**CASE STUDY**

Child Health Imprints: Revitalizing Neonatal Care With IoT Streaming

**Enhancing Healthcare and Eliminating Human Error in NICUs**

With the internet of things (IoT) poised to permeate every aspect of our lives, Child Health Imprints created a streaming-enabled platform aimed at reducing mortality in preterm infants. The NICU system aggregates health and video data for doctors working to save babies’ lives.

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<th>CHALLENGES</th>
<th>SOLUTIONS</th>
<th>OUTCOMES</th>
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<tr>
<td>Needed low-latency, high-quality video feeds to support life-critical decision-making.</td>
<td>Designed a live video-enabled device suitable for remote patient care.</td>
<td>37% babies are born preterm.</td>
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<td>Sought to synchronize video, clinical, and vital data for real-time monitoring.</td>
<td>Correlated all data for early diagnoses and quicker clinical intervention.</td>
<td>150 Million babies are born each year.</td>
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<td>Required battle-tested technology and engineering expertise to meet the requirements of regulatory bodies in the medical sector.</td>
<td>Partnered with Wowza’s engineering team to develop, test, and document the implementation of streaming in their product.</td>
<td>1 in 10 babies are born preterm.</td>
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**Identifying a Critical Need for IoT Biomedical Devices**

Ravneet Kaur gave birth to twins more than three months ahead of her due date. After her babies were transferred to the neonatal intensive care unit (NICU), Ravneet and her husband, Harpreet Singh, were struck by how lonely and ineffective these facilities can be.

Truth be told, plenty of new families spend time in the NICU. Approximately 15 million babies are born preterm each year, and of those, nearly 2.5 million die before reaching 28 days of age. Ravneet and Harpreet confronted this reality shortly after welcoming their twins into the world, when one of the newborns passed away due to an unavoidable infection.
According to the World Health Organization, reducing mortality starts with quality care. A recent fact sheet states, “Children who die within the first 28 days of birth suffer from conditions and diseases associated with lack of quality care at birth or skilled care and treatment immediately after birth and in the first days of life.”

The couple founded a health tech startup called Child Health Imprints to improve clinical outcomes. They got to work developing an integrated Neonatal Intensive Care Unit (iNICU) with one goal in mind: reducing neonatal mortality.

The cloud-hosted appliance assimilates real-time data from the disparate biomedical devices used to monitor preterm infants — including ventilators, monitors, and blood gas analyzers. In addition to reducing time-to-treatment and improving quality of care, the product enables remote monitoring of neonates in rural regions via video streaming.

Harnessing the Human Element of Medicine Using Streaming Video

The amount of data collected in intensive care is exhausting. Respiration rate, heart rate, lab data, and PACS all contribute to the information tracked for each child. But without video streaming, Child Health Imprints’ iNICU solution would lack a crucial data point for doctors: observation.

“It gives so much more confidence to the doctor if he can see the patient, can see what the intervention is. If I increase the ventilation by this much, how is the patient behaving? If I do a procedure, how is a patient’s facial expression? That’s where the visual is so much more important,” explains Child Health Imprints Cofounder Harpreet.

To learn more about how others are using Wowza streaming technology, visit wowza.com or contact sales@wowza.com.

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