



RECONSTRUCTING RHYTHM INTERPRETATION EDUCATION TO INCREASE EFFICIENCY AND COMPETENCY



DukeHealth

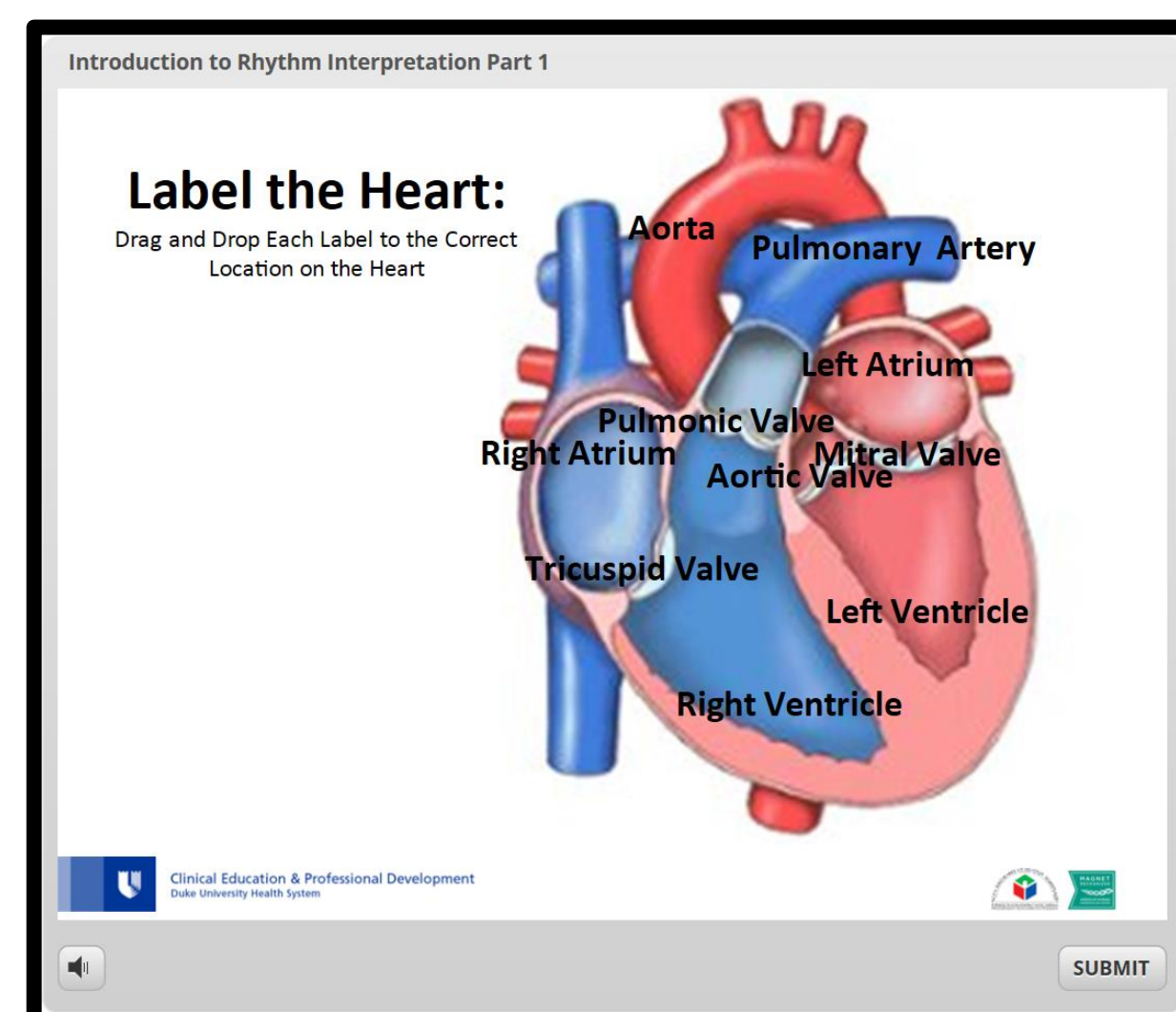
Stacey O'Brien, MSN, RN-BC; Duke University Health System, Mary Anne Boshier, MSN, RN-BC; Duke University Health System, John Howe, BSN, RN; Duke University Health System, Anne Martin, BSN, RN; Duke Raleigh Hospital, Tracey Stell, BSN, RN; Duke Regional Hospital and Melissa Topper, MSN, RN, CCRN; Duke University Health System

Background:

Rhythm interpretation is a common expectation of nurses who care for patients requiring cardiac monitoring. Basic rhythm interpretation testing is often required to complete orientation. While most nurses are introduced to basic rhythm identification during undergraduate study, adequate education to interpret rhythms is not often provided. Most health care organizations offer some type of rhythm interpretation training.

Objectives:

1. Assess current content and materials utilized in an established two-day rhythm interpretation course.
2. Analyze rhythm interpretation testing results to identify gaps in current class content.
3. Identify alternative learning modalities to decrease class time while maintaining or increasing the current testing pass rate for learners.



Methods:

A team of Clinical Nurse Educators (CNE) identified content suitable for interactive web-based learning to be done prior to a face-to-face class resulting in the development of a two-part module. The face-to-face content was reordered to reinforce learning and slides comparing frequently confused rhythms were added. In addition, pediatric specific differences were included in the presentation of each rhythm and a pediatric workbook emphasizing pediatric rhythm considerations was developed. The two-part module and one day face-to-face class was implemented as a pilot.

