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Efficiency and Data Quality of Health Workers After the Implementation of SiPenting

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ABSTRACT

Background: Digital innovations are increasingly being used to improve community-based nutrition surveillance. The SiPenting web-based application was developed to improve the efficiency and quality of anthropometric measurement data conducted by cadres and health workers in Bantul Regency, Indonesia.
Purpose: This study aims to assess the impact of SiPenting implementation on the efficiency of health workers (midwives and nutritionists) and the quality of reporting data on the nutritional status of toddlers
Methods: This study used a quasi-experimental design with a pre-post approach on 80 health workers from 27 health centers in Bantul Regency. Data is collected through system log analysis and structured questionnaires. Efficiency is measured through reporting time, response time to case follow-up, and workload perception. Data quality is assessed through indicators of completeness, accuracy, and timeliness. Paired *t-test* and correlation analysis were used to compare the results before and after the implementation of SiPenting.
Results: After the use of SiImportant, the average reporting time per child decreased from 7.6 ± 2.1 minutes to 4.2 ± 1.4 minutes ($p < 0.001$). Data completeness increased from 83.5% to 97.8%, accuracy from 85.1% to 96.3%, and reporting timeliness from 71.4% to 93.9%. A strong positive correlation was found between the perception of ease of use and increased efficiency ($r = 0.68$; $p < 0.001$). Most respondents (92.5%) stated that SiPenting reduces administrative burden and makes it easier to monitor in real-time.
Conclusion: The implementation of SiPenting significantly improved the efficiency and quality of data among health workers in Bantul. This innovation supports digital transformation in maternal and child health surveillance and has the potential to become a model that can be replicated in other regions.

Keywords: *Efficiency; Data Quality; Health Workers; Importance*