

Improving HPV Immunization Coverage in Vancouver Coastal

Strategies Tried, and True

Dr. M Dawar

On behalf of

VCH Regional Immunization Committee

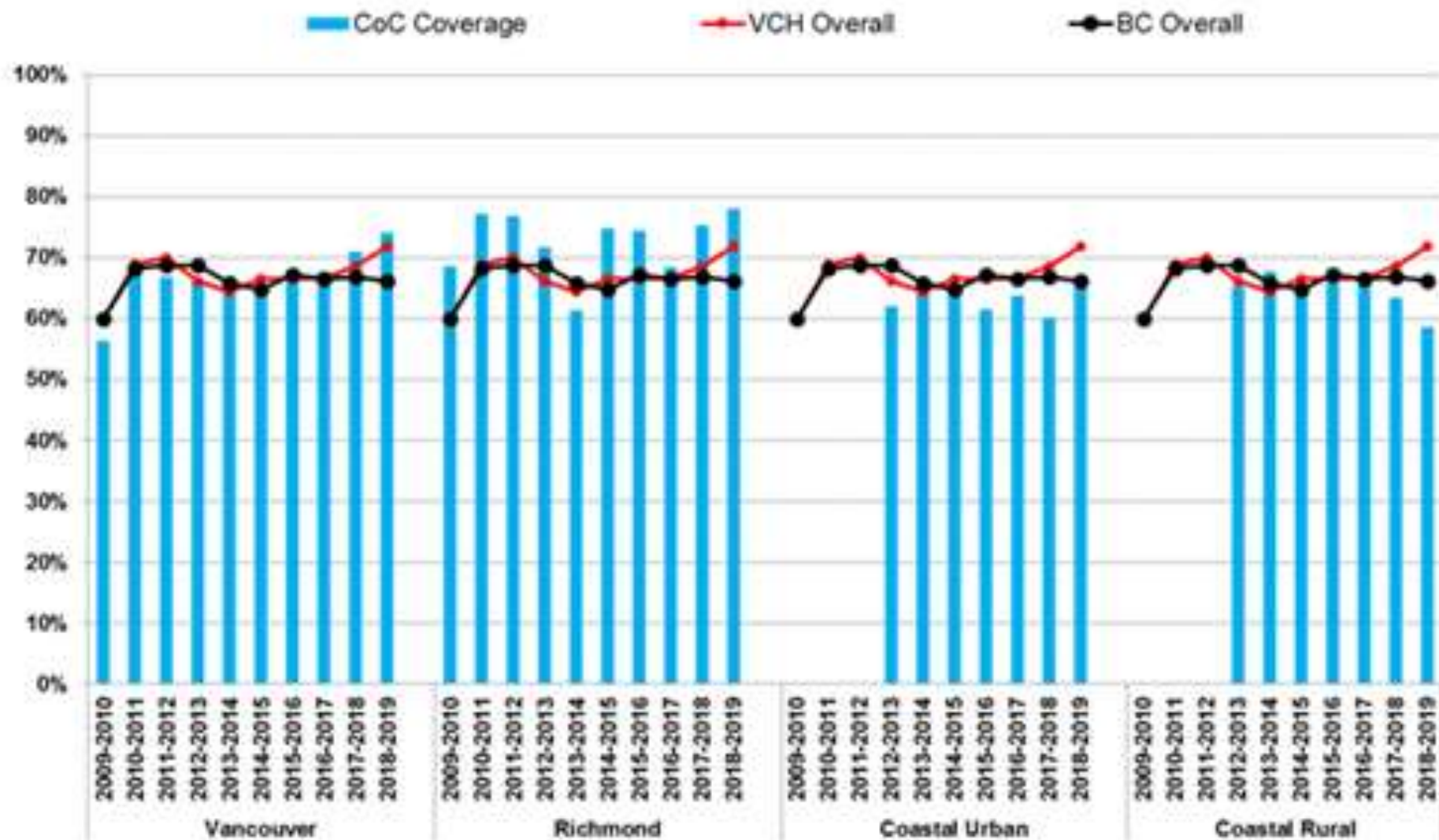
Factors influencing HPV coverage

- Grade 6: Baseline acceptance* / vaccine hesitancy
- Actively consent and reoffer in school
 - Grade 9 catchup*
 - # of doses*
 - # of Grade 9 clinics*
 - Close off series in grade 10
- Pilots
 - Grade 12 catchup
 - In class education
- Next steps

