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## ■ Hospital water dangerous to weak patients

In a report to the *American Society for Microbiology*, Arkansas researcher Elias Anaissie says that hospital tap water contained bacteria and fungi in levels high enough to harm patients with weakened immune systems. This in spite of the fact that the water met all federal and state standards.

According to Anaissie, patients undergoing chemotherapy and the critically ill are most at risk for contracting life-threatening infections. Fungus and bacteria were found in tap water, in drains, on shower heads and under sinks in patients' rooms. In one hospital, water held in the hospital reservoir had a thin film of fungus floating on the surface.

The bacteria and fungus he found are usually airborne and can infect people when they breathe them in but they can also be transmitted through open wounds that are immersed in contaminated water.

“Since I made these findings,” Anaissie said, “I only drink filtered water.” Good advice indeed. ▲



## Hospital patients not told about recovery information

A study published in *The Archives of Internal Medicine* reports that many doctors seriously overestimate how much their patients understand about their continuing care needs after being released from the hospital.

The study involved 99 patients, all of whom were patients at Beth Israel Hospital in Boston, and their doctors. The patients all had been treated for myocardial infarction (heart attack) and pneumonia, both of which require a lot of treatment after hospital discharge.

Doctors felt 88.9% of their patients knew about the possible side effects of their medication but only 57.4% of the patients felt they understood. The researchers also found that the doctors felt 94.7% of their patients knew when to resume normal activities but only 57.9% of the patients knew when normal activity could resume.

The report concluded, “It is certainly possible that better understanding of the side effects of medication and of the appropriate time to resume normal activities would reduce the risk of unplanned readmission or improve other outcomes of care following hospital discharge.”

Every doctor's responsibilities include informing the patient of vital information that can affect their recovery. Every patient's responsibilities include asking as many questions as it takes to completely understand all the ramifications of their care to their health. ▲



## Hospital workers forget to wash hands between patients

The journal *Annals of Internal Medicine* reports in their January 19, 1999 issue that researchers have found that "noncompliance with handwashing is a substantial problem" in more than half of their contacts with patients.

The researchers are from the University of Geneva in Switzerland. In the study, they had infection control nurses observe the staff at one Geneva teaching hospital. In nearly 3,000 routine "handwashing opportunities" over a one month period, the staff was observed washing or disinfecting their hands in only 48% of required instances. A "handwashing opportunity" was defined as "all situations in which handwashing is indicated" as a way to prevent the spread of infection.

The study also found that physicians were three times more likely to neglect washing their hands as nurses, who had the best compliance of any of the healthcare workers observed at 52%.

Worse news was that the busier the hospital, the less handwashing occurred. In fact, intensive care units had the lowest compliance at 36%. This is most disturbing since seriously ill patients in intensive care units are among those most susceptible to hospital acquired infections.

The researchers also pointed out that the staff at the study hospital had been told about the research and may have improved their habits as a result. The authors speculate that "the real situation may be even worse than reported."

80,000 people die in the United States every year from nosocomial (hospital-acquired) infections. That's roughly 9 people every hour. 216 every day. That's about twice the number of people killed every day in automobile accidents. ▲

## ■ 90,000 deaths every year from hospital-acquired infections

In March, 1998, officials of the Centers for Disease Control and Prevention told the first International Conference of Emerging Infectious Diseases that 2,000,000 people suffer from hospital-acquired infections every year and up to 90,000 of those patients die as a result.

This statistic reflects the growing problem of antibiotic resistant bacteria. Fred Tenover, who is the director of the CDC's hospital pathogens research program says that 70% of hospital acquired infections are now resistant to at least one antibiotic with many more resistant to many or all antibiotics. Many of those infections will still respond to the strongest of the antibiotics, Vancomycin but there are signs that the bacteria are becoming resistant to it as well. CDC officials are concerned that it's only a matter of time until "superbugs" resistant to all antibiotics emerge.

Overuse and misuse of Vancomycin is increasing the rate at which the bacteria develop resistance. "Our survey showed that as much as 60% of the hospital prescriptions for this drug are not in accordance with the CDC guidelines," Tenover said. "They are using it in too many situations where it's neither necessary or appropriate." ▲

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## ■ Busy ER leads to medication errors in children

Reuters Health reported on October 18, 2002 that a recent study presented to the 2002 American Academy of Pediatrics Conference found that children treated at busy urban hospital emergency rooms run a high risk of medication errors which can lead to severe adverse outcomes.

The study was conducted at the Albany Medical Center in New York by Dr. Renee Rasmus and her colleagues. They reviewed more than 56,000 pediatric drug orders given by the emergency room over a 48 month period. A total of 176 “clinically significant” prescribing errors had been made during the time period studied. This rate amounted to 3.1 errors per 1,000 admissions.

According to Rasmus, this rate was “surprising, but expected. Albany Medical is a busy ER. We have resident doctors and academics writing orders in a very busy environment.”

Dosing errors were by far the most common error, comprising 82% of the total. Drug allergies, wrong formulations and wrong drugs made up the difference. 33% of the errors were potentially “serious” and 6% could have led to “potentially life-threatening” situations. 74% of the errors involved antibiotics.

