (2) vital signs, (3) oxygen saturation, (4) consciousness and mental status, (5) pain control or comfort level, (6) urinary output, (7) absence of nausea and vomiting, (8) absence of anxiety or agitation, (9) no excessive bleeding and (10) laboratory values within normal limits (Brown et al., 2008).

Evidence Summary

Our research provided us with enough evidence to support the elements included in the VA PAS for use in a Phase I discharge tool.

Assessment criteria elements in the VA-PAS:

❖ Oxygenation

❖ Respiratory Status

❖ Circulatory Status

❖ Level of Consciousness

❖ Pain

❖ Nausea/Vomiting

❖ Level of Activity

Our next step is to validate this content.

VA PHASE ONE AND PHASE TWO DISCHARGE CRITERIA

Department of Veterans Affairs (VA) Phase One (PACU) discharge Criteria – Postanesthesia Score (VA-PAS)	Points

OXYGENATION

SpO2 ≥ 94% (or baseline) on room air	2
SpO2 ≥ 94% (or baseline minus 2%) with oxygen	1
SpO2 < 94% (or baseline minus 2%) with oxygen	0

PAC(U) RESPIRATORY STATUS

Normal breathing, deep cough on command	2
Inadequate coughing or coughing without command	1
Tachypneic, Dyspneic, requires assisted ventilation or airway device	0

CIRCULATORY STATUS

BP/HR +/- 20% or 20 mmHg of baseline	2
+/- 20-40% or 20-40 mmHg, no orthostasis	1
+/- 40% or 40 mmHg, or orthostasis	0

LEVEL OF CONSCIOUSNESS

Fully awake or easily awakened	2
Arousable, but delayed	1
Not responding or responding only with tactile stimulation	0

PAIN

Minimal – Pain score 1-4 or at tolerable level or at baseline	2
Moderate, requiring oral medication – Pain score 5-7 or 3 above baseline	1
Severe, requiring intravenous opioid treatment – Pain score 8-10	0

NAUSEA/VOMITING

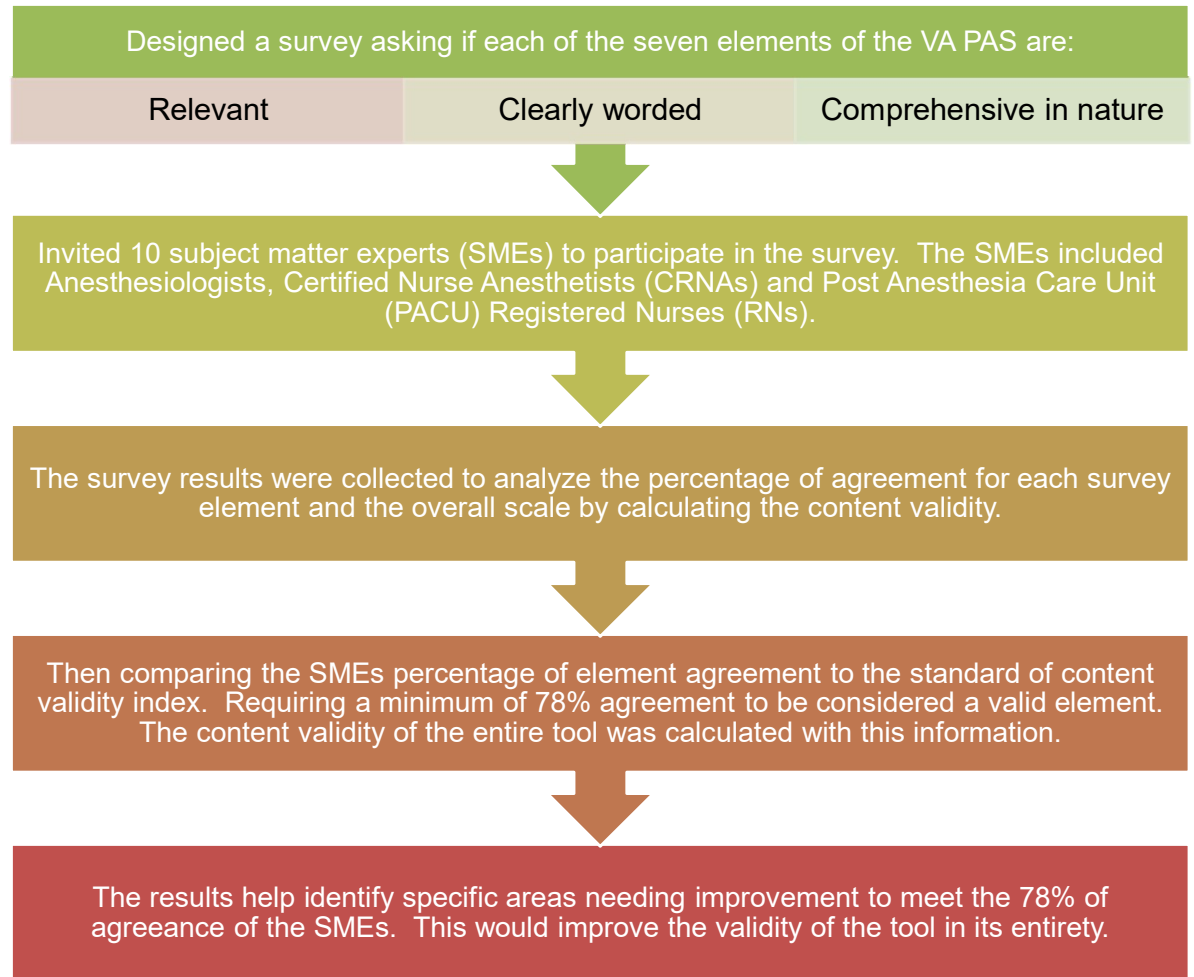|	
Minimal	2
Moderate (requiring medication)	1
Severe	0

