

Vaccine Adherence in Kids Program:

A Pfizer Vaccines Resource



- Importance of Pediatric Immunization Adherence
- Approaches to Improve Pediatric Adherence
- Pfizer Solutions to Support Pediatric Adherence
- Summary / Key Takeaways

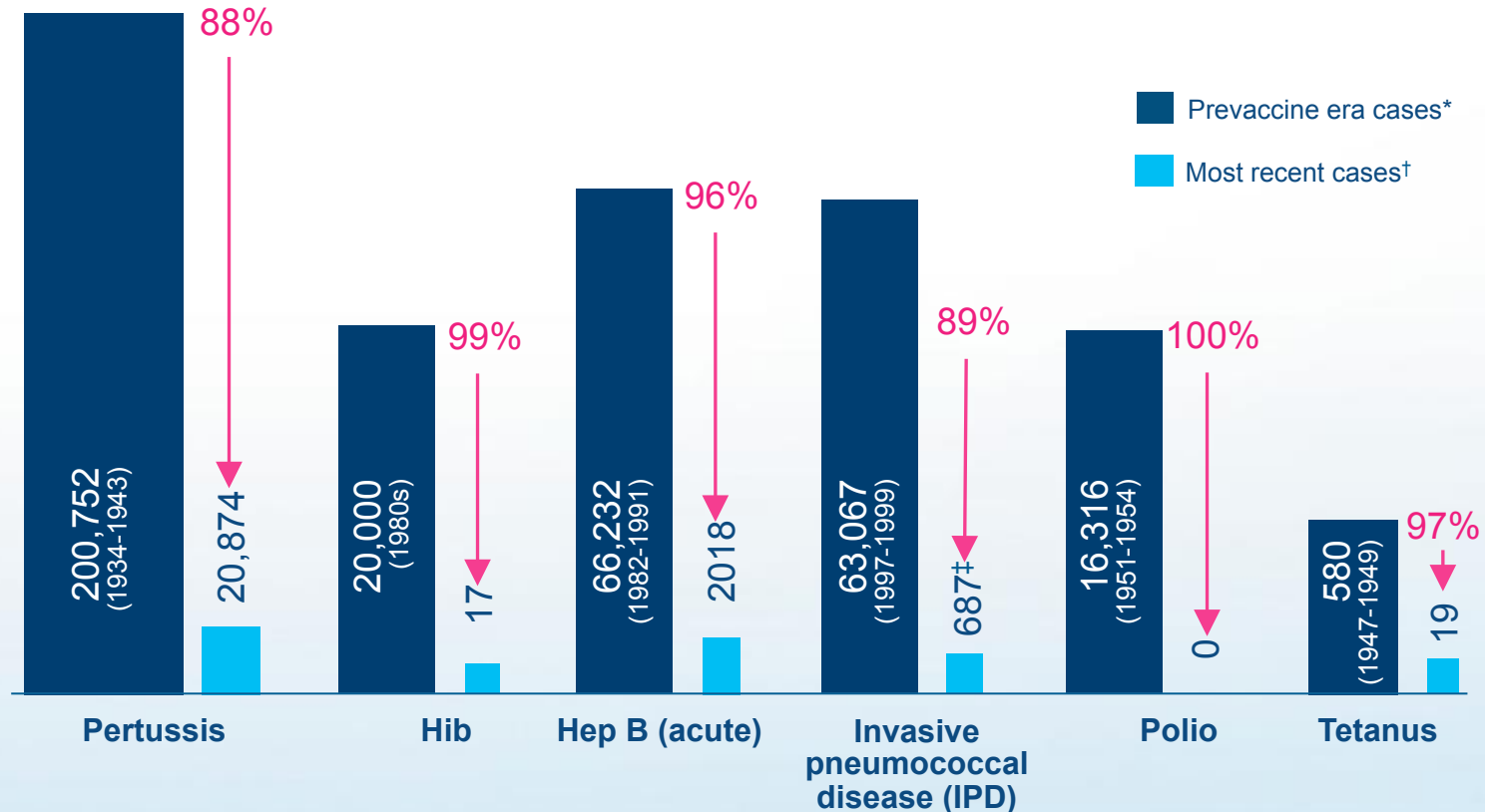
Key Takeaways

- Pediatric vaccination has demonstrated proven value in reducing the rate of vaccine-preventable diseases
- However, improving vaccine adherence remains a challenge in pediatric health care delivery
- Pfizer's Vaccine Adherence in Kids (VAKs) program can help support vaccination and overall health care for your pediatric patients
- The program includes a reminder recall program with a variety of outreach options that span multiple communication channels
- These resources are customizable and can be initiated in collaboration with your Pfizer Vaccine Account Manager

- **Importance of Pediatric Immunization Adherence**
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Vaccines have significantly reduced infectious disease morbidity in the United States

Morbidity of Vaccine-Preventable Diseases (VPDs) in Children <5 Years of Age^{1,2}



Hep B=hepatitis B; Hib=*Haemophilus influenzae* type b.

*Estimated annual average number of cases.

