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Qualitative Research

# Screening for poverty and intervening in a primary care setting: an acceptability and feasibility study

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## Abstract

**Background.** A movement is emerging to encourage health providers and health organizations to take action on the social determinants of health. However, few evidence-based interventions exist. Digital tools have not been examined in depth.

**Objective.** To assess the acceptability and feasibility of integrating, within routine primary care, screening for poverty and an online tool that helps identify financial benefits.

**Methods.** The setting was a Community Health Centre serving a large number of low-income individuals in Toronto, Canada. Physicians were encouraged to use the tool at every possible encounter during a 1-month period. A link to the tool was easily accessible, and reminder emails were circulated regularly. This mixed-methods study used a combination of pre-intervention and post-intervention surveys, focus groups and interviews.

**Results.** Thirteen physicians participated (81.25% of all) and represented a range of genders and years in practice. Physicians reported a strong awareness of the importance of identifying poverty as a health concern, but low confidence in their ability to address poverty. The tool was used with 63 patients over a 1-month period. Although screening and intervening on poverty is logistically challenging in regular workflows, online tools could assist patients and health providers identify financial benefits quickly. Future interventions should include more robust follow-up.

**Conclusions.** Our study contributes to the evidence base on addressing the social determinants of health in clinical settings. Future approaches could involve routine screening, engaging other members of the team in intervening and following up, and better integration with the electronic health record.

**Key words:** Internet, poverty, primary health care, software tool, social determinants of health

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## Key Messages

- Family physicians welcome tools to help patients access more financial benefits.
- Screening patients routinely for poverty is likely not feasible if the physician is solely responsible.
- Interventions on poverty and other social determinants require a team approach.

## Background

The social determinants of health (SDoH) are the processes and contexts in which people are born, live, work and age, and which shape their health (1). SDoH include one's housing, educational attainment, gender, food security and income, and have a powerful impact on health and health service utilization (2–4). Over the past decade, a number of organizations have called on primary care providers to be involved in addressing SDoH directly as part of comprehensive health services (5,6). These include the British Medical Association (7), the Canadian Medical Association (8), the College of Family Physicians of Canada (9), the American Academy of Pediatrics (10), the American Academy of Family Physicians (11) and the American College of Physicians (12).

Income is a crucial SDoH, as it is closely linked to access to basic necessities (e.g. food, housing, and fuel), social status, exposure to environmental risks and access to health services (13–16). Across societies, the poor tend to live shorter lives than the wealthy (17). People living in poverty experience high rates of chronic diseases and mental illness and are likely to use health services at a higher rate than better-resourced members of society (4,18,19).

There are only a few existing published examples where primary care providers have intervened on poverty as a way to improve health. In England, a number of practices have formed links with Citizen Advice Bureaus and brought these services directly to patients (20–22). A systematic review of this intervention found that it indeed led to more financial benefits being received by patients, boosting their income (23). In the USA, a number of studies have now demonstrated the feasibility of broadly screening for social needs, including income insecurity, and that such interventions improve access to resources (24–26) and are associated with improvements in health (27). In Canada, clinical practice guidelines have been developed to encourage providers to screen for poverty (28), and new programmes where staff focus solely on income insecurity are being developed and implemented (29).

Few practices will be able to dedicate staff to tackle poverty. A simple, online tool that explores ways to improve income security for patients could be more feasible in clinic workflows, easier to keep up to date and could integrate with the electronic medical record (24,30). Our study assessed the acceptability and feasibility of providers screening their patients for poverty using an online tool that also identifies financial benefits for which the patients could be eligible. We sought to understand whether this would be an efficient and acceptable method for addressing low income with patients in primary care.

## Methods

This mixed-methods study took place in late 2015 at a Community Health Centre (CHC) in Toronto, Canada that serves a diverse community, including a large number of refugees and other newcomers. In addition to medical services, the CHC offers health promotion services such as diabetes prevention, social work and community programming. This study was supported by an Income and Health Advisory Group, made up of patients with lived experience of

poverty and representatives of local community organizations that assisted clients with financial matters.

