Roundtable Discussion
Addressing Antimicrobial Resistance

Resistance A Patient-Safety Issue

Antibiotic resistance is a natural phenomenon in infectious organisms, but humankind can — and does — affect its rate of progression. We see this daily in the healthcare setting, and in the community, where such agents as MRSA (methicillin-resistant Staphylococcus aureus), multidrug-resistant (MDR) Acinetobacter, and Clostridium difficile — often designated as “super-bugs” — make headlines and challenge control efforts.

An interagency task force has developed a federal action plan for tackling antimicrobial resistance (cdc.gov/drugresistance/actionplan/) but budgetary constraints hinder its ability to keep pace with a growing list of worrisome trends. Various professional associations also have created special programs focused on resistance, and congressional interest in the problem appears to be growing.

To see how these efforts might be better coordinated and might use their resources more effectively, the nonprofit U.S. Medicine Institute for Health Studies convened a roundtable discussion bringing together key representatives of federal agencies, professional organizations, academia, industry, and congressional staff.

A significant message that emerged from the discussion: Antibiotic-resistance should be treated as a patient-safety issue and monitored via post-marketing surveillance once an antimicrobial is approved by the Food and Drug Administration. Proper use of antibiotics should be regularly updated in drug labeling — current usage statements do not keep pace with the development of resistance, potentially leading to the wrong strength or the wrong agent being administered.

Other suggestions and observations emerging from the discussion:
• Improving the level and types of communication about resistant organisms. Efforts should be made to reach the public and healthcare workers in the “do’s” and “don’ts” of infection control. Current attempts to do this are sporadic and unfocused.
• Blitzing a resistant organism as soon as resistance first appears. Pouring on resources and control efforts such as isolation to stop a resistant organism before it can become entrenched would be expensive, but would prove cost-effective and prevent morbidity and mortality. This will require coordination among the various healthcare sectors.
• Conducting studies to better define resistance and determine the best appropriate conditions for use of a drug. It would be extremely valuable to be able to link susceptibility testing in the laboratory to outcomes in patients — to develop a dose-response curve and use it to tailor therapy.

Currently, a “one size fits all” approach characterizes antibiotic use, and this in itself likely contributes to the development of resistance. Focus should not be on the organism involved, but rather on the individual patient and the particular disease and severity of infection.

Incomplete understanding of resistance can lead to use of ineffective agents, cost-shifting to more expensive therapies than actually

Other Highlights

• For resistant Staph aureus, there is potential to return to the “pre-antibiotic” era within the next decade.
• Dealing with resistance needs to be made a national priority.
• Resistance is a global phenomenon that also requires diplomatic coordination, as has been accomplished for pandemic influenza through the G-7 group.
• Rapid diagnostics are needed to determine who is infected, what strain of the organism is at issue, and its susceptibility patterns.
• Vaccines remain the best hope for halting resistant organisms, but there is none on the immediate horizon.
needed, or unnecessary use of more

toxic alternatives.

- Remaining aware that progress is
doctor — that is, not conceding the battle.

For example, the Pittsburgh VA
Medical Center has cut MRSA infec-
tion rates by 70 per cent through
screening all patients via nasal swabs,
isolating those who prove positive,
requiring gowns and gloves for those
who treat positive patients, disinfect-
ing equipment used for these pa-
tients, and implementing stringent
policies requiring hand-washing.

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An Issue of Leadership

Surveillance by CDC through its
National Healthcare Safety Network
demonstrates MRSA to be well-established.
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shows MRSA to be well-established.
Sixty to 65 per cent of all Staph in-
fected in intensive care units are
now methicillin-resistant.
Community-acquired methicillin-
resistant increasingly is being cultu-
cared in healthcare settings, con-
 founding the treatment profile,

MDR Acinetobacter also appears
to be increasing. Alarmingly, at Wal-
ter Reed Army Medical Center, 4 per
cent of isolates were resistant to all
antibiotics tested.

The essential ingredient in de-
aling with these rising rates of resis-
tance is leadership. Often, however,
hospital leadership, which faces
competing demands for resources,
must be shown that efforts to control
resistance make good business sense,
and that the costs of prevention
through such measures as good hy-
giene are less than the costs of treat-
ment, which often are not fully cov-
ered by third-party insurers.

While the military mandates
accountability throughout its chain of
command to enforce control efforts,
the civilian sector has no such
mechanism available. Any approach
taken in civilian healthcare facilities
should involve incentives rather than
punitive measures, which serve only
to encourage coverup of resistance
rates.

Further, determining where resis-
tance originates is complex and
difficult — was it brought into the
hospital, or did it emerge there?

Standardization Needed

It is difficult to mount a coordi-
nated approach to antibiotic resis-
tance or to develop a strategic plan
for addressing it — as has been done
for pandemic influenza — when
there is no standardized nomenclature
or or standardized way to enter
data on resistance into medical re-
cords.

Just who would lead such an
effort at coordination remains pro-lematic. Appointing a “resistance
czar” is one possibility, but that indi-
vidual would need to be given suffi-
cient resources to do the job. While
there was concern within the round-
table group that efforts to coordinate
approaches to resistance could be-
come “political,” others said that is
exactly what should happen. It is the
political structure that can authorize
the support and resources needed.

Without political traction, the effort
would not succeed.

The group also urged increased
resources for the interagency task
force, currently up for reauthorization
by Congress.

Participants in this roundtable:

Cynthia Bascetta of GAO; Jennifer Bryn-
ing of the Senate Health, Education,
Labor and Pensions (HELP) Committee;
David Dorsey of the Senate HELP
Committee; Barry Eisenstein of Cubist
Pharmaceuticals; Ralph L. Erickson of
DoD-GEIS (Global Emerging Infections
Surveillance and Response System);
Dennis Fiax of the Naval Health Re-
search Center; Michael Feldgarden of the
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ics (APUA); Neil Fishman of the Infectious
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the Senate HELP Committee; Lijten Tan
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David Tribble of the Uniformed Services
University of the Health Sciences; J.
Todd Weber of CDC; Glen Wortmann of
Walter Reed Army Medical Center; and
Tom Zimmerman of ISMR.

The roundtable was moderated by
Donald Poretz of IDSA.

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was provided by DoD-GEIS; the Internation-
al Society of Microbial Resistance/George
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Diseases; and EWyatt Consulting.