

# Evaluasi Kinerja Skrining Covid-19 pada Petugas Kesehatan dan Non Kesehatan di Siloam Hospitals Group Tahun 2020 = Covid-19 Screening Performance Evaluation in Siloam Hospitals Group's Healthcare and Non Healthcare Workers during 2020

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## Abstrak

Skrining penyakit Coronavirus Disease 2019 (Covid-19) pada petugas kesehatan dan non kesehatan rumah sakit merupakan salah satu upaya mencegah penularan Covid-19 di rumah sakit. Siloam Hospitals Group menerapkan tiga komponen skrining Covid-19 pada petugas, yaitu pengkajian gejala klinis, penemuan kontak erat, serta pemeriksaan antibodi Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) secara berkala. Temuan positif pada minimal satu komponen skrining Covid-19 akan ditindaklanjuti dengan pemeriksaan reverse transcription polymerase chain reaction (RT PCR). Meskipun demikian, keterlambatan penemuan kasus konfirmasi Covid-19 pada petugas di tahun 2020 menuntut penilaian terhadap kinerja skrining Covid-19 yang berjalan saat itu. Penelitian ini mengevaluasi kinerja skrining Covid-19 pada petugas di Siloam Hospitals Group pada tahun 2020 melalui analisis kuantitatif hubungan antara masing-masing komponen skrining Covid-19 dengan luaran hasil RT PCR, dilanjutkan dengan analisis kualitatif berdasarkan aspek evaluasi kinerja skrining menurut Wilson dan Jungner (1968). Desain kuantitatif penelitian ini berjenis kasus kontrol dengan memanfaatkan telaah data secara retrospektif. Data kualitatif penelitian ini diperoleh melalui wawancara mendalam terhadap tiga kriteria informan dan telaah dokumen. Penelitian ini menemukan hubungan signifikan antara gejala klinis khas Covid-19 dan antibodi SARS-CoV-2 dengan luaran hasil RT PCR ( $p < 0,05$ ), namun tidak terdapat hubungan signifikan antara riwayat kontak erat dengan luaran hasil RT PCR ( $p > 0,05$ ). Gejala klinis merupakan komponen skrining Covid-19 yang menunjukkan kinerja paling baik dalam memperkirakan luaran hasil RT PCR pada kasus Covid-19 bergejala, namun untuk menangkap kasus Covid-19 presimptomatik dan asimtomatik, penemuan kontak erat seharusnya menjadi komponen skrining yang lebih unggul. Kejadian under reporting dan over reporting dalam penemuan kontak erat menyebabkan kasus konfirmasi Covid-19 terlewat untuk didiagnosis dan kasus non kontak erat dilaporkan sebagai kontak erat dengan mayoritas hasil RT PCR negatif. Uji antibodi SARS-CoV-2 memiliki kinerja yang paling buruk karena memberikan yield yang rendah dalam penemuan kasus dan pengambilan keputusan klinis. Penelitian ini menyimpulkan bahwa pengkajian gejala klinis masih direkomendasikan sebagai komponen skrining Covid-19 yang memiliki kinerja baik. Penemuan kontak erat juga masih direkomendasikan sebagai komponen skrining Covid-19 meskipun kinerjanya memerlukan perbaikan. Sebaliknya, pemeriksaan antibodi SARS-CoV-2 berkala tidak lagi direkomendasikan sebagai komponen skrining Covid-19 karena menunjukkan kinerja yang paling buruk. Pemeriksaan berkala antigen SARS-CoV-2 atau pemeriksaan Nucleic Acid Amplification Test (NAAT) lainnya lebih direkomendasikan jika sudah tersedia.

.....The Coronavirus Disease 2019 (Covid-19) screening on healthcare and non-healthcare workers is one of the means to prevent Covid-19 transmission within hospitals. Siloam Hospitals Group implements three components for Covid-19 screening on hospitals' workers which consists of clinical symptoms assessment, contact finding, and serial Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) antibody

testing. Positive finding on at least one of Covid-19 screening components will be followed up by reverse transcription polymerase chain reaction (RT PCR) testing. However, delay in Covid-19 confirmed case findings in hospitals' workers in 2020 period requires assessment regarding Covid-19 screening performance implemented at the time. This study evaluates Covid-19 screening performance in Siloam Hospitals Group's workers in 2020 through quantitative analysis of correlation between each of the Covid-19 screening components and RT PCR result, followed by qualitative analysis based on Wilson and Jungner's (1968) principles of screening performance evaluation. The quantitative approach uses case control study design which collects quantitative data retrospectively. Qualitative data is acquired through in-depth interview with informants from three different criteria and through document study. This study finds significant correlation between Covid-19 clinical symptoms and RT PCR result as well as between SARS-CoV-2 antibody result and RT PCR result ( $p < 0,05$ ), although no significant correlation is found between contact history and RT PCR result ( $p > 0,05$ ). Clinical symptom is Covid-19 screening component which shows high performance in predicting RT PCR result for Covid-19 symptomatic cases. However, for Covid-19 presymptomatic and asymptomatic caeas, contact tracing should be placed as superior Covid-19 screening component. Under-reporting and over-reporting found in contact tracing implementation cause misdiagnosis of Covid-19 confirmed cases, while non-eligible contacts are reported as eligible contacts with predominant negative RT PCR results on follow up. SARS-CoV-2 antibody testing shows the lowest performance due to its low yield in case finding and clinical decision making. This study concludes that clinical symptoms assessment is still recommended as Covid-19 screening component with high performance. Contact tracing is also recommended to be used as Covid-19 screening component with performance improvement. In contrast, SARS-CoV-2 antibody testing is no longer recommended as Covid-19 screening component due to its low performance. Antigen SARS-CoV-2 or other Nucleic Acid Amplification Test (NAAT) serial testing is more recommended, if available.