

# OPTIMAL OUTPATIENT SCHEDULING USING OPTIONAL APPOINTMENT FEES FOR A CLINIC WITH PATIENT NO-SHOWS

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## ABSTRACT

Efficient and effective outpatient management is imperative for hospitals with limited medical resources and high service demands. This research aims to examine the cost differences between a system with an optional appointment fee and a system without. A single server queueing model is developed to derive theoretical findings with validation by using actual real-world data from a large hospital. Our research concludes that different optimal SWs shall be used for prepaid and unpaid appointments. Empirical results show that a system employs optional appointment fees could result in an average of 20% cost savings.

**Keywords:** mathematical modeling, patient no-shows, outpatient scheduling, appointment fees