eTable 1. Characteristics of children included in the study, i.e., all births in Ontario occurring Jan 1st, 1993 – Dec 31st, 2016; stratified according to occurrence of severe RSV-related illness (hospital admission or death)

Characteristic	**No RSV Event** N=2,938,036	**RSV Event** N=77,323
BIRTH CHARACTERISTICS		
Birth Year (%)		
1993-1996	16.21	20.00
1997-2000	15.61	19.40
2001-2004	16.35	17.42
2005-2008	17.45	14.74
2009-2012	17.23	14.35
2013-2016	17.15	14.09
High Risk birth Month, Nov-Jan (%)	23.22	33.23
Female Sex (%)	48.92	39.68
Multiple Birth (%)	2.92	4.85
Estimated Weeks Gestation Age (wGA) (%)		
<28 wGA (extremely preterm)	0.41	1.56
28-32 wGA (very preterm)	0.58	2.17
33-36 wGA (preterm)	5.34	9.86
37+ wGA (term)	92.38	84.36
Missing	1.29	2.06
Weight group (%)		
<1500 g	0.93	3.42
1500 - 1999 g	1.16	2.75
2000 - 2499 g	3.84	6.15
2500 - 2999 g	15.47	17.22
3000 - 3499 g	36.32	33.18
3500 - 3999g	30.26	26.38
4000 - 4499 g	10.08	9.03
4500g +	1.94	1.87
Mean weight, grams (SD)	3,375.18 (582.93)	3,233.18 (723.21)
CLINICAL CHARACTERISTICS		
Congenital diseases [c] (%)		
Congenital Heart Disease (CHD)	0.72	4.62
Any major congenital anomaly	2.58	9.01
RSV High-Risk Criteria [c] (%)		
Any clear eligibility criteria met[a]	1.05	4.63
1: Extreme or very preterm (≤32 wGA) and ≤6 months	0.80	3.11
2. <24 months with CLD/BPD	0.11	1.24
3. <24 months with hs-CHD	0.19	1.20
4. ≤6 months, preterm (33-26 wGA) and geographically isolated	0.03	0.07

Other, possibly eligible criteria [c] (%)		
1: Other CHD	0.53	3.42
2. Other serious congenital airway anomalies	0.06	0.60
3. Trisomy 21	0.01	0.17
4. ≤6 months and preterm (33-26 wGA)	4.30	8.57
SOCIO-DEMOGRAPHIC CHARACTERISTICS [b]		
Mother's immigration status (%)		
Canadian-born/ long-term resident	77.66	83.50
Non-refugee immigrant, long-term resident (5+ years)	11.81	9.43
Non-refugee immigrant, short-term resident (<5 years)	10.39	6.96
Refugee	0.13	0.11
Maternal Age (%)		
<18 years	2.26	4.20
19-24	14.93	20.78
25-29	29.07	29.25
30-34	34.18	30.18
35-39	16.36	13.26
40+	3.21	2.32
Mean maternal age (SD)	29.79 (5.45)	28.61 (5.73)
Neighborhood Income Quintile (%)		
1 (lowest 20% of neighborhood income)	22.08	26.00
2	20.04	20.58
3	20.05	19.45
4	20.50	18.62
5 (highest 20% of neighborhood income)	16.47	14.15
Missing	0.87	1.19
Rurality of residence (%)		
Urban	88.86	87.00
Rural	10.73	12.64
Missing	0.41	0.35
Geographically isolated residence (%)	0.81	0.94

Note: Statistically significant difference between children with and without severe RSV-related illness was noted across all included characteristics; p<0.0001 for all characteristics, except geographic isolation (p=0.0001).
[a] Except for criteria #1 and #4, criteria are not mutually exclusive. [b] Determined at the time of birth. [c] Clinical conditions diagnosed before second birthday.
wGA: weeks gestational age; BPD: Bronchopulmonary Dysplasia; CLD: Chronic lung Disease; hs-CHD: hemodynamically significant congenital heart disease; SD: standard deviation

eTable 2. Age-specific trend and level changes* following the introduction of two palivizumab funding programs in Ontario, Canada (as shown in Figure 2, eFigure 1, and eFigure 2)

