for Bacterial Diseases," which the FDA, the National Institute of Allergy and Infectious Diseases (NIAID), and the IDSA cosponsored. Slides and video of the workshop presentations are freely available on the IDSA Web site [6].

Although we may disagree with Outterson et al [4] on how best to prioritize resistance funding, we are in full agreement that new funds are desperately needed. In recent months, the IDSA has urged Congress to substantially increase federal funding in this area. We called for an additional \$36 million to strengthen the FDA's antibacterial resistance and drug review programs, as well as the FDA's new regulatory science efforts specific to antibacterials; a major increase in funding for the NIAID's antibacterial resistance and drug discovery and development research efforts from approximately \$200 million to \$500 million; and a nearly 3-fold increase for the Centers for Disease Control and Prevention's public health efforts to \$40 million.

Last, we appreciate the endorsement by Burgess et al [7] and the Society of Infectious Diseases Pharmacists (SIDP) of the 10×20 initiative. Pharmacists with training in infectious diseases play a key role in antibiotic stewardship programs in many medical centers. As such, the IDSA supports the efforts of the SIDP to ensure continued postgraduate training of pharmacists in the safe and effective use of antimicrobials.

As the IDSA advocates for adoption of the 10×20 initiative, enactment of the STAAR Act, appropriate agricultural uses of antibiotics, and for funding to support research and other related work, we hold closely the principles that antibiotics are a gift to us from prior generations and that we have a moral obligation to ensure that this global treasure is available for our children and future generations.

Acknowledgments

Potential conflicts of interest. D.N.G. serves as an advisor and/or consultant to Achaogen, Pacific Bioscience, Pfizer, Schering-Plough (Merck), and Advanced Life Sciences. H.W.B. has served as an advisor and/or consultant to Basilea, Cerexa, Cubist, Durata, Johnson & Johnson, Merck, Methylgene, Nabriva, Optimer, Rib-X, Targanta/TMC, Astellas/Theravance, and Pfizer/Wyeth. G.H.T. provides or has recently provided, through Talbot Advisors LLC, consultative services to Actelion, Advanced Life Sciences, Avera, Bausch & Lomb, Calixa, Cempra, Cerexa, Cubist, Durata, Ipsat, Middlebrook, MMM, Nabriva, PTC, Rib-X, Shire, Targanta, Tetraphase, Theravance, ViroPharma, and Wyeth and owns shares in Cerexa, Calixa, and Mpex. B.S. has received grant support from Gilead, Astellas, and Novartis and has served as a consultant for Merck, Pfizer, Arpida, Theravance, Advanced Life Sciences, Basilea, The Medicines Company, Achaogen, Novartis, Cerexa, Wyeth, Trius, Meiji, Zimek Technologies, Eisai, and Anacor and owns shares in Neutropenia Immunotherapy Solutions and NovaDigm Therapeutics. J.E.E. serves on the scientific advisory board of Cerexa; has participated in educational programs regarding fungal infections funded by Pfizer, Merck, and Astellas; has received research laboratory support from Pfizer, Merck, Enzon, Squibb, and Gilead; has participated in the Bristol-Myers Squibb Freedom to Discovery research program; and is a cofounder of and holds shares in NovaDigm Therapeutics. W.M.S. receives research support from Pfizer. J.S.B.'s employer, the University of California-San Diego, has received research grants from Cubist, Johnson & Johnson, and Trius and holds consultant contracts with Bayer Pharmaceuticals, Cerexa, Johnson & Johnson, Nabriva, Trius, and Pfizer Pharmaceuticals. R.J.G.: no conflicts.

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References

- Boucher HW, et al. Bad bugs, no drugs: no ESKAPE! an update from the Infectious Diseases Society of America. Clin Infect Dis 2009; 48:1–12.
- 2. Tillotson GS. Development of new antibacterials: a laudable aim, but what is the value [letter]? Clin Infect Dis **2010**;51(6):752–753 (in this issue).
- 3. The Infectious Diseases Society of America's statement on antibiotic resistance: promoting critically needed antibiotic research and development and appropriate use ("stewardship") of these precious drugs, before the U.S. House Committee on Energy and Commerce Subcommittee on Health, June 9, 2010. Infectious Diseases Society of America Web site. http://www.idsociety.org/WorkArea/DownloadAsset .aspx?id = 16656. Published 9 June 2010. Accessed 2 August 2010.
- 4. Outterson K, Powers JH III, Gould IM, Kesselheim AS. Questions about the 10 \times '20 ini-

tiative [letter]. Clin Infect Dis **2010**; 51(6): 751–752 (in this issue).

