



# Strategies for Improving Immunizations

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VPDs	Strategies	RPMS	Vaccine Safety	Recommendations
<u>1 piece of chocolate</u>				
<u>2 pieces of chocolate</u>				
<u>3 pieces of chocolate</u>				
<u>4 pieces of chocolate</u>				

# Vaccine Preventable Diseases - 1

- **While no longer endemic in the United States, imported cases continue to cause outbreaks in the U.S. An outbreak in 2008 in San Diego resulted in follow up of 839 exposed people, 11 additional cases, and 1 infant hospitalization.**

- **What is Measles?**



# Vaccine Preventable Diseases - 2

- An outbreak of this disease in CA in 2010 caused the death of 10 infants
- What is pertussis?

# Vaccine Preventable Diseases - 3

- **This disease primarily affects children < 5 years of age, and 95% of children will be infected. Prior to vaccination, this disease annually caused:**
  - more than 400,000 physician visits
  - more than 200,000 emergency department visits
  - 55,000-70,000 hospitalizations
  - 20-60 deaths
  - Annual direct and indirect costs estimated at approximately \$1 billion
- **[What is rotavirus?](#)**

# Vaccine Preventable Diseases - 4

- **Some AI/AN communities had disease rates that were 5-24 times higher than the general U.S. population, though the introduction of a conjugate vaccine in 2000 has resulted in dramatic declines nationwide in the incidence of this disease.**
- **What is Invasive pneumococcal disease?**

# PCV and GPRA

- The purpose of GPRA is NOT “Is the child up to date TODAY?”
- GPRA measures how we did at MEETING THE RECOMMENDATIONS
  - E.g. did the child get the vaccines as recommended

## PCV and GPRA

- 4 doses routinely recommended at 2,4,6 mnths, booster at 12-15 mnths
- If start late, or get off schedule, may need fewer doses, HOWEVER
- If doses  $\neq$  4, child will show up as “Not Current” in RPMS 2 year old report

AND

- Child will not meet the GPRA 4313314 measure

# Strategies - 1

- **Utilizing state immunization registries, providing vaccines at both acute and preventive care visits, and use of standing orders to administer vaccines can help to reduce these.**
- **[What are missed opportunities?](#)**

# Strategies - 2

- **These non-physician, non-nurse providers are licensed in every state to administer at least some vaccines and are an excellent resource for expanding immunization opportunities within your facility.**
- **What are pharmacists?**

# Pharmacist Immunizers: Why?

- Coverage rates with most adult vaccines are sub-optimal, even in IHS
  - IHS seasonal influenza vaccine coverage rates for 2011-2012: 34.2%
- Increases patient access
  - Clinics are often at or near capacity
    - Can be difficult for patient to schedule appointments for routine immunizations
  - Pharmacy hours are usually longer than clinic hours
- Decreases missed opportunities
  - Patients may see pharmacists more often than their primary care provider (e.g. for medication refills)
  - Pharmacists often encounter more than just the patient, such as siblings, parents, or guardians
- Can generate revenue for the facility
  - In some states pharmacists are recognized as billable providers under Medicaid and can generate revenue.

# Strategies - 3

- **2 strategies that have been shown to increase immunization coverage**

# What Works to Improve Immunization Rates?\*

- **Patient-focused Interventions**
  - Tracking and Reminder-recall systems
  - Incentives
  - Media/education
- **Provider Interventions**
  - Provider reminders and incentives
  - Standing orders
  - Provider feedback re: coverage rates
- **System Interventions**
  - Improving access to services
  - Monitoring immunization coverage



\* From The Task Force on Community Preventive Services

# Reminder Recall

- Letters from RPMS
- Pharmaceutical-sponsored reminder recall programs
  - Pfizer – PCV
  - Merck – HPV and all vaccines
- Auto-dialer
  - Phoenix Indian Medical Center

# PCV Postcard/Phone Reminder Program

PRSRT STD  
U.S. POSTAGE  
PAID  
MAILED FROM  
ZIP CODE 96001

**IS YOUR CHILD  
FULLY PROTECTED?**



# HPV Email Reminder Program

(3741 unread) Yahoo! Mail, avgroom - Windows Internet Explorer

http://us.mg6.mail.yahoo.com/dc/launch?gx=18&rand=19057ogcee02c

File Edit View Favorites Tools Help

YAHOO! MAIL Hi, Amy | Busy | Sign Out

Check Mail New

Search Mail... Go

View your 2011 Credit Report

Inbox (3738)