Model Parameter	Estimate	95% CI	p-value
Severe RSV event occurring before 6 months of age			
Baseline reference values (among ineligible infants)			
Intercept	-3.43	(-3.48, -3.39)	<.0001
Pre-SAP time trend	1.00%	(-0.43, 2.44)	0.1710
SAP Level Change	-7.93%	(-14.65, -1.21)	0.0207
SAP Trend Change	-0.68%	(-3.22, 1.86)	0.6010
HRP Level Change	-17.21%	(-22.07, -12.34)	<.0001
HRP Trend Change	-2.09%	(-4.21, 0.03)	0.0536
Changes among possibly eligible infants, compared to ineligible infants			
Pre-SAP level	1.04	(0.90, 1.18)	<.0001
Pre-SAP time trend	0.01%	(-4.13, 4.15)	0.9963
SAP Level Change	9.56%	(-9.24, 28.37)	0.3188
SAP Trend Change	-5.78%	(-12.93, 1.38)	0.1134
HRP Level Change	23.48%	(9.84, 37.12)	0.0007
HRP Trend Change	4.62%	(-1.30, 10.54)	0.1261
Changes among eligible infants, compared to ineligible infants			
Pre-SAP level	1.97	(1.79, 2.15)	<.0001
Pre-SAP time trend	-7.03%	(-12.61, -1.44)	0.0137
SAP Level Change	-10.41%	(-39.42, 18.59)	0.4816
SAP Trend Change	3.09%	(-7.90, 14.09)	0.5816
HRP Level Change	10.55%	(-13.17, 34.28)	0.3833
HRP Trend Change	3.47%	(-6.18, 13.13)	0.4808
Severe RSV event occurring 6-11 months of age			
Baseline reference values (among ineligible children)			
Intercept	-3.95	(-4.06, -3.85)	<.0001
Pre-SAP time trend	-5.26%	(-8.11, -2.40)	0.0003
SAP Level Change	13.55%	(3.80, 23.29)	0.0064
SAP Trend Change	0.01%	(-4.13, 4.16)	0.9952
HRP Level Change	-25.42%	(-32.82, -18.01)	<.0001
HRP Trend Change	2.75%	(-0.31, 5.81)	0.0779
Changes among possibly eligible infants, compared to ineligible children			
Pre-SAP level	0.99	(0.61, 1.36)	<.0001
Pre-SAP time trend	8.68%	(-1.47, 18.84)	0.0938
SAP Level Change	-21.10%	(-55.68, 13.49)	0.2318
SAP Trend Change	-10.05%	(-24.77, 4.67)	0.1807
HRP Level Change	24.76%	(-0.56, 50.08)	0.0552
HRP Trend Change	1.45%	(-9.37, 12.27)	0.7928
Changes among eligible infants, compared to ineligible children			
Pre-SAP level	1.86	(1.45, 2.28)	<.0001

Pre-SAP time trend	8.40%	(-2.84, 19.64)	0.1429
SAP Level Change	-23.10%	(-64.77, 18.57)	0.2772
SAP Trend Change	-15.22%	(-33.02, 2.58)	0.0937
HRP Level Change	39.91%	(5.69, 74.12)	0.0223
HRP Trend Change	6.46%	(-7.58, 20.50)	0.3673
Severe RSV event occurring 12-23 months of age			
Baseline reference values (among ineligible children)			
Intercept	-4.89	(-5.02, -4.75)	<.0001
Pre-SAP time trend	-12.34%	(-16.10, -8.58)	<.0001
SAP Level Change	33.71%	(21.74, 45.67)	<.0001
SAP Trend Change	8.77%	(3.60, 13.95)	0.0009
HRP Level Change	-12.96%	(-21.15, -4.77)	0.0019
HRP Trend Change	4.31%	(0.72, 7.89)	0.0186
Changes among possibly eligible infants, compared to ineligible children			
Pre-SAP level	1.2945	(0.39, 2.20)	0.0052
Pre-SAP time trend	8.31%	(-16.02, 32.65)	0.5032
SAP Level Change	-57.57%	(-134.30, 19.16)	0.1414
SAP Trend Change	9.81%	(-22.78, 42.41)	0.5551
HRP Level Change	4.74%	(-39.25, 48.73)	0.8327
HRP Trend Change	-18.72%	(-40.55, 3.10)	0.0927
Changes among eligible infants, compared to ineligible children			
Pre-SAP level	2.0716	(1.32, 2.82)	<.0001
Pre-SAP time trend	7.45%	(-12.77, 27.66)	0.4703
SAP Level Change	-45.96%	(-116.39, 24.47)	0.2009
SAP Trend Change	-10.30%	(-40.75, 20.14)	0.5071
HRP Level Change	27.09%	(-25.04, 79.23)	0.3084
HRP Trend Change	3.20%	(-19.76, 26.16)	0.7846

** Referent group: Ineligible infants.*

SAP: National Special Access Program (Introduced 1998); HRP: Provincial High-Risk Program (Introduced 2002)

eTable 3. Age-specific trend changes [a] among high- versus low-income infants following the introduction of two palivizumab funding programs in Ontario, Canada (N= 2,384,776); stratified by palivizumab eligibility group (as shown in Figure 3, eFigure 3, and eFigure 4)

Model Parameter	Beta estimate	95% CI	p-value
Severe RSV event occurring before 6 months of age			
Eligible			
Baseline trend, high-income	-0.03%	(-0.04, -0.02)	<.0001
Low- vs high-income level difference	36.71%	(17.25, 56.17)	0.0002
Low- vs high-income trend difference	-1.78%	(-3.50, -0.06)	0.0423
Possibly Eligible			
Baseline trend, high-income	-2.77%	(-3.52, -2.02)	<.0001
Low- vs high-income level difference	21.61%	(9.24, 33.98)	0.0006
Low- vs high-income trend difference	0.16%	(-0.80, 1.11)	0.7500
Ineligible			
Baseline trend, high-income	-2.19%	(-2.46, -1.92)	<.0001
Low- vs high-income level difference	24.70%	(20.11, 29.30)	<.0001
Low- vs high-income trend difference	-0.60%	(-0.95, -0.24)	0.0009
Severe RSV event occurring 6-11 months of age*			
Eligible			
Baseline trend, high-income	-4.24%	(-6.31, -2.17)	<.0001
Low- vs high-income level difference	18.77%	(-11.82, 49.37)	0.2292
Low- vs high-income trend difference	0.60%	(-1.99, 3.19)	0.6476
Possibly Eligible			
Baseline trend, high-income	-3.48%	(-4.93, -2.03)	<.0001
Low- vs high-income level difference	15.60%	(-9.05, 40.26)	0.2148
Low- vs high-income trend difference	-0.47%	(-2.36, 1.42)	0.6260
Ineligible			
Baseline trend, high-income	-4.35%	(-4.81, -3.89)	<.0001
Low- vs high-income level difference	25.34%	(17.89, 32.78)	<.0001
Low- vs high-income trend difference	-0.18%	(-0.41, 0.77)	0.5530
Severe RSV event occurring 12-23 months of age*			
Eligible			
Baseline trend, high-income	0.86	(-1.93, 3.65)	0.5445
Low- vs high-income level difference	44.62	(-6.62, 95.86)	0.0879
Low- vs high-income trend difference	-1.52	(-5.07, 2.02)	0.3393
Possibly Eligible			
Baseline trend, high-income	-0.61	(-2.88, 1.66)	0.5992
Low- vs high-income level difference	-53.78	(-102.64, 4.91)	0.0310
Low- vs high-income trend difference	2.61	(-0.55, 5.78)	0.1052
Ineligible			
Baseline trend, high-income	-0.05	(-0.49, 0.39)	0.8367
Low- vs high-income level difference	21.52	(12.96, 30.08)	<.0001
Low- vs high-income trend difference	-0.48	(-1.06, 0.10)	0.1049

