



Department of Health

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Healthcare Quality Reporting Program

## HOSPITAL-ACQUIRED INFECTIONS SUBCOMMITTEE

8-9am, May 19, 2014

Healthcentric Advisors, 235 Promenade Street, Suite 500

### 1. Welcome (8am)

- Meeting chairs: L. Mermel and S. Viner-Brown
- Program staff: R. Baier, E. Cooper, A. Messier
- Voting members in attendance (8/16): U. Bandy, M. Fishman, Y. Jiang, M. Marsella, L. Mermel, S. Turner, J. Robinson, N. Vallande
- Others in attendance: P. Winderman, M. Smith

### 2. Today's meeting objectives (8:05am)

- To discuss the MRSA CLABSI data source and hand hygiene measurement

### 3. Previous meeting's action items (8:05am)

- Share questions with the Immunization Program (Rosa) – Complete
- Provide Gina with *C. difficile* talking points for the HARI Board (Rosa) – Complete

### 4. Hand hygiene measurement (8:10am)

- Discussion of Dr. Fine's request that the Subcommittee recommend a standard best practice for hand hygiene for all hospitals to implement and potentially report
- Recommendations: Before formulating a recommendation to the Steering Committee, discuss the evidence base for hand hygiene standards (CDC, Joint Commission and WHO), how Rhode Island hospitals are monitoring compliance and how other states are reporting data
- There are many challenges to measuring hand hygiene across hospitals due to how it is measured (ie which of the WHO 5 moments for hand hygiene is measured -- measuring before patient care, after patient care, after touching the environment, etc), when hand hygiene is measured (eg, measuring during day shift vs night shift), who does the measurement (eg, secret shopper, staff known to those being measured, etc), measurement of those in contact precautions vs those not in such precautions, etc.

### 5. HAI policy ideas (8:30am)

- Discussion of Senator Whitehouse's proposed HAI policy ideas, provided in hard copy, which his staff asked Healthcentric Advisors to review



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- Discussion themes included priority areas, necessary resources and workflow considerations
- Request for post-meeting thoughts at [https://www.surveymonkey.com/s/HAI\\_legislation](https://www.surveymonkey.com/s/HAI_legislation)
- Potential issues include lack of resources to do do infection control, need for better funded state departments of health, more incentives for hospitals and extended care facilities to do infection control and more disincentives for HAIs, need to reduce antibiotic use, not just use of last resort antibiotics, etc.
- Next steps: Healthcentric Advisors to provide Whitehouse's staff with feedback that reflects input from multiple stakeholder groups, including this committee

#### **6. Action items (8:55am)**

- Follow-up with Gina about the HARI Board discussion of HAIs (Maureen)
- Share additional feedback on the legislative idea via [Survey Monkey](#) (All)
- Research the evidence base for hand hygiene requirements and reporting (Emily/Rosa)
- Conduct an environmental scan of other states' hand hygiene reporting (Emily/Rosa)
- Share hand hygiene data collection forms with Emily and Rosa (All)
- Provide Whitehouse's staff with HAI policy feedback (Rosa)

**Next Meeting: June 16, 2014**



Healthcare Quality Reports  
**HOSPITAL HAND HYGIENE**  
 Data Report, March 2014

Clean hands are the most important strategy to prevent germs from spreading in the hospital. As a result, how hospital healthcare workers clean their hands—their “hand hygiene”—is an important part of how the hospital controls infections. Hospitals’ hand hygiene processes are [reported on the Department of Health’s \(HEALTH’s\) Web site](#) as part of the Department’s hospital reporting work. You can learn more about these measures—including what each measure means, how it is calculated, and why this information is important—by reading the Technical Page. With questions about a hospital’s performance, please contact the hospital directly by clicking on each hospital’s name.

Hospital ( <i>Alphabetical</i> )	Hand Hygiene & Glove Use Education Provided*	Hand Hygiene Measured <sup>H</sup> (Yes/No)	Hand Hygiene Reported <sup>P</sup>
<a href="#">Bradley Hospital</a>	Yes	Yes	Yes
<a href="#">Butler Hospital</a>	Yes	Yes	Yes
<a href="#">Eleanor Slater Hospital</a>	Yes	Yes	Yes
<a href="#">Kent Hospital</a>	Yes	Yes	Yes
<a href="#">Landmark Medical Center</a>	Yes	Yes	Yes
<a href="#">Memorial Hospital</a>	Yes	Yes	Yes
<a href="#">Miriam Hospital</a>	Yes	Yes	Yes
<a href="#">Newport Hospital</a>	Yes	Yes	Yes
<a href="#">Our Lady of Fatima Hospital</a>	Yes	Yes	Yes
<a href="#">Rhode Island Hospital</a>	Yes	Yes	Yes
<a href="#">Roger Williams Medical Center</a>	Yes	Yes	Yes
<a href="#">South County Hospital</a>	Yes	Yes	Yes
<a href="#">Westerly Hospital</a>	Yes	No	No
<a href="#">Women &amp; Infants Hospital</a>	Yes	Yes	Yes

