# Healthy babies, healthy neighbourhoods

## It will take an interconnected response to tackle the complex issue of teen moms, poverty and low-birth-weight babies.

Hamilton Spectator – Born: A Code Red Project

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In 1997, Ontario's health ministry set an unambiguous hard target for reducing the province's rate of low birth weight babies, which was 5.7 per cent at the time.

By 2010, the ministry declared, the rate of low-birth-weight babies in Ontario would be reduced to 4 per cent.

It's one of the few hard targets that can be found in provincial government literature about birth outcomes.

In 2010, however, the actual low-birth-weight rate in Ontario had risen to 6.5 per cent, according to the results of The Spectator's massive new BORN project.

Thirteen years after the government set its goal, the low-birth-weight rate didn't come close to the 4 per cent target.

In fact, it actually became substantially worse during a period that saw Ontario's entire health budget rise to $44 billion from $17 billion a year.

"Clearly there hasn't even been any close approximation to that 4 per cent happening," said Neil Johnston, one of the collaborators on both the BORN project and last year's landmark Code Red series.

Johnston, an expert in analyzing health data, is also a faculty member in McMaster University's department of medicine.

"What I haven't seen — and I expect doesn't exist — is that any structure was put in place to achieve that objective," Johnston said.

"More to the point, was anybody or any organization or a minister of the Crown or somebody given responsibility for achieving it and given some kind of apparatus to make it happen? And I'm betting the answer is no.

"So it becomes another meaningless political gesture and we're now 14

years down the road with the same problem, maybe worse," he added.

The stubborn persistence in the rate of low-birth-weight babies is more than just a point of provincial shame or a quest for better statistics.

There's a lot of money at stake.

Low-birth-weight babies, on average, are an expense for the health care system — sometimes for life.

To get a sense of the costs for just one part of the low-birth-weight equation, here are some rough back-of-the-envelope calculations.

Let's say, for the sake of argument, the province had succeeded in achieving its 4 per cent target last year.

That would have meant approximately 3,370 fewer low-birth-weight babies would have been born in Ontario in 2010.

According to an Ontario health promotion ministry document published last year, the average hospital cost for a newborn of healthy birth weight was about $1,000, using Canadian figures from 2005-06.

For each low-birth-weight baby, however, the same document estimated the hospital costs for the first year of life would be approximately $88,000.

So, multiply 3,370 babies by $87,000 per baby that wouldn't have to be spent and you end up with a potential $293 million in savings for Ontario taxpayers.

That's just for low-birth-weight babies, and just for the first year of life, which is a fraction of the potential costs for low-birth-weight babies to the health care system.

One Alberta study has shown premature babies required five times more in direct health costs than full-term babies over the first seven years of life.

Yet The Spectator's BORN project shows the needle continues to move in the wrong direction.

"I don't think there's a quick fix in this," said Johnston.

"You have to harmonize all the bits and pieces. What we have right now is a wonderful jam session going on with all kinds of really deeply motivated, committed people, highly skilled in their professions.

"What we need is a symphony orchestra," he said.

“We need everybody playing together and playing from the same score and that requires structural changes.”

Over the past two Saturdays the BORN project has identified unacceptably high rates of low-birth-weight babies across the province, particularly in Ontario communities and neighbourhoods suffering from high levels of poverty.

The exhaustive analysis of 535,000 birth outcomes has shown the same is true when it comes to the numbers of teen girls having babies, especially in the north and remote native communities.

It’s likewise for the rates of Ontario women receiving the early prenatal care that is vital for putting a pregnancy on the right track.

“Ultimately in Ontario, the provincial government has made it very clear that they run the health system,” said Johnston. “They make the decisions about what the health system will and will not do.

“That’s fine. But then they must take accountability for what happens in it.

“If we see something like this continuing relatively high level of apparently poor pregnancy outcomes — with a great deal of variation between different neighbourhoods and population centres — then I’d simply like to know who is responsible,” he added.

