

## ABSTRAK

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Penumpukan pada sistem pelayanan secara umum disebabkan karena fasilitas pelayanan tidak dapat memenuhi kebutuhan layanan sehingga pemakai jasa membutuhkan waktu untuk bisa menggunakan fasilitas. Puskesmas sebagai salah satu fasilitas yang memberikan pelayanan di bidang kesehatan. Namun, jumlah kebutuhan dokter di puskesmas yang ada di Indonesia belum terpenuhi dan jumlah pasien yang tidak pernah kosong setiap harinya menyebabkan terjadi penumpukan pada sistem pelayanan. Penerapan sistem jaringan pelayanan menggunakan *open Jackson queueing network* dapat memodelkan sistem pelayanan serta menganalisis kinerjanya. Metode observasi digunakan untuk mengamati waktu kedatangan dan kepergian pasien di Puskesmas Jelekong khususnya pada bagian pendaftaran, poliklinik umum, poliklinik gigi, dan farmasi selama tiga hari. Diperoleh peningkatan waktu tunggu pasien sebelum dilayani dan waktu di sistem yang tidak terlalu signifikan pada poliklinik umum setelah penerapan, sehingga dilakukan penambahan fasilitas pelayanan. Namun, pada poliklinik gigi mengalami penurunan waktu tunggu pasien sebelum dilayani dan waktu di sistem yang sangat signifikan setelah penerapan, sehingga tidak perlu penambahan fasilitas pelayanan.

**Kata kunci:** Puskesmas; Sistem Pelayanan; Sistem Jaringan Pelayanan; *Open Jackson Queueing Network*

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*The buildup in the service system is generally caused because service facilities cannot meet service needs so that service users need time to be able to use the facilities. Health center as one of the facilities that provides services in the health sector. However, the number of doctors needed in health centers in Indonesia has not been met and the number of patients who are never empty everyday cause a buildup in the service system. The application of service network system using an open Jackson queueing network can model the network system and analyze its performance. The observation method was used to observe the arrival and departure times of patients at the Jelekong health center, especially in the registration section, general polyclinic, dental polyclinic, and pharmacy for three days. It was obtained that the increase in patient waiting time before being served and time in the system was not to significant in general polyclinic after application, so additional service facility were needed. However, the dental polyclinic experienced a very significant decrease in patient waiting time before being served and time in the system after application, so there was No. need to add service facilities.*

**Keywords:** *Health Center; Service System; Service Network System; Open Jackson Queueing Network*