

Influenza Incidence Pilot Project

Year 1

Wisconsin



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Partners

- ❑ Wisconsin Division of Public Health
 - Tom Haupt, MS – Influenza Coordinator
 - Jeffery Davis, MD – State Epidemiologist
- ❑ Wisconsin State Laboratory of Hygiene
 - Pete Shult, PhD – Director, Communicable Disease
 - Carol Kirk – Virus Lab Director
- ❑ UW Department of Family Medicine
 - Jon Temte, MD/PhD
 - Clinical Sites
 - ❑ Belleville Family Medical Center
 - ❑ Verona Family Medical Center
 - ❑ Wingra Family Medical Center

History of Successful Collaboration

- ❑ Ongoing respiratory virus surveillance
 - Since 1994
 - Wide scope
- ❑ Merging Multiple data streams
 - Syndromic surveillance
 - ❑ ILI-Net
 - Virological Surveillance
 - ❑ culture and PCR
 - Mechanical surveillance
 - ❑ UW-DFM Clinical Data Warehouse
 - Other
 - ❑ CDC and WHO
- ❑ Active weekly feedback to multiple stakeholders

IIP Surveillance Model

□ 3 clinical site

- Family medicine residency training clinics
- Total patient volume ~ 50,000 visits per year

- 1000 visits per week

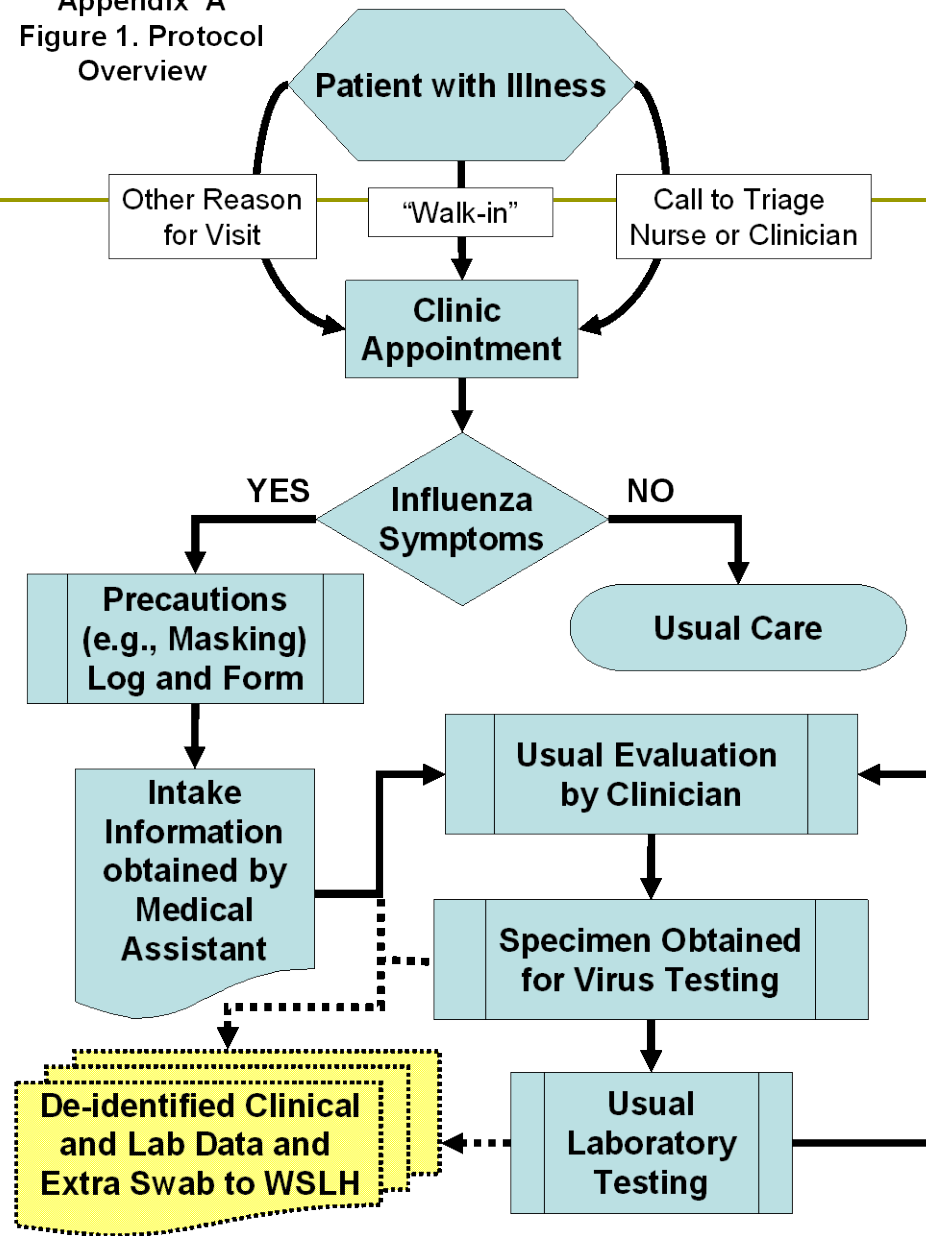
- 45% urgent care
- 45% chronic care and follow-up
- 10% well and preventive care

