

USING VACCINATION TECHNOLOGIES

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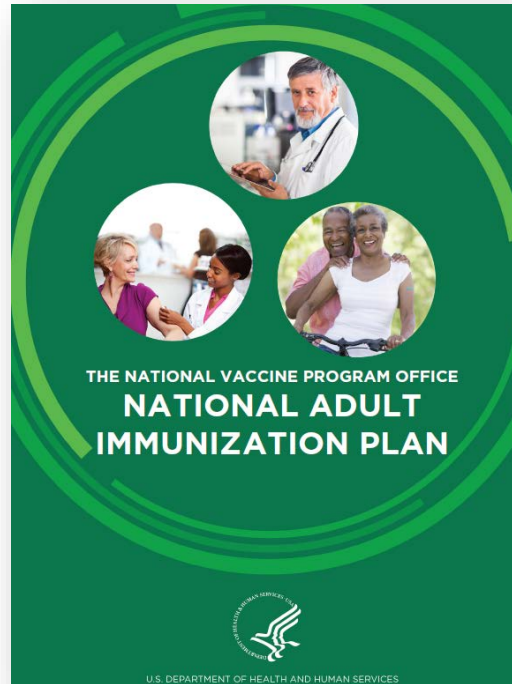


SCOPE OF TODAY'S TALK

- I. Background and Context
- II. Service technologies: helping providers provide immunization services
- III. Vaccine technologies

I. BACKGROUND

THE (FIRST EVER) NATIONAL ADULT IMMUNIZATION PLAN



FOUR OVERARCHING GOALS

INFRASTRUCTURE



GOAL 1:

Strengthen the adult immunization infrastructure



ACCESS



GOAL 2:

Improve access to adult vaccines

DEMAND



GOAL 3:

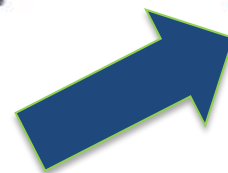
Increase community demand for adult immunizations

INNOVATE



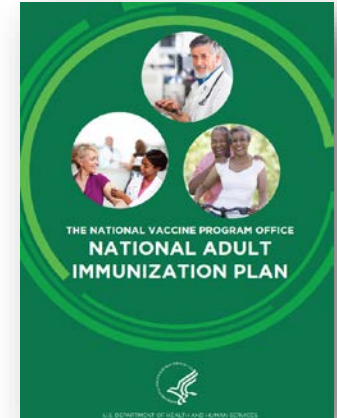
GOAL 4:

Foster innovation in adult vaccine development and vaccination related technologies



OBJECTIVE NAIP AND NAIIS

- I. Promote vaccination coverage across the lifespan
- II. Find ways to reduce barriers to implementing vaccination services
 - A. Forecasting vaccine demand
 - B. Vaccine purchase
 - C. Storage and handling
 - D. Managing private inventories
 - E. Billing
 - F. IIS reporting (automatically from EHR)
 - G. Means to improve immunization coverage

