

Pharmacists in the ER speed delivery of coagulation drug to bleeding patients

5 September 2019

Millions of patients take blood thinners such as Coumadin to prevent blood clots that can cause strokes.

But when such patients come to the [emergency department](#) (ED) with life-threatening bleeding, they may require a drug that counteracts the effect of [blood thinners](#), thereby improving coagulation.

Now a first-of-its-kind study by Loyola Medicine researchers has found that when a [pharmacist](#) is present in the ED, patients receive the coagulation drug much more quickly, resulting in less time in the intensive care unit and shorter hospital stays. (The coagulation drug is called four-factor prothrombin complex concentrate or 4F-PCC.)

The retrospective study by first author Dalila Masic, PharmD, senior author Megan A Rech, PharmD, MS, BCPS, BCCCP, and colleagues is published online July 15, 2019 in the *Journal of Emergency Medicine*.

The study included 116 patients who were on a blood thinner and came to the ED with life-threatening bleeding. The most common blood thinner was warfarin (brand name Coumadin), and the most common indication for the [blood](#) thinner was treatment of a heart rhythm disorder called atrial fibrillation. The most [common type](#) of bleeding was intracranial hemorrhage (bleeding inside the skull that causes a stroke).

Of the 116 patients, 50 had a clinical pharmacist at their bedsides and 66 had a physician team alone. (A clinical pharmacist is typically present in Loyola's ED during weekdays but not during nights and weekends.)

Among patients who had a pharmacist at the bedside managing medications, the coagulation drug was administered in a median time of 66.5 minutes, compared with 206.5 minutes in patients without a bedside pharmacist. Patients with a

bedside pharmacist spent less time in the [intensive care unit](#) (2 days vs. 5 days) and in the hospital overall (5.5 days vs. 8 days).

The study findings suggest that bedside pharmacists helped emergency physicians in clinical decision-making and appropriate ordering of 4F-PCC. Pharmacists communicated with the central pharmacy to ensure the life-saving medication was delivered to the patient in a timelier manner.

"A clinical pharmacist provides valuable therapeutic recommendations and optimizes time to receipt of life-saving pharmacotherapy," researchers concluded.

The study is titled "Pharmacist presence decreases time to prothrombin complex concentrate in emergency department patients with life-threatening bleeding and urgent procedures."

Provided by Loyola University Health System

APA citation: Pharmacists in the ER speed delivery of coagulation drug to bleeding patients (2019, September 5) retrieved 6 September 2022 from <https://medicalxpress.com/news/2019-09-pharmacists-er-delivery-coagulation-drug.html>

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