

## ABSTRAK

**Latar Belakang:** Pemeriksaan diagnostik Tuberkulosis (TB) dengan cara genotipik dilakukan dengan metode *Open System* dan *Close System*. Pemanfaatan mesin *Real Time-PCR* (RT-PCR) yang tersedia pasca pandemi COVID-19 untuk diagnosis TB dapat mengurangi biaya karena tidak membutuhkan pembelian mesin/alat baru. Oleh karena itu, dibutuhkan perhitungan *unit cost* untuk dapat melakukan diagnosa TB melalui metode RT-PCR *open system* dan *close system*.

**Metode:** Penelitian ini merupakan penelitian deskriptif dengan pendekatan studi kasus dengan tujuan menganalisis biaya satuan dengan metode *Time Driven Activity Based Costing* (TDABC). Penelitian dilakukan di RSUP Persahabatan Jakarta pada bulan Januari – Mei 2024 dengan metode pengumpulan data telaah dokumen dan wawancara mendalam.

**Hasil:** Didapatkan bahwa Diagnosis TB dengan Open System sebesar Rp429.140,- per 46 sampel (130 menit/tindakan) atau Rp9.329,- per sampel, sedangkan Close System sebesar Rp448.689,- per 20 sampel (171 menit/tindakan) atau Rp22.434 per sampel. Disparitas ini dipengaruhi oleh biaya personel, biaya alat, dan waktu yang dibutuhkan dalam diagnosis TB.

**Kesimpulan:** Diagnosis TB dengan *open system* dapat memanfaatkan mesin *Real Time Polymerase Chain Reaction* (RT-PCR) yang sebelumnya digunakan untuk diagnosis Covid-19 sehingga dapat mengurangi biaya secara signifikan. Uji Diagnostik TB *Open system* dengan reagen M-GENE dapat digunakan dalam diagnosis TB dengan memanfaatkan mesin RT-PCR pasca pandemi Covid-19.

**Kata Kunci:** *Tuberkulosis, Biaya Satuan, Time Driven Activity Based Costing*

## ABSTRACT

**Background:** Diagnosis of Tuberculosis (TB) genotyping is carried out with open system and closed system method. Utilizing the *Real Time-PCR* (RT-PCR) PCR machines available post-COVID-19 pandemic for TB diagnosis can reduce costs as it eliminates the need for purchasing new machines/equipment. Therefore, calculating the unit cost for TB diagnosis via RT-PCR using both the open system and close system methods is necessary.

**Methods:** This research is a descriptive study with a case study approach aimed at analyzing unit costs using the Time-Driven Activity-Based Costing (TDABC) method. The study was conducted at RSUP Persahabatan Jakarta from January to May 2024, with data collection methods including document reviews and in-depth interviews.

**Results:** The study found that TB diagnosis using the Open System costs Rp429,140,- for 46 samples (130 minutes/procedure) or Rp9,329,- per sample, whereas the Close System costs Rp448,689,- for 20 samples (171 minutes/procedure) or Rp22,434 per sample. This disparity is influenced by personnel costs, equipment costs, and the time required for TB diagnosis.

**Conclusion:** TB diagnosis with the open system can utilize Real-Time Polymerase Chain Reaction (RT-PCR) machines previously used for COVID-19 diagnosis, significantly reducing costs. The TB diagnostic test using the open system with M-GENE reagents can be employed in TB diagnosis by leveraging RT-PCR machines post-COVID-19 pandemic.

**Key Words:** *Tuberculosis, Unit Cost, Time Driven Activity Based Costing*