MEDICAL DEVICES

DIGINEWB

Technologie maturée par

OUEST VALORISATION
Ressources d'innovation

Measure of the maturational age of preterm babies monitored non-invasively and in real-time in the setting of NICU

Electrophysiological signals

Sound & Video

#MATURATIONAL AGE	#NICU	#PRETERM BABIES

Several markers - monitored in NICU - have been identified to determine the maturation level of preterm babies:

- **Cry analysis** : Automated detection and spontaneous cry extraction of long duration recordings for all types of cries, adapted to NICU with other noise like alarms or adults, Detection accuracy of 94.1% (412h of recordings on 23 newborns)
- **Heart rate variability** : 30 minutes of continuous heart rate or respiration rate monitoring to produce an estimation of the FMA - Functional Maturational Age, Real time and as a bed-side tool in NICU settings
- **Motion** : automatically monitoring of motions on long periods to provide relevant information about premature newborns motion activity
- **Sleep** : Semi-Automated sleep maturation estimation

Maturation chart

AGE
In weeks

SLEEP

38 SA
34 SA
30 SA
26 SA

HRV
Heart Rate Variability

CRIES

CRE
Cardio-respiratory Events

MOVEMENTS

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