HPV vaccine schedule has simplified over time

Year	Details
2008	<i>Three dose</i> schedule: 0, 2 and 6 months
2010	<i>Extended dose</i> schedule: 0, 6 months in grade 6, third dose in grade 11 Third dose later changed to grade 9, implemented for one year in 2013
2014	<i>Two dose</i> schedule for ages 9-14 years of age: 0, 6 months
2017	Universal program: grade 6 boys included (birth cohort 2006)

HPV Vaccine Coverage among Grade 6 Female Students by CoCs Vancouver Coastal Health, 2009/2010 - 2018/2019 Academic Year

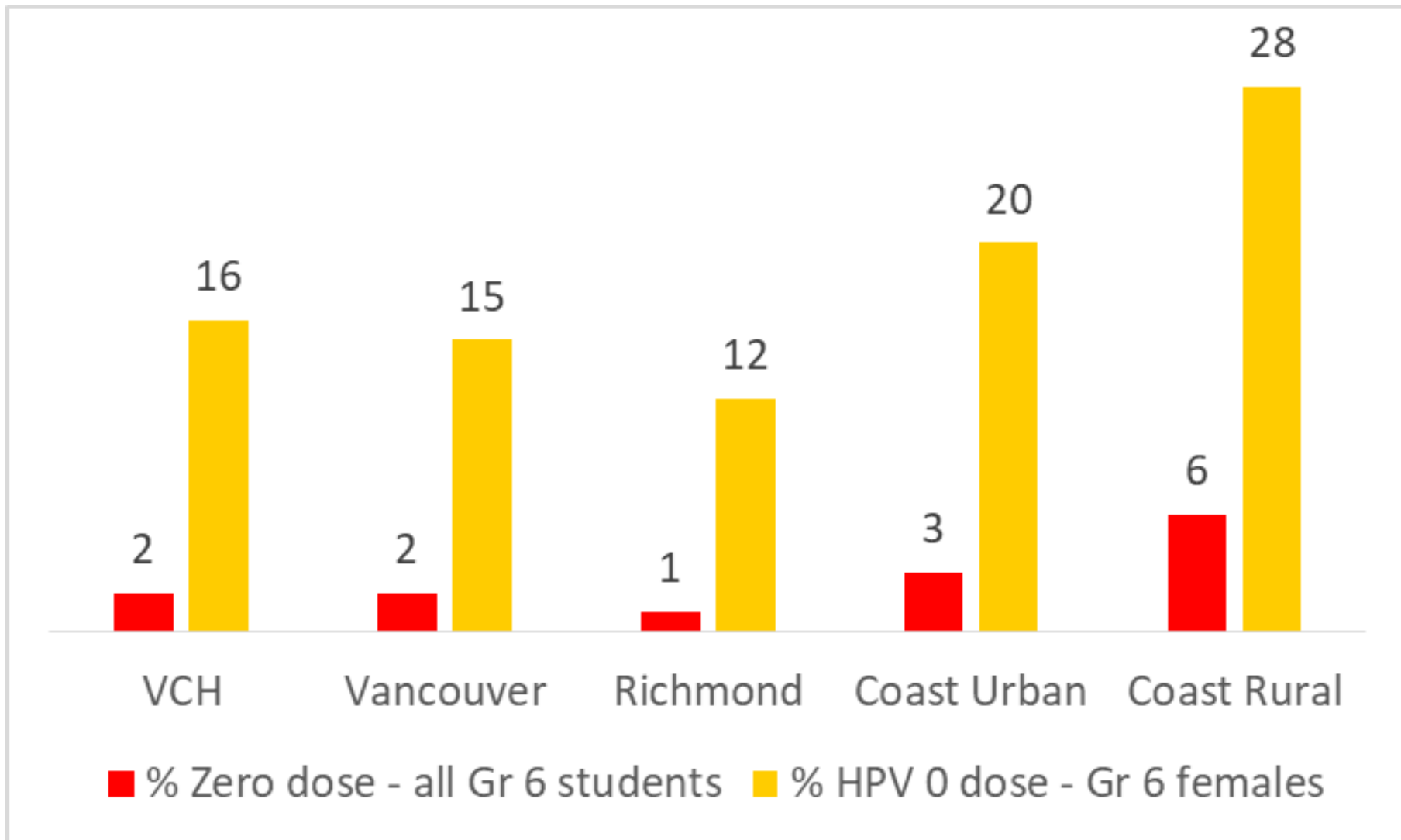


Data source: VCH Primary Access Regional Information System

Prepared by: Public Health Surveillance Unit, Vancouver Coastal Health, February 2020