The online tool was developed in collaboration with Prosper Canada, a national Canadian charity focussed on financial literacy and financial empowerment (31). As the tool is online, it is easy to update continuously as the eligibility for government benefits and the amounts paid out change over time. The tool was based on *Poverty: A clinical tool for primary care in Ontario* (28). We received input on the tool from community organizations and staff from the CHC (a social worker and a health promotion lead). The tool prompted physicians to ask patients the screening question, ‘Do you ever have difficulty making ends meet at the end of the month?’ Previous research had suggested that such a question was approximately 98% sensitive (95% confidence interval of 90.4–99.6%) for detecting patients who live below the Canadian Low-Income Cut-Off (32).

Our study specifically recruited physicians in order to explore what role they could play in improving patient's income. After asking the screening question, the tool posed several demographic questions such as patient age, household income and immigration status. Based on the responses to these questions, the tool produced a tailored, printable list of federal and provincial government benefits that might help supplement a patient's income.

Our participants were purposively selected staff family physicians and family medicine residents at the CHC. We invited all physicians and residents to take part. Physicians participating in the study attended an introductory session to learn about the project, the relationship between income and health and how to use the online tool. At the introductory session, a pre-intervention survey was circulated to participants that asked questions about the perceived value of physician-led screening for poverty as well as participants' degree of confidence in identifying and suggesting resources to patients for improving their income. Participants were asked to use the tool with as many patients as possible between 23 September 2015 and 23 October 2015. The online tool collected information on usage.

After the pilot period, participants were asked to attend a focus group, which began with a post-intervention survey. The survey asked about the perceived value of the web-based poverty tool and the physicians' willingness to use the tool in the future. The survey also included open-ended questions for feedback from participants, including a question regarding possible improvements to the tool. Focus groups explored physicians' perspectives on implementing the tool, its feasibility for primary care settings, and suggestions for improvements. The sessions took approximately 45 minutes. Discussions were audio-recorded and transcribed verbatim. If a participant could not attend a focus group, an interview was organized, and detailed notes were taken.

Descriptive analyses of survey response data were completed using Microsoft Excel. Open-ended responses from surveys were organized thematically. Focus group transcripts and interview notes were uploaded to NVivo 10 (QSR International, Victoria, Australia) for data management. We applied thematic content analysis (33), with two team members (MB and AR) reading and intensively coding a transcript of a focus group independently. Next, these team members met with the study principal investigator (AP) to develop a coding framework in the context of the research question.

The remaining transcripts and notes were then coded using this framework, with new themes emerging inductively from a close reading of the data. In an iterative fashion, results were shared and discussed among the members of study team completing data analysis (AP, AR and MB) (34). These members of the team achieved reflexivity by considering how their roles and experiences in working in family and emergency medicine, primary care research and poverty reduction influenced their inquiry. Furthermore, the group of physicians participating in the study had the opportunity to reflect on how aware they were (or were not) to patients' social needs, and what role they could play in addressing these underlying issues that affected health. The final themes and key findings were confirmed after discussion, in the context of the survey results and data on the use of the tool. Findings were also discussed and verified with the Income and Health Advisory Group.

## Results

Fourteen physicians were initially recruited to participate in this study (six staff physicians and eight resident physicians). One participant was lost to follow-up, leaving 13 physicians who completed the study (81.25% of all physicians), and represented a range of genders and years in practice. Of these, 11 attended one of two focus groups. Two participants were unable to attend and completed individual interviews.

Prior to using the tool, all physicians recognized income as a critical determinant of health. Each physician was aware of patients in their practice who would benefit from additional income but rated their current ability to improve a patient's income as low. Physicians reported feeling that they had insufficient resources to assist patients (average rating of 3.6 on a 10-point scale) and had low confidence in suggesting community supports to help patients address low income (average rating of 3.3 on a 10-point scale). Support for routinely screening patients for poverty was low, and reasons given included a lack of knowledge about benefits or programmes to help patients.

