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House Oversight and Government Reform Committee
On Healthcare -Acquired Infections
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Consumers Union, nonprofit publisher of *Consumer Reports*, appreciates the opportunity to comment to the Committee about the serious problem of health care-acquired infections.

Five years ago, Consumers Union launched a national campaign, www.StopHospitalInfections.org, advocating for public disclosure of hospital-acquired infection rates to inform people about the safety of their hospitals and to mobilize hospitals to do more to prevent infections occurring in their facilities. We also advocate for screening hospital patients for methicillin-resistant *Staphylococcus aureus* (MRSA) as a means to prevent its spread to other vulnerable hospital patients.

Twenty-two states now have laws requiring reporting of hospital infection rates, an "outcome measure" that we believe is the best measure of the overall effectiveness of a hospital's infection control program. Also, three states (IL, PA, NJ) require hospitals to use life-saving protocols to prevent the spread of MRSA, including screening incoming patients who are at high risk for carrying MRSA.

CONGRESSIONAL / FEDERAL RESPONSE TO HEALTH CARE-ACQUIRED INFECTIONS

Currently, five bills have been introduced to establish a national infection reporting law and more aggressive MRSA infection prevention, including some patient screening and well researched and tested protocols. A listing of the bills is attached to this testimony. We are encouraged with this interest by Congress and strongly support a national law requiring all US hospitals to report their infection rates and to require hospitals to screen patients for MRSA and follow protocols to prevent its spread. The states have proven to be good laboratories in which many issues have been debated such as which infections hospitals should initially report, how the data is analyzed and when the reports should be published. The groundwork done in the states will help to guide a national reporting system.

Another federal activity that has stimulated activity around the country is the Centers for Medicare and Medicaid Services (CMS) "no-payment" rules which go into effect in October 2008. This rule halts hospital payments for patient care required due to harm the hospital caused, or hospital-acquired conditions. It also prohibits billing patients for these services. Several hospital-acquired infections are on the list: catheter-associated urinary tract infections, vascular catheter associated infections, and mediastinitis, a type of infection from Coronary Artery Bypass Graft (CABG) Surgery.

However, now, almost a year after adopting the rule, several states have adopted similar policies for their Medicaid programs, numerous private insurers have announced they will no longer pay for these hospital-acquired conditions, and some hospitals are no longer charging for the services associated with them. This demonstrates the incredible power that CMS has to change the behavior of hospitals and the way our health care system responds to these preventable infections, but rarely has used in the last 30 years.

Unfortunately, there has been a consistent lack of strong leadership in the federal government to fight hospital-acquired infections. The work that has been done rarely focuses on the public interest or demonstrates sensitivity to the years of horrific and painful recovery an infected patient must endure. Rather, it has focused more on the need of the health care providers than the threat to the public – with voluntary reporting and limited visible enforcement of Medicare's requirement that hospitals implement infection prevention policies. The Hospital Compare site now publishes how often hospitals use proven surgical infection prevention techniques – but the public needs to see outcome measures, such as infection rates, to get a real sense of the effectiveness of their hospitals' infection control programs.

The Centers for Disease Control and Prevention leaps into action when cases of other infectious diseases – TB, measles – affect significantly fewer people. CDC does respond at times to hospital outbreaks, but not in the highly visible way they respond to other infectious disease cases. Further, most infections are not identified in an outbreak situation, rather, they have become routine in our nation's hospitals. This is where CDC could use its power to affect change – by strongly coming out with a zero tolerance campaign against hospital-acquired infections. The agency has significantly increased the amount of information available to the public in the last few years and has developed an updated system for collecting information about infections occurring across the country. Another major responsibility of CDC is to develop infection prevention guidelines – yet these often take years to develop and fail to establish a clear gold standard of policies for hospitals to follow. There is a great need for translation of these often incomprehensible policies to the front line workers who must implement them. Numerous definitions that are used to identify when an infection is hospital-acquired are outdated or lead to inaccuracies in identifying hospital-acquired infections. For example, the definition of ventilator associated pneumonia, among the most common and deadly infections, is pages long and, if followed, over reports the problem. Most hospitals find the definition unusable and infection control professionals have been pushing for the definition to change for years.

