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Medical and nursing students have traditionally been taught Hippocrates' dictum first do no harm. Unfortunately, unintentional patient harm at the hands of health care professionals has been the focus of recent studies, national investigations, and public attention. In the mid-1990s, several medical incidents that resulted in serious adverse consequences to patients were highly publicized, stimulating the interest and concern of the public and health care professionals regarding the safety of the health care system. The estimated financial cost of medical errors in the United States is approximately \$37.6 billion each year, with \$17 billion of these costs associated with preventable errors. One third of all medical errors involve medication errors, making these the most common cause of preventable medical errors.

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This article discusses the experiences of a community hospital on the path to improved patient safety. It focuses specifically on efforts to reduce adverse drug events through initiatives in developing a culture of safety. Tactics focus on creating the safety culture, medication reconciliation, failure mode effects analysis, controlled use of high-risk medications, and the use of standardized order sets.

Anita B. Crockett

Trends in prescription drug use are influenced by patterns of subtle disease and drug responses; influential consumer desires; variable drug testing and prescribing practices; questionable drug promotion impacts; and diminishing prescription drug insurance benefits and payment capabilities. Yet there is a definite overall trend toward increased prescription drug use. Representative types of drugs showing prescriptive changes are grouped into four categories of use, including: (1) health promotion, (2) primary prevention, (3) secondary prevention, and (4) tertiary prevention. In addition to addressing pharmacogenetics and therapeutic drug monitoring, health professionals need to promote shared decision-making during client education and appropriate prescribing. Nurses have long known the benefit of this cooperative approach.

## Strategies for Acquiring Affordable Medications for Seniors

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Kathy J. Morris

While Congress continues to debate issues related to Medicare drug benefits, senior citizens grow increasingly frustrated with their monthly medication bills. Many seniors are unable to afford all of their medications, and therefore find that they must choose between those that are the most helpful and those that have the greatest potential for severe medical consequences if missed. Options are available for helping senior citizens with this financial burden, but many seniors are either unaware or unable to avail themselves of the existing programs. Several pharmaceutical companies have developed programs for the medically needy based on income levels. Generic medications as opposed to trade names represent substantial cost savings. Many pills can be split, thus providing twice the dose for half the cost. Some community health centers offer access to prescriptions at decreased costs through federal programs. This article explores the various options available to senior citizens so that nurses may act as advocates for these patients.

## Antibiotic Resistance

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Maria A. Smith

Antibiotic use and abuse is linked to antibiotic resistance. Inappropriate prescription use and practices are global issues. Reasons for overuse of antibiotics include public expectations and patient demand for medication, lack of understanding about antibiotic effectiveness against illnesses of viral origin, health care provider desire to comply with patient requests, and provider diagnosis and uncertainty. Interventions to address antibiotic resistance include patient and provider education, use of established criteria for

prescribing antibiotics, use of hygiene measures and nonpharmacologic treatments, and continued surveillance.

## **Innovations in Antineoplastic Therapy**

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Roberta Kaplow

Innovations in the treatment of cancer are developed on a regular basis. The US Food and Drug Administration (FDA) frequently makes announcements about agents approved for either clinical trials or clinician use as part of the arsenal against cancer. Ongoing research in the basic sciences has led to an enhanced understanding of cancer. This knowledge has resulted in new key scientific advances to combat disease. This article reviews the antineoplastic therapies that have received FDA approval within the past 3 years.

## **New Developments in Antidepressant Therapy**

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Karen S. Ward

Depression is an overwhelmingly common problem in the United States. It is not only life threatening, but also costly, both personally and financially. Following a brief overview of depression, this article presents a variety of treatment modalities. Advantages and disadvantages of each intervention are explored along with suggestions for evaluating current and future advances in treatment options.

## **Multidimensional Pharmacologic Strategies for Diabetes**

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Ken W. Edmisson

Managing diabetes and its complications has become one of this country's largest health concerns. Diabetes care is complex and requires a multi-faceted approach including lifestyle management, diet and exercise, management of comorbid illnesses, and meticulous pharmacologic interventions. New guidelines for diabetes management have been established to provide for better health in patients who have diabetes.

## **Osteoporosis: Incidence, Prevention, and Treatment of the Silent Killer**

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Lynn C. Parsons

Osteoporosis is a significant health care concern for millions of Americans. This disease is characterized by low bone mass and deterioration of bone tissue, which can lead to fractures. Ten million Americans suffer from osteoporosis and another 34 million are estimated to have osteopenia (ie, low bone mass) which places them

at greater risk for osteoporosis. Osteoporosis is often thought of as a disease that affects only older women, but osteoporosis can occur at any age and in either gender. This article focuses on the incidence, prevention, and treatment of this "silent killer," and current pharmacologic advances are reviewed, including vitamin and mineral therapies.

## **Emerging Trends in the Management of Heart Failure: Beta Blocker Therapy**

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Jenny L. Sauls and Tom Rone

Heart failure is a serious condition in which the heart does not pump well enough to meet the oxygenation needs of the body. Millions of people suffer from this debilitating disease, and despite advances in treatment, 50% of those diagnosed die within five years. Current research indicates that beta blockers, specifically bisoprolol, metoprolol, and carvedilol, actually reduce morbidity and mortality of heart failure. Current guidelines published by the Heart Failure Society of America recommend the use of beta blocking drugs for the treatment of patients suffering with mild to severe symptoms of heart failure. These drugs should be used as a cornerstone of therapy in combination with diuretics and angiotensin-converting enzyme inhibitors to increase the quality of life for these patients.

## **Update on Antiviral Agents for HIV and AIDS**

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Linda W. Covington

The diagnosis and treatment of patients who have HIV and AIDS is challenging for most nurses. New pharmaceutical therapies, which are vital components of care for these individuals, are constantly evolving. Issues from weight loss and gain, heart disease, insulin resistance, and even increased bone metabolism must be considered when determining appropriate pharmaceutical regimens. New complications often arise with new treatments; living longer may not always mean living better. Use of appropriate drug therapy and management of individual drug implications can help patients who have HIV and AIDS live longer and enjoy a better quality of life.

## **An Evaluation of Children's Metered-dose Inhaler Technique for Asthma Medications**

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Patricia V. Burkhart, Mary Kay Rayens, and  
Roxanne K. Bowman

Children's metered-dose inhaler (MDI) technique for asthma medications was evaluated pre- and postteaching. A majority (92%) of

the children (N = 36) used their MDIs incorrectly during the pretest. The most common mistakes were: (1) not holding breath after actuation, (2) not waiting between inhalations, (3) inadequately shaking the medication, (4) not inhaling the medication fully, and (5) not using a spacer. The children made significant improvement in their MDI technique after receiving instruction ( $P < 0.001$ ). The results of this study underscore the importance of teaching and reinforcing accurate medication administration technique at each health encounter.