“And if indeed nobody is responsible for it, then you’ve got this patchwork quilt of municipalities and health departments and LHINs (Local Health Integration Networks) and God alone knows what else — none of whom have a clearly defined accountability for this important health outcome.”

So just who should be held accountable?

With Ontario’s rate of low-birth-weight babies going up, not down, who should be held responsible?

Who should be held responsible when one in seven babies in some Hamilton neighbourhoods is born to a teen mother?

Or when the rate of teen moms is as high as 40 per cent on some northern native reserves? Or when nearly half of the pregnant women in a place such as Windsor aren’t receiving prenatal care in the first three months?

One of those people is Deb Matthews, Ontario’s health minister for the past two years.

“If you’re going to tackle a problem, you first have to understand it,” said Matthews. “You have to have the data so that you can be strategic in the interventions.

“Understanding where challenges are geographically and then what the interventions are that can move those numbers is the first step in actually having a healthier society.”

Matthews understands this better than most politicians. Outside the political arena, she’s a demographer by training, and she earned a PhD in sociology for an examination of the effects of immigration on Canadian cities over the next 40 years.

“We set a goal. We want Ontario to be the healthiest place to grow up and grow old,” said Matthews. “We’ve got to get to work and figure out what we mean by that, how we’re going to measure that.

“We as government, but also we in health care, know that the best thing that we can do for our health care system is actually have healthier people,” she said.

The BORN project has also shown the disturbing level of maternal health problems that exist in First Nations communities, particularly those located on isolated reserves in Ontario’s Far North.

Pick almost any marker of social or economic health, and those, too, will likely be abysmal for aboriginals in northern Ontario.

Untangling accountability for Ontario’s native population is complex, however.

The federal government is responsible for funding First Nations health across Canada but the delivery of the actual health programs is shared between the First Nations themselves and the federal and provincial governments.

“The Government of Canada is very concerned about the gap in health outcomes between First Nations and other Canadians,” said Health Canada spokesperson Gary Holub.

Geographically isolated reserves and “challenging socio-economic conditions” are some of the barriers to delivering comprehensive health services, said Holub, along with “the intergenerational impacts of Indian residential schools, which have profoundly impacted parenting and mothering skills and disrupted healthy relationships at many levels.”

Holub noted some aboriginal health markers have improved in recent years, but infant mortality rates remain approximately twice as high as Canada's non-native population. The quality of data collected from native communities is also a problem, hindering the government's ability to measure progress.

"The current health challenges facing First Nations in Canada are a result of a myriad of factors," said Holub, "and will require the co-operation of individuals, First Nations governments, provinces, territories and the Government of Canada."

At the local level, Dr. Chris Mackie is another of those people prepared to be held responsible.

He's a Hamilton associate medical officer of health and he's blunt in his assessment.

"I would hold every level of government and every major institution in our community accountable," said Mackie. "We haven't handled this issue.

"We haven't solved this problem and it's been known for some time that it's a major problem."

Mackie said all governments have a role to play in helping solve — or worsen — the health problems affecting mothers and babies.

"Are you going to choose policies that create a more supportive and caring society or are you going to choose policies that punish people when they don't succeed in life?" asked Mackie.

"If we as individuals within a community don't care about the other people in our community, if we have economic and political power and we don't care about the other people in our community, the chance of them caring about themselves, taking care of themselves, taking care of their children and their lives is pretty low."

The community itself also has to play a role, particularly with teen mothers, according to Debbie Sheehan, director of family health for Hamilton's public health department.

It would be easy, and tempting, to simply blame teen mothers — and teen fathers, let's not forget — for their predicament.

That kind of approach, however, does nothing to help the children of these children.

"This has to be a grass-roots movement where the community supports

adolescent mothers, and service providers are there in a supportive capacity but not in the lead," said Sheehan. "The community needs to own the moms that live in their community.

