Implementation of a Physician Incentive Program for 18-Month Developmental Screening in Ontario, Canada

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Objectives To evaluate factors associated with uptake of a financial incentive for developmental screening at an enhanced 18-month well-child visit (EWCV) in Ontario, Canada.

Study design Population-based cohort study using linked administrative data of children (17-24 months of age) eligible for EWCV between 2009 and 2017. Logistic regression modeled associations of EWCV receipt by provider and patient characteristics.

Results Of 910 976 eligible children, 54.2% received EWCV (annually, 39.2%-61.2%). The odds of assessment were lower for socially vulnerable children, namely, those from the lowest vs highest neighborhood income quintile (aOR, 0.84; 95% CI, 0.83-0.85), those born to refugee vs nonimmigrant mothers (aOR, 0.90; 95% CI, 0.88-0.93), and to teenaged mothers (aOR, 0.70; 95% CI, 0.69-0.71)). Children were more likely to have had developmental screening if cared for by a pediatrician vs family physician (aOR, 1.28; 95% CI, 1.13-1.44), recently trained physician (aOR, 1.38; 95% CI, 1.29-1.48 for ≤5 years in practice vs ≥21 years) and less likely if the physician was male (aOR, 0.64; 95% CI, 0.61-0.66). For physicians eligible for a pay-for-performance immunization bonus, there was a positive association with screening.

Conclusions In the context of a universal healthcare system and a specific financial incentive, uptake of the developmental assessment increased over time but remains moderate. The implementation of similar interventions or incentives needs to account for physician factors and focus on socially vulnerable children to be effective. *(J Pediatr 2020;226:213-20)*.

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A compelling case for the importance of promoting healthy development in early childhood has been made, based on the accrual of evidence from a broad range of medical, neuropsychological, and population-based research studies.[1,2] Collectively, this research supports the need for early identification, treatment, and support for children showing early signs of developmental problems to increase school readiness and optimize development. Almost 7% of children in the US are diagnosed with a developmental disability.[3] The prevalence of significant delay in ≥1 of the developmental spheres far exceeds the number of children referred for developmental services or receiving care.[4-6]

Routine developmental surveillance through well-child visits has been shown to have poor sensitivity.[7-9] Many early signs are subtle.[10] The American Academy of Pediatrics and the Canadian Paediatric Society have recommended the use of formal developmental screening tools at the 9-, 18-, and 30-month visits (in the US) and the 18-month visit (in Canada) in addition to routine developmental surveillance by primary care providers at all well-child visits.[6,11] However, despite some disagreement, the US Preventative Services Task Force and the Canadian Task Force on Preventative Health cite insufficient evidence to recommend universal screening for speech and language or developmental delay in children in the absence of concerns by parents or providers.[7,8,12,13] Data on current practice suggests that <50% of pediatricians use formal screening tools for the detection of developmental delays in primary care.[7,14] Time, feasibility, lack of financial incentive, and insufficient evidence for improving developmental outcomes have all been cited as factors for this.[15,16]

Before the task force reviews, in October 2009, Ontario became the first Canadian province to fund a formal developmental assessment at the 18-month well-child visit. The Ontario Ministry of Health and Long-Term Care, which pays for all primary and acute care services for legal residents of Ontario, introduced a new fee code for primary care providers as an incentive to conduct an 18-month enhanced well-child visit (EWCV). The additional payment for the developmental screening is almost double that for the existing well-child visit. There is no penalty for those who choose to not screen and bill the standard amount for

EWCV	Enhanced well-child visit
ICES	Institute for Clinical Evaluative Sciences

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the visit. Apart from a previously implemented annual bonus targeting some family physicians only for up-to-date immunizations of 24-month-olds, this program was an isolated financial incentive for pediatric primary care. To bill for the EWBV, providers are required to document in the medical record a discussion around the child's development using screening tools; those recommended are the Nipissing District Development Screen filled in by the parent or caregiver, and questions on the Rourke Baby Record, both of which use questions around developmental milestones.[17-20] If either suggests milestones are not met, referral to appropriate services is recommended. At the time of implementation, there were no formal validation studies of the test characteristics of the Nipissing Screen, and there was no clear score or cut-off from either tool that would indicate a specific diagnosis. Audits of the medical record documentation are within the purview of the Ministry of Health but are not done routinely unless fraud is suspected. At the time of, and since implementation, there have been no changes in funding or availability of any developmental services that might be required to respond to additional needs from this enhanced visit.