- Whole Clinic approach

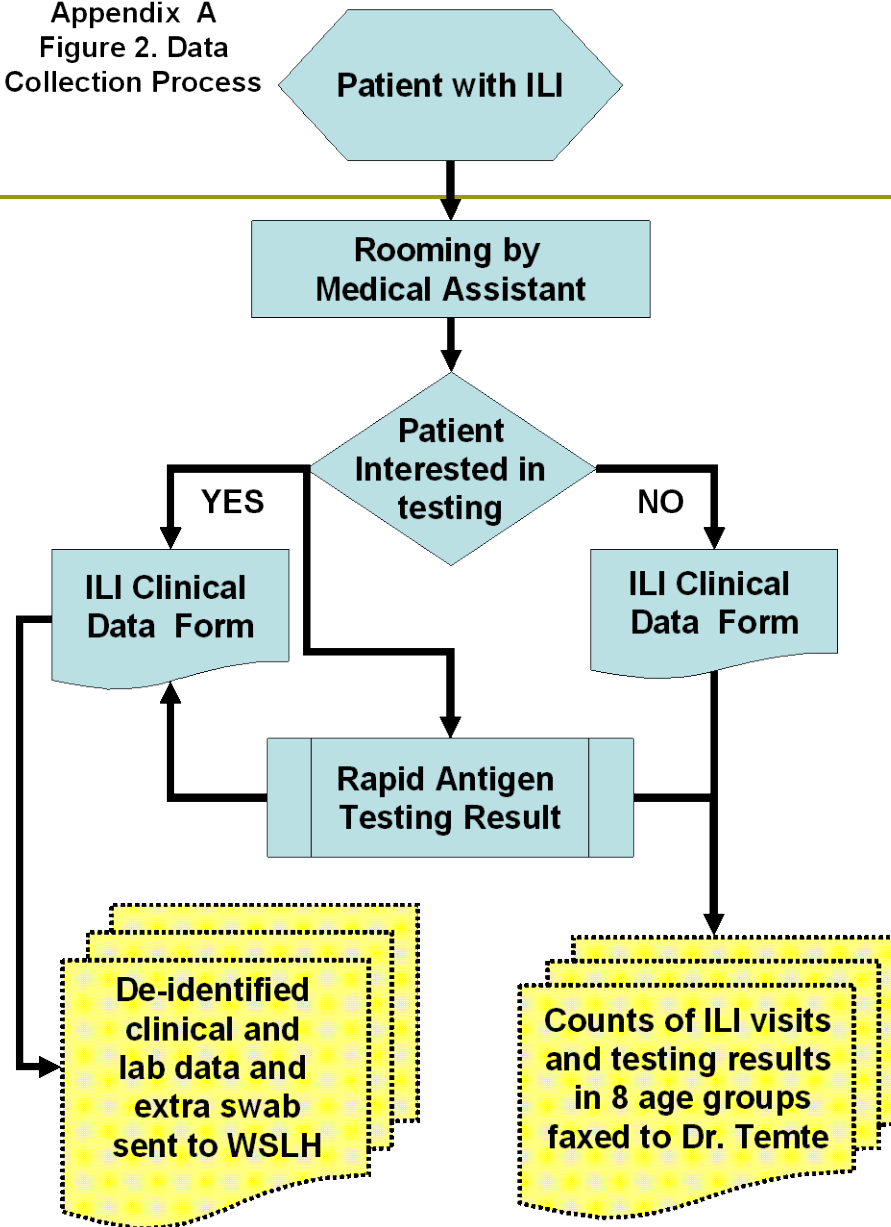
- All clinicians to participate in surveillance

- 30 residents
- 6 mid-level providers
- 22 Faculty
- Multiple shared medical assistants, nurses, laboratorians