\* Hand hygiene and glove use educational program in place

H Hand hygiene compliance measured through direct observation, collected at least once every three months (quarterly)

P Hand hygiene compliance measured through direct observation, collected at least once every three months (quarterly), with feedback provided to credentialed staff, the Chief Executive Officer, and Executive Leadership

## VIEWPOINT

# Why Does Antimicrobial Overuse in Hospitalized Patients Persist?

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*God gave the world to men in common; but since he gave it to them for their own benefit...it cannot be supposed he meant it should always remain common...*

**John Locke, Second Treatise of Government, 1689**

*...you are undone if you once forget that the fruits of the earth belong to us all, and the earth itself to nobody.*

**Jean-Jacques Rousseau, Discourse on Inequality, 1754**

The overuse of antimicrobials leads to the development of bacterial resistance and makes patients susceptible to *Clostridium difficile* and other serious infections, yet many hospitalized patients continue to receive antimicrobials that are inappropriate or unnecessary.<sup>1</sup> In a new study in *Morbidity and Mortality Weekly Report*, Fridkin and colleagues,<sup>2</sup> using administrative data from 323 hospitals in the United States, found that 55.7% of inpatients received antimicrobials. Furthermore, using data from the Emerging Infections Program at the Centers for Disease Control and Prevention (CDC) and applying objective criteria for "potential improvement" in antimicrobial use at 36 hospitals, they report opportunities for improvement in the use of these medications in 37% of patients receiving vancomycin or treatment for urinary tract infection (UTI). It is disheartening that despite years of work, little progress has been made.<sup>3</sup> In fact, Alexander Fleming warned against the overuse of penicillin in 1945.<sup>4</sup> Nearly 70 years later, however, his call is being repeated. Why?

Antimicrobials, like many drugs, have the potential to both benefit and harm the patients who receive them. Unique to antimicrobials, however, is the potential to harm other patients through the spread of *C difficile* and the development of antimicrobial resistance. Thus, prescribing antimicrobials for a patient with a possible bacterial infection, who may or may not benefit from their use, requires a physician to weigh the potential benefit to the patient against the potential harm to society.<sup>5</sup> This long-standing tension is a manifestation, at least in part, of an even older philosophical debate, exemplified by the competing political philosophies of John Locke and Jean-Jacques Rousseau. Locke, a 17th-century British physician whose theories influenced America's founding fathers, believed in the importance of the individual as "free and equal" and in the individual's right to make decisions based on his or her own judgment and beliefs. Jean-Jacques Rousseau, an influential 18th-century European thinker, differed from Locke in important ways. He argued that the "general will"—a collectively held will that prioritizes the *common interest*—is far more important than individual will.

The tension between advantaging society or the individual plays out daily when physicians decide whether

to prescribe antimicrobials in the hospital. And more often than not, as confirmed by Fridkin et al,<sup>2</sup> the interest of the "individual" prevails and antimicrobials are prescribed. This in part reflects a very strong desire on the part of clinicians to avoid the "chagrin" associated with withholding antimicrobials in a patient ultimately found to have a bacterial infection.<sup>6</sup> So in these daily battles, the emphasis on individualism espoused by Locke appears to rule the day. As a result, there has been little progress in reducing antimicrobial overuse. Perhaps physicians should question whether approaches emphasizing societal benefit (that is efforts to improve antimicrobial prescribing to temper increases in resistant organisms) could predominate. According to the social psychologist Geert Hofstede,<sup>7</sup> the United States is the most individualistic country in the world.

The needed solutions should play to physicians' "individualistic needs" but also provide for a greater societal benefit. Fortunately, many promising strategies have been tested and found effective. The development of robust antimicrobial stewardship programs have been particularly important.<sup>8</sup> Stewardship programs, often led by infectious diseases physicians in partnership with clinical pharmacists, use strategies such as formulary restrictions, guideline development, and audit and feedback to clinicians to better monitor and direct antimicrobial use. Despite the successes of such programs, however, they may be difficult to implement and are only part of the solution. The institutions that have done the most have also worked hard to actively engage clinicians. Hospitalists, who are responsible for the care of an increasingly large percentage of hospitalized patients and therefore much of the antimicrobial prescribing, should figure prominently in engagement efforts.