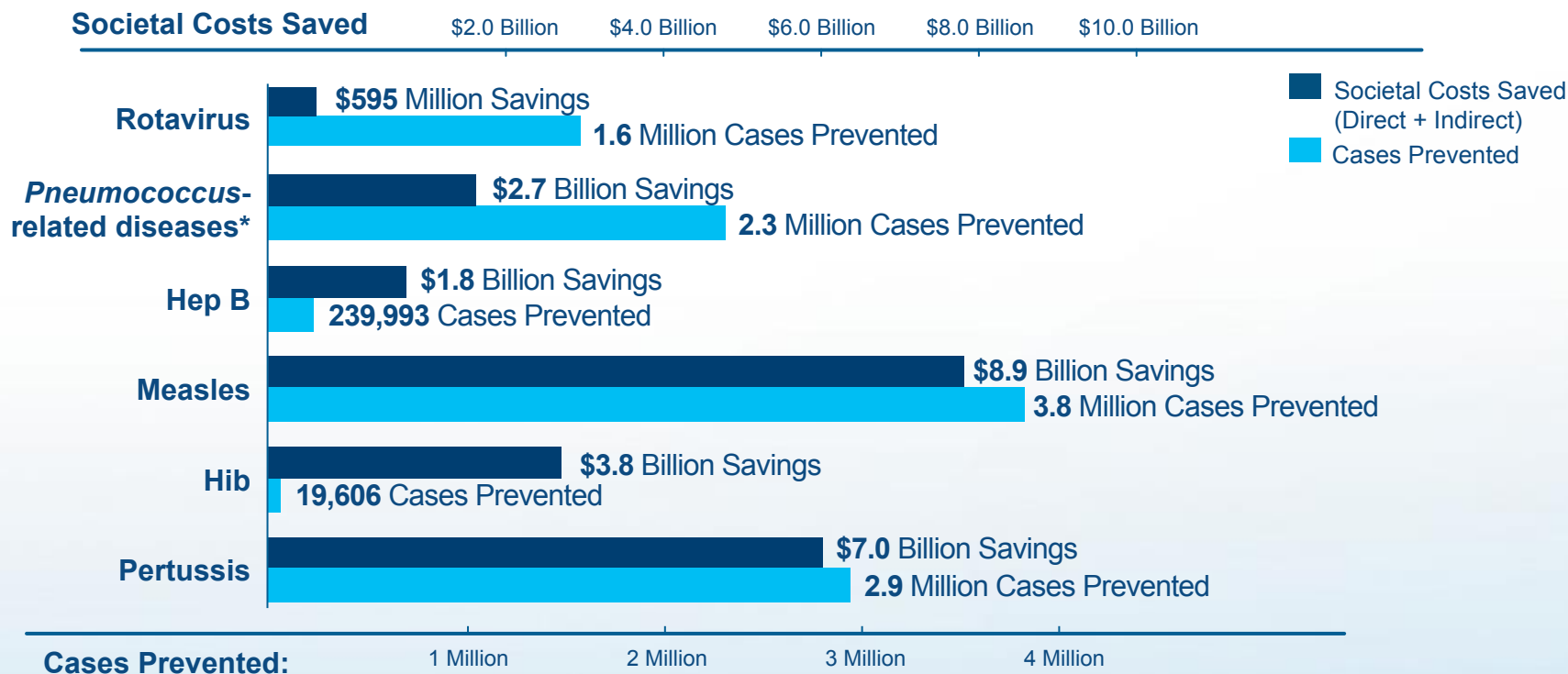
†Provisional cases reported through September 27, 2014.

*Cases in children <5 years of age.

References: 1. Roush SW et al. *JAMA*. 2007;298(18):2155-2163. 2. Centers for Disease Control and Prevention (CDC). *MMWR Morb Mortal Wkly Rep*. 2014;63(39):ND536-ND549.

A successful pediatric vaccination program is estimated to lead to reduced disease burden and cost

Estimated Disease and Cost Reductions of US Childhood Vaccination Program in 2009 Birth Cohort



Decision analysis was conducted using population-based vaccination coverage, published vaccine efficacies, historical data on disease incidence before vaccination, and disease incidence reported during 2005 to 2009. Costs were estimated using the direct cost and societal (direct and indirect costs) perspectives. Program costs included vaccine, administration, vaccine-associated adverse events, and parent travel and work time lost. All costs were inflated to 2009 dollars, and all costs and benefits in the future were discounted at a 3% annual rate. A hypothetical 2009 US birth cohort of 4 261 494 infants over their lifetime was followed up from birth through death. Net present value (net savings) and benefit-cost ratios of routine childhood immunization were calculated.

Hep B=hepatitis B; Hib=*Haemophilus influenzae* type b.