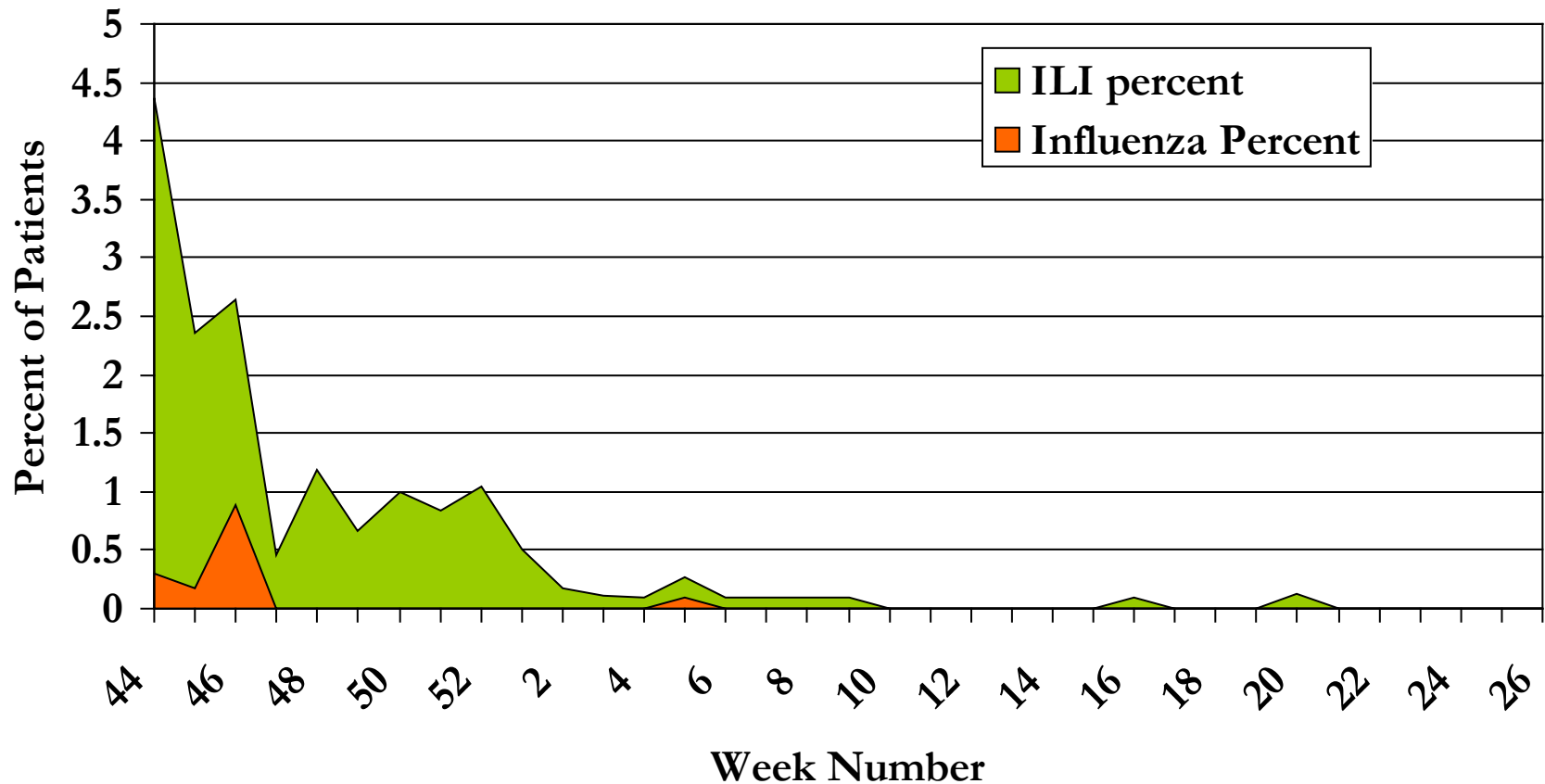
Appendix A
Figure 1. Protocol
Overview



Appendix A
Figure 2. Data
Collection Process