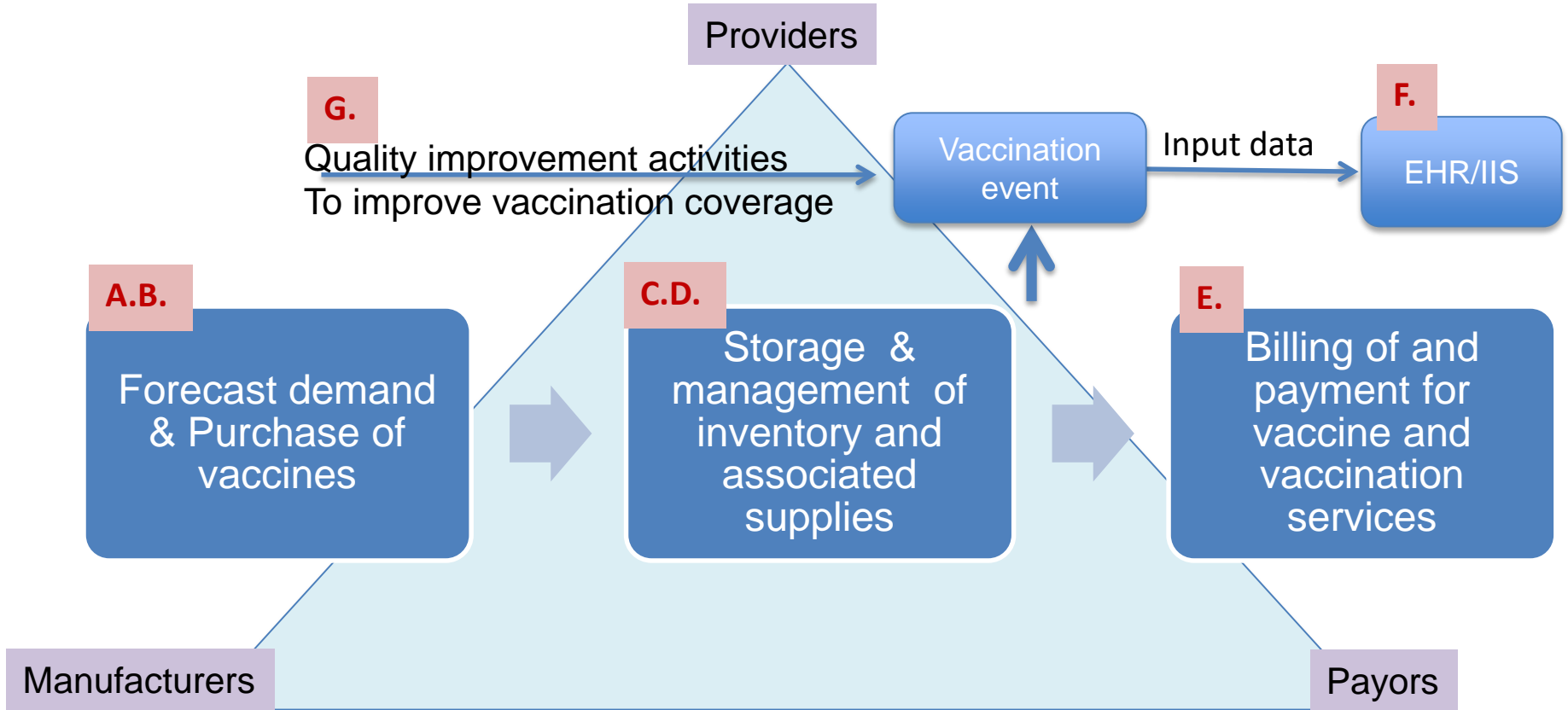


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MANAGING THE BUSINESS OF VACCINATION: PROVIDERS



ACTUALLY MORE COMPLEX



WHAT DOES IT “COST” THE PROVIDER TO IMMUNIZE?

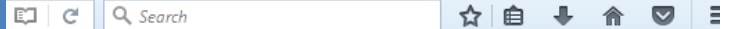
- A.B. Forecast demand & purchase of vaccines
 - Order, track, and maintain supply, deferred payment
- C.D. Storage & management of inventory & associated supplies
 - Equipment
 - Refrigerator/freezer, temperature monitoring devices
 - Upfront purchase costs
 - Back-up power/alarms
 - Insurance for inventory
 - Opportunity cost of inventory – potentially hundreds of thousands of dollars tied up in inventory

VACCINATION EVENT

- Vaccine administration
 - Staff time
 - Discussions with individuals
 - Supplies
 - Documentation
 - Learning billing and coding across various payors
 - Hundreds of thousands of dollars tied up in inventory

E. BILLING OF AND PAYMENT FOR VACCINE & VACCINATION SERVICES

CDC Vaccine Price List



Most Visited Getting Started JIRA Home | Intranet.HHS...

Adult Vaccine Price List

Vaccine	Brandname/ Tradename	NDC	Packaging	CDC Cost/ Dose	Private Sector Cost/ Dose	Contract End Date	Manufacturer	Contract Number
Hepatitis A-Adult [5]	Vaqta®	00006-4096-02	10 pack - 1 dose syringe	\$27.68	\$66.91	6/30/2017	Merck	200-2016-90100
		00006-4841-41	10 pack - 1 dose vial	\$25.73	\$64.21			
Hepatitis A Adult [5]	Havrix®	58160-0826-11	10 pack - 1 dose vial	\$25.73	\$63.72	6/30/2017	GlaxoSmithKline	200-2016-90099
		58160-0826-52	10 pack - 1 dose syringe	\$27.68	\$63.10			
Hepatitis A-Hepatitis B Adult [3]	Twinrix®	58160-0815-52	10 pack - 1 dose syringe	\$54.66	\$92.50	6/30/2017	GlaxoSmithKline	200-2016-90099