- 5. The Infectious Diseases Society of America's statement on antibiotic resistance: promoting judicious use of medically important antibiotics in animal agriculture, before the U.S. House Committee on Energy and Commerce Subcommittee on Health, July 14, 2010. Infectious Diseases Society of America Web site. http://www.idsociety.org/WorkArea/linkit.aspx?Link Identifier = id&ItemID = 16796. Accessed 2 August 2010.
- 6. Infectious Diseases Society of America Web site. http://www.idsociety.org/ARWORKSHOP .html.

Accessed 1 August 2010.

 Burgess DS, Slain D, Mohr J, Wong-Beringer A, Destache C, Suda K. Letter in response to the Infectious Diseases Society of America's 10 × '20 initiative [letter]. Clin Infect Dis 2010; 51(6):753 (in this issue).

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Clinical Infectious Diseases 2010; 51(6):754–755

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Treatment Recommendations for Patients from the Community: Concerns Regarding the New Guidelines for Treatment of Intra-Abdominal Infection

TO THE EDITOR-I have read the Infectious Diseases Society of America's new guidelines for treatment of intra-abdominal infection [1] with interest, and I have concerns regarding the treatment of patients from the community with broadspectrum agents-in particular, with the suggestion that ertapenem and tigecycline be considered treatment options for mildto-moderate infection, the suggestion that carbapenems be used for treatment of severe infections (Table 2 from the guidelines), and the recommendation to avoid using ampicillin-sulbactam empirically. Extended-spectrum β -lactamases (ESBLs; from *Escherichia coli* or *Klebsiella* species) should not be covered empirically in any infectious disease, especially if patients are from the community, unless the patient has a history of infection with such organisms, the patient has health care-associated risk factors, or local epidemiological data suggest otherwise. To my knowledge, there have been no published studies of increasing rates of communityacquired ESBL infection among patients with intra-abdominal infection from the United States who have had culture samples obtained <48 h after hospital admission and who have been screened for hospital-associated risk factors. Patients should be treated with antibiotics that cover the most likely organisms for that particular patient's risk factors, for that given disease state, in most instances.

The guidelines cited Paterson et al [2] to provide evidence in support of ESBL coverage for patients from the community. Paterson and colleagues tested isolates recovered from patients in 5 countries, showing that 5% of E. coli isolates and 8% of Klebsiella isolates were ESBL producing, for cultures of samples obtained <48 h after hospital admission. The authors only looked at the time to positive culture results and not at the patients' histories or recent hospital admissions, which is a significant limitation to this study. Furthermore, the article does not have data pertaining to isolates recovered <48 h after admission in the United States alone and only reports overall data in the United States: 3% of E. coli isolates and 7% of Klebsiella isolates are ESBL producing. If 95% of community-acquired E. coli isolates are non-ESBL producing strains worldwide, it should not be recommended to treat patients from the community with antibiotics that cover ESBL.

The guidelines also cite Mosdell et al [3] as part of the evidence for and summary of data on treatment of communityacquired infections with high severity. This reference did not suggest using carbapenems for treatment of severe communityacquired disease. The authors showed a benefit associated with use of single broadspectrum agents initially in treating patients with community-acquired peritonitis, compared with use of multiple agents and/or switches in therapy; however, most patients in that study received ampicillin-sulbactam or cefoxitin. This study by Mosdell and colleagues is a retrospective chart review from 1987 from 5 hospitals in New Mexico. I have not found any evidence or other references that support use of a carbapenem over any other β -lactam antibiotic to improve outcomes in patients with severe community-acquired disease. Although this practice does exist and is appropriate at times, such as in patients with septic shock and/or unknown medical history with a severe lifethreatening infection, it should not be recommended in a nationally published guideline as a treatment option. Furthermore, the definition of high severity from Table 2 appears to incorporate most cases in admitted patients: severe physiological disturbance, advanced age, and/or an immunocompromised state. In clinical practice, this definition translates into use of broader-spectrum agents for elderly persons; for patients with human immunodeficiency virus infection or cancer; for patients with myocardial infarction, hypotension, or atrial fibrillation; or for patients with any other severe physiological disturbance.

