Impact of the COVID-19 Pandemic on Adult HPV, Pneumococcal, and Zoster Vaccinations

Mawuli Nyaku, DrPH, MBA, MPH
Director, Center for Observation and Real-World Evidence

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Data Sources

IBM Truwen Early View:
- Near real-time data (~3-month lag)
- Data contributed by large employers, EMR providers, Medicare and Medicaid
- Over 245 million unique U.S. patients

TriNetX Dataworks:
- Near real-time longitudinal EMR data
- 26 Healthcare Organizations, 38 million U.S. patients
- Data refreshed monthly to quarterly (denominator issues)
- Denominator limited to individuals with a medical encounter
Population

- Individuals ≥19-45 years for HPV vaccines
- Individuals ≥50 years of age for zoster vaccines (Shingrix and Zostavax)
- **Does not** cover individuals ≥65 years for pneumococcal vaccines
- No continuous enrollment eligibility
- Single date enrollment in corresponding month

Metrics by Month

Percent Change:
- 2018 vs. 2019: (# vaccines in 2018 - # vaccines in 2019) / # vaccines in 2019
- 2020 vs. 2019: (# vaccines in 2020 - # vaccines in 2019) / # vaccines in 2019
- 2021 data excluded
Methods – TriNetX Dataworks

Population

- HPV - ≥19-45 years
- Zoster - (Shingrix and Zostavax) - ≥50 years of age
- Pneumococcal (Prevnar 13 and Pneumovax 23) - ≥65 for pneumococcal vaccines
- Individuals with a vaccine visit claim

Metrics by month

Percent Change:

- 2018 vs. 2019: (# vaccines in 2018 - # vaccines in 2019) / # vaccines in 2019
- 2020 vs. 2019: (# vaccines in 2020 - # vaccines in 2019) / # vaccines in 2019
- 2021 data excluded
HPV VACCINATIONS
Percent Change in HPV Vaccinations – IBM Truven Early View, January 2018 – December 2020

Percent Change 2018 to 2019
Percent Change 2019 to 2020
Percent Change Mean of 2018 & 2019 to 2020
Percent Change in HPV Vaccinations – TriNetX Dataworks (January 2018 – December 2020)
Percent Change in HPV Vaccinations – IBM Truven Early View & TriNetX Dataworks (January 2018 – December 2020)

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ZOSTER VACCINATIONS
Percent Change in Zoster Vaccinations – IBM Truven Early View (January 2018 – December 2020)
Percent Change in Zoster Vaccinations – TriNetX Dataworks (January 2018 – December 2020)
Percent Change in Zoster Vaccinations – IBM Truven Early View & TriNetX Dataworks (January 2018 – December 2020)
PNEUMOCOCCAL VACCINATIONS
Percent Change in Pneumococcal Vaccinations – TriNetX Dataworks (January 2018 – December 2020)
Conclusions

- Significant drop-offs in 2020 for adult HPV, pneumococcal, and zoster vaccinations
- Vaccine uptake of adult HPV, pneumococcal, and zoster vaccinations trending towards pre-pandemic levels
- Significant cumulative deficit of missed doses especially during 2020 implies that current vaccination uptake trends will have to significantly surpass pre-pandemic levels to make up for the loses
THANK YOU