

# Simple shifts in antibiotic prescribing patterns can reduce resistant infections

By ACSH Staff — March 6, 2014



The Center for Disease Control s (CDC) ongoing efforts to

prevent and control the spread of antibacterial-resistant infections has yielded new areas of intervention. They report doctors in some hospitals are prescribing three times more antibiotics than physicians treating similar patients in other institutions. The variability in practice indicates that in many common circumstances, antibiotic use can be improved [by more than 30%](#), <sup>[1]</sup> according to the agency s recent analysis.

The CDC evaluated data from the MarketScan Hospital Drug Database, which suggested in 2010, 55.7% of patients discharged from a sample of 323 hospitals received antibiotics during their inpatient stay. Moreover, their own [Emerging Infections Program](#) <sup>[2]</sup> enumerated 49.9% of all treatment antibiotics were prescribed in one or more of three scenarios: lower respiratory infections, urinary tract infections (UTI), or presumed resistant Gram-positive infections. In analyzing antibiotic prescription for frequent and common conditions such as UTIs, health officials found antibiotic use could have been improved in 37.2% of the cases. CDC Director Dr. Tom Frieden explains, In UTI, for instance, doctors should be certain that the patient has an infection rather than simple colonization. He goes on to elaborate that urine cultures are often teeming with bacteria, however, this alone does not amount to infection.

Frieden s recommendation and CDC reports follow a simple and successful hospital intervention for asymptomatic bacteriuria (the presence of bacteria in the urine but absent evidence of actual infection), implemented by Canadian researchers. Dr. Jerome Leis and colleagues of Sunnybrook Health Sciences Centre in Toronto describe in [Clinical Infectious Disease](#) <sup>[3]</sup>, The change was simply not to routinely report the result of urine cultures to doctors. Instead, doctors were told to call the microbiology lab for results if an infection was suspected on clinical grounds.

Therefore, variable and unnecessary prescription of antibiotics can be abated with simple shifts in practices. Indeed, this realization has brought about the need for antibiotic stewardship programs in all hospitals, which Dr. Frieden predicts will save lives and [they] also save money. These programs would in effect track antibiotic prescription, thereby eliminating antibiotic abuse in hospitals.

Furthermore, to promote antibiotic stewardship efforts, the CDC is [seeking \\$30 billion from the federal government](#) [4]. The funding would allow the opening of specialized laboratories in five parts of the country to help local hospitals more quickly diagnose and combat drug-resistant infections, says Dr. Frieden. In addition, the labs would offer rapid mapping of all of the bug's genes to better spot outbreaks, and the program would work to help hospitals and communities tackle the problem. The monetary investment is expected to help in fighting all infections; however, Clostridium difficile (C. diff) infections, an intestinal bacterium, are projected to decrease by half. This alone will prevent 20,000 deaths, 168,000 hospitalizations and over \$1 billion in healthcare costs.

ClosACSH's Dr. Gil Ross had this to say: It is undeniable that too many antibiotics are being prescribed based on scanty or no evidence of actual bacterial infection, both in- and out-of-hospital. Some effort and expenditure to remedy this situation is, as the CDC's Frieden asserts, called for. I question, however, the need for the humongous amount thirty Billion dollars to educate doctors about proper antibiotic use? to accomplish this task. I am certain the CDC's mega-computers tasked with modeling this expenditure were working overtimes to justify such an item.

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**Links**

[1]

[http://www.medpagetoday.com/HospitalBasedMedicine/GeneralHospitalPractice/44595?isalert=1&uun=g321946dnews&utm\\_medium=email&utm\\_campaign=breaking-news&xid=NL\\_breakingnews\\_2014-03-05](http://www.medpagetoday.com/HospitalBasedMedicine/GeneralHospitalPractice/44595?isalert=1&uun=g321946dnews&utm_medium=email&utm_campaign=breaking-news&xid=NL_breakingnews_2014-03-05)

[2] <http://www.cdc.gov/ncezid/dpei/eip/>

[3] <http://cid.oxfordjournals.org/content/early/2014/02/24/cid.ciu010.abstract?sid=8c6b3a86-93ac-4c7e-8816-ef27b1fa304d>

[4] <http://www.nbcnews.com/health/health-news/cdc-warns-growing-threat-superbugs-n44431>