Start in the Junctional Tissue

Junctional Rhythms Summary

Rhythm	Regularity	Rate	P waves	P:QRS	PRI	QRS
Junctional Rhythm	Regular	40-60	Inverted/hidden in QRS	If present, 1:1	<0.12 if before QRS; not measured if absent or after QRS	<0.12
Accelerated Junctional	Regular	60-100	Inverted/hidden in QRS	If present, 1:1	<0.12 if before QRS; not measured if absent or after QRS	<0.12
Junctional Tachycardia	Regular	>100	Inverted/hidden in QRS	If present, 1:1	<0.12 if before QRS; not measured if absent or after QRS	<0.12

• Peds: JET (Junctional Ectopic Tachycardia) is the rarest form of SVT in infants. Typically seen in pts following cardiac bypass for congenital heart defect repairs, resulting from electrolyte imbalances.

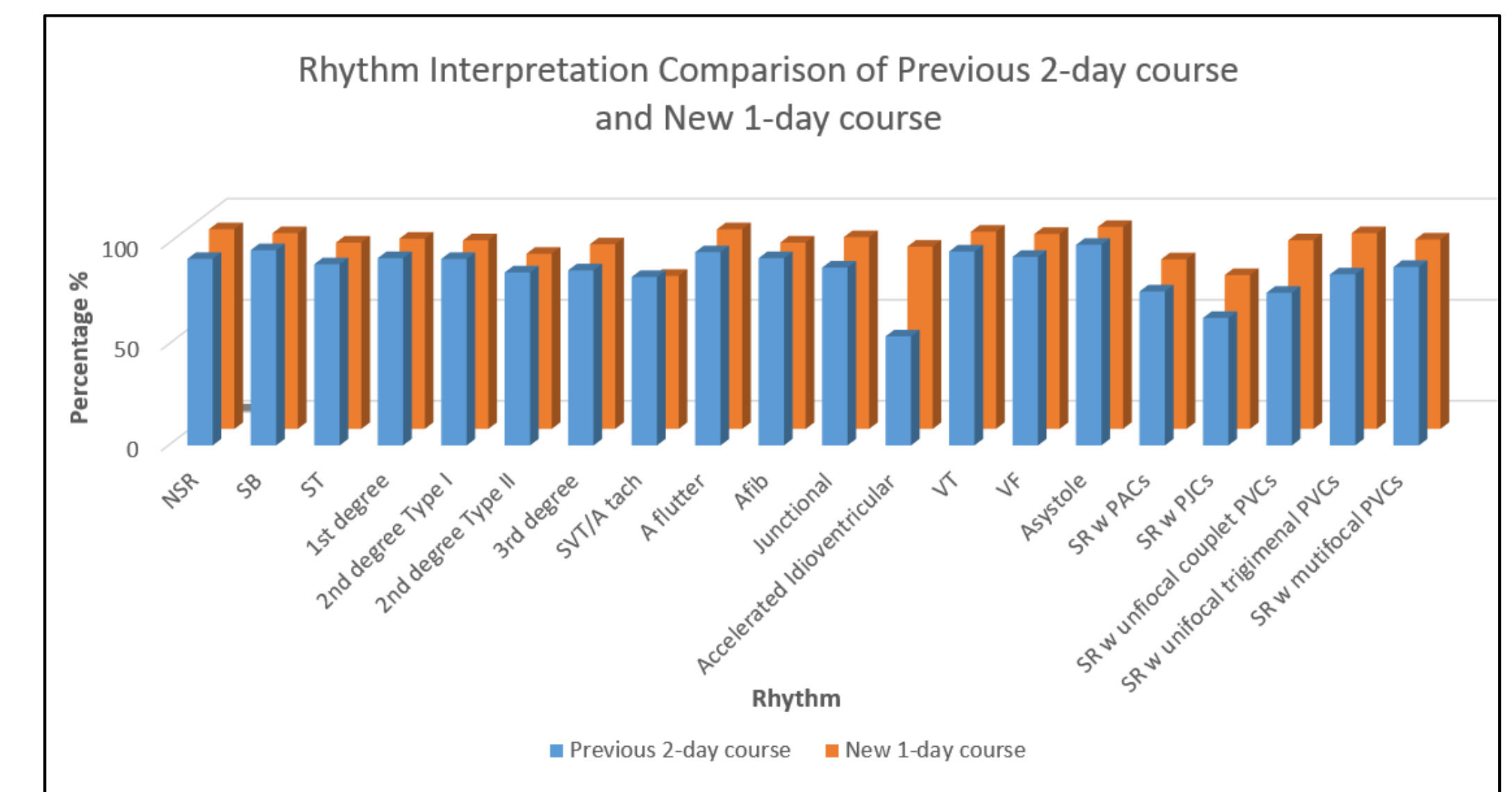
Cardiac Output = Stroke Volume x Heart Rate

Idioventricular v. Junctional

Rhythm	Regularity	Rate	P waves	P:R	PRI	QRS
Idioventricular Rhythm	Often regular	20-40	None	UTA	None	>0.12
Junctional Rhythm	Regular	40-60	Inverted/hidden in QRS	If present, 1:1	<0.12 if before QRS; not measured if absent or after QRS	<0.12

Results/Outcomes/Improvements:

Class	% Pass	% Fail
Previous 2-day	73%	27%
New 1-day (n160)	↑ 81%	↓ 18%



Significance/Implications/Relevance:

- 11% ↓ remediation time for participants & CNEs
- Approximately 25% ↓ in class time
- Two-fold return on investment for Nurse Managers:
 - ↑ bedside clinical time during orientation
 - 25% ↓ in indirect hour per participant for this class

We would like to acknowledge Heather Mabry, Nursing Informatics System Specialist, for her help in developing the modules.