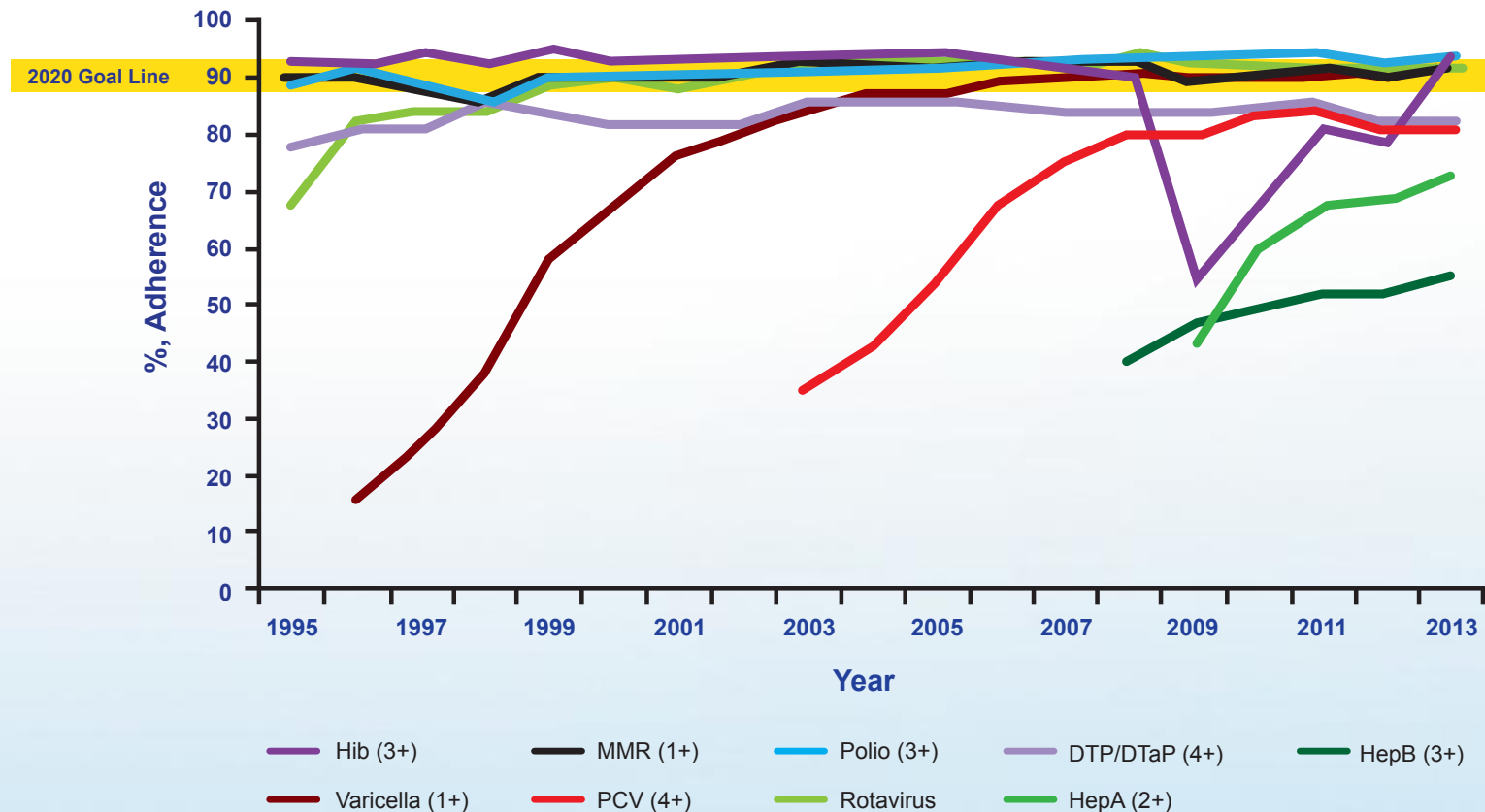
*Included IPD, acute otitis media and pneumonia.

Reference: 1. Zhou F et al. *Pediatrics*. 2014;133:1-9.



In spite of this, pediatric vaccination rates fall below the recommended levels

Vaccine-Specific Adherence in the United States Among Children Aged 19-35 Months: National Immunization Survey (1995-2013)¹



Hib=*Haemophilus influenzae* type b; DTP/DTaP=diphtheria, tetanus, and acellular pertussis; HepA=hepatitis type A; HepB=hepatitis type B; MMR=measles, mumps, rubella; PCV=pneumococcal conjugate vaccine.

Reference: 1. McLaughlin JM, et al. Could disparities in childhood PCV adherence become disparities in pneumococcal disease rates under a reduced dosing schedule? Poster presented at: Infectious Disease Week; October 8-12, 2014; Philadelphia, Pennsylvania.

While the value of vaccines may be broadly understood, parents may still present barriers to adherence

Key Barriers to Pediatric Vaccine Adherence



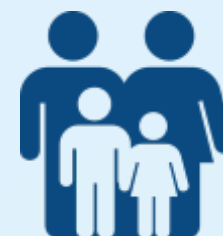
Crowded Vaccine Schedule¹

- May be overwhelmed by number of vaccines child is receiving
- May delay one or more vaccines with the intention of ultimately receiving them
- May not realize which vaccines child has missed



Parental Misconceptions²

- May question vaccine safety, efficacy, or urgency
- May trust own research more than HCP recommendations
- May not understand risks of vaccine-preventable diseases
- HCP may not address questions to eliminate misconceptions



Logistical Obstacles¹

- May struggle to make appointment (time off work, coordinating child care, travel)
- May face cost or access hurdles
- May prioritize other health services above vaccination

HCPs=health care professionals.

References: 1. Data on file, Pfizer Inc, New York, NY. 2. What influences vaccine acceptance: a model of determinants of vaccine hesitancy. The SAGE Vaccine Hesitancy Working Group, 2013.

