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2-year old immunization coverage in
Fraser Health, British Columbia:
beyond up-to-date status

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Disclosure Statement



- I have no affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.

Background

- Fraser Health – large health authority with mixed model of immunization delivery
- Up-to-date coverage: standardized way of measuring immunization rates
- Fraser Health's UTD coverage at 2 years:
 - typically 65-70%
 - Without 18 month booster, 75-78%

Methods: data sources

- BC iPHIS birth cohorts 2008-2010
 - 54,390 children
 - all antigens and dates of receipt up to 2 years of age
 - DOB
 - Health unit
 - Refusal indicators (additional 2012 summary data)

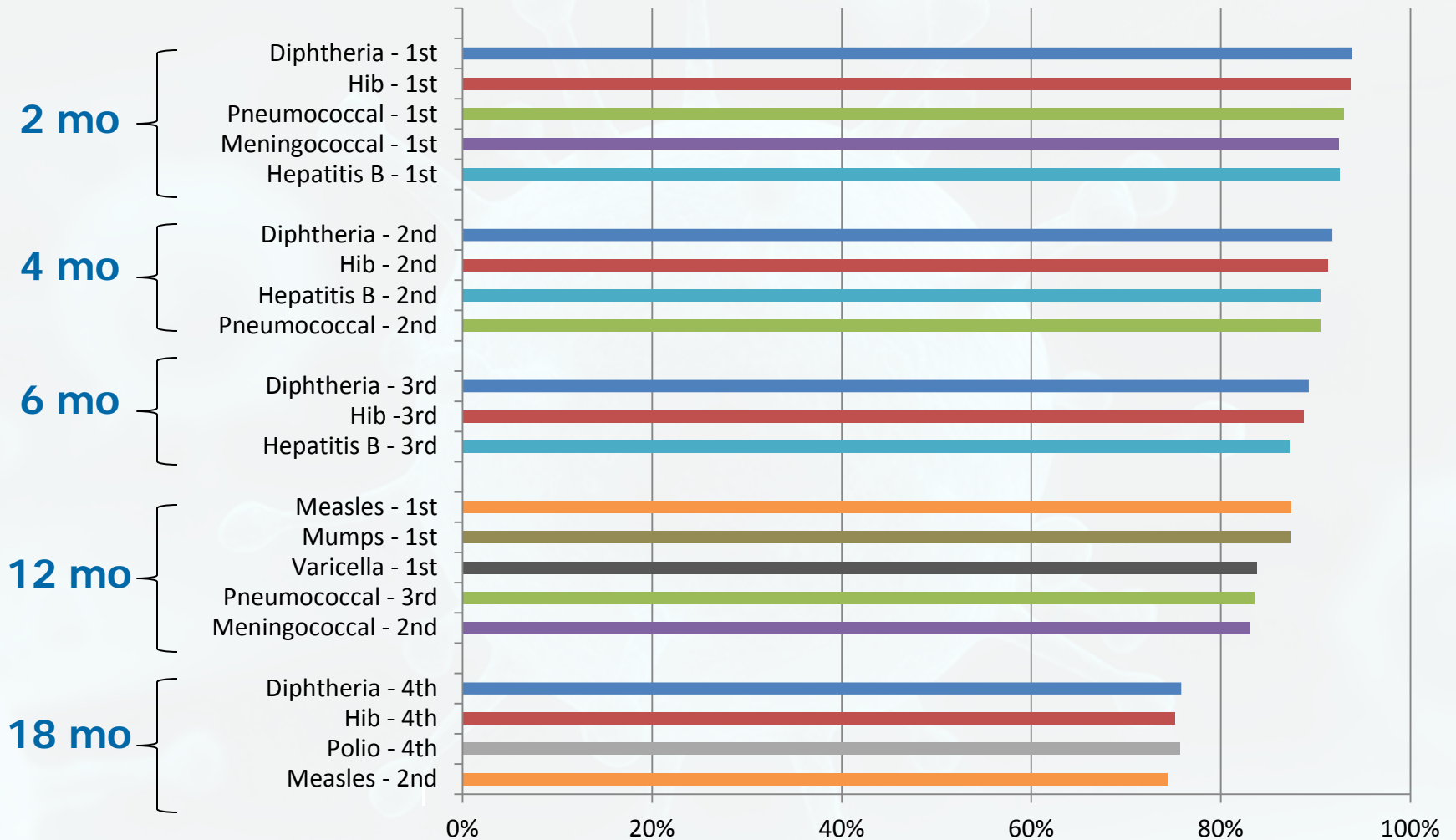
Methods: descriptive analysis

- Classification of doses: timeliness and validity
- Examination of drop-off, selective dosing, and non-receipt
- Examination of lateness and intervals
- Examination of number of visits



