**Pediatricians’ Survey Regarding Use of Barcodes on Vaccines**

**The purpose of this 10-15 minute survey is to examine the attitudes of physicians about a vaccine barcoding system.**

**Please read the following information prior to completing this survey.**

In August 2011, the Federal Food and Drug Administration (FDA) published final guidance on barcode label requirements.  This guidance states that FDA will now consider requests from vaccine manufacturers to include a modern two dimensional (2-D) barcode on vaccines that would include product identifier, lot number and expiration date.

Modern, 2-D barcodes can be used for the following vaccine related functions:

* To interact with electronic medical records, automating the recording of vaccine information in patient records
* For paper-based medical records, a scanner can read the barcode and print a simple label containing the product, lot number and expiration date, which can be placed in the patient’s record
* To keep inventory records for vaccines
* To facilitate identifying patients who received vaccine from a particular lot in the event of a recall
* To record and facilitate the sending of vaccine information to a regional or state vaccine registry
* If barcodes were integrated into Vaccine Information Statements (VIS), these could be scanned to record in a patient’s record that they had been given the VIS

The purpose of this survey is to gain an understanding of physicians’ likelihood of using modern 2-D barcodes, if available, as well as benefits and barriers to using barcodes, from the perspective of physicians. This information is needed to guide the federal government as they determine the specific information and format of information in the new barcodes and prepare to support providers in using them. *You may have recently completed an internet survey on this topic, conducted by Research Triangle Institute (RTI). The current survey will provide the federal government with a greater level of detail on this topic.*

**Please answer the following questions with respect to your primary site of outpatient practice. If you practice at more than one outpatient site, please respond to this survey regarding the site at which you spend the most time.**

1. **In the table below, please indicate approximately how many patients you personally see in a typical week, and whether or not you provide vaccines to this age group. Regardless of whether you see patients in these age groups, please indicate whether or not you vaccinate them.** (*For each row, you should check two boxes)*

|  |  |  |
| --- | --- | --- |
|  | **Number of patients seen in a typical week** | **Do you provide vaccines to this group?** |
|  | **None** | **1-10** | **11-20** | **21-30** | **31-40** | **50 or more** | **Yes** | **No** |
| 1. Children up to age 3
 |  |  |  |  |  |  |  |  |
| 1. Children age 4-6
 |  |  |  |  |  |  |  |  |
| 1. Children age 7-10
 |  |  |  |  |  |  |  |  |
| 1. Children age 11-18
 |  |  |  |  |  |  |  |  |
| 1. Age 19 and over
 |  |  |  |  |  |  |  |  |

1. **If you do not provide vaccines for ANY age groups in question 1, please skip to question 10. If you checked “yes” for providing vaccines to at least one age group in question 1, please continue with question 2.**

**Do you provide influenza vaccine to parents or grandparents of your patients?**

Yes

No

1. **For which of the following vaccines does your primary site of outpatient practice usually maintain an inventory, alone or in a combination vaccine, for each of the following patient groups?** *(Please check YES or NO for each row)*

|  |  |  |
| --- | --- | --- |
| **Children** | **Yes, stock** **this vaccine** | **No, do not stock this vaccine** |
| 1. DTaP (diphtheria-tetanus-pertussis)
 |  |  |
| 1. Hepatitis A
 |  |  |
| 1. Hepatitis B
 |  |  |
| 1. Hib *(Haemophilus influenzae* type b)
 |  |  |
| 1. Injectable Influenza (single dose or multidose)
 |  |  |
| 1. Intranasal Influenza (FluMist®)
 |  |  |
| 1. IPV (Inactivated Poliovirus)
 |  |  |
| 1. MMR (measles, mumps, rubella)
 |  |  |
| 1. Pneumococcal conjugate vaccine (Prevnar 13®)
 |  |  |
| 1. Rotavirus (RotaTeq® or Rotarix®)
 |  |  |
| 1. Varicella (Varivax®)
 |  |  |
| **Adolescents** |
| 1. HPV (human papillomavirus, Gardasil® or Cervarix®)
 |  |  |
| 1. Injectable Influenza (single dose or multidose)
 |  |  |
| 1. Intranasal Influenza (FluMist®)
 |  |  |
| 1. Meningococcal Conjugate Vaccine (Menactra® or Menveo®)
 |  |  |
| 1. Td (tetanus, diphtheria)
 |  |  |
| 1. Tdap (tetanus, diphtheria, pertussis)
 |  |  |