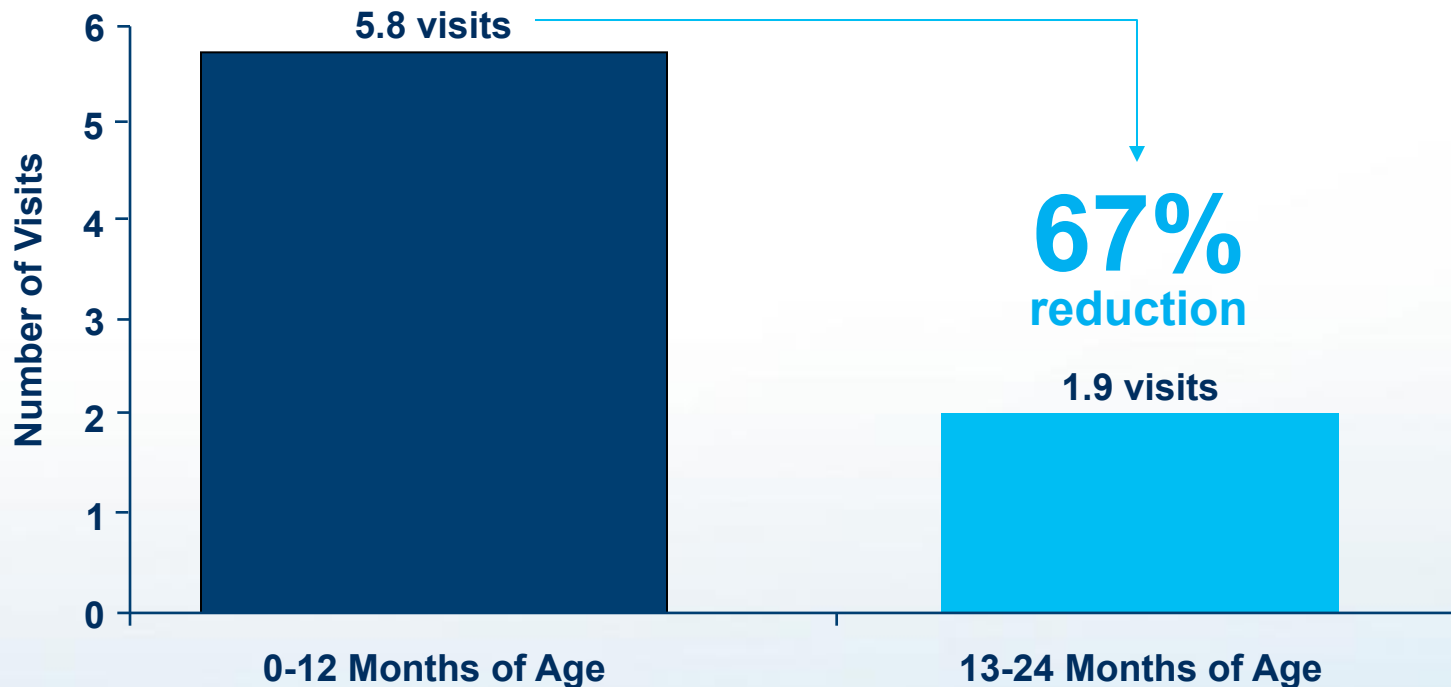
Both undervaccination and vaccination refusal can prompt the resurgence of preventable diseases

- Parents who choose to delay or refuse vaccines for their children put them at risk for vaccine-preventable diseases (VPDs)
- Recent VPD outbreaks demonstrate that children who do not receive common vaccinations are at risk for subsequent disease and infection
- In California, where some of the most lenient immunization laws in the country exist, the parental choice not to vaccinate has led to the highest rate of measles outbreaks since 2000¹

Delaying and refusing recommended vaccines can leave children at risk at the critical time they are susceptible to disease

The likelihood of children coming back to the office for well visits also drops significantly after their first year¹

Average Number of Well Visits in Children <2 Years of Age



Children who miss well visits may not be receiving other important health services, such as developmental milestone assessments

*IMS Health, LifeLink Solutions, Cohort Selection 06/2008–08/2008 and 06/2009–08/2009, 24-month tracking (cohort consists of children who had a well visit at 0 months of age between 06/2008–08/2008 and 06/2009–08/2009. These children were then tracked individually over a 24-month period). The analysis included a total of 5,207,170 well visits among children 0-12 months of age and 1,720,899 well visits among children 13-24 months of age.

Reference: 1. Data on file, Pfizer Inc, New York, NY.



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National vaccine initiatives provide resources to support pediatric immunization, reducing health care costs¹

Vaccinations for Children (VFC) Program has shown that vaccines can make substantial impact on health outcomes and costs¹

- Among 78.6 million children born between 1994 and 2013, routine childhood immunization for vaccine-preventable diseases (VPDs) was estimated to prevent:
 - 322 million illnesses
 - 21 million hospitalizations
 - 732k premature deaths

The net payer savings due to routine childhood immunization was estimated at almost \$300 billion

VPDs=vaccine-preventable diseases.

Immunization reminder recall systems can also play an important role in supporting adherence

Overview of Reminder Recall Systems¹

Description

- Immunization reminder recall systems enable health care professionals to identify children in need of vaccination and contact their parents or caregivers
- Help improve pediatric vaccination rates according to the schedule recommended by AAP, CDC, and ACIP

