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Healthy Babies Healthy Children Process Implementation Evaluation

Highlights of Provincial Results (June 2014)




Ontario
Agency for Health Protection and Promotion
Agence de protection et de promotion de la santé

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Background

Healthy Babies Healthy Children (HBHC) is a program funded by the Ministry of Children and Youth Services (MCYS) designed to help children in Ontario have a healthy start in life and provide them with opportunities to reach their potential.

This voluntary program is delivered through 36 public health units (PHUs) in Ontario in partnership with hospitals and other community partners.

The program consists of universal screening with targeted assessments and interventions for families and children from the prenatal period until their transition to school.

Program Changes

In 2012–13, MCYS introduced enhancements to strengthen the HBHC program.

These enhancements included:

- A new HBHC Screen
- Universal 48-hour contact in the postpartum period
- Introduction of a screening liaison nurse (SLN) model to collaborate with community partners
- Introduction of standardized education and training to use evidence-informed interventions during home visiting.

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Evaluation

- Previous evaluation activities related to the enhancements have included:
  - HBHC Screen validation (Phase 1)
  - Evaluation of the HBHC Screen Administration models (Phase 2)
- Public Health Ontario was asked to lead the **Phase 3 Implementation Process Evaluation,** which:
  - Focused on the first six months following full implementation
  - Measured the extent to which the planned changes have been implemented

Methods: Phase 3 Implementation Process Evaluation

- Overall method
  - Mixed method design (combining both qualitative and quantitative data)
- Informed by engagement and existing literature
  - HBHC Advisory Committee, HBHC Directors and Managers, MCYS
- Data Sources
  - Administrative database (HBHC-ISCIS)
  - Health Unit Staff Survey
  - Focus groups
  - Training evaluation survey
- Ethics approvals received from PHO Ethics Review Board (ERB)
- This resulted in two interim and one final report based on results from all data sources.

Evaluation Questions

There were two main evaluation questions

- To what extent have process implementation outcomes been achieved?
  - Reach, fidelity, impact of program change goals and local adaptations
- Which factors are related to the delivery of the enhanced HBHC program?
  - At innovation, provider, population, public health unit and system levels

Reach

Reach measures the distribution and characteristics of those receiving the HBHC program services.

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HBHC Screen

- The HBHC Screen has 36 items:
  - Pregnancy and birth
    - (i.e., birth-weight, multiple births, premature, Apgar score, labor and delivery complications)
  - Socio-demographics (family)
    - (i.e., age, educational attainment, access to OHIP, concerns about money)
  - Infant/child
    - (i.e., congenital or acquired health challenge)
  - Risk behaviours during pregnancy
    - (i.e., smoking, alcohol use, drug use)
  - Parenting and parenting-related
    - (i.e., parenting concerns, history of depression/anxiety/mental illness in parent(s)
  - Other infant/child development risk factors

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HBHC Screen Reach

Comparison of HBHC Screening Target and HBHC Screen Reach in the First Six Months of Implementation