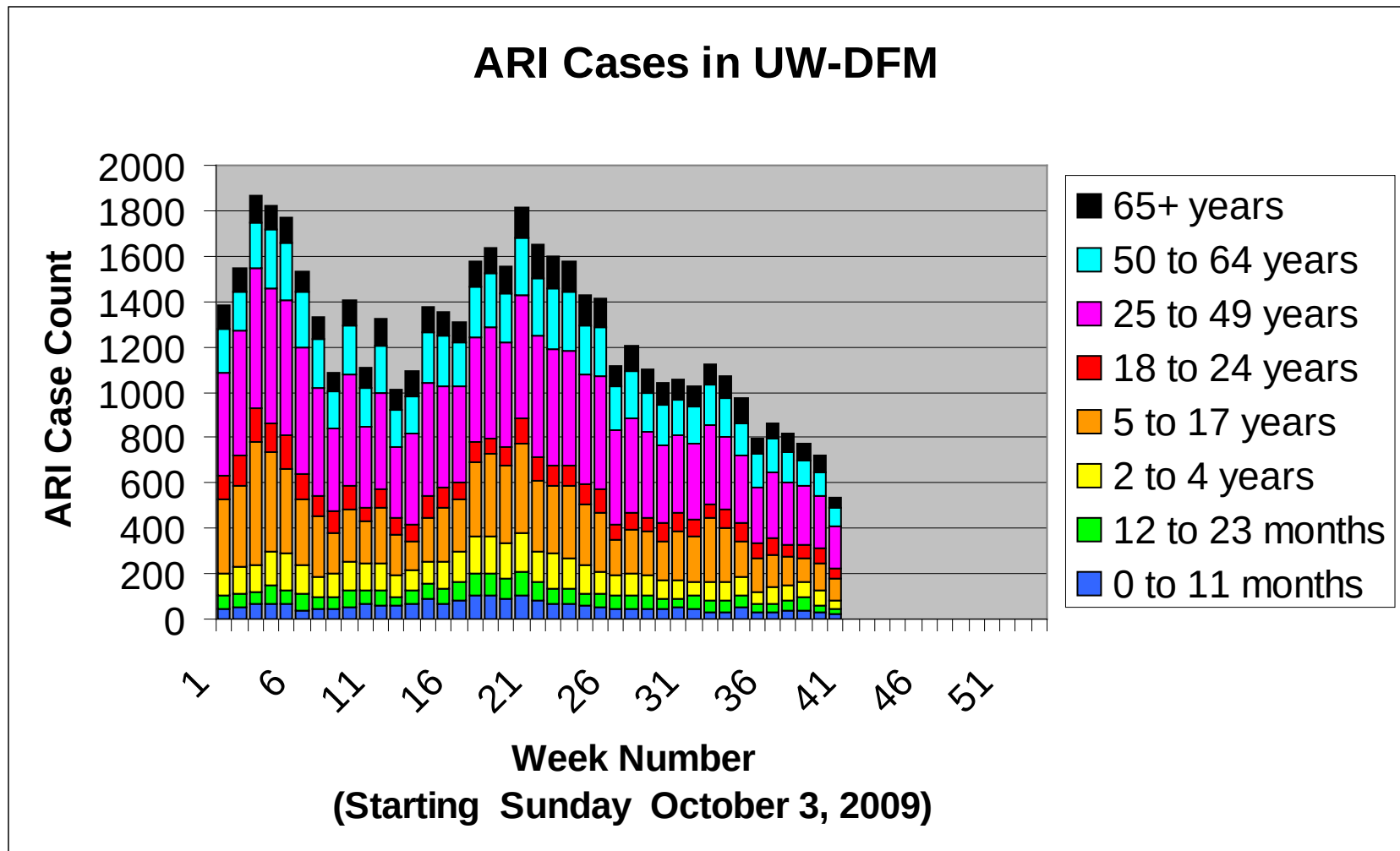


Incidence of ILI and Influenza – Wisconsin 2009-2010



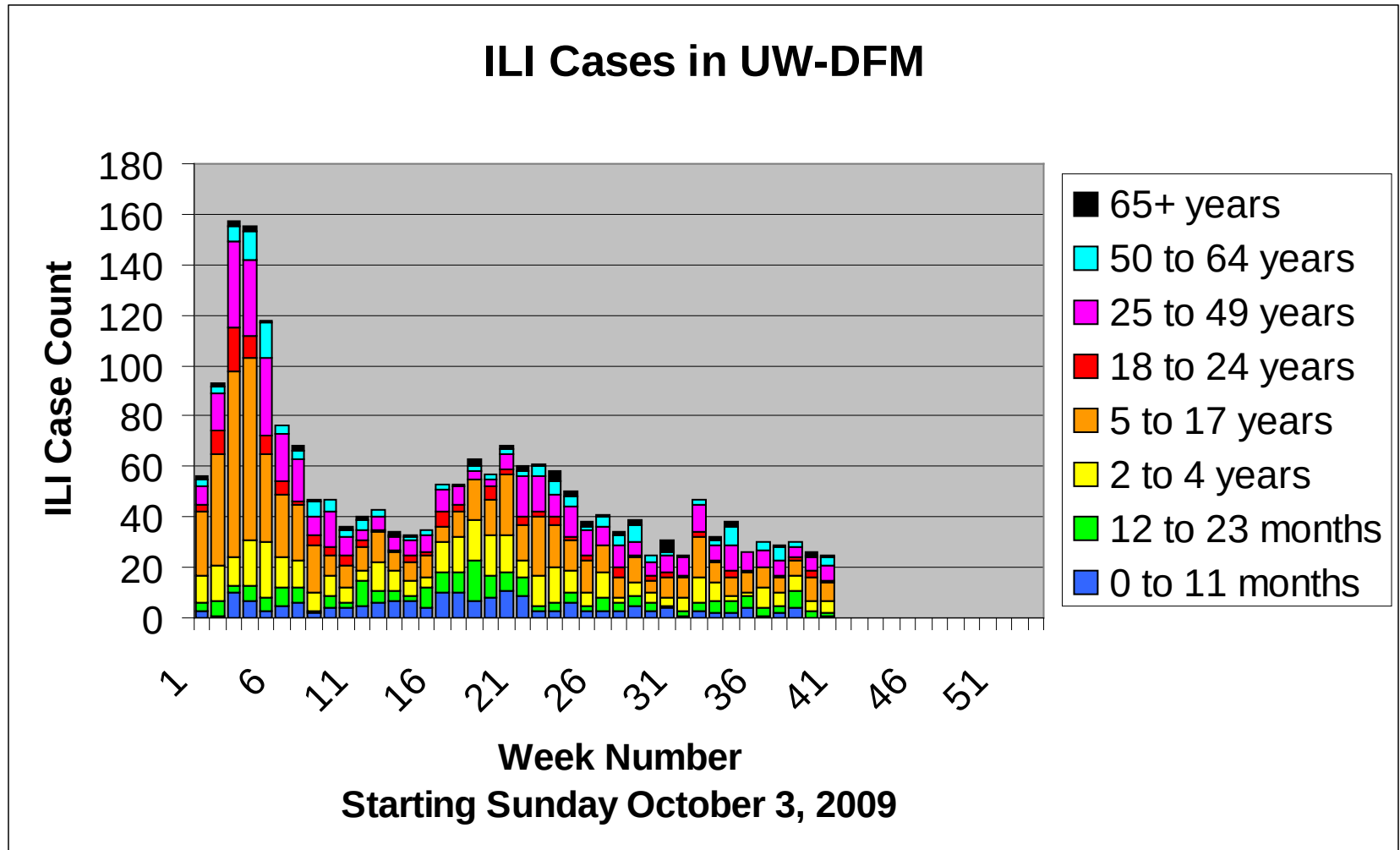
Incidence of ARI (EMR data)

