

ISSUE 1 • 2019

HORIZONS

THIS ISSUE: OPIOIDS AND ADDICTIONS

AMBULANCE ENTRANCE ONLY

Perspectives from the ED

*Listening,
avoiding
judgement,
to affect change*



Dr. Kristen Weersink



Dr. Kristen Weersink, right, and fellow Queen's PGY4 EM resident Dr. Eve Purdy at Hotel Dieu Hospital. Dr. Weersink in an Addictions Medicine fellow at CAMH/U of T.

By Dr. Kristen Weersink

We have all heard about the opioid epidemic. We've been familiarized with the addictive properties of opioids, and been conditioned to fear the word "fentanyl." The shocking statistics from coroner data in recent years regarding the lethality of these drugs is devastating¹. As health-care professionals, in all areas of medicine, we see these patients every day – and with every interaction comes a chance to affect change.

I'll never forget the patient I saw last year who came into the emergency department (ED) under my care after receiving one dose of naloxone in the field with EMS. We monitored him for several hours, ruled out other conditions with additional testing, and discharged him home with standard return-to-ED instructions and warnings about the danger of using alone. We advised him to pick up a free naloxone kit from the closest pharmacy on his way home.

My friend was working the next day and received a paramedic patch call for termination of resuscitation. It was the same patient – who had overdosed again. This time, the naloxone did not get there in time.

I think about that case often, and wonder if there was anything I could have done in the ED to prevent that outcome. If that visit was too late, could something have

been done earlier? As a fourth-year resident in emergency medicine at Queen's University, I sought out answers to these questions through the Addiction Medicine Enhanced Skills Program at the Centre for Addiction and Mental Health (CAMH)/University of Toronto.

I came into the program hoping to gain some insight into the complex issue of addiction, and, like most things, the more I learn, the more aware I am of all I/we don't know. Although working in addictions has its challenges, I have gained a lot of hope. I would like to give you an illustration of my experience, first in the ED in my early years of training, and now concurrently in the specialty of addiction medicine using what I have learned so far.

I would like to share two case examples based loosely on the many patients I have seen, but not specific to any one person's story.

Case 1

Ryan is a 30-year-old male who presented to the emergency department with suicidal ideation and symptoms of mild alcohol withdrawal.

In the past, I would have seen Ryan, assessed his risk, reviewed with my staff, and either asked for a psychiatry consult or arranged follow-up and sent him to the detox centre here in Kingston with a prescription for benzodiazepines to help him through the withdrawal. Safe and reasonable care.

What I would do now is not all that different from then in terms of medical care, but vastly different in terms of potential effect on Ryan's health going forward.

I would assess Ryan for safety, as before – assessing suicide risk and risk of complicated withdrawal – and make a decision with my staff as to whether he can go to outpatient non-medical detox with psychiatric follow-up or whether he needs to come in for medically supervised detox and/or psychiatric assessment.

What happens after that is what has changed for me.

Using SBIRT (Screening, Brief Intervention and Referral to Treatment)², I would now offer an anti-craving medication, such as naltrexone or acamprosate, discuss the option of SMART Recovery (Self-Management and Recovery Training) or Alcoholics Anonymous, and really try to use trauma-informed care to meet Ryan where he is in his recovery goals.

The difference in medical knowledge between the first interaction and the second is minimal. Ryan is not a real patient, but I have seen many similar to him in my outpatient clinic. A non-judgmental, informed approach to Ryan's substance use could make him feel that he can gain back some control – and that there is hope. Ryan is used to people (especially health-care professionals) expressing disappointment and telling him he is doing things wrong. In my experience, seeing patients like Ryan in follow-up, what is said and how it is said in those first interactions can make a huge difference in what Ryan does next.



Case 2

Karly is a 45-year-old female who presented to the emergency department with cough, hypoxia, fever, shortness of breath, and a consolidation on her chest X-ray. She has also been experiencing nausea, and hasn't been able to take the oxycodone she has become dependent on. Throughout her stay, she begins to experience sweating, diffuse pain, goose bumps, worsening nausea and vomiting, diarrhea, and a runny nose.

As a junior resident, I might not have realized what Karly was experiencing and may not have thought about asking about substance misuse. I would have started her on antibiotics, consulted internal medicine, and felt good about my medical care. Karly would have progressed in her discomfort and may have left against medical advice to cure her withdrawal on her own.

