CDC: Top Public Health Challenges of 2014

The Centers for Disease Control and Prevention (CDC; Atlanta, GA) released on December 15 its list of the top 10 public health challenges of 2014. First on the list was the agency's continued emergency response to the most complex Ebola virus epidemic in history, with more than 170 staff members in the field and more than 700 people currently working on Ebola research and monitoring. Next was the continuing challenge of antibiotic resistance and health care–associated infections. New this year to top agency challenges was enterovirus D-68, a previously rare virus affecting children, with especially severe effects in children with asthma. Middle Eastern Respiratory Syndrome remained on the list. First reported in Saudi Arabia in 2012, the viral illness saw a dramatic increase in 2014. The CDC continues to work to decrease the spread of infectious diseases, and 2 of these appeared on the list of top challenges for 2014: HIV/AIDS (on which CDC works in partnership with the President's Emergency Plan for AIDS Relief to provide support for more than 60 countries for testing and antiretroviral treatment) and polio (which is nearing eradication but requires rigorous final steps to complete this effort). Laboratory safety was cited as one of the challenges of 2014, with CDC and other public agency laboratory incidents raising national awareness of scientific research standards during the year. Two lifestyle-associated health challenges appeared on the list: cardiovascular disease (with a special CDC effort to encourage widespread adoption and use of standardized treatment protocols for hypertension) and smoking (which remains the leading cause of preventable death in the United States). The final challenge on the list was prescription drug overdose, which leads to 44 U.S deaths each day. Additional information on each of these top 10 challenges of 2014 can be accessed at http://www.cdc.gov/media/dpk/2014/dpk-eoy.html.

Centers for Disease Control and Prevention

Decisions on EHR Adoption

On December 5 the U.S. Department of Health and Human Services Office of the National Coordinator for Health IT (ONC) released a data brief on "Physician Motivations for Adoption of Electronic Health Records (EHRs)." The brief, authored by Dawn Heisey-Grove, MPH, and Vaishali Patel, PhD, used data from the 2013 National Ambulatory Medical Care Survey to assess both the level of importance providers associate with EHR and health IT adoption and reasons identified for moving toward or delaying EHR adoption.

Financial incentives and the ability to exchange clinical information were the top reasons cited for EHR adoption. The data brief, which included numerous charts and explanatory material, indicated that since the enactment of the Health Information Technology for Economic and Clinical Health (HITECH) Act in 2009, 62% of physicians who adopted health IT tools identified financial incentives and penalties as a major influence on the decision to adopt, compared with only 23% before 2009.

The study also identified the ability to easily share electronic information directly with other caregivers, identified by the ONC as an important component in chronic care management, as a motivator for EHR adoption. More than one third of physicians who adopted EHRs after HITECH was enacted cited this capability as a major influence in their decision to adopt, and almost 4 in 10 physicians who were not using an EHR reported that the ability to electronically exchange clinical information would be a major driver in their decision to adopt.

ONC cited the importance of the HITECH Act's Medicare and Medicaid EHR Incentive Programs (meaningful use) and payments for services that include use of certified EHR technology, such as the separately billable Chronic Care Management services finalized under the 2015 Medicare Physician Fee Schedule, as significant drivers in advancing interconnectivity and networked improvements in national health care delivery.

On the same day that the data brief was released, ONC posted a new tool to help clinicians estimate the amount of money they might receive while using their certified health IT in treating Medicare patients living with chronic conditions (available at: http://dashboard.healthit.gov/quickstats/pages/FIG-Chronic-Care-Management-Fee-Tool.php?utm_source=x&utm_medium=HHSPress&utm_campaign=CCMQuickStat). The complete brief is available at: http://www.healthit.gov/sites/default/files/oncdatabrief-physician-ehr-adoption-motivators-2014.pdf?utm_source=x&utm_medium=HHSPress&utm_campaign=AdoptionMotivatorsBrief.

Office of the National Coordinator for Health IT

CMS and Proposed ACO Rule Changes

The Centers for Medicare & Medicaid Services (CMS) on December 6 released a proposal designed to strengthen the Shared Savings Program for Accountable Care Organizations (ACOs) through a greater emphasis on primary care services and promotion of transitions to performance-based risk arrangements. The proposed rule reflects input from program participants, experts, consumer groups, and the larger stakeholder community. CMS indicated that it hopes to continue this dialog "to ensure that the Medicare Shared Savings Program ACOs are successful in providing seniors and people with disabilities with better care at lower costs."