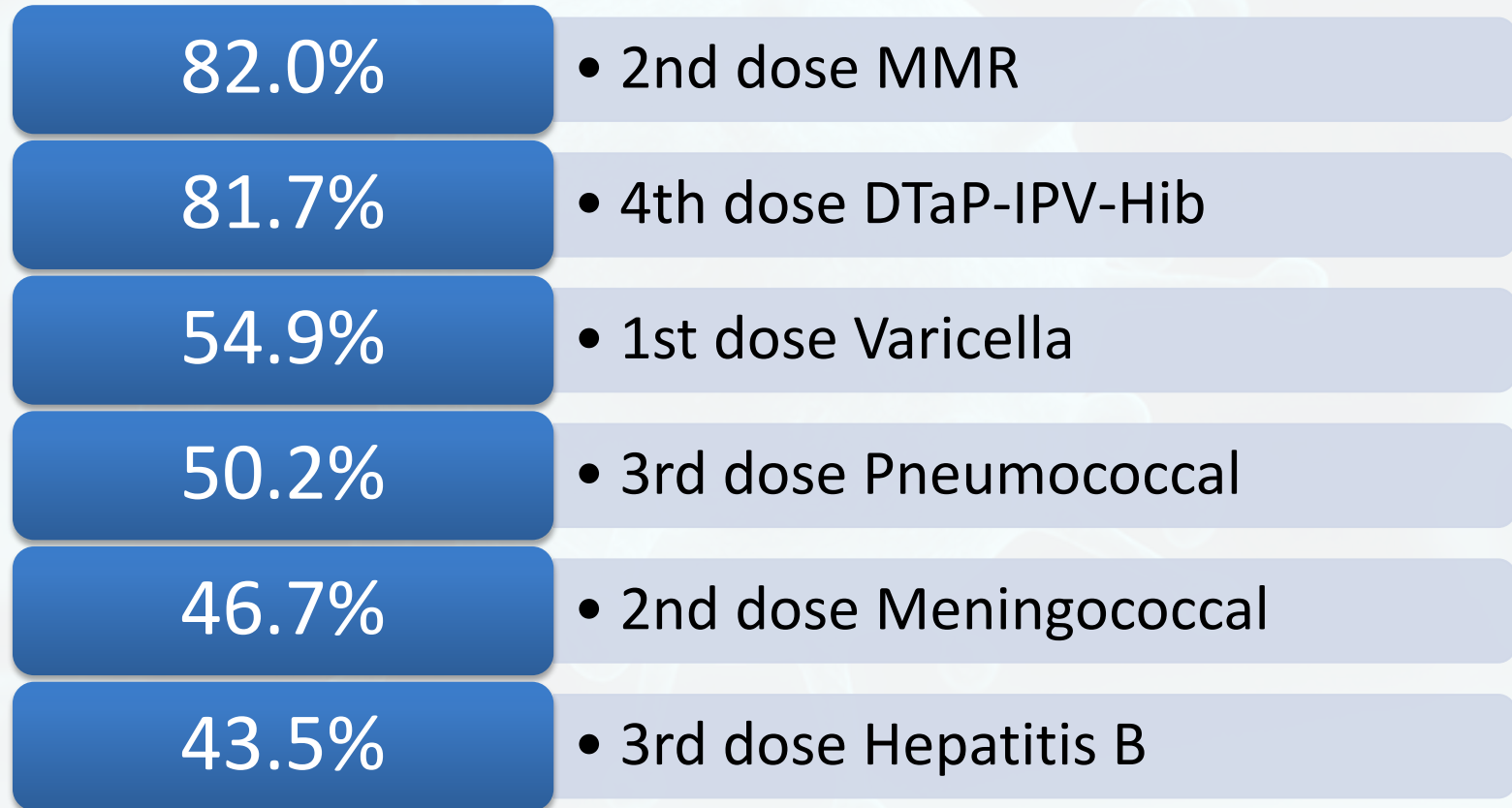
OVERALL VACCINE RECEIPT

Percentage of children receiving selected antigens, FHA, 2008-2010*



*for second dose of MMR, only 2008-2009 used.