On further history, Karly explains that she has been escalating her doses of oxycodone for years and gets her supply from the street. She has not had a prescription in months and she has escalated to 20 pills per day, which she now chews and sometimes snorts. She meets criteria for a severe opioid use disorder and is really looking for help, with the goal of stopping altogether. When she has tried on her own in the past, the discomfort of withdrawal has proven too much. Her symptoms place her in moderate opioid withdrawal on the clinical opioid withdrawal scale (COWS), and you talk to her about the possibility of buprenorphine/naloxone (Suboxone). She is interested, and you initiate after-counselling on what the follow-up will likely look like.

Karly is admitted, titrated up to a stable dose of buprenorphine/naloxone, finishes her course of antibiotics, and is sent home to follow up with her family physician. Two months later she returns to the ED with a thank-you card for the care she received. Thanks to opioid-agonist treatment, she has been able to avoid illicit opioids and has found stability for the first time in years.

I have seen a lot of difficult cases in the ED. As emergency physicians, we rarely get to see the impact an open, trauma-informed approach and compassionate follow-up could have on these patients. I have been fortunate to see some of that impact this year. It has changed my view from one of helplessness, seeing the same patients again and again when they are entrenched in their addiction, to one of hope.

It is our job to treat the emergencies, but I also believe it is our job to do a little more. We can, and do, make a difference in these patients' lives just by listening, meeting them where they are, and avoiding judgment for their actions.

Suboxone initiation and naloxone kits are two emerging strategies in the ED that have been important interventions to help curb the impact of the opioid crisis. However, opioids are just a small part of the problem. It is important to remember that other substances are also prevalent in our society and they, too, can be treated. In the ED, or in primary care, we can start the process and are often in the best position to do so for many of these patients. The interventions are small, but the effect can be life-saving.

Dr. Kristen Weersink is a Queen's PGY4 Emergency Medicine resident and an Addictions Medicine Fellow at the Centre for Addiction and Mental Health (CAMH)/University of Toronto.

Resources for health-care providers

- [Mentoring, Education, and Clinical Tools for Addiction: Primary Care-Hospital Integration \(META: PHI\)](#): A Provincial Initiative to Support Health Care Providers in Treating People Struggling with Substance Use Disorders. This website offers information about the META: PHI care model, clinical addiction tools for health-care providers, resources for patients, and information about rapid access addiction medicine clinics across the province.
- [CAMH Opioid Dependence Treatment ODT Core Course](#): This course prepares physicians, pharmacists, counsellors, nurses, and other health-care professionals to effectively and safely manage the treatment of clients receiving methadone or buprenorphine for opioid dependence. The course also promotes interprofessional collaboration among health-care teams involved in the delivery of opioid dependence treatment (ODT).
- [UBC Addiction Care and Treatment Online Certificate](#): A free, University of British Columbia course that provides an online education curriculum to train health-care providers to diagnose and treat patients with substance use disorders using evidence-based treatments along a continuum of care.
- [Suboxone \(Buprenorphine and Naloxone\) Training Program](#): An online training program with six modules.

Up-to-date health services information for mental health and substance use disorders in Ontario

- [ConnexOntario](#) (1-866-531-2600)
- [211 Ontario](#) (211 or [1-877-330-3213](#))

Citations

1. Public Health Ontario (2017). [Opioid-Related Morbidity and Mortality in Ontario](#)
2. Babor, TF et al. (2007). [Screening, Brief Intervention, and Referral to Treatment \(SBIRT\)](#): Toward a Public Health Approach to the Management of Substance Abuse. *Substance Abuse*, 28:3, 7-30

