Why create a **MEDICINE TAKEBACK PROGRAM** in your community?
Organizing a medicine collection event or program is a great way for communities to help ensure that unwanted medication is disposed of properly. But how can program providers and municipalities be sure that a take-back program is a benefit to the community and worth the money spent? A Purdue University study recently found that the estimated societal benefits of establishing a medicine take-back program outweigh the costs.

### Reasons for Unwanted Medicine

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopped taking medicine</td>
<td>33%</td>
</tr>
<tr>
<td>Medicine expired</td>
<td>32%</td>
</tr>
<tr>
<td>Prescription changed</td>
<td>25%</td>
</tr>
</tbody>
</table>

### Improper Disposal

- Discarded in the trash: 44%
- Flushed down the toilet or sink: 29%

### Retention

- Not disposed of: 32%

### Environmental Pathways

- Landfill
- Wastewater
- Drinking water

Studies across the U.S. have found pharmaceutical compounds in rivers, lakes, streams, groundwater, and drinking water. Unwanted medicines may be abused, misused, or accidentally ingested.

### Environmental Impacts

**Reproduction and Development**

The accumulation of pharmaceuticals in the environment is a growing concern and has been linked to delayed development, altered reproduction, and changes to feeding behavior in wildlife.

**Drinking Water**

Although no negative impacts have been documented, extremely low levels of pharmaceuticals have been found in drinking water.

### Public Health Issues

**Accidental Poisoning**

In 2015, an estimated 58,000 children under the age of five were treated for accidental poisoning from prescription medications.

- Human prescription medications are regularly the leading cause of pet poisonings.

**Drug Overdose**

Drug overdose death rates have increased five-fold since 1980, becoming the leading cause of accidental deaths in 29 states. Young adults can be especially impacted: 24 percent of teenagers have misused or abused prescriptions at least once.

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*Percentages are based on the 68% of people who disposed of unwanted medicines in the past.
**Percentage is based on the 61% of people who had unwanted medicines in their homes.
Several states, counties, and municipalities across the nation—including many in the Great Lakes region—have started pharmaceutical take-back programs. These programs, often sponsored by local law enforcement or pharmacies, provide secure collection and destruction of unwanted medicine in compliance with the U.S. Environmental Protection Administration and U.S. Drug Enforcement Administration (DEA) regulations. Since 2007, Illinois-Indiana Sea Grant (IISG) has helped set up more than 70 new take-back programs in Illinois, Indiana, Michigan, and Wisconsin, including more than 54 permanent take-back sites, ensuring the responsible destruction of over 100 tons of unwanted medicine.

**TOTAL ESTIMATED VALUE OF MEDICINE COLLECTION PROGRAMS TO EACH STATE ($MILLION USD)**

**AVERAGE ESTIMATED VALUE (PER VISIT) OF PROPERLY DISPOSING OF UNWANTED MEDICINE**

<table>
<thead>
<tr>
<th>State</th>
<th>Value (Per Visit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MN</td>
<td>48¢</td>
</tr>
<tr>
<td>WI</td>
<td>52¢</td>
</tr>
<tr>
<td>IL</td>
<td>$1.36</td>
</tr>
<tr>
<td>IN</td>
<td>$1.04</td>
</tr>
<tr>
<td>MI</td>
<td>93¢</td>
</tr>
<tr>
<td>OH</td>
<td>78¢</td>
</tr>
</tbody>
</table>

61% Had unwanted medicine in the past 24 months

56% Would be willing to use a medicine takeback program

Benefits vs Costs

The costs of drug take-back programs vary by their type, size, and scope. Expenses may include advertising, secure drop boxes, supplies, warehousing of medicines prior to disposal, transportation to a disposal facility, medicine destruction, and personnel time. It can be difficult to navigate the complex regulations for drug take-back programs, and many programs require law enforcement or pharmacy involvement. The least expensive type of medicine collection program is a series of single-day events since permanent collection programs have ongoing costs for administration, transport, and disposal of the medications. Using volunteer time to staff events and securing grant funding to support these programs can help ease the financial burden.
As the public becomes more aware about the environmental and societal risks of improperly disposing of medications, it is very likely the number of programs across the region will grow. IISG has grants available to help defray the cost of DEA-approved drop boxes for permanent programs or expenses from single-day collection events and can provide guidance regarding DEA regulations.

Visit www.unwantedmeds.org to find your local take-back program and download resources, including information about how to properly dispose of unwanted medicine and how to start a medicine take-back program in your community.

For questions or more information, please contact Sarah Zack, IISG pollution prevention specialist at szack@illinois.edu or 217-300-4076.

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The Great Lakes Region refers to Indiana, Illinois, Ohio, Michigan, Wisconsin, and Minnesota. The total benefit of medicine collection programs to the Great Lakes region was estimated by multiplying the reported value per visit by one person per household by the number of households. It is considered a conservative estimate because it is likely that some people that use medicine take-back programs are disposing of more than one prescription from more than one person in their household.

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