1. **The use of barcoding and scanners could potentially allow practices to communicate electronically with their state’s Vaccine for Children (VFC) program to maintain inventory. Does your practice participate in the VFC program?**

Yes No

**4b. If no, how would the availability of barcoding change your interest in participating in the VFC program?** *(Please check the ONE best response)*

Would **increase** my interest

Would **not change** my interest

Would **decrease** my interest

**4a. If yes, approximately what % of children in your practice are covered by VFC?** *(Please check the ONE best response)*

 0-10%

 11-19%

 20-29%

 30-49%

 50-74%

 75% or more

Don’t know

1. **Barcoding systems can be used to automatically record vaccine product information, lot number and expiration date. Please think about the layout of your office. If you had the necessary equipment and software for scanning barcodes, at how many separate locations in your office would you want to be able to scan barcodes?** *(Please check the ONE best response)*

1

2-3

4-7

8-10

More than 10

1. **Which of the following best describes your current system for recording vaccine product, lot number and expiration date in the patient’s medical record?** *(Please check the ONE best response)*

Entered directly into the patient’s EMR (Electronic Medical Record) or EHR (Electronic Health Record) at the time of vaccine administration

Entered directly into the patient’s paper-based medical record at the time of vaccine administration

Recorded temporarily on paper and entered into the patient’s EMR or EHR at a later time

Recorded temporarily on paper and entered into paper-based medical record at a later time

Entered directly into immunization registry, which is linked to the patients EMR or EHR

Other *(please specify*): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I don’t know how we do this at our practice

1. **Many practices have multiple systems in place to monitor the number of vaccines and doses in stock. Please indicate whether or not you use any of the following systems or procedures to monitor the number of vaccine doses in stock at your practice location.** *(Please check YES or NO for each)*

|  |  |  |
| --- | --- | --- |
|  | **Yes** | **No** |
| 1. Registry- or Internet-based inventory system
 |  |  |
| 1. Inventory software system installed in your practice
 |  |  |
| 1. Computerized system that is part of your practice management and billing system
 |  |  |
| 1. MS Excel spreadsheets or similar files maintained by your staff
 |  |  |
| 1. Paper-based inventory system, such as a ledger
 |  |  |
| 1. We simply order when the stock looks low
 |  |  |
| 1. We order when we know the demand is about to pick up
 |  |  |
| 1. Other *(please specify)*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 |  |  |
| 1. I don’t know how we do this at our practice
 |  |  |

1. **Some practices find that they must separately enter vaccine administration information into multiple record systems. This would generally include type of vaccine and date given, and may also include lot number and expiration date. Which of the following different places does your practice separately enter any information on vaccines administered?** *(Please check YES or NO for each)*

|  |  |  |
| --- | --- | --- |
|  | **Yes** | **No** |
| 1. Medical record (either EMR or paper)
 |  |  |
| 1. Immunization registry (regional or state)
 |  |  |
| 1. Electronic inventory system for vaccines
 |  |  |
| 1. Paper-based inventory system
 |  |  |
| 1. Patient hand-held record
 |  |  |
| 1. Other *(please specify)*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 |  |  |
| 1. I don’t know how we do this at our practice
 |  |  |

1. **Please indicate the extent to which you agree or disagree with each of the following statements.** *(Please check the ONE best response for each statement)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Strongly agree** | **Somewhat agree** | **Somewhat disagree** | **Strongly disagree** |
| 1. My practice’s current system for recording doses of vaccine and keeping inventory are sufficiently accurate.
 |  |  |  |  |
| 1. Barcodes would be more reliable and accurate than our current recording systems.
 |  |  |  |  |
| 1. The ability to scan barcodes could greatly improve the efficiency of vaccine administration at my practice.
 |  |  |  |  |
| 1. Recording vaccine doses in the patient’s record takes a lot of time at my practice.
 |  |  |  |  |
| 1. Our practice frequently runs out of vaccine doses of one kind or another.
 |  |  |  |  |
| 1. The current systems of recording vaccine doses in the patient’s records at my practice work well.
 |  |  |  |  |
| 1. The ability to scan barcodes could facilitate tracking of vaccine inventory at my practice.
 |  |  |  |  |
| 1. Accurately recording of vaccine lot numbers would allow us to recall patients due to concerns about a particular lot number.
 |  |  |  |  |
| 1. I am satisfied with my practice’s current system for keeping track of vaccine inventory.
 |  |  |  |  |
| 1. Keeping track of vaccine inventory takes a lot of time at my practice.
 |  |  |  |  |

