Amplitude/Burst Dynamics of the Non-Nutritive Suck in Preterm Infants

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METHODS

Weekly testing in the NICU (2 sites)
Follow-ups @ 3, 6, 12, 24 months

NEOSSUCK RT

Fourier Transform to determine frequency parameters for the suck

• Fourier Transform (power distribution

• First derivative of the suck pressure signal is computed and peak values are obtained by indexing each

• Zero crossing (that meets the minimum threshold-slope) of the derivative suck signal into the original

ACTIFIER

• Suck entrainment for those babies with oromotor dysfunction

Technique proves to be very rapid application of the NNS technology to characterize the amplitude/burst dynamics of the NNS.

SUMMARY

• NNS amplitude is significantly different among the three groups

• Neurological issues associated with orofunctional issues may impact later emergent sensorimotor skills.

• Oromotor Dysfunction (N=11)

• Preemies with Oromotor Dysfunction exhibit NNS amplitudes that are greater than normal. This may reflect a lack of inhibitory control by the brainstem control centers

• Neurological issues associated with orofunctional issues may impact later emergent sensorimotor skills.