<https://www.cdc.gov/vaccines/programs/vfc/awardees/vaccine-management/price-list/index.html>

CODING AND BILLING WEBSITE



HOME WORKGROUPS ANNUAL SUMMIT SUMMIT AWARDS ADULT STANDARDS WORLD SUMMITS RESOURCES

Coding and Billing for Adult Vaccinations

A common problem that has been expressed by providers of adult vaccinations has been the intricacies and complexities associated with coding and billing for those services. Much discussion at meetings of the National Adult and Influenza Immunization Summit ("Summit") has focused on opportunities to provide information to providers to reduce the errors and confusion associated with coding and billing for adult vaccines. The Summit's Access and Provider Workgroup has developed this website in response to this identified need.

At this one web location, you will find the **top questions** identified with coding and/or billing for adult vaccinations, **scenarios** that detail how to go about coding and billing for adult vaccines, and collected **resources** from the Summit's medical association, public health, and vaccine

Coding and Billing Subgroup Members

- Carolyn Bridges, CDC
- Laura Lee Hall, Sustainable Healthy Communities
- David Kim, CDC
- Don Nicholson, TX Dept of Health
- Jill Powelson, AMGA
- Angela Shen, NVPO
- L.J Tan, IAC

<https://www.izsummitpartners.org/naiis-workgroups/access-provider-workgroup/coding-and-billing/>

MANUFACTURERS PROVIDE HOTLINES

- Many manufacturers provide hotlines to assist coders; these may also offer guidance for claims preparation, appeals, and specific payers' vaccine coverage and reimbursement policies
- Contact your vaccine representative to learn more about their reimbursement support services

