

# Physicians' Attitudes Regarding a New Rotavirus Vaccine: A National Survey



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# Background



- Rotavirus vaccine licensed February 2006
- 3-dose schedule given at 2, 4, and 6 months of age
- Timing of doses:
  - 1<sup>st</sup> dose given between 6-12 weeks of age
  - 3<sup>rd</sup> dose by 32 weeks of age

# Study Objectives



To determine, in a national survey of pediatricians (Peds) and family medicine (FM) physicians:

- Rates of adoption of new Rotavirus vaccine
- Knowledge of and compliance with ACIP recommendations for its use
- Perceived barriers to adoption
- Understanding of FDA/CDC post-marketing surveillance reports



# Study Setting and Population

- Conducted in a sentinel physician network, developed as part of the Vaccine Policy Collaborative Initiative
- Network recruited from random samples of 2500 AAP and 3500 AAFP members
- Designed to be representative of AAP and AAFP:
  - Region of country (NE, S, MW, W)
  - Location (urban, suburban, rural)
  - Setting (private, managed care, community/hospital-based) – AAP only
- Respondents practicing < 50% primary care excluded



# Survey Administration

- Administered by mail and email during August – October, 2007
  - 429 Pediatricians
  - 419 Family Medicine Physicians



# Results: Survey Response

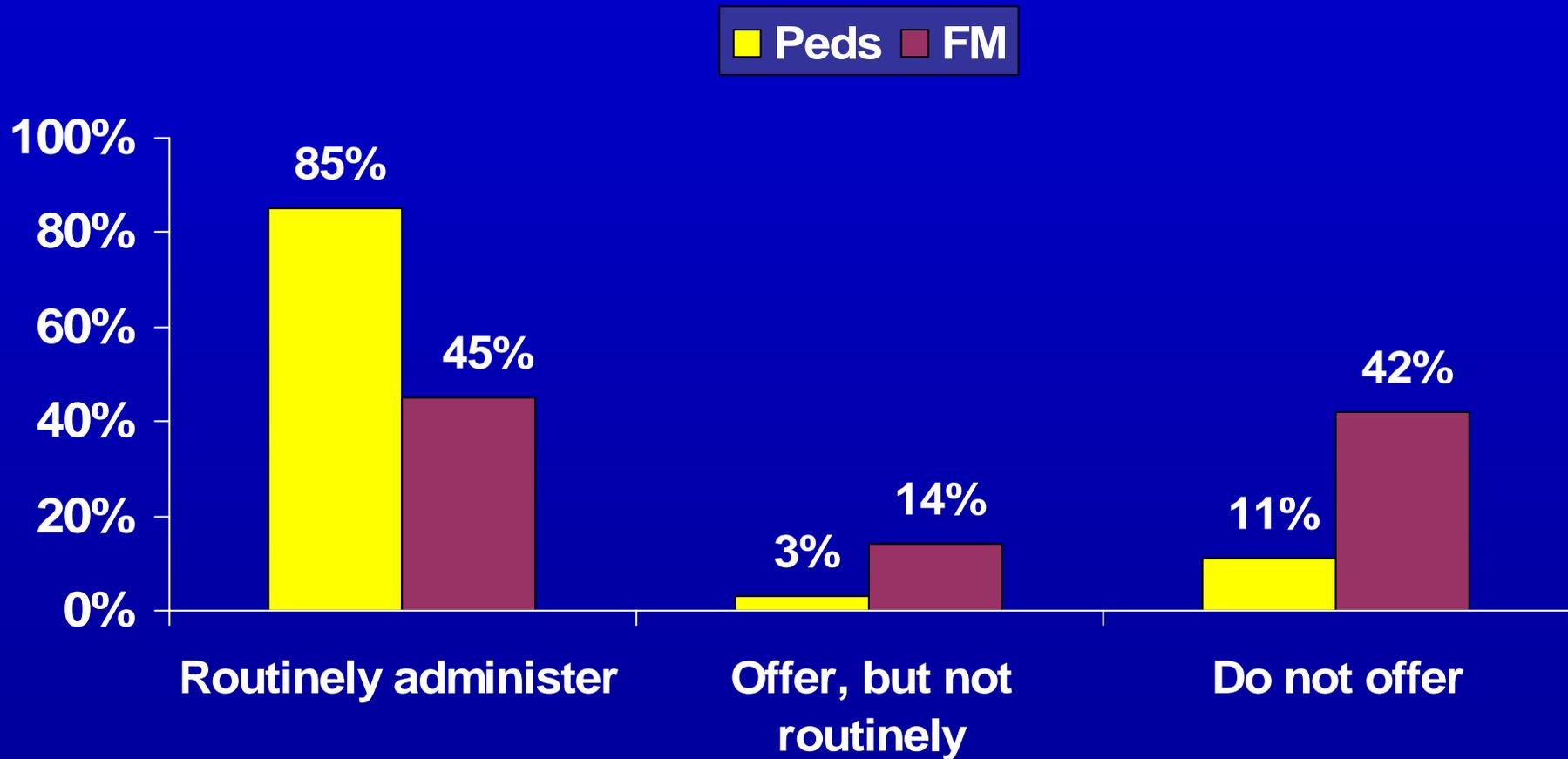
- Response rates: 84% Peds, 79% FM
  - FM physicians who don't see infants < 6mos. excluded (n=68)
  - Total N=623 (Peds=359; FM=264)
- Respondents did not differ from non-respondents with respect to sociodemographic factors, region of the country, practice setting, or location