The objectives of this study were to describe the uptake of developmental screening with the 18-month EWCV over the first 9 years since the introduction of the incentive and test the child, family, and provider characteristics associated with its use.

Methods

This retrospective study included repeated cross-sectional population-based cohorts of Ontario children at the time of eligibility for the EWCV, using linked health and demographic administrative databases available at ICES (formerly known as the Institute for Clinical Evaluative Sciences). The use of these encoded Ontario data was authorized under section 45 of Ontario's Personal Health Information Protection Act, which does not require review by a Research Ethics Board.

Data Sources

The Registered Persons Database was used to obtain demographic information including dates of outmigration for all Ontario residents eligible for the Ontario Health Insurance Plan. The Canadian Institute for Health Information Discharge Abstract Database was used to identify records of births occurring in hospital and the MOMBABY database links these births to the records of the mothers. The ICES Physician Database and Client Agency Program Enrolment were used to obtain physician-level characteristics and primary care enrollment model affiliation, respectively. The physician fee-for-service claims file (Ontario Health Insurance Plan) was used to identify primary care visits. We used the 2006 Statistics Canada Census to assign neighborhood income quintile within a dissemination area (400-700 people) and the Permanent Resident Data System from Immigration, Refugee and Citizenship Canada, which contains information for all landed immigrants to Ontario, was used for maternal immigration status.[21]

Study Population

The study cohort consisted of children born in Ontario and who were 17-24 months of age between December 1, 2009, and June 30, 2017 (birthdates from July 1, 2008, to June 30, 2015). Children were excluded if their birth weight was likely miscoded (≤400 g or >7000 g). Other exclusions were death, outmigration from Ontario before age 24 months, or primary care affiliation with a community health center in which physicians are salaried and do not submit billing claims, including for the EWCV.

Child, Maternal, and Usual Provider of Care Characteristics

Factors known to be associated with primary care use were considered as covariates. Child characteristics included sex, birth weight, neighborhood income, and rural residence. Birth weight was categorized as very low (400-1499 g), low (1500-2499 g), and normal (≥2500 g). The postal code of the child at 16 months of age was linked to Statistics Canada 2006 Census data to ascertain rural residency (belonging to a community of size of <10 000 residents) and neighborhood income quintile adjusted for household size and community within a dissemination area.

Maternal characteristics included mother's age at first delivery (a measure of social vulnerability), obtained by linking the earliest delivery date record in MOMBABY to the mother's birth date.[22] We were unable to link 2.3% of delivery date records to the mother's identifier in MOMBABY. Mother's age at first delivery (limited to Ontario) was categorized as <19 or ≥19 years. Young age at first delivery has been shown to be a significant social risk factor for poor child outcomes.[23,24] We looked back to the earliest available immigration records dating back to 1985 to identify maternal immigration status categorized as nonimmigrant, nonrefugee immigrant, or refugee.

In Ontario, a number of patient enrollment models have been developed to improve primary care through formal enrollment/"rostering," enhanced after-hours care, blended payments, and interprofessional teams.[25] Pediatricians provide primary care to some children, but have not been included in these primary care reform models in Ontario. We assigned children to their usual providers of primary care using a hierarchical approach. For those rostered to a primary care model, they were assigned to that provider. For nonrostered children, an algorithm using all primary care billings from birth to 16 months of life were used to assign the primary care physician with the highest dollar value of primary care billings. We categorized each assigned primary care provider as family physician patient enrollment model, family physician no patient enrollment model, pediatrician, or no primary care provider. Other primary care provider characteristics included sex, the number of years in practice (≤5, 6-10, 11-15, 16-20 or ≥21 years), and location of medical training (international graduate or domestic graduate). Last, continuity of care was computed as the proportion of primary care visits to the primary care provider divided by the all primary care visits to any general

practitioner or pediatrician in the first 16 months of life. Continuity of care was categorized as very low (0%-49%), low (50%-67%), medium (68%-86%), or high (>86%). Children with no primary care visits during this period were categorized as having no primary care visits (no primary care provider).

Outcome Measure

We used the physician billing claims for the 18-month EWCV to measure if the visit occurred between 17 and 24 months of life.