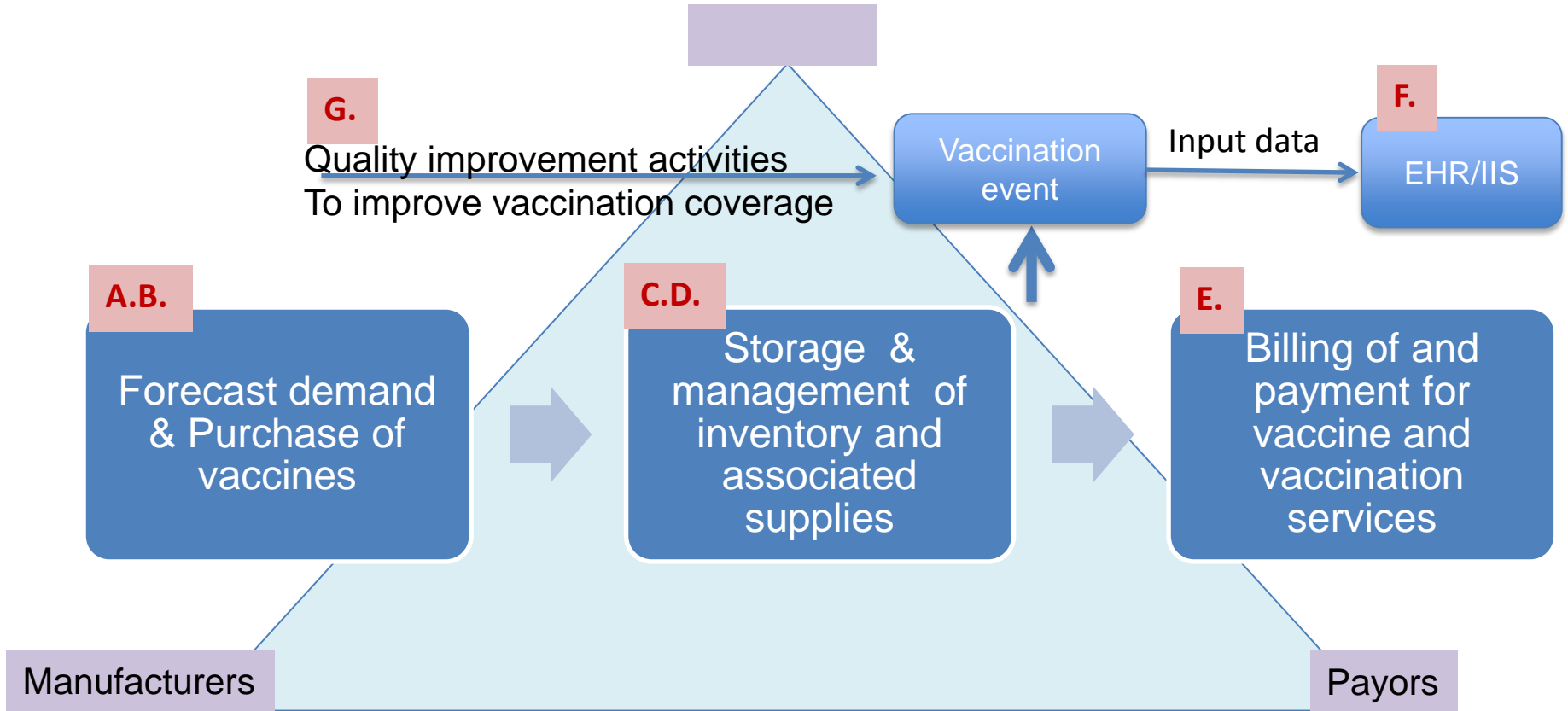
DATA INPUTS AND QUALITY IMPROVEMENT

- F. Time to input data into EHR/IIS
- G. Quality improvement activities to improve vaccination coverage

CHALLENGES IN PURCHASING ADULT VACCINES

- Newer vaccines are more expensive
- No federal vaccine purchase program for adults
- Vaccine product pricing can vary depending on negotiated prices, which are confidential
- Adult vaccine providers have smaller economies of scale than pediatric providers for vaccinations

MANAGING THE BUSINESS OF VACCINATION: PROVIDERS



BUSINESS SOLUTIONS

- Supporting the vaccination model: buy, vaccine and bill
- Automating purchasing, management dispensing to reduce barriers to vaccinating for practices
- Additional ability to conduct mass vaccination clinics as part of emergency response in school settings or as part of occupational health clinics

BUSINESS SOLUTIONS CONT.

- Public and private sector settings
- Across patient age cohorts & geographic settings
- In various practice types including large health systems, private practices, group practices
- **GOAL**: expand accessibility of vaccines to all patients and all health care provider types in all settings to expand immunization services and improve vaccination coverage

II. VACCINE TECHNOLOGIES

FUTURE OF VACCINE DELIVERY METHODS

- Multiple carrier systems
 - Liposomes, microspheres, nanoparticles
 - Control how antigen is presented to immune system to allow for sustained release, cellular targeting
- Needle-free patch
 - Dendritic cells engaged to present antigen delivered by microneedles of sugar which dissolve
- Inhaled and oral vaccines
 - Delivery of antigen into lungs – pulmonary immune response; Or into gut - engaging GALT
 - Would mimic entry of many pathogens
 - Also potential engagement of mucosal immunity

FUTURE OF VACCINE DELIVERY METHODS

- Microneedle arrays
 - Also engaging dendritic cells in the skin
 - Arrays (patches) of microneedles less than 1mm long
- Transcutaneous immunization (TCI)
 - Again, trying to engage skin associated immune cells
 - Techniques to create abrasions in the skin where the antigen would be introduced

SMART REFRIGERATION

- These are purpose-built, pharmaceutical-grade vaccine storage and management systems
 - More than just a freezer or refrigerator
 - May have design features (eg. door-less) to ensure temperature stability, even during heavy, continuous use
 - Have integrated temperature monitoring, recording, alerting
 - May allow for precise inventory management, such as automatic stock rotation, real time stock levels, alerts for low stock or near-expiry stock, etc.
 - Allows for EHR integration - saves time and eliminates transcription and billing errors
 - May feature automatic back-up in case of main power outage
- One system is currently in commercial use
 - pediatric and adult
 - single-practitioner; large IDN; university health system

MANY THANKS

- LJ Tan, Immunization Action Coalition
- Gus Birkhead, NVPO