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Submitted electronically to www.healthit.gov

Dear Dr. DeSalvo:

On behalf of the Infectious Diseases Society of America (IDSA), thank you for the opportunity to comment on the *Federal Health IT Strategic Plan 2015–2020* (HIT strategic plan). IDSA supports the goals outlined in the strategic plan and urges the Office of the National Coordinator (ONC) to take a strong leadership position to advance these priorities as swiftly as possible. In this letter, we highlight four IDSA policy priorities that depend upon the successful implementation of the HIT strategic plan.

IDSA represents over 10,000 infectious diseases physicians and scientists devoted to patient care, disease prevention, public health, education, and research in the area of infectious diseases. Our members care for patients of all ages with serious infections, including meningitis, pneumonia, tuberculosis, HIV/AIDS, antibiotic-resistant bacterial infections such as those caused by methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE), and Gram-negative bacterial infections such as *Acinetobacter baumannii*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*, emerging infections such as Middle East respiratory syndrome coronavirus (MERS-CoV) and Ebola, and bacteria containing the New Delhi metallo-beta-lactamase (NDM) enzymes that makes them resistant to a broad range of antibacterial drugs.

Effective use of health information technology (HIT) and electronic health records (EHR) is essential for improving patient care and public health in the 21st century. As infectious diseases specialists, we recognize the promise of HIT and EHR to prevent, treat, and control infectious diseases in both the healthcare delivery setting and the community. We are encouraged by the clear vision, goals, and strategies set forth in the HIT strategic plan. Successful implementation will require a sustained commitment, including consideration for financial support to practitioners, hospitals and healthcare systems, and strong leadership from the federal government. We offer our support and assistance to the ONC during the implementation phase.

1. Promote Adoption and Use of the National Healthcare Safety Network Antimicrobial Use and Resistance Module

[Critical HIT Strategic Plan Objectives: 1A, 1B, 2A, 2B, 3B, 4B, 5A, 5B, 5C]

Antibiotic resistance (AR) is a significant and rapidly increasing public health threat in the U.S. and globally. IDSA members are alarmed at the rising rates of resistance and the slow pace at which the U.S. government has responded. We enthusiastically welcome the recently-announced Combatting Antibiotic-Resistant Bacteria (CARB) strategy and related Executive Order directing the Secretaries of the Department of Health and Human Services (HHS), US Department of Agriculture (USDA), and Department of Defense (DoD) to prepare a plan to coordinate a nationwide public health response to the AR epidemic.

One important element of the CARB strategy is to expand and strengthen the national infrastructure for AR surveillance and data reporting by establishing procedures for creating and integrating surveillance systems and laboratory networks. Today, surveillance and data collection of antibiotic resistance and antibiotic usage are sporadic and contain many gaps. Antibiotic usage drives resistance, yet granular data on use are sorely lacking. Real time, publicly available information is critical for clinical decision support, determining the prevalence and emergence of resistant infections, monitoring the impact of measures such as antibiotic stewardship and infection prevention, determining antibiotic and diagnostic development priorities, defining metrics, and allowing benchmarking.

IDSA supports adoption of the US Centers for Disease Control and Prevention's (CDC) National Healthcare Safety Network (NHSN) Antimicrobial Use & Resistance (AUR) module in all healthcare facilities. The AUR Module will help facilities centralize reporting of antibiotic resistance data and antibiotic use data, and ultimately give infectious diseases specialists and public health officials a better picture of AR hot spots and their relation to the use of antibiotics. The CARB strategy calls for the creation of incentives for hospital reporting of data on antibiotic use and resistance to the NHSN, using the AUR module or equivalent update to achieve these reporting targets by 2020:

- At least 95% of eligible hospitals report electronically captured antibiotic resistance data to NHSN;
- 3,400 acute care hospitals using electronic health records that meet certification criteria for NHSN AUR reporting or successor standard as appropriate;
- DoD and VA hospitals and long-term care facilities will also use electronic health records that meet certification criteria for AUR reporting or successor standard as appropriate.¹

The CARB strategy would also add electronic reporting of antimicrobial use and resistance data in a standard file format to the Stage 3 Meaningful Use (MU) certification program for electronic health record systems. The strategy also calls for incentives for reporting and requiring reporting

¹ White House. National Strategy for Combatting Antibiotic-Resistant Bacteria. September 2014. Available at, http://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf.

of antibiotic resistance data to NHSN as part of the Centers for Medicare and Medicaid (CMS) Hospital Inpatient Quality Reporting Program.

