



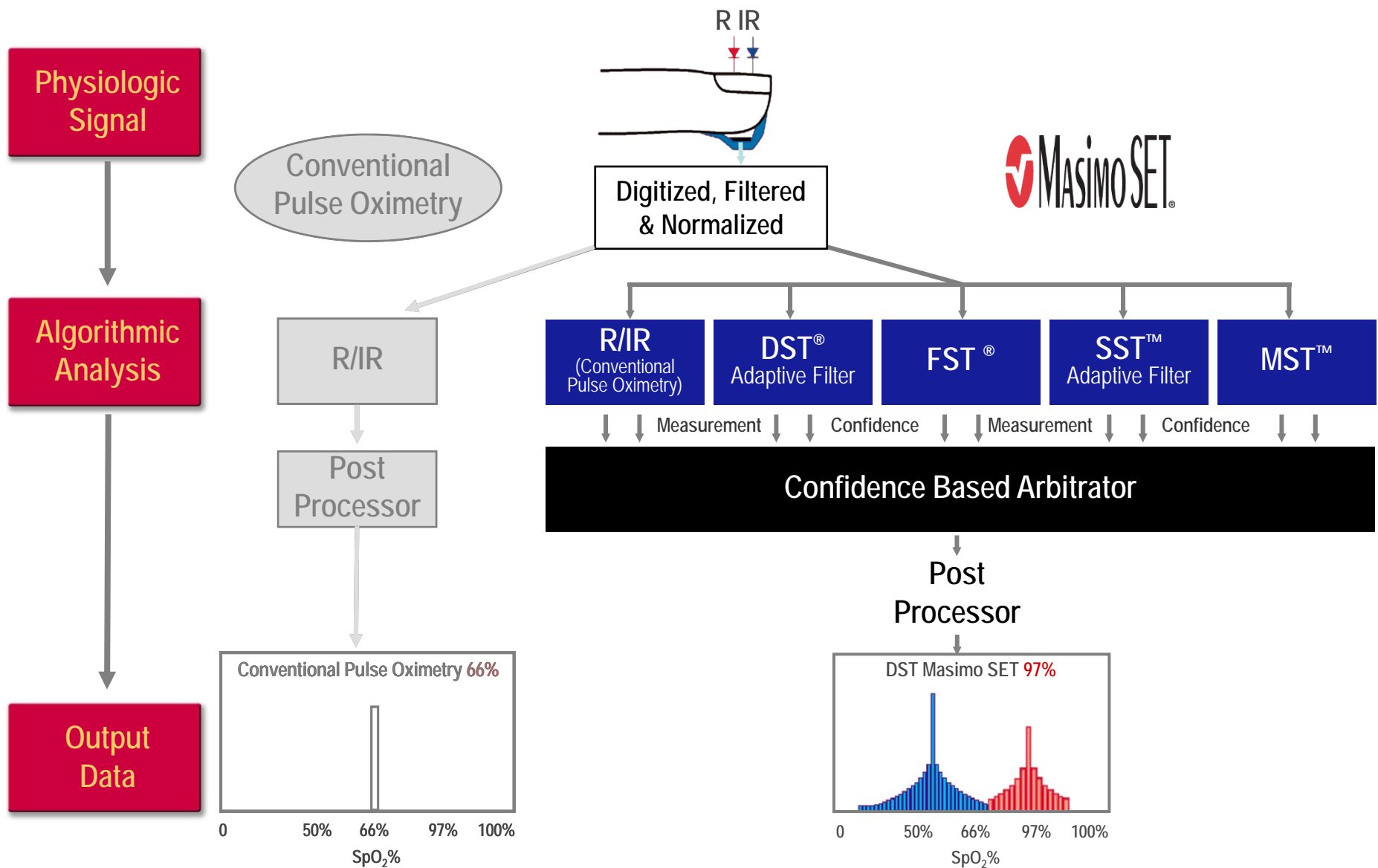
# Tools and Technology to Start Your CCHD Screening Program

# Objectives

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- > What is Motion-Tolerant?
- > Pulse oximetry system
- > Monitors: Bedside, Handheld
- > Confidence Indicators: Signal IQ, Perfusion Index
- > Sensors: Adhesive, Reusable