If a child is incomplete – what are they most likely to be missing?

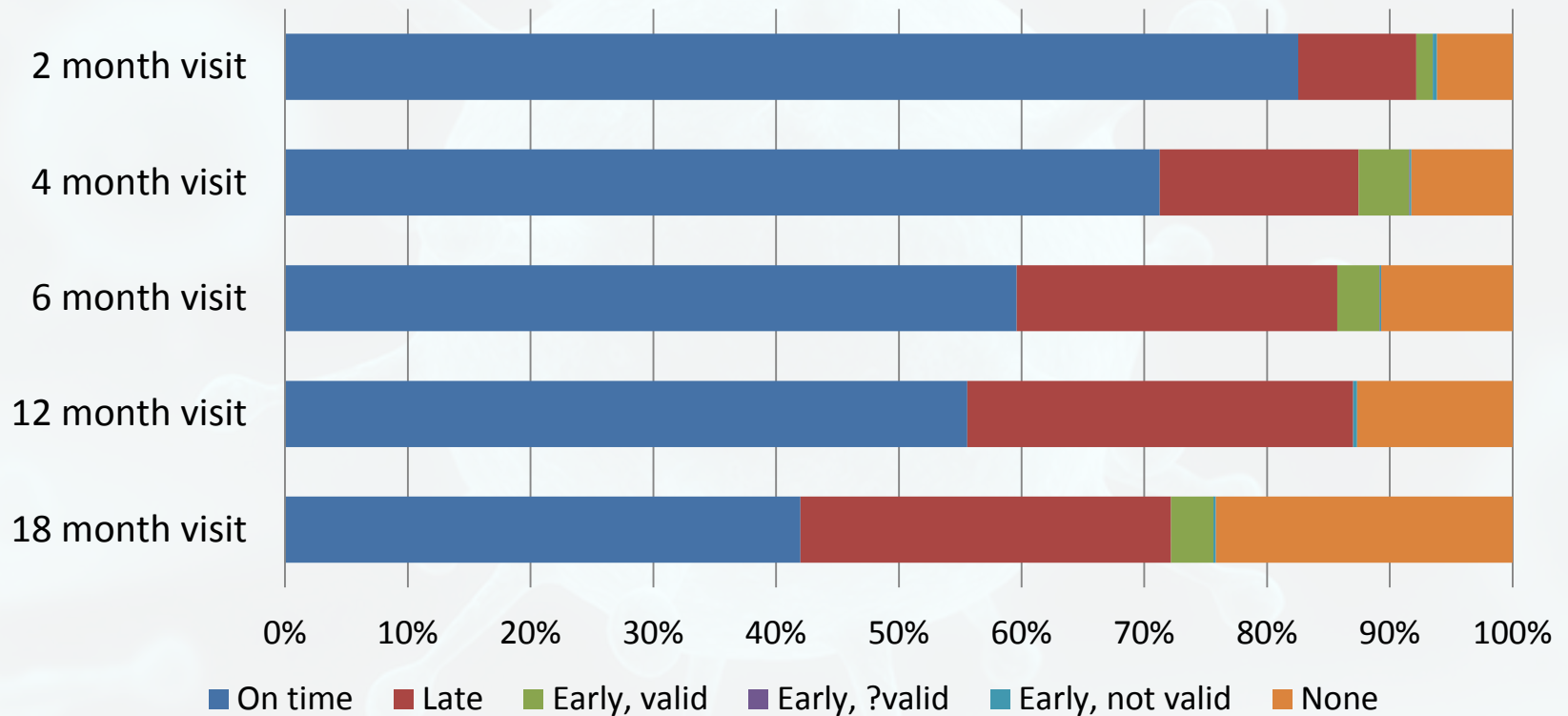




VACCINE TIMELINESS



Timeliness at immunization visits before 2 years of age using sentinel antigens, FH 2008-2010



