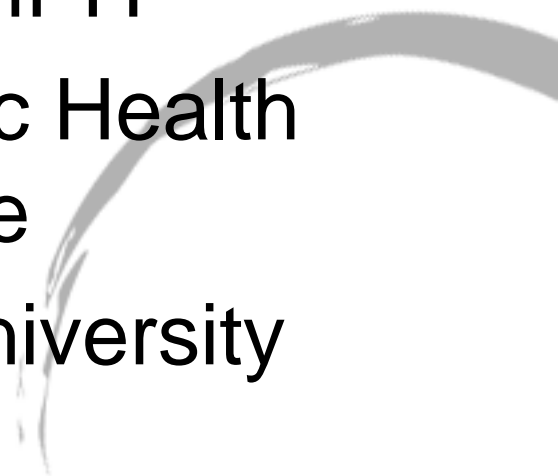




# The Rural Oregon Immunization Initiative: Preliminary Data

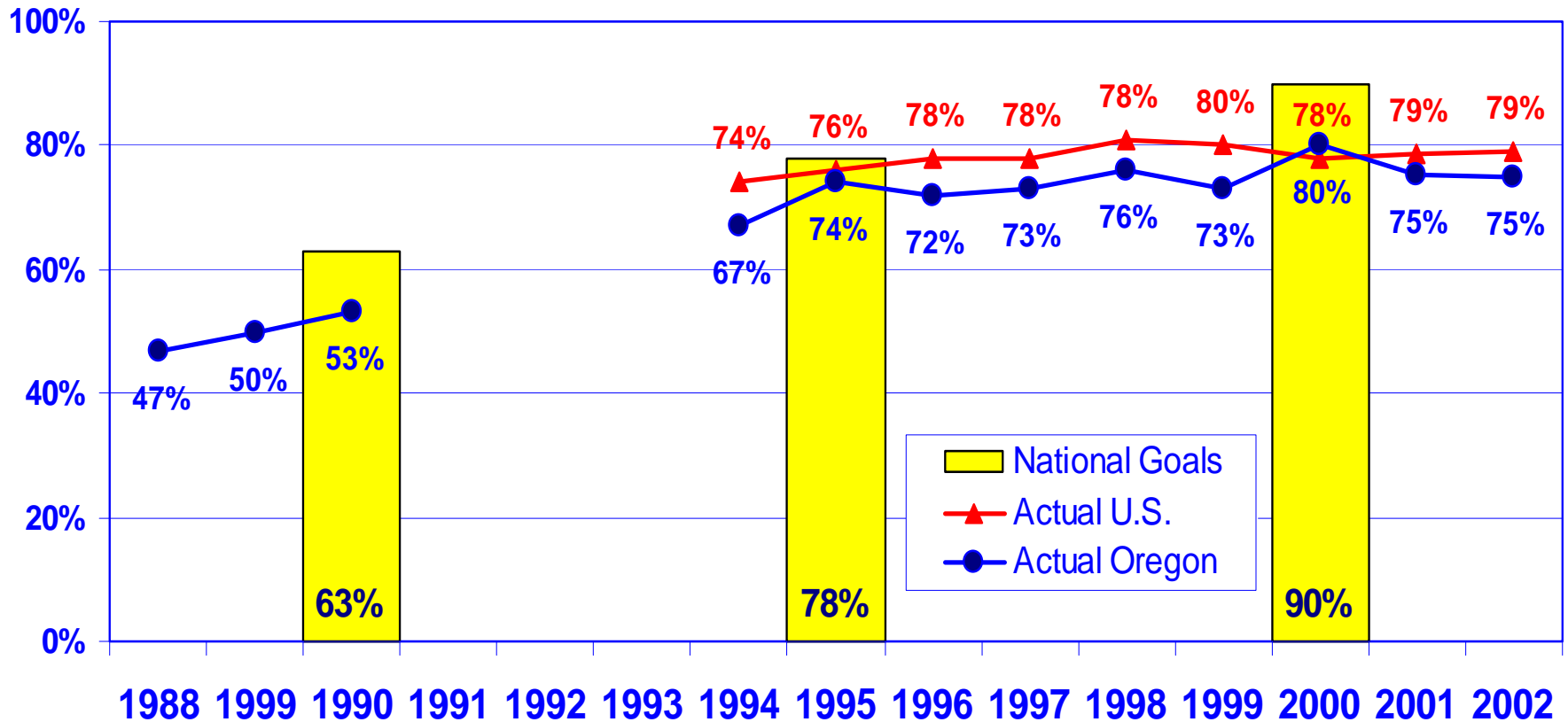
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# Background

