

Unwanted Medicines: Health and Safety Concerns

Legislation proposed in Washington State will create a producer-provided medicine return program that is convenient, safe, and secure for residents throughout the state. Unwanted prescription drugs, including controlled substances, and over-the-counter medicines will be securely collected and disposed using the safest method currently available to help prevent accidental poisonings, drug misuse, and environmental contamination. This background document provides a brief summary of studies on the amount of unwanted medicines, and the problems of accidental poisonings and drug diversion.

The Amount of Unwanted Medicines Is Significant

The amount of prescription and over-the-counter medicines that go unused, expire, or are unwanted has not been precisely determined. However, some studies have found the amount of unwanted medicine is significant, ranging from 10 to 33 percent of drugs sold.

- Using direct measurement and mathematical extrapolation, Florida researchers estimated that 11 percent of all medications become unused in the United States.
Source: Musson SE, & Townsend TG. (2009). Pharmaceutical compound content of municipal solid waste. *Journal of Hazardous Materials*. Volume 162, Number 2-3. pg 2-3.
- A British study sampled waste from households and found that 19 percent of active pharmaceutical ingredient sold would be discarded, equivalent to 170 tonnes (or 374,785 pounds U.S.) of active pharmaceutical ingredient wasted per year in the UK.
Source: Slack, RJ, Bonin, M, Gronow, JR, et al. (2007). Household hazardous waste data for the UK by direct sampling., *Environ Sci Technol*, Volume 41, pg 2566 - 2571.
- An in-home survey conducted in the mid 1990's found that the proportion of expired drugs stored in home medicine cabinets in most countries was 8 to 17 percent, except in Chapel Hill, North Carolina where expired drugs totaled almost 30 percent.
Source: Bush, P.J., Sanz, E.J., & Garcia, M. (1996). Section II: Cross-cultural reports. *Medicines at Home: the contents of medicine cabinets in eight countries*. In Bush (ed) *Children, medicines, and culture*. New York: Pharmaceutical Products Press.
- A 2005 study in Britain showed that 47.2 percent of homes had waste medicine. Twenty percent of respondents didn't use all of their pain medicines, 50 percent didn't finish antidepressants or beta blockers, and 82 percent didn't use all of their antibiotics.
Source: Bound, J. P. and Voulvoulis, N. (2005). "Household Disposal of Pharmaceuticals as a Pathway for Aquatic Contamination in the United Kingdom", *Environmental Health Perspectives* Volume 113, Number 12, Dec. 2005. Available online at: <http://www.ehponline.org/members/2005/8315/8315.pdf>, accessed 08/26/08.
- In a 2006 telephone survey of King County residents, 39 percent of respondents said they had more than ten medicine containers at home, and of these, only a third were using—or planning to use—all of their medicines within six months.
Source: SoundStats Survey (2006). "Unwanted Household Medicines: A Survey of King County Residents." Washington Citizens for Resource Conservation. <http://wastenotwashington.org/Pharmsurvey.pdf>
- Washington State's PH:ARM pilot at Group Health Cooperative and Bartell Drugs have collected 35,000 pounds of unwanted medicines (in original containers) with little advertising at 37 pharmacy drop-off locations in six counties since October 2006. In a six month study done between July and December 2009 at the Bartell Drugs pharmacy in the Queen Anne neighborhood of Seattle, a total of 216 people brought in 177 pounds of medicines. This averages to about 0.82 pounds of unwanted medicines per person. For more information, see <http://www.medicinereturn.com>.

Unwanted medicines in our homes increase risk of drug abuse and diversion

Medicines have become more popular for abuse than other illegal drugs. Access to these drugs is easy—usually as close as the home medicine cabinet.

- Over half of the people using prescription drugs for nonmedical reasons obtained them from a friend or relative.

Source: Substance Abuse and Mental Health Services Administration (2007). Results from the 2006 National Survey on Drug Use and Health: National Findings. Office of Applied Studies, NSDUH Series H-32, DHHS Publication No. SMA 07-4293. Available online at: <http://www.oas.samhsa.gov/nsduh/2k6nsduh/2k6Results.cfm#TOC>, accessed 08/25/08.

- 15 percent of 10th graders in Washington who abused prescription pain relievers got them from their own home or someone else's home without permission.

Source: RMC Research Corporation. (2009). Washington State Healthy Youth Survey 2008: Statewide Results, Grade 10. Available online at: <http://www.hys.wa.gov/Reporting/Default.aspx>, accessed 10/16/2009.

- More than three in five teens say prescription pain relievers are easy to get from parents' medicine cabinets; half of teens say they are easy to get through other people's prescriptions; and more than half (52%) say prescription pain relievers are "available everywhere." The majority of teens (56%) agree that prescription drugs are easier to get than illicit drugs.

Source: Partnership Attitude Tracking Study (PATS). 2006. Teens in grades 7 through 12, 2005. Partnership for a Drug-Free America. Available online at: http://www.drugfree.org/Files/Full_Teen_Report

- Abuse of prescription drugs is a growing problem among teens.