IDSA strongly supports these CARB targets and we urge the ONC to incorporate these objectives into the HIT strategic plan. Unfortunately, many HIT/EHR barriers exist that threaten to prevent healthcare facilities from meeting them, and few facilities have adopted the module relative to the total number of facilities participating in NHSN in some capacity. Facilities often cite financial and technological barriers that prevent them from adopting the module. Much of the cost associated with AUR module implementation involves enabling interoperability (i.e., preparatory technical steps at individual healthcare facilities that are prerequisites for establishing interoperable data exchanges). This work must be completed before electronic messaging can be turned on and is necessary to produce meaningful transfers of data between systems.

These challenges can generally be overcome or managed by strong leadership at the national level. Direction at the national level for adoption of AU and AR terminology standards in EHRs would help accelerate AUR implementation, as it would provide incentives and direction for facilities and vendors to act. Therefore, IDSA urges the ONC to consider these challenges to AUR adoption when implementing the strategies outlined in the HIT strategic plan.

2. Enable Laboratory Diagnostic Reporting Across the U.S. Health System

[Critical HIT Strategic Plan Objectives: 1A, 2A, 2B, 3B, 4B, 5B, 5C]

Diagnostics tests that detect infectious agents are fundamental to high quality, lifesaving care and public health. Technological advances are now enabling new tests that combine simplicity, speed, and accuracy. In the field of infectious diseases, speed is essential, and a delay in diagnosis of even a few hours can delay appropriate treatment and containment protocols, significantly impacting patient outcomes and allowing dangerous infections to spread. Further, when test results are delayed, clinicians often initiate empiric therapy, which frequently leads to the overuse of antibiotics.

The tremendous potential of rapid diagnostics to improve patient care and public health can only be realized by improving coordination between physicians, the laboratory running the tests, public health officials, and antimicrobial stewardship program leaders to quickly relay diagnostic results to inform patient care and public health protocols. A new test that can provide results in under an hour cannot fully impact patient care or public health if the treating physician, public health responder, and other appropriate individuals do not receive the test results until several hours later. New EHR systems have the potential to significantly improve clinical decision support and coordination between healthcare facilities and public health, but unfortunately many EHR systems do not adequately integrate diagnostic tests and their results.

IDSA urges the ONC to explore ways to promote the integration of diagnostic information into EHR systems, allowing for more rapid transmission of diagnostic test results to clinicians and, for reportable diseases, to state, local, and federal health departments. We also support the CARB strategy directive to link laboratories that test (and report on) resistant bacteria into

regional networks that promote the use of new technologies and diagnostics using standardized testing platforms.² Successful implementation of the HIT strategic plan will be critical to fulfilling this CARB objective.

3. Promote Use of Immunization Registries Across the Lifespan

[Critical HIT Strategic Plan Objectives: 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C, 4A, 5A, 5B, 5C]

Every year, tens of thousands of adults die and many more are hospitalized due to diseases that could have been prevented by vaccination.² Although >90% of young children have received the individual vaccines recommended for them, coverage for adult vaccines can range from 26% to 65% depending on the vaccine and target population—well below the Healthy People 2020 targets.³ State immunization Information Systems (IIS) or “registries” can be a powerful tool for states to manage pediatric, adolescent, and adult vaccine schedules, and to help both healthcare providers and patients identify immunization gaps and avoid redundant vaccinations. Although IIS use has been shown to help increase immunization rates in children,⁴ adolescent and adult participation in IIS is too low to effectively boost vaccine uptake in the same way. In 2012, only 24.5% of adults ≥19 years participated in an IIS, compared with 86.0% for children.⁵ In a recent survey of provider perspectives on adult immunization, only 8% of general internists and 36% of family medicine practitioners reported recording adult immunization information in a state or regional IIS.⁶

The 2014 National Vaccine Advisory Committee (NVAC) standards for adult immunization, where were drafted with support from IDSA, state that healthcare providers who care for adult patients “should understand how to access the IIS as a source to check for vaccines that a patient has already received or should be receiving.”⁷ In addition, IDSA has previously supported broad adoption of IIS among providers who care for adults.⁸

The federal meaningful use (MU) program offers incentive payments to participating healthcare providers who demonstrate meaningful use of EHR systems, including through use of IIS. In a 9-state survey, conducted as part of a pilot project led by IDSA in partnership with the National Adult and Influenza Immunization Summit (NAIIS), states reported bottlenecks that delayed MU implementation, including provider decisions not to

² National Vaccine Advisory Council (NVAC). “A Pathway to Leadership for Adult Immunization: Recommendations of the National Vaccine Advisory Committee.” Public Health Reports. Jan-Feb 2012; 127(Suppl 1)1.

³ Available at <http://www.healthypeople.gov/2020/default.aspx>.

⁴ Task Force for Community Preventive Services. Increasing appropriate vaccination: Immunization information systems (2010).

⁵ U.S. Centers for Disease Control and Prevention. Progress in immunization information systems – United States, 2012. Morbidity and Mortality Weekly Report. Vol. 62 No. 49 (December 13, 2013).