Vaccine refusal versus hesitancy

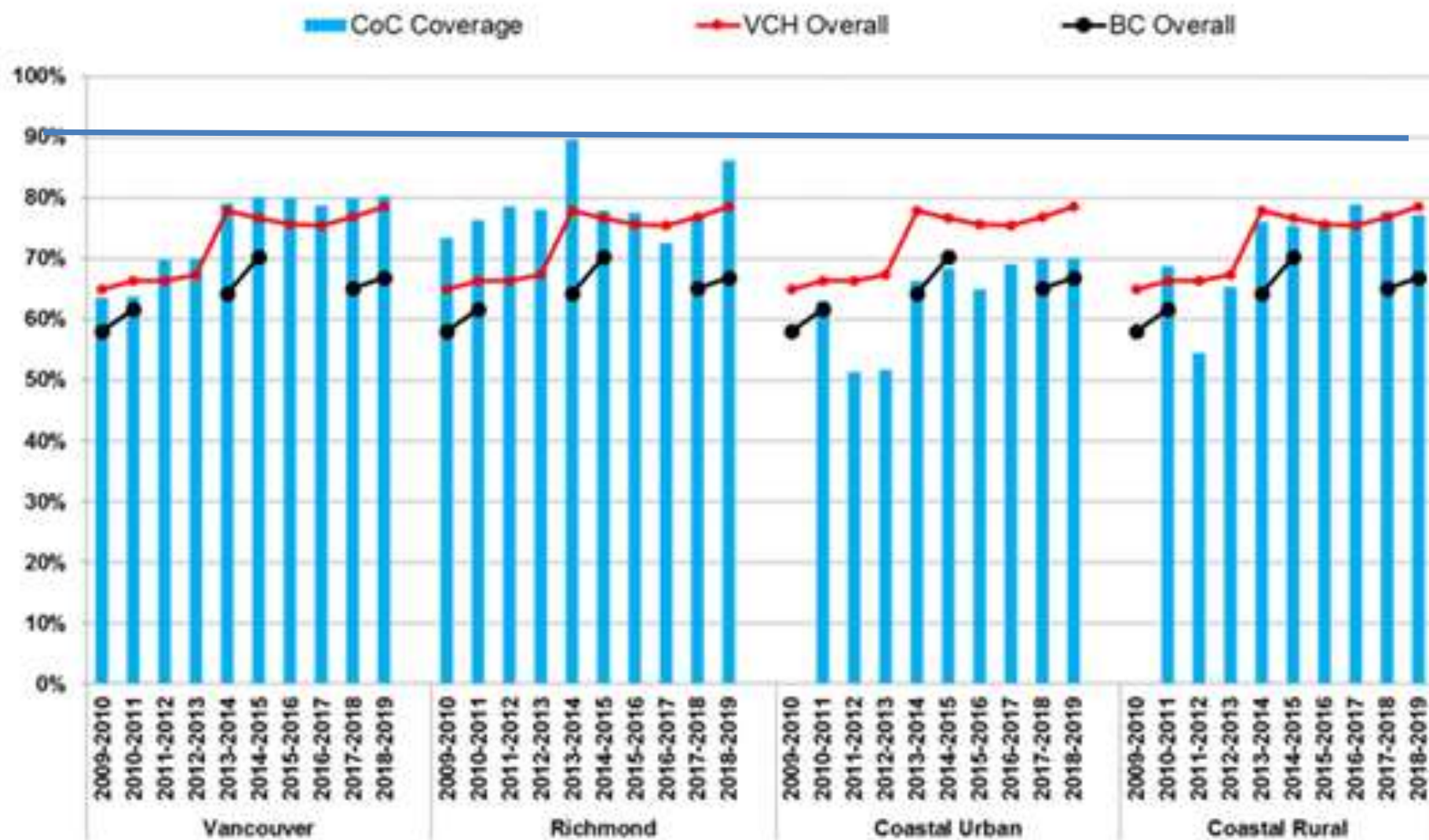
(rates 2018-2019 school year)



