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Critical Analysis of Clinical Pharmacist Serve as a Healthcare Provider In Multidisciplinary Intensive Healthcare Team: a Meta-Analysis

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SUMMARY. **This study was designed to critically evaluate the effects of including clinical pharmacist's role in multidisciplinary intensive care unit teams on mortality as well as observing adverse drug events. A systematic literature search up to March 2022 incorporated 15 trials involving 37821 subjects in intensive care units at the beginning of the study; 23008 were using critical care clinical pharmacists, and 14813 were control. Statistical tools like the dichotomous method were used within a random or fixed-influence model to establish the odds ratio (OR) with 95% confidence intervals (CIs) to evaluate the influence of including critical care clinical pharmacists in multidisciplinary intensive care unit teams on mortality, and adverse drug events. Critical care clinical pharmacists had significantly lower mortality (OR, 0.72; 95% CI, 0.56-0.92,** $p = 0.01$**), and adverse drug events (OR, 0.34; 95% CI, 0.19-0.60,** $p < 0.001$**) compared with control. Critical care clinical pharmacists had significantly lower mortality, and adverse drug events compared with control. Prospectively, it is suggested that further studies are required to validate these findings.**

RESUMEN. Este estudio fue diseñado para evaluar críticamente los efectos de incluir el papel del farmacéutico clínico en los equipos multidisciplinarios de la unidad de cuidados intensivos sobre la mortalidad, así como para observar los eventos adversos de los medicamentos. Una búsqueda bibliográfica sistemática hasta marzo de 2022 incorporó 15 ensayos con 37821 sujetos en unidades de cuidados intensivos al comienzo del estudio; 23008 usaban farmacéuticos clínicos de cuidados intensivos y 14813 eran control. Se utilizaron herramientas estadísticas como el método dicotómico dentro de un modelo de influencia aleatoria o fija para establecer la razón de posibilidades (OR) con intervalos de confianza (IC) del 95 % para evaluar la influencia de la inclusión de farmacéuticos clínicos de cuidados intensivos en equipos multidisciplinarios de unidades de cuidados intensivos sobre la mortalidad y eventos adversos de medicamentos. Los farmacéuticos clínicos de cuidados intensivos tuvieron una mortalidad significativamente menor (OR, 0,72; IC del 95 %, 0,56-0,92, $p = 0,01$) y eventos adversos de medicamentos (OR, 0,34; IC del 95 %, 0,19-0,60, $p < 0,001$) en comparación con el control. Los farmacéuticos clínicos de cuidados intensivos tuvieron una mortalidad y eventos adversos de medicamentos significativamente más bajos en comparación con el control. De manera prospectiva, se sugiere que se requieren más estudios para validar estos hallazgos.

KEY WORDS: critical care clinical pharmacists, intensive care unit, multidisciplinary, mortality.

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