A promising approach is to integrate best practices for the use of antimicrobials into the existing care processes of hospitalist programs.<sup>9</sup> An example is the effort to better incorporate antimicrobial documentation (ie, indication, day of administration, expected duration of therapy) into daily progress notes and the service "sign-outs" hospitalists use to hand off their patients. Some programs have also implemented a 72-hour antimicrobial "time-out" during multidisciplinary hospital ward rounds as an effort to ensure that the correct diagnosis has been made, to check culture and antimicrobial sensitivity results, and to de-escalate therapy (eg, discontinue the drug therapy or use a narrower spectrum antimicrobial) if possible. This strategy allows physicians to administer antimicrobials as necessary at hospital admission, a time when patients are most likely to be unstable and without a definitive diagnosis, yet routinely reassess their use within several days.

Hospitals that have successfully addressed antimicrobial overuse have developed treatment recommendations, based on guidelines, for commonly encountered infections (such as pneumonia, UTI, and skin and soft-tissue infections), which incorporate specific expectations for duration of treatment rather than the all-too-common “7-to-21-day” treatment range.<sup>9,10</sup> In partnership with the Institute for Healthcare Improvement and several professional medical societies, the CDC has developed key concepts for improving antimicrobial use in hospitalized patients and specific improvement strategies.<sup>10</sup> Other potential solutions, although not as well developed, should be considered, such as improving physicians’ ability to distinguish bacterial from nonbacterial processes. Better diagnostic tests, such as serum procalcitonin—a biomarker that is often elevated with bacterial infection—will help, but such tests are imperfect. Ultimately, the use of antimicrobials for patients without infections reflects diagnostic error. A patient with congestive heart failure treated as though he or she has pneumonia with “Cephakill’em-all” may have adverse effects and is not being treated for their actual medical problem.

Improved understanding of the cognitive approaches inherent in the decision-making process of physicians may also help. Potential cognitive interventions stem from Nobel Laureate Daniel Kahneman’s recognition of dual systems of thought.<sup>11</sup> System 1 thought processes are fast, subconscious, reflexive, and largely intuitive and are thus often vulnerable to certain types of error. An example is the “knee-jerk” response of many physicians to treat a patient with significant bacteriuria with antimicrobials, even if the patient is asymptomatic. In contrast, System 2 thought processes are slower, deliberate, and more effortful. Although an individual’s System 2 thought capacity is limited, a major goal of cognitive interventions is to help the individual “mobilize” System 2 thinking in certain situations during which System 1 thinking usually prevails. This approach may help when a clinician is considering antimicrobial therapy, and it could be incorporated into the 72-hour antimicrobial time-out.

Performance measures can also drive change. A prime target is inappropriate antimicrobial use for UTI, a problem highlighted by Fridkin et al.<sup>2</sup> The CDC currently collects data that inform national performance measures targeting catheter-associated UTI (CAUTI), one of the most common health care-associated infections. With a few changes, these performance measures could be broadened so that they target antimicrobial overuse for CAUTI. This would require modifying the current measures to include as CAUTI any case in which a physician prescribed antimicrobials for a patient with presumed CAUTI, irrespective of symptoms. Such a modification would highlight inappropriate diagnosis and focus attention on physicians who may be overusing antimicrobials. Even modest improvements in the appropriate use of antimicrobials may have large benefits, as Fridkin et al.<sup>2</sup> showed that a 30% reduction in broad spectrum antimicrobial use—equivalent to a 5% reduction in the proportion of hospitalized patients receiving antimicrobials—would lead to a 26% reduction in *C difficile* infection.

Finally, focusing on efforts to reduce *C difficile* infection is important and may not raise the conflict between what is best for society and for individual patients. Physicians, whether they believe in Locke’s individualism or Rousseau’s collectivism, should appreciate the benefits of avoiding *C difficile* infection.

In conclusion, antimicrobial overuse in hospitalized patients persists despite the best efforts of many physicians over many decades. Simply asking clinicians to do a better job in considering the potential harms to society when prescribing antimicrobials is an ineffective approach. Effective strategies such as those we have described focus on maximizing both individual and societal benefits. Locke wrote that everyone has a natural right to defend “his life [and] health....” We would all benefit if that means finding more effective ways to use Rousseau’s “fruits of the earth that belong to us all”—a definition applicable to antimicrobials.

#### ARTICLE INFORMATION

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