

ABSTRAK

Peningkatan akses terhadap perawatan medis di daerah kepulauan merupakan tantangan utama dalam meningkatkan kesejahteraan dan kesehatan neonatal. Penelitian ini bertujuan merancang sistem transport baby incubator dengan kontrol suhu fuzzy logic, fast charging battery, dan fitur electrocardiography. Sistem ini mendukung mobilitas dan ketersediaan alat di berbagai kondisi transportasi. Penggunaan baterai LiFePO4 50 Ah menjamin stabilitas dan masa pakai yang panjang. Sensor AM2315 dan sensor skin NTC digunakan untuk memantau suhu dan kelembaban udara di sekitar bayi serta suhu kulit bayi. Hasilnya diharapkan dapat meningkatkan akses dan kualitas perawatan medis neonatal di daerah terpencil dan kepulauan. Keberhasilan penelitian ini akan memberikan kontribusi dalam mengatasi tantangan kesehatan masyarakat di wilayah yang sulit dijangkau. Kolaborasi lintas sektor antara pemerintah, industri, dan masyarakat sipil diharapkan dapat ditingkatkan untuk meningkatkan kesehatan dan kesejahteraan neonatal.

Kata Kunci: Electrocardiography, Fast charging battery, incubator , suhu

ABSTRACT

Increased access to medical care in island regions poses a significant challenge in improving the welfare and health of neonates. The purpose of this research is to design a transport baby incubator system with fuzzy logic temperature control, fast charging battery capability, and electrocardiography feature. This system supports mobility and equipment availability in various transportation conditions. The use of LiFePO4 50 Ah batteries ensures stability and long lifespan. AM2315 and NTC skin sensors are used to monitor air temperature and humidity around the baby, as well as the baby's skin temperature. The results are expected to enhance access and quality of neonatal medical care in remote and island areas. The success of this research will contribute to addressing healthcare challenges in hard-to-reach regions. Collaboration across sectors including government, industry, and civil society is expected to be enhanced to improve neonatal health and welfare.

Keyword: Electrocardiography, Fast charging battery, incubator , temperature