- Immunizations are one of the most effective disease prevention strategies
- Increasing immunization rates remain among the 10 leading objectives in the USPHS Healthy People 2010 e.g.
  - Increase the 4 DTP: 3 Polio: 1 MMR coverage to 90% among children 19-35 mos.
  - Increase the proportion of children who participate in fully operational population-based immunization registries to 95% among children < 6 years of age.

# Oregon's 4:3:1\* Immunization Rates for Two-Year-Olds



\*4:3:1 = 4 doses DtaP, 3 polio, and 1 MMR. Sources: Priedeman et al, OR DHS Immunization Program. Oregon 1988-90 data from retrospective school surveys of first graders in 1991-93; 1994 data from the 1994 Two-Year-Old Immunization Survey; 1995-1999 data from the CDC National Immunization Survey.

\*\*Due to the different methodologies used, comparisons across data sources are not

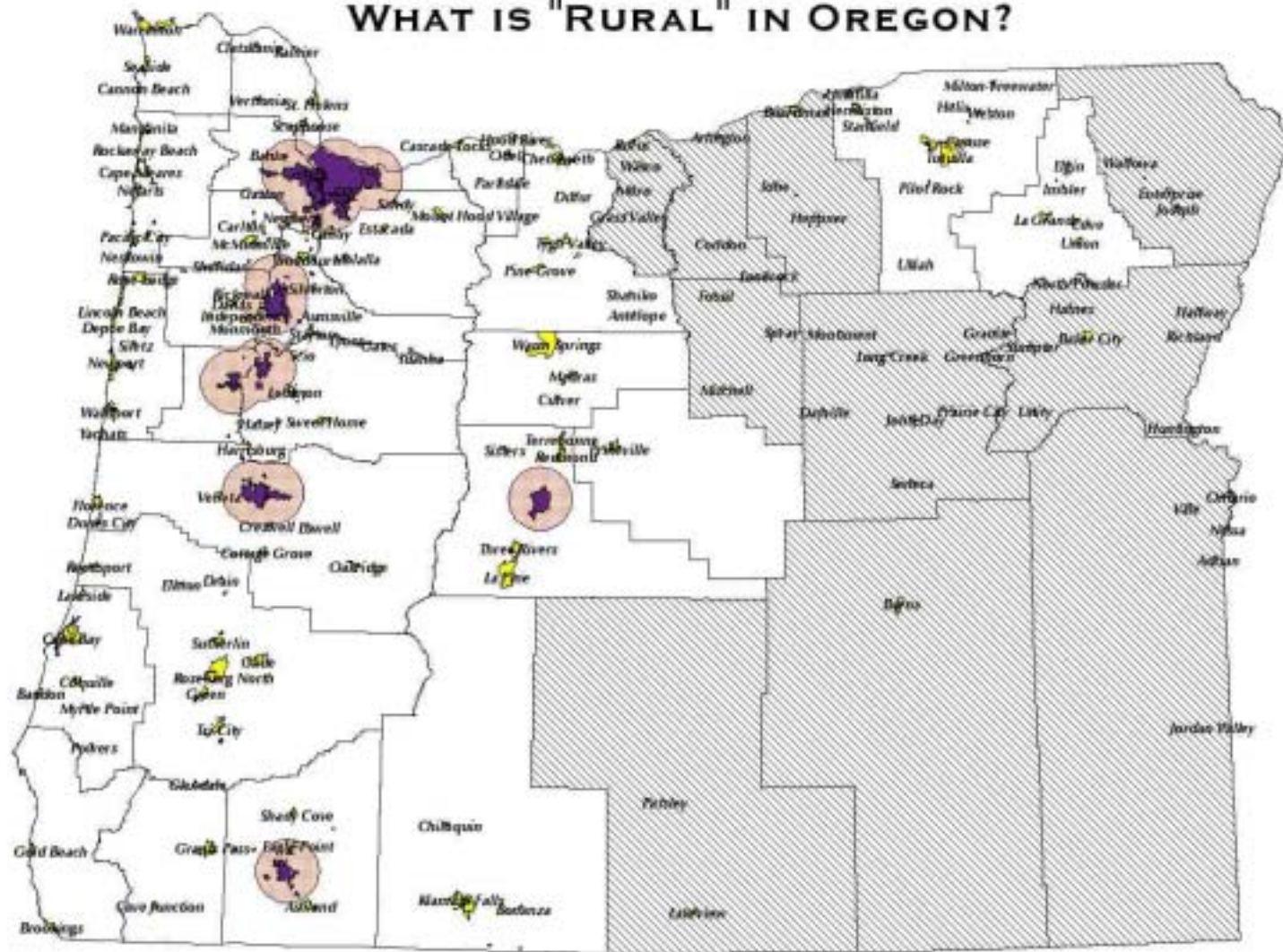
# State of Oregon Immunization Program Efforts

