

Part 3

Office interventions for poverty: child health

by Julia Morinis, MD, FRCPC, MSc; Andrea Feller, MD, MS, FAAP, FACPM

PART 3 OF 5

Why poverty is a medical problem



YOU ARE A FAMILY PHYSICIAN IN A BUSY SUBURBAN CLINIC. YOU SEE A FAMILY THAT IS RELATIVELY NEW TO YOUR PRACTICE: MELANIE IS A 19-YEAR-OLD SINGLE MOTHER OF TWO CHILDREN — SETH (AGE THREE) AND JAKE (AGE ONE MONTH). SHE LIVES IN HER AUNT'S CRAMPED ONE-BEDROOM APARTMENT. MELANIE'S SOURCE OF INCOME IS ONTARIO WORKS (WELFARE) AND THE ONTARIO CHILD BENEFIT, FROM WHICH SHE RECEIVES \$1,194 PER MONTH. YOU RECOGNIZE THAT SETH HAS LIMITED LANGUAGE THAT IS DIFFICULT TO UNDERSTAND,

and he appears to have significant dental caries. Melanie tells you that he is home with her all day and that he spends four hours or more per day watching television. She is suffering from depression and they rarely leave the home. She is struggling to make ends meet. Seth has very limited socialization with other children. There is likely more going on in Melanie's life than you know about, but you have only 15 minutes and you don't have more time to spend on the social stressors.

Introduction

The first two articles in this series (which appeared in the October 2013 OMR, accessible at www.oma.org) outlined the strong links between the social determinants of health and health outcomes, and the importance of interventions into poverty as a health risk. This article focuses on the role of physicians in addressing these issues when it comes to children, and highlights how small interventions within the office setting, and navigation of

community resources, can have a large impact in practice.

Social Determinants Of Health

The social determinants of health are the conditions into which people are born, grow, live, work and age, and include income, employment, educa-

comes, such as low birth weight, learning difficulties, mental health problems, micronutrient deficiencies, asthma, burns and injuries, obesity and hospitalization.^{6,7} Infants living in poverty have a 60% higher mortality rate before the age of one year.² Children are particularly vulnerable as they are largely

“ It is easier to build strong children than to repair broken men. ”

Frederick Douglass (1817-1895)

tion, early child development, nutrition, social support, and health care access.^{1,2,3} These social issues powerfully shape children's development and physical well-being.⁴

Currently in Canada, nearly one in six children lives in a low-income household.⁵ Research has shown that these children are at higher risk than their more affluent peers for negative health out-

dependent upon their families for basic needs, social support, socialization, and the development of life skills.⁷

Background

Early childhood exposure to poverty has been shown to lead to adult chronic disease through epigenetic changes, stress dysregulation and perpetuation of poverty.⁸⁻¹¹ Exposure to prolonged

stress is known as toxic stress and can negatively impact physical, social and cognitive development.⁸ The number of social risk factors and length of exposure demonstrate a cumulative increased vulnerability to poorer health status over the years that most impact “life-course developmental health.”¹²⁻¹⁴ Trying to lessen the negative health impacts of social determinants of health at an early age is essential to improving the health of all Canadians.

The American Academy of Pediatrics and Canadian Pediatric Society (in press) recommend expanding the role of health providers for children to include screening, assessment, and referral of parents for social problems, and to urge practitioners to look beyond their offices and medical teams to include community resources in routine care.^{4,15} Early identification and recognition within the office setting is essential in order to minimize the nega-

tive outcomes seen among these children. This approach includes:

- a) **Screen** for social risk.
- b) **Provide appropriate intervention and referrals** to community resources.
- c) **Ensure followup and support.**

Screen

The use of screening tools may increase screening rates and identification of social problems.¹⁶ For example, Kenyon, et al., created the IHELLP mnemonic — income, housing, education, literacy, legal status, and personal safety — to assist practitioners with the social history in day-to-day practice.⁹ Garg, et al., recommends conducting routine screening with initial intake, and at all well-child visits, with increasing screen-

ing based on burden of psychosocial issues in the community.⁴ However, in order for screening to be beneficial, effective interventions must be available to address identified problems.³ Although there is a paucity of randomized controlled trials evaluating programs that address the social determinants of health, other studies have suggested beneficial effects in many domains.¹⁷⁻¹⁹

Refer

Research has highlighted key areas for intervention that can make a difference in health outcomes among low-income children. Simple actions such as regular referrals of children to quality childcare, Public Health departments, libraries or Early Years Centres in Ontario, as well as for hearing tests and routine vision and dental care, have been shown to make a significant difference in health outcomes.²⁰⁻²³ Referring these patients,