"If you look at most cultures, with respect to pregnant women, the whole community rallies around from the beginning of the pregnancy right up until that child is of age," Sheehan added.

"It takes a village to raise a child — that sounds trite — but many of these adolescents don't have a village around supporting them."

## Born Conclusions: Healthier mothers, healthier babies

**Deb Matthews Ontario health minister, on recognizing the important role of social determinants on people's health:**

"It's very top of mind on a lot of fronts. We're making targeted investments to improve access to care amongst populations for whom poverty is a reason why they're not accessing the care they need.

"We know that providing primary care, particularly to vulnerable populations, is just the right thing to do. It's the right thing to do for the people but it also takes pressure off other parts of our system like our emergency departments.

"We're doubling the number of community health centres in the province. We're really working to have those social determinants of health and health equity embedded right in the decision-making."

DEB MATTHEWS AUDIO by thespec

It would be unfair to suggest nothing is being done at a local, provincial or even federal level to improve birth outcomes and maternal health.

In response to the outcomes highlighted in the original Code Red series last year, one priority set by Hamilton's public health department was to develop a communitywide initiative to address maternal health issues.

"We know we have to do something different because we have not been successful to date in preventing low birth weight," said Sheehan.

"Our rates show little improvement over the last 20 years or so. We've done a lot of great work but it's not making a difference."

Meanwhile, a team of McMaster researchers has received federal funding for a one-year study that will look at the factors that could be responsible for variations in the health of pregnant moms and their babies across

Hamilton neighbourhoods.

At the federal level, Health Canada provides at least $200 million annually to a variety of programs aimed at improving the health of native mothers and children, including nutrition programs, programs to prevent fetal alcohol spectrum disorder births, and the Aboriginal Head Start On Reserve program, which is directed at on-reserve children up to age six.

At the Six Nations reserve south of Hamilton, for example, pregnant women can take advantage of Ontario's only aboriginal birthing centre, which offers free 24-hour-a-day support.

Home visits are part of the program, and pregnant women can even receive some medications, such as iron supplements.

The centre's logo — four generations of women with a grandmother moon shining down — is painted on the wall and built into the floor as a tiled mosaic.

"For us, it takes a whole community to raise a child," said Julie Wilson, supervisor of the centre.

Six Nations also offers a Healthy Babies, Healthy Children program for families.

At the provincial level, Ontario has put into a place a strategy with the goal of reducing by 25 per cent the number of children living in poverty by 2013. The province has also set a goal of reducing child obesity by 20 per cent.

"It's something I am absolutely committed to and passionate about," said Matthews, the health minister. "We're all better off when all our children are better off.

"Health is closely linked to their ability to eat nutritious food or to have stability in their housing," she added. "Taking financial pressure off families is good for the health of kids and they'll do better in school.

"Everything is connected and I think we have to look at it in an interconnected way."

Healthy birth weight is one of the eight indicators being tracked as part of the poverty reduction strategy.

"We think it's an important indicator because it talks about the health of the mom and it also talks about the health of the child," said Matthews.

## Born Conclusions: Progress requires 'hard targets'

**Dr. Chris Mackie, Hamilton's associate medical officer of health, on possible reasons for the city's polarized rates of teen moms, which differ sharply between low-income neighbourhoods and those with higher incomes:**

"If people finish high school, they're less likely to become teenage moms, we know that. People who go on to university are less likely to be teenage moms.

"But is that the causal factor? It's probably part of it. But I think it's earlier than that.

"It's whether that person has hope or not, whether the person believes they can achieve their goals, and that's determined earlier. Much earlier — maybe even in the first two years of life in many cases.

"If you don't have that foundation, that belief that you're valuable as a person, which is really established in those first two years, then you're a lot less likely to go on and achieve something in elementary school. And if you don't achieve something in elementary school, chances are you're not going to achieve something in high school.

"So yes, it's true that there's a link between high school and university attainment and teenage pregnancy, but that stuff is already wired in many senses."