“With pediatric patients, you need to prescribe the medication based on weight,” Rasmus continued. “And while weight was taken into account in the errors detected, for one reason or another, the math was done improperly or the weight was wrong.”

“I don’t think Albany Medical is unique,” she said. “I think that every ER that is seeing children that is busy is making these sorts of errors.”

## ■ Hospital-acquired mold infections may come from hospital water systems

Despite the increased use of special air filters that filter outside-air intakes, hospital patients are still experiencing increasing numbers of hospital-acquired mold infections. Previous reports have indicated that hospital water systems can colonize such molds says the April 1, 2003 issue of the journal *Blood*.

Researchers at the University of Arkansas for Medical Sciences examined mold levels in various environmental samples from a bone marrow transplantation unit which uses the best air filtration protocols. 70% of 398 water samples, 22% of 1311 surface swabs and 83% of 264 indoor air samples harbored molds.

The airborne molds were at the highest concentrations in rooms where water was used a lot, such as bathrooms. The airborne mold strains closely resembled the ones present in the water systems.

The researchers suggest that providing patients with sterile water for drinking, sterile sponges for bathing and thoroughly cleaning shower room floors would be “an effective and inexpensive approach to prevent exposure to waterborne molds.”

Commentary: Goodness. We would certainly hope that hospitals wouldn't need to be told to clean the shower floors. But you never know.

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## ■ Autopsies Reveal Missed Diagnoses

A report in the June 2003 issue of the Journal of the American Medical Association says that U.S. researchers estimate that up to 24 percent of autopsies discover a previously undiagnosed condition, many of which may well have been the cause of the patient's death.

The lead researcher of the study was Dr. Kaveh G. Shojania of the University of California, San Francisco. He says that between four and seven percent of the autopsies that detect diagnostic errors detect class I errors, those that indicate that the patient may have survived had they been properly diagnosed.

This means that of the 850,000 people who die in hospitals in the U.S. each year, 34,850 may have survived had they been diagnosed correctly.

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## ■ Drug reactions cost hospitals millions

The January, 1997 issue of the *Journal of the American Medical Association* reports that a typical U.S. teaching hospital spends approximately \$5 million extra on problems associated with drug reactions and the resulting longer hospital stays. About half of this expense is likely due to hospital error.

The study says that 1.4% of patients will experience a negative drug reaction, resulting in an increased hospital stay at a cost of \$4,685.00 per patient. ▲

# ■ Preventable Medical Error Death Estimates Double

On July 27, 2004 the news service HealthDayNews reported that the estimated number of people in the United States who die each year from preventable medical errors in hospitals has more than doubled from previous estimates of 98,000 per year to more than 195,000.

The previous estimate came from the Institute of Medicine (IOM) in 1999. The current report was produced by HealthGrades, Inc., a health-quality ratings company. IOM representatives confirmed the new estimates saying their 1999 estimates were always considered to be on the conservative side.

In the study, 37 million Medicare patient hospital records from 2000 to 2002 were reviewed. The data showed there were about 1.14 million “safety-related incidents” associated with 323,993 deaths. 81% of those deaths were specifically attributable to an incident. One in every four Medicare patients who experienced an incident died.

The report also found that 60% of all “safety-related incidents” were the result of “failure to rescue” (that is, the failure to diagnose and treat a condition that developed in the hospital), bedsores and post-operative sepsis and infection.

According to the authors, during the time frame of the study, 2000 to 2002, the 575,000 preventable deaths that occurred cost American consumers an extra \$19 billion.

Lead author, Dr. Samantha Collier said, “The magnitude of this is significant. We need to address this and we need to have support from the medical community.”

“I think it’s a safe bet to say that we’ve maybe gotten a little complacent about patient safety in the medical community, and this is just re-sparking and refueling debate around how to address this,” she said. “Hopefully, it is creating a sense of urgency.”

# ■ Hospital Accrediting Agency Misses Problems

A July 2004 report by the United States Government Accountability Office (GAO) says that the Joint Commission on Accreditation of Healthcare Organizations, which is responsible for inspecting hospitals and approving them to receive Medicare payments, missed many potentially dangerous problems during routine inspections.

The commission is a private organization made up of 28 people representing doctors, other health care professionals and hospitals. It is the only accrediting agency the government has no authority over and hospitals approved by the commission are automatically eligible to participate in Medicare.

Problems the commission missed included substandard patient care, medications being given without physician orders, unsanitary environments that enabled transmission of infections and communicable diseases, failed medical instrument sterilization programs and unsafe fire conditions.

82% of hospitals in the U.S. were approved by the commission in 2002.

U.S. Representative Pete Stark of California is co-sponsor of legislation introduced that will increase Medicare's authority over the commission. "While more may need to be done, the legislation we're introducing today will improve accountability by establishing a clear chain of command within the hospital oversight process. It will help assure that taxpayer dollars are being spent in facilities that meet Medicare's standards."

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## ■ Doctor Owned Specialty Hospitals Faulted

The April 7, 2005 issue of the New England Journal of Medicine says that doctor owned specialty hospitals, such as those that offer cardiac procedures, are no better than the local community hospitals.