[a] Referent group: High-income infants, based on neighborhood income quintiles 5 and 4.

** Numerous cell sizes <5.*

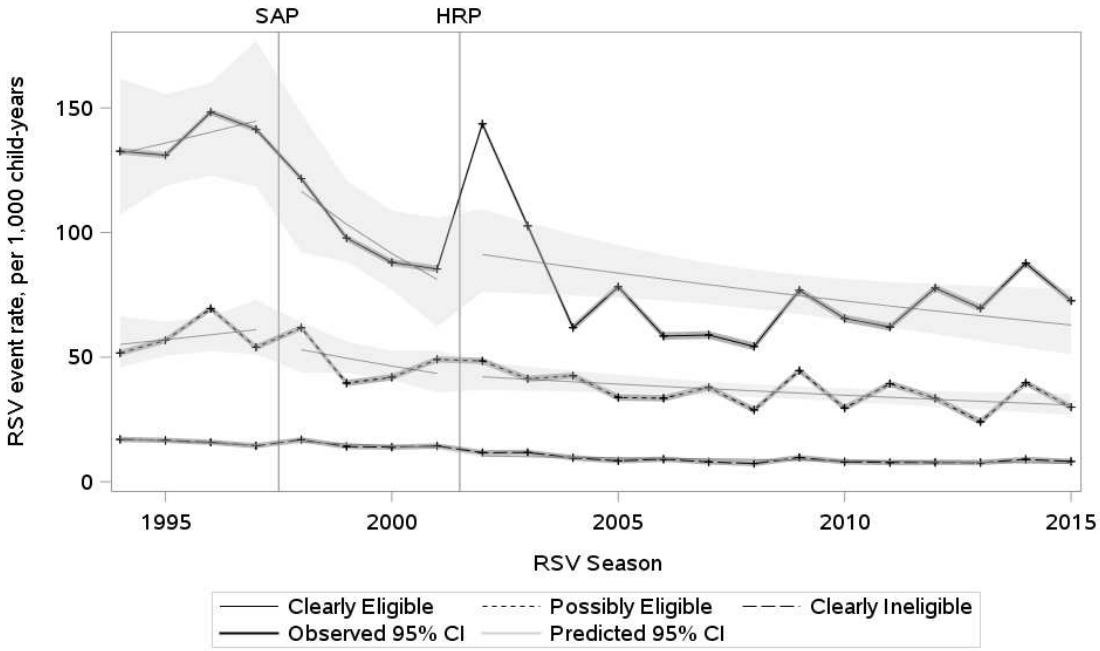
SAP: National Special Access Program (introduced 1998); HRP: Provincial High-Risk Program (introduced 2002)

eTable 4. Frequency of eligibility criteria among study cohort

Criteria	N (%) High Risk in this Study	N (%) Reported by CARESS[a]
Clearly Eligible	N = 34,301	N = 1,224
Criteria #1: Born <32 wGA and aged ≤6 mos during RSV season	25,952 (75.7)	914 (74.7)
Criteria #2: <24 months of age with BPD/CLD	4,311 (12.6)	119 (9.7)
Criteria #3: <24 months of age with hs-CHD	6,596 (19.2)	119 (9.7)
Criteria #4: 33-35 wGA, aged ≤6 mos during RSV season and living in a geographically isolated area (CARESS: other factors)	850 (2.5)	72 (5.9)
Number of criteria met		
Exactly 1	30,979 (90.3)	NR
Exactly 2	3,236 (0.1)	NR
Exactly 3	86 (0.0)	NR
Possibly Eligible	N = 143,913	
Criteria #1: Other CHD	13,453 (9.4)	-
Criteria #2: Other congenital airway anomalies	1,980 (1.4)	-
Criteria #3: Trisomy 21	1,044 (0.7)	-
Criteria #4: ≤6 mos during RSV season and born 33-36 wGA	13,1043 (91.1)	-
Number of criteria met		
Exactly 1	14,0432 (97.6)	-
Exactly 2	3,355 (2.3)	-
Exactly 3	126 (0.1)	-