Over 1 month, the online tool was used with 63 patients at the CHC, with 57.1% screening positive for low income. Of the 39 patients who provided their age when using the tool, 2.5% ( $n = 1$ ) were under 18; 51.2% ( $n = 20$ ) were between 18 and 59; 17.9% ( $n = 7$ ) were between the ages of 59–64 and 28.2% ( $n = 11$ ) were 65 or older. Thirty-seven patients answered the question, 'Are you or anyone in your household living with a physical or mental health disability?', with 37.8% ( $n = 14$ ) answering 'Yes', 45.9% ( $n = 17$ ) answering 'No' and 10.8% ( $n = 4$ ) answering 'Don't know/prefer not to answer'. The tool recommended benefits for 14 patients with 28.5% ( $n = 4$ ) being recommended one potential benefit; 28.5% ( $n = 4$ ) recommended two potential benefits; 28.5% ( $n = 4$ ) recommended three potential benefits; 7.1% ( $n = 1$ ) recommended four potential benefits and 7.1% ( $n = 1$ ) recommended five or more potential benefits.

Although physicians reported using the tool in approximately 20.4% (range 5–60%) of patient encounters during the study period, on average each physician used the tool with fewer than five patients. During focus groups, multiple physicians expressed their belief that health providers could play a role in improving a patient's income. When participating physicians were asked the likelihood of continuing to use a tool that could assist patients access benefits in the future, the average score was 6.9 out of 10.

Three main themes emerged through our focus groups and interviews: (i) incorporating screening and intervention around poverty is logistically challenging; (ii) online tools can assist patients and health

providers identify financial benefits quickly and (iii) the intervention should include follow-up with patients.

## Challenges to screening and intervening on poverty

Physicians reported several barriers to screening patients for poverty. It was difficult to begin a conversation about poverty within the usual workflow. The tool was easiest to incorporate into new patient appointments or opportunistically when patients discussed income or social assistance during an appointment. Some physicians discussed how trust was central to whether they broached the topic. Some physicians feared offending or confusing patients by asking about income when they expected assistance with acute ailments. Physicians reported that patients had mixed responses to being asked about their income, with some expressing discomfort while others appreciated being asked about their social circumstance. Lack of sufficient time was identified as a main challenge. The relatively brief appointment times, typically 30 minutes, posed a barrier to integrating the tool into routine care. As one physician noted, 'It wasn't so much that asking the question takes a lot of time, but it's the conversation that would follow' (FG 2, p. 1). Physicians also expressed uncertainty around whether they were the most appropriate team member to use the screening tool, given time constraints, lack of expertise on financial benefits and challenges in providing ongoing support. Several physicians suggested that the tool is most useful in an interprofessional team, saying that allied health care staff such as social workers might be most appropriate for using this tool with patients.

## Online tools can assist patients and health providers identify financial benefits quickly

Overall, physicians approved of the web-based tool and found it easy to use. Occasionally, technical issues arose, such as difficulties printing the recommendations or difficulties locating some functions of the tool, e.g. expanding or contracting the amount of text. The volume of information produced by the tool was also a challenge. The recommendations were often many pages in length, which could be overwhelming for patients. This also made it difficult for physicians to access specific information about certain benefits. Due to the inconvenience of printing specific portions of the document generated, one physician wrote out recommendations for patients. A key benefit was helping the physicians themselves better understand the social assistance system: 'I learned about different kinds of benefits. No, seriously, it's the best summary that I've seen' (FG 2, p. 16). The tool was seen as a methodical approach to addressing financial difficulties. Furthermore, physicians said that they learned more about their patients' lives. The tool was seen as most useful for people who are not already accessing government benefits. Physicians cited several examples where benefits were identified that a patient was not yet accessing but for which he or she was eligible.