There have been many missteps and lost opportunities in the past, but it is important to seize the opportunity for change now that public attention and policymakers' interest in this problem is high. It is essential for federal agencies to make it a priority to stop the millions of injuries and deaths that these infections cause. In addition, CU is concerned about evidence indicating that African Americans suffer two times the rate of MRSA infection as whites. We urge this committee to investigate the reasons for these disparities, and seek ways to reduce and eliminate risks of infection.

THE IMPORTANCE OF PUBLIC REPORTING

Public Reporting stimulates change and brings attention to issues that were previously hidden. When state legislators began responding to our activists' requests to

take action against hospital-acquired infections, it stimulated a public discourse on the subject throughout the country and put this problem front and center where it should be.

An effective tool in creating change, public reporting serves many purposes. It satisfies patients' right to know about the safety of their local hospital and helps them have more informed conversations with their physicians and make more informed health care choices. It informs hospitals and other providers about how they compare to their competitors. Public reporting laws standardize definitions and collection techniques so that the information presented to consumers allows for fair comparisons. It educates about evidence-based medicine and the importance of understanding that health care outcomes matter and can be improved. Disclosure stimulates change within hospitals because it requires them to identify the problems as they are occurring. This is perhaps the most important result of public reporting, since most hospitals do the bare minimum of tracking infections. Monitoring selected infections in the ICU and selected surgeries is the standard in most American hospitals. But that is now changing because of reporting laws and other complementary initiatives, such as the Institute for Healthcare Improvement's campaigns to help hospitals implement life-saving protocols that prevent infections and other unwanted outcomes.

Finally, public awareness of performance can stimulate community pressure for change. So, even a town with only one hospital can see how its hospital is performing compared to other similar hospitals in the state or nation. This happens through the public forum of local media, conversations among providers, and citizen activism.

THE COST OF HOSPITAL-ACQUIRED INFECTIONS

The cost of hospital-acquired infections can be assessed at numerous levels. The **human cost** is by far the greatest: each year nearly two million patients get an infection while being treated in our nation's hospitals, and almost 100,000 of them die.[i]

Cost to the health care system:

John Jernigan, Chief of Interventions and Evaluations at the Centers for Disease Control and Prevention (CDC), estimates the hospital costs for these infections to be as high as $27.5 billion each year. The cost of an infection depends on the type and how long it takes for a patient to recover, and it is difficult to pin down the actual costs because most estimates are based on "charges." Generally, the cost-charge ratio is estimated at 0.5 (so cost is about half of the charges); of course, this ratio can vary by hospital.[ii]

Most estimates only look at hospital costs, but the cost for each patient goes far beyond hospital care to include medications, home health care, doctors' services, physical therapy, wound care, etc.

The best public estimates we have to date are from Pennsylvania which reports rates on all four of the major types of infections (surgical site infections, blood-stream infections, ventilator associated pneumonia, and urinary tract infections) and reports on infections occurring throughout the hospital. The state also collected information directly from private insurers to get a more accurate picture of the actual costs to the health care system.[iii] The private insurance payments ranged from $27,000 for urinary tract

infections to $80,000 for blood stream infections.[iv] In 2005, Pennsylvania estimated the total charges for the state's infections at $1.4 billion.

Governor Schwarzenegger's office estimates the cost of hospital-acquired infections in California to be $3 billion. And, a Massachusetts Panel estimated the total cost of hospital-acquired infections in that state to be $200 million to $473 million.

Cost to Government.

The cost of hospital-acquired infections to state and federally funded health care programs is substantial and must be considered when looking at the investment needed for a public reporting system. The increased public and hospital awareness that comes with such a system will reduce infections and has the potential for saving significant taxpayer dollars.

While there are no comprehensive estimates to data on the Medicare costs associated with hospital-acquired infections, the recent "no-payment" proposal contained some statistics estimating the number of certain infections and their costs. The law required CMS to identify conditions that were of high cost and high volume to the Medicare program. In FY 2006 they identified the following Medicare incidences and costs:

- Catheter associated urinary tract infections: 11,780 cases at an average charge for the entire hospital stay of $40,347.
- Serious staph aureus infections: 29,500 cases at an average charge of $82,678.
- Clostridium difficile-associated disease (CDAD): 110,761 Medicare patients at an average charge of $52,464.
- Ventilator Associated Pneumonia (VAP) and Other Types of Pneumonia: 92,586 cases, average charge of $88,781.
- Methicillin-Resistant Staphylococcus Aureus (MRSA): 95,103 cases at average charge of $31,088.
- Surgical Site Infections: 38,763 with any type of postoperative infection at an average charge of$79,504.