- Drafts (9)
- Sent
- Spam (128) Empty
- Trash Empty

Contacts 0 online

Folders

- Airline
- Blood safe
- Bots\_Moz
- Cables
- Camp 2011
- Finances
- GNA
- Groupon
- High Street
- Matias Soccer
- Matias Summer Camp
- pass (2)
- Rapid Test
- Travel
- UMDNJ\_FXB
- untitled1

Applications

- Attach Large Files
- Automatic Organizer
- Calendar
- Edit Photos
- Evite
- Flickr
- My Cool Fonts

What's New | **Inbox 4294 emails** | Welcome to the remind... | Mobile | Options | Help

Delete Reply Forward Spam Move Print Actions

## 3 to complete

MAKE SURE YOU GET ALL 3 DOSES  
SO THAT YOU GET THE BEST PROTECTION.

### WELCOME TO THE 3 TO COMPLETE REMINDER PROGRAM.

You made the choice to help guard yourself or your child against cervical cancer, genital warts, and other human papillomavirus (HPV) diseases. GARDASIL is a series of 3 doses. And now there are 2 more doses to go.

We know schedules can get busy and some things can be easy to forget. That's why we are glad you signed up to be reminded about the remaining doses of GARDASIL. **Be on the lookout for more reminders to help you stay on track.**

#### INFORMATION ABOUT GARDASIL

GARDASIL is the only HPV vaccine that helps protect against 4 types of HPV. In girls and young women ages 9 to 26, GARDASIL helps protect against 2 types of HPV that cause about 75% of cervical cancer cases, and 2 more types that cause 90% of genital warts cases.

In boys and young men ages 9 to 26, GARDASIL helps protect against 90% of genital warts cases.

GARDASIL also helps protect girls and young women ages 9 to 26 against 70% of vaginal cancer cases and up to 50% of vulvar cancer cases.

GARDASIL may not fully protect everyone, nor will it protect against diseases caused by other HPV types or against diseases not caused by HPV. GARDASIL does not prevent all types of cervical cancer, so it's important for women to continue routine cervical cancer screenings. GARDASIL does not treat cancer or genital warts. GARDASIL is given as 3 injections over 6 months.

The duration of protection of GARDASIL has not been established.

#### IMPORTANT SAFETY INFORMATION

Anyone who is allergic to the ingredients of GARDASIL, including those severely allergic to yeast, should not receive the vaccine. GARDASIL is not for women who are pregnant.

The side effects include pain, swelling, itching, bruising, and redness at the injection site, headache, fever, nausea, dizziness, vomiting, and fainting. Fainting can happen after getting GARDASIL. Sometimes people who faint can fall and hurt themselves. For this reason, you or your child's health care professional may

### MAKE SURE YOU MAKE AN APPOINTMENT FOR THE SECOND DOSE.

VACCINATION SCHEDULE:	
The 1st dose was:	
1ST DOSE	[04/2011]*
The 2nd dose should be:	
2ND DOSE	[06/2011]*
The 3rd dose should be:	
3RD DOSE	[10/2011]*

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# Strategies - 4

- **This RPMS immunization package report can help you monitor age appropriate vaccine coverage and ensure children are protected when they are most vulnerable by identifying children who are falling behind while there is still time to intervene.**
- **What is the QTR or 3-27 month old report?**

# 3-27 month old report

- Allows real-time monitoring of immunization coverage
  - Is the child up to date TODAY?
- Identifies children falling behind while there is still time to do something about it!
- High coverage in 3-27 month old report = High 2 year old coverage = High GPRA measure coverage

# 3-27 month old report

UNSPECIFIED Medical Center  
 Quarterly Immunization Report  
 For Children 3-27 Months of Age  
 30-Sep-2007