1. **Please indicate the extent to which you agree or disagree with each of the following statements.** *(Please check the ONE best response for each statement)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Strongly agree** | **Somewhat agree** | **Somewhat disagree** | **Strongly disagree** |
| 1. Hand-written recording of vaccine doses has an unacceptable risk of being inaccurate.
 |  |  |  |  |
| 1. I have never experienced any errors or problems with hand-written recording of vaccine doses.
 |  |  |  |  |
| 1. The use of barcodes would improve patient safety.
 |  |  |  |  |
| 1. Hand-written recording of vaccine doses has an unacceptable risk of being illegible.
 |  |  |  |  |
| 1. When there are errors with vaccine recording, they are generally small errors that do not increase risk to patients.
 |  |  |  |  |
| 1. I am concerned about medical malpractice associated with inaccurate tracking of vaccines.
 |  |  |  |  |
| 1. My practice has had problems in the past with inaccurately maintaining vaccine records.
 |  |  |  |  |

1. **Which of the following functions would need to be available for your practice to adopt a barcoding system, that is, your practice would not adopt a barcoding system if the system was not able to perform this function?**  *(Please check one box for each row)*

|  |  |  |
| --- | --- | --- |
|  | **Crucial to adoption** | **Not crucial to adoption** |
| 1. Recording vaccine dose information in an electronic medical record.
 |  |  |
| 1. Printing vaccine dose information for placement in a paper-based medical record.
 |  |  |
| 1. Billing for vaccine doses.
 |  |  |
| 1. Maintaining vaccine inventory records.
 |  |  |
| 1. Recording that a Vaccine Information Statement (VIS) was given to a patient.
 |  |  |
| 1. Automatically transferring vaccine administration information to a regional or state vaccine registry.
 |  |  |
| 1. Identifying patients who have received a recalled lot of vaccine.
 |  |  |

1. **Does your state or region currently have a computer or internet-based immunization registry, also known as an immunization information system (IIS)?**

Don’t know **Please skip to question 14**

No **Please skip to question 14**

Yes

**13. If yes, does your practice participate in the registry?**

No **13a. If no,** **would having a barcoding system with an interface that allows you to scan vaccines for automatic recording in the registry make it more desirable for you to participate in the registry?**

Yes

No

Yes **13b. If yes, how is data transmitted to the registry?** *(Please check the ONE best response)*

Data from our office’s computer system automatically uploads to the registry

Our office must directly enter the information into the registry system separate from any entry we make into our own records

Information is faxed to the registry for data entry

Information sent by CD-ROM

Other *(please specify)*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I don’t know how we do this at our practice

Please skip to question 7

1. **Does your practice *currently* use any of the following computer systems or devices?** *(Please check YES or NO for each row)*

|  |  |  |
| --- | --- | --- |
| **System** | **Yes, in use** | **No, not in use** |
| 1. EMR/EHR (Electronic medical record or electronic health record)
 |  |  |
| 1. Electronic practice management and billing system
 |  |  |
| 1. Automated electronic data input device

(e.g., weight scales, blood pressure) |  |  |
| 1. Barcoding and barcode scanning of any type for medical supplies, encounter forms, documentation, etc.
 |  |  |

1. **If you do not have an EMR or EHR system at present, please answer questions 15a and 15b. If you do have an EMR or eHr, please skip to question 16.**

**15a. When do you expect that you may have an EMR or EHR system in use?** *(Please check the ONE best response)*

By the end of 2011

By the end of 2012

By the end of 2013

By the end of 2014

By the end of 2015

Sometime after 2015

Don’t know

Have no plans to adopt

**15b. If your practice had an EMR or EHR, how would that increase or decrease your interest in using barcodes at your primary outpatient practice?** *(Please check the ONE best response)*

