

The Research Question

Real-Time Surveillance of Influenza in Ambulatory Primary Care Settings

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- **The Question:** Could rapid influenza diagnostic test (RIDT) analyzers connected to a wireless routers and placed into primary care practices provide “early detection” of influenza?
- **Why this is important?**
Early detection of outbreaks facilitates medical/public health response
Current approaches have inherent delays in reporting

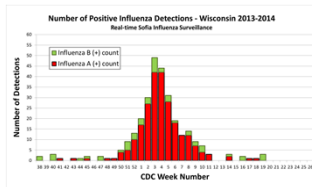
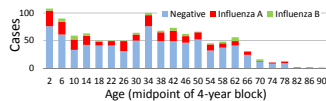
What the Researchers Did

- **Population/Subjects**
 - 19 clinics in Wisconsin
 - Any patient with ARI
 - onset within 4 days of visit
- **Design**
 - Prospective active surveillance
- **Basic Method/Intervention**
 - Nasal swab collected at visit
 - Tested with Quidel Sofia Influenza A+B RIDT
 - Equipped with wireless transmission of results
 - “waste swab” sent to Wisconsin State Laboratory of Hygiene for PCR confirmation



What the Researchers Found

- **Great Surveillance Population**
 - Wide range in ages
 - Similar to “community” rates of ARI
- **Outbreak detection in real time**
 - **Extremely early detection**
- **Comparable with Existing Surveillance Systems**
 - High correlation with
 - PCR network
 - RIDT network
- **Good Performance of RIDT**
 - Sensitivity = 74%
 - 89% for children
 - Specificity = 96%
 - 96% for children



What This Means for Clinical Practice

Wireless RIDT allows real-time surveillance of influenza

- Free flow of anonymous result data to public health in near real-time
- Eliminates need for anyone to assemble, aggregate, and send information

Wireless RIDT can be implemented quickly in primary care

- Public health implementation would remove need to attain IRB approval
- Extremely simple surveillance protocols allow buy-in from clinics and clinicians

Wireless RIDT creates robust and reliable surveillance

- Extremely early detection of influenza outbreak in Wisconsin
- Close correlation with "gold standard" surveillance systems
- Adaptable system