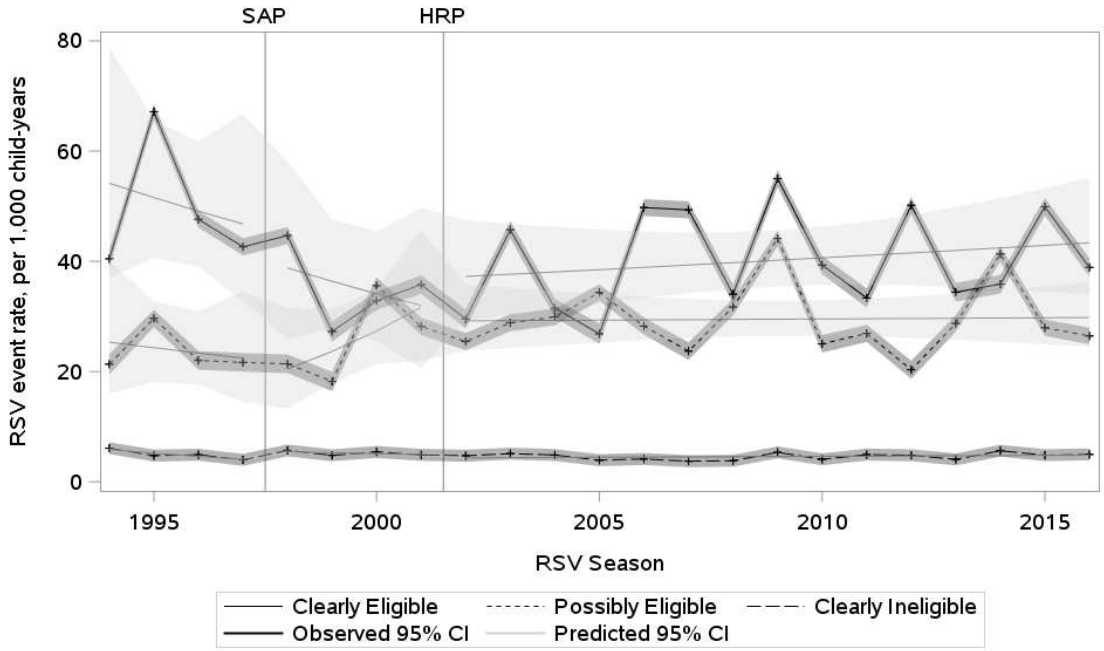
[a] Primary reason palivizumab was received according to the Canadian Registry of Synagis (CARESS) for the 2006/7 RSV Season [39].

BPD: Bronchopulmonary disease; CLD: Congenital lung disease; hs-CHD: hemodynamically significant congenital heart disease; NR: Not reported; wGA: weeks gestational age



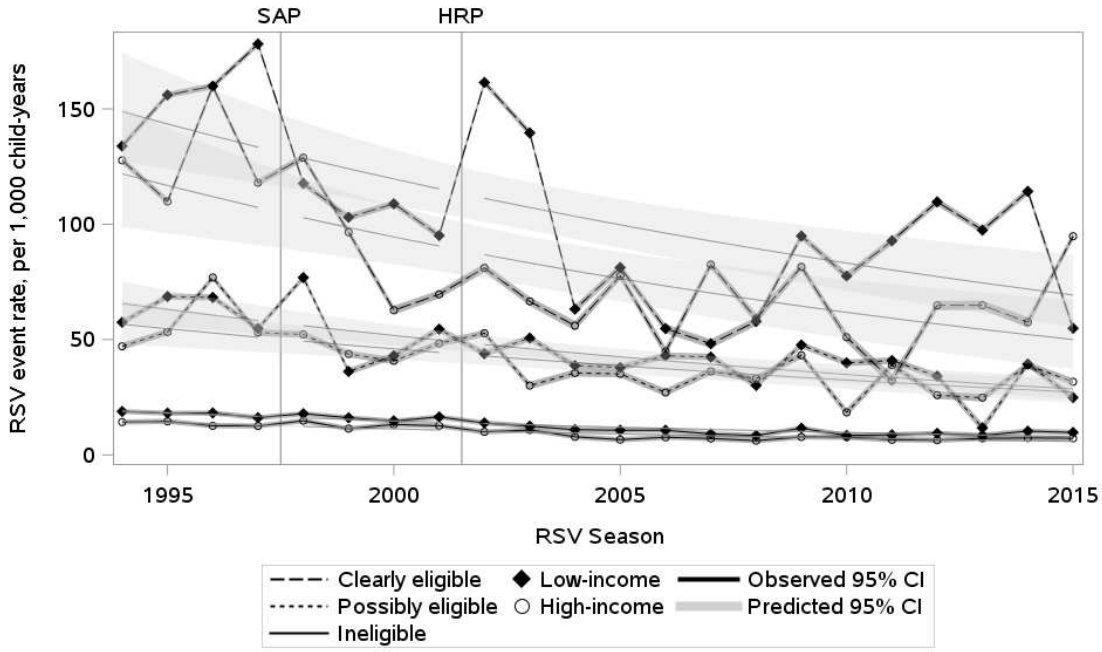
eFigure 1. Annual observed and predicted rates (95% CI) of severe RSV-related illness* among children aged 6-11 months**, according to eligibility for Ontario's palivizumab program; 1993-2016

SAP: National Special Access Palivizumab Program (1998); HRP: Provincial High-Risk Palivizumab Program (2002).
*Annual rates of RSV-related hospitalization or death for July 1st through June 30th, inclusive.
** 6-11 months of age at the time of admission/death.