- Prescription drugs are the drug of choice among 12- and 13-year olds.
- New abusers of prescription drugs are now as common as new users of marijuana.
- Pain relievers like OxyContin and Vicodin are the prescription drugs most commonly abused by teens.
- One third of all new abusers of prescription drugs in 2005 were 12- to 17-year olds.

Source: Office of National Drug Control Policy, Executive Office of the President, January, 2008. Prescription for Danger: A Report on the Troubling Trend of Prescription and Over-the-Counter Drug Abuse Among the Nation's Teens. Available online at: http://www.theantidrug.com/pdfs/prescription_report.pdf, accessed 11/20/08.

See also: Office of National Drug Control Policy web site > Drug Facts > Prescription Drugs. At http://www.whitehousedrugpolicy.gov/drugfact/prescriptn_drugs/index.html

- More than one in ten Washington State 10th and 12th graders used prescription pain medications to get high in the past 30 days.

Source: Washington State Department of Social and Health Services, Division of Alcohol and Substance Abuse. Tobacco, Alcohol, & Other Drug Abuse Trends in Washington State – 2008 Report. Available online at: <http://www.dshs.wa.gov/pdf/hrsa/dasa/2008-Trends%20Report.pdf>

- There were an estimated 3.4 million residential burglaries in the United States during 2004, and there is evidence to suggest that prescription drugs are a major target in a significant portion of these crimes. The four items typically sought in residential burglaries are cash, jewelry, guns, and prescription drugs.

Source: Inciardi, J. A., Surratt, H. L., Kurtz, S. P., & Cicero, T. J. (2007). Mechanisms of prescription drug diversion among drug-involved club- and street-based populations. *Pain Medicine*, Volume 8. pg 171–183.

Storing unwanted medicines in our homes contribute to accidental poisonings

Accidental poisonings are a significant health care problem and expense in our state. Residents who store or save their unneeded medications in their homes are increasing risks of accidental poisonings.

- Pharmaceutical products most frequently implicated in poisoning are those which are most frequently prescribed and are consequently in the home.
Source: Repetto, M. R. (1997). Epidemiology of poisoning due to pharmaceutical products, Poison Control Centre, Seville, Spain. *European Journal of Epidemiology*, Volume 13, Number 3. pg 353.
- An estimated 71,224 emergency department visits were made annually in the United States by children aged ≤ 18 years for unintentional medication overdoses. "Medication overdoses are most common among two-year-olds," adds lead researcher Dr. Daniel Budnitz, director of the CDC's Medication Safety Program in the division of health-care quality promotion. "About one out of every 180 two-year-olds visits an emergency department for a medication overdose each year."
Source: Schillie, S.F., Shehab, N., Thomas, K.E., Budnitz, D.S. (2009). Medication Overdoses Leading to Emergency Department Visits Among Children. *American Journal of Preventive Medicine*, Volume 37, Issue 3, September 2009, pg. 181-187
- In Washington State, accidental poisonings have grown 395 percent since 1990, with 85 percent of unintentional poisoning deaths involving medications in 2006.
Source: Washington State Dept of Health (June 2008). "Poisoning and drug overdose." *Washington State Injury and Violence Prevention Guide*. DOH Publication No: 530-090. Available online at: <http://www.doh.wa.gov/hsqa/emstrauma/injury/pubs/icpg/DOH530090Poison.pdf>, accessed 10/29/09.
- Thirty two percent of poisoning deaths in Washington children were caused by someone else's prescription medication and 26 percent were caused by over-the-counter medications. The second leading cause of injury hospitalization for Washington children 0 – 17 years old was injuries from poisonings. The 15 – 17 age group had the highest injury rates from poisoning.
Source: Sabel, J. (2004). *Washington State Childhood Injury Report – Poisoning Chapter*. WA DOH. Available online at: http://www.doh.wa.gov/hsqa/emstrauma/injury/pubs/wscir/WSCIR_Poisoning.pdf, accessed 12/4/09.
- More than half of the exposure calls reported by the Washington Poison Center involved children under six, and almost half of these children were poisoned by medicines. The elderly are also at risk of accidental poisonings. In 2007, over 7,000 calls to the Poison Center were from the older adult population and 66 percent of these involved medications.
Source: WA Poison Center. (2008). *WAPC Resources & Data* Available online at: http://www.wapc.org/resources/wapc_resources.htm, accessed 10/22/09.
- ER visits in Seattle for non-medical use of prescription opiates went up 47 percent from 2004 to 2007. Emergency department reports indicate that 3,529 visits in 2006 were caused by prescription opiate medications.
Source: Banta-Green, C, et al. (2007). *The Use & Abuse of Prescription-Type Opiates in Washington State*, Alcohol and Drug Abuse Institute, University of Washington. Available online at http://depts.washington.edu/adai/pubs/arb/PrescriptionOpiates_March30_2007.pdf, accessed 12/4/09.
See also: Warner M, Chen LH, Makuc DM. (2009) Increase in fatal poisonings involving opioid analgesics in the United States, 1999-2006. NCHS data brief, no 22. Hyattsville, MD: National Center for Health Statistics. <http://www.cdc.gov/nchs/data/databriefs/db22.htm#citation>

Compiled 12/2009 from literature research conducted by members of the Medicine Return Project in Washington, www.medicinereturn.com.

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