There appears to be little evidence to support the recommendation to avoid administering ampicillin-sulbactam to patients from the community. Studies that report ampicillin-sulbactam susceptibility data (40%-60%) usually incorporate all culture data together and do not report community versus hospital susceptibilities separately [4-6]. The study by Paterson et al [2] used in the guideline to support this recommendation did not include ampicillin-sulbactam susceptibility data: this agent was not tested in the 2003 SMART study. However, there are other SMART studies that report data on E. coli susceptibility to ampicillin-sulbactam (54%-60%) in cultures performed <48 h after hospital admission, although these studies do not include country-specific data for these cultures [7, 8]. To make this recommendation, the references for ampicillin-sulbactam susceptibility should reflect only isolates from the United States recovered <48 h after hospital admission.

The guidelines [1] also suggest coverage for methicillin-resistant *Staphylococcus aureus* (MRSA) with tigecycline in patients from the community. To my knowledge, there are no studies that have reported an increase in community-acquired MRSA intra-abdominal infections nationwide. Community patients should not be covered empirically for MRSA unless the patient has a history of infections with this organism or unless there is a high suspicion (eg, from imaging or culture data or because of an abscess) of an infection associated with this organism.

The overuse of antibiotics has greatly contributed to the emergence of multidrug-resistant organisms. There is a significant disconnect between what the text of the guidelines discusses and what the tables suggest. The text of these guidelines address my concerns about use of broadspectrum agents in patients from the community and expresses the resistance issues associated with their use, but this is clearly not reflected in Table 2. In my opinion, many non-infectious diseases health care providers, residents, and other professionals may only briefly read the text or not read it at all; many will focus on the tables for treatment recommendations. Finally, guidelines with these types of recommendations will cripple any chances for an institution to implement and maintain a strong antibiotic stewardship program.

Acknowledgments

Potential conflicts of interest. F.P.: no conflicts.

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References

- Solomkin JS, Mazuski JE, Bradley JS, et al. Diagnosis and management of complicated intraabdominal infection in adults and children: guidelines by the surgical infection society and the infectious diseases society of America. Clin Infect Dis 2010; 50:133–164.
- Paterson Dl, Rossi F, Baquero F, et al. In vitro susceptibilities of aerobic and facultative gramnegative bacilli isolated from patients with intra-abdominal infections worldwide: the 2003

Study for Monitoring Antimicrobial Resistance Trends (SMART). J Antimicrob Chemother **2005**; 55:965–973.

- Mosdell DM, Morris DM, Voltura A, et al. Antibiotic treatment for surgical peritonitis. Ann Surg 1991; 214:543–554.
- 4. Hawser SP, Bouchillon SK, Hoban DJ, et al. Emergence of high levels of extended-spectrum beta bactamase-producing gram-negative bacilli in the pacific region: data from the Study for Monitoring Antimicrobial Resistance Trends (SMART) Program, 2007. Antimicrob Agents Chemother **2009**; 53:3280–3284.
- Karlowsky JA, Jones ME, Thornsberry C, et al. Trends in antimicrobial susceptibilities among Enterbacteriaceae isolated from hospitalized patients in the United States from 1998 to 2001. Antimicrob Agents Chemother 2003; 47:1672– 1680.
- Al-Hasan MN, Lahr BD, Eckel-Passow JE, Baddour LM. Antimicrobial resistance trends of Escherichia coli bloodstream isolates: a population-based study, 1998–2007. J Antimicrob Chemother 2009; 64:169–174.
- Chow JW, Satishchandran V, Snyder TA, et al. In vitro susceptibilities of aerobic and facultative gram-negative bacilli isolated from patients with intra-abdominal infections worldwide: the 2002 study for Monitoring Antimicrobial Resistance Trends (SMART). Surg Infect (Larchmt) 2006; 6:439–447.
- Baquero F, Hsueh PR, Paterson DL, et al. In vitro susceptibilities of aerobic and facultatively anaerobic gram-negative bacilli isolated from patients with intra-abdominal infections worldwide: 2005 results from Study for Monitoring Antimicrobial Resistance Trends (SMART). Surg Infect (Larchmt) 2009; 10:99–104.

