Effective Strategies to Increase Influenza Vaccination of Healthcare Workers in Saudi Arabia

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Nothing to disclose
Overview: AL-Moosa Specialist Hospital
Al-Ahsa, Saudi Arabia

- 200 bed tertiary care hospital
- 66 ICU beds (Adult + Pediatrics)
- >1800 staff
- Accredited by: Joint Commission International & Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI)
- Planetree designation

Website: www.almoosahospital.org; Facebook: @almoosahospital1; Twitter: @almoosahospital
Influenza Vaccination is recommended by WHO and Saudi Ministry of Health for healthcare workers (HCWs), however, coverage has been historically low:

<table>
<thead>
<tr>
<th>Influenza Vaccination among Healthcare Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014–15 season</td>
</tr>
<tr>
<td>77.3%</td>
</tr>
</tbody>
</table>

Source: Centers for Disease Control and Prevention, September 2016

Influenza vaccination is the most effective method for reducing the risk of flu and absenteeism in HCWs as well as the risk of respiratory illness and mortality in their patients.

This presentation discusses the most effective strategies applied to raise influenza vaccine coverage (IVC) rates in HCWs and the effect on sick leave (SL) rate due to influenza-like illnesses (ILI) during three flu seasons.
Material/Methods

• We retrospectively reviewed and analyzed **IVC rates** during the flu seasons from October 2014 to February 2017 through which several interventions were progressively implemented.

|------------------|------------------|------------------|

Flu season selected: October till February

• **SL rate due to ILI** calculation = 
  
  \[
  \text{Total number of SL due to ILI during the flu season} / \text{Total number of SL during the flu season}
  \]

• The impact of influenza vaccination on SL rate due to ILI was compared between **vaccinated** and **unvaccinated** HCWs during flu seasons.
Results
Influenza Vaccine Coverage Rate from October 2014 – February 2017

Interventions: provision of free non-mandatory vaccine and easy access to it, providing educational activities, requesting signed declination statement (refusal form)

- 2014-2015 Flu Season: 45%
- 2015-2016 Flu Season: 83%
- 2016-2017 Flu Season: 96%
Influenza Vaccine Coverage Rate from October 2014 – February 2017

Interventions:
- Provision of free non-mandatory vaccine and easy access to it, providing educational activities, requesting signed declination statement (refusal form)
- Limiting barriers to vaccine and actively promoting for flu vaccine

Significant increase 38%, p<0.05
Influenza Vaccine Coverage Rate from October 2014 – February 2017

Interventions:
- Provision of free non-mandatory vaccine and easy access to it, providing educational activities, requesting signed declination statement (refusal form)

Interventions:
- Limiting barriers to vaccine and actively promoting for flu vaccine

Intervention: mandating flu vaccine

- Significant increase 38%, p<0.05
- Significant increase 13%, p<0.05

2014-2015 Flu Season: 45%
2015-2016 Flu Season: 83%
2016-2017 Flu Season: 96%
• With the use of multiple progressive interventions:
  – The overall Influenza Vaccination Coverage rate increased significantly by 51% (p-value<0.05)
### Sick Leave (SL) due to ILI in Vaccinated and Unvaccinated HCW

<table>
<thead>
<tr>
<th>Flu Season</th>
<th>SL due to ILI in Unvaccinated HCW</th>
<th>SL due to ILI in Vaccinated HCW</th>
<th>Total SL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-2015</td>
<td>40</td>
<td>20</td>
<td>143</td>
</tr>
<tr>
<td>2015-2016</td>
<td>157</td>
<td>51</td>
<td>520</td>
</tr>
<tr>
<td>2016-2017</td>
<td>173</td>
<td>52</td>
<td>624</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>370 (29%)</strong></td>
<td><strong>123 (10%)</strong></td>
<td><strong>1287</strong></td>
</tr>
</tbody>
</table>

Significant decrease of 19% (p-value<0.05)

Throughout the three flu seasons, the increase in IVC rate was associated with 19% reduction (p-value<0.05) in SL rate due to ILI between vaccinated and unvaccinated HCWs.
Conclusions

• Our findings confirm the importance of a comprehensive approach using combined interventions that have cumulative effect resulting in increased IVC rate

• A mandatory influenza vaccination program for HCWs is feasible and results in extremely high vaccination rates

• Influenza vaccination of HCWs is significantly associated with a fewer number of SL due to ILI

• Long-term well-designed programs are the key to sustainable improvement in IVC rate, leading to improved patient safety outcome
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References


Thank you

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