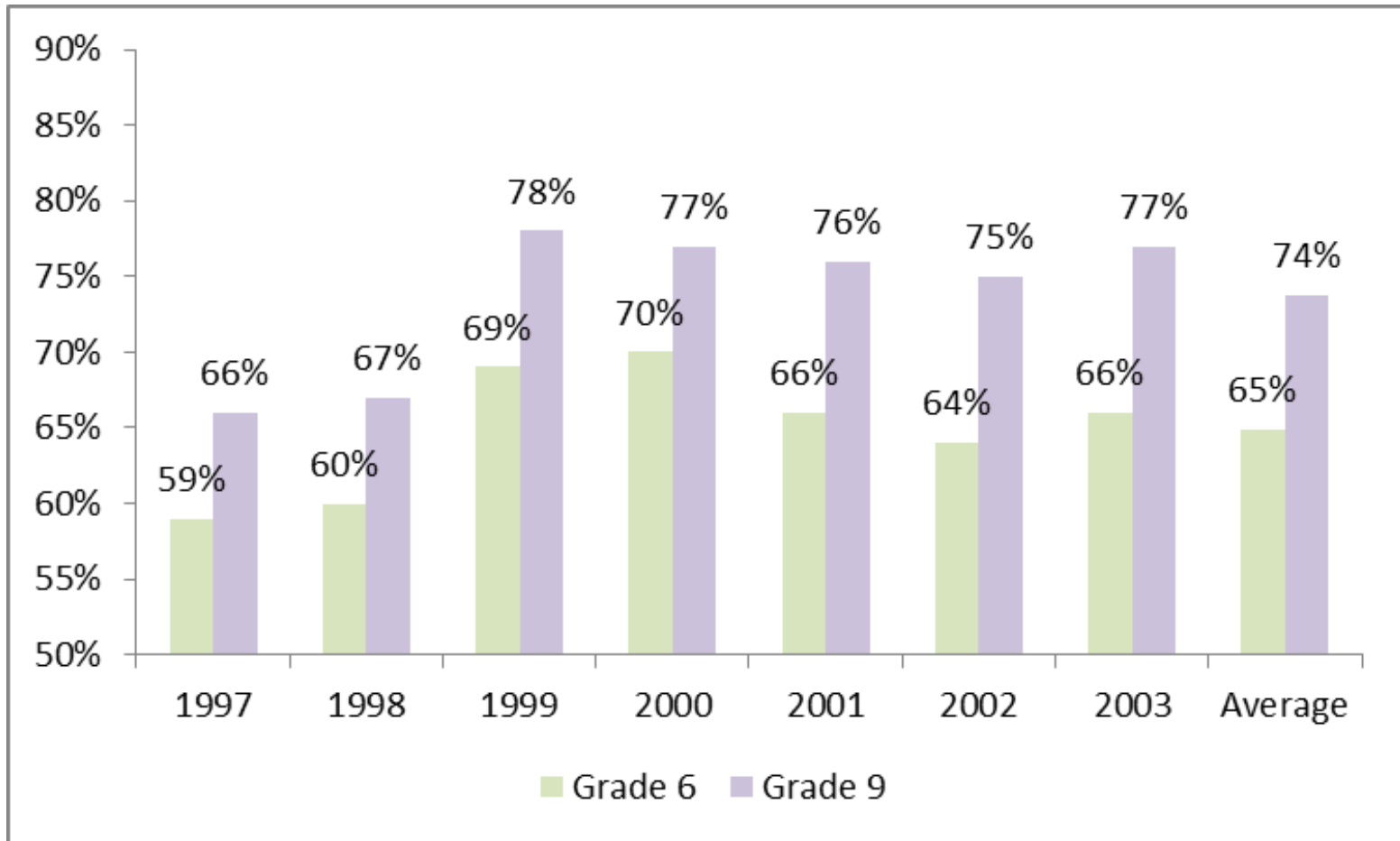
Improving HPV coverage strategy #1:

REOFFER IN GRADE 9

HPV Vaccine Coverage among Grade 9 Female Students by CoCs Vancouver Coastal Health, 2009/2010 - 2018/2019 Academic Year



VCH: HPV coverage increases for birth cohorts as girls progress from grades 6 to 9



Grade 9 one-dose coverage varies by number of in-school immunization clinics

- 2016-2017

Region (CoC)	# of in-school immunization clinics	0 Dose	1 Dose	Up-to-date
VCH Overall	-	14%	10%	76%
Ÿ Vancouver	2	13%	7%	80%
Ÿ Richmond	1	8%	19%	73%
Ÿ Coastal Urban	1	18%	12%	70%
Ÿ Coastal Rural	2	16%	5%	79%

- 2017-2018

HSDA	Zero Dose %	One Dose %	Up-to-date %
TOTAL (VCH)	12	10	78
Vancouver	12	8	80
Richmond	8	13	79
Coastal Urban	15	14	71
Coastal Rural	18	4	78

Improving HPV coverage strategy #2

REPORT GRADE 10 COVERAGE?

