# Health Intelligence for the First 1000 Days



Getting the right start early in life impacts a child's lifelong health trajectory and immune resiliency. The first 1000 days of life, from conception through age two, is the most critical time for growth, brain development and creation of a strong immune system. It is a time of tremendous potential but also enormous vulnerability. Those first 1000 days present a unique window of opportunity for personalizing nutrition, care, and interventions.

This window also is one of increased risk for pregnant women and their babies, particularly those socially or economically disadvantaged. The U.S. has abysmal statistics for maternal and infant mortality and morbidities driven by disparities in care. By leveraging large, diverse datasets and machine learning, Astarte Medical's digital tools and diagnostics help drive better outcomes and the provision of equitable care for both mom and baby during the first 1000 days.

### Leveraging Comprehensive Longitudinal Health Data To Create:









As survival rates for preterm infants improve - viability at 22 weeks gestation attention is now focused on improving the quality of survival. For clinical teams, these tiny babies create complex challenges related to feeding and growth -50% suffer growth failure and 40% experience neurodevelopmental delays or disabilities. The next frontier in neonatal care is optimization of nutrition and gut health given the important role in growth and brain development.





Real-time, EMR-integrated clinical decision support tool to standardize feeding practices based on a hospital's own protocol, optimize nutrition management, assess the provision of equitable care, and streamline workflow in the neonatral ICU.







Digital platform leveraging machine learning to predict growth failure and identify nutritional phenotypes (NutriTypes). These digital diagnostics provide early insights related to growth using a proprietary, multi-dimensional dataset, to drive personalized care and nutrition planning, enabling clinicians to proactively manage care.

Paired together, these two platforms will address some of the most challenging issues for preterm infants. NutriTypes identified using NICUbiome® will help inform personalized nutrition strategies delivered through NICUtrition® thereby improving growth and development.

# Identifying Disparities in Care

Hospitals are under increasing pressure from payers via financial incentives to adopt Health Equity solutions. Data-driven measures of reducing health disparities can result in higher reimbursement for hospitals. Current hospital Health Equity programs lack the tools to efficiently capture, measure, and track disparities. They rely on time-consuming retrospective studies which can confirm the presence of health disparities but are unable to address inherent bias at the point of care.

NICUtrition® Equitable Care Intelligence (ECI) platform monitors disparities in care and associated outcomes of preterm infants in the NICU. ECI enables unit-wide and patient-level tracking of key care performance metrics by race and ethnicity throughout the patient journey from birth to discharge.

#### Key benefits include:

- Track care metrics real-time to assess equitability
- Identify patients that require additional support
- Inform and measure QI & Health Equity programs

	All Infants N = 115	Black N = 33	Hispanic N = 22	White N = 45	0ther N = 15	
Mortality	3%	4%	3%	2%	0%	0
NEC 1	3%	4%	4%	2%	2%	0
Sepsis		14%	9%		8%	0
BPD (or CLD)	14%	12%		16%	10%	
IVH Grade 3-4		31%		21%	17%	
CLABSI (4)	0.9%			0.8%	0.4%	
PERFORMANCE 3%, Mack Interpreted in the performance 10% in the perfo	PROPORTION 100%	TREND  24% 24% 25 3% 26 1%				
no.	Mack Hispanic White Other	22021	3/2021 4/2021	5/2021 6/2021	7/2021 8/20	19 92

- Necrotizing Enterocolitis (NEC)
   Bronchopulmonary Dysplasia (BPD)
- ③ Intraventricular Hemorrhage (IVH) ④ Central Line-Associated Bloodstream Infection (CLABSI)

- Launched NICUtrition,® signed NICUs
- >\$5M pipeline; \$1M ARR YE 2021
- Engaged multiple strategics for partnership
- Created world's largest preterm infant dataset
- Developed digital Dx for growth failure
- Foundational patent issued; expanded IP portfolio

### **Dedicated Team**



Tracy Warren Co-founder and CEO



Tammi Jantzen Co-founder and CFO



David Genetti



William Hay, MD



Holly Clarke

## Looking to the Future!

Children today experience alarming rates of asthma, diabetes, obesity, food allergies and metabolic disorders.

> Astarte Medical is developing digital tools to identify **NutriTypes** to better tailor diet and target microbial-based interventions. Of interest are diet transitions (e.g. weaning from breastfeeding) and the impact on growth and immunity, gut resiliency and recovery post antibiotic exposure, and the impact of nutrition and diet on brain development.

#### Interested in learning more? Please contact

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