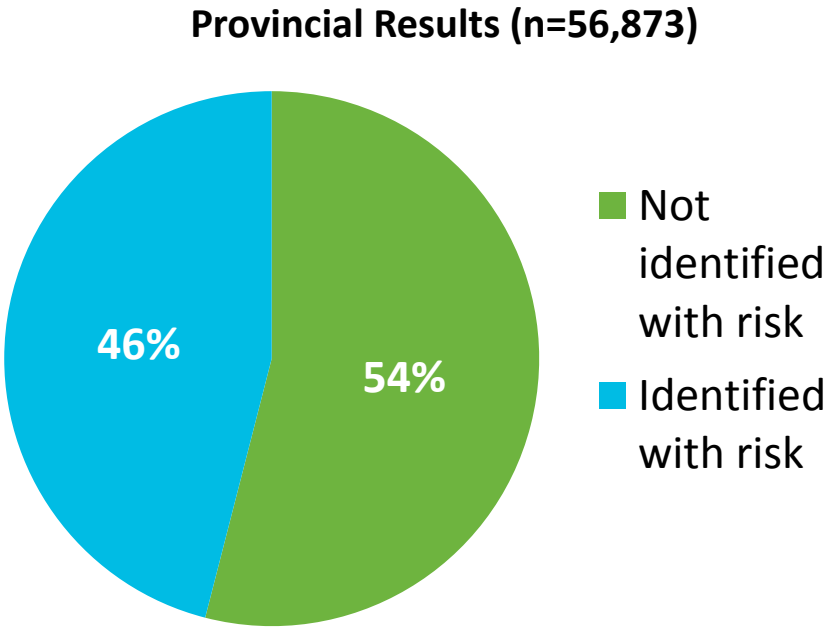
Entry Stage	HBHC Screening Target	HBHC Screen Reach[1]	Identified with Risk
Postpartum	100% of provincial births	**~81**% (n=56,903)	**46%** (n=25,930)
Prenatal	25% of provincial births	**~9**% (n=6,623)	**60%** (n=3,957)
Early Childhood	20-35% of children aged 6 weeks to 70 months	**<1%** (n=2,509)	**92%** (n=2,313)

Note: [1] Reflects the reach of HBHC clients in the first six months of implementation. Per cent reached was estimated based on preliminary 2013 live birth data from BORN. Number of clients who were screened in each entry stage are listed in parenthesis.

HBHC screen reaches a large number of postpartum clients and is a resource for surveillance and monitoring activities

Risk Identification (Postpartum Clients)

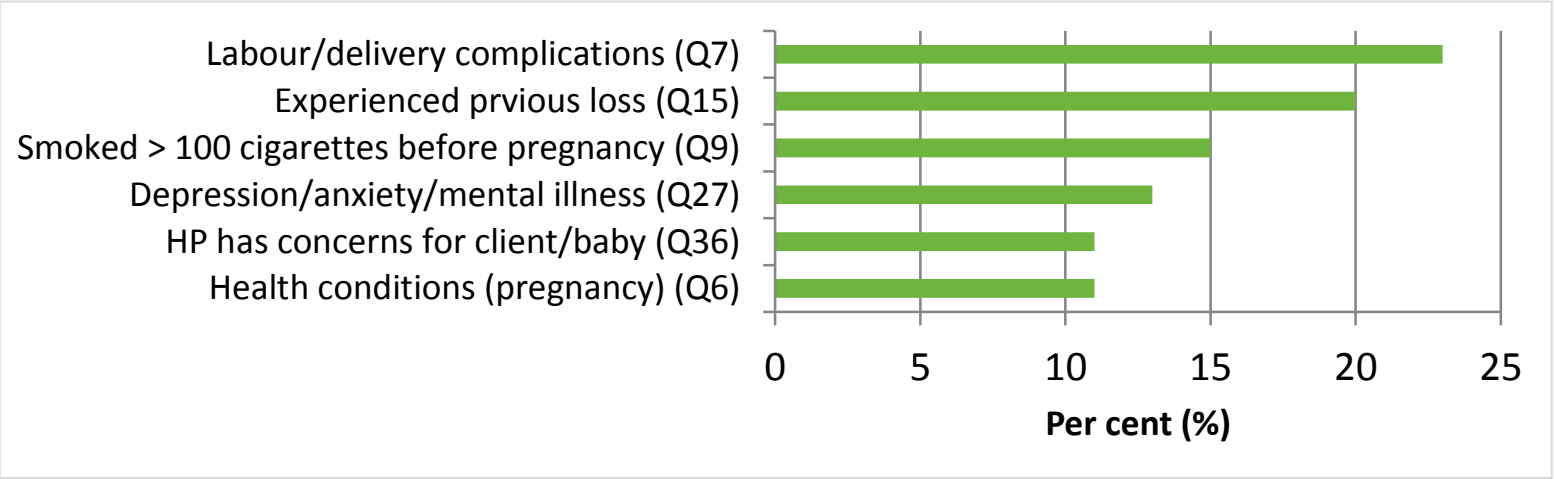
Risk Identification in HBHC Screens of Postpartum Clients



- 46% of postpartum clients were identified with risk
- Risk identification ranged between 31-76% across PHUs

Top Five HBHC Screen Risk Factors among Postpartum Clients

Provincial Results (n=56,873)



Note: Screen questions are listed in parenthesis (see Appendix 2 for HBHC Screen).