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 Facility: UNSPEC MED CTR  
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	Age in Months						Totals	
	3-4	5-6	7-15	16-18	19-23	24-27		
# in Age	138	138	587	190	275	271	1599	
Minimum Needs	1-DTaP 1-POLIO 1-HIB 1-HEPB	2-DTaP 2-POLIO 2-HIB 2-HEPB	3-DTaP 2-POLIO 2-HIB 2-HEPB	3-DTaP 2-POLIO 3-HIB 2-HEPB 1-MMR	4-DTaP 3-POLIO 3-HIB 3-HEPB 1-MMR	4-DTaP 3-POLIO 3-HIB 3-HEPB 1-MMR		
Approp. for Age	119 86%	101 73%	458 78%	148 78%	186 68%	217 80%	1229 77%	
1-DTaP	119	126	539	179	258	259	1480	
2-DTaP	28	102	515	170	248	253	1316	
3-DTaP		25	463	160	237	248	1133	
4-DTaP			15	68	190	222	495	
1-POLIO	120	126	538	178	257	258	1477	
2-POLIO	28	101	512	169	243	252	1305	
3-POLIO		26	459	158	228	243	1114	
1-MMR			168	154	238	247	807	
1-HIB	120	126	538	178	258	260	1480	
2-HIB	27	102	506	171	243	253	1302	
3-HIB			181	149	223	236	789	
4-HIB			6	10	16	26	58	
1-HEPB	128	133	548	182	262	264	1517	
2-HEPB	101	125	521	176	249	252	1424	
3-HEPB	19	77	456	166	236	244	1198	
1-VAR			141	139	215	226	721	
1-HEPA				1	1	134	136	
2-HEPA						1	1	
1-PNE	118	126	533	177	252	256	1462	
2-PNE	26	99	506	167	238	250	1286	
3-PNE		25	405	131	214	234	1009	
4-PNE			7	24	111	132	274	
1-ROTA	118	126	533	177	252	256	1462	
2-ROTA	26	99	506	167	238	250	1286	
3-ROTA		25	405	131	214	234	1009	
Total Patients included who had Refusals on record							14	

# RPMS - 1

- **True or False – all of the RPMS Immunization package coverage reports provide a list of patients who are not up to date with vaccines as outlined in the report.**
  
- **True**

# Current vs. Not Current

- All patient reports allow you to generate a list of the patients who are Not Current, Current, or Both groups
- To View, type in “N” for Not Current, “C” for current, or “B” for both groups

Training 10 - IHI IPIs  
Search Edit View Commands Script Help  
Immunization v8.5\*1 Feb 15, 2012 09:49:29 Page: 1 of 4

CIHA HOSPITAL  
\* Adult Immunization Report \*  
Report Date: 02/15/2012  
Date Range: 02/15/2011 - 02/15/2012

Active Users (2+ visits, 3 yrs)  
-----  
Beneficiary Type: INDIAN/ALASKA NATIVE  
-----

	Number	Percent
Total Number of Patients over 19 years old.....:	40	
TETANUS: # patients w/Td in past 10 years.....:	18	45.0
TETANUS: # patients w/Tdap in past 10 years.....:	1	2.5
HPV: Total # Female patients age 19-26.....:	2	5.0
HPV: # Female patients age 19-26 w/HPV1.....:	0	0.0
HPV: # Female patients age 19-26 w/HPV2.....:	0	0.0

+ To view patient rosters, select a group below:  
N NOT Current      C Current      B Both Groups  
Select Action: Quit// n

# Patient Lists of “Not Current”

Training DB - TNVPlus  
 Session Edit View Commands Script Help

Immunization v8.5\*1 Feb 15, 2012 09:53:40 Page: 1 of 3

WARNING: Confidential Patient Information, Privacy Act applies.

CIHA HOSPITAL  
 -----

Report Date: 15-Feb-2012 Total Patients: 23 (19+ Years) \*01  
 Report Title: ADULT Patient Group: Report - Not Current