# Results - Respondent Characteristics



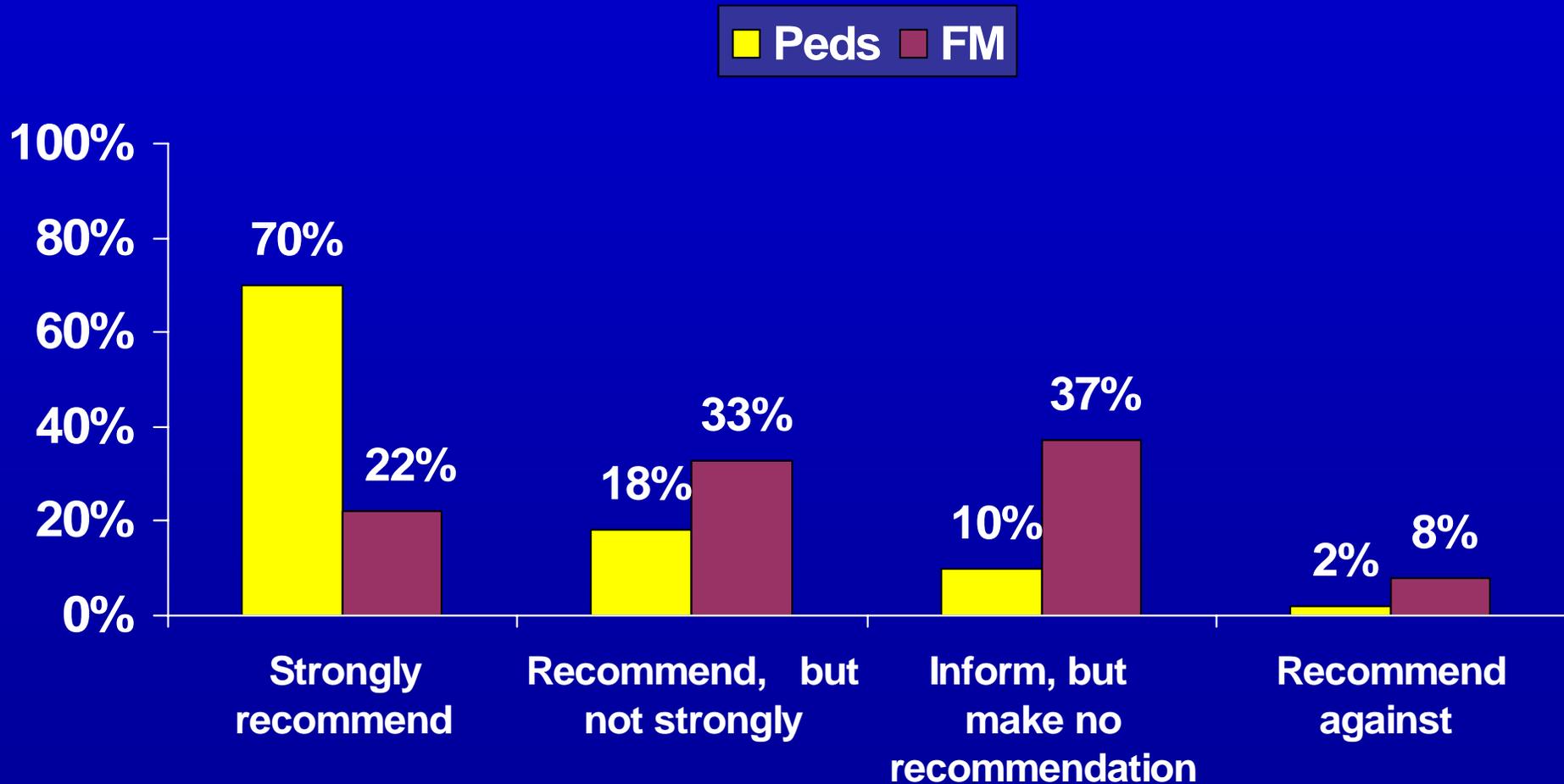
Characteristic	Peds (n=359)	FM (n=264)
<b>Year of birth, mean (SD)</b>	1958 (9.9)	-
<b>Practice Setting, %</b>		
Private	86	80
Hospital or clinic	12	19
HMO/other	2	2
<b>Region, %</b>		
West	18	27
South	34	23
Northeast	28	17
Midwest	21	33
<b>Location of practice, %</b>		
Urban, inner-city	46	25
Suburban / Urban, non- inner city	41	45
Rural	13	31

