

# TRENDS AND SOLUTIONS for Leaders in Credentialing

November 11-14, 2013 Omni Amelia Island Amelia Island, FL



## The rewards and challenges of item development and review in a virtual environment.

Debbie Hecker  
Sarah Hughes  
Dr. Timothy Muckle



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### Welcome and Introductions:

- Debbie Hecker RN, MBA, WCC, DWC - Executive Director, National Alliance of Wound Care and Ostomy (NAWCO)
- Sarah Hughes – Med Educational Leadership, Test Development Professional with Alpine Testing Solutions, Inc.
- Dr. Timothy Muckle – Director of Testing Services, National Board of Certification and Recertification for Nurse Anesthetists (NBCRNA)



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# Virtual Item Development

- The itembank is an credentialing organizations **chief intellectual asset.**



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# Virtual Item Development

- Electronic item banking
  - User-friendly remote authoring
  - Administrative capabilities
  - Meta-Data
  - QTI
  - Security





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## User-UNfriendly remote authoring

Item Stem	Option A	Option B	Option C	Option D	Key
Identify the proper dose response curve for the agonist if a competitive antagonist is given.	A	B	C	D	B
Identify the proper dose response curve for the agonist if a noncompetitive antagonist is given.	A	B	C	D	D
When performing epidural steroid injections for chronic pain, please identify the structure marked as A:	dorsal root ganglion.	ligamentum flavum.	posterior longitudinal ligament.	epidural fat.	B
When functional residual capacity decreases, which of the following lung volumes will change, as indicated by the letter in the diagram?	A	B	C	D	B
In the accompanying figure, catheter tip entry into the pulmonary artery occurs at point:	A.	B.	C.	D.	C
The ligamentum flavum is represented in the following figure as what letter?	A	B	C	D	B
In the ventricular pressure-volume loop shown below, the interval between point C and point D corresponds to:	isovolumetric contraction.	atrial systole.	rapid ventricular filling.	diastasis.	A