Examples

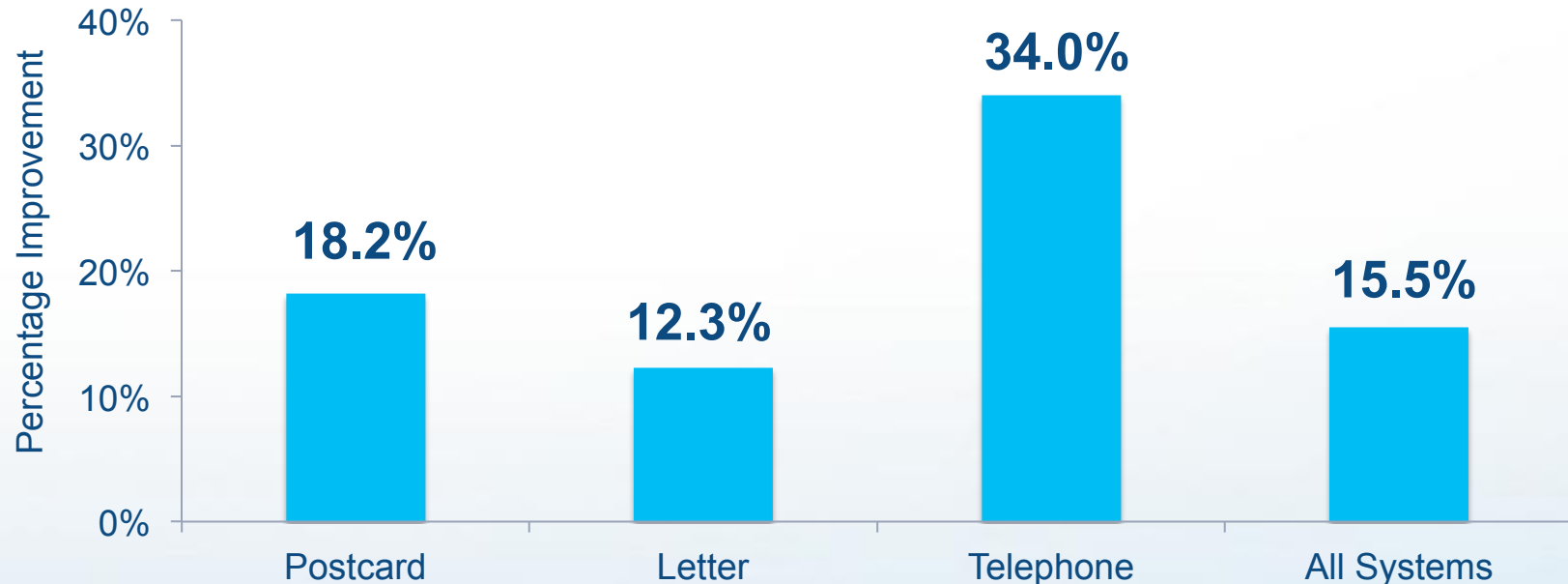
Mail reminders	Standing orders	Text messages
Chart reviews	Phone calls	E-mails
Reminders during appointment	Calendars	

Potential Benefits

- Improves recommended vaccination rates and overall child health care
- Supports Meaningful Use objectives
- May improve HEDIS and NIS scores

Reminder recall systems have demonstrated measurable improvement in vaccination rates across many platforms

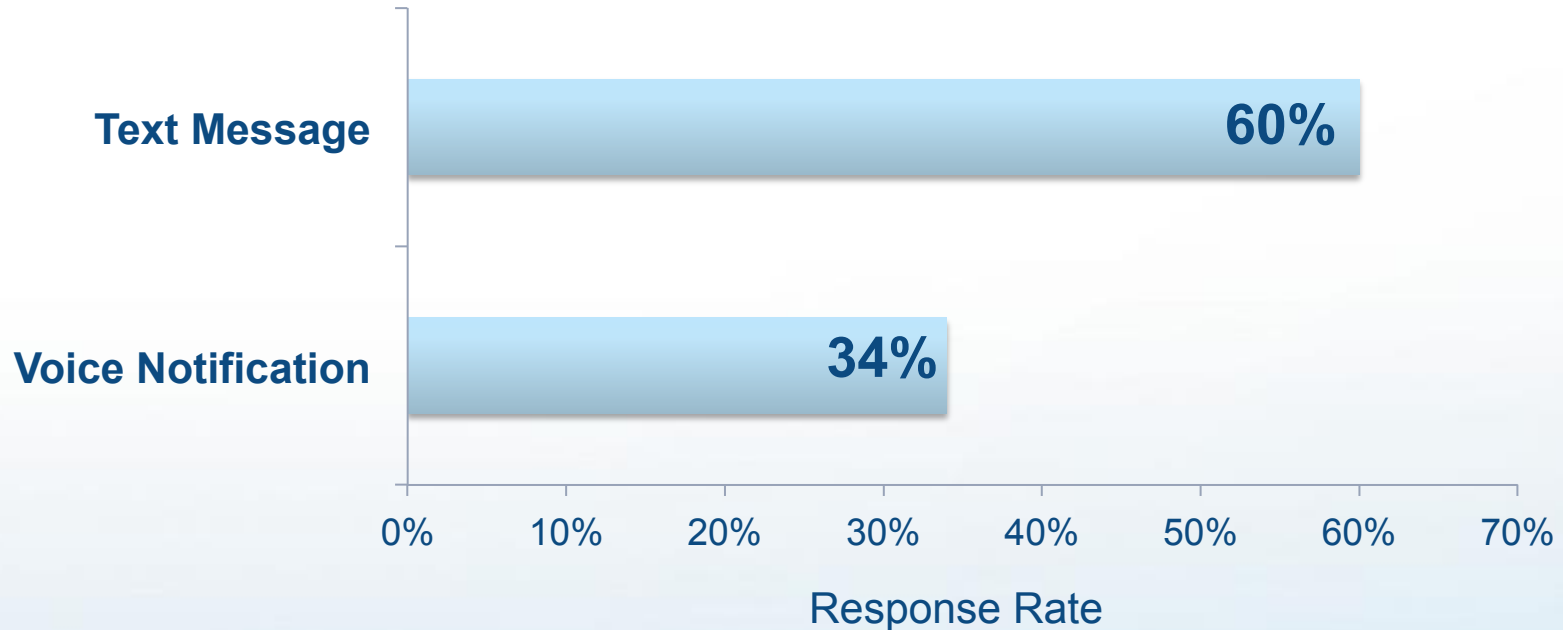
Improvement in Pediatric Immunization by Reminder Recall Type