- Since the outbreaks of late 1980s & early '90s, public health has put special emphasis on vaccinating preschool children
- Since approximately 80-90% of childhood immunizations are given by private providers in Oregon, our efforts to improve immunization delivery and increase coverage depend on private providers and health plans

# Oregon's Statewide Immunization Registry, ALERT

- 1 million child records (ages 0-18)
- 16 million immunizations
- Provider participation in ALERT:
  - 83% of private providers and all county health departments
  - Major health plans send data regularly
- Providers and schools have on-line web access to immunization histories
- ~93% of Oregon preschool children have immunization records in ALERT

# WHAT IS "RURAL" IN OREGON?



Urban Rural Frontier

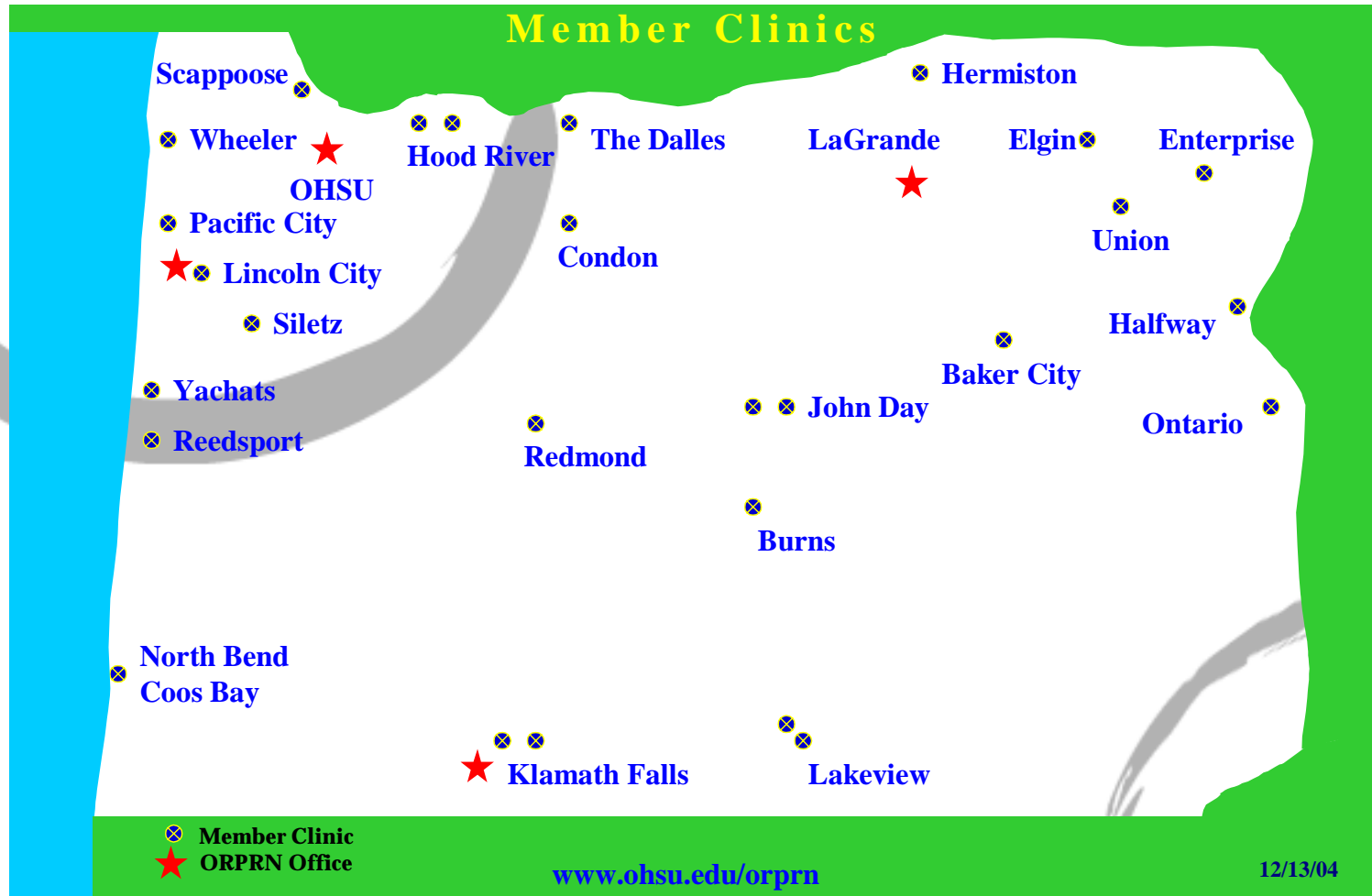
"Rural" is a geographic area ten or more miles from a population center of 30,000 or more.

