Medical Dental Integration for Vaccinations and Well Child Checks

A Targeted Intervention to Increase Rates of Tdap, MCV4, and HPV9 Vaccination and Well Child Checks for Children Ages 9-17

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Background

- The pediatric vaccine schedule is front-loaded in the first 4 years of life. The vaccines schedule picks back up in the adolescent years.
- Children under the age of 5 have more preventative visits with doctors.[1]
- Well child check rates decrease in adolescents compared to their younger counterparts.[4]
- Children older than 9-years of age typically see dentists more often than their primary care doctors.[1]
- The rates of Well Child Checks and Vaccination rates dropped during the COVID-19 pandemic. [3]
- Dentists play key roles in preventative health (diet, oral hygiene, etc.)[2] but past studies have found that most dentists feel uncomfortable counselling on topics such as vaccines.[1]
  - The HPV vaccine is of particular importance to dentistry as HPV can cause oral cancers.
- There is an opportunity for dentistry and medicine to collaborate in adolescent preventative health measures.[5]

Study Purpose and Aims

Purpose: Create a collaborative process between dentistry and medicine to increase vaccination rates and WCC in children aged 9-17.

Aims:

1) To increase vaccination rates of the Tdap, MCV4 and HPV9 vaccines by 5% in patients aged 9-17 through vaccination *at pediatric dental visits* and through *assisted scheduling*

2) To increase WCC rates through *reminders during dental visits* and *assisted scheduling* for overdue patients.

Patient Population

- Patients aged 9-17 overdue for Tdap, MCV4, HPV or WCCs on the day of their dental appointment.
- Data Collected from 5/24/2021-10/29/2021
- Patients from three pilot sites at a large Federally Qualified Health Center in Denver, CO
  - Eastside, Westside, Montbello Clinics
  - Dental clinics were co-located with medical clinics
  - Share EMR
- N=627 Patient Encounters

Methodology: In Clinic

Worked with staff across all three clinics to create the workflow below:

- Dentists received education on vaccines.
- Front desk staff ran daily reports of children overdue for vaccines or WCC.
- "Overdue" stickers placed on identified patient charts. Flyers were also placed in exam rooms.
- Dentists/Hygienists discussed overdue status with patients and parents.
- Amenable patients sent to pediatrics clinic to get same day vaccination from clinic Medical Assistants.
- If unable to get same day vaccine, assisted in scheduling WCC or vaccine appointment.

Methodology: Data Collection

- Ran daily EPIC reports to identify patients who were overdue for HPV, Tdap, MCV or WCC.
- Weekly chart review conducted on identified patients to determine if vaccines were administered during their dental visit.
  - Patients that did not receive vaccines or were overdue for WCC were identified.
  - Identified patient data was sent to clinic clerical staff for follow up scheduling.
- Chart Review was conducted again >30 days after dental visit to identify patients who had completed WCC within 30 days of their dental visit.

Results

Vaccinations:

- N=627
- 10% of patients (N=54) were vaccinated the same day after reminders from their dental provider.
- 9% (N=58) were vaccinated within 30 days of their dental visit with assisted scheduling.
- 3.38% of ALL vaccines given in 2021 in the months of the study were found to be secondary to the MDI intervention.

2021 Total Vaccines Given on ANY DAY May-Oct	MDI Vaccines-Same Day as Dental Visit	MDI Vaccines-Follow Up within 30 days with assisted scheduling	*% of vaccines given due to MDI intervention*
3,512	61	58	**3.38%**

Table 1: Patients who were vaccinated with Tdap, HPV, or MCV across all three clinics.

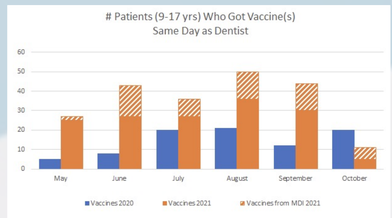

Figure 1: Patients who were vaccinated with Tdap, HPV, or MCV4 on the same day as their dental visit across all three clinics in 2020 vs 2021. The striped portion of the bar graph represents vaccinations from this intervention and the percent increase from 2021 baseline data.

Well Child Checks:

- 1.2% increase in WCC from MDI alone across all three clinics.

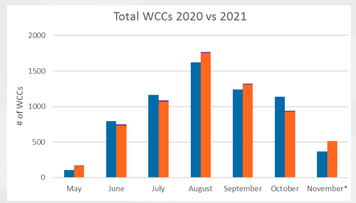

Figure 3: Graph demonstrating number of WCC compelted across all three clinics from 2020 vs 2021 within 30 days of dental visit. Purple bar denotes the number of WCC from MDI intervention

Montebello was more efficacious than the other clinics.

Clinic	Average Efficacy
All Clinics	10%
Montbello	16%
Eastside	7%
Westside	6%

Table 2: Average efficacy of same day vaccination broken down by clinic.

Figure 2: The changes in efficacy overtime of same day vaccinations at Montbello. Annotated with pertinent events.

Highlighting Montbello:

- N=156
- 29 Same-Day Vaccinations
- 16% Efficacy
- 7.3% increase in vaccinations clinic wide

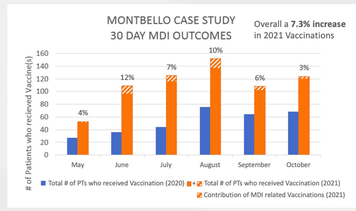

Figure 4: Number of patients who received vaccines at the Montbello Clinic in 2020 vs 2021, including the percentage of vaccines given due to MDI intervention (both same day and assisted follow up within 30 days).

Summary & Conclusions

- Adolescents typically see the dentist more often than their medical providers
- Patients are receptive to discussing routine vaccinations in the dental setting
  - 10% of patients who were overdue for vaccines at the time of their dental appointment were vaccinated the same day
    - Montbello clinic had 16% efficacy
  - 3.38% increase in vaccine administration across all three clinics
    - 7.3% increase at Montbello
- 1.2% of WCC in 2021 across all three clinics were due to MDI intervention
- The dental office appears to be an effective and appropriate place to offer reminders regarding vaccines and preventative health measures
- Dentists, dental assistants, and auxiliary team members play a powerful role in promoting and improving WCC compliance and vaccination rates

Future Work

Future Work:

- Increasing efficacy: Part time MA specific to Dental Clinic, legislative work, narrow focus to one clinic
- Expansion: Addition of other vaccines, increasing age range to include younger children or adults

Acknowledgments & References

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