Primary Analyses

Descriptive statistics were computed at the child, maternal, and usual provider of care levels. The χ^2 test was used to test for differences between groups. A multivariable logistic regression model was used to test the association of child, maternal, and primary care provider characteristics and receipt of the 18-month enhanced well-child visit. A generalized estimating equations approach was used to account for clustering of children within primary care providers. Children with no identifiable primary care provider and missing covariates profiles were not included in the multivariable model. All analyses were conducted with a significance criterion of $\alpha = 0.05$ using SAS 9.4 (SAS Institute, Cary, North Carolina).

Secondary Analyses

To further explore whether an EWCV was associated with other measures of quality of care, we tested the association between incentive bonuses paid for levels of childhood immunization completion and percentage of eligible children with an EWCV. We performed a subgroup analysis of all family physicians in our cohort who belonged to a primary care enrollment model eligible for a pay-for-performance bonus paid through Ontario Health Insurance Plan in 2013 for levels of complete immunizations rates of 2-year-olds (categorized as 85%, 90%, or >95% complete immunizations). Differences between the mean 18-month EWCV rates for each immunization incentive claim group were tested using a 1-way analysis of variance.

All analyses were prespecified in a protocol (available by request), except for 1 post hoc analysis requested by a reviewer to assess what proportion of children with no EWCV had a regular well-child visit billed.

Results

There were 910 976 children during the study period eligible for the 18-month EWCV after exclusions (**Figure 1**; available at www.jpeds.com). **Table I** describes the characteristics of the cohort overall and by screening status. Most children (89.5%) lived in urban areas and were of normal birth weights (93.7%). Most mothers (92.2%) were >19 years of age at the time of first delivery and 71.8% were nonimmigrants. Overall, 12% of patients had a pediatrician and 80% a general practitioner enrolled in a primary care model as their primary care provider, and 5.1% had no primary care provider. Approximately 59% had physicians who were in practice for ≥21 years, and 66% were trained domestically.

Overall, 54.2% of children were screened. Since initiation of the enhanced 18-month well-child visit, uptake has increased steadily from 39% screened in the first year of the program to 61% in 2017 (**Figure 2**). There were no clinically important differences by sex. The frequency distribution of all other variables were different by statistical significance ($P < .001$), but clinically important differences included a greater proportion of children who were not screened lived in lower income neighborhoods, lived in rural areas, and were born to mothers who were teenagers at the birth of their first child. A greater proportion of children screened were cared for by pediatricians, more recently trained, and female physicians. Overall, 65% of children who were not screened did have a usual well-child visit at age 17-24 months. This proportion decreased as the program matured (from 73% to 68% in the first and last years of the study).

The aOR for an EWCV are shown in **Table II**. The odds of being screened increased with each year since institution of the enhanced screening: children born in 2015 (last eligible year) were more than twice as likely as children born in 2008 to be screened (aOR, 2.41; 95% CI, 2.31-2.51) compared with those born in 2008. Very low birth weight infants are less likely than those of normal birth weight to be screened (aOR, 0.74; 95% CI, 0.70-0.79). The child's neighborhood income quintile demonstrated a clear gradient, with infants from the lowest income quintile 16% less likely to be screened compared with children in the highest neighborhood income quintile. Those living in rural areas were also less likely to be screened (aOR, 0.86; 95% CI, 0.84-0.87). Children whose mother had their first child at <19 years of age had a 0.70 lower odds (95% CI, 0.69-0.71) of being screened. Finally, children born to refugee mothers were slightly less likely to receive the visit compared with children born to nonimmigrant mothers (aOR, 0.90; 95% CI, 0.88-0.93), although there was no difference for children born to nonrefugee immigrants.

A number of primary care provider characteristics were associated with an EWCV. Those cared for by a pediatrician had a 28% higher odds of being screened compared with patients enrolled in a family physician led primary care model. Patients of male providers had a significantly lower odds (aOR, 0.64; 95% CI, 0.61-0.66) and a shorter time in practice was associated with a higher odds of screening (OR 1.38, 95% CI, 1.29-1.48 for ≤5 years in practice vs ≥21 years). Continuity of primary care had no consistent association with screening.

In the convenience sample of all physicians eligible for the immunization bonus in 2013, there was a positive association between the rate of practice level up-to-date immunizations and rates of enhanced 18-month EWCV rates. Eligible physicians who did not claim this immunization bonus had the lowest mean uptake of the 18-month EWCV (48.7%) (**Table III**).