Other references

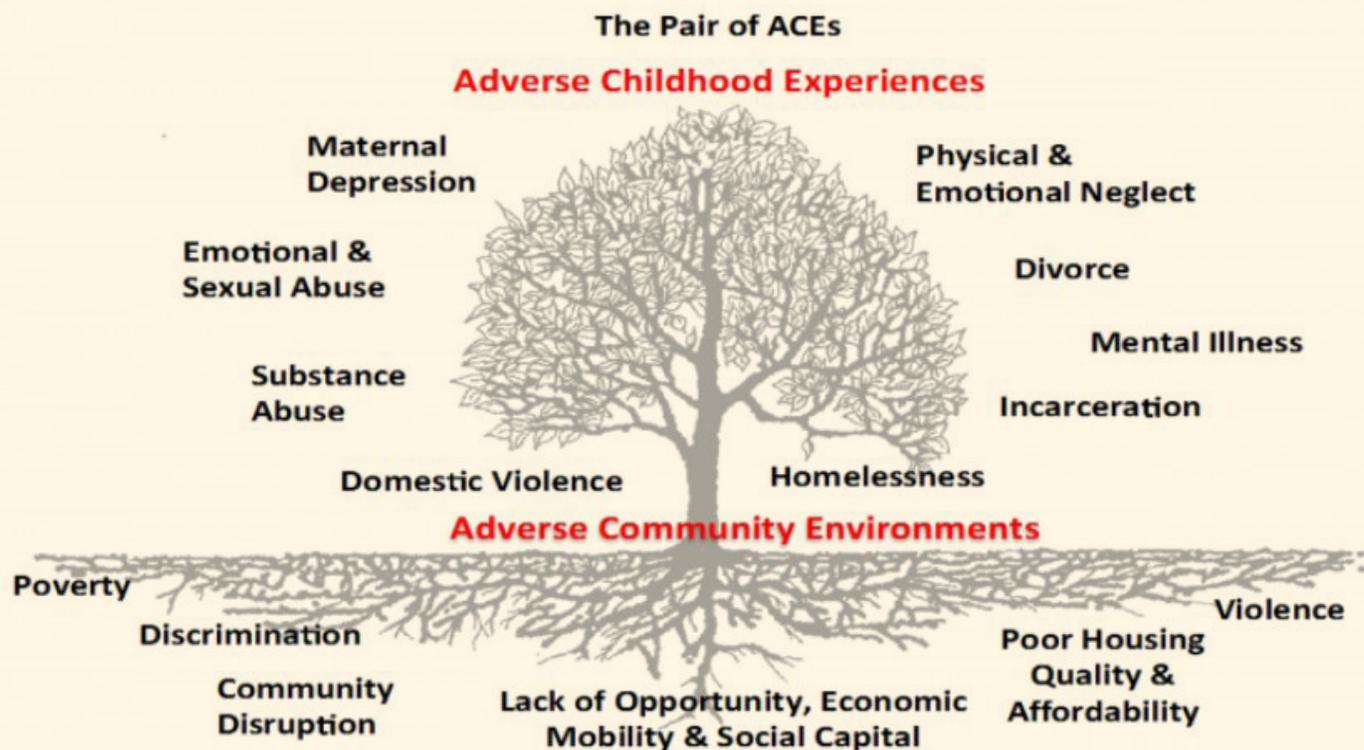
Government of Canada (2018). [Overview of National Data on Opioid-Related Harms and Deaths](#)

Canadian Centre on Substance Use and Addiction (2017). [Canadian Drug Summary: Alcohol](#)

Pearson, Caryn, Teresa Janz and Jennifer Ali. 2013. [Mental and Substance Use Disorders in Canada](#), *Health at a Glance*. September. Statistics Canada Catalogue No. 82-624-X

Street Health Centre

Adverse Childhood Experiences Biggest Risk Factor to our Health



Ellis, W., Dietz, W. (2017) *A New Framework for Addressing Adverse Childhood and Community Experiences: The Building Community Resilience (BCR) Model*. *Academic Pediatrics*. 17 (2017) pp S86-S93. DOI information: 0.1016/j.acap.2016.12.011

By Dr. Meredith MacKenzie and Travis Mitchell

Each year, the number of individuals who lose their lives to opioid overdose continues to rise across Canada. In Ontario, alcohol and opioid use are leading causes of death, emergency department visits and health-care costs.¹ More than 850 people died from opioid overdose in 2016, 4,427 people visited the emergency department, and 1,906 were admitted to hospital for opioid-related reasons². The burden of mental illness and addictions in Ontario is more than 1.5 times the rate of all cancers and more than seven times the rate of all infectious diseases.¹ One in five Canadians experience a mental-health or addiction complication. Additionally, chronic diseases are leading causes of death and disability in Ontario³. There is a common risk factor for all of these.

Canada's Four Pillar Drug Strategy includes prevention, harm reduction, enforcement, and treatment. Several initiatives have been put forward to address the opioid crisis, including improved access to treatment through Rapid Access Addiction Medicine clinics (RAAMs), and improved access to harm-reduction services such as supervised consumption and access to naloxone. The emergent nature of the opioid crisis has our strategies focusing on the substances causing immediate harm (e.g. fentanyl, carfentanil, etc.). We continue to address the supply side of the equation, rather than the demand. When we do not address *why* people use substances – and what the substances are doing for them – we ignore complex social and health inequalities that greatly influence the prevalence of substance use in our communities.