The positive impact of reminder recall systems on adherence rates can increase with the use of multiple intervention types

Text messaging in particular can drive increased response rates among parents

Confirmation and Cancellation Responses by Notification Type



Text messaging can result in a 76% improvement over the response rate generated by telephonic-only reminders

Efficient use of vaccine registries and EMR systems can improve the success of reminder recall programs

- **Vaccine Registries**

- Confidential computerized information systems that collect vaccination data about all children in a specific area¹
- Can be used to send reminders and recall notices and help reduce overvaccination²

- **EMR Systems**

- Allow health care professionals to help identify children in need of vaccinations³
- Use of the EMR system immunization alerts delivered to clinicians at point of care were associated with an immediate and significant increase in immunization rates³
- The AAP suggests using EMR systems to create computerized vaccination reminders as part of a reminder recall program⁴

Vaccine registries and EMR systems can be used to help identify patients for whom reminders are appropriate

AAP=American Academy of Pediatrics; EMR=electronic medical record.

References: 1. Centers for Disease Control and Prevention. Immunization Information Systems (IIS): IIS frequently asked questions. <http://www.cdc.gov/vaccines/programs/iis/resources-refs/faq.htm>. Accessed September 11, 2013. 2. Every Child By Two. Benefits for physicians. <http://www.ecbt.org/registries/messagephysicians.cfm>. Accessed September 11, 2013. 3. Fiks AG, Grundmeier RW, Biggs LM, Localio AR, Alessandrini EA. Impact of clinical alerts within an electronic health record on routine childhood immunization in an urban pediatric population. *Pediatrics*. 2007;120(4):707-714. 4. American Academy of Pediatrics Childhood Immunization Support Program. Immunization reminder/recall systems. <http://www.aap.org/immunization/pediatricians/pdf/ReminderRecall.pdf>. Accessed September 11, 2013.



Meaningful Use objectives on preventive care encourage full adherence to recommended dosing schedules

Menu Objective: Patient Reminder¹ – Send patient reminders per patient preference for preventive follow-up care

Measure Definition Stage 1

>20% of all patients aged 5 years or younger were sent an appropriate reminder during the EHR reporting period

Meaningful Use Core Objective: Preventive Care² – Identify patients who should receive reminders for preventive/follow-up care and send these patients the reminders, per patient preference

Measure Definition Stage 2

>10% of all unique patients who had ≥ 2 office visits with HCPs within the 24 months before the beginning of the EHR reporting period were sent a reminder, per patient preference, when available

Reminder recall postcards and outbound phone calls can meet Meaningful Use Stage 1 and Stage 2 patient reminder/preventive care objectives

EHR=electronic health record; HCPs=health care professionals.

References: 1. Centers for Medicare and Medicaid Services website. http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/4_Patient_Reminders.pdf. Accessed August 11, 2014. 2. Centers for Medicare and Medicaid Services website. http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/Stage2_Toolkit_EHR_0313.pdf. Updated February 2013. Accessed August 11, 2014.



HEDIS® scores and NIS measures also track vaccination rates, according to CDC-recommended schedules

HEDIS®: Childhood Immunization Status^{1*}

Percent of children 2 years of age had the following vaccines by their 2nd birthday:

- 4 DTaP
- 3 IPV
- 1 MMR
- 3 *H influenzae* type B
- 3 HepB
- 1 varicella
- 4 PCV
- 1 HepA
- 2 or 3 rotavirus
- 2 influenza

*The measure calculates a rate for each vaccine and 9 separate combination rates.

NIS Combination Vaccine Series^{2,3†}

- 4 doses of DTaP vaccine
- 3 doses of IPV vaccine
- 1 dose of MMR vaccine
- 3 doses of Hib vaccine
- 3 doses of HepB vaccine
- 1 dose of varicella vaccine
- 4 doses of PCV

†Measures estimate the percentage of children who have been administered the above vaccines by age 19-35 months.
HEDIS=Healthcare Effectiveness Data and Information Set; NIS=National Immunization Survey.

References: 1. Childhood immunization status. National Committee for Quality Assurance (NCQA) website. <http://www.ncqa.org/portals/0/PublicComment/HEDIS2014/3.%20CIS%20Materials.pdf>. Accessed March 9, 2015. 2. Centers for Disease Control and Prevention. National, state, and local area vaccination coverage among children aged 19–35 months—United States, 2007. *MMWR Morb Mortal Wkly Rep.* 2008;57(35):961-966. 3. Centers for Disease Control and Prevention. Recommended immunization schedules for persons aged 0–18 years—United States, 2008. *MMWR Morb Mortal Wkly Rep.* 2008;57(1):Q1-Q4.