⁶ Hurley, L. et al. U.S. physicians’ perspective of adult vaccine delivery. *Ann Intern Med.* 2014;160:161-170.

⁷ National Vaccine Advisory Committee. Recommendations from the National Vaccine Advisory Committee: Standards for adult immunization Practice. *Pub. Health Rep.* Vol. 29; March-April 2014. Available at <http://www.publichealthreports.org/issueopen.cfm?articleID=3145>.

⁸ Infectious Diseases Society of America. Actions to Strengthen Adult and Adolescent Immunization Coverage in the United States: Policy Principles of the Infectious Diseases Society of America. *Clin Infect Dis.* (2007) 44 (12): e104-e108.

transition from MU Stage 1 to 2 because of technological and financial barriers, lack of state staff and funding for dedicated IIS MU team (most states relied on department-wide MU team and external IT departments and only one state had dedicated full-time staff for MU), and EHR vendor delays.⁹ Moreover, it was clear that states prioritized providers of pediatric immunizations in MU implementation because those providers administered a higher volume of immunizations, were more likely to be prepared to dedicate resources to complete the project, and had an established record of reporting to the IIS.

In the short term, much can be done to increase the profile of IIS as a tool to boost adult vaccine coverage. IDSA supports strategies to expedite EHR connectivity and ease of data transfer between IIS platforms, state development of web-based patient access portals, and education and awareness initiatives to increase provider and patient knowledge of the benefits of IIS use. These strategies should also include non-traditional or community providers (e.g., pharmacies). By improving both providers' and patients' ability to document and access immunizations administered and needed, more adults will have the opportunity to maximally reduce their risk of vaccine preventable diseases through vaccination. IDSA urges the ONC to consider the challenges facing IIS adoption when implementing the HIT strategic plan.

4. Expand Use and Availability of Telehealth Services

[Critical HIT Strategic Plan Objectives: 1A, 1C, 3B, 3C, 4A, 5B, 5C]

As many infectious diseases physicians practice in or near academic centers, telemedicine has the potential to provide specialty infectious diseases care to patients outside these areas where unmet need exists, including rural areas and correctional facilities. The lack of broadband infrastructure in the US poses significant challenges for the advancement of telemedicine, especially for patients living in rural areas.¹⁰ Moreover, many hospitals, including critical access hospitals, do not have infectious diseases specialists on staff.

Telemedicine can be used to link patients directly to infectious diseases specialists or to facilitate consultations between primary care providers and specialists.¹¹ Advancing telemedicine within the HIT strategic plan is important for provision of infectious diseases expertise because it will not only bolster the expansion of patient care but also will promote the extension of infection control and prevention as well as antimicrobial stewardship in furtherance of the principles outlined in the CARB strategy. Moreover, telemedicine expansion holds promise for improvements in management of chronic infectious diseases like hepatitis C (HCV) and HIV/AIDS, clinical decision support systems, and disaster preparedness and response.

⁹ National Adult and Influenza Immunization Summit. Using Immunization Information Systems to Increase Adult Vaccine Uptake: A Report from the National Adult and Influenza Immunization Summit. Unpublished Manuscript. June 2014.

¹⁰ Alverson D, et al. Telehealth in the trenches: Reporting back from the frontlines in Rural America. *Telemed. e-Health*.2004;10:S-95–S-109.

¹¹ Parmar P, Mackie D, Varghese S, Cooper C. Use of telemedicine technologies in the management of infectious diseases: a review. *Clin Infect Dis* 2015. Available at, <http://cid.oxfordjournals.org/content/early/2015/01/06/cid.ciu1143.abstract>. Accessed January 22, 2015.

A successful employment of infectious diseases telemedicine can be seen in the Project ECHO, which initially extended care to remote patients with HCV infection in New Mexico.¹² This model has also been replicated in other states.¹³ Looking to the future, we are also hopeful that advances in mHealth (mobile health) can provide useful diagnostic apps via smartphones that can provide information rapidly to facilitate appropriate care.

Again, thank you for the opportunity to comment. We look forward to working with the ONC to fulfill the promise of HIT to advance patient care and public health. If you have any questions about these comments, please contact John Billington, IDSA Director of Health Policy, at jbillington@idsociety.org / 703-299-0015.

Sincerely,

A handwritten signature in purple ink that reads "Stephen B. Calderwood".

Stephen B. Calderwood, MD, FIDSA
President, IDSA

¹² Project Echo Website. Available at, <http://echo.unm.edu/about-echo/>. Accessed January 26, 2015.

¹³ See, e.g., Khatri K, Haddad M, Anderson D. Project ECHO: Replicating a Novel Model to Enhance Access to Hepatitis C Care in a Community Health Center. *Journal of Health Care for the Poor and Underserved*. Vol 24; 850–858 (2013).