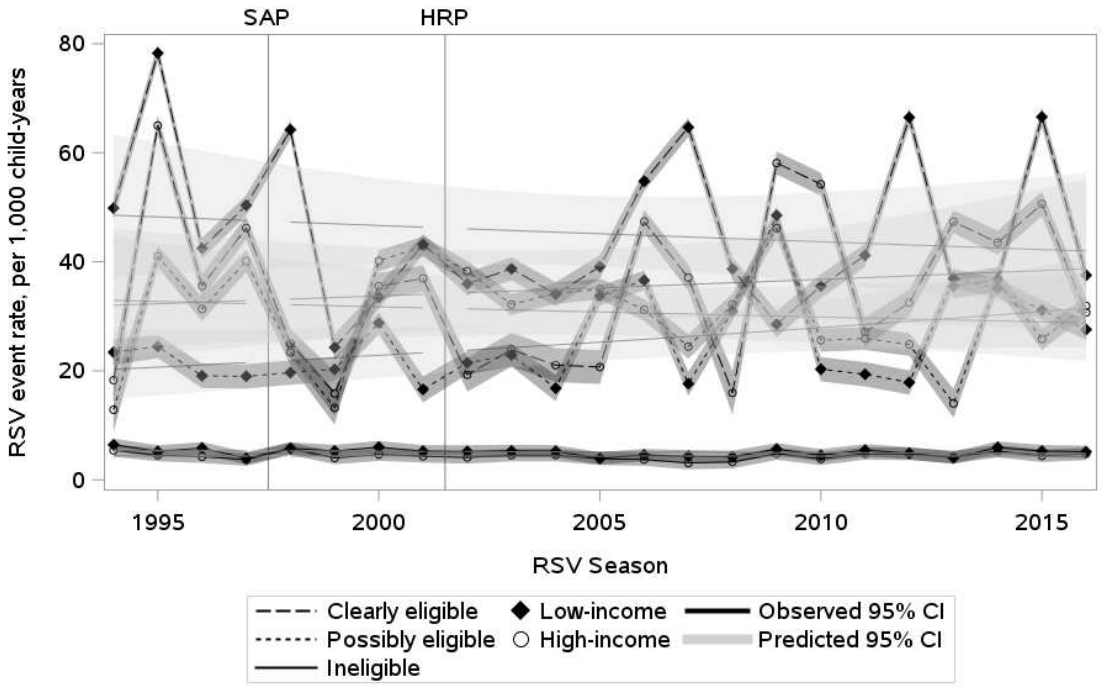
eFigure 2. Annual observed and predicted rates (95% CI) of severe RSV-related illness* among children aged 12-23 months**, according to eligibility for Ontario's palivizumab program; 1993-2016

SAP: National Special Access Palivizumab Program (1998); HRP: Provincial High-Risk Palivizumab Program (2002).
*Annual rates of RSV-related hospitalization or death for July 1st through June 30th, inclusive.
** 12-23 months of age at the time of admission/death.
Model parameter estimates, along with associated 95% confidence intervals and p-values, are provided in eTable 2.



eFigure 3. Annual observed and predicted rates (95% CI) of severe RSV-related illness* among high- versus low-income children aged 6-11 months**; stratified by palivizumab eligibility

SAP: National Special Access Palivizumab Program (1998); HRP: Provincial High-Risk Palivizumab Program (2002).
*Annual rates of RSV-related hospitalization or death for July 1st through June 30th, inclusive.
** 6-11 months of age at the time of hospitalization/death.
Note: Multiple cell sizes <5 among clearly eligible children.
Model parameter estimates, along with associated 95% confidence intervals and p-values, are provided in eTable 2.



eFigure 4. Annual observed and predicted rates (95% CI) of severe RSV-related illness* among high- versus low-income children aged 12-23 months**; stratified by palivizumab eligibility

SAP: National Special Access Palivizumab Program (1998); HRP: Provincial High-Risk Palivizumab Program (2002).
*Annual rates of RSV-related hospitalization or death for July 1st through June 30th, inclusive.
** 12-23 months of age at the time of hospitalization/death.
Note: Numerous cell sizes <5 among clearly eligible children.
Model parameter estimates, along with associated 95% confidence intervals and p-values, are provided in eTable 3.

Appendix A. Detailed description of variables used to identify children clearly or possibly eligible for Ontario's respiratory syncytial virus prophylaxis program

Criteria	Description	Exclusions/ Notes
Clearly eligible		
1. Infant born very or extremely preterm	i. Preterm infants born at 32 wGA or earlier (i.e., very or extremely preterm); AND ii. 6 months of chronological age or younger at the start of (or during) local RSV season (i.e., Dec 1st – Mar 31st).	No exclusions Note: Children born June 1st – March 31st would be ≤6 months of chronological age during local RSV season.
2. Child with chronic lung disease (CLD)	i. Less than 24 months of age during RSV season; AND ii. BPD/CLD diagnosis before second birthday (ICD-9: 748.0-748.9; ICD-10: Q30-Q34, P28.0)	No exclusions Note: considers bronchopulmonary dysplasia (BPD)/ CLD
3. Child with hemodynamically significant congenital heart disease (hs-CHD) [a]	i. Less than 24 months of age during RSV season; AND ii. hs-CHD diagnosis before second birthday: a. CHD (ICD-9: 745.0-747.4, 425.0-425.4, 429.1, 426.0-427.4, 427.6-427.9; ICD-10: Q20.0-Q26.9, I42.0-I42.5, I42.7-I42.9, I51.5, I44, I45, I47-I49); b. Cardiomyopathy (ICD-10: I42; ICD-9: 425) or heart failure (ICD-10: I50; ICD-9: 428); or c. Any cardiovascular surgical code (CCI: 1.HA-1.HZ) or any congenital heart intervention code (CCI: 1.LA-1.LD; CCP: VIII47-51)	i. Infants 6 months of age or older with: a. ventricular septal defects: Q21.0, 745.4; b. atrial septal defects: Q21.1, 745.5; c. atrioventricular septal defects: Q21.2, 745.6; d. aortopulmonary septal defects: Q21.4, 745.8; or e. patent ductus arteriosus: Q25.0, 747.0; OR ii. Any child with corrective cardiovascular surgery at or before 1 month of age
4. Geographically isolated, preterm infant	i. ≤6 months of age during RSV season; ii. Born preterm (33-36 wGA); AND iii. Lives in a geographically isolated community where pediatric hospital care is not readily accessible and ambulance transportation is required	No exclusions Note: geographically isolated operationalized as Rurality Index of Ontario (RIO)≥75
Possibly eligible		
1. Child with other CHD	i. Less than 24 months of age during RSV season; AND ii. Other CHD diagnosed before second birthday (ICD-10: Q90.0, Q90.1, Q90.2, Q90.9; ICD-9: 758.0)	No exclusions
2. Child with other serious congenital airway anomalies	i. Less than 24 months of age during RSV season; AND ii. Any serious congenital anomaly of the larynx, trachea, or bronchus diagnosed before second birthday: ICD-10: Q31^, Q32^, Q33^, Q34^; ICD-9: 748.2-748.8	No exclusions
3. Child with Trisomy 21	i. Less than 24 months of age during RSV season; AND ii. Diagnosed with Trisomy 21 before second birthday: ICD-10: Q90^; ICD-9: 758.0	No exclusions
4. Other preterm infants	i. ≤6 months of age during RSV season; AND ii. Born preterm (33-36 wGA)	No exclusions

