Electronic Medical Record – Integrated Solution in Primary Care to Screen and Provide Supports for Those Living in Poverty

Claire Stapon[1], Gary Bloch[2], Julia Orkin[3,4], Justin Presseau[5], Sarah Asad[5], Chris Cassolato[6], Dave Courtemanche[7], Mario Elia[8], Dan Flanders[9], Katie Hagel[1]

[1]Centre for Effective Practice, Toronto, ON, [2]St. Michael's Hospital, Toronto, ON, [3]Department of Paediatrics University of Toronto, Toronto, ON, [4]The Hospital for Sick Children, Toronto, ON, [5]Ottawa Hospital Research Institute, Ottawa, ON, [6]Two Rivers Family Health Team, Cambridge, ON, [7]City of Lakes Family Health Team, London, ON, [8]London Lambeth Family Medicine Clinic, London, ON, [9]Kindercare Pediatrics, Toronto, ON

Background/Context

In Ontario, approximately 20% of families, or 1.57 million people, live in poverty. Primary care providers are well situated to act as an entry point to social service supports for individuals living in poverty.[1, 2] Opportunistic identification of social need at primary care medical appointments allows for access and support for individuals who may not otherwise be aware of services or social resources that they may be eligible for. Yet, many providers report feeling ill-equipped to address these issues.[3]

Objectives

This project, led by the Centre for Effective Practice in partnership with CognisantMD and 211Ontario, aimed to develop and test an electronic medical record (EMR)-integrated primary care intervention to enable providers to effectively screen and provide supports to those living in poverty.

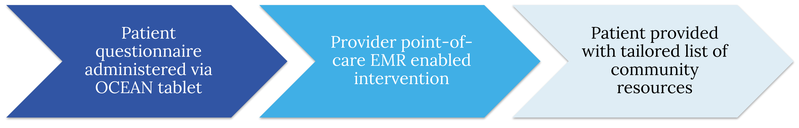
Methods

Participants: The intervention was pilot tested in four purposively-sampled sites in Ontario varying in size, geographic location (Toronto, London, Cambridge, Sudbury) and patient populations (general, pediatric).

Education: Pre-intervention, providers at each site were offered an accredited educational workshop on poverty screening, management and resources.

Implementation: The EMR-enabled screening tool was tested over a 2-month period between mid-October and mid-December 2017. During a regular healthcare visit, patients were asked to complete a brief poverty screening questionnaire in the waiting room using an OCEAN tablet computer. Questionnaire results were automatically and immediately populated into the patient's EMR. For patients identified as at risk of living in poverty, the EMR provided customized solutions to enable the provider to discuss relevant government benefits and services the patient may be eligible for during the visit, including a customized, printable list of resources based on the patient's responses to the survey and their postal code, populated from the 211Ontario database. See Figure 1 for a visual of this process.

Figure 1. Three-Step EMR Intervention to Identify and Address Poverty in Primary Care Setting



Evaluation: The intervention was evaluated by an independent third party. The aims of the evaluation were to:

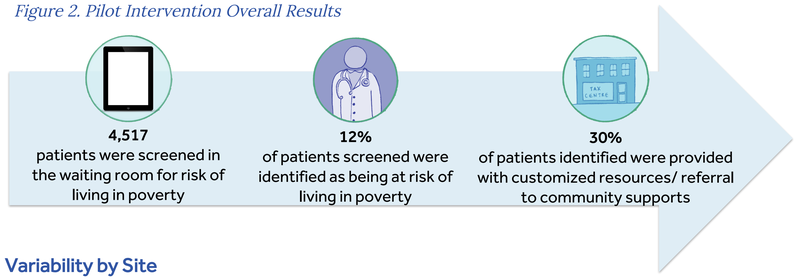
- Quantify the number of patients screened, identified, and referred to community services at each practice after the introduction of the EMR-enabled screening tool, both overall and by patient subgroup;
- Assess primary care staff's knowledge, attitudes and current poverty screening behaviours;
- Assess primary care staff's experienced barriers and enablers to implementation.

Data collection methods included EMR data on select indicators, provider pre- and post-intervention surveys, and post-intervention interviews, guided by the Theoretical Domains Framework.

Results & Discussion

Over the two-month period, 4,517 patients were screened across the four sites; 535 (12%) were identified as at risk of living in poverty, and 30% of those identified were subsequently provided with resources or referrals. Results show that primary care offers the population-level reach to screen for risk of living in poverty and the capacity to help support those living in poverty to access resources that may further support them.

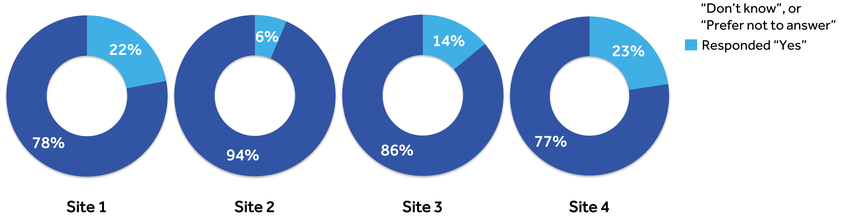
Figure 2. Pilot Intervention Overall Results



Variability by Site

Variability across sites was observed, both in terms of number of patients identified at risk of poverty (range 6%-23%, see Figure 3) and number of identified patients subsequently provided with support (7%-48%). Depending on the patient population served, over a fifth of patients may be living in poverty.