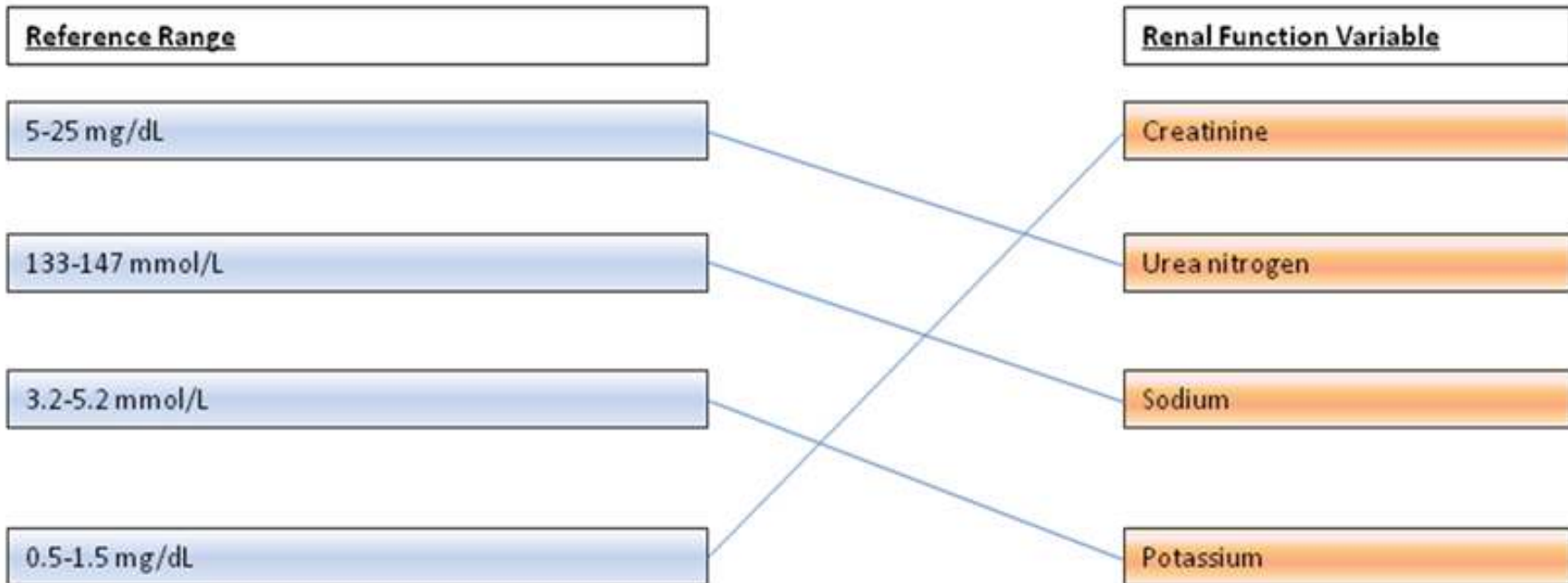


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## User-UNfriendly remote authoring

Item Stem: Match the common renal function tests in the right-hand column with the acceptable reference ranges on the left.



Classification Code: 0034

Comments:

Reference: Nagelhout and Plaus, Nurse Anesthesia, 4<sup>th</sup> ed, 2009, Saunders, Elsevier, pg 706-710



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### **User-friendly remote authoring**

- Item templates for different formats
- Confinement of user to functions they need
- Direct interface with item database
- Compatibility with various OS, browsers
- Media libraries



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### **Administrative Functions**

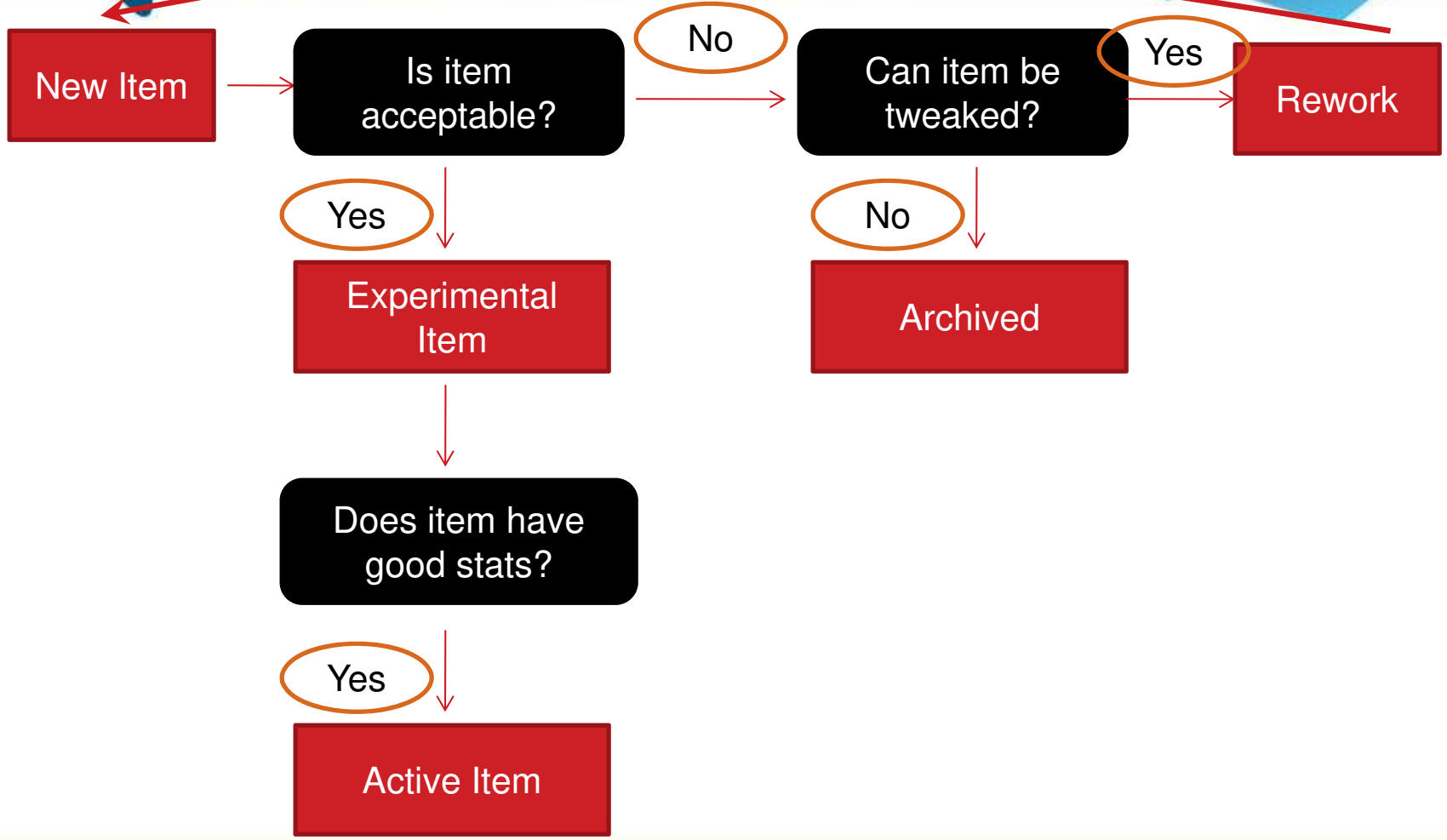
- User Permissions / Access
- Authoring projects / Communication
- Monitor item writing progress
- Queries, Filtering, Spellcheck
- Revision tracking
- Customizable Item Lifecycle Workflows