**(AS WE CLOSE SERIES FOR THOSE PREVIOUSLY
CONSENTED IN GRADE 9)**

HPV Immunization Coverage Change from Grade 9 (2016/17) to Grade 10 (2017/18)

			Grade 9 (2016/17)	Grade 10 (2017/18)	Coverage Change
		Coverage			
Vancouver	PUBLIC SCHOOL	0 dose	13.1	13.9	0.8
		1 dose	7.5	4.8	-2.7
		2 doses	79.4	→ 81.3	1.9

Closing off series in grade 10 is important

- Protects individuals

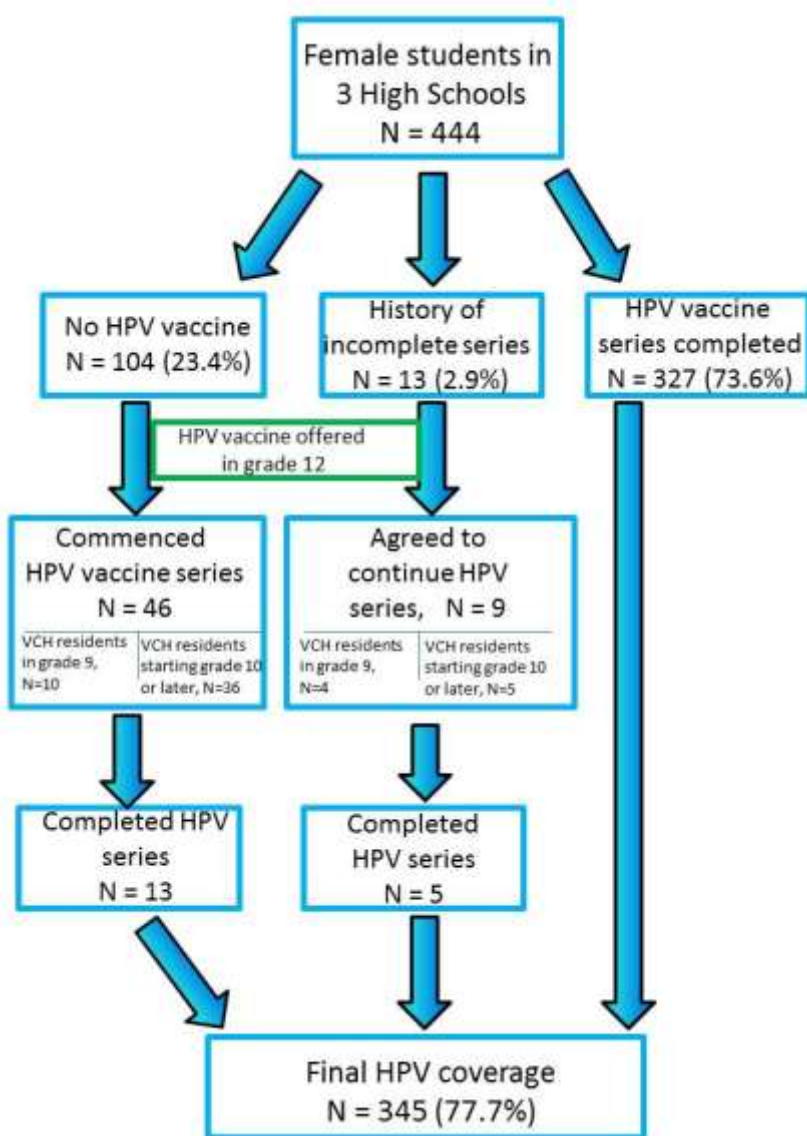
However, it does not measurably improve coverage

- New students enrolled into the grade 10 cohort
- Expansion of denominator, but no consent based campaign to catch them up.

Improving HPV coverage strategy #3

REOFFER IN GRADE 12?