Table I. Characteristics of cohort by screening status

Characteristics	18-Month EWCV not screened (n = 416 868)	18-month EWCV Screened (n = 494 108)	Total (n = 910 976)	*P* value
Child characteristics				
Sex				
Female	202 882 (48.7)	240 998 (48.8)	443 880 (48.7)	.312
Birth weight				
Very low	3796 (0.9)	3606 (0.7)	7402 (0.8)	<.001
Low	22 800 (5.5)	26 976 (5.5)	49 776 (5.5)	
Normal	390 272 (93.6)	463 526 (93.8)	853 798 (93.7)	
Birth year				
2008	41 524 (10.0)	26 845 (5.4)	68 369 (7.5)	<.001
2009	65 999 (15.8)	59 030 (11.9)	125 029 (13.7)	
2010	65 705 (15.8)	67 314 (13.6)	133 019 (14.6)	
2011	59 447 (14.3)	72 188 (14.6)	131 635 (14.4)	
2012	56 597 (13.6)	75 601 (15.3)	132 198 (14.5)	
2013	52 900 (12.7)	76 636 (15.5)	129 536 (14.2)	
2014	50 624 (12.1)	78 367 (15.9)	128 991 (14.2)	
2015	24 072 (5.8)	38 127 (7.7)	62 199 (6.8)	
Neighborhood income				
Quintile 1 (lowest)	104 882 (25.2)	89 819 (18.2)	194 701 (21.4)	<.001
Quintile 2	84 397 (20.2)	91 646 (18.5)	176 043 (19.3)	
Quintile 3	83 061 (19.9)	100 446 (20.3)	183 507 (20.1)	
Quintile 4	81 668 (19.6)	118 346 (24.0)	200 014 (22.0)	
Quintile 5 (highest)	62 860 (15.1)	93 851 (19.0)	156 711 (17.2)	
Rurality				
Rural	54 110 (13.0)	38 994 (7.9)	93 104 (10.2)	
Urban	361 615 (86.7)	453 612 (91.8)	815 227 (89.5)	<.001
Missing	1143 (0.3)	1502 (0.3)	2645 (0.3)	
Maternal characteristics				
Age at first delivery, years				
<19	31 684 (7.6)	18 613 (3.8)	50 297 (5.5)	<.001
≥19	372 683 (89.4)	467 100 (94.5)	839 783 (92.2)	
No mother identified	12 501 (3.0)	8395 (1.7)	20 896 (2.3)	
Immigration status				
Immigrant	93 716 (22.5)	111 789 (22.6)	205 505 (22.6)	<.001
Nonimmigrant	295 323 (70.8)	358 526 (72.6)	653 849 (71.8)	
Refugee	15 328 (3.7)	15 398 (3.1)	30 726 (3.4)	
No mother identified	12 501 (3.0)	8395 (1.7)	20 896 (2.3)	
Usual provider of care characteristics				
Specialty				
General practitioner-primary care model	341 812 (82.0)	385 960 (78.1)	727 772 (79.9)	<.001
General practitioner-no model	16 814 (4.0)	10 349 (2.1)	27 163 (3.0)	
Pediatrician	35 141 (8.4)	74 257 (15.0)	109 398 (12.0)	
No UPC identified	23 101 (5.5)	23 542 (4.8)	46 643 (5.1)	
Sex				
Female	150 843 (36.2)	241 117 (48.8)	391 960 (43.0)	<.001
No UPC identified	23 101 (5.5)	23 542 (4.8)	46 643 (5.1)	
Continuity of care				
Very low	117 860 (28.3)	135 750 (27.5)	253 610 (27.8)	<.001
Low	77 716 (18.6)	88 726 (18.0)	166 442 (18.3)	
Medium	93 752 (22.5)	125 845 (25.5)	219 597 (24.1)	
High	104 439 (25.1)	120 245 (24.3)	224 684 (24.7)	
No UPC identified	23 101 (5.5)	23 542 (4.8)	46 643 (5.1)	
Time in practice, years				
≤5	15 293 (3.7)	29 984 (6.1)	45 277 (5.0)	<.001
6-10	28 424 (6.8)	47 165 (9.5)	75 589 (8.3)	
11-15	35 444 (8.5)	55 550 (11.2)	90 994 (10.0)	
16-20	46 241 (11.1)	65 247 (13.2)	111 488 (12.2)	
≥21	267 932 (64.3)	271 975 (55.0)	539 907 (59.3)	
Missing	433 (0.1)	645 (0.1)	1078 (0.1)	
No UPC identified	23 101 (5.5)	23 542 (4.8)	46 643 (5.1)	
Medical training				
Domestic	274 203 (65.8)	327 022 (66.2)	601 225 (66.0)	<.001
International	116 010 (27.8)	137 395 (27.8)	253 405 (27.8)	
Missing or no UPC identified	3554 (0.9)	6149 (1.2)	9703 (1.1)	
No UPC identified	23 101 (5.5)	23 542 (4.8)	46 643 (5.1)	

Values are number (%).