wGA: Weeks gestational age; RIO: Rurality Index of Ontario; ICD-9: International Classification of Disease, Ninth revision; ICD-10: International Classification of Disease, Tenth revision (adopted in Canada in 2002); CCI: Canadian Classification of Health Interventions (adopted in Canada in 2002); CCP: Canadian Classification of Diagnostic, Therapeutic, and Surgical Procedures (CCP)

[a] Criteria follow those outlined by Bergman et al.,[28] as available in the administrative health databases used in this study.

Appendix B. Eligibility criteria (2018/9) for Ontario's Respiratory Syncytial Virus Prophylaxis for High-Risk Infants Program [24]

Palivizumab is only provided during the active RSV season, generally November-April, to infants who meet the eligibility criteria for funding. Palivizumab will be funded for infants who are residents of Ontario, have a valid Ontario health card and meet at least one of the following criteria:

- Infants born prematurely at ≤ 32 completed weeks gestation and aged ≤ 6 months at the start of, or during, the local RSV season; or
- Infants 33 – 35 completed weeks gestation and aged ≤ 6 months at the start of, or during the local RSV season, who DO NOT live in isolated communities AND have a Risk Assessment Tool Score of 49 to 100 (see below for scoring guidelines); or
- Infants 33 – 35 completed weeks gestation and aged ≤ 6 months at the start of, or during the local RSV season, and who LIVE IN isolated communities where paediatric hospital care is not readily accessible and ambulance transportation for hospital admission is required; or
- Children < 24 months of age with Down Syndrome / Trisomy 21; or
- Children < 24 months of age with bronchopulmonary dysplasia/chronic lung disease and who required oxygen and/or medical therapy within the 6 months preceding the RSV season; or
- Children < 12 months of age with hemodynamically significant cyanotic or acyanotic congenital heart disease; requiring corrective surgery or are on cardiac medication for hemodynamic significant disease. Children 12 – 24 months of age with ongoing HS-CHD will be considered on a case-by-case basis.

Risk Assessment Tool:

a. Infant's birth month is November, December of January? Yes: 25 points
b. Infant to attend day care or siblings in day care/kindergarten during this winter? Yes: 17 points
c. More than five individuals in the home, including the infant? Yes: 13 points
d. Infant is small for gestational age (<10th percentile)? Yes: 12 points
e. Infant's immediate family member has a history *without* eczema? Yes: 12 points
f. Infant is male? Yes: 11 points
g. Two or more smokers in the infant's household? Yes: 10 points

Low risk: 0-48 points, will not be approved if submitted
Moderate risk: 49-64 points, will be approved if submitted
High risk: 65-100 points, will be approved if submitted

Appendix C. Eligibility criteria for National Special Access Palivizumab Program, as per 1999 Canadian Pediatric Society Guidelines

Priority for palivizumab prophylaxis should be given to:
(a) children 24 months of age or younger with bronchopulmonary dysplasia (BPD) who required oxygen within the six months preceding the RSV season, and
(b) infants born at 32 weeks' gestation or earlier who are six months of age or younger (with or without BPD) at the start of the RSV season.
Children in isolated communities where hospital care is not readily accessible already qualify for RSV prophylaxis if they have the risk factors outlined in (a) and (b) above. Children born between 33 to 35 weeks' gestation in these areas may be given special consideration for RSV prophylaxis.
An application for the use of palivizumab in patients who do not fulfill these criteria will be considered on a case-by-case basis by the Canadian Blood Services.

Reference: Canadian Pediatric Society "Palivizumab and respiratory syncytial virus immune globulin intravenous for the prophylaxis of respiratory syncytial virus infection in high risk infants," *Paediatr Child Health,* vol. 4, issue 7, p.474-80, 1999.