Child Health Resources

Resource	Details
211ontario.ca	Index of community and social services in Ontario (phone 211): http://www.211ontario.ca/
Ontario Child Care Subsidy	Provides financial assistance for child care: http://www.edu.gov.on.ca/childcare/paying.html#subsidy
Healthy Smiles Ontario (HSO)	Provides dental care for children 17 years and younger (phone 1.866.532.3161): http://www.health.gov.on.ca/en/public/programs/dental/
Ontario Drug Benefits (Trillium Drug Program)	Provides financial assistance for households that spend a large portion of income on prescribed drugs: www.health.gov.on.ca (search “trillium”)
Canada Revenue Agency (CRA)	Provides financial assistance, including the universal child care benefit and children’s special allowances: www.cra-arc.gc.ca/bnfts/menu-eng.html
Service Canada – Learning Bond	Provides money for education: http://www.servicecanada.gc.ca/eng/goc/clb.shtml
CanadaBenefits.gc.ca	Searchable and customizable index of federal and provincial government benefits: http://www.canadabenefits.gc.ca/
Ontario Early Years Centres (OEYC)	Provides information and supports for parents and children: www.ontarioearlyyears.ca/
Special Services at Home	Information on services for parents of children with a disability: http://www.children.gov.on.ca/ (search SSAH)

as well as maintaining close followup and support, is essential for success and clinical improvement.

1) Vision and Hearing

Poor vision has detrimental effects on both social and educational development.²⁴ Screening can improve the detection of visual problems. Studies are ongoing to assess in-school interventions to increase the rate of glasses use, however, screening in primary care, referral and follow-up is paramount.^{24,25} Hearing difficulties are also linked to deficits in communication and literacy.²⁶ Hearing screening can improve the identification of hearing problems, and interventions to improve hearing are linked with better school and language outcomes.^{26,27}

2) Child Care and Education

As many children spend a large proportion of their time in non-parental care, child-care centres and preschool programs present an important setting in which to promote early childhood education, and can buffer the negative effects of poverty on school readiness.^{20,28} High-quality childcare has a beneficial effect on behavioural and cognitive outcomes, and structured preschool programs have shown consistent short-term and long-term outcome benefits, including improved IQ, school achievement, increased employment, and higher socioeconomic status.^{29,30}

3) Language and Literacy

Comprehensive literacy promotion programs, such as the Reach Out and Read program, have shown positive effects on reading and development.²¹ These programs involve anticipatory guidance, the provision of age-appropriate books, and literacy-rich waiting rooms.³¹ The beneficial effects are highest in the most impoverished families.³²

Don't Play "Wait And See"

Watchful waiting is often utilized in pediatrics to assist in the diagnosis and treatment of undifferentiated or seemingly minor concerns. However, this approach should not be employed for developmental concerns. This is especially important for children with a

high social burden, including a history of poverty, time in foster care, or other social instability.¹⁸

Back To The Case

You immediately refer Melanie to Public Health and speech and language supports, ensuring the phone call is made before she leaves. You then see Melanie at Jake's two-month visit. You reiterate the importance of library visits and daily programming at the local Early Years Centre for both children. You provide Melanie with information to sign up for a daycare subsidy in addition to audiology assessment and a referral to a developmental pediatrician. You give her a collection of children's books to read to Seth at home, and discuss the importance of vision and hearing screening. Three months later, Seth has gained a tremendous amount of language through socialization and Melanie has established a community through the Early Years Centre. In addition, Melanie has also continued to breastfeed Jake, saving money on formula, and qualifying her for the Pregnancy/Breastfeeding Nutritional Allowance (\$40 per month).

Conclusion

Identification of, and intervention into, social determinants of health with children is essential to improving their health trajectory. Identification of social determinants through screening tools and simple actions such as advocating for quality childcare should be a routine part of child health visits.

As our understanding of the mechanisms and impact of social factors on healthy development deepens, the role of the clinician in promoting the physical, mental, and social health of children at social risk must also evolve.³³ ■

Overall series editor: Dr. Andrea Feller. Series editorial committee: Dr. Andrea Feller, Dr. Gary Bloch, Dr. Michael Rachlis. The editors would like to thank Dr. Lee Ford-Jones for her support, and Kathryn MacKay, Ontario Medical Association, for her assistance with the final preparation of the articles.

