

Rancangan Sistem Informasi Terintegrasi untuk Peningkatan Respon Outbreak Response Immunization (ORI) Kejadian Luar Biasa (KLB) Campak-Rubela

Wahyudi, Tri

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Abstrak

Campak dan Rubela merupakan penyakit menular berpotensi wabah yang dapat menimbulkan komplikasi serius bahkan kematian, terutama pada anak-anak. Namun keduanya dapat dicegah melalui pemberian imunisasi. Trend cakupan imunisasi yang menurun, terutama paska pandemi COVID-19, telah menyebabkan peningkatan Kejadian Luar Biasa (KLB) salah satunya Campak-Rubela, sehingga diperlukan respon cepat melalui pemberian imunisasi tambahan berupa Outbreak Response Immunization (ORI). Pelaksanaan ORI di sebagian besar wilayah terdampak KLB masih belum optimal, terutama dari sisi ketepatan waktu respon. Kementerian Kesehatan telah menyediakan alat bantu untuk mendukung proses pra-pelaksanaan ORI, namun penginputan masih bersifat manual dan sistem ini belum terintegrasi dengan sistem informasi lain, serta belum memiliki mekanisme verifikasi dan monitoring oleh tingkat administrasi yang lebih tinggi. Oleh karena itu, dibutuhkan suatu inovasi yang dapat memperbaiki sistem yang ada saat ini. Penelitian ini bertujuan untuk mengembangkan prototipe sistem informasi terintegrasi guna meningkatkan ketepatan waktu pelaksanaan ORI di tingkat puskesmas dalam rangka penanggulangan KLB Campak-Rubela. Metode yang digunakan adalah Pendekatan Rapid Evolutionary Prototyping yang memungkinkan pengembangan dilakukan bertahap berdasarkan masukan yang diperoleh selama proses implementasi dengan cakupan terbatas. Sistem dikembangkan melalui tahapan analisis kebutuhan, identifikasi masalah, desain (logis serta fisik) dan implementasi. Penelitian ini menghasilkan prototipe yang terintegrasi dengan sistem SKDR dan SMILE dilengkapi beberapa menu utama yaitu notifikasi status, penginputan data kajian epidemiologi, perhitungan kebutuhan vaksin dan pelaporan ORI secara real time. Hasil pengujian yang melibatkan informan dari Dinas Kesehatan Kota Depok, Puskesmas Pengasinan dan Depok Jaya menunjukkan bahwa prototipe Sistem Informasi Outbreak Response Immunization (SIORI) efektif dan efisien dalam mendukung penyelenggaraan ORI. Kesimpulannya, prototipe SIORI memiliki potensi memperbaiki sistem yang ada saat ini dalam meningkatkan ketepatan waktu penyelenggaraan ORI KLB Campak-Rubela.

Measles and Rubella are highly contagious infectious diseases that can lead to serious complications and even death, especially in children. These diseases could cause outbreaks, however, can be prevented through immunization. The declining trend in immunization coverage, particularly after the COVID-19 pandemic, has led to an increase in outbreaks, including Measles-Rubella, thus requiring a prompt response through supplementary immunization activities known as Outbreak Response Immunization (ORI). The implementation of ORI in most outbreak-affected areas remains suboptimal, particularly in terms of response timeliness. Although the Ministry of Health has provided supporting excel based tools to support the pre-implementation process of ORI, data entry is still manual, the system is not yet integrated with other relevant information systems and is not complemented with verification and monitoring mechanisms from higher administrative levels. Therefore, an innovation is needed to improve the current system. This study

aims to improve the timeliness of ORI implementation at the primary health care level in response to Measles-Rubella outbreaks through development of an integrated information system prototype. The Rapid Evolutionary Prototyping approach was used as the system development model, which allows for incremental development based on feedback collected during implementation assessment. The system was developed through the stages of needs analysis, problem identification, logical and physical design, and implementation. This study resulted in the development of a prototype information system named SIORI, designed to improve the timeliness of ORI implementation. The system includes several key features including outbreak status notification that is integrated with the Early Warning Alert and Response System (SKDR), input for epidemiological assessment data, vaccine stock data obtained from the Electronic Immunization and Logistics Monitoring System (SMILE), vaccine needs calculation, and reporting functions covering response timeliness and immunization service data input. Implementation test involving informants from Depok City Health Office and selected health centers (Puskesmas Pengasinan and Depok Jaya) showed that SIORI is more effective and efficient in supporting ORI implementation. The conclusion is that prototype SIORI has potentials to improve the current system in to accelerating ORI implementation timeliness.