Frontier rural areas are counties that have a population density of six people per square mile or less.

# The Oregon Rural Practice-based Research Network in 2005

- 27 practices in 23 rural Oregon communities
- 120 clinicians serving 150,000 (est.) rural patients
- Membership is 60% family physicians, 7% general internists, 5% general pediatricians, 16% nurse practitioners, and 12% physician assistants.
- ORPRN clinics represent all models of practice: Federally Qualified Health Centers (FQHCs), Rural Health Clinics (private and public), university clinics, private health system clinics, and privately owned medical practices.
- ORPRN Research: relevant to both researchers AND clinicians

# ORPRN is Statewide...



# Methods

- Target population: all rural primary care providers caring for children 0-36 months (N= 1136)
- Survey development and pilot testing
- Distribution and follow-up
- Incentive

# Results: Overview

- Preliminary!
- Descriptive data
- Cross tabulations
  - Family medicine vs. Pediatrics
  - Routine ALERT Registry users vs. Non-users

# Results

- Response rate (approx.): 59%

Email (2): 79/321 (25%)

Mail respondents from email non-respondents: 10/242 (4%)

Mailings (2): 529/808 (65%)

Phone follow-up: identifying ineligible

# Medical discipline of eligible respondents (N= 384)

Discipline	N (%)
MD/DO	238 (62)
Family medicine	200
Pediatrics	38
NP	102 (27)
PA	44 (11)

# Practice Ownership

Ownership structure	N (%)
Physician or group	193 (50)
Hospital	44 (11)
HMO	0 (0)
University-affiliated	16 (4)
FQHC	48 (13)
Rural Health Clinic	72 (19)
Indian Health Service	6 (2)

# Practice accepting new patients

Closed to new patients	35 (9)
No new OHP/ Medicaid	59 (15)
No new Medicare	51 (13)
No new uninsured	11 (3)
No restrictions: open to all	243 (63)

# Computers, etc.

	% of respondents (N=335)
Paper chart	79
Electronic health record	13
Both	7
Internet access in clinic	92
Near patient care areas	89

# Community Population

Population	N of respondents (%)
< 1,000	10 (3)
1,000 - 2,500	24 (6)
2,501 - 5,000	36 (10)
5,001 - 10,000	73 (19)
10,001 - 20,000	84 (22)
20,001 - 30,000	63 (17)
30,001 - 40,000	25 (7)
40,001 - 50,000	30 (8)
> 50,000	32 (8)