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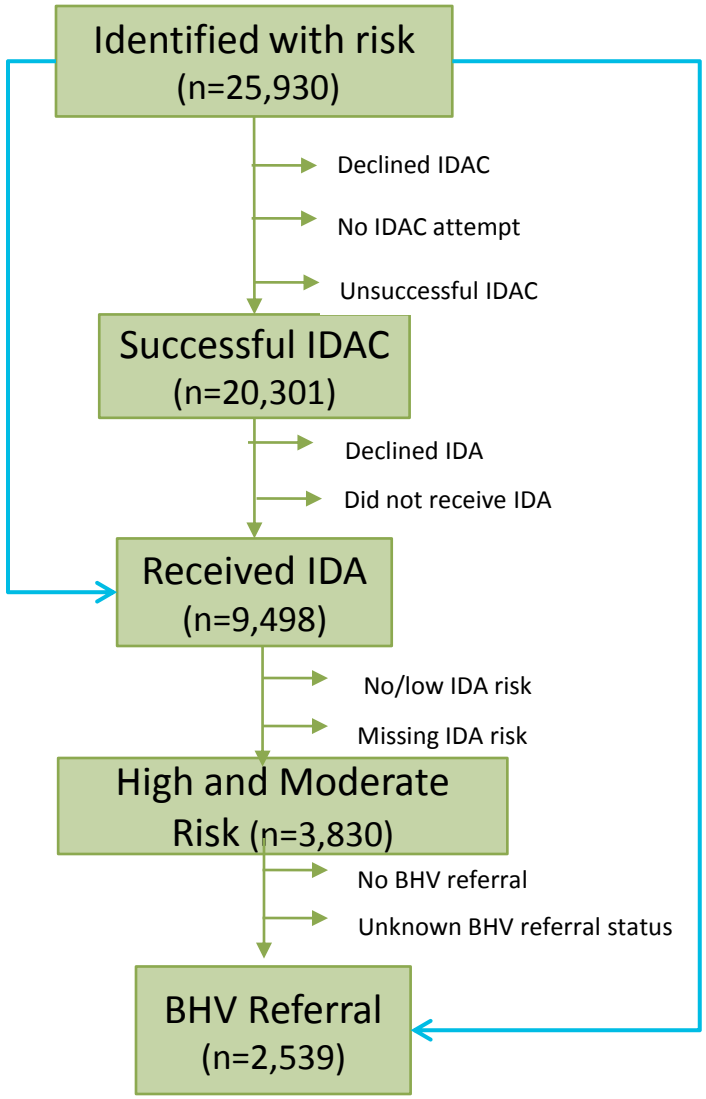
Variability in Screen Characteristics (Postpartum Clients)

Prevalence of HBHC Screen Risk Factors among Postpartum Clients

HBHC Screen Characteristics	Ontario (%)	Public Health Units (Range, %)
Birth Outcomes		
Premature[2]	8	4 – 13
Birth Weight > 4000g[4]	**9**	**5 – 15**
Maternal Risky Behaviors		
Smoked during Pregnancy[8]	10	3 – 32
Smoked > 100 Cigarettes before Pregnancy[9]	**15**	**4 – 45**
Alcohol Use during Pregnancy[10]	2	0.5 – 13
Drugs Use during Pregnancy[11]	3	1 – 17
Mental Health Problems		
Depression/Anxiety/Mental Illness[27]	13	6 – 28

- Prevalence of HBHC Screen characteristics varied greatly across PHUs (e.g., percent of mothers who had smoked 100 cigarettes prior to pregnancy varied by 41 percentage points across PHUs)