Name	HRCN#	DOB	Age Today	Sex	Current Community
ABERNATHY, SUMMER MA	112797	10/22/1981	(30 yrs)	F	BIG COVE
HEATH, RICHARD	100343	02/21/1941	(70 yrs)	M	BIG Y
TAYLOR, JACQUELINE M	103584	01/21/1951	(61 yrs)	F	BIG Y
JOHNSON, ANN C	108220	10/15/1983	(28 yrs)	F	BIG Y
SMALL, LINDA SUE	101935	01/25/1947	(65 yrs)	F	BIRDTOWN
COOPER, DIANE	107027	08/09/1965	(46 yrs)	F	BIRDTOWN
PERRY, JENNIFER	108681	09/13/1954	(57 yrs)	F	BRYSON CITY
ABERCROMBIE, JAMES M	129969	06/13/1958	(53 yrs)	M	CANDLER
WILSON, JACK	100800	03/22/1948	(63 yrs)	M	CHEROKEE
ABERNATHY, KERMIT	136389	11/08/1959	(52 yrs)	M	OHIO UNK
ABBOTT, RODOLFO ALMA	103922	06/27/1948	(63 yrs)	M	PAINTTOWN

+ Enter ?? for more actions

Edit Patient Print List (no queuing)

Select Action: Quit// e Edit Patient

Select Patient Name or Chart#: 103922

start | Inboxes - Mailbox - Gro... | user manual 10\_19\_11 | Immunization Packag... | Training DB - TNVPlus | bl\_085u8\_21\_11agc... | NUM | 10:55 AM

- To view an individual patient record, select “E” for edit patient
- Enter patient chart number
- Enter forecast date (or accept default)
- Patients Imm Record and complete history will be pulled up

# RPMS - 2

- **This RPMS report measures how well sites did at meeting the childhood vaccine recommendations, and allows sites to monitor coverage with the GPRA immunization measure for all children year round.**
- **What is the two year old report?**

# CRS vs. Immunization Package Reports

- Same data source (RPMS data)
- Main difference is time period
  - CRS – children 19-35 months AS OF JUNE 30<sup>th</sup>
  - Immunization reports – children 19-35 months the day the report is run
  - CRS December (mid year) reports includes children NOT YET 19-35 months
  - Immunization report for December includes children who are currently 19-35 months

# RPMS - 3

- **This RPMS report monitors influenza vaccination coverage in all age groups, including among 18-49 year olds with high risk medical conditions. Running this report every week during flu season can help you identify patients who have not yet been vaccinated.**
- **[What is the Flu Report?](#)**

# RPMS - 4

- **Children who meet these criteria can be “inactivated” in the Immunization package registry so that they are no longer captured in your reports.**
  
- **What are MOGE criteria**
  - **Moved or Going Elsewhere**

# MOGE

- Moved
  - Child has moved out of your service area
    - Specific knowledge that child has moved out of your service area
    - Disconnected phone, returned letter, address unknown  
DOES NOT = MOVED
- Going Elsewhere
  - Child receives care elsewhere
    - Look up in state registry
    - Request from another provider to transfer records
    - Parent tells you they go somewhere else

# Vaccine Safety - 1

- Although there is no evidence to suggest there are safety concerns with this preservative, vaccine manufacturers stopped using it in childhood vaccines as a precautionary measure. The only childhood vaccine that currently contains this preservative is multi-dose vials of influenza vaccine.
- Thimerosal

# The Truth about Thimerosal

- Is a mercury containing preservative used to prevent contamination in multi-dose vials
- It has been used for decades in vaccines
- Thimerosal contains ETHYLMERCURY, not METHYLMERCURY
  - Methylmercury is found in the food chain , and can be toxic to humans at high levels. It is not easily broken down and excreted by the human body.
  - Ethylmercury is more easily broken down and excreted by the body, so it is less likely to build up in the body the way methylmercury does.
- Numerous scientific studies have found no convincing evidence of harm caused by low doses of thimerosal

# Daily Double

- True or False – The Advisory Committee on Immunization Practices (ACIP) recommend that pregnant women receive thimerosal-free influenza vaccine
- False. The ACIP does not state a preference for thimerosal free vaccine for pregnant women.

# Excerpt from ACIP flu recommendations

- “**The benefits of influenza vaccination** for all recommended groups, including pregnant women and young children, **outweigh concerns** on the basis of **a theoretical risk from thimerosal exposure through vaccination**. The risks for severe illness from influenza virus infection are elevated among both young children and pregnant women, and vaccination has been demonstrated to reduce the risk for severe influenza illness and subsequent medical complications. In contrast, **no scientifically conclusive evidence has demonstrated harm from exposure to vaccine containing thimerosal preservative**. For these reasons, persons recommended to receive TIV may receive any age- and risk factor–appropriate vaccine preparation, depending on availability.

