A subsidised primary care clinic in Singapore wanted to evaluate the impact of different patient appointment apportionment and patient-doctor allocation strategies on the cycle time that their patients need to spend during their clinic visits. To the best of the authors' knowledge, there is limited literature on such studies. This paper aims to fill this research gap via scientific evaluation of these operating strategies. Based on simulation model projections, two key inferences are made. First, appointment system is a good patient classification strategy that reduces median and 95th percentile cycle times of appointment patients. But the magnitude of these reductions in median and 95th percentile cycle times diminish as number of appointment patients in a patient population increases. Second, exclusive allocation of walk-in patients seeking consultation for their non-chronic conditions to selected doctors is not effective relative to appointment systems in reducing overall median and 95th percentile cycle times. 12 refs.

(Received in September 2010, accepted in September 2011. This paper was with the authors 1 month for 2 revisions.)

Key Words: Cycle Time, Discrete-Event Simulation, Appointment Scheduling, Walk-in Patients