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[Dan Rutz] I'm your host, Dan Rutz and today I'm with Dr. J. Todd Weber, an associate editor of Emerging Infectious Diseases. Dr. Weber is also the director of CDC's Office of Antimicrobial Resistance and we're discussing leftover antimicrobial drugs in homes.

Todd, I've read in Emerging Infectious Diseases October 2006 issue an article entitled Antimicrobial Drugs in the Home, United Kingdom. Researchers report that 44% of the persons surveyed had leftover antimicrobial drugs in their homes and admitted keeping them in case of future need.

Well, what are the dangers of keeping antimicrobial drugs in the home?

[Todd Weber] Dan, there are a number of dangers. Parents should know that leftover drugs are dangerous because they may be accidentally ingested by children. Either adults don't keep the bottles properly closed and stored or because even young kids can sometimes open childproof lids.

Patients may use the drugs after their expiration date.

The leftover drugs may be taken for the wrong reasons. For example, someone may have a viral infection and self-prescribe the leftover antimicrobial that was prescribed for a bacterial infection. But that drug will have no effect against a viral infection.

Drugs that are leftover might be given to or taken by someone else who may have a serious allergy to the medicine and who, for that reason, would not be prescribed the medicine under the supervision of a physician.

Finally, inappropriate use of drugs promotes drug resistance if the drug is taken for the wrong indication, the wrong duration, or in the wrong dosage.

[Dan Rutz] Todd, what can people do about this? How can the situation be improved?

[Todd Weber] I think physicians, patients, and parents of patients can take steps to improve the situation. First of all, physicians should prescribe the drug only when appropriate, only in the correct amount, and only for the correct duration.

Also, the physician must stress to the patient that the full course of the drug must be taken. This is recommended even if symptoms resolve before the end of the prescription. And parents of children on antibiotics need to ensure they complete their course as well.

[Dan Rutz] Now that may be the ideal but in the real world we know that sometimes there's going to be some of these drugs leftover or left around the house. What then?

[Todd Weber] That's right and that's exactly what these researchers found. There were leftover drugs, even though prescriptions may have been appropriate. If, for any reason, some drug is left over, the patient should dispose of the drug and the safest way to do that is to return leftovers to the pharmacy.

[Dan Rutz] Let's talk briefly about some of the other implications this report has regarding the appropriate use of antimicrobial drugs.

[Todd Weber] Well, Dan, these researchers found that many prescriptions that are filled at the pharmacy are not completely used by the patient and remain in the patient's home. The authors wrote that this finding of high levels of leftover antimicrobial drugs suggests that prescription does not equate to use. Since many epidemiologic studies measure antimicrobial usage by focusing on the number of prescriptions written and filled, this finding indicates the studies might overstate drug usage as well as miss all the reasons and circumstances under which patients are taking their drugs.

[Dan Weber] Important points and I thank you, Dr. Weber, for your comments.

The article that we've been talking about, Antimicrobial Drugs in the Home, United Kingdom, was written by Cliodna A.M. McNulty, Paul Boyle, Tom Nichols, Douglas P. Clappison, and Peter Davey. The article is available entirely online from www.cdc.gov/eid

Comments on this interview may be sent to [eideditor](mailto:eideditor@cdc.gov) (that's one word, [eideditor](mailto:eideditor@cdc.gov))@cdc.gov.

This is Dan Rutz for CDC and Emerging Infectious Diseases. Thanks for joining us.

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