# Current Administration Practices



Distributions between Peds and FM are different at  $p < .0001$

# Strength of Recommendation



Distributions between Peds and FM are different at  $p < .0001$

# Attitudes Regarding Adoption



	<b>Peds (n=359)</b>	<b>FM (n=264)</b>	<b>P-value</b>
The rotavirus vaccine is NOT necessary for my patients			
Strongly / Somewhat agree	<b>17%</b>	<b>44%</b>	<b>&lt;.0001</b>
Rotavirus vaccine should be routinely recommended for all eligible infants			
Strongly / Somewhat agree	<b>88%</b>	<b>64%</b>	<b>&lt;.0001</b>

# Knowledge Regarding Recommendations



	<b>Peds (n=359)</b>	<b>FM (n=264)</b>	<b>P-value</b>
Knew age by which the 1 <sup>st</sup> dose should be administered (12 weeks)	69%	30%	<.0001
Knew age by which all 3 doses should be administered (32 weeks)	62%	32%	<.0001
How often 1 <sup>st</sup> dose administered to infants > 12 weeks of age?			
Frequently / Sometimes	12%	20%	0.02
How often 3 <sup>rd</sup> dose administered to infants > 32 weeks of age?			
Frequently / Sometimes	7%	10%	0.31

# Perceived Barriers to Giving Rotavirus Vaccine



<b>Definitely a Barrier</b>	<b>Peds (n=359)</b>	<b>FM (n=264)</b>	<b>P-value</b>
<b>Failure of some insurance companies to cover vaccination</b>	<b>19%</b>	<b>22%</b>	<b>0.28</b>
<b>The “up-front” costs to purchase the vaccine</b>	<b>17%</b>	<b>22%</b>	<b>0.13</b>
<b>Lack of adequate reimbursement</b>	<b>15%</b>	<b>18%</b>	<b>0.34</b>
<b>Respondent’s concern about the safety of rotavirus vaccine</b>	<b>9%</b>	<b>25%</b>	<b>&lt;.0001</b>
<b>Addition of another vaccine to the schedule</b>	<b>5%</b>	<b>22%</b>	<b>&lt;.0001</b>