Wisconsin 2009-2010

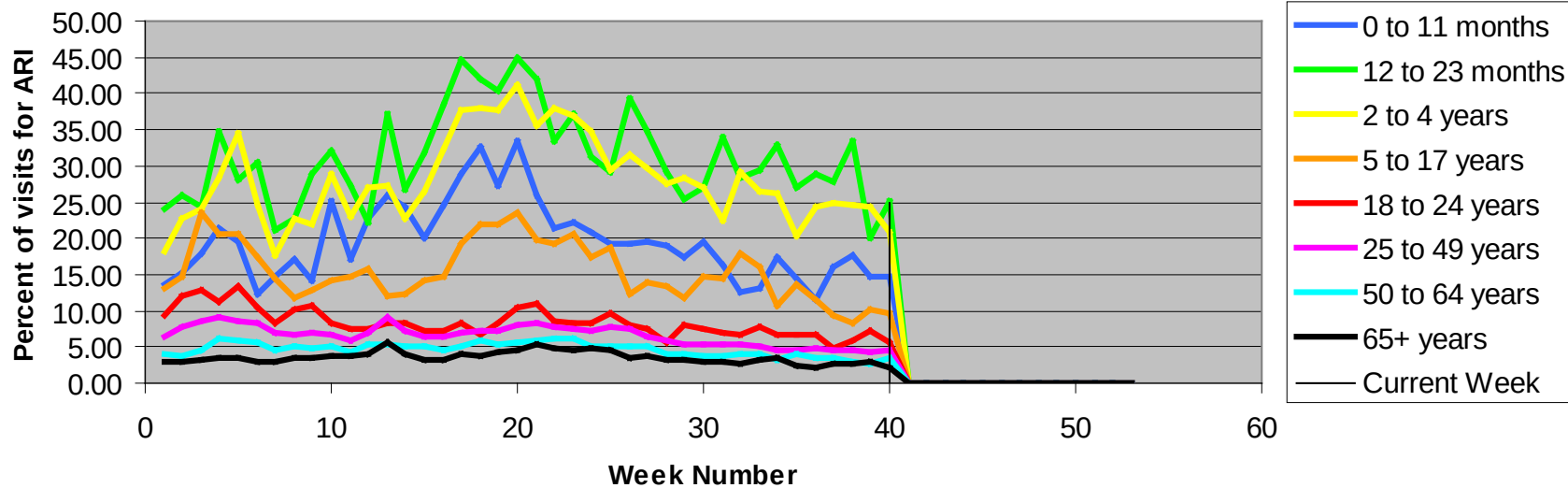


Incidence of ILI (EMR data)