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Clinical Infectious Diseases 2010;51(6):755-757 © 2010 by the Infectious Diseases Society of America. All rights reserved. 1058-4838/2010/5106-0023\$15.00 DOI: 10.1086/655959

Empirical Enterococcal Coverage for Complicated Intra-Abdominal Infection

To THE EDITOR—All new or updated Infection Diseases Society of America (IDSA) guidelines allow us to be in a privileged position to take advantage of an authoritative review of current knowledge and best practices on a given topic. The recent IDSA guidelines on the diagnosis and management of complicated intra-abdominal infection in adults and children [1] are no different, and I commend the authors for the amount of work that was necessary to write the manuscript.

However, on the topic of empirical enterococcal coverage for abdominal infections, there are some inconsistencies that should be addressed to clarify the recommended approach. Whether enterococci are significant pathogens in intraabdominal infections has been a matter of much debate and research. On one hand, there have been several well-designed trials showing no clinical benefit associated with empirical enterococcal coverage [2, 3]. Conversely, prospective trials have demonstrated increased mortality among patients with documented enterococcal infection, particularly in those patients with health care-associated intra-abdominal infection [4, 5]. On the basis of these data, I agree with the position stated on pages 150 and 151 of the guidelines that it seems reasonable and appropriate to provide empirical enterococcal coverage both for high-risk community-acquired intra-abdominal infections and for all health careassociated intra-abdominal infections.

Recommendations at odds with the above are, however, to be found in Table 2 of the guidelines, in which "Cefepime, ceftazidime, ciprofloxacin, or levofloxacin, each in combination with metronidazole" are suggested as appropriate regimens for high-risk, community-acquired intra-ab-dominal infections. These regimens provide no—or, in the case of levofloxacin, extremely poor—enterococcal coverage. This is clearly inconsistent with the statement in point 42: "Empirical use of agents against enterococci is recommended" [1, p 136].

Along the same lines, point 34 states that "Empiric coverage of *Enterococcus* is not necessary with community-acquired intra-abdominal infection" [1, p 136]. This is under the heading of mild-to-moderate infections and is therefore congruent with the rest of the guidelines. Nevertheless, for clarity, this statement should probably be revised to state, "Empiric coverage of *Enterococcus* is not necessary with *mild-to-moderate* community-acquired intra-abdominal infection."

Similar issues can be found in the rec-

ommendations for healthcare-associated infections. Table 3 offers "Ceftazidime or cefepime, each with metronidazole" for the aforementioned indication in institutions with a low prevalence of multidrugresistant infections with gram-negative organisms. This is at odds with the statement in point 55: "Empiric anti-enterococcal therapy is recommended for patients with health care-associated intra-abdominal infection, particularly those with postoperative infection, those who have previously received cephalosporins or other antimicrobial agents selecting for Enterococcus species, immunocompromised patients, and those with valvular heart disease or prosthetic intravascular materials" [1, p 137].

These incongruities do not detract from the overall quality of the guidelines. In my opinion, an update to clarify these points would, nonetheless, be welcomed.

Acknowledgments

Potential conflicts of interest. G.T.: no conflicts.

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References

- Solomkin JS, Mazuski JE, Bradley JS, et al. Diagnosis and management of complicated intraabdominal infection in adults and children: guidelines by the Surgical Infection Society and the Infectious Diseases Society of America. Clin Infect Dis 2010; 50(2):133–164.
- Ohlin B, Cederberg A, Forssell H, Solhaug JH, Tveit E. Piperacillin/tazobactam compared with cefuroxime/ metronidazole in the treatment of intra-abdominal infections. Eur J Surg 1999; 165:875–884.
- Teppler H, McCarroll K, Gesser RM, Woods GL. Surgical infections with enterococcus: outcome in patients treated with ertapenem versus piperacillin-tazobactam. Surg Infect (Larchmt) 2002; 3(4):337–349.
- Sitges-Serra A, Lopez MJ, Girvent M, Almirall S, Sancho JJ. Postoperative enterococcal infection after treatment of complicated intra-abdominal sepsis. Br J Surg 2002; 89:361–367.
- Burnett RJ, Haverstock DC, Dellinger EP, et al. Definition of the role of enterococcus in intraabdominal infection: analysis of a prospective randomized trial. Surgery 1995;118:716– 721.