Appendix D. Comparison of current palivizumab eligibility guidelines according to the Ontario Ministry of Health (MOH), Canadian Pediatric Society (CPS), and the American Academy of Pediatrics (AAP)

	Guidelines for Each Body as of Most Recent Guidelines		
Risk Group	**MOH, 2019/20[1]**	**CPS, 2015[2]**	**AAP, 2017[3]**
Prematurity (only)	Infants born prematurely at ≤ 32 completed weeks gestation and aged ≤ 6 months at the start of, or during, the local RSV season.	In preterm infants without CLD born before 30 wGA who are <6 months of age at the start of RSV season, it is reasonable (but not essential) to offer palivizumab.	In the first year of life, infants born before 29 wGA.
Chronic lung disease/ bronchopulmonary disease	Children < 24 months of age with bronchopulmonary dysplasia/chronic lung disease (BPD/CLD) and who required oxygen and/or medical therapy specifically for chronic lung disease within the 6 months preceding the RSV season.	Children with CLD (defined as a need for oxygen at 36 wGA) who require ongoing diuretics, bronchodilators, steroids or supplemental oxygen, should receive palivizumab if they are <12 months of age at the start of RSV season. Because the incidence of RSV decreases in the second year of life, palivizumab is not indicated during the second RSV season for the vast majority of children with CLD (with the exception of those still on or weaned off of supplemental oxygen in the past three months).	In the first year of life, infants born before 32 wGA with chronic lung disease of prematurity defined as a need for greater than 21% oxygen for at least 28 days after birth. Palivizumab prophylaxis is not recommended in the second year of life except for children who require at least 28 days of supplemental oxygen after birth and who continue to require medical intervention (supplemental oxygen, chronic corticosteroid or diuretic therapy) during the second RSV season.
Congenital heart disease	Children < 12 months of age with hemodynamically significant (HS) cyanotic or acyanotic congenital heart disease (CHD): requiring corrective surgery or are on cardiac medication for congestive heart failure or diagnosed with moderate to severe pulmonary hypertension.	Children with hemodynamically significant CHD who require ongoing diuretics, bronchodilators, or steroids should receive palivizumab if they are <12 months of age at the start of RSV season.	Clinicians may administer palivizumab prophylaxis in the first year of life to certain infants with hemodynamically significant heart disease. Consultation with a cardiologist for decisions about prophylaxis is recommended for patients with cyanotic heart disease.

	Children 12-24 months of age with ongoing HS CHD will be considered on a case-by-case basis.		
Geography/ Demographics	Infants 33-35 wGA and aged ≤ 6 months at the start of, or during the local RSV season, and who LIVE IN remote communities defined by lack of immediate access to medical care (< 30 min) (i.e., Level I hospital) AND/OR inability to access pediatric services in a timely manner (<90 minutes).	Infants in remote communities who would require air transportation for hospitalization born before 36 wGA and <6 months of age at the start of RSV season should be offered palivizumab. It is not clear whether this recommendation should apply only to Inuit infants, to all Aboriginal infants or to all infants in remote communities. Consideration may be given to administering palivizumab during RSV season to term Inuit infants until they reach six months of age only if they live in communities with documented persistent high rates of RSV hospitalization. However, the first priority should be to provide palivizumab to infants with prematurity, CLD or CHD.	The burden of RSV disease in certain remote areas may result in a broader use of palivizumab for RSV prevention in Alaska Native populations and possibly in other selected Native American populations.
Other medical conditions	Children < 24 months of age with Down Syndrome / Trisomy 21; Infants and children with other specific medical illnesses that place them at high risk of hospitalizations and complications from a RSV infection may also be considered for prophylaxis on a case-by-case basis.	Children with immunodeficiencies, Down syndrome, cystic fibrosis, upper airway obstruction or a chronic pulmonary disease other than CLD should not routinely be offered palivizumab. However, prophylaxis may be considered for children <24 months of age who are on home oxygen, have had a prolonged hospitalization for severe pulmonary disease or are severely immunocompromised.	• Children younger than 24 months of age who will be profoundly immunocompromised during the RSV season may be considered for prophylaxis. Children with a pulmonary abnormality or neuromuscular disease that impairs the ability to clear secretions from the lower airways may be considered for prophylaxis in the first year of life.

Other criteria	Infants 33-35 completed weeks gestation and aged ≤ 6 months at the start of, or during the local RSV season, who DO NOT live in remote communities AND have a Risk Assessment Tool Score of 49 to 100 *(See Appendix B for Risk Assessment Tool).*	None	None

[1] MOH, "Respiratory Syncytial Virus Prophylaxis for High-Risk Infants Program". Available online: www.health.gov.on.ca/en/pro/programs/drugs/funded_drug/fund_respiratory.aspx. [Accessed: Feb 19, 2020] Last updated: Nov 12, 2019.

[2] Robinson JL, Le Saux N, and Canadian Paediatric Society, Infectious Diseases and Immunization Committee. "Preventing hospitalizations for respiratory syncytial virus infection," Pediatr Child Health 2015; 20(6): 321-6.

[3] Munoz FM, Ralston SL, Meissner, HC. "RSV recommendations unchanged after review of new data, "AAP News; Oct 19, 2017. Available online: hwww.aappublications.org/news/2017/10/19/RSV101917 [Accessed: Feb 19, 2020]

Appendix E. Changes to palivizumab eligibility criteria for Ontario children, including original Health Canada Special Access Program (SAP) criteria (1998) and changes made since the creation of a provincial high-risk program