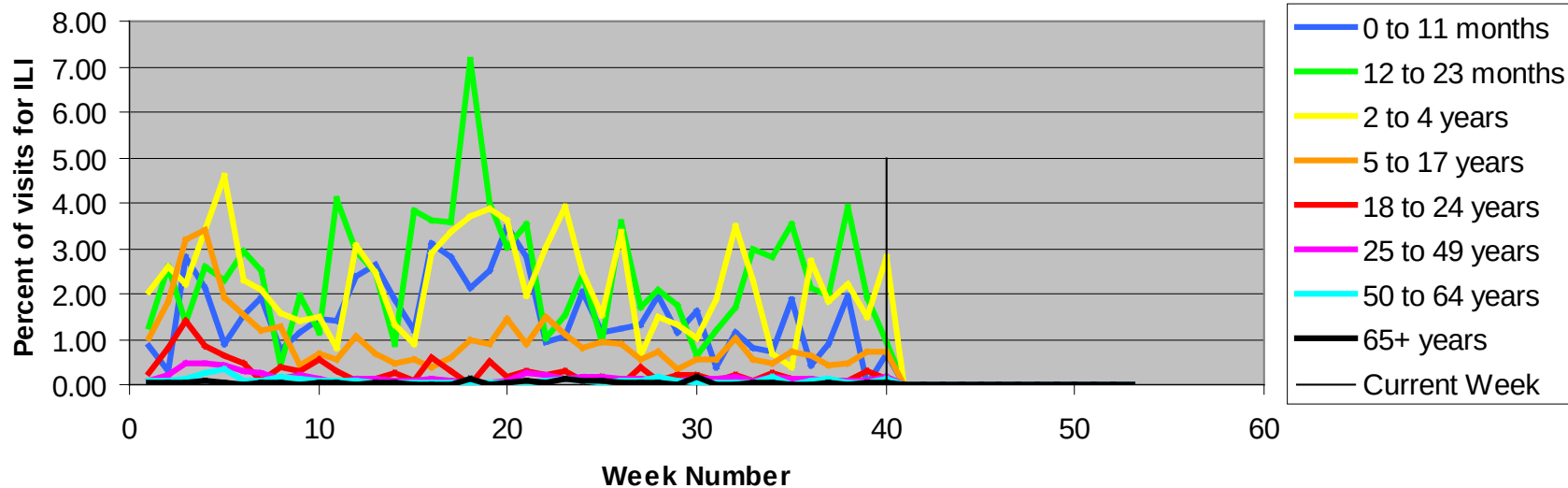
Wisconsin 2009-2010



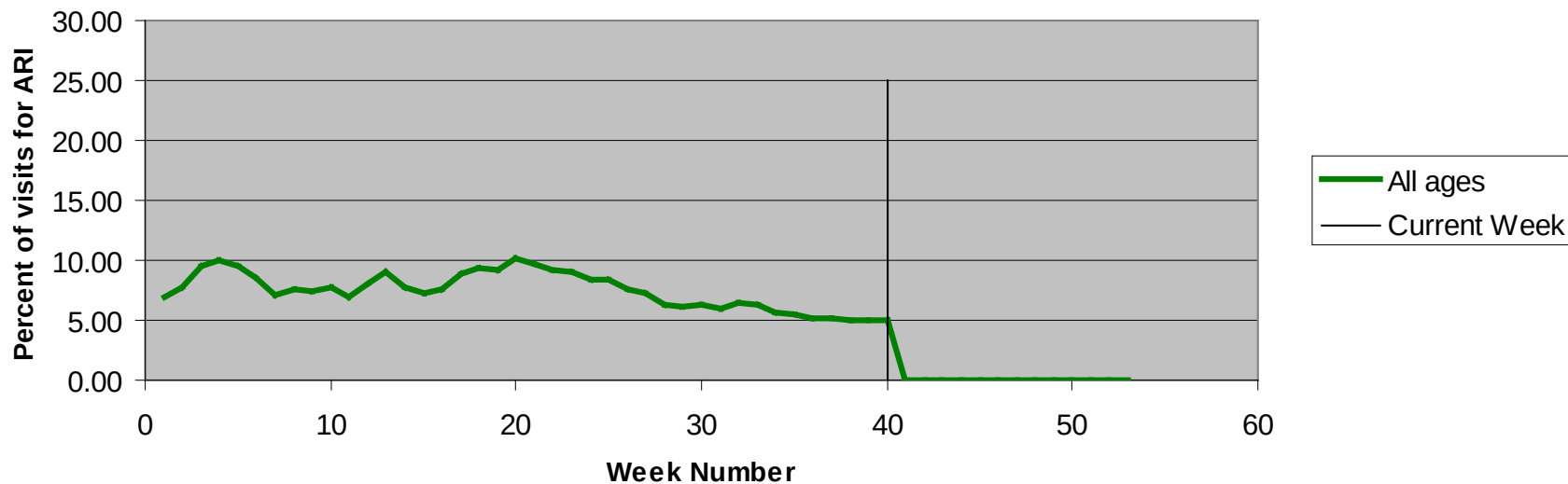
Age-Adjusted ARI visits in UW-DFM



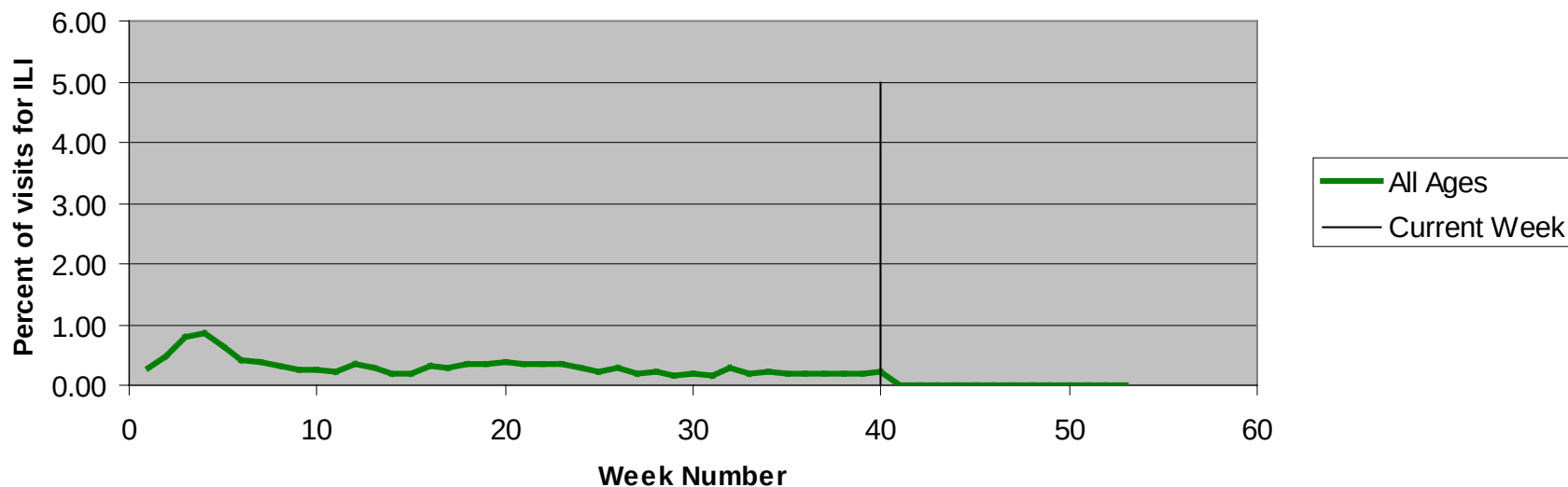
Age-Adjusted ILI visits in UW-DFM



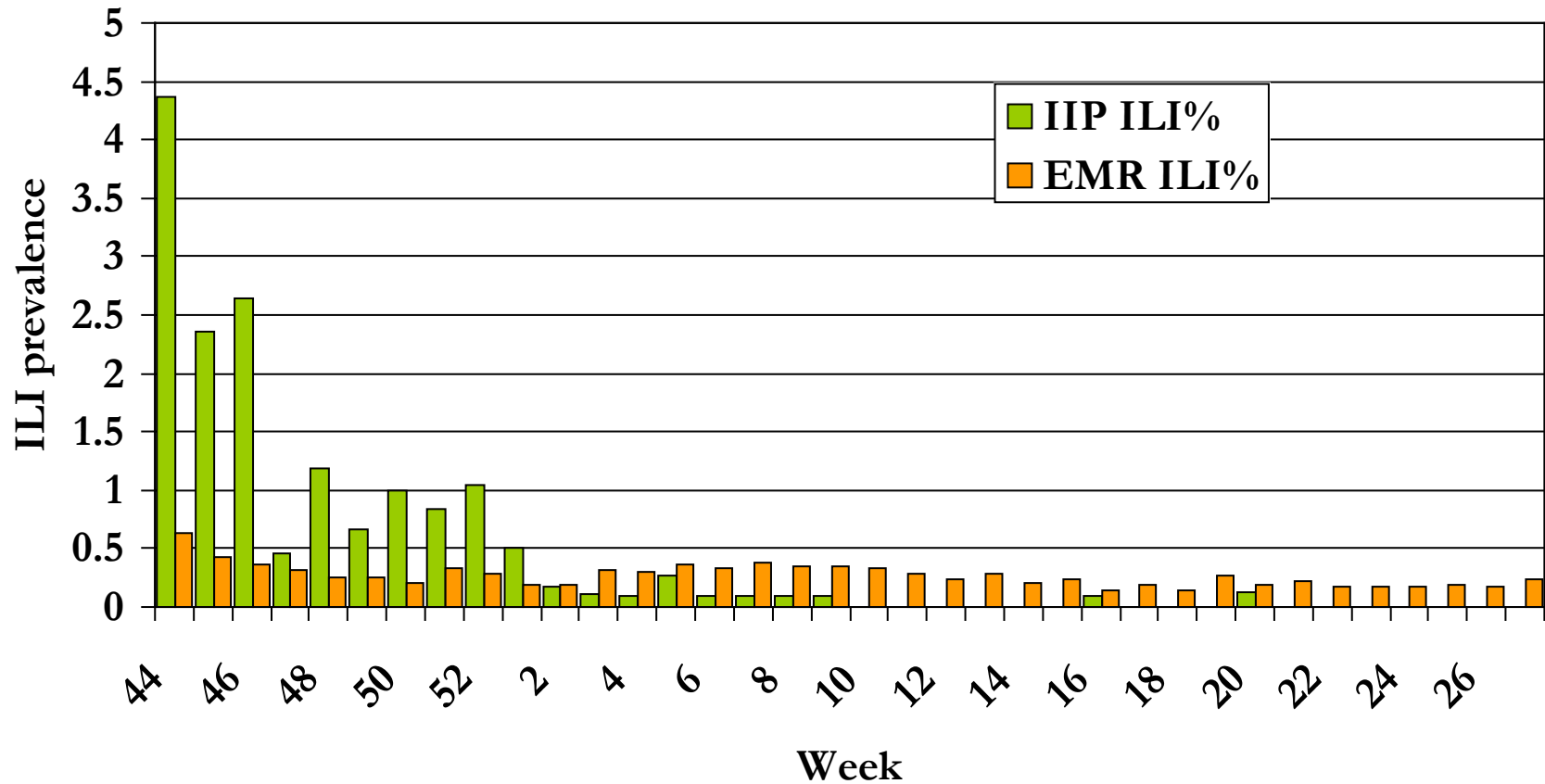
ARI visits in UW-DFM



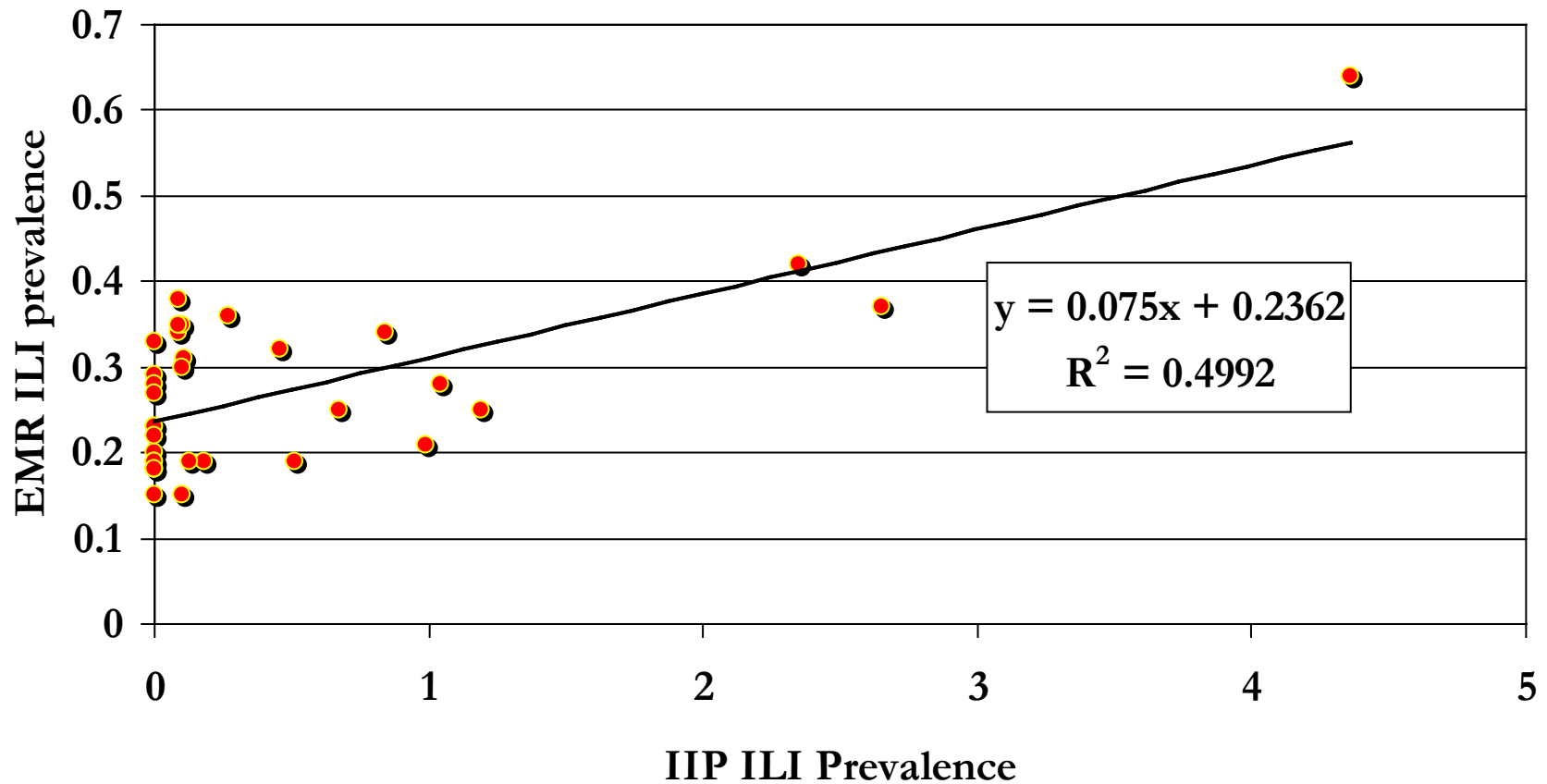
ILI visits in UW-DFM



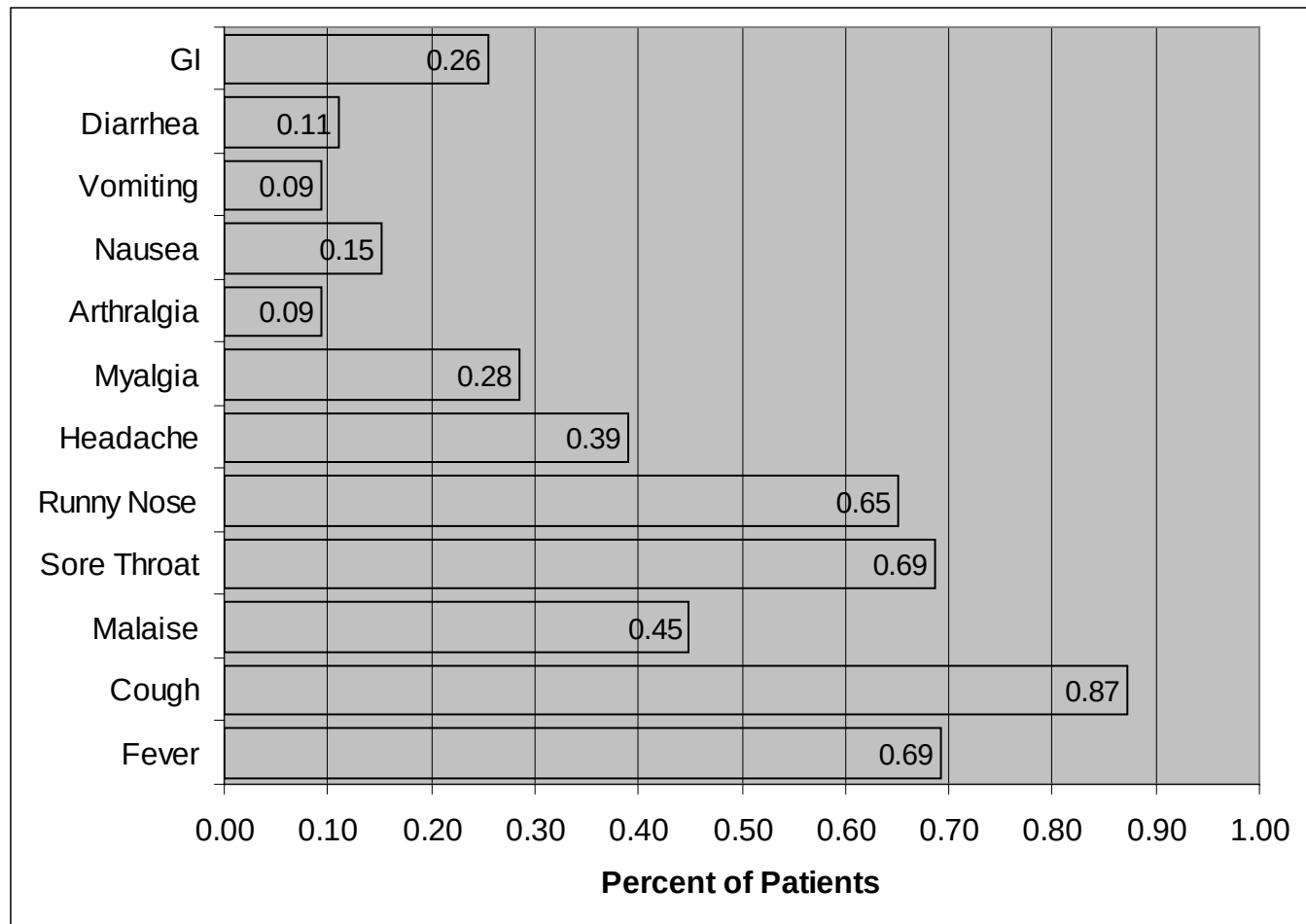
Comparison of IIP to EMR



Comparison of IIP to EMR



Clinical Data



Clinical Data

- Mean age = 25.9
- Sex ratio
 - Female: 58.3
 - Male: 41.7
- Days since onset
 - Mean = 4.1
 - Median = 3
- Exposure to similar illness within 3 days
 - 49%
- Severity of Illness
 - Mild: 25.9%
 - Moderate: 59.0
 - Severe: 5.1