# What is Motion-Tolerant?



# Pulse Oximetry System

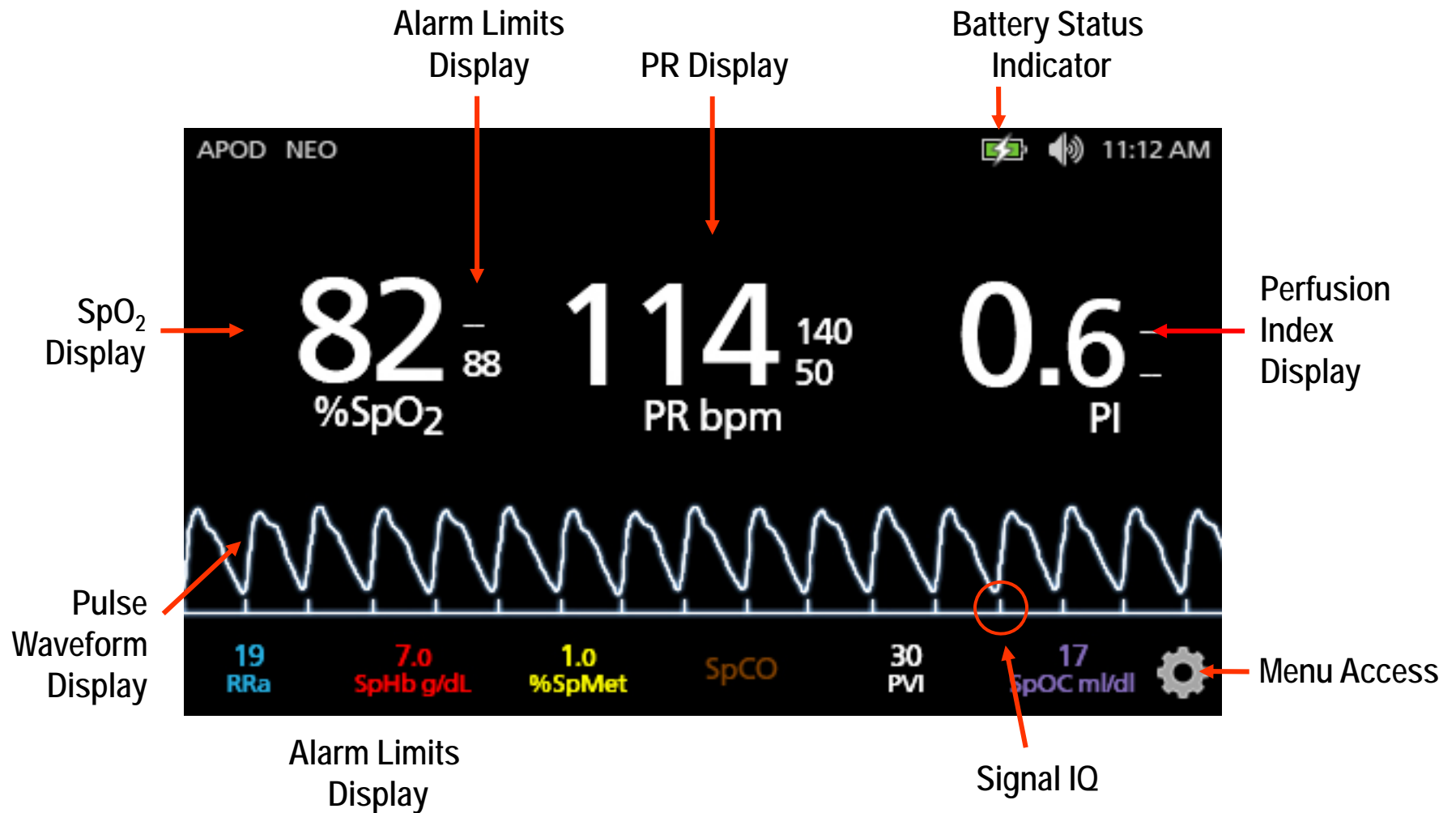
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# 2012 Radical-7