Dr. Julia Morinis is a staff pediatrician at the Hospital for Sick Children and a post-doctoral research fellow at the Centre for Research on

Inner City Health, Li Ka Shing Knowledge Institute, St. Michael's Hospital; Dr. Andrea Feller is Associate Medical Officer of Health in Niagara Region, and is board-certified in both pediatrics and preventive medicine.

References

1. Marmot M, Friel S, Bell R, Houweling TA, Taylor S; Commission on Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health. *Lancet*. 2008 Nov 8;372(9650):1661-9.
2. Gupta RP, de Wit ML, McKeown D. The impact of poverty on the current and future health status of children. *Paediatr Child Health*. 2007 Oct;12(8):667-72. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528796/pdf/pch12667.pdf>. Accessed: 2013 Oct 22.
3. Kenyon C, Sandel M, Silverstein M, Shakir A, Zuckerman B. Revisiting the social history for child health. *Pediatrics*. 2007 Sep;120(3):e734-8. Available at: <http://pediatrics.aappublications.org/content/120/3/e734.full.pdf>. Accessed: 2013 Oct 22.
4. Garg A, Sandel M, Dworkin PH, Kahn RS, Zuckerman B. From medical home to health neighborhood: transforming the medical home into a community-based health neighborhood. *J Pediatr*. 2012 Apr;160(4):535-536. Available at: <http://download.journals.elsevierhealth.com/pdfs/journals/0022-3476/PIIS0022347612000200.pdf>. Accessed: 2013 Oct 22.
5. Rothman L. Oh Canada! Too many children in poverty for too long. *Paediatr Child Health*. 2007 Oct;12(8):661-5. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528808/pdf/pch12661.pdf>. Accessed: 2013 Oct 22.
6. Campaign 2000: End Child & Family Poverty in Canada. Revisiting family security in insecure times: 2011 report card on child and family poverty in Canada. 2011. Toronto, ON: Campaign 2000; 2011 Nov. Available at: <http://www.campaign2000.ca/reportCards/national/2011EnglishReportCard.pdf>. Accessed: 2013 Oct 22.
7. Denburg A, Daneman D. The link between social inequality and child health outcomes. *Healthc Q*. 2010 Oct;14 Spec No 1:21-31.
8. Evans GW, Kim P. Childhood poverty and health: cumulative risk exposure and stress dysregulation. *Psychol Sci*. 2007 Nov;18(11):953-7.