# Site of child immunizations

Respondent's clinic		
	All	138 (36)
	Some	176 (46)
	None	66 (17)
County health dept.		346 (90)
Community health clinic		140 (36)

# Routine child vaccine administration (N=305)

Vaccine	% who routinely administer
Hep B, DTaP, Hib, IPV, MMR	98
Varicella	89
Pneumococcus	88
Influenza	79
Hep A	64

# Reasons for Referrals for Immunizations (N=305)

Reason	Any imp.	V. imp.
Inconvenience of counseling	16%	2%
Documentation hassles	22	7
Concerns about safety	12	3
Inadequate reimbursement	53	24
Storage and stocking issues	42	19
Language barriers	19	3

# Use of ALERT Registry

Submit data to ALERT	TBD
Access ALERT to check immun. status of patients	191 (50)
If yes, how often:	
Every child	27 (14)
Most children	54 (28)
Some children	82 (43)
Very few children	28 (15)

# Comparing ALERT Users

- Routine Users those who access for “all” or “most” of their child patients
- Occasional Users those who access for “some” or “very few”
- Non-users those who reported not accessing ALERT to check status

# ALERT and VFC participation

	No	Yes (%)	Don't know
Routine	1	74 (93)	5
Occasional	2	103 (94)	5
Non-user	30	69 (57)	22

# ALERT and vaccination-only visits offered

	No	Yes (%)
Routine	14	67 (83)
Occasional	13	97 (88)
Non-user	29	92 (76)

# ALERT and max # of shots in a single visit

	2	3	4	As many as indicated (%)
Routine	0	5	17	59 (73)
Occasional	0	5	21	85 (77)
Non-user	4	10	36	70 (58)

# ALERT and Screening for immun. status at ALL visits

	No	Yes (%)
Routine	32	49 (60)
Occasional	47	64 (58)
Non-user	133	59 (31)

# ALERT and Review of immun. coverage of patient population

	No	Yes (%)
Routine	35	30 (46)
Occasional	53	34 (39)
Non-user	166	17 (9)



# Comparing immunization delivery across disciplines

# Specialty and Provision of Immunizations

	All (%)	Some (%)	None (%)
GP/FP	107 (34)	150 (48)	57 (18)
Peds	30 (57)	22 (42)	1 (2)
Other	1 (8)	4 (31)	8 (62)

# Opinions about vaccinations

	GP/FP	Ped
Safety of immun. concerns me	27%	33%
Link with chronic illness concerns me	12	12
I am reluctant to incorporate new vaccines	22	12
Immuniz. are primary reason parents come for WCC	68	69
I need more info on immun. safety	13	12

# Reasons for Referrals for Immunizations

Reason	FP (n=118)	Ped (n=21)
Inconvenience of counseling	19%	0%
Documentation hassles	25	10
Concerns about safety	15	5
Inadequate reimbursement	52	50
Storage and stocking issues	43	35
Language barriers	18	20

# Immunization practices by Specialty

	GP/FP	Peds
Vaccine-only visits	80%	92%
VFC participation	75%	98%
Screen status all visits	40%	73%
Access ALERT routinely	44%	36%
Review of pt. population status	21%	50%
Send out immun. reminders	33%	54%
No system to track pts who are behind on immun.	41%	36%

# Vaccination in face of acute illness\*

	GP/FP	Ped
Fever to 102.5	5%	18%
URI (afebrile)	93%	98%
Gastroenteritis	56%	73%
Persistent otitis media	74%	90%
Bronchiolitis	39%	45%

\*These are in reference to giving DTaP in a 4 month old infant with the conditions listed

# Overview of ROII

- Phase I : complete
  - Survey of all rural healthcare primary care providers serving children birth - 36 months
- Phase II: scheduled to start by late summer
  - Selection of up to 20 practices for on-site quantitative and qualitative assessment
- Phase III: timeline TBD
  - Quality improvement initiative derived from lessons learned in Phases I and II