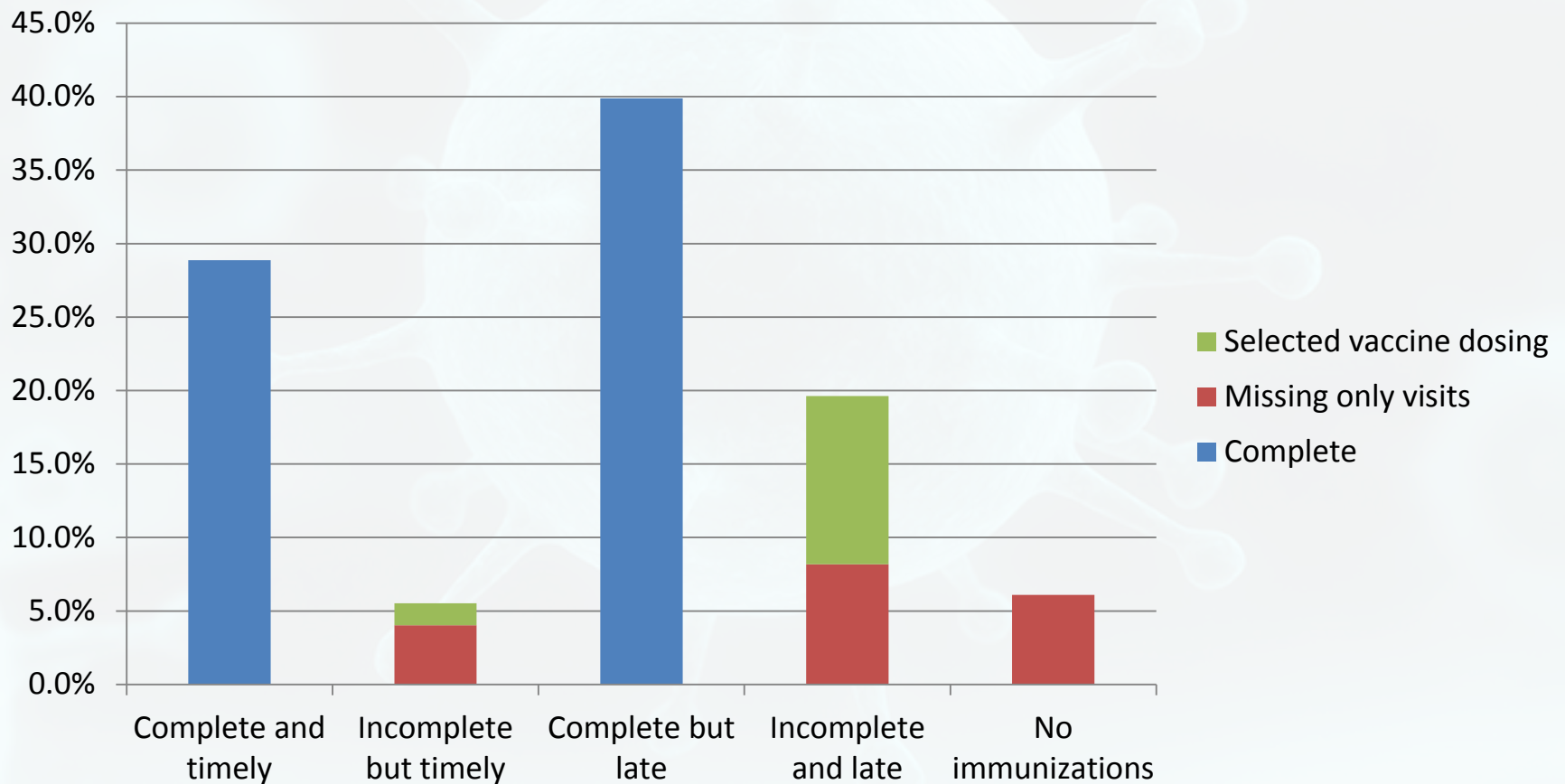
*Diphtheria used for all visits except 12 month (mumps)