CMS Administrator Marilyn Tavenner, MHA, said, "This proposed rule is part of our continued commitment to rewarding value and care coordination—rather

than volume and care duplication. We look forward to partnering with providers and stakeholders to continuously refine and improve the Medicare Shared Savings Program." The Shared Savings Program now includes more than 330 ACOs in 47 states, providing care to more than 4.9 million beneficiaries in Medicare fee-for-service health care.

CMS had previously announced first-year Shared Savings Program results, including the fact that 58 program participant ACOs held spending below their benchmarks by a total of $705 million, earning shared payments of >$315 million. The agency has also instituted steps to provide more flexibility for ACOs seeking to renew participation in the program and to encourage ACOs to take on greater performance-based risk and reward.

The agency is seeking comments on these and other efforts, including a proposal to refine the way in which Medicare beneficiaries are assigned to an ACO, to place greater emphasis on primary care services delivered by nurse practitioners, physician assistants, and clinical nurse specialists and to allow certain specialists not associated with primary care to participate in multiple ACOs. CMS is also looking at alternative methodologies that would make ACO benchmarks for determining shared savings and losses gradually more independent of each ACO's past performance and more dependent on the ACO's success in being cost efficient relative to its local market. Also planned are efforts to streamline the process by which ACOs access beneficiary claims data necessary for health care operations (such as quality improvement activities and care coordination) while retaining the opportunity for beneficiaries to decline to have claims data shared with the ACO.

A fact sheet with more information about the proposed rule is available at: http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2014-Fact-sheets-items/2014-12-01.html. The proposed rule will be open for public comment until February 6.

Centers for Medicare & Medicaid Services

Medical Isotope Supply Security

The Council of the Organisation for Economic Co-operation and Development (OECD; Paris, France) announced on December 17 that 11 countries had formally adhered to the Joint Declaration on the Security of Supply of Medical Radioisotopes, which seeks to ensure the security of the global supply of ^{99}Mo. Additional countries are being encouraged by the council to join this effort. The joint declaration provided a coordinated political commitment by countries involved in the production and use of medical radioisotopes to help bring about the necessary changes across the supply chain. According to an OECD press release, the joint declaration "sends a clear signal to the actors in the medical radioisotope supply chain that the governments have the resolute intention to take coordinated action to ensure the long-term security of supply of this important medical radioisotope."

This effort, which was coordinated through the OECD Nuclear Energy Agency (NEA) High-Level Group on the Security of Supply of Medical Radioisotopes (HLG-MR), promotes full-cost recovery of isotope production and the availability of reserve capacity. The joint declaration also provides a platform for ongoing discussions among participating countries on their current or potential future involvement in the supply chain for ^{99}Mo. The governments of Australia, Canada, Germany, Japan, The Netherlands, Poland, the Republic of Korea, the Russian Federation, Spain, the United Kingdom, and the United States have formally adhered to the declaration, and participation remains open to the remaining countries participating in the HLG-MR as well as any other countries that wish to do so. The NEA stated that it will continue "to support global efforts to ensure a long-term, secure, and reliable supply of medical radioisotopes by providing relevant information, economic analyses, and policy recommendations on the market situation."

The HLG-MR, with a main objective of strengthening the reliability of ^{99}Mo and ^{99m}Tc supply in the near, medium, and long terms, includes more than 40 experts representing the governments of 17 countries, as well as the European Commission and the International Atomic Energy Agency. Members of the HLG-MR are nominated by governments and include experts from government agencies responsible for medical or nuclear policy, as well as from research and industry organizations with interests in medical radioisotopes.

The joint declaration is available at www.oecd-nea.org/med-radio/jointdeclaration.html.

Council of the Organisation for Economic Co-operation and Development

Cigarette Smoking Down Among Adults

Data published on November 26 in the Centers for Disease Control and Prevention (CDC) *Morbidity and Mortality Weekly Report* indicated that cigarette smoking among adults in the United States dropped from 20.9% in 2005 to 17.8% in 2013, the lowest prevalence of adult smoking since the CDC's National Health Interview Survey (NHIS) began keeping such records in 1965. The report also showed that the total number of cigarette smokers dropped from 45.1 million in 2005 to 42.1 million in 2013, despite an increasing national population.