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Pfizer offers reminder recall resources to support customers in their adherence efforts



- Pfizer has created **Vaccine Adherence in Kids (VAKs)**, a reminder recall program that includes a variety of ways to reach parents and caregivers, with the goal of increasing pediatric vaccination adherence rates and improving overall pediatric health care
- This program allows Pfizer to partner with customers to address adherence barriers and to identify additional opportunities for improving vaccination rates
- Backed by Televox[®], the program includes multiple communication platforms to reach appropriate customers

The VAKs program targets pediatric patients who may not be fully vaccinated, or are approaching critical visits

- Pfizer offers the VAKs Program to eligible customers in order to identify children who may have missed a vaccine dose or are approaching their important 12-month wellness visit
 - Health care professionals can then contact their parents or caregivers to schedule appointments for pediatric vaccinations recommended by the CDC, ACIP, and the AAP

Missed Dose Alert

A concise, motivational message aimed at reaching parents and caregivers whose child did not receive a vaccine dose

12-Month Well-Visit Alert

An advance notice for parents and caregivers whose child has an upcoming appointment for a 12-month visit

CDC=Centers for Disease Control and Prevention; ACIP=Advisory Committee on Immunization Practices; AAP=American Academy of Pediatrics.

This resource is available to a multitude of customer types who can benefit from support in pediatric vaccination

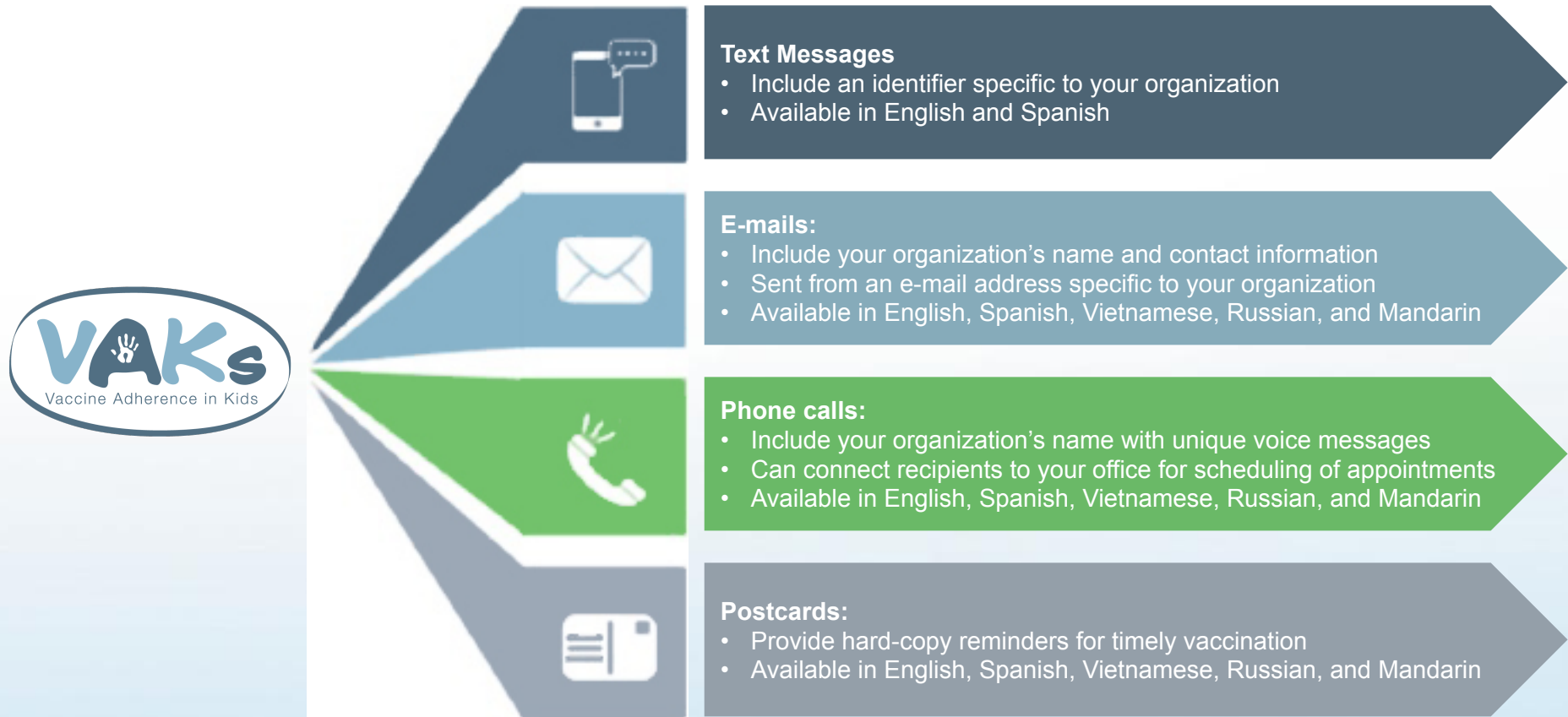
Potential VAKs Users Include:

- Private Insurance and MCOs
- Medicaid plans and MCOs
- Local, city, and state health departments
- Federally Qualified Health Centers (FQHCs)
- Indian Health Service provider
- Integrated delivery networks (IDNs)
- Military facilities
- Hospital clinics



Pfizer Vaccine Account Managers work with these customers to incorporate VAKs into their adherence strategies

The VAKs reminder recall program spans multiple platforms*, tailored to customers' needs and capabilities



*Customers choose at most 2 intervention types, depending on preference and availability of patient information availability and text opt-in.