Pennsylvania estimated that 68 percent of that state's hospital-acquired infections were paid for by Medicare and Medicaid.

State costs. A 2007 study by the Association of Professionals in Infection Control and Epidemiology (APIC), found that Medicaid was the payer for 11.4% of hospital-acquired infection cases nationwide. A 2005 Pennsylvania report analyzing who was paying for hospital-acquired infections in that state found that Medicaid paid for 9% of all hospital-acquired infections, accounting for 18% of the hospital charges for that state's infected patients. Pennsylvania estimated that the average charges for Medicaid patients with an infection were more than $391,000, while the average charges for Medicaid patients without an infection were just under $30,000. Oregon estimated that the excess Medicaid costs for hospital-acquired infections in that state exceeded $2.4 million in 2005.

INFORMATION ABOUT MRSA

In June 2007, the Association for Professionals in Infection Control and Epidemiology (APIC) released the first-ever nationwide analysis on the prevalence of

MRSA in U.S. healthcare facilities based on data collected from more than 1,200 hospitals in all 50 states. The APIC report found that MRSA hospital-acquired infections are 8.6 times more prevalent than previous estimates and those MRSA infections are found in all wards throughout most hospitals. This is significant as APIC found that less than half (45 percent) of hospitals are tracking infections throughout the hospital – the rest are focusing only on intensive care, surgical, or high risk nursery patients.[v]

An estimated 95,000 people developed MRSA infections in 2005, according to CDC researchers.[vi] Hospitalizations due to MRSA infections have doubled in recent years. Between 1999 and 2005, the number of patients hospitalized with MRSA infections went from 127,000 to almost 280,000.[vii]

While MRSA once affected primarily the sick and elderly in hospitals, according to many published reports it has now spread outside of these facilities. The bugs, typically different strains than the types found in hospitals, are striking young, healthy people through contact with infected skin mainly by sharing towels or other personal items. However, the community strain is now being spread in hospitals when patients unknowingly carry it in and it is then carried to other patients by health care workers.

Though reports of community-acquired MRSA infections are increasing, recent CDC sponsored research shows that 85 percent of such infections are picked up in the hospital or some other health care setting.[viii]

Patients who develop MRSA infections end up staying longer in the hospital, have higher medical care bills, and are more likely to die from their infection. A study by the Pennsylvania Health Care Cost Containment Council found that hospital patients with MRSA infections are four times as likely to die, will stay in the hospital two and a half times as long, and are charged three times as much compared to patients without MRSA.[ix]

As MRSA infection rates have climbed, more and more attention has focused on preventing the spread of these superbugs. In addition to strict hand hygiene, successful strategies for controlling MRSA include screening patients using active surveillance cultures (quick turn around cultures from nasal swabs), isolating patients colonized with MRSA, observing strict hand hygiene compliance, using gowns, gloves, and in some cases masks when treating them, and routine decontamination of patient rooms and operating rooms.[x]

Many hospitals in northern Europe have used these strategies to successfully control MRSA infections for decades. MRSA made up 33 percent of all staph infections in Denmark in the 1960s, but has declined steadily after aggressive control practices were instituted and has hovered around 1 percent for the past 25 years.[xi] Likewise, the prevalence of MRSA has been kept under .5 percent in both Finland and the Netherlands.[xii]

APIC found that only 29 percent of infection control professionals it surveyed for its 2007 MRSA prevalence study reported that their hospitals used active surveillance cultures to identify patients who are colonized with MRSA. Fifty percent of the infection control professionals surveyed said their hospital "was not doing as much as it could or should to stop the transmission of MRSA."[xiii]

