

# Perbedaan Pertumbuhan Bakteri di Humidifier dan Non Humidifier pada Pasien yang mendapat Terapi Oksigen di RSUD Dr. Soetomo Surabaya = The difference between bacterial growth in humidifier and non humidifier at the patient who Received oxygen therapy in Dr. Soetomo General Hospital, Surabaya

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## Abstrak

Humidifier merupakan alat humidifikasi. Humidifier pada terapi oksigen menggunakan air steril dalam tabungnya namun, ada penelitian sebelumnya yang menunjukkan bahwa terapi oksigen kurang dari 5 liter per menit, humidifier tidak perlu diberi air steril, disebut non humidifier. Tujuan: Mendapatkan gambaran perbedaan pertumbuhan bakteri di humidifier dan non humidifier pada pasien yang mendapat terapi oksigen. Metodologi; Penelitian survei analitik yang pengumpulan datanya secara purposive sampling. Hipotesis: Tidak ada perbedaan pertumbuhan bakteri pada humidifier dan non humidifier pada pasien yang mendapat terapi oksigen. Sampel: Sampel penelitian adalah 24 humidifier terdiri dari 12 sampel menggunakan humidifier dan 12 sampel menggunakan non humidifier. Instrumen: instrumen yang digunakan peralatan kultur dan pedoman observasi. Hasil: Uji Mann Whitney pada jam ke-0 menunjukkan tidak ada perbedaan pertumbuhan bakteri ( $p=0,131$ ), pada jam ke-12 ada perbedaan pertumbuhan bakteri yang bermakna ( $p=0,046$ ), dan pada jam ke-24 ada perbedaan pertumbuhan bakteri yang bermakna ( $p= 0,046$ ). Analisis uji Kolmogorov Smimov membuktikan adanya perbedaan pertumbuhan bakteri pada humidifier dan non humidifier pada klien yang mendapat terapi oksigen ( $p= 0,010$ ). Kesimpulan: Penggunaan non humidifier dapat mencegah terjadinya pertumbuhan bakteri sehingga dapat mengurangi terjadinya infeksi nosokomial. Rekomendasi: Rumah sakit perlu menerapkan penggunaan non humidifier dan bila menggunakan humidifier maksimal 12 jam sekali harus di desinfeksi dan diganti airnya.

.....Humidifier is a device for delivering oxygen to the patients. Before using it, the humidifier tube should fill with sterile water. There was a recent study that administering oxygen less than five liter per minutes, the tube was not load with the sterile water. Aim: The research aim was to describe the difference between bacterial growth in the humidifier and non humidifier at the patient who got oxygen therapy. Design; The design was the analytic survey with purposive sampling method. The samples were 24 patients. They were divided into two groups. Group one, consisted of 12 patients with humidifier and the others with non humidifier. The instrument was culture equipments diagnostic test and observation guidance. Hypothesis: The hypothesis was there was no difference bacterial growth existence in humidifier and non humidifier at the patient who got oxygen therapy. Results: The results showed that there was no significance difference of bacterial growth at time of zero hour ( $p= 0.131$ ). Meanwhile, there was significance different of bacterial growth at time of 12 hour ( $p= 0,046$ ), and time of 24 hour( $p= 0,046$ ). There was also significance different between bacterial growth in humidifier and non humidifier at the patient who got oxygen therapy ( $p= 0.010$ ). Conclusion; The conclusion is a non humidifier device could prevent bacterial and reduce nosocomial infection. Recommends: It was recommended that hospital should use non humidifier and the humidifier had to disinfect and change the water every 12 hours.