Text messages and e-mails offer direct contact with parents and caregivers who are away from home

- **Sample Text Alerts:**

- “Records show your child may have missed an important vaccine. Please call XXX-XXX-XXXX for an appointment. **Text Help for help.**”
- “Records show that your child has a recommended visit with a health care professional at age 12 months. Please call XXX-XXX-XXXX for an appointment. **Text Help for help.**”

- **Sample E-mail Alerts:**

Missed Dose Alert



12-Month Well-Visit Alert



VAKs also uses phone calls and prerecorded voice messages to contact parents and caregivers

Example Phone Script for Missed Pediatric Vaccine

- “Hello. I’m calling on behalf of **[organization name]** with some important information about your child’s health. Our **records** indicate that your child may have **missed a recommended vaccine shot**. Please contact your child’s doctor or health clinic to check that your child is up to date with all **recommended vaccine shots**”
- “If you would like to opt out of this and future vaccine reminder phone calls from **[organization name]**, please press the 9 key”
- “Financial support for this communication has been provided by Pfizer. No patient-specific information has been or will be provided to Pfizer. Again, this call is being placed by **[organization name]**”
- “Thank you for your time, and have a good day”

Telephonic scripts can be customized depending on customer needs¹

Hello, I'm calling on behalf of **[organization name]** with some important information about your health.

Optional Language #1

If you would like to hear this message in English, press 1. Hola. Estoy llamando de parte de **[organization name]** con información importante sobre la salud de su niño. Si desea escuchar este mensaje en español, presione 2.

"Our records indicate that you may be eligible to receive a recommended vaccine shot. Please contact your doctor or health care clinic to see if you are up-to-date with all recommended vaccine shots. If you would like to opt out of this and future vaccine reminder phone calls from **[organization name]**, please press 9."

Optional Language #2
For Managed Care/Health Plans Only

[Organization name] covers all recommended vaccines to help ensure that you are protected against vaccine-preventable diseases.

Optional Language #3
For Managed Care/Health Plans Only

If you have questions regarding health benefit coverage for adult vaccines, please call **[customer service at the number listed on the back of your health plan identification card]** or **[telephone number]**.

Optional Language #4
For Managed Care/Health Plans Only

[Organization name] also covers annual wellness visits.

Optional Language #5
Only if Optional Language #4 selected –
For Managed Care/Health Plans Only

If you have questions regarding health benefit coverage for adult vaccines or wellness visits, please call **[customer service at the number listed on the back of your health plan identification card]** or **[telephone number]**.

Optional Language #6
For State Immunization Programs OR
Local Health Departments Only

[Organization name] offers all recommended adult vaccines to help ensure that you are protected against vaccine-preventable diseases.

"Financial support for this communication has been provided by Pfizer. No patient-specific information has been or will be provided to Pfizer. Again, this call is being placed by **[organization name]**. Thank you for your time, and have a good day."

Lastly VAKs also includes a postcard option for alerts, with bilingual communication

- Postcards provide a hard-copy vaccination reminder for parents and caregivers
- Offers bilingual communication to remind parents
 - English, Spanish, Vietnamese, Russian, and Mandarin

Missed Dose Alert



12-Month Well-Visit Alert



VAKs is delivered through Pfizer's trusted partner, TeleVox®



A Valued Partner Resource

- Provides services to 140,000 providers in hospitals, group health networks, and practices
- Enables member interactions for more than 100 health plans
- Extensive network of industry partners and integrations
- Dedicated Compliance Manager and Security Office
- Billions of minutes of voice-related transactions annually

TeleVox® Services & Capabilities

- Complete postcard printing and mailing services
- Recordings by professional voice talent
- Language options
- Caller ID display customization
- Summary and Web reports to monitor campaign success
- HIPAA privacy and security compliant

HIPAA=Health Insurance Portability and Accountability Act.

Reference: 1. Data on file. Pfizer Inc, New York, NY.



Implementation of VAKs is a straightforward process, facilitated by TeleVox®

- 1 Execute service agreement**
 - ✓ Select communication preference and finalize service agreement
- 2 Schedule implementation call and training**
 - ✓ TeleVox® Implementation Specialist calls to discuss program components, customer adherence goals, and outreach process
- 3 Identify communications parameters**
 - ✓ Work with TeleVox® to customize calling, mailing, and/or messaging preferences using the immunizations specifications document
- 4 Identify children due for recommended vaccines**
 - ✓ Use filters to identify the parents and caregivers who will receive reminders
- 5 Track the progress**
 - ✓ View completed statistics reports to track the outcomes of patient reminders

Common customer questions

What if we don't have permission to contact our patients/members on their cell phones and landlines, and cell phones are not indicated in our database?

TeleVox® has the ability through the Cell Phone Scrubbing Program to identify and scrub cell numbers from your data file prior to initiating a calling session, and we can include language to that effect in the agreement.

The quality of our data is bad, and our population is very transient. What if the phone numbers and addresses are outdated?

TeleVox® offers the SmartAppend service that can be used to update your data file with the most current landline phone number and address. The appended information will be reported back to you in your reports if you would like to import it into your system.

Customer testimonials

“The best part of this program, from a managerial perspective, is that the process is electronic and simple. We download the patient data from our registry and then upload the file to TeleVox®. They take care of the rest.”

“Our children’s immunization program is one of our most successful programs, mainly due to the monthly TeleVox® campaign that we have in place. TeleVox® has indeed helped us to reduce costs and improve the health of our members.”

“We have noticed that parents/guardians do reply regarding their child’s immunization record when receiving the call from TeleVox®. When parents/guardians show up at the county clinics, they make statements such as appreciation of telephone reminder calls and reminder postcards in the mail.”

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