# Vaccine Safety - 2

- **His report linking MMR vaccine with autism resulted in dramatic declines in vaccine coverage and subsequent outbreaks of disease in the U.K. His study has since been debunked , and the journal withdrew the study after it emerged that he faked the data, and he lost his license to practice medicine in the U.K.**
- **[Who is Andrew Wakefield?](#)**

# Vaccine Safety

- No medication is 100% safe
- Serious adverse events associated with vaccination are RARE
- Concerns about vaccine safety are a common reason for not getting vaccinated
- Difficult to distinguish true vaccine-related adverse events (coincidence vs. causality)
  - Current vaccine adverse-event reporting has limitations

# Assessing the risk/benefit of vaccination

- Risks of the vaccine
  - What is known- scientific data
  - What is postulated- data not available?
  - What is misinformation
- Risk of NOT vaccinating
  - Re-emergence of disease
  - Risk of the disease to the individual
  - Risk of transmission to the community
- Issue of trust
  - Do you believe the data?
  - Do you believe policy makers have the best interests of individuals and communities in mind?



# The Immune System

- Babies are exposed to millions of antigens everyday from their surroundings. Children are colonized with trillions of bacteria, each of which contains 2,000 – 6,000 immunological components.
- The 14 vaccines recommended for children contain just 150 immunological components
  - the 7 vaccines recommended in the 1970s contained over 3000 immunological components
- Antigens in vaccines are weakened or killed and cannot cause serious illness
- Simultaneous vaccination is safe and reduces missed opportunities

# Vaccine Safety - 4

- **True or False – alternative vaccine schedules (e.g. spacing out vaccines more than is currently outlined in the recommended schedule) are benign, and are a reasonable way to allay parents fears.**
- **False**

# Delayed Vaccination

- Delaying vaccination = Child left unprotected for a longer time
- Spreading vaccines out over multiple visits increases potential for missed opportunities
- Consequences of delayed/refused vaccination
  - Hib meningitis death – 14 month old
    - had delayed booster dose because ill
  - Hib meningitis, Severe brain damage – 2 mo old
    - 2 month old - delayed first vaccine because of mild illness
  - Hib pneumonia – 14 month old
    - parents had refused all vaccines
  - Pneumococcal meningitis - 9 month old
    - Foster parents delayed vaccines – worried about autism
  - Hepatitis A in a mother
    - unvaccinated 15 month old child had traveled to Africa

# Resources on delaying/refusing vaccines

- Offit P, Moser C. The problem with Dr. Bob's alternative vaccine schedule. Pediatrics 2009; 123: e164
- CDC Parents website - <http://www.cdc.gov/vaccines/parents/index.html>
  - Fact sheet: If you choose not to vaccinate your child, understand the risks and responsibilities

# Recommendations - 1

- In order to protect against a disease in a community, you need to achieve a certain level of vaccine coverage
- What is Herd Immunity?



# Tdap recommendations

- **Updated recommendation (February 2012)**
  - For adults aged 19 years and older who previously have not received a dose of Tdap, a single dose of Tdap should be given.
  - Tdap should be administered regardless of interval since the last tetanus or diphtheria toxoid-containing vaccine.
  - Adults should receive a Tdap dose if the dose is recommended and no record of previous administration exists.
- **Guidance on use of Tdap products for adults aged 65 years and older**
  - Providers should not miss an opportunity to vaccinate persons aged 65 years and older with Tdap, and may administer the vaccine that they have available.
  - When feasible, for adults aged 65 years and older, Boostrix should be used; however, either vaccine product administered to a person aged 65 years and older provides protection and is considered valid.

# Recommendations - 3

- **To help prevent genital warts, this vaccine is recommended for use in males 11 yrs – 21 yrs.**
- **Quadrivalent HPV**

# Recommendations - 4

- **This vaccine was recently recommended for use in previously unvaccinated diabetics.**
  
- **Hep B**

# Hepatitis B Vaccine for Diabetics

Passed at the Feb 2012 ACIP meeting

- Hepatitis B vaccination should be administered to unvaccinated adults with diabetes mellitus who are aged 19 through 59 years.
- Hepatitis B vaccination may be administered at the discretion of the treating clinician to unvaccinated adults with diabetes mellitus who are aged  $\geq 60$  years.