## The intervention should include more robust follow-up

Physicians described challenges after using the tool and providing recommendations. In particular, given that several patients had limited English-speaking ability, the English-only nature of the tool and tensions around offering a patient an enormous amount of information on potential benefits without any assistance in navigating the application process for those same benefits caused some concern: 'I felt a little insensitive, because it was almost like a tease. Like there might be something in this package that could help you, but you actually can't access it or even understand it, because you can barely

read English' (FG 1, p. 7). Physicians made suggestions to improve the tool and the approach to its use, including using geo-location to identify local resources, such as the nearest financial advice service or benefits office. Another suggestion was to translate the tool into multiple languages. One physician recommended having patients self-administer the screening in the waiting room and directing them to appropriate resources if they screened positively for low income. This could be complemented with information videos in the waiting room. Other approaches could be to incorporate screening for social needs into standard primary care flowsheets for periodic health exams, well baby appointments and prenatal visits. Participants also recommended using automated reminders in the electronic medical record to prompt health team members to screen for social needs. Finally, physicians raised the importance of financial incentives for providers. Some participants suggested counting the time using the screening tool as counselling, for which providers can bill the provincial government, under a publicly funded 'fee for service' model of payment: *'...it sounds awful, but if you're working in a fee-for-service – like where you don't get a salary, where time is money, how would they be compensated for this?'* (FG 1, p. 21). However, it is estimated that several hundred thousand people do not qualify for public health insurance in Ontario, and under current billing models, these patients could not access this service from health care providers without a cost. This barrier also applies to other contexts where patients do not have access to publicly funded health care.

## Conclusion

This study assessed physicians' views about the value and feasibility of an online tool to screen and intervene directly on poverty. The main strength of the approach is that it gives providers a practical way to address income and social needs in their clinic and increases their ability to connect patients to resources, a major barrier to addressing SDoH (30,35,36). Overall, participants found the screener to be a worthwhile tool, which could be modified to be more effective.

Our findings fit with other research in this area. A recent study of primary care physicians in Virginia, USA similarly found that assessing social needs can be resource intensive and there is an important need to engage the entire team (37). Trials of standardized screening for and intervening on social needs have also found that providers find these interventions acceptable and feasible to implement in primary care if systems are in place to support managing the results of screening (27,38). Garg *et al.* have found in a series of studies in paediatric settings that follow-up with patients after providing them with information on community resources to address social needs is vital to successfully addressing these needs (35,39,40).

The most significant obstacle to integrating the benefits screening tool into primary care was the lack of time during appointments (35). On average, each physician completing the study used the tool for less than five patients over an entire month, despite being asked to use it with every patient seen. A different approach would be necessary to screen a larger number of patients for low income. Ideally, physicians would not administer the tool in its entirety. Other studies have explored alternative approaches that engage other members of the primary care team. For example, the Health Leads model involves trained volunteers. Other studies have used self-administered online tools (24,30,36,41). Intake staff or even the patients themselves could perform brief initial screening. Once a patient screens positive, a social worker or another health professional could help complete the process, recommend resources, and assist the patient with

next steps so that there would be more consistent follow through. In this study, patients may have been overwhelmed by the volume of recommendations generated by the tool or may simply not have the language, literacy or educational background to understand the process. Translation and the use of multimedia learning tools such as videos could address these challenges. Our study adds to the literature by highlighting additional barriers such as stigma around discussing finances with a physician and the importance of navigation and usability.

Our study was limited by focussing on a single primary care organization and the context in which such interventions occur likely has a significant influence on provider interest, uptake and quality. There may also be selection bias, in that providers at this clinic—and those who agreed to participate—may be more interested in addressing SDoH than the typical physician. Providers in settings that see fewer low-income patients or are situated in more middle- or high-income communities may not value screening and intervening on poverty, although studies suggest that providers often misjudge the socioeconomic status of patients (42). Nevertheless, a large majority of available physicians participated, and views on both the facilitating factors and barriers to addressing poverty in primary care were expressed.

Screening for poverty and identifying financial benefits for which a patient is eligible using a simple, online tool is a practical way to increase patients' income in primary care settings. This study adds to the literature through examining physician perspectives. Future work will build on these lessons and examine patient views and outcomes, follow patients and providers for a longer period of time and evaluate this intervention in multiple primary care settings. Future research will also explore which member of the primary care team (e.g. social workers, community health workers and patient navigators) would be best positioned to take a lead on anti-poverty interventions, and what role to physicians, nurses and others can play in supporting them in these efforts (43).