9. Marmot M, Allen J, Bell R, Bloomer E, Goldblatt P; Consortium for the European Review of Social Determinants of Health and the Health Divide. WHO European review of social determinants of health and the health divide. *Lancet*. 2012 Sep 15;380(9846):1011-29. doi: 10.1016/S0140-6736(12)61228-8.
10. Francis DD. Conceptualizing child health disparities: a role for developmental neurogenomics. *Pediatrics*. 2009 Nov;124 Suppl 3:S196-202. Available at: http://pediatrics.aappublications.org/content/124/Supplement_3/S196.full.pdf. Accessed: 2013 Oct 22.
11. Shonkoff JP, Boyce WT, McEwen BS. Neuroscience, molecular biology, and the childhood roots of health disparities: building a new framework for health promotion and disease prevention. *JAMA*. 2009 Jun 3;301(21):2252-9.
12. Johnson SB, Riley AW, Granger DA, Riis J. The science of early life toxic stress for pediatric practice and advocacy. *Pediatrics*. 2013 Feb;131(2):319-27.
13. Bauman LJ, Silver EJ, Stein RE. Cumulative social disadvantage and child health. *Pediatrics*. 2006 Apr;117(4):1321-8. Available at: <http://pediatrics.aappublications.org/content/117/4/1321.full.pdf>. Accessed: 2013 Oct 22.
14. Halfon N, Hochstein M. Life course health development: an integrated framework for developing health, policy, and research. *Milbank Q*. 2002;80(3):433-79. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690118/pdf/milq0080-0433.pdf>. Accessed: 2013 Oct 22.
15. American Academy of Pediatrics. Council on Community Pediatrics. Community pediatrics: navigating the intersection of medicine, public health, and social determinants of children's health [policy statement]. *Pediatrics*. 2013 Mar;131(3):623-8. Available at: <http://pediatrics.aappublications.org/content/131/3/623.full.pdf>. Accessed: 2013 Oct 22.
16. Garg A, Butz AM, Dworkin PH, Lewis RA, Serwint JR. Screening for basic social needs at a medical home for low-income children. *Clin Pediatr (Phila)*. 2009 Jan;48(1):32-6.
17. 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 Sep;120(3):547-58. Available at: <http://pediatrics.aappublications.org/content/120/3/547.full.pdf>. Accessed: 2013 Oct 22.
18. Perou R, Elliott MN, Visser SN, Claussen AH, Scott KG, Beckwith LH, Howard J, Katz LF, Smith DC. Legacy for Children™: a pair of randomized controlled trials of a public health model to improve developmental outcomes among children in poverty. *BMC Public Health*. 2012 Aug 23;12:691. Available at: <http://www.biomedcentral.com/content/pdf/1471-2458-12-691.pdf>. Accessed: 2013 Oct 22.
19. Moss E, Dubois-Comtois K, Cyr C, Tarabulsky GM, St-Laurent D, Bernier A. Efficacy of a home-visiting intervention aimed at improving maternal sensitivity, child attachment, and behavioral outcomes for maltreated children: a randomized control trial. *Dev Psychopathol*. 2011 Feb; 23(1):195-210.
20. Health implications of children in child care centres Part A: Canadian trends in child care, behaviour and developmental outcomes. *Paediatr Child Health*. 2008 Dec;13(10):863-7. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2603507/pdf/pch13863.pdf>. Accessed: 2013 Oct 22.
21. Shaw A. Canadian Paediatric Society. Community Paediatrics Committee. Read, speak, sing: promoting literacy in the physician's office [position statement]. *Paediatr Child Health*. 2006 Nov;11(9):601-6. Available at: <http://www.cps.ca/en/documents/position/read-speak-sing-promoting-literacy>. Accessed: 2013 Oct 22.
22. Powell C, Wedner S, Richardson S. Screening for correctable visual acuity deficits in school-age children and adolescents. *Cochrane Database Syst Rev*. 2005 Jan 25;(1):CD005023.
23. American Academy of Pediatrics. Section on Pediatric Dentistry and Oral Health. Preventive oral health intervention for pediatricians. *Pediatrics*. 2008 Dec;122(6):1387-94. Available at: <http://pediatrics.aappublications.org/content/122/6/1387.full.pdf>. Accessed: 2013 Oct 22.
24. Wang C, Bovaird S, Ford-Jones EL, Bender R, Parsonage C, Yau M, Ferguson B. Vision and hearing screening in school settings: Reducing barriers to children's achievement. *Paediatr Child Health*. 2011 May;16(5):271-2. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3114988/pdf/pch05271.pdf>. Accessed: 2013 Oct 22.
25. Ethan D, Basch CE, Platt R, Bogen E, Zybert P. Implementing and evaluating a school-based program to improve childhood vision. *J Sch Health*. 2010 Jul;80(7):340-5; quiz 368-70.
26. Patel H, Feldman M. Universal newborn hearing screening. *Paediatr Child Health*. 2011 May;16(5):301-10. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3114997/pdf/pch05301.pdf>. Accessed: 2013 Oct 22.
27. Nelson HD, Bougatsos C, Nygren P; 2001 US Preventive Services Task Force. Universal newborn hearing screening: systematic review to update the 2001 US Preventive Services Task Force Recommendation. *Pediatrics*. 2008 Jul;122(1):e266-76. Available at: <http://pediatrics.aappublications.org/content/122/1/e266.full.pdf>. Accessed: 2013 Oct 22.
28. Bradley RH, Chazan-Cohen R, Raikes H. The impact of early Head Start on school readiness: new looks. *Early Education and Development*. 2009;20(6):883-892.
29. Burchinal MR, Roberts JE, Riggan R Jr, Zeisel SA, Neebe E, Bryant D. Relating quality of center-based child care to early cognitive and language development longitudinally. *Child Dev*. 2000 Mar-Apr;71(2):339-57.
30. Zoritch B, Roberts I, Oakley A. Day care for pre-school children. *Cochrane Database Syst Rev*. 2000;(3):CD000564.
31. Needlman R, Klass P, Zuckerman B. Reach out and get your patients to read. *Contemporary Pediatrics*. 2002 Jan;19(1):51-69.
32. Mendelsohn AL, Mogilner LN, Dreyer BP, Forman JA, Weinstein SC, Broderick M, et al. The impact of a clinic-based literacy intervention on language development in inner-city preschool children. *Pediatrics*. 2001 Jan;107(1):130-4.
33. Garner AS, Shonkoff JP. Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; Section on Developmental and Behavioral Pediatrics. Early childhood adversity, toxic stress, and the role of the pediatrician: translating developmental science into lifelong health. *Pediatrics*. 2012 Jan;129(1):e224-31. Available at: <http://pediatrics.aappublications.org/content/129/1/e224.full.pdf>. Accessed: 2013 Oct 22.