Social Determinants of Health and Adverse Childhood Experiences In Pediatric Surgery Clinics in a Tertiary Children's Hospital

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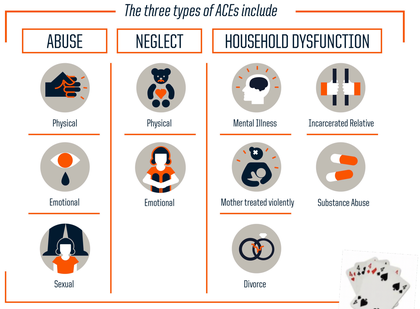
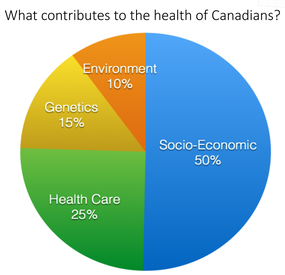
Background

- Access to specialists like pediatric surgeons and pediatricians is more difficult for families with adverse Social Determinants of Health (SDoH) than for other populations.[1]
- SDoH are factors such as education, and gender, that are known to influence health.[2]
- Lower socioeconomic status is also associated with higher rates of infant mortality, mental health issues, among other adverse outcomes, and poorer adult health.[3]
- Having 4 or greater adverse childhood experiences (ACEs), is linked to significantly poorer health outcomes.[4]
- There is limited data in the literature around SDoH/ACEs in patients seeing specialty surgery and pediatrics in a tertiary care center.





Methods

This survey study, led by the Departments of Surgery and Pediatrics, took place at the British Columbia (BC) Children's Hospital (BCCH) from January 2018-January 2019.

Survey Development

- The survey used in this study was synthesized by our team as an amalgamation of current available literature, including: questions related to demographics, social and material capital, healthcare utilization and access, food security, housing security, and financial security, among others; the Adverse Childhood Experiences (ACE) Questionnaire; the Southern Kennebec Healthy Start resiliency survey.

Data collection

- Fourteen clinics participated in this study. Multidisciplinary groups included the Cleft Palate and Craniofacial (n=92), Spina Bifida (n=98), and Cerebral Palsy (n=30) clinics. Surgical clinics included Plastic Surgery (n=25), General Surgery (n=25), Ophthalmology (inner city n=18, hospital ambulatory n=25), Dentistry (n=24), Orthopedic Surgery (n=21), Neurosurgery (n=13), Otolaryngology (n=25), and Urology (n=1).
- Patient/family participants were recruited in the waiting rooms of clinics. Participants were given 15-20 minutes to complete the survey. Participants were given a $15 gift certificate for a coffee shop as an honorarium for their time.

Acknowledgements

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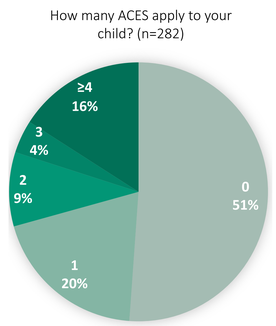
Results

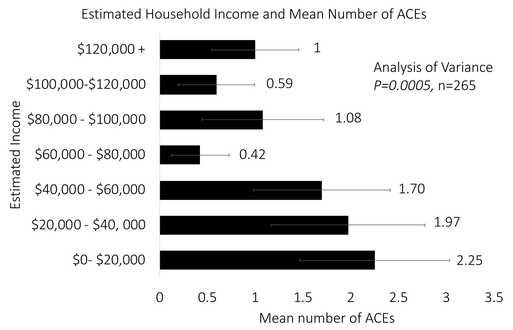
Adverse Childhood Experiences

- Sixteen percent of children in our study had an ACE score of 4 or more (≧4) (16%, n=282), compared to the US national average of 12.5%, where ACE scores ≧4 are significantly related to poorer health outcomes.
- We found a significant difference in mean ACE scores between income brackets (ANOVA, P=0.0005, n=265), with those of the lowest income having the highest mean ACE score (mean=2.25).

1 in 6 children had an ACE score of 4 or greater

Lowest income bracket had highest number of ACEs

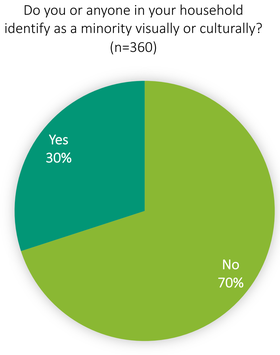


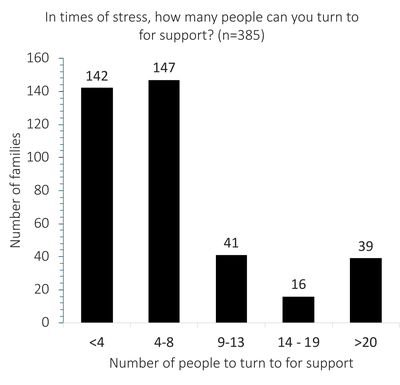


Social

- While almost all families had a primary care provider (n=366, 94.3%), only 76.9% (n=321) reported being able to turn to them for assistance.
- One third (30%, n=360) of participants identified as a visual/cultural minority.

