



Epidemiology and Economic Burden of Serious Adverse Drug Reactions

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DESCRIPTION

Adverse Drug Reactions (ADRs) are suspected to be drug-related that occur after administration of a drug or drug combination under conditions of normal use. ADR usually requires stopping the drug or reducing the dose. An adverse event is any harm that occurs while a patient is taking a drug, whether or not the drug is suspected to be the cause.

A side effect is any effect caused by a drug that deviates from its intended therapeutic effect, whether beneficial, neutral, or harmful. The term "side effect" is often used interchangeably with "ADR," although the former usually imply effects that are less harmful and predictable and do not require discontinuation of treatment. Drug toxicity describes the undesired effects of a drug that occur as a result of an accidental or intentional increase in dose or plasma concentration beyond the therapeutic range (drug overdose). Substance abuse is any recreational or it's drug abuse.

Adverse drug events result in approximately 1.3 million emergency room visits each year. Each year, approximately 350,000 patients are hospitalized after emergency visits for adverse drug events for further treatment. People usually take more medications as they get older, and the risk of adverse events can increase as more people take more medications.

Not surprisingly, adverse drug reactions are common. Most side effects are relatively mild and often subside when the drug is stopped or the dose is changed. Some people get better gradually

as their bodies adjust to the medication. Other side effects are more serious and last longer. Approximately 3%-7% of all hospital admissions in the United States are for treatment of adverse drug reactions. Side effects occur in 10% to 20% of hospitalized patients, and about 10% to 20% are serious. These statistics do not include the number of side effects that occur in people living in nursing homes and other care settings.

Although the exact number of adverse drug reactions is unknown, it is clear that they represent a major public health problem that is often preventable.

Gastrointestinal Disorders Lack of appetite, nausea, bloating, constipation, and diarrhea are particularly common drug side effects because most drugs are taken orally and pass through the digestive tract. However, almost any organ system can be affected. In older people, the brain is often affected, causing drowsiness and confusion.

In other words, ADRs can be unexpected or unwanted effects that are direct extensions of a drug's mechanism of action. Adverse effects of drugs are mostly non-immunologically mediated. They occur as a result of undesirable but known properties of drugs (thus completely predictable) or as a result of drug intolerance/idiosyncrasies (completely unpredictable). The former is much more common, accounting for approximately 80% of all adverse drug reactions. Less commonly, adverse drug reactions are manifestations of an immunological phenomenon known as allergic drug reactions.

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