

Study assesses outcomes for meth users with burn injuries

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UC Davis Health researchers were surprised to find that methamphetamine use is not linked with worse health outcomes among burn patients. However, meth use was associated with significantly worse conditions for those patients after their release from the hospital.

Meth-positive patients commonly sustain large total body surface area (TBSA) [burn injuries](#). They are often a result of drug-related accidents or explosions during meth production, according to the study authors.

"At first, we expected that matched meth-positive patients would have worse outcomes than meth-negative patients," said senior author Kathleen Romanowski, assistant professor with UC Davis Health's Division of Burn Surgery. "We were surprised to find that they did not have higher mortality or require more procedures, ventilation days, operating room visits or ICU days."

Meth use and burn injuries

Using a database of burn-injured patients admitted to the Firefighters Burn Institute Regional Burn Center at UC Davis Medical Center over four years, the researchers examined all the burn-injury cases.

"This is the largest study to date to investigate methamphetamine use in burn-injured patients, with 264 meth-positive adult cases," Romanowski said.

Out of the 264 meth-positive cases, they matched 193 patients with meth-negative patients based on their age and the nature of their injuries. The researchers looked at how measures of [injury](#) severity, burn management and socioeconomic data varied among matched and unmatched meth-positive and meth-negative patients.

Hospital stay and post-discharge care for meth-positive patients

The outcomes showed that meth-positive patients suffered worse injuries and stayed longer in hospital than meth-negative patients. Yet, more meth-positive patients left the hospital against medical advice. Fewer meth-positive patients had access to support such as skilled nursing facilities.

Meth-positive patients did worse in every measure of socioeconomic status, based on their ZIP codes. The early discharge could be linked to insurance status. Only 9% of the patients had private insurance, compared to nearly a quarter of meth-negative patients.

"Meth-positive patients are not receiving the same level of post-discharge care as their meth-negative counterparts. This is possibly due to lack of resources, addiction or perceived stigma," Romanowski said. Patients who use meth may have unique and more complex issues that need to be addressed in addition to their burn injuries, said Romanowski. They represent a special group who needs additional resources to ensure they successfully recover.

"Providers need to consider how they can support these patients with adequate inpatient and follow-up care. This might include addiction counseling, social services or follow-up care facilitation," Romanowski said. "Given these patients are being discharged with less support and

access to resources, there is a need for further research on the long-term mortality and other health outcomes of these patients."

On average, meth-positive patients were more likely than meth-negative patients to be younger (42 vs. 46 years), male (81.5% vs. 72.7%) smokers (54% vs. 29%) and drug dependent (81% vs. 16%). They also were less likely to have health issues such as [congestive heart failure](#), high blood pressure requiring medication, obesity, diabetes and wheelchair dependency.

More information: Eve A Solomon et al, Clinical and Socioeconomic Differences in Methamphetamine-Positive Burn Patients, *Journal of Burn Care & Research* (2019). [DOI: 10.1093/jbcr/irz102](https://doi.org/10.1093/jbcr/irz102)

Provided by UC Davis

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