Among current cigarette smokers, the percentage of those who smoke every day decreased from 80.8% in 2005 to 76.9 % in 2013. The percentage of those who smoke only on some days increased from 19.2% in 2005 to 23.1% in 2013. Among daily smokers, the average number of cigarettes smoked per day declined from 16.7 in 2005 to 14.2 in 2013. The percentage of daily smokers who smoked 20–29 cigarettes/d dropped from 34.9% in 2005 to 29.3% in 2013.

Although smoking rates have dropped, the CDC cited a significant need to help those who continue to smoke. Cigarette smoking remains high among the following groups: those below the poverty level, those

with less education, Americans of multiple race, American Indians/Alaska Natives, males, those who live in the South or Midwest, those who have a disability or limitation, and those who are lesbian/gay/bisexual. Data specific to sexual orientation were collected for the first time by the NHIS in 2013.

Centers for Disease Control and Prevention

3D Organ Printing and Radiopharmaceutical Therapy

In a press release dated December 17, the Institute for Cancer Research (ICR; London, UK) reported that researchers have used 3D printing to produce replica models of tumors and organs in an effort to increase accuracy in delivery of radiation in cancer treatment, with a special focus on targeted radionuclide therapies. Preliminary studies show that the models can accurately replicate the shape of a patient's tumor and surrounding organs, as well as the exact position of the tumor within the body. Initial tests at ICR and at The Royal Marsden National Health Service (NHS) Foundation Trust found that the models allowed both more accurate initial molecular radiotherapy and information that aided in optimizing subsequent doses.

The phantoms, made from plastic and printed by researchers from the ICR and The Royal Marsden, are based on series of CT and PET images acquired during patient treatment. The researchers originally produced handmade individual models of a tumor before turning to 3D printing technology. If validated in larger studies, 3D printing could be used to significantly improve the accuracy of dosing during molecular radiotherapy, the ICR said.

Study coleader Jonathan Gear, PhD, Clinical Scientist in the Joint Department of Physics at the ICR said, "The big challenge we faced was to produce a model that was both anatomically accurate and allowed us to monitor the dose of radiation it received. We found that the printed replicas could give us information we couldn't get from 2D scans. . . . Our research is aiming to find new ways to fine-tune the amounts of radiation given to patients as part of their treatment. There's no reason why in the future, treatment planning can't incorporate 3D printing technology to help improve radiation dosing for patients."

Glenn Flux, PhD, head of Radioisotope Physics at the Joint Department of Physics at the ICR and The Royal Marsden NHS Foundation Trust, said: "We've seen reports on how 3D printing is being used for prosthetics and to inform surgery, and this research shows it has the potential to improve cancer treatment, too—by helping us to perform complex radiotherapy calculations more accurately. We're really excited by this technology and the potential it has for personalizing cancer treatment with highly targeted radiation."

Institute for Cancer Research

CMS and Medicare Provider Oversight

The Centers for Medicare & Medicaid Services (CMS) announced on December 3 new rules designed to "strengthen oversight of Medicare providers and protect taxpayer dollars from bad actors." These rules are intended to: prevent physicians and other providers with unpaid debt from re-entering Medicare; remove providers with patterns or practices of abusive billing; and implement other provisions to save unnecessary expenditures. CMS Deputy Administrator and Director of the Center for Program Integrity, Shantanu Agrawal, MD, said, "CMS has removed nearly 25,000 providers from Medicare and the new rules help us stop bad actors from coming back in as we continue to protect our patients. For years, some providers tried to game the system and dodge rules to get Medicare dollars; today, this final rule makes it much harder for bad actors that were removed from the program to come back in."

CMS is using new authorities created by the Affordable Care Act to address Medicare fraud, waste, and abuse. CMS currently has in place temporary enrollment moratoria on new ambulance and home health providers in 7 "fraud hot spots" around the United States. The moratoria allow CMS to target its resources in those areas, including use of fingerprint-based criminal background checks.

The newly announced changes allow CMS to:

- Deny enrollment to providers, suppliers, and owners affiliated with any entity that has unpaid Medicare debt (designed to prevent those with Medicare debt from exiting the program and re-entering as new entities);
- Deny or revoke the enrollment of a provider or supplier if a managing employee has been convicted of a felony offense that CMS determines to be detrimental to Medicare beneficiaries; and
- Revoke enrollments of providers and suppliers engaging in abuse of billing privileges by demonstrating a pattern or practice of billing for services that do not meet Medicare requirements.

A fact sheet about the final rule is available at: http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2014-Fact-sheets-items/2014-12-03.html.

Centers for Medicare & Medicaid Services