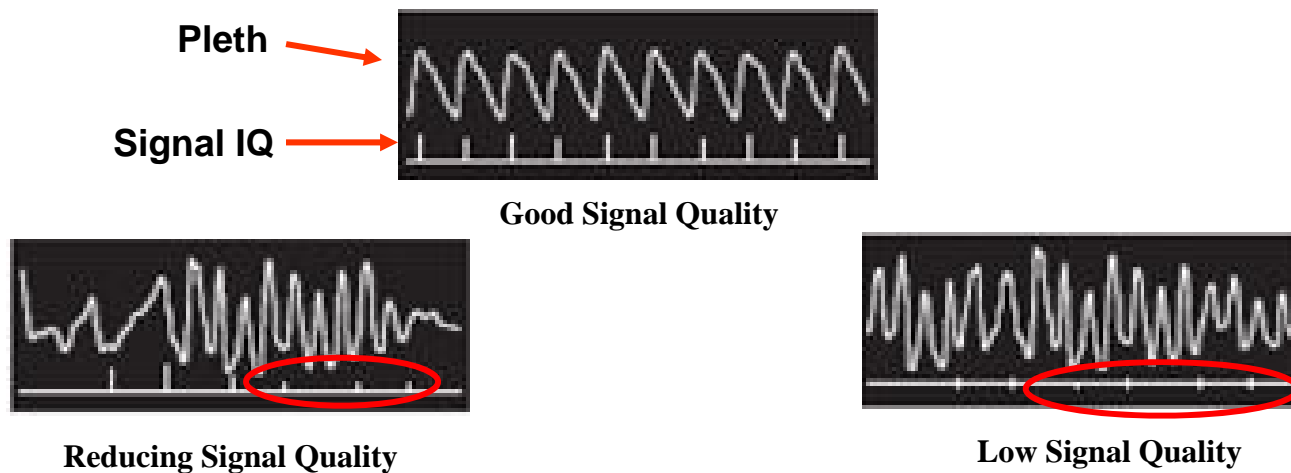
# 2012 Radical-7 LCD Display



# Confidence Indicator: Signal IQ

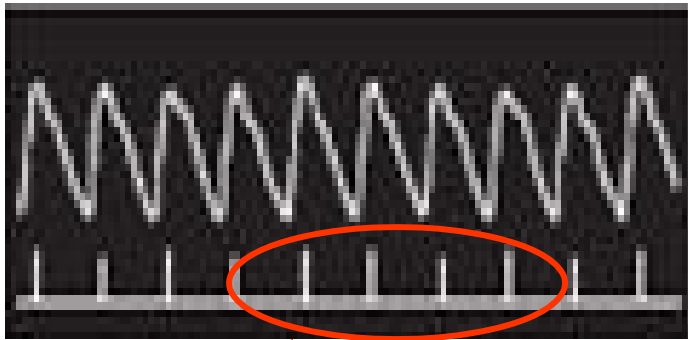
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- Displayed as horizontal bar with vertical spikes
- Vertical spikes coincide with the pulsation at the measuring site
- Height of spike indicates confidence



# Confidence Indicator: Signal IQ

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- > Plethysmographic waveform is clean and strong
- > Confidence indicated by high level in Signal IQ-Note height of 'spike'.



- > Plethysmographic waveform is corrupted.
- > Height of 'spikes' decreasing- confidence in resulting measurement diminishing.



# Confidence Indicator: Perfusion Index (PI)

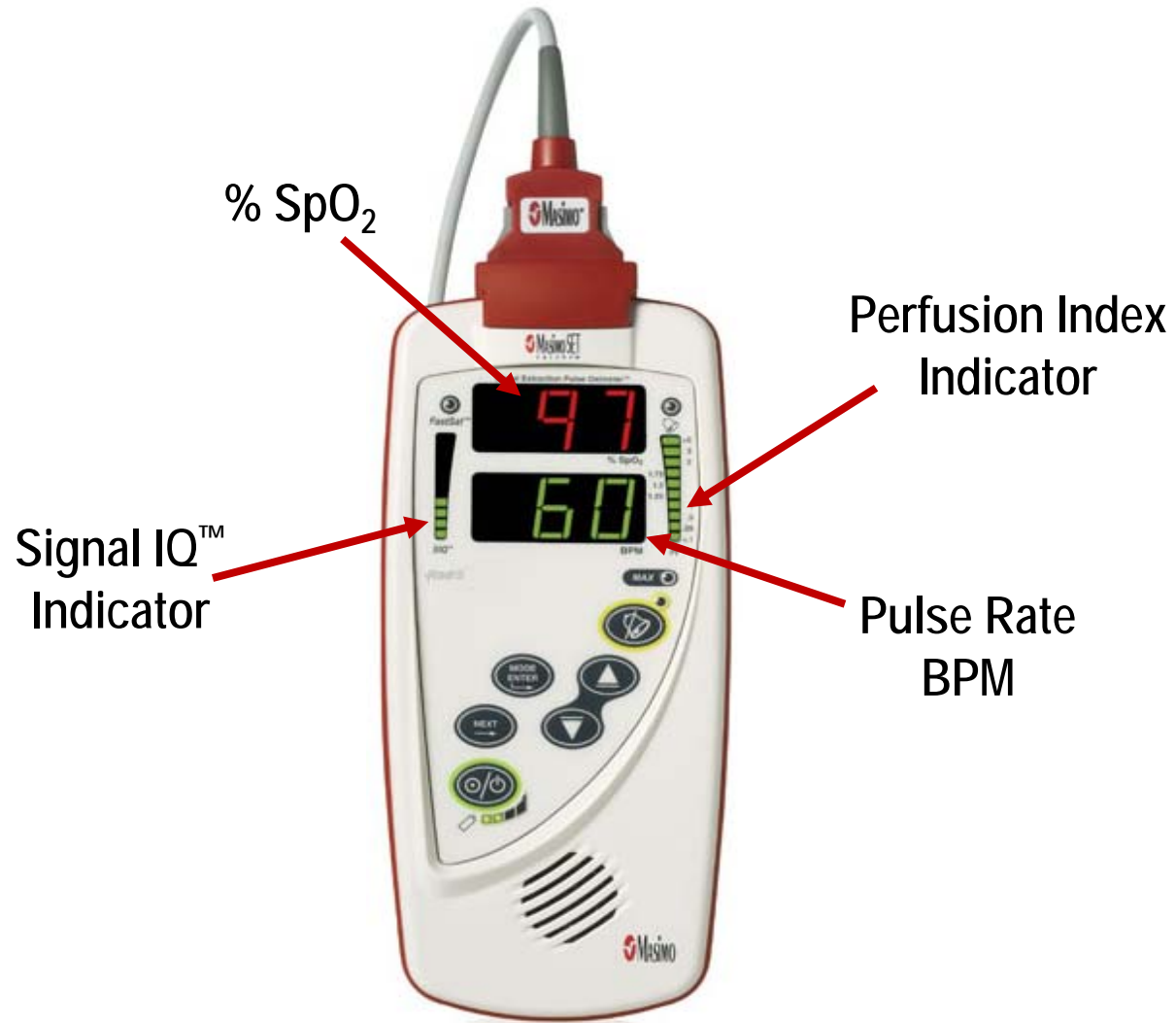
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- > What is PI?
  - Assessment of the pulse strength at the monitoring site
  - Numerical value between 0.02% and 20.0%
  - Lower values indicate lower perfusion
  - Measurement is influenced primarily by the amount of blood at the monitoring site
  