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## References

- World Health Organization. *Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health*. Geneva, Switzerland: World Health Organization; 2008.
- Marmot M. Social determinants of health inequalities. *Lancet* 2005; 365: 1099–104.
- Wilkinson RG, Pickett KE. Income inequality and population health: a review and explanation of the evidence. *Soc Sci Med* 2006; 62: 1768–84.
- Fitzpatrick T, Rosella LC, Calzavara A *et al*. Looking beyond income and education. *Am J Prev Med* 2015; 49: 161–71.
- Kiran T, Pinto AD. Swimming ‘upstream’ to tackle the social determinants of health. *BMJ Qual Saf* 2016; 25: 138–40.
- Pinto AD, Bloch G. Framework for building primary care capacity to address the social determinants of health. *Can Fam Physician* 2017; 63: e476–82.
- British Medical Association. *Social Determinants of Health - What Doctors Can Do*. London, UK: British Medical Association; 2011.
- Canadian Medical Association. *Health Equity and the Social Determinants of Health: A Role for the Medical Profession*. Ottawa, Canada: Canadian Medical Association; 2013. <https://www.cma.ca/Assets/assets-library/document/en/advocacy/PD13-03-e.pdf> (accessed on 3 January 2019).
- College of Family Physicians of Canada. *Best Advice - Social Determinants of Health*. Mississauga, Canada: College of Family Physicians of Canada; 2015.
- Statement P. Patient- and family-centered care and the pediatrician’s role. *Pediatrics* 2012; 129: 394–404.
- Daniel H, Bornstein SS, Kane GC. Social Determinants of Health (SDoH): family physicians’ Role The EveryONE Project Helping family physicians improve the health of all people. *Am Acad Fam Physicians* 2017; 168: 577–8.
- Daniel H, Bornstein SS, Kane GC; Health and Public Policy Committee of the American College of Physicians. Addressing social determinants to improve patient care and promote health equity: an American college of physicians position paper. *Ann Intern Med* 2018; 168: 577–8.
- Marmot M, Wilkinson RG. Psychosocial and material pathways in the relation between income and health: a response to Lynch *et al*. *BMJ* 2001; 322: 1233–6.
- Tarasuk V, Cheng J, de Oliveria C, Dachner N, Gunderson C, Kurdyak P. Association between household food insecurity and annual health care costs. *Can Med Assoc J* 2015; 187: e429–36.
- Hwang SW. Homelessness and health. *CMAJ* 2001; 164: 229–33.
- Adler NE, Stead WW. Patients in context—EHR capture of social and behavioral determinants of health. *N Engl J Med* 2015; 372: 698–701.
- Marmot MG, Shipley MJ. Do socioeconomic differences in mortality persist after retirement? 25 year follow up of civil servants from the first Whitehall study. *BMJ* 1996; 313: 1177–80.
- Public Health Agency of Canada (PHAC). *The Chief Public Health Officer’s Report on The State of Public Health in Canada 2008*. 2008. <http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2008/fr-rc/cphorsphc-respcacsp05a-eng.php> (accessed on 3 January 2019).
- Rosella LC, Fitzpatrick T, Wodchis WP, Calzavara A, Manson H, Goel V. High-cost health care users in Ontario, Canada: demographic, socio-economic, and health status characteristics. *BMC Health Serv Res* 2014; 14: 532.
- Paris JA, Player D. Citizens’ advice in general practice. *BMJ* 1993; 306: 1518–20.
- Burrows J, Baxter S, Baird W, Hirst J, Goyder E. Citizens advice in primary care: a qualitative study of the views and experiences of service users and staff. *Public Health* 2011; 125: 704–10.
- Sherratt M, Jones K, Middleton P. A citizens’ advice service in primary care: improving patient access to benefits. *Prim Heal Care Res Dev* 2000; 1: 139–46.