Selective dosing and refusals

Completion and timeliness subanalyses

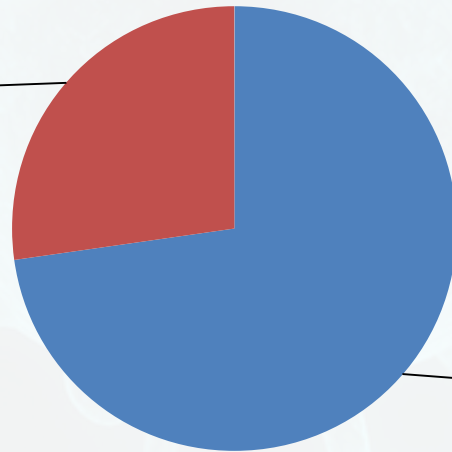
Proportion of FHA children complete and/or on-time for under 2 immunizations, 2008-2010



Refusal data

- 2010 only

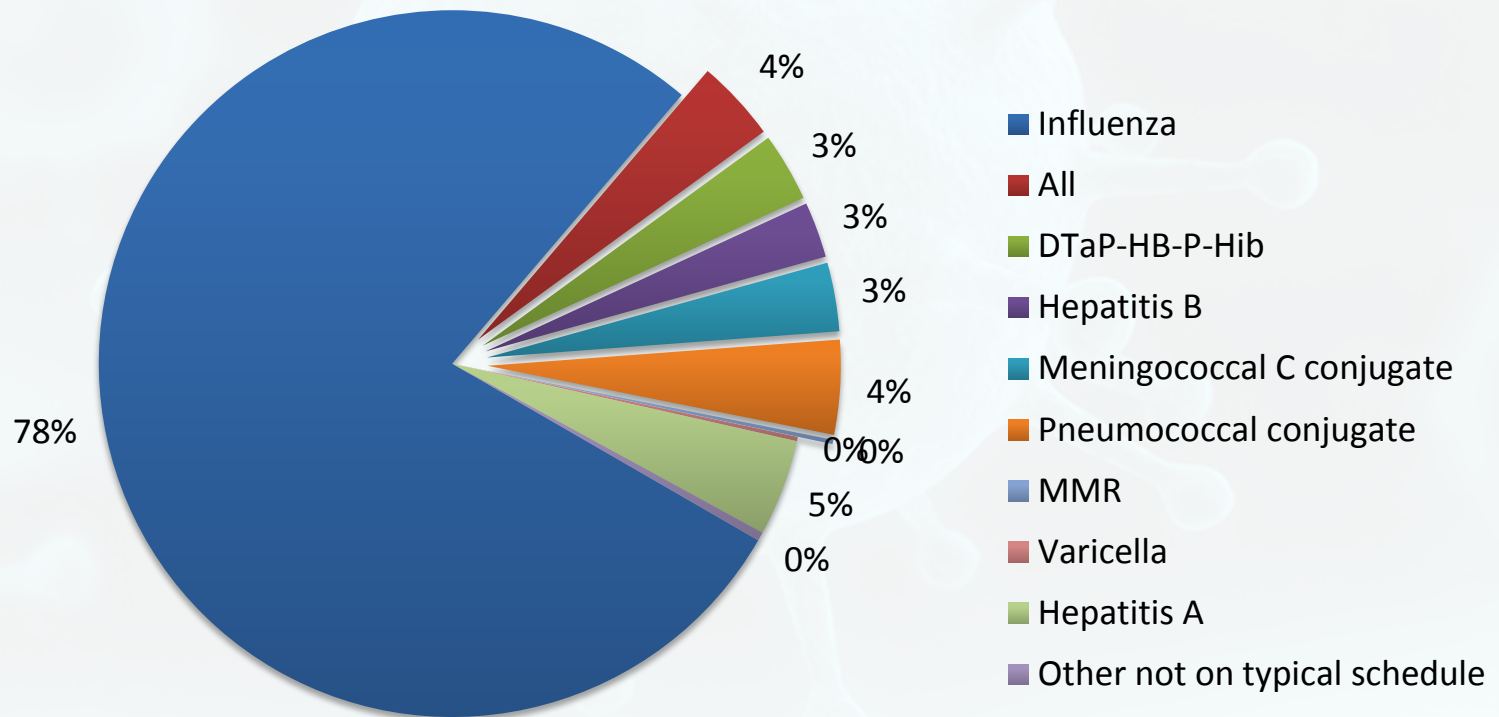
27% - at
least one
refusal on
file

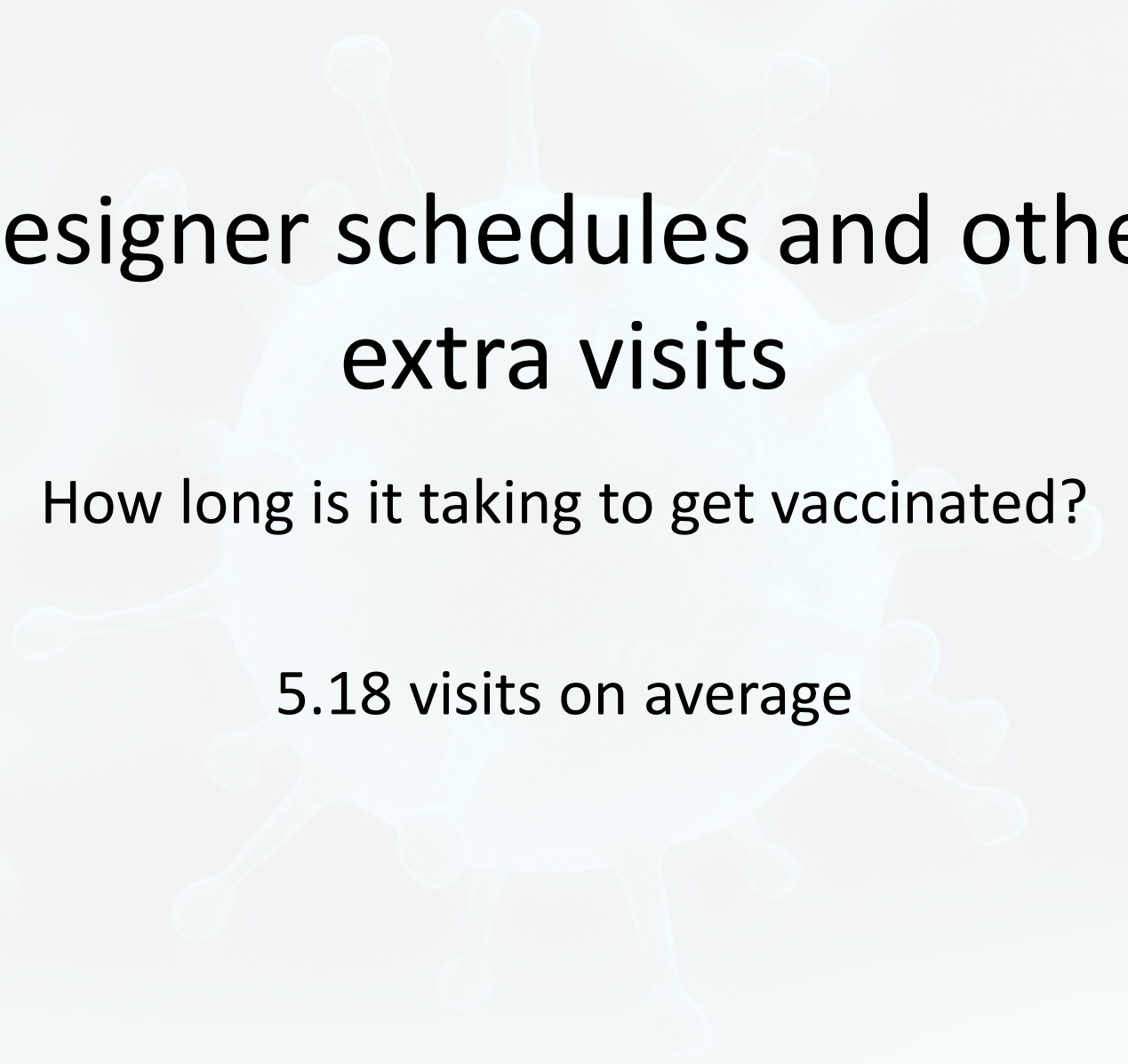


73% - no
refusals on
file

Which antigens are refused?