Overall HBHC Provincial Program Reach (Postpartum Clients)



37% of clients identified with risk received IDA

9% of clients identified with risk were referred to BHV

Acronyms
IDA: In-Depth Assessment
IDAC: In-Depth Assessment Contact
BHV: Blended Home Visiting

Re-entry Through Postpartum Contact

- Only 3% (n = 735) of clients who received a PPC re-entered the HBHC program
  - Rate of re-entry: telephone (8%) vs. written contact (< 1%)
- The most commonly identified reason for re-entry was: “health professional has concerns for client/baby” (94%)
  - Causes for concern are not available
- The majority of clients who re-entered did not receive an IDA (59%) or were classified as no/low risk using IDA (26%)

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Reach: Summary

- Initial focus of implementation was on screening for the postpartum entry stage (~81% reached)
- Approximately half (46%) of postpartum clients are being identified with risk, and there was significant variability in client risk factors across health units
- More vulnerable clients were reached for prenatal and early childhood screening (60% and 92% identified with risk)
- Overall, IDA was received by 37% of postpartum clients, 34% of prenatal clients and 48% of early childhood clients identified with risk
- Clients with risk who were not assessed by IDA appear to have higher prevalence of pregnancy, labour, and delivery related risk factors

Fidelity

Fidelity refers to the extent to which the program is being implemented as planned in the HBHC Protocol.[16]

