Implementing Inpatient Visitor Restrictions during Non-pandemic Influenza Seasons in Marion County, IN

Melissa McMasters, MSN, RN
Coordinator, Immunization and Infectious Disease Programs

Brittany Yarnell, MPH
Syndromic Surveillance Epidemiologist
Executive Summary

• Background on ILI season
• Why visitor restrictions are implemented
Background

- **ILI = Influenza-like Illness**
  - Fever with cough or sore throat, or used the word “flu” or “influenza” as reason for visit
- Seasons start in late September/early October and end in May
  - **MMWR Week 40**
- “Start flu season” when 2% of Marion County ED visits are for ILI (baseline)
Why implement visitor restrictions?

- Patient safety
- Less “vectors”
- Hospitalized patients are extremely vulnerable and an influenza infection can be fatal
- Influenza can increase lengths of stay and contribute to overall costs of healthcare
- Time to “cocoon” inpatients during flu season
What are the restrictions?
Tier 1 Least Restrictive Option

<table>
<thead>
<tr>
<th>For Patients</th>
<th>For Healthcare Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No visitors less than 18 years of age</td>
<td>• Signage at all entrances</td>
</tr>
<tr>
<td>• No visitors sick with the symptoms of influenza</td>
<td>• Public notice via MCPHD</td>
</tr>
<tr>
<td>• Only immediate family identified by patient</td>
<td>• Respiratory etiquette equipment and supplies at all entrances</td>
</tr>
</tbody>
</table>

And for everyone: Increased vigilance with handwashing and covering coughs!
## Additional Restrictions

<table>
<thead>
<tr>
<th>Tier 2 More Restrictive</th>
<th>Tier 3 Most Restrictive</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Access to hospital restricted to designated entrances which all have screening stations</td>
<td>- Designated entrances and screening as in Tier 2</td>
</tr>
<tr>
<td>- All visitors must pass a short health screening</td>
<td>- Only essential staff and two family members are permitted</td>
</tr>
<tr>
<td>- Sticker or armband for those who pass</td>
<td>- All persons screened (even employees) and given sticker/armband</td>
</tr>
<tr>
<td></td>
<td>- Limited movement in the hospital</td>
</tr>
</tbody>
</table>
Healthcare providers are part of cocoon

- All Marion County hospitals require annual influenza vaccination of their employees
- MCPHD requires vaccination of all its employees
- Healthcare workers are obligated by ethical guidelines to “do no harm”
- This sets stage for a protected workforce
Lots of Patients are 65+

Adults 65+ are at increased risk of flu-related complications

- **Pneumococcal Pneumonia** kills more than **18,000** older adults in the US each year.
- **Heart Attack** risk is increased by **3 to 5x** in the first 2 weeks of infection.
- **Stroke** risk is increased by **2 to 3x** in the first 2 weeks of infection.

High rates of related deaths and hospitalizations in adults 65+

- **78%** of all flu-related hospitalizations (more than 750,000 in US 2014-2015 flu season alone).
- **6x** more deaths from flu and related complications compared to all other age groups combined.
Senior Vaccines

Annual vaccination is the best way to protect yourself against the flu

Vaccines are safe and effective and reduce the risk of flu and related complications

Immune systems decline as adults age. Certain vaccines are available to help boost immune response, specifically in adults 65+:

- High-dose vaccines contain 4X more antigen than standard-dose vaccines
- Adjuvanted flu vaccines contain an ingredient that helps create a stronger immune response

If a specific flu vaccine is not available in your area, don’t delay! Vaccination with any available influenza vaccine is recommended and will still provide protection.

National Foundation for Infectious Diseases
www.nfid.org/flu
Care About Older Adults? Care About Flu! PSA

Talk to Patients 65+:
- Importance of annual flu vaccination
- Specific vaccines most beneficial for them

https://youtu.be/WgUu1igs9U
I wish there was a vaccine that prevented me from hearing your opinion about flu shots.

"All we have to do is place them on the waiting room chairs!"

Way to stand your ground on the whole "flu shot is a scam" bit.

Call me when your lungs have drained.
Low vaccination rates
Low vaccination rates

Figure 2. Flu Vaccination Coverage by State, Children 6 Months—17 Years, United States, 2018–19 Season
Low vaccination rates

Figure 3. Flu Vaccination Coverage of Adults 18 years and older, United States, 2010–2019
Low vaccination rates
Has flu been so bad we need to restrict visitors?

