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Brasilia ICU Project

**Project Context**

This project focuses on analyzing and optimizing ICU Length of Stay (LOS) and patient access at Hospital da Criança de Brasília (HCB). The goal is to understand key factors affecting LOS and develop strategies to improve ICU access and efficiency for pediatric care.

**Brief Background and Description**

HCB was established through the efforts of the Brazilian Association of Assistance to the Families of Children with Cancer and Hemopathies (abbr. as ABRACE in Portuguese). Originally focused on providing support to families dealing with childhood cancer, ABRACE recognized a broader need for a specialized center offering integrated and multidisciplinary treatment for children and adolescents.

Constructed in two phases, the hospital’s Outpatient Unit was funded and built by ABRACE. It provides consultations, outpatient surgeries, chemotherapy, dialysis, and other essential pediatric services in a child-friendly environment. Meanwhile, the Hospitalization Unit, developed by the Government of the Federal District in partnership with the World Family Organization, includes inpatient care, surgical facilities, an Intensive Care Unit (ICU), and a dedicated Teaching and Research Center.

Managed by the Institute of Childhood Cancer and Specialized Pediatrics (ICIPE), HCB operates exclusively through Brazil’s public healthcare system (SUS). It now performs over 400,000 visits each year, covering a wide range of pediatric specialties and support services. Through collaboration with government bodies, civil society, and philanthropic campaigns, HCB serves as a vital resource for comprehensive pediatric care in Brasília and surrounding regions.

### **Primary Objectives**

#### **1. Understanding ICU Length of Stay**

* **Analyze Contributing Factors**: Identify variables influencing ICU Length of Stay (LOS) for children at HCB
* **Literature Review**: Examine similar cases of LOS analysis in ICUs across different countries and demographics to benchmark best practices
* **Healthcare Research**: Investigate Brazil’s healthcare system, focusing on the health status of children, treatment plans, and unique challenges in pediatric ICUs
* **Data Mapping**:
  + Identify and map data sources for ICU
  + Assess the availability of relevant data for analysis
* **Standard Operating Procedures**: Develop a Standard Operating Procedure (SOP) for project continuity
* **Staff Insights**: Directly engage with ICU staff to identify on-ground factors influencing LOS

#### **2. Improving ICU Access**

* **Workflow Analysis**: Conduct a step-by-step analysis of ICU processes in Brazil to understand existing workflows
* **Identify Inefficiencies**: Pinpoint weaknesses and inefficiencies in the current ICU workflow
* **Resource Assessment**:
  + Map out all resources required for the ICU process
  + Develop process flows and calculate ICU capacity for improved patient access and flow