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### Meta-Data

- Content classification
- Statistics
- Status
- Author
- References
- Enemies
- Min/Max selections



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### QTI

- Standardized programming language for tests
- Strategic advantage: Opens up options for delivery
- While QTI is an industry standard, not all QTIs are equal!



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### Security

- Enterprise class firewalls / intrusion protection systems
- IP verification
- Strong passwords and a robust password policy
- All connections secured and encrypted using industry standard 128 bit SSL
- Data backups
- Inactive users are automatically logged out of the system after time limit





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### Future?

- Automated Test Assembly
- Innovative uses of response data
- Text / similarity analysis
- Biometric authentication



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# Virtual Item Development Experiences: NAWCO Perspective

History of item writing for WCC program

- Virtual reviews from beginning in 2006
  - Old format: word docs
    - Security issues
    - Who is minding the item bank?
  - Step up to present online item writing/banking tool



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# Virtual Item Development Experiences: NAWCO Perspective

## Rewards

- Cost savings over in person meetings
  - No travel/meeting facility expenses
  - Virtual meeting environment



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# Virtual Item Development Experiences: NAWCO Perspective

## Rewards

- Flexibility in scheduling
  - Evening/weekend sessions
  - Easy to reschedule
  - Split groups to give options





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# Virtual Item Development Experiences: NAWCO Perspective

## Rewards

- No time away from day jobs
- Greater number of shorter sessions possible
- No brain drain
  - Better participation
  - Increased collaboration-instant results



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# Virtual Item Development Experiences: NAWCO Perspective

## Challenges

- Committee Recruitment
  - Gaining commitment
  - Setting attendance expectations
  - Follow through on offline assignments
    - Item revisions
    - Reference checking



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# Virtual Item Development Experiences: NAWCO Perspective

## Challenges

- Group dynamics
  - Training in virtual environment
  - Telephone etiquette
  - Forming cohesive group
  - Importance of facilitator



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# Virtual Item Development Experiences: NAWCO Perspective

## Challenges

- Technology issues
  - Computer platform hiccups
  - System limitations
  - Operator error





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# Virtual Item Development Experiences: NAWCO Perspective

## Pearls

- Not easy, but worth it!
- Rotate your stock
- Rewards for participation



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# Virtual Item Development Experiences

- National Board of Certification and Recertification for Nurse Anesthetists (NBCRNA)



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# Virtual Item Development in Action

- Identifying resources
- Preparation and training
- Scheduling and support



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### Item Banking Tool Demo

- <https://metacat.net/alpine/app/>



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### Questions

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