Using Health Information Technology to Improve Adult Immunization Rates
Immunization Rates Fall Short of National Goals

Estimated Immunization Rates for Older Adults Are Substantially Lower Than Healthy People 2020 Goals

- An estimated 40,000 to 50,000 adults in the United States die annually of vaccine-preventable diseases.
- Annual estimated cost of $10 billion in direct medical care.

Healthy People 2020 is a set of national health objectives developed for the United States by the US Department of Health and Human Services.

CMS=Centers for Medicare and Medicaid Services.
HIT Can Be Used to Help Overcome Barriers to Immunizing Eligible Patients

**Immunization Protocols**

Barrier
HCPs report confusion around adult vaccination schedules (including which patient to vaccinate and when).\(^7\)

Solution
Standardized protocols can facilitate understanding of immunization process and procedures.\(^8\)

**Vaccination History**

Barrier
Inability to quickly locate vaccination histories limits timely identification of eligible patients.

Solution
Electronic patient records facilitate checking vaccination histories and tracking of vaccine administration.\(^9\)

**Abstraction and Reporting**

Barrier
Abstraction requires staff and time. Reporting quality metrics to registries must be done electronically.\(^12\)

Solution
EHRs with reporting capability make it easier to report and track patient vaccination histories.\(^13,14\)

**Clinical Decision Support**

Barrier
HCPs report difficulty in identifying appropriate patients for immunization.\(^7\)

Solution
CDS can apply rules to reinforce vaccination protocols that identify adults and generate alerts for HCPs to order vaccinations.\(^9\)

**Provider Order Entry**

Barrier
Manual order entries are associated with lower vaccination orders.

Solution
Preselected vaccine orders have been shown to facilitate higher numbers of vaccination orders.\(^10\)

**Nurse Standing Orders**

Barrier
Ambiguity about who is responsible for administering vaccines to patients.\(^9\)

Solution
Standing orders have been shown to increase immunization rates.\(^10\)

**Common operational barriers and the solutions offered by EHR systems**

HIT=health information technology; HCPs=health care providers.
Adult immunization rates can be enhanced through fully operationalizing health information technology\(^9,10,15,16\)

- Use EHR to improve access to vaccination histories\(^9,15\)
- Use CDS to help promote adherence to vaccination protocols\(^9\)
- Use CPOE to help simplify vaccine orders\(^10\)
- Use standing orders to help ensure vaccine administration\(^10,16\)
- Use EHR to record and report data to maintain up-to-date vaccination histories\(^13,14\)

**Process Efficiencies**

**Vaccination Histories**

**Abstraction & Reporting**

**Standing Orders**

**Order Entries**

**Protocols**

**Decision Support**

When EHR functionalities are used together effectively, adult immunization rates have been shown to increase by 36%\(^10\)

Optimize the use of EHR systems to help overcome barriers and increase adult immunization rates