Outcome of Pilot Grade 12 HPV vaccination campaign (2016-17)



Reached another 12% of the grade cohort

Coverage increased from 74% to 78%, could be as high as 86% (if all consented students immunized)

*Three out of four interested students were new enrolments since grade 9

Grade 12 campaign requires more resources:

- an influx of new students
 - three dose series
 - finding students for clinics is difficult
- New resources required

Improving HPV coverage strategy #4

IN CLASS EDUCATION PILOT: 2015-16

K O'Connor and A Redding, 2016

Curriculum: Two, in-class sessions + I Boost Immunity website information for grades 5/6

Pilot school: Squamish Elementary

- Pre-pilot grade 6 HPV coverage (2015): 77% (95% CI, 65%-89%)
- Post-pilot grade 6 HPV coverage (2016): 89% (95% CI, 80%-98%)

Education is always an important strategy to consider
Needs further evaluation, particularly with the new KBI curriculum

Time intensive

May be strategically employed in schools with low coverage

Data to support local action



VCH School-Age Immunization Coverage Dashboard



Each school year, VCH public health nurses collect immunization histories from schools, parents and primary care providers in order to provide history-based immunizations for kindergarten, grade 6 and grade 9 students. At the end of the school year, immunization records are summarized to determine coverage levels by antigen, school, grade and health service areas. Immunization coverage data for the years 2013-2018 have been used to populate the dashboard.

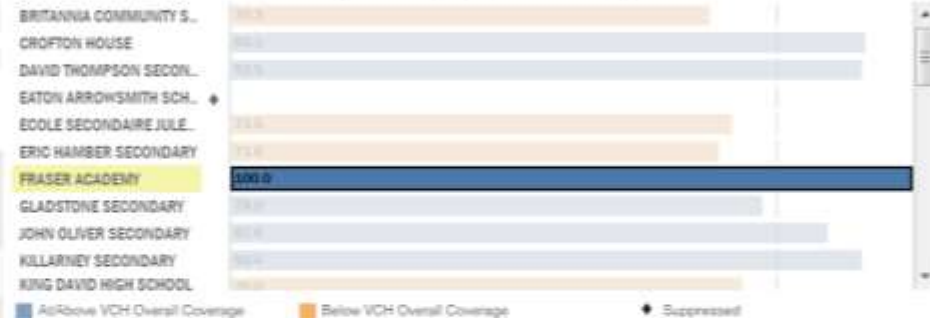
Please note: Kindergarten Measles and Mumps vaccines were measured at two doses while Kindergarten Rubella was measured at one or more doses. For more information about the vaccine coverage definitions, please refer to the table here: <http://www.vch.ca/Documents/Immunization-Coverage-Table-Definition-2018-2019.pdf>

School Year: 2017/18
 Vaccine T.: Grade 9 - Human Papillomavirus (HPV) - female
 Region: VANCOUVER

Grade 9 - Human Papillomavirus (HPV) - female Coverage was 76.8% in VCH in 2017/18 (among 4,800 eligible students)



2017/18 Grade 9 - Human Papillomavirus (HPV) - female Coverage in VANCOUVER - All



Click on schools from either map or barchart to display the school immunization profile
FRASER ACADEMY

Grade	Vaccine	2013/14	2014/15	2015/16	2016/17	2017/18
Grade 6	Hepatitis B	69.2%	89.5%	95.5%	88.9%	85.0%
	Human Papillomavirus (HPV) - female	•	71.4%	37.5%	33.3%	28.6%
	Human Papillomavirus (HPV) - male	NA	NA	NA	NA	61.5%
	Meningococcal	76.9%	89.5%	77.3%	NA	NA
	Varicella (chickenpox) - two doses	53.9%	78.9%	72.7%	66.7%	80.0%
Grade 9	Zero Vaccine	•	•	•	•	•
	Human Papillomavirus (HPV) - female	70.6%	57.1%	78.6%	50.0%	100.0%
	Meningococcal	NA	NA	NA	60.0%	80.0%
	Tetanus / Diphtheria / Pertussis	63.3%	76.3%	71.1%	60.0%	80.0%
	Zero Vaccine	•	•	•	•	0.0%

Data Source: 1. School-age Immunization Records, Primary Access Regional Information System, Vancouver Coastal Health. 2. Translato.

Next steps

- Evaluation of current *passive* in school-catch up campaign to identify increase in HPV rates for students in non target grades.
- Evaluate the pilot Grade 7 *active* (consent based, in school) HPV campaign.

Our vision: Strengthen the Grade 9 campaign

Increase opportunities to close series for 10% of grade 9 graduates who received one dose:

1. Start grade 9 clinics Sep to Dec
 1. Students need only two doses of vaccine
 2. Greater opportunity to fit in two clinics in the school year
 3. (Challenge: Need to schedule high school clinics around two grade 6 clinics per year)
2. Active follow up of one dose recipients near the end of school year
3. Promote vaccine in low coverage schools/areas using Kids Boost Immunity

With thanks

- A superb group of program administrative staff, immunizers, and nurse leaders who endeavour to reach every eligible student at every encounter.
- An amazing surveillance team without whom we would be shooting in the dark.