- > If Perfusion Index (PI) < 0.70 in at least one limb, consider referring infant for further medical evaluation.
  
- > Adding Perfusion Index to neonatal examination and saturation screening may increase sensitivity to some types of CCHD though may result in an increase in false positives<sup>1</sup>

1. de-Wahl Granelli A, Ostman-Smith I. Noninvasive peripheral perfusion index as a possible tool for screening for critical left heart obstruction. Acta Paediatr. 2007 Oct; 96(10):1455-9.

# Rad-5 Display

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# Sensors for CCHD Screening

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Adhesive, Disposable,  
Single-Use



Reusable



# Adhesive Sensors: Neonates < 3 kg = Neo sensor



## Foot Application:

- Apply the sensor to either foot using the thinnest part of the foot – this is the lateral aspect
- The detector can be on either the sole of the foot or the top of the foot
- Ensure the emitter and detector are aligned.
- Wrap the tape around the foot.

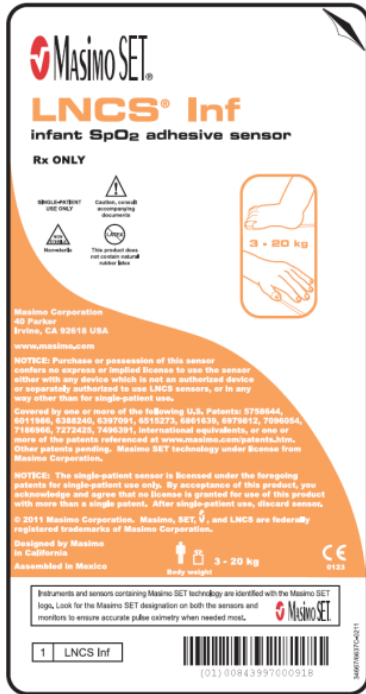


## Hand Application:

- Apply the sensor to the right hand using the thinnest part of the palm – this is the lateral aspect
- The detector should be on the fleshy part of the hand, this may be the back of the hand – dorsal aspect
- Ensure the emitter and detector are aligned.
- Wrap the tape around the hand.



# LNCS Inf Infant Sensor



Great Toe Application

Thumb Application



Great Toe or Thumb Application  
Patient Weighing 3 - 10 kg



# Multisite YI with Foam Wrap: Neonates > 1 kg

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Foot Application

Hand Application



# Applications of YI Wraps



Clean Shield®  
Multisite Wrap



Standard  
Wrap



Foam  
Wrap

	Body Weight	Clean Shield® Multisite Wrap	Standard Wrap	Foam Wrap
	1 kg ~ 3 kg	■	■	■
	3 kg ~ 10 kg	■	■	■
	10 kg ~ 30 kg			■
	10 kg ~ 50 kg			■
	> 30 kg	■	■	■



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**Thank you**