- Recent Antiviral Use
 - 1.9%
- Seasonal Vaccine Use
 - 42.3%
- H1N1 Vaccine Use
 - 19.5%

Successes and Failures

□ Successes

- Enthusiastic clinical laboratories
- High rate of paired specimens
- Seamless transfer of specimens
- Excellent State Laboratory back-up
- Good match between IIP and estimates of community-wide prevalence
- Timely Feedback to Clinicians

□ Failures

- Late start
 - Very long and ungratifying IRB process
- Low level of prevalence

Lessons learned

- ❑ IRB issues
 - 70-80 hours to obtain “exemption”
- ❑ Political issues
 - Medical Foundation attempting to remove all point-of-care testing from primary care
- ❑ Too many clinicians
 - Increases variability of compliance
 - Increases variability in interpretation
 - Impossible to do outreach to everyone
- ❑ Too little staff time
 - One person running entire show at 10% FTE

Lessons learned

- ❑ What is prevalence?
 - Depends on sampling frame
 - ❑ Entire Clinic
 - ❑ Urgent Care
 - Depends on Clinician
 - ❑ Established panel
 - ❑ Non-continuity
- ❑ EMR data provides reflective framework

Year 2 innovations

- ❑ 50% time coordinator
 - Outreach to clinics
- ❑ Increase team meetings
- ❑ Change from all-clinic model to select “high volume” clinicians
 - 58 clinicians to 16 clinicians
 - ❑ 73% reduction in clinicians
 - ❑ 50% reduction in patient volume
 - Reduce variability
- ❑ Clinician appointment letters and contracts