Figure 3. Patient Response to Screening Question, by Site ("Do you ever have difficulty making ends meet?")



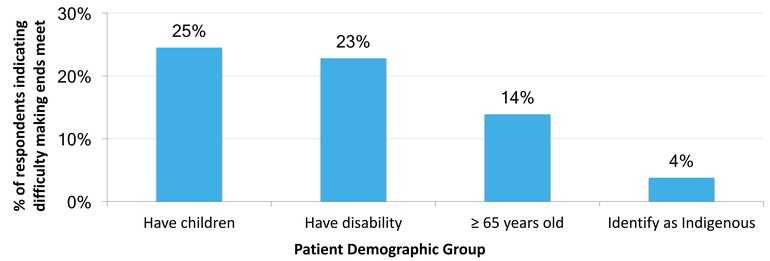
Subgroup Analyses

Sex Differences: There were no major differences in the number of males and females screened (n = 2,220 and 2,297, respectively), identified (n = 198, 199), and provided with an intervention (n = 86, 74). This suggests that the tool is useful for both sexes and that there does not seem to be any notable difference between sexes in those screening positive for risk of poverty, at least in this pilot study. The significance of this finding underscores that poverty can affect either sex.

Age: The mean age of those screened ranged from 47 to 58 across sites (overall M = 52, SD = 18), with those identified as at risk of poverty (M = 48, SD = 16) being a younger subset of those screened, though there was substantial standard deviation. Note that one pediatric site was not included in this analysis.

Other analyses: Figure 4 shows the percentage of those individuals identified as being at risk of poverty, by various demographic factors. This is based on patient questionnaire response data and does not include one pediatric site.

Figure 4. % of Patients Identified as at Risk of Living in Poverty, by Those Having Children, Having a Disability, Age (greater or equal to 65), and Indigenous Status



Provider Knowledge, Attitudes and Behaviours Around Poverty Screening

Though limited by small sample size (baseline n=19; follow-up n=9), sites reported higher levels of knowledge, skills and resources for referring and intervening with patients identified as at risk of poverty post-intervention, highlighting the feasibility of the tool's implementation in primary care.

Pre-Intervention	Only a minority of patients were being provided with resources and/or referrals related to poverty.
Post-Intervention	Sites reported providing resources and referrals to twice as many patients on average in a given two-week period. Three out of the four sites showed an increase in the number of patients provided with resources and referrals, including one site with a substantial increase (from 4 to 20 every two weeks).

Enablers, Barriers, and Learnings

- The evaluation showed that there are a substantial number of patients at risk for poverty in primary care, and demonstrated the potential of the EMR-integrated tool to support healthcare providers in poverty screening and intervening at-risk patients;
- Provider survey responses highlight provider recognition of the importance of supporting their patients at risk of poverty and their motivation for doing so;
- However, post-intervention results also showed that half of provider respondents reported lacking confidence in providing patients with sufficient resources to meet patients' needs. This could be addressed in future iterations of the tool by improving the printable resource referral component of the tool and providing additional supplemental training and educational outreach visits.

Conclusion

The data collected through the intervention will contribute to a body of knowledge that will support further interventions into social determinants of health in primary care, and poverty reduction programs across the province. This work will lead to improved knowledge among providers about benefit programs and social services in their community, and increased connections to community benefit programs and support services for patients. Furthermore, the findings of this pilot evaluation will help to inform refinements to the tool to support wide-scale uptake.

Funding: This initiative is supported by the Local Poverty Reduction Fund, a grant funded by the Government of Ontario and administered by the Ontario Trillium Foundation.

www.effectivepractice.org/poverty

[1] Ontario's Poverty Reduction Strategy: Realizing Our Potential, 2014-2019. Government of Ontario.
[2] MacDonnell S, Lim A, Dyson D. Losing ground: the persistent growth of family poverty in Canada's largest city. Toronto: United Way of Greater Toronto; 2007 Nov [cited 2016 Aug 29]; i-68.
[3] Brcic V, Eberdt C, Kaczorowski J. Development of a Tool to Identify Poverty in a Family Practice Setting: A Pilot Study. International Journal of Family Medicine. 2011 May 26; 1-7.
[4] Cane J, O'Connor D, Michie S. Validation of the theoretical domains framework for use in behaviour change and implementation research. Implementation Science. 2012 Dec;7(1):37.

Centre for Effective Practice
Best Evidence • Best Practices • Better Health

Ontario Trillium Foundation / Fondation Trillium de l'Ontario
An agency of the Government of Ontario / Un organisme du gouvernement de l'Ontario

Ontario | 211 Ontario | ocean by CognisantMD