



## FAST FACTS AND CONCEPTS #286 MEDICATION DISPOSAL

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**Background** Patients receiving home hospice or palliative care often have a residual supply of opioids and other pharmaceuticals at the time of the patient's death. A number of agencies have recommendations and resources on safe medication disposal, including the Food and Drug Administration (FDA), Environmental Protection Agency (EPA), and the Drug Enforcement Agency (DEA) (1-3). Educating families on proper disposal of medications is an important patient safety measure.

**Medicine Take-Back Events or Programs** Ideally, medications should be given to a secure medication collection site or disposed of through an official take-back program. These programs dispose of medications in accordance with federal, state and/or local environmental regulations. Many collected medications are incinerated.

Medication collections sites include police stations, pharmacies, chemical plants; sometimes programs included locked drop-boxes associated with these facilities. There is no unified resource that identifies all of these options in every state, but the website <http://www.awarerx.org/get-local> provides information on these sites by state. If the patient does not have internet access, they can call 311 or the FDA: 1-888-INFO-FDA for information about local resources.

**Disposal in Household Trash** If the patient cannot access a secure collection site, they should be instructed on safe medication disposal in the household trash. The FDA, EPA and other safety programs have created consumer education materials and recommend the following (4, 5):

- Remove medications (liquids, tablets, or capsules) from their original container.
- Mix medications (do not crush tablets or capsules) with unpalatable substances (such as kitty litter or used coffee grounds) and seal in a plastic zip lock bag or empty container (such as a margarine tub) and place in the trash.
- Remove identifying information about the patient and medication by covering with permanent marker or scratching off labels.
- Empty pill bottles should be thrown in the trash or recycling (depending upon local guidelines).

**Flushing Medications** If a drop-off program is unavailable or impractical, the FDA recommends flushing down the toilet certain medications that can be harmful to unintentional users. These medications include all opioids, rectal diazepam, and transdermal methylphenidate and buprenorphine (1).

In 2013, the FDA issued an update regarding the disposal of fentanyl patches in response to 32 cases of accidental exposure to fentanyl since 1997, most of them involving children younger than 2 years old (6). The patches should be folded in half, sticky sides together, and flushed down the toilet. While not explicitly stated, it is reasonable to dispose of transdermal buprenorphine and methylphenidate similarly.

**Environmental Impact of Unused Medications** There has been controversy and media coverage around concerns with flushing medications. The EPA has advised against flushing medications down the toilet because of environmental concerns (2). However, others have noted the main way drug residues enter water systems is by passage of drug and drug-metabolites in urine and feces (7,8). Additionally, there is no clear scientific evidence of actual ecological harm brought about by pharmaceutical contamination of waste water. Given this, the FDA's recommendation to flush certain drugs which are very harmful if unintentionally ingested should be followed.

**Hospice and Medication Disposal** There are no consensus guidelines or best practices specific to the hospice community around disposal of medication after a patient's death. The National Hospice and Palliative Care Organization and the Hospice and Palliative Nurses Association recommend following the FDA and DEA guidelines listed above and stress the requirement for individual hospice agencies to have organizational policies and procedures on the disposal of controlled substances in accordance with the

Centers for Medicare and Medicaid Services Hospice Conditions of Participation, Sec. 418.106. (9-11) In a recent study, nearly 1/3 of hospice nurses were not familiar with these rules (12).

Because of prognostic uncertainty in hospice many patients have unused medications at the time of their death, many of which are opioids or benzodiazepines. There is significant cost associated with discarded medications (13, 14) and concern by hospice staff about legal and environmental impact and risk for drug diversion (12). At the time of first ordering controlled medications, the hospice should provide the patient or patient representative a copy of the hospice written policy on the management and disposal of controlled drugs. After the patient dies, the medications remain the property of the family and hospice staff should advise family on safe disposal.

**Bottom Line** Ideally, medications should be disposed of at take-back programs, or thrown in the trash. **Opioids, including patches, should be flushed down the toilet and not thrown in the trash.**

Providers should educate patients and families about safe medication disposal, particularly with opioids which can be deadly if unintentionally ingested.

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