Fidelity Across the HBHC Program: Screen Completion

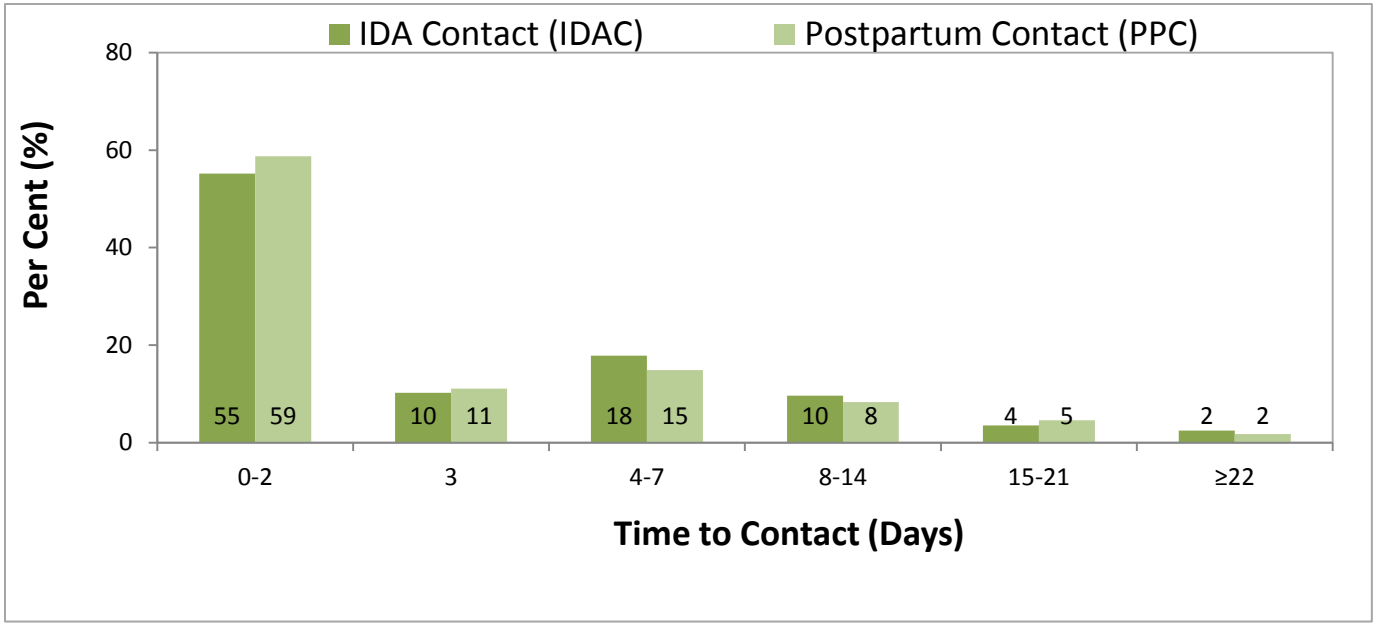
Provincial

- Although all HBHC Screens must be completed before providing other services, 66% of postpartum screens were found to be complete
  - 69%* of postpartum screens for those identified at risk were found to be complete
  - 64% of postpartum screens for those not identified at risk were found to be complete
- Completion rates were similar for the other two entry stages
  - Prenatal 67%
  - Early childhood 63%

Note:* statistically significant (χ^2 p-value<0.05) compared to those not identified with risk

Fidelity to 48 hour Contact Requirement (Postpartum Clients)

Time to IDAC and PPC among Postpartum Clients



- The majority of clients receive IDAC or PPC within 48 hours [1]
- 75% of clients received IDAC within 5 days or PPC within 4 days
- 90% of clients received IDAC within 11 days or PPC within 10 days

Note: [1] 48 hours was operationalized as two calendar days

Fidelity to Postpartum Contact Methods (Clients With/Without Risk)

IDAC

- Successful IDACs using a single contact method (79%):
  - 56%- Telephone
  - 16%- Face to Face
  - 7%- One-way communication (inconsistent with HBHC Guidance Document requirements)

PPC

- Successful PPC contact methods:
  - 50%- Written (all methods allowed for PPC)
  - 25%- Telephone

Overall HBHC Program Variability (Postpartum Clients)

- Variation across PHUs for each program component:
  - Screen reach (range: 63-117%) [1]
  - Screen risk identification (range: 31-76%)
  - Successful IDAC (range: 69-95%)
  - Successful PPC (range: 38-99%)
  - 48 hour IDAC (range: 9-89%)
  - 48 hour PPC (range: 23-98%)
  - IDA completion (range: 34-100%)
- These variations are likely related to client characteristics, local adaptations, and other factors
- Majority of PHUs (61%) reported local adaptations

Note: [1]These estimates must be interpreted with caution due to the preliminary nature of 2013 live birth data from BORN and this may explain the screening reach above 100% in some PHUs.

Fidelity: Summary

- While many program components were being implemented as intended, there was significant variation among PHUs for each program component
- Variability in population characteristics, local adaptations, and other factors may be contributing to the variation across PHUs
- From the Health Unit Survey and Focus Groups:
  - HBHC staff would like both consistency and adaptability in the program
  - HBHC staff request further clarification on which program components must be standardized and which may be adapted

Strengths and Challenges

Contributing Factors: Selected Strengths

Innovation:

- Screening Liaison Nurses

Provider:

- HBHC staff are an experienced and committed workforce

Organization:

- Survey respondents reported positive organizational culture within their health units

Systems:

- Directors, managers, and PHNs felt that the enhanced HBHC program aligned well with many other PHU mandates and priorities

Facilitation:

- The enhanced HBHC program was implemented using a multi-faceted and comprehensive approach

Contributing Factors: Selected Challenges

Innovation:

- HBHC Screen takes longer to complete than previous screening tools
- Format challenges (e.g. small font size) and consent process

Provider:

- Respondents reported an increase in time spent on various program elements

System:

- The ability of community partners to perform skilled screening varies
- Need for better alignment of HBHC program objectives with other initiatives, e.g., Baby-Friendly Initiative (BFI)

Facilitation

- Staff identified the need for ongoing professional development to facilitate program implementation

Conclusions

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Conclusions

- The evaluation methods allowed for a comprehensive understanding of the first six months of implementation
- Enhanced HBHC program is being implemented across Ontario with significant variability among peer groups and PHUs
- Provincial results have relevance within and beyond HBHC
- MCYS and the local PHUs should explore strategies to address both the strengths and challenges associated with the first six months of implementation