

# Analisis Pengelolaan Limbah Cair dan Kualitas Limbah Cair di Rumah Sakit Swasta X Depok = Analysis of Liquid Waste Management and Liquid Waste Quality at Private Hospital X Depok

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## Abstrak

Di antara semua limbah medis, limbah cair merupakan ancaman serius bagi kesehatan manusia dan lingkungan karena kemampuannya memasuki daerah aliran sungai, mencemari air tanah, dan air minum jika tidak ditangani dan dibuang dengan benar. Efektivitas pengelolaan limbah cair dan kualitas limbah cair masih menjadi masalah yang signifikan di fasilitas pelayanan kesehatan di Indonesia, dimana limbah cair masih banyak yang tidak memenuhi standar baku mutu. Penelitian ini bertujuan untuk menganalisis manajemen pengelolaan limbah cair, efektivitas IPAL, kualitas limbah cair, dan strategi pengelolaan permasalahan efektivitas IPAL Rumah Sakit Swasta X Depok. Penelitian ini menggunakan metode mixed methods (kuantitatif deskriptif dengan desain studi kasus dan kualitatif dengan triangulasi konkuren dan analisis SWOT). Penelitian ini berlangsung dari Desember - April 2023 dengan menggunakan data sekunder periode Juli 2021 - Juni 2022. Standar regulasi yang dijadikan acuan dalam penelitian ini adalah Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor: P.68/Menlhk/Setjen/Kum. 1/8/2016 tentang Baku Mutu Limbah Cair Domestik. Analisis data dilakukan dengan analisis kuantitatif (analisis univariat), analisis kualitatif, dan analisis SWOT. Manajemen pengelolaan limbah cair di Rumah Sakit Swasta X Depok dapat terlihat dari aspek peraturan, kebijakan, dan perundang-undangan; aspek proses pengelolaan limbah cair; dan aspek monitoring dan evaluasi sudah sesuai dengan Permenkes Nomor 7 Tahun 2019. Namun, aspek sumber daya manusia, sarana prasarana, dan dana belum sepenuhnya sesuai dengan Permenkes Nomor 7 Tahun 2019. Kualitas limbah cair (fisika, kimia, biologi) di bagian inlet dan outlet IPAL Rumah Sakit Swasta X Depok pada bulan Juli 2021 - Juni 2022 masih berfluktuasi. Efektivitas IPAL Rumah Sakit Swasta X Depok masih fluktuatif pada periode bulan Juli 2021 - Juni 2022. Strategi pengelolaan permasalahan efektivitas IPAL Rumah Sakit Swasta X Depok berdasarkan analisis SWOT yang telah dilakukan, yakni strategi agresif. dengan lima rekomendasi inovatif untuk meningkatkan manajemen peningkatan efektivitas IPAL. Rumah Sakit Swasta X Depok dapat memastikan sumber limbah cair, menambahkan bak penampung sementara, memberikan pretreatment pada limbah cair, pemeriksaan hasil influen limbah cair setiap bulan, menyiapkan cadangan blower, pompa celup, saringan pasir lambat, serta menambahkan bak netralizing, alat pengukur klor, alat pengukur tekanan oksigen, sinar ultraviolet pada IPAL, komponen swapantau harian agar dapat meningkatkan efektivitas IPAL dalam menurunkan parameter pencemar limbah cair.

.....Among all medical wastes, wastewater poses a serious threat to human health and the environment due to its ability to enter watersheds, contaminate groundwater and drinking water if not handled and disposed of properly. The effectiveness of liquid waste management and the quality of liquid waste are still significant problems in health care facilities in Indonesia, where there are still many liquid wastes that do not meet quality standards. This study aims to analyze the management of liquid waste management, the effectiveness of the WWTP, the quality of the liquid waste, and strategies for managing the problem of the effectiveness of the IPAL of Private Hospital X Depok. This research uses mixed methods (quantitative descriptive with

case study design and qualitative with concurrent triangulation and SWOT analysis). This research took place from March - April 2023 using secondary data for the period July 2021 - June 2022. The regulatory standard used as a reference in this research is the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number: P.68/Menlhk/Setjen/Kum. 1/8/2016 concerning Domestic Liquid Waste Quality Standards. Data analysis was performed by quantitative analysis (univariate analysis), qualitative analysis, and SWOT analysis. The management of liquid waste management at X Private Hospital Depok can be seen from the aspects of regulations, policies and legislation; aspects of the liquid waste management process; and monitoring and evaluation aspects are in accordance with Permenkes Number 7 of 2019. However, aspects of human resources, infrastructure, and funds are not fully in accordance with Permenkes Number 7 of 2019. The quality of wastewater (physics, chemistry, biology) in the inlet and IPAL outlets at Private Hospital X Depok in July 2021 - June 2022 are still fluctuating. The effectiveness of WWTP for Private Hospital X Depok is still fluctuating in the period July 2021 - June 2022. The strategy for managing the problem of IPAL effectiveness for Private Hospital X Depok is based on the SWOT analysis that has been carried out, namely an aggressive strategy with five innovative recommendations to improve management to increase the effectiveness of WWTP. Private Hospital X Depok can ensure the source of liquid waste, add temporary storage tanks, provide pretreatment of liquid waste, check the results of influent liquid waste every month, prepare backup blowers, submersible pumps, slow sand filters, and add neutralizing tanks, chlorine gauges, oxygen pressure gauges, ultraviolet rays in the WWTP, daily self-monitoring components in order to increase the effectiveness of the WWTP in reducing liquid waste pollutant parameters.