- Adams J, White M, Moffatt S, Howel D, Mackintosh J. A systematic review of the health, social and financial impacts of welfare rights advice delivered in healthcare settings. *BMC Public Health* 2006; 6: 81.
- Hassan A, Scherer EA, Pikilings A *et al*. Improving social determinants of health: effectiveness of a web-based intervention. *Am J Prev Med* 2015; 49: 822–31.
- Gottlieb LM, Wing H, Adler NE. A systematic review of interventions on patients’ social and economic needs. *Am J Prev Med* 2017; 53: 719–29.
- Garg A, Toy S, Tripodis Y, Silverstein M, Freeman E. Addressing social determinants of health at well child care visits: a cluster RCT. *Pediatrics* 2015; 135. [http://pediatrics.aappublications.org/content/135/2/e296?utm\\_source=highwire&utm\\_medium=email&utm\\_campaign=Pediatrics\\_etoc](http://pediatrics.aappublications.org/content/135/2/e296?utm_source=highwire&utm_medium=email&utm_campaign=Pediatrics_etoc) (accessed on 31 May 2017).
- Gottlieb LM, Hessler D, Long D *et al*. Effects of social needs screening and in-person service navigation on child health. *JAMA Pediatr* 2016; 124: e162521.
- Centre for Effective Practice. *Poverty: A Clinical Tool for Primary Care (ON)*. Toronto, Canada: Centre for Effective Practice; 2016.
- Jones MK, Bloch G, Pinto AD. A novel income security intervention to address poverty in a primary care setting: a retrospective chart review. *BMJ Open* 2017; 7: e014270.
- Gottlieb L, Hessler D, Long D, Amaya A, Adler N. A randomized trial on screening for social determinants of health: the iScreen study. *Pediatrics* 2014; 134: e1611–8.
- Prosper Canada. <http://prospercanada.org/About-Us/Overview.aspx>. Published 2016. Accessed 10 June 2016.
- Brcic V, Eberdt C, Kaczorowski J. Development of a tool to identify poverty in a family practice setting: a pilot study. *Int J Family Med* 2011; 2011: 812182.
- Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3: 77–101.
- Crabtree BF, Miller WL. *Doing Qualitative Research* 1999. doi:10.1097/00006199-199507000-00011.
- Garg A, Marino M, Vikani AR, Solomon BS. Addressing families’ unmet social needs within pediatric primary care: the health leads model. *Clin Pediatr (Phila)* 2012; 51: 1191–3.
- Garg A, Butz AM, Dworkin PH, Lewis RA, Thompson RE, Serwint JR. Improving the management of family psychosocial problems at low-income children’s well-child care visits: the WE CARE Project. *Pediatrics* 2007; 120: 547–58.
- Tong ST, Liaw WR, Kashiri PL *et al*. Clinician experiences with screening for social needs in primary care. *J Am Board Fam Med* 2018; 31: 351–63.
- Berkowitz SA, Hulberg AC, Hong C *et al*. Addressing basic resource needs to improve primary care quality: a community collaboration programme. *BMJ Qual Saf* 2016; 25: 164–72.
- Garg A, Toy S, Tripodis Y, Silverstein M, Freeman E. Addressing social determinants of health at well child care visits: a cluster RCT. *Pediatrics* 2015; 135: e296–304.
- Garg A, Dworkin PH. Surveillance and screening for social determinants of health: the medical home and beyond. *JAMA Pediatr* 2016; 170: 189–90.
- Pinto AD, Glattstein-Young G, Mohamed A, Bloch G, Leung FH, Glazier RH. Building a foundation to reduce health inequities: routine collection of sociodemographic data in primary care. *J Am Board Fam Med* 2016; 29: 348–55.
- Casanova L, Ringa V, Bloy G, Falcoff H, Rigal L. Factors associated with GPs’ knowledge of their patients’ socio-economic circumstances: a multi-level analysis. *Fam Pract* 2015; 32: 652–8.
- Aery A, Rucchetto A, Singer A *et al*. Implementation and impact of an online tool used in primary care to improve access to financial benefits for patients: a study protocol. *BMJ Open* 2017; 7: e015947.