

ABSTRAK

PERLINDUNGAN HUKUM TERHADAP DOKTER DALAM PENGUNAAN ALAT BEDAH ROBOTIK DAN TELE ROBOTIK

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Perkembangan teknologi kesehatan berbasis robotika, kecerdasan artifisial, dan sistem telekomunikasi digital telah mendorong penggunaan alat bedah robotik dan telerobotik dalam tindakan kedokteran. Teknologi ini mampu meningkatkan presisi tindakan medis dan memperluas akses pelayanan spesialis. Namun, penggunaannya juga menimbulkan persoalan hukum baru, khususnya mengenai batas pertanggungjawaban dokter apabila terjadi kerugian pasien akibat kegagalan sistem, gangguan jaringan, kesalahan perangkat lunak, atau malfungsi alat robotik. Penelitian ini bertujuan untuk menganalisis pengaturan hukum saat ini dalam penggunaan alat bedah robotik dan telerobotik serta perlindungan hukum terhadap dokter dalam tindakan kedokteran berbasis teknologi tersebut. Penelitian ini menggunakan metode yuridis normatif dengan pendekatan perundang-undangan, konseptual, dan perbandingan hukum. Bahan hukum yang digunakan meliputi bahan hukum primer dan sekunder yang dianalisis secara preskriptif melalui interpretasi hukum dan penalaran hukum komparatif. Hasil penelitian menunjukkan bahwa hukum positif Indonesia, khususnya Undang-Undang Nomor 17 Tahun 2023 tentang Kesehatan, Peraturan Pemerintah Nomor 28 Tahun 2024, dan Peraturan Menteri Kesehatan Nomor 3 Tahun 2025, belum secara khusus mengatur robotic surgery dan tele-robotic surgery. Akibatnya, belum terdapat pembagian tanggung jawab yang tegas antara dokter, rumah sakit, penyedia teknologi, operator sistem, dan produsen alat kesehatan. Penelitian ini merekomendasikan pembentukan regulasi khusus serta penerapan Tiered and Distributed Causal Liability Model agar pertanggungjawaban hukum dapat dibebankan secara proporsional berdasarkan sumber kesalahan, tingkat kendali, dan kontribusi kausal masing-masing pihak.

Kata Kunci: dokter, perlindungan hukum, bedah robotik, telerobotik, pertanggungjawaban kausal terdistribusi.berjenjang

ABSTRACT

LEGAL PROTECTION FOR DOCTORS IN THE USE OF ROBOTIC AND TELEROBOTIC SURGICAL DEVICES

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The development of health technology based on robotics, artificial intelligence, and digital telecommunication systems has driven the use of robotic and telerobotic surgical devices in medical procedures. This technology is capable of increasing the precision of medical procedures and expanding access to specialist services. However, its use also raises new legal issues, particularly regarding the limits of physician liability in the event of patient harm due to system failure, network disruption, software errors, or robotic device malfunction. This study aims to analyze the current legal regulations governing the use of robotic and telerobotic surgical devices, as well as the legal protection of physicians in such technology-based medical procedures. This study employs a normative legal research method with statutory, conceptual, and comparative law approaches. The legal materials used include primary and secondary legal materials, which are analyzed prescriptively through legal interpretation and comparative legal reasoning. The results of the study show that Indonesian positive law, specifically Law Number 17 of 2023 concerning Health, Government Regulation Number 28 of 2024, and Minister of Health Regulation Number 3 of 2025, has not specifically regulated robotic surgery and telerobotic surgery. Consequently, there is no clear distribution of liability among physicians, hospitals, technology providers, system operators, and medical device manufacturers. This study recommends the formulation of specific regulations and the implementation of a Tiered and Distributed Causal Liability Model, so that legal liability can be proportionally assigned based on the source of error, degree of control, and causal contribution of each party.

Keywords: *doctor, legal protection, robotic surgery, telerobotic surgery, Tiered and Distributed Causal Liability.*