A number of hospitals in the U.S. following this "bundle" of MRSA infection control strategies have documented impressive results. A pilot program at the Veterans Health Administration's (VHA) Pittsburgh Healthcare System in Pennsylvania in 2001 has reduced infections in the hospital's surgical unit by 70 percent.[xiv]

All patients admitted to the hospital underwent a nasal swab upon admission to screen for MRSA. Patients who tested positive were isolated from other patients and were treated by health care workers who wore disposable gowns, masks, and gloves. Medical equipment – like stethoscopes and blood pressure cuffs – was disinfected after each use. Patients received another nasal swab right before discharge to see if they developed a MRSA infection during treatment.[xv]

This pilot was so successful that the VHA issued a directive in January 2007 "to interrupt the chain of transmission of MRSA" by requiring all of its 150 hospitals to follow this MRSA protocol. Initially, the directive required screening patients in intensive care units, then in other high risk units such as transplant units and general surgical wards, and continuing to phase in other units of the hospitals "until all inpatient areas (with the exception of inpatient psychiatry) are incorporated in the initiative."[xvi]

The University of Pittsburgh Medical Center has reduced MRSA in its intensive care units by 90 percent using this approach[xvii] and significant results have been documented at the University of Virginia Health System[xviii] and Evanston Northwestern Healthcare in Illinois.[xix]

The effectiveness of MRSA screening efforts at three hospitals in the Evanston Northwestern Healthcare system were documented in a study published on March 18, 2008 in *Annals of Internal Medicine*. Researchers studied MRSA interventions and found that universal screening of all patients upon admission resulted in an over 50 percent reduction in hospital-acquired MRSA infections.[xx]

Another study published recently in the *Journal of the American Medical Association* concluded that MRSA screening of surgical patients was not effective for preventing surgical infections. However, this study did not measure the impact on the spread of infections throughout the hospital, rather it only measured infections among the surgical patients screened. The study revealed that the results of 31 percent of the patients' tests were not received prior to their surgery, thus negating the benefit of screening. Further, the study actually found those patients who were pre-screened and who got results prior to surgery, were able to receive the appropriate preventive antibiotics for MRSA and to "decolonize" prior to surgery. In this group, no infections occurred.[xxi]

Critics argue that this bundled approach for controlling MRSA is too expensive. But numerous studies have shown that screening and isolating patients who test positive for MRSA ends up saving money by preventing infections that would result in even higher costs for patients and hospitals.[xxii] For example, the infection control program at Evanston Northwestern saves the hospital $25,000 in uncovered medical costs per patient every time a MRSA infection is prevented.[xxiii]

Similarly, a recent analysis found that hospitals nationwide would save over $231 million annually if all elective surgery patients were screened for MRSA upon admission and proper precautions were taken with those found colonized with MRSA.[xxiv]

HOSPITAL-ACQUIRED INFECTION REPORTING IN THE STATES

Twenty-two state laws require reporting of the rate of various types of infections: CO, CT, DE, FL, IL, MD, MN, MO, NH, NY, NJ , OH, OK, OR, PA, SC, TN, TX, VA, VT, WA, and WVA. Several other states do not report rates but have various other requirements: CA & RI report information about the processes hospitals use to prevent infections; AR reporting is voluntary with aggregated public reports (not hospital-

specific); NV, NE hospitals send confidential reports to a state agency. So far five states have issued reports (FL, PA, MO, SC, VT) which can be viewed at http://www.consumersunion.org/campaigns/stophospitalinfections/learn.html.

Most of the states are planning to use the CDC National Healthcare Safety Network (NHSN) as the data collector (including CO, CT, NJ, NY, OR, PA, SC, TN, VA, VT, WA). While NHSN is a voluntary, confidential reporting system, the laws in these states establish the requirement to report infection rates. The hospitals send data to NHSN and then provide the analyzed information from NHSN to the state agency responsible for the public reports. NHSN has developed with these emerging state laws in mind and facilitates the process of sharing of data between state agencies and hospitals. This is an update of a system that was in place at CDC for more than 30 years. That prior system had limited capacity (315 hospitals) while NHSN states that it will be able to handle every hospital in the country. However, reports from participating hospitals around the country indicate that the data input is slow and highlights the importance of sufficiently funding this resource at CDC.

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[vii] Klein, p. 1840.

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