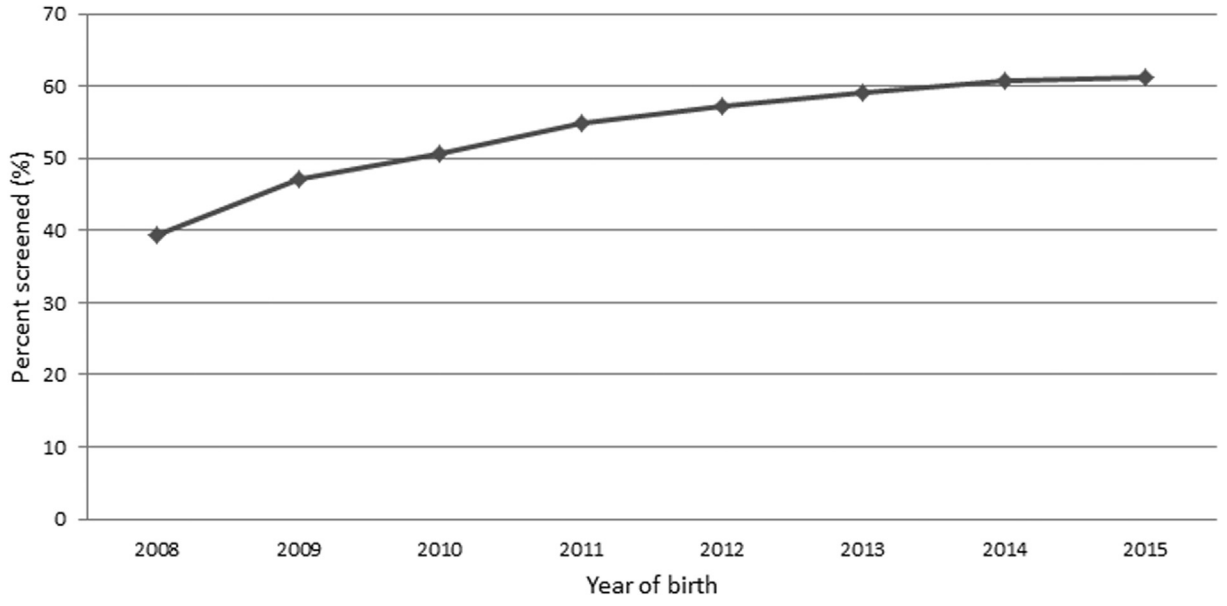

Figure 2. Proportion of eligible children screened with the 18-month EWCV (n = 910 976).

Discussion

In this large, population-based cohort study, we report low, albeit increasing, uptake of the 18-month EWCV over the 9 years since its inception. Despite both universal funding for primary care in general and a significant financial incentive, just more than one-half of eligible Ontario children received the developmental screening overall, but in the final 2 birth cohorts, >60% of eligible children were being screened. Rates of uptake of formal developmental screening tools in this study are comparable with previously published pediatric studies,[7,26,27]

Our study adds to the small but growing body of literature demonstrating pediatric incentive programs have only modest effects, at improving the quality of care for children.[28-33] This literature has been largely focused on pay-for-performance bonus schemes, predominantly oriented toward improving childhood immunization rates. Our findings should also be contextualized within a growing body of literature focused on primary care incentives in Ontario, such as cancer screening in adults, which suggests that these have rewarded physicians who were already providing high quality care and have not improved system-wide care.[34,35] Similarly, pediatric incentive schemes have been criticized for simply improving documentation rather than quality of care and rewarding those who are already doing well.[28,30,36] Although we were not able to assess screening practices before the new fee code, it may have rewarded physicians already using developmental screening tools and it provided no incentive to reach particular benchmarks or improve individual level physician targets as is done with pay-for-performance bonus schemes. Other factors such as the level of the incentive are important—the reimbursement for completing developmental screening may not be comparable with the cost and time required to carry out screening. However, the increase in rates over time does suggest that the fee (in this case almost double than the usual visit fee) may have been successful in incentivizing physicians who were not previously doing screening to add this to the visit content rather than merely rewarding better documentation, which would have resulted in higher rates at the outset of the program.