Refusals by antigen, 2012 (excluding Rotavirus vaccines)





Designer schedules and other extra visits

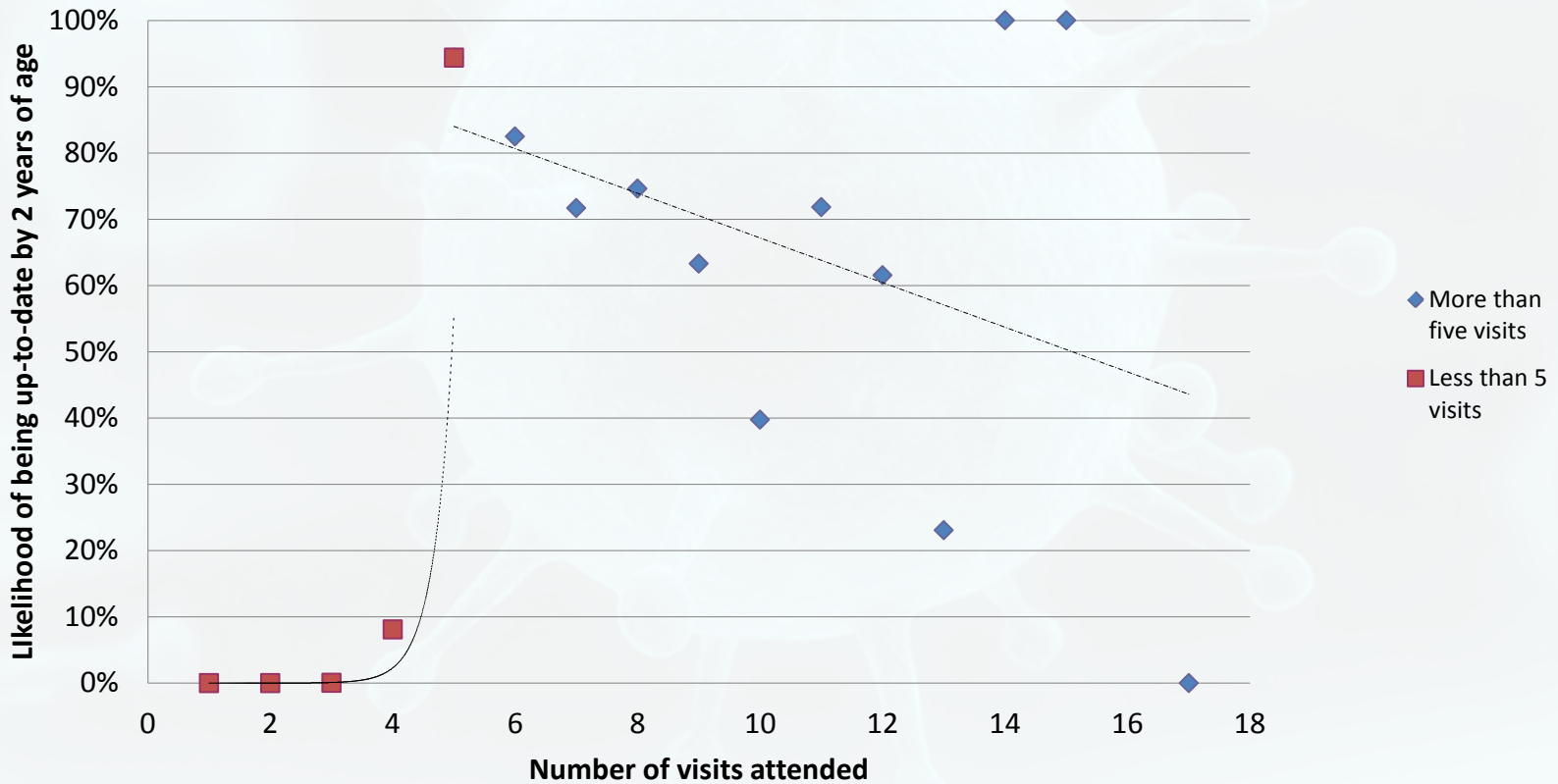
How long is it taking to get vaccinated?