Lead author Dr. Peter Cram, assistant professor of medicine at the University of Iowa, says even though the specialty hospitals have produced studies showing lower death rates and shorter hospital stays, those studies are deceptive.

Cram cites the fact that specialty hospitals only admit patients who are healthier, wealthier and have better insurance coverage leaving the sicker patients for the community hospitals.

He also says that after accounting for differences in patient health and a higher volume of patients seen, there are no statistical differences in outcome. He goes on to say that while specialty hospitals do discharge the patients faster, “they do not have lower costs for Medicare patients than community hospitals.”

A Congressional moratorium on construction of new specialty hospitals is set to expire in June, 2005. Experts say this report is timely since they anticipate many new facilities being set up after the moratorium expires.

Ellen Pryga, policy director for the American Hospital Association says this study reinforces the idea “that there aren’t any really significant contributions coming from this particular delivery model that would warrant the kind of extreme treatment they get under government regulatory and payment policy.”

## ■ Hospital Computer Keyboards Can Transmit Resistant Bacteria

A study presented to the 15<sup>th</sup> annual scientific meeting of the Society for Healthcare Epidemiology of America on April 11, 2005 reports that hospital computer keyboards and keyboard covers can allow the spread of resistant bacteria to gloved and ungloved hands and as a result, to patients.

Senior researcher Gary Noskin, MD says “there’s been an increasing trend towards maintaining electronic health records and computerized order entry, and in some hospitals there’s now a computer in every patient’s room that could potentially serve as a reservoir for the transmission of resistant bacteria.”

In the study, researchers contaminated clean keyboards and keyboard covers with various antibiotic resistant strains of bacteria. Samples drawn from the surfaces at regular intervals indicated that some bacteria, such as methicillin-resistant *Staphylococcus aureus* (MRSA) were still thriving after 24 hours.

Next, the researchers wanted to confirm that the contamination could be transmitted to fingers. It was no surprise that transmission increased with more keyboard contact. In the case of MRSA, up to 92% of keyboard touches resulted in transmission after only 1-5 touches. The transmission rate was also higher for ungloved hands (with their built-in ridges and fingerprints) than gloved.

Another problem is that the mild cleaners recommended by computer manufacturers are not enough to kill the resistant bacteria and researchers are unsure whether or not the equipment will hold up under repeated use of harsher hospital chemicals.

Commentary: Our suggestion is to keep yourself healthy so that you do not end up in a hospital. If you do find yourself in one, make sure that anyone who has contact with you washes their hands before coming near you or after touching computers, bedrails, phones and blood pressure cuffs.

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## ■ Medical Errors Worsening

A May 2, 2005 report issued from Colorado-based Health Grades Inc. finds that deaths from medical errors, particularly those from hospital acquired infections, are on the increase even though the problem is much more recognized than in previous years.

According to the report, “Hospital-acquired infection rates worsened by approximately 20 percent from 2000 to 2003 and accounted for 9552 deaths and \$2.6 billion, almost 30 percent of the total excess cost related to the patient safety incidents.”

The report found that more than 300,000 patients died after experiencing some kind of hospital-related incident between 2001-2003. More than 80 percent of those deaths could be directly attributed to the incident.

A hospital’s infection rate “correlated most highly with overall performance...suggesting that hospital-acquired infection rates could be used as a proxy of overall hospital patient safety.”

“For patients, it’s important to know which hospitals meet this standard, as they are nearly 200 percent less likely to have an incident at hospitals in the top 10 percent.”

## ■ 12,000 Pennsylvania hospital patients got infections in 2004

The Associated Press reported on July 13, 2005 that the Pennsylvania Health Care Cost Containment Council found that nearly 12,000 Pennsylvania patients contracted infections during their hospital stay in 2004. Nearly 1800 of them died as a result.

The report went on to say that hospital infections also added an additional \$2 billion in cost and extended patient stays by 205,000 days. Those numbers are based on a analysis of 1.6 million admissions to 173 general acute care hospitals in the state in 2004.

Pennsylvania, along with Florida, Illinois, Missouri, Nebraska and Virginia require hospitals to report hospital acquired infections.

The Council's executive director, Marc P. Volavka, says, "the deaths associated with those patients and the costs associated with those patients are astounding. These numbers, even on their own, stand as a clarion cry to take action."

Compounding the problem, officials suspect the actual numbers are even higher because of inconsistencies in the quarterly reports on four types of infections that hospitals are required to file.

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## U.S. Leads The World In Medical Errors

The November 3, 2005 issue of the internet journal Health Affairs reports that patients in the United States reported higher rates of medical errors and more disorganized doctor visits than people in other countries around the world.

The study was a phone survey of patients who had experienced some kind of serious health issue that required “intense” medical treatment or hospitalization.

Thirty-four percent of U.S. patients reported that they received the wrong medication, improper treatment or incorrect or delayed test results during the last two years.

Thirty percent of patients in Canada reported similar results along with 27 percent of Australian patients, twenty-five percent in New Zealand, 23 percent in Germany and 22 percent in Britain.