No, no...
This isn’t gossip.
It’s the truth.
Past season: 2017/2018

Deadliest season

- Marion County: 25 influenza-associated deaths
  - Average: 12 per season
  - Range: 0 – 21 per season
- Indiana: 336 influenza-associated deaths
  - Average: 70 per season
  - Range: 0 – 149 per season
- National: 179 pediatric influenza-associated deaths
  - Average: 114 per season
  - Range: 37 – 171 per season
Past season: 2018/2019

Longest season

- Two peaks
- 15 weeks above baseline (2%)
  - Average: 6 weeks
  - Range: 0 – 13 weeks
Considered for visitor restrictions

- ILI activity
- Case severity
- ED diversions/MESH
  - EMS runs
- IU respiratory viral activity
- National and state trends
- Input from members of Indianapolis Coalition for Patient Safety
VISITORS

Visitation Restrictions Now in Effect for Flu Season

Only immediate family members and significant others who are not experiencing flu-like symptoms and who are over the age of 18 may visit patients at this time.

Thank you for helping us to create a safe environment at Eskenazi Health.
Benefit of “Citywide Approach”

• Less confusing for visitors
• Commitment from both private sector and public health
• Data driven by all hospital EDs
• Message spread via the Indianapolis Coalition for Patient Safety and is united
Review 2017/2018 season

Week 40 – 50: Marion County under 2%

Top: Week 40 (10/07)
Bottom: Week 49 (12/09)

Top: Week 45 (11/11)
Bottom: Week 50 (12/16)

Top: Week 47 (11/25)
Bottom: Week 51 (12/23)
Marion County ED visits

ILI visits to Marion County EDs, 2017/2018
Marion County ED visits

ILI visits to Marion County EDs, 2017/2018
Marion County ED visits

ILI visits to Marion County EDs, 2017/2018
Timeline

- Started internal conversations December 27, 2017
- External update December 28
  - Indiana Coalition for Patient Safety
- Week 02 implemented visitor restrictions
  - January 08, 2018
- Week 13 visitor restrictions ended
  - March 19, 2018
Marion County ED visits

ILI visits to Marion County EDs, 2017/2018
Other considerations for ending restrictions

- Communication again through the Indianapolis Coalition for Patient Safety
- Timeliness only fair to patients, visitors and staff
- Restrictions do have psychosocial impact
  - New moms wanting siblings present
Some years are more challenging to gage trends

- **2018/2019 season had:**
  - Two peaks
  - Two influenza strains
  - RSV was high during first peak (Respiratory Syncytial Virus)
Weekly Influenza reports

- CDC: https://www.cdc.gov/flu/weekly/index.htm
- Indiana: https://www.in.gov/isdh/22104.htm
- Marion County: http://marionhealth.org/programs/administration/epidemiology/seasonal-influenza-weekly-reports/
Questions about flu?

Get a flu vaccine. It's the best way to #fightflu.
It’s just the flu...

Ashley McCormick

Ashley was a 23-year-old nanny who worked with a family that had three kids. On December 20, 2013 Ashley came home from work with a few cold symptoms – runny nose, sore throat and a headache. The next day she had a high fever, so she went to an urgent care where they did a test for flu and sent her home with some medication.

Two days later she received a phone call from the urgent care saying she tested positive for type A influenza. The doctor said since it had been longer than 48 hours since her first symptom, she could not take Tamiflu. Luckily, she started to feel better for a few days. But, then on Christmas she spiked a fever of 103.8. She loved Christmas so much she said she was fine. However, the next day she was not better so her parents took her to the emergency room where she was diagnosed with pneumonia and H1N1 influenza, which had attacked her lungs. Her lungs were so inflamed and damaged that her only hope was an extracorporeal membrane oxygenation (ECMO) machine that would let her lungs heal and provide oxygen to her organs.

Ashley’s doctors had a hard time finding a hospital that had an available ECMO machine because it was the peak of the flu season and they were all being used. They finally found a hospital that had one and she was transferred there and taken into surgery immediately. A short while later her parents were told she didn’t make it. On December 27, 2013, Ashley McCormick died from influenza.

Ashley was not vaccinated against the flu. Her parents want to share Ashley’s story so that no other family loses a loved one to this vaccine-preventable disease.
Kendra Mann-O’Brien

Kendra was a healthy mother of two when she lost her life to flu.

FFF Advocate:
Joan Mann (mother)

Place of Residence:
Leawood, KS

Date of Child’s Death:
April 5, 2012

https://youtu.be/pGPJcEgjGMo
Reminder About the Seriousness of Influenza Infection: ECMO

- Know what it is
- Know if and where it is available in your community
- Assess each hospital’s capacity

https://vimeo.com/80161346