

Use of the web by public health jurisdictions to disseminate practical information to strengthen antimicrobial stewardship programs and enhance surveillance — United States, 2017

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Background

- Antimicrobial resistance (AR) is a major threat to public health in all jurisdictions. Combating this threat calls for:
 - Widespread implementations of antibiotic stewards programs (ASP)
 - Robust surveillance to detect and respond to multi-drug resistant organisms (MDROs)¹.
- Success depends on appropriate prescribing and actionable AR data

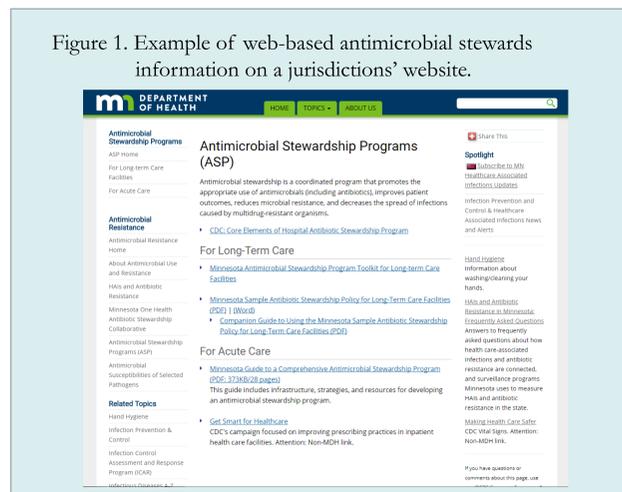
Study Aim

- Document public health jurisdictions' web-based practical information to:
 - Strengthen antimicrobial stewardship programs
 - Enhance surveillance for MDROs including carbapenem-resistant Enterobacteriaceae (CRE)

Methods

- Online review conducted in May 2017 on the websites of all 57 jurisdictions that submit nationally notifiable disease data to the Centers for Disease Control and Prevention (Figure 1). Searched for:
 - Presence of any information on AR (found by search terms with each jurisdiction's name and "Antibiotic resistance")
 - Antibiotic stewardship information (ASP) targeted to specific settings (e.g.):
 - Acute care facilities
 - Long-term care facilities
 - Outpatients
 - General audience
 - Guidance to enhance surveillance for specific infections:
 - MRSA
 - Hospital Acquired Infections (CRE, CP-CRE, VISA, VRSA)
 - Requirements for submission of isolates: CRE, VISA, VRSA
 - Types of CRE isolates: i.e., all CRE or CP-CRE only
 - Surveillance case definition for CRE, CP-CRE

Figure 1. Example of web-based antimicrobial stewards information on a jurisdictions' website.



Results

- Web-based ASP information on jurisdiction websites (Figure 2)
 - Found on 57 jurisdiction websites
 - Most (84.2%) websites had information about AR "superbugs"
 - Five (8%) highlighted AR on their homepage
 - 70.8% had ASP information targeted to acute care facilities and 49.2% targeted to long-term care facilities
 - 66.7% had links to the CDC Get Smart website
 - 37% had information on judicious antibiotic use on farms
- CRE surveillance
 - Eight jurisdictions (14%) included requirements for reporting CRE
 - Five had instructions for submission of isolates
- Public education (Figure 3)
 - 66.3% had public educational materials on appropriate antibiotic use



Growth of bacteria on plates with antibiotic diffusion disks-- Bacteria in the left plate are susceptible to antibiotics while the right plate has CRE that is resistant to all the antibiotics. Image courtesy: CDC

Funding: This work was supported in part by the Commonwealth of Pennsylvania and the Centers for Disease Control and Prevention Cooperative Agreement Program (ELC-04040) for Get Smart About Antibiotics and CRE Lab Surveillance activities.

Conclusions

- Public health jurisdictions are using the web to raise awareness about the threat of antimicrobial resistance.
- Focus of jurisdictions' web-based materials on antimicrobial stewardship has been on acute-care facilities; to a lesser degree, long-term care and outpatients are being addressed.
- With recent federal support, lab-based surveillance for CRE is in early stages and expected to increase². There is need for voluntary/mandatory reporting and isolate submission guidance on the web.
- The web could be leveraged to support ASP and surveillance for MDROs including CRE through increased communication among web designers, epidemiologists, and healthcare providers.

Figure 2. Practical information to promote antimicrobial stewardship and enhance surveillance on public health jurisdictions' websites, United States--2017

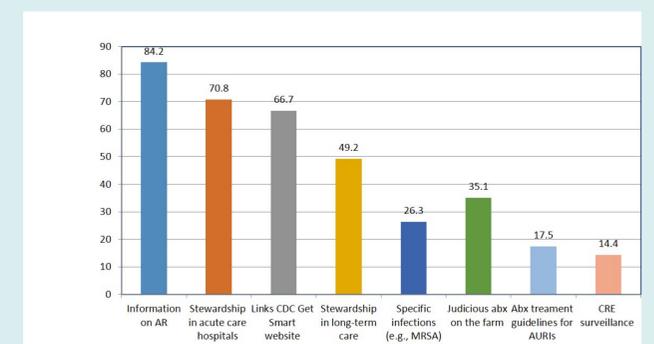
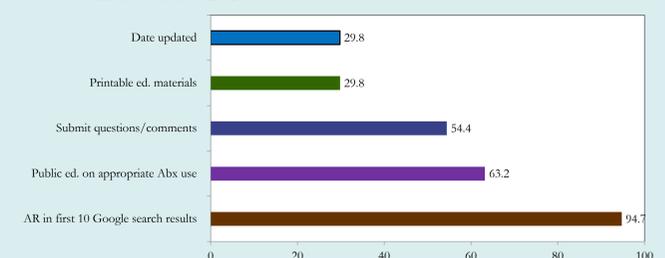


Figure 3. Availability of information to increase awareness about appropriate antibiotics use on public health jurisdictions' websites, United States--2017



References

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2. CDC. Antibiotic Resistance Lab Network. Accessed September 27, 2017 at: <https://www.cdc.gov/drugresistance/solutions-initiative/ar-lab-networks.html>

All authors declare no conflict of interest

IDWeek 2017 Poster # 681