ABSTRACT

Queue is a phenomenon faced by customers in service industries, waiting to get health care when sick is not pleased. Customers are likely to choose to travel farther or pay more for services that do not lead to long queues.

External factors Puskesmas service too long, tedious, and the density of the minimal facilities pose tendency found in cases of patients going home or leaving the health center queue, it affects low utilization of public health services at the health center. Model strategy (Multi-Channel Multi Phase) in use. Observational study design, with a direct observation on the subject of the research.

Research purposes to determine arrival time, service rate server (registration counter, polyclinic BP, polyclinic KIA, polyclinic Dental, laboratory and pharmacy), average total time of service, Utility Server, the analysis of the percentage of entities the total number of service time, entity average queue by using a computer simulation program matlab software, easy fit and SPSS.

Result of research is the average time between a patient's arrival 0.2733 minutes at the server and the arrival rate (λ) = 4.16 people / hour. The average time of services provided by the server 1399 minutes and the service level (μ) = 83.94 person / hour. Utilities queuing system on the server 0.5. Probability of idle servers 0.27758. The average waiting time of patients who will service 0.429302 minutes, service time server in the average waiting time 0.3643398 minutes in the system.

The conclusions of the study (no difference) between the simulation and the real system, because the simulation model created by the real system. Suggestions researchers to medium healthcare facilities in order to maximize patient care, by providing facilities services (servers) are optimal (providing the server is proportional to the number of patients, especially in a dense server).

Keywords:
Simulation Model, *Queue*, *Multi-Channel Multi Phase*. Health centers, *Arrival time, Service rate Utility system, Probability server, Average waiting time*