

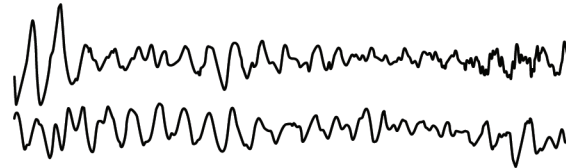
## DEFINITIONS OF ARRHYTHMIAS DETECTED BY ACUTY®



### Mortara Instrument's VERITAS™

#### V-Fib (Ventricular Fibrillation)

Chaotic quivering of the ventricles accompanied by rapid irregular waves but no formed QRS complexes.



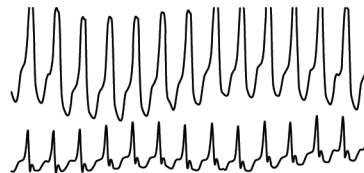
#### Asystole

Absence of any detected beat for 4 or more seconds.



#### VTach (Ventricular Tachycardia)

Characterized by a run of premature ventricular beats that is greater than or equal to the PVC run alarm limit setting and a rate greater than or equal to the patient's VTach alarm limit.



#### PVC Run (Ventricular Run)

Characterized by a run of three to six consecutive, premature ventricular beats that exceeds the patient's VTach alarm limit.



#### Couplet

Characterized by two consecutive ventricular beats that are preceded and followed by a normal beat.



#### PVC/min

Premature Ventricular Contractions (PVCs, either Unifocal or Multifocal) that are greater or equal to the patient's PVC/min alarm limit setting.



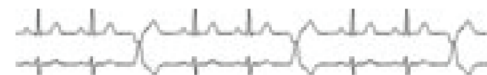
#### Bigeminy

Characterized by three or more successive cycles consisting of a normal beat followed by a premature ventricular beat. Bigeminy is independent of the average heart rate.



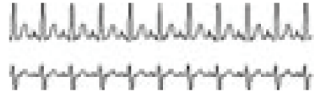
#### Trigeminy

Characterized by three or more successive cycles consisting of two normal beats followed by a premature ventricular beat. Trigeminy is independent of the average heart rate.



### Tachycardia (Sinus Tachycardia)

Characterized by a HR greater than or equal to the patient's Tachycardia alarm limit value. (If the Tachycardia limit is decreased past the HR high limit, then the HR high limit will decrease to a value equal to the Tachycardia limit.)



### Bradycardia (Sinus Bradycardia)

Characterized by a HR less than or equal to the patient's Bradycardia alarm limit value. (If the Bradycardia limit is increased past the HR low limit, then the HR low limit will decrease to a value equal to the Bradycardia limit.)



### Pause

The R-to-R interval which is greater than or equal to two times the average R-to-R.



### Missed Beat

The R-to-R interval between two beats that is approximately 1.5 times and up to 2 times the average R-R and preceded by a normal beat.



### R on T

Characterized by an occurrence of a premature beat on or near a T wave of the preceding beat.



### ECG Lead Selection

- ECG1 is required for arrhythmia analysis. If ECG1 is not displayed, arrhythmia analysis will not be performed. Be sure to select a lead for ECG1 that has significant amplitude to optimize arrhythmia analysis. For example, if the waveform for ECG1 does not have an average amplitude  $>200\mu\text{V}$  peak-to-peak, Acuity may not detect certain arrhythmias, including VFib. Acuity Also uses ECG2 and ECG3 for arrhythmia analysis if available, although the order of importance is always ECG1, ECG2 and ECG3. Be sure to select leads you prefer for arrhythmia analysis when selecting ECG1, ECG2 and ECG3.
- If the QRS complex is not twice the amplitude (height) of the P and T waves, a different monitoring lead should be selected for monitoring in the ECG1 channel. Tall P and T waves may be incorrectly classified as a QRS complex, a PVC and/or may generate a high heart rate or other alarm condition.
- If biphasic QRS complexes appear, a different monitoring lead should be selected.
- Lead preparation and placement should be carefully verified. The optimal lead should be selected for the patient's acuity/disease process.
- Stress loops should be utilized.
- The ECG cable, and electrodes should be checked for damage on a regular basis and replaced as necessary.
- Review the quick reference card: Preparing the Patient for Successful Monitoring.

### Relearn

- The Relearn function enables the clinician to tell Acuity to relearn a patient's rhythm based on the patient's dominant beat morphology.
- Acuity automatically relearns the patient's normal reference beats whenever the following events occur: a lead selection change, an unintentional lead failure due to one or more leads disconnected, or system restart. Additionally, the operator may manually initiate a Relearn.
- During the learning period, Acuity indicates only the VFib and Asystole arrhythmia conditions. Other vital signs are unaffected.
- Inappropriate use of Relearn can lead to mislabeling of beats and possibly a failure to alarm. Carefully examine the patient's current beats to make sure you want Acuity to Relearn the patient's normal reference beat template based on the patient's current beats. Periods of noise, artifact, pacer poison and other alarm conditions may significantly affect the Relearn function. Choose the best monitoring lead and allow a sufficient time period for stabilization (normally 30 to 40 seconds).
- An appropriate time to use Relearn is when a patient is admitted with a ventricular rhythm that the Acuity system learns as the patient's "normal" rhythm. When the patient's rhythm converts to the rhythm that is truly normal for that patient, Relearn should be initiated. In this way, the Acuity system will alarm appropriately if the patient converts back to the previous ventricular rhythm.
- If the monitor is disconnected from Acuity for an extended period of time, Acuity can initiate a learning phase when the monitor is reconnected to Acuity.

# WelchAllyn®

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