Indication	Change(s)	Notes
Bronchopulmonary dysplasia **(since SAP introduction):** Children <2 years of age with BPD (need for supplemental oxygen at 36 wGA (corrected) due to chronic lung disease who have been on oxygen therapy within 6 months preceding the RSV season	**2009/10:** Children < 24 months with BPD/ chronic lung disease (CLD) and who have required oxygen and/or medical therapy within the 6 months preceding the RSV season. BPD/ CLD medical therapies include: corticosteroids, bronchodilators, and diuretics specifically for the management of BPD/CLD	Indications for RSV-IGIV (licensed at the time) and palivizumab (not licensed, only available through HC SAP at the time)
Premature infants without BPD **(since SAP introduction):** May be considered for infants < 6 months of age at the start of the RSV season. The decision for prophylaxis for these infants should be individualized. For example, prophylaxis is more strongly recommended at lower gestational ages (below 32 weeks) and also at younger chronical ages (below 6 months at the start of RSV season)	**2000/1:** Premature infants without BPD born at ≤32 wGA: May be considered if ≤6 months of age at the start of RSV season. The decision should be individualized for these patients. For example, … **2009/10:** Infants born prematurely ≤32 wGA and aged ≤6 months at the start of, or during, the local RSV season. **2010/11:** Infants born prematurely **≤33 wGA** and aged ≤6 months at the start of, or during, the local RSV season. **2011/12**: Infants born prematurely ≤32 wGA and aged ≤6 months at the start of, or during, the local RSV season.	Indications for RSV-IGIV (licensed at the time) and palivizumab (not licensed, only available through HC SAP at the time)
Premature infants without BPD **(since SAP introduction):** Infants born at **32-35 wGA**. Given the larger number of infants in this group and the high cost of the RSV-IGIV and palivizumab, a more selective approach is recommended. The use […] should be considered for those children in this group with additional risk factors. Such risk factors include the following: - Presence of young siblings - Multiple births - Unavoidable passive tobacco smoke exposure - Previous episodes suggestive reactive airway disease	**2000/1:** Premature infants without BPD, born at **33-35 wGA**: prophylaxis may also be considered on a case by case basis. A very selective approach is recommended. Infants living in isolated communities who do not have ready access to medical care may be given special consideration. Such consideration may also apply to other infants with special medical conditions that increase their risk of severe RSV disease. This should be dealt with on a case by case scenario basis. **2007/8:** Infants born 33-35 wGA who are <6 months of age at the start of RSV season: For this group, national guidelines are currently being developed and the Formulary guidelines will be modified accordingly when these become available.	Indications for RSV-IGIV (licensed at the time) and palivizumab (not licensed, only available through HC SAP at the time)

- Attendance in child care facilities - Other conditions, such as neurologic or metabolic diseases - Severe congestive heart failure with recurrent aspiration	**2009/10:** Infants in the 33-35 wGA cohort who are ≤6 months at the start of, or during, local RSV season and who live in isolated communities where hospital care is not readily accessible. These requests must include the first three postal code digits. Infants in the 33-35 wGA cohort aged ≤6months at the start of, or during, the local RSV season and who do not live in isolated communities. A completed Risk Assessment Tool … must accompany the RSV request form. **2010/11:** Infants in the 33-35 wGA cohort aged ≤6months at the start of, or during, the local RSV season and who do not live in isolated communities. A completed Risk Assessment Tool … must accompany the RSV request form. **Funding will be considered on a case by case basis.** **2011/12:** Infants in the 33-35 wGA cohort aged ≤6months at the start of, or during, the local RSV season and who do not live in isolated communities and have a Risk assessment tool score greater than 49. **Funding will be considered on a case by case basis.** **2013/4:** No longer "for consideration", listed with approval criteria. **2015**: Infants in the 33-35 wGA cohort who are ≤6 months at the start of, or during, local RSV season and who live in isolated communities where hospital care is not readily accessible and ambulance transportation for hospital admission is required. Infants in the 33-35 wGA cohort aged ≤6months at the start of, or during, the local RSV season and who do not live in isolated communities and have a Risk assessment tool score between 49 and 100.	
Immune deficiency **(since SAP introduction):** Although specific recommendations cannot be made for immune-compromised patients, children with	**2009/10: REMOVED**	Indications for RSV-IGIV (licensed at the time) and palivizumab (not licensed, only available through HC SAP at the time)

severe immunodeficiencies may benefit		
Cyanotic heart disease **(since SAP introduction):** Neither […] is currently recommended.	**2000/1:** Neither […] is currently recommended. However, patients with asymptomatic, acyanotic heart disease may benefit from prophylaxis. **2005/6:** Children <24 months of age with hs-HD. As determined by a cardiologist. **2009/10:** Children <24 months of age with hs-CHD (cyanotic or acyanotic), requiring corrective surgery or on cardiac medication for hemodynamic considerations.	Indications for RSV-IGIV (licensed at the time) and palivizumab (not licensed, only available through HC SAP at the time)
Children < 24 months of age with Down Syndrome/ Trisomy 21 (**Added 2009/10**)	**2010/11: REMOVED** **2012/13: RE-ADDED:** Children with Down Syndrome/ Trisomy 21 less than 24 months of age at the start of the local RSV Season	
Multiple births in any of the above categories **(Added 2009/10)**	**2010/11: REMOVED** **2013/4: RE-ADDED:** If a high-risk infant identified above is part of a multiple birth, then siblings in the same set are also eligible.	
Infants with a special medical illness (e.g. CF, neuromuscular disease, airway anomalies, transplantation, SCIDS). **(Added 2009/10)** Requests for these infants must include a letter from the requesting physician providing medical justification for request and a letter from either am infectious disease specialist or a neonatologist or a respirologist supporting the request.	**2010/11: Funding will be considered on a case by case basis.**	
Patients were severe CLD or congenital heart disease, who require ongoing medical therapy, may benefit from prophylaxis during a second RSV season **(Added 2010/11)**		