5.18 visits on average

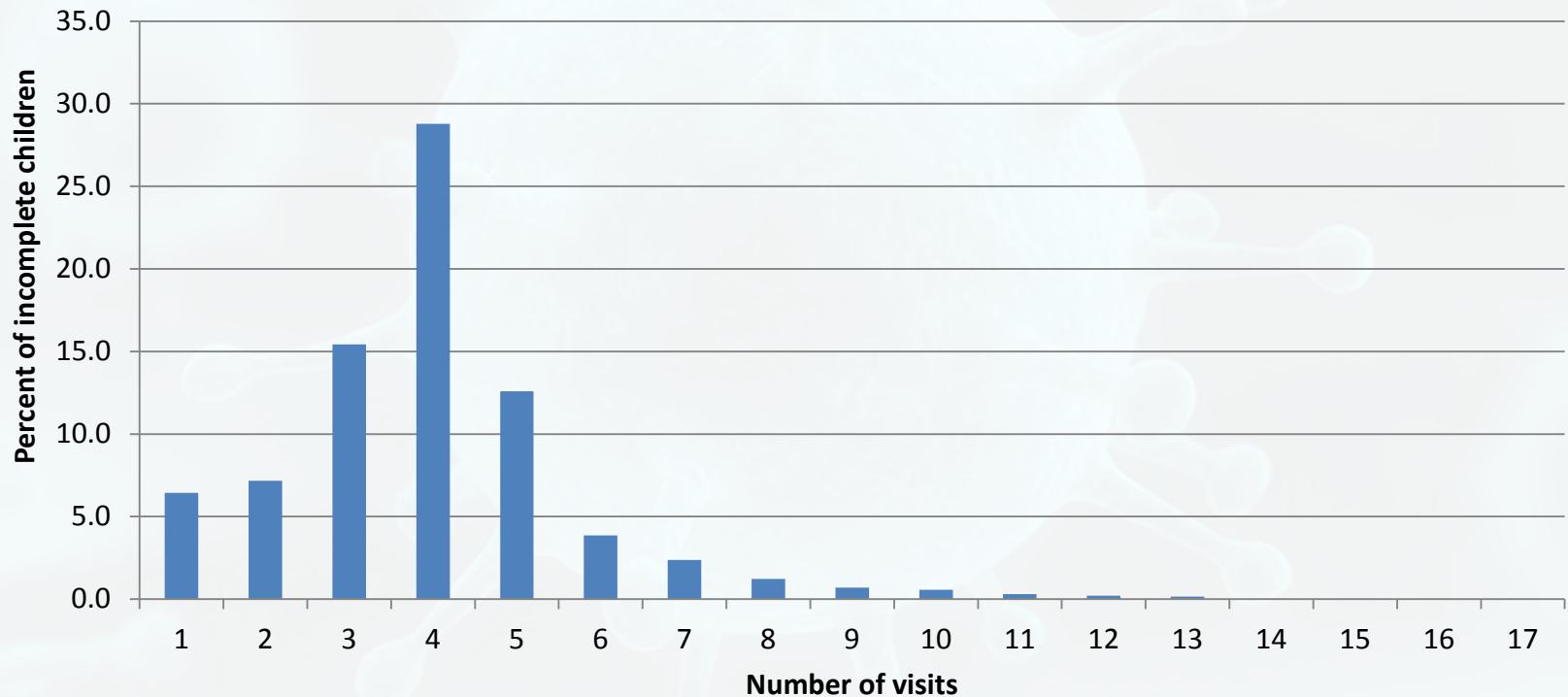
How many visits have children used?

- 68.7% had exactly 5 visits
- 18.5% had 4 or fewer
- 12.8% had 6 or greater
 - 32.5% in total had an indication for an extra visit

Diminishing returns with extra visits: proportion of incomplete children with each number of visits vs likelihood of being up-to-date by 2 years of age by number of visits completed



Proportion of incomplete children by numbers of visits



Conclusions, part 1

- Most children who are not up-to-date have had a number of vaccines.
- Trends in poorer timeliness and completion are broad
- Vaccine-specific hesitancy common but not the biggest barrier to schedule completion
- Refusal issues higher around newer vaccines and influenza, not necessarily vaccines that have faced a lot of unfounded critique (e.g. MMR)

Conclusions, part 2

- Extended schedules don't support eventual completeness
- Questions regarding
 - Parental prioritization
 - Perceived value
 - Service accessibility
- Parents need a reason to come in for 12 and especially 18 month visits

Acknowledgements



- Michelle Murti
- Stephanie Konrad
- Fraser Health Communicable Disease Nurse Coordinators

Strengths and limitations

- Represents both public health and physician delivered immunizations
- Data quality
 - questions about denominator
 - reporting from physicians
- Refusal indicator problematic
- Missing helpful fields