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**MEDICINE DISPOSAL: SOURCES, ENVIRONMENTAL CONCERNS, AND INITIATIVES**

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**ABSTRACT:** Proper disposal of unused medicines is a rapidly emerging concern that spans a broad range of issues including human health, water quality, solid waste management, law enforcement, and environmental integrity. Substances of concern include both prescription and non-prescription drugs. Pharmaceuticals are produced in increasing volumes every year. With this growth comes concern about the fate of these compounds in the environment. Recent studies have identified a wide range of pharmaceuticals in fresh and marine waters nationwide, and several of these compounds are potentially harmful to aquatic organisms, even in small quantities, as they are specifically designed to be bioactive. Additionally, improper medicine disposal poses risks of poisoning to children, the elderly and pets and can lead to drug/identity theft. Currently, there are no official U.S. federal guidelines for consumers on proper disposal of unused/unwanted medicines. Unused medicines are either accumulated in homes or disposed of by flushing, placing in the trash, or giving to family or friends, all of which have significant disadvantages. This presentation will describe the current situation of unused/unwanted medicines by identifying the various environmental, health and societal concerns related to this issue, the current barriers to improved disposal programs, and case studies of successful take-back programs.

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