An assessment of the importance of the modest uptake for this incentive program is complex given the lack of evidence to support developmental screening and surveillance and may account for the high proportion of children not screened who nevertheless have a well-child visit. Although the Canadian Paediatric Society and American Academy of Pediatrics have endorsed the practice, these recommendations are primarily based on expert consensus rather than evidence as reflected in the recent Canadian and US Task Force findings of insufficient evidence to recommend screening.[6,11] Although developmental screening can improve detection and time to referral, it has not been shown to improve developmental outcomes, in particular for speech and language.[7,8,37-40] Insufficient evidence-based process and outcome metrics have been cited as contributors to ineffective implementation of other pay-for-performance programs in healthcare.[28,30,41] Developmental screening is also complicated by the lack of screening measures sensitive and specific enough to do general population screening for delay, a point highlighted in the recent Canadian Preventative Task Force Report.[42] Two formal assessments of the Nipissing District Developmental Screening Tool have only recently been published, both of which suggest neither sensitivity nor specificity meet the standard required for population-level screening.[18,43]

Table II. Adjusted odds of receipt of enhanced visit by child, mother, and provider characteristics (n = 833 682)

Characteristics	aOR	95% CI
Child characteristics		
Sex		
Male	1.00	0.99-1.01
Female (reference)		
Birth weight		
Very low	0.74	0.70-0.79
Low birth	0.98	0.97-1.00
Normal (reference)		
Birth Year		
2015	2.41	2.31-2.51
2014	2.35	2.26-2.45
2013	2.22	2.13-2.31
2012	2.09	2.01-2.17
2011	1.89	1.82-1.97
2010	1.59	1.53-1.65
2009	1.40	1.36-1.44
2008 (Reference)		
Neighborhood income		
Quintile 1 (lowest)	0.84	0.83-0.85
Quintile 2	0.92	0.91-0.93
Quintile 3	0.95	0.93-0.96
Quintile 4	0.99	0.98-1.01
Quintile 5 (reference)		
Rurality		
Rural	0.86	0.84-0.87
Urban (reference)		
Mother characteristics		
Age at first delivery, years		
<19	0.70	0.69-0.71
≥19 (reference)		
Immigration status		
Immigrant	1.00	0.98-1.01
Refugee	0.90	0.88-0.93
Nonimmigrant (reference)		
Usual provider of care characteristics		
Specialty		
Family physician no patient enrollment model	0.93	0.86-1.02
Pediatrician	1.28	1.13-1.44
Family physician –patient enrollment model (reference)		
Sex		
Male	0.64	0.61-0.66
Female (reference)		
Continuity of care		
Very low	1.10	1.07-1.13
Low	1.00	0.99-1.02
Medium	1.10	1.08-1.11
High (reference)		
Time in practice, years		
≤5	1.38	1.29-1.48
6-10	1.30	1.22-1.39
11-15	1.27	1.19-1.36
16-20	1.28	1.20-1.38
≥21 (reference)		
Medical training		
International	0.98	0.94-1.03
Domestic (reference)		

Table III. Mean practice screening rates by immunization level bonus (fiscal year 2013) (n = 8352 family physicians)

Immunization level bonus (%)	No. of providers	Mean screening rate	SD	*P* value
No bonus	3018	48.07	36.33	<.001
85	223	57.06	29.77	
90	344	56.68	30.62	
95	4767	58.22	32.12	

Pairwise comparisons show each incentive group is significantly higher in mean screening rates compared with the no bonus group.