LEVEL OF ACTIVITY

Able to move all extremities voluntarily or on command, or moves all extremities with the exception of extremity treated with peripheral nerve block, or pt baseline (e.g., SCI)	2
Moves at least two extremities (or baseline moving less than all extremities)	1
Unable to voluntarily move extremities on command	0

Score of 13 is fit for discharge from Phase I

VA PAS Phase I

ACTION PLAN

Designed a survey asking if each of the seven elements of the VA PAS are:

Relevant	Clearly worded	Comprehensive in nature

Invited 10 subject matter experts (SMEs) to participate in the survey. The SMEs included Anesthesiologists, Certified Nurse Anesthetists (CRNAs) and Post Anesthesia Care Unit (PACU) Registered Nurses (RNs).

The survey results were collected to analyze the percentage of agreement for each survey element and the overall scale by calculating the content validity.

Then comparing the SMEs percentage of element agreement to the standard of content validity index. Requiring a minimum of 78% agreement to be considered a valid element. The content validity of the entire tool was calculated with this information.

The results help identify specific areas needing improvement to meet the 78% of agreeance of the SMEs. This would improve the validity of the tool in its entirety.

Content Validity Index

Content Validity Index is an instrument that helps provide validity of the evidence in a scale.

Having a standard calculation allows scales to be consistently analyzed the same way.

Looking at item relevance and the content of the overall scale provides the comparison percentage.

When there are six or more judges, it has been agreed that the interrater agreement can be 0.78. Meaning 78% of the time, the judges agree that the content is relevant. This provides a baseline to measure a scales content validity against.

Differing opinions, lack of understanding, and/or potential biased views of experts can sway the validity of a scale, thus the importance of this balance.

Subject Matter Expert (SMEs) Responses

Role	Number of respondents
Anesthesiologists	2
CRNAs	1
RNs	7

Content Evaluation Results

Seven total VA-PAS Elements:

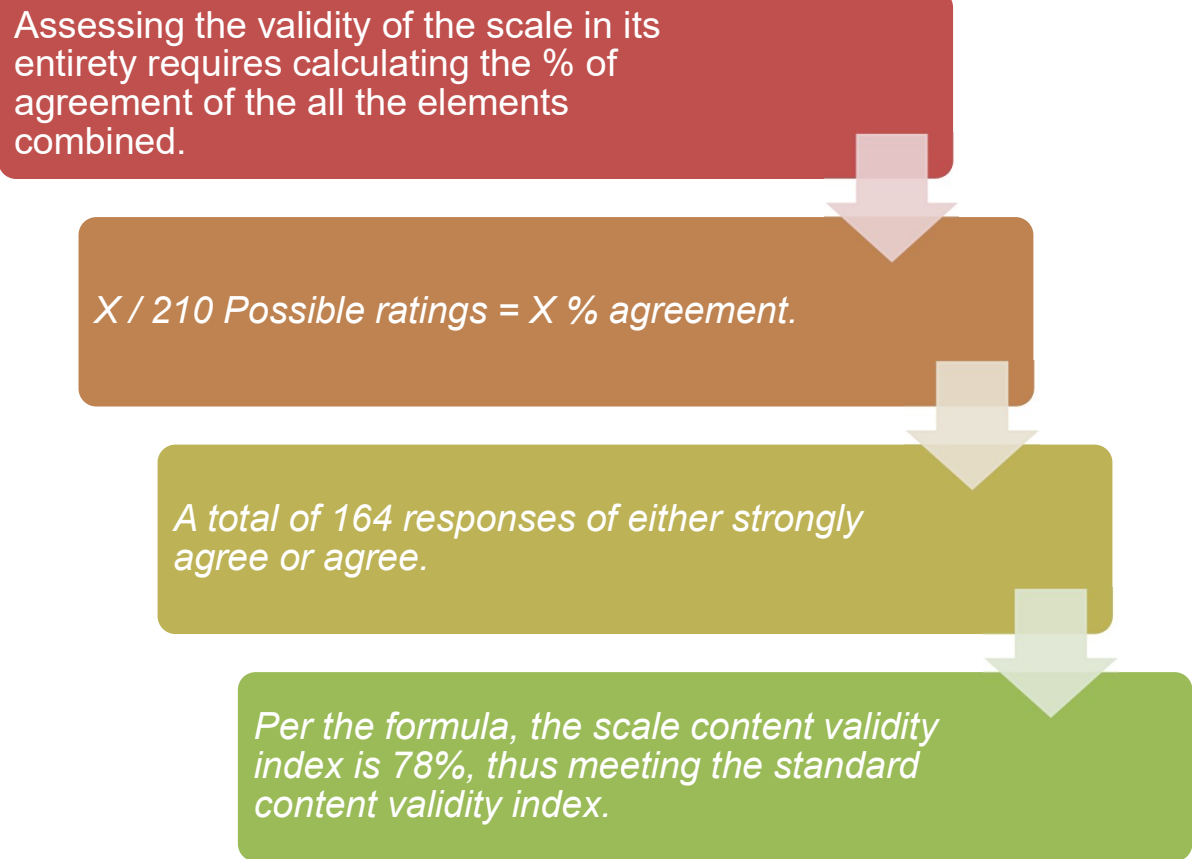3 sections per element asking if the element was :

- Relevant

- Clearly Worded

- Comprehensive

X= strongly agree or agree ratings

X / 30 possible ratings = X % agreement

VA PAS Assessment Element	Content Validity Index
Pain	73%
Consciousness	80%
Nausea/Vomiting	70%
Level of Activity	70%
Circulatory Status	80%
Oxygenation	83%
Respiratory Status	90%

Assessing the validity of the scale in its entirety requires calculating the % of agreement of the all the elements combined.

X / 210 Possible ratings = X % agreement.

A total of 164 responses of either strongly agree or agree.

Per the formula, the scale content validity index is 78%, thus meeting the standard content validity index.

Overall Content Validity Index

RESULTS

- The VA-PAS tool in its entirety meets the standard for content validity.
- Pain, Nausea/Vomiting & Level of Activity did not meet the standard as each element scored below the 78% mark for content validity.
- Pain, Nausea/Vomiting & Level of Activity elements need to be revised.
- One SME provided feedback. Addressing the idea of subjectivity. *"Patients can be discharged with moderate pain. Patients may actually rate their pain in the severe area and this maybe a chronic condition for them. Pain is subjective and every patient has different coping skills. We may not see any pain behaviors and rate the pain lower."*

CHALLENGES

Limited data and research on the efficacy of previously used discharge scoring tools.

Unable to obtain data from the National Anesthesia Office on their process of creating the VA-PAS and if the content validity has already been performed.

IMPLICATIONS FOR PRACTICE

Elements of *Pain, Nausea/Vomiting, and Level of Activity* need to be revised to increase their relevance, clarity and comprehensiveness to be used effectively in the VA PAS.

Engage a larger number of VA perianesthesia stakeholders in this review process for Phase I content validation.

CONCLUSION

Out of the 7 elements, 3 elements do not meet the content validity.

The tool in its entirety meets the minimum overall standard of content validity.

According to our SMEs and the content validity index, 78% of the time the VA-PAS could transfer a patient safely to their next phase of care.

The VA surpasses at delivering excellent care to our veterans. This is achieved by implementing evidence-based care as the standard. The minimum does not meet this benchmark. The elements of the tool that scored below, need to be revised and the validity process repeated to move forward.

QUESTIONS & DISCUSSION

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