Greatly increase interest

Somewhat increase interest

Somewhat decrease interest

Greatly decrease interest

1. **Using barcodes would require, at a minimum, that a practice have a barcode scanner, a computer, and software that can interpret the scanned information. For an EMR or EHR, software would be required to interface with the EMR or EHR. For paper records, a printer would be required to print vaccine information for placement in paper records. For billing, software would be required that can interface with the billing system. For keeping track of vaccine inventory, inventory software would be required.**

**Whether or not you currently provide vaccines, how much would each of the following be barriers to incorporating barcodes into administration of vaccines at your practice?** *(Please check the ONE best response for each row)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Major barrier** | **Moderate barrier** | **Minor barrier** | **Not at all a barrier** |
| 1. The number of locations at which we prepare vaccines at our practice, which would all require a scanner.
 |  |  |  |  |
| 1. The need for software.
 |  |  |  |  |
| 1. The need for computer equipment.
 |  |  |  |  |
| 1. Lack of an electronic medical record.
 |  |  |  |  |
| 1. The need for training.
 |  |  |  |  |
| 1. My belief that it will not improve patient safety.
 |  |  |  |  |
| 1. My belief that it will not improve efficiency in our office.
 |  |  |  |  |
| 1. My belief that it will not reduce liability or risk of medical malpractice suits.
 |  |  |  |  |
| 1. My concern that it would disrupt our workflow.
 |  |  |  |  |
| 1. My concern over reliability of barcodes.
 |  |  |  |  |
| 1. The need for information technology support.
 |  |  |  |  |

1. **Whether or not you currently provide vaccines, please indicate how likely your practice would be to initially adopt a barcoding system given the following possible costs to your practice, including all necessary equipment (e.g., scanner, computer, printer, as necessary), software (e.g., interface with billing and medical record systems) and IT support. If you are part of a multi-site system, please respond regarding costs for your practice at a single location.** *(Please check ONE for each row)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Definitely adopt** | **Probably adopt** | **Probably not adopt** | **Definitely not adopt** |
| 1. Total cost more than $20,000
 |  |  |  |  |
| 1. Total cost between $10,000 and $20,000
 |  |  |  |  |
| 1. Total cost between $5,000 and $9,999
 |  |  |  |  |
| 1. Total cost between $1,000 and $4,999
 |  |  |  |  |
| 1. Total cost between $500 and $999
 |  |  |  |  |
| 1. Total cost between $100 and $499
 |  |  |  |  |
| 1. Total cost under $100 or free
 |  |  |  |  |

1. **Taking into account all considerations, how likely is your practice to adopt a barcoding system when it becomes available?** *(Please check the ONE best response)*

Very likely

Somewhat likely

Not very likely

Not at all likely

1. **If you currently provide vaccines at your practice please skip to question 22.**

**IF YOU DO NOT CURRENTLY PROVIDE ANY VACCINES, PLEASE CONTINUE WITH QUESTION 21.**

**If 2-D barcode systems became available, how would that change your practice’s willingness to administer vaccines?** *(Please check the ONE best response)*

Would **not change** my practice’s willingness to administer vaccines

Would **increase** my practice’s willingness to administer vaccines

Would **decrease** my practice’s willingness to administer vaccines

1. **In your primary outpatient practice, roughly what percentages of your patients are in the following groups?** *(Please approximate; groups may not sum up to 100%)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **0%** | **1-9%** | **10-24%** | **25-49%** | **50-74%** | **75-100%** |
| 1. Private Insurance
 |  |  |  |  |  |  |
| 1. Medicaid
 |  |  |  |  |  |  |
| 1. State Children’s Health Insurance Program (CHIP)
 |  |  |  |  |  |  |
| 1. Uninsured
 |  |  |  |  |  |  |

1. **In your primary outpatient practice, roughly what percentages of your patients are in the following racial/ethnic minority groups?** *(Please approximate; groups may not sum up to 100%)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **0%** | **1-9%** | **10-24%** | **25-49%** | **50-74%** | **75-100%** |
| 1. Hispanic or Latino
 |  |  |  |  |  |  |
| 1. Black or African American
 |  |  |  |  |  |  |
| 1. Asian
 |  |  |  |  |  |  |
| 1. Other minority group

*(please specify)*:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  |  |  |

**Thank you for participating. Please return this survey in the enclosed stamped envelope addressed to:**

Vaccine Policy Collaborative Initiative

Children’s Outcomes Research/Michaela Brtnikova

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