Corrado Gini was an Italian statistician with a particular interest in the economics of large populations.

In 1912, he came up with a mathematical formula that has since been linked to his name — the Gini coefficient.

While the formula is complicated, the concept is simple. The Gini coefficient is a number between 0 and 1 that represents the income inequality that exists across a group of people.

In a hypothetical population where every single person had the exact same income, the Gini coefficient would be 0. A place where one person had all the income and everyone else had none would have a Gini coefficient of 1.

Most of the time, the Gini coefficient is used to rank countries.

At one extreme is Namibia, the country with the greatest income inequality in the world and a Gini coefficient of 0.71.

At the other extreme, the country with the least income inequality, perhaps not surprisingly, is Sweden, with a Gini coefficient of 0.23.

Canada’s coefficient is 0.32, which is 35th-best in the world. Meanwhile, there are only 43 countries in the world worse than the United States, which has a coefficient of 0.45.

But Gini coefficients can also be derived at a much smaller level than countries.

Patrick DeLuca, one of The Spectator’s BORN and Code Red collaborators as well as a McMaster University geographer and statistician, calculated the Gini coefficients for Hamilton’s 135 neighbourhoods. (See map above.)

The results are eye-opening.

It turns out the Hamilton neighbourhoods with the greatest income inequality are also the same neighbourhoods with the highest levels of poverty.

Twenty of the 22 neighbourhoods with the highest income inequality are located in the lower inner city, centred in the heart of Hamilton’s downtown.

The neighbourhood with the highest income inequality — from Queen Street to James Street between King Street and Hunter Street — has a Gini coefficient of 0.71, the same as Namibia.

This same neighbourhood was among the 10 worst in Hamilton for a number of health factors, based on last year’s Code Red findings. Its median household income was less than $19,000 according to the last census, almost half of the people there lived below the poverty line and about one-quarter of the neighbourhood’s income came from government handouts.

Meanwhile, the neighbourhood with the lowest income inequality — on the west Mountain along the brow by Scenic Drive — had a Gini coefficient of 0.17, more equal than Sweden.

In that neighbourhood, the median household income was nearly $136,000 and there were no people living below the poverty line according to the last census.

Look around the Golden Horseshoe and compare numbers.

Hamilton’s Gini coefficient is 0.424. For Burlington, it’s 0.334.

For Oakville, one of Canada’s wealthiest communities and a place where teen mothers are almost nonexistent (as BORN showed), the Gini coefficient is even better at 0.286.

Why is this important?

Because the health and social effects of income inequality are coming under greater worldwide scrutiny by academics.

Backed by hundreds of scientifically conducted studies, the evidence now suggests that the greater the income inequality across a group of people, the worse the outcomes are for any number of health and social factors.

And not just for those at the bottom of the ladder, but for everyone across the group.

Perhaps it's a coincidence the neighbourhoods in Hamilton with the greatest income inequality also happen to be the neighbourhoods that performed poorly for any number of health variables based on the findings of both Code Red and BORN.

Perhaps it's not a coincidence.

Terry Cooke is president and CEO of the Hamilton Community Foundation, the city's most powerful philanthropic organization.

He's also a former Hamilton councillor and regional chairman, so he understands from more than one angle the politics and challenges of city building.

Income inequality in Hamilton, Cooke says, is "a massive problem."

"It diminishes assets and compounds problems in concentrated areas," said Cooke.

"What we've learned is that there's both a human and a fiscal cost associated with that that impacts everybody in a metropolitan area."

In the 19 months since Code Red was first published, Cooke said he can see momentum building thanks to collaborations that have brought together public agencies, academic institutions and citizens' groups.

"I think the pendulum is moving and in some ways, the public is starting to understand that we need some fundamental changes and that will require leadership both at a grass-roots neighbourhood level but also at a political level.

"I think we've built some trust and actually made some progress," Cooke added.

"I'm hopeful."