It is striking that strong drivers of uptake seem to be more highly associated with provider rather than patient characteristics. Specifically, negative predictors of uptake include physicians who have been in practice for >20 years and are male. Although pediatricians were the most likely to provide EWCV, within the subsample of family practitioners eligible for the immunization bonus, it is clear that there are those who achieve a better quality of care across both metrics. The positive association with recency of training is in line with other studies of medical care and may relate in part to efforts to incorporate continuous quality improvement in medical training and practice.[44-48] Other Canadian studies have suggested that female primary care physicians may be more likely to follow guideline care.[49]

The association of not receiving the 18-month EWCV with social vulnerability is consistent with our previous studies in the same jurisdiction around other measures of primary care quality. These findings suggest that, despite a universal health insurance system, disparities in access to and quality of care continue to exist for at-risk populations. Although we do not know whether there were inequities in developmental screening or surveillance before the program, there is a growing literature that suggests that medical incentive programs that do not explicitly target inequities may widen pre-existing gaps in access to and quality of care for those with social risk factors.[50-52] Although we explicitly did not explore other medical risk factors that might be related to developmental problems because this enhanced visit is recommended for all children irrespective of whether they are already being followed for developmental issues, our finding that very low birth weight children are less likely to be screened likely relates to these children being part of secondary prevention programs such as neonatal follow-up clinics that provide developmental assessments to high-risk infants who were cared for in neonatal intensive care clinics and have high rates of attendance in Ontario.[53]

Although the population-based nature of the data sources for this study is a study strength, it also poses limitations. Our measured outcome is based on physician billing records. Some children do not receive all of their primary care from physicians and likely account for some of the 5% of children identified as having no usual provider of physician care. This includes those whose family physicians employ nurse practitioners (although this is relatively uncommon and physicians still bill for some of their activities), as well as children living in remote communities, including First Nations, served by nursing stations. We were limited in which practice characteristics we could measure, and there may be others that are relevant (such as the use of electronic medical records or patient panel numbers) to implementing developmental screening. We were not able to assess the actual content of

these visits or that of those that occurred at 18 months before the new fee code to assess whether there was truly a change in actual practice, and whether this program has changed social disparities in screening. We were also limited in our ability to correlate with other quality measures (which are generally hard to measure in administrative data) apart from the immunization bonus. Finally, our unit of analysis was the child. Although we analyzed a number of patient-level sociodemographic risk factors, practice-level analyses would be important to determine whether low uptake in children with social risk is concentrated at a practice level or whether disparities exist within a practice.

Our findings from the experience in Ontario suggests that implementation of similar incentive programs will need to both target certain physician demographics and focus on preexisting inequities in order to be effective. Qualitative data will be necessary to elucidate the reasons for the less than optimal rates of screening. Future steps in the evaluation of this particular program should include an assessment of the impact of the visit on both developmental service use and child outcomes. ■

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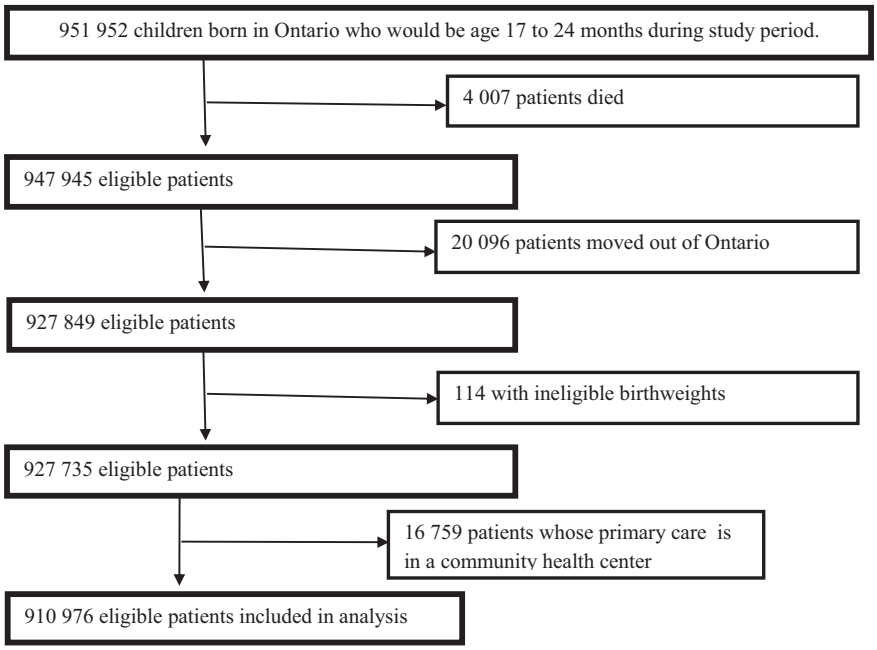

Figure 1. Flow chart of exclusions for patients eligible for the enhanced 18-month well-child visit from 2008 to 2015 in Ontario.