1 in 3 families had fewer than 4 people to turn to for support

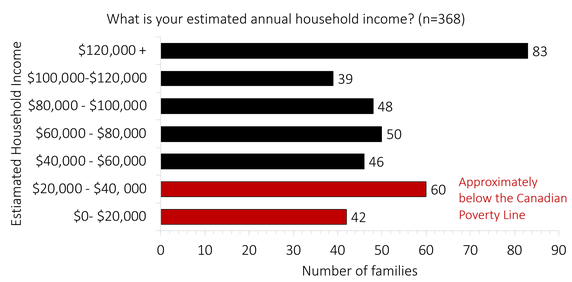


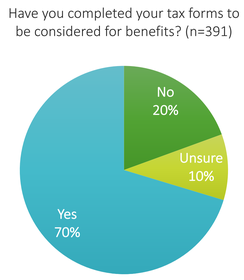


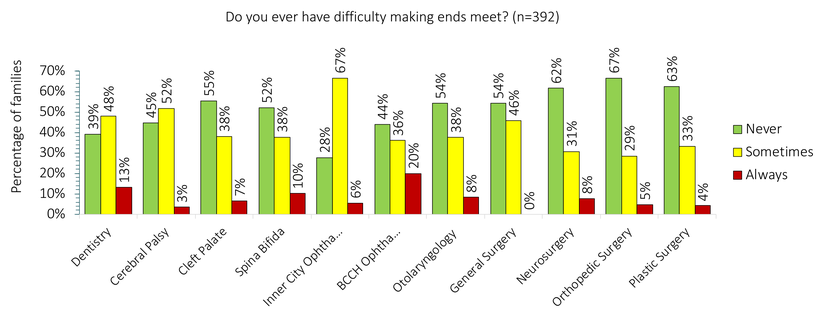
Economic

- Half of families reported having difficulty making ends meet (n=364, 53.3%).
- Twenty-three percent of families had an income below $40,000, with $37,542 being the Canadian Poverty Line (2015).

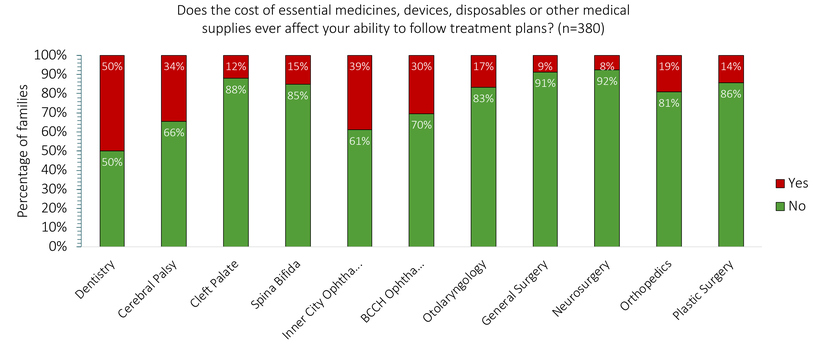
Nearly 1 in 4 families live below the poverty line







- One in five (n=352, 18.2%) stated the cost of medical supplies and medicines affected adherence to treatment plans.
- There is no Canadian national health insurance plan for dental health, with regional exceptions. Fifty percent of families in the Dentistry clinic found it difficult to follow through on treatment plans due to cost of equipment/medications.



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Lessons Learned and Future Directions

- It is valuable to ask these types of SDoH questions in our ambulatory clinics.
- It is possible to respectfully ask about ACEs in our pediatric surgical specialty ambulatory settings (70% of participants answered the ACEs questions).
- This data supports quality improvement interventions, such as advocating for social screening and social work availability during speciality pediatric and ambulatory surgical clinic visits.
- Future directions include extending our study to investigate surgeons' and pediatricians' knowledge and behaviours around SDoH/ACEs in their practice.
- Being included in the design and implementation of QI SDoH studies may offset and mitigate risks for "moral distress" and professional burnout.
- Our results demonstrate that socioeconomic factors clearly affect the lives of many surgical patients and families.