# Physicians' Understanding of FDA/CDC Post-Marketing Reports on Intussusception



	Peds (n=292)*	FM (n=109)*
Number of cases reported <u>DOES NOT</u> exceed number expected by chance	91%	62%
Uncertain whether number of cases reported exceeds number expected by chance	8%	24%
Number of cases <u>DOES</u> exceed number expected by chance	1%	11%

\*Of those who heard/read about the report;

\*Peds significantly different than FM  $p < 0.0001$

# Did FDA/CDC Post-Marketing Reports Alter Practice?



	<b>Peds (n=292)</b>	<b>FM (n=109)</b>
Did not alter practice	<b>88%</b>	<b>79%</b>
Stopped giving rotavirus vaccine	<b>3%</b>	<b>11%</b>
Continued to give vaccine, but told all patients about FDA report	<b>7%</b>	<b>6%</b>

\*Of those who heard/read about the report;

\*Peds significantly different than FM  $p < 0.01$

# Attitudes Regarding FDA/CDC Post-Marketing Reports



Somewhat / Strongly Agree that...	Peds (n=292)	FM (n=109)	P-value
Message regarding intussusception was communicated clearly	79%	63%	0.0004
Reports reassured me that intussusception was being closely monitored by government agencies	92%	84%	0.009
Reports were <u>helpful</u> because they increased vigilance about reporting cases of intussusception in infants	60%	67%	0.18
Reports should <u>NOT</u> have been publicized because they raised concern unnecessarily	33%	31%	0.67

# Attitudes Regarding FDA/CDC Post-Marketing Reports



<b>Somewhat / Strongly Agree that...</b>	<b>Peds (n=292)</b>	<b>FM (n=109)</b>	<b>P-value</b>
Reports increased physician's concern about rotavirus vaccine's safety	<b>24%</b>	<b>58%</b>	<b>&lt;.0001</b>
Reports increased parent's concern about the rotavirus vaccine's safety	<b>37%</b>	<b>56%</b>	<b>0.0005</b>
Reports about post-marketing intussusception have decreased parental acceptance of the vaccine	<b>20%</b>	<b>42%</b>	<b>&lt;.0001</b>

# Study Limitations



- **Potential for bias in those who respond to surveys**
- **Data rely on self-reported vaccination practices rather than measured practice**

# Conclusions



- 85% of Peds but only 45% of FM report currently routinely offering the new rotavirus vaccine to all eligible infants
- Attitudes of Peds and FM about the vaccine differ with FM more often reporting
  - Rotavirus vaccine is not a necessary vaccine
  - Rotavirus vaccine should not be routinely recommended
- Knowledge regarding timing of doses of Rotavirus vaccine is twice as high among Peds than among FM

# Conclusions



- As with other new vaccines, concerns regarding insurance coverage, up-front costs and inadequate reimbursement are perceived as the major barriers to implementation in both groups
- FM also have substantial concerns regarding vaccine safety in general, about rotavirus vaccine specifically and about overloading an already crowded immunization schedule

# Conclusions



- In general the FDA/CDC post-marketing surveillance reports were understood by the physicians and were thought to be reported clearly
- Compared to Peds, more FM reported increased vaccine safety concerns due to the reports



# Vaccine Policy Collaborative Initiative

**Principal Investigator - Allison Kempe, MD, MPH**

- Matthew F. Daley, MD
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- Christine Babbel, MSPH
- John F. Steiner, MD, MPH
- Arthur Davidson, MD, MSPH
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## **CDC Collaborators**

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- Jackie Tate, PhD

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