Background

The Centers for Disease Control (CDC) conducted the Adverse Childhood Experiences (ACE) study between 1995 and 1997. More than 17,000 confidential patient surveys identified that there were 10 specific areas of adversity between birth and age 18 that affected future health and social well-being. These areas included abuse (physical, emotional, sexual); neglect (physical, emotional); and household dysfunction (incarcerated relative, divorce, mental illness, substance use, mother treated violently). The original ACE score is out of 10; to find your ACE score, link to [this questionnaire](#).

ACE scores of 4 + increase the risk of chronic diseases:

Obesity	160%
Fracture	160%
Diabetes	160%
Any Cancer	190%
Heart Disease	220%
Smoking	220%
Hepatitis	240%
Stroke	240%
STIs	250%
COPD	390%
Depression	460%
Illicit Drug	470%
Alcoholic	740%
Injected Drug	1,000%
Suicide Attempts	1,200%

Male with ACE of 6+:

- IDU 4,600%
- Die 20 Years Earlier
- Homelessness

Many communities across Canada are noticing significant increases in the number of individuals using non-opioid substances, like crystal methamphetamine. For many individuals experiencing opioid dependency, crystal methamphetamine can be useful in delaying the onset of opioid-related withdrawal symptoms. Many others may use crystal methamphetamine due to availability or the inexpensive cost associated with the substance, paired with a prolonged half-life, which can sometimes last up to 36 hours. For some individuals who experience homelessness, crystal methamphetamine can be used to stay alert during the night, to avoid experiencing victimization. Unfortunately, crystal methamphetamine can produce many behaviour challenges and exacerbate other mental-health conditions, leaving many individuals unsupported due to lack of appropriate services, or services that are not equipped to support their complex needs.



Their predominant emotions may be fear, anger, rage, and sadness. These brain changes can result in people behaving in ways that, within our existing paradigms, challenge us to respond with compassion.



To have a meaningful impact on Canada's opioid crisis, improve mental health, and reduce the incidence of other chronic conditions, we must make prevention a priority. We know the biggest risk factor that threatens our health and social well-being is chronic toxic stressors on young children's developing brains – adverse childhood experiences (ACEs).

Adverse childhood experiences account for 65 per cent of the variation in suicide attempts, 55 per cent in substance use, 45 per cent in depression, and 30 per cent in violent behaviour.⁴ These experiences are the public-health crisis of our time, affecting the developing brain in ways that affect our ability to learn and develop cognitively. They have an effect on health, well-being, social development, chronic disease, and mental illness, and have a massive impact on future violent behaviours and criminality. Exposure to adverse childhood experiences, and living in an adverse community environment, compounds the burden of negative health outcomes.⁵

The neurobiology of adversity sets the stage for an overactive amygdala and an underactive prefrontal cortex. People exposed to toxic stressors without any modifying influences are perpetually in fight/flight/freeze or survival mode and may have difficulty with learning, memory, emotional regulation, boundaries, judgment, and trust. Their predominant emotions may be fear, anger, rage, and sadness. These brain changes can result in people behaving in ways that, within our existing paradigms, challenge us to respond with compassion. Instead, we may be tempted to respond with the only tools we have (often punitive measures) that can re-traumatize the very people we set out to help.

The effects of toxic stress can be mitigated by the presence of people we are calling “SNAP” (safe, nurturing, available, and predictable) adults. These SNAP adults provide the safety and compassion required to prevent the long-term effects of toxic stress on the developing brain and bring an understanding of the effects of toxic stressors on the adults we work and live with in our communities. SNAP adults can include neighbours, coaches, teachers, health-care providers, you ... and anyone and everyone.

This is what harm reduction looks like. In the context of substance use, harm reduction is defined as a “set of practical strategies and ideas aimed at reducing negative consequences associated with drug use. Harm reduction is also a movement for social justice built on a belief in, and respect for, the rights of people who use drugs.”⁶ We would like to extend the definition of harm reduction to include the policies, procedures, and practices that seek to mitigate harm to people who have endured / are enduring adversity / trauma. With this lens, we are able to ask the question, “What’s happened to you?” rather than, “What is wrong with you?” and begin to become trauma-sensitive. This allows us to view substance use as a symptom of something much bigger, not an end in itself, and shifts our paradigm to think upstream at prevention measures (starting with healthy attachment in childhood and addressing all the social determinants of health). It also allows us to consider how health care, education, law enforcement / corrections, child protection agencies / youth services, etc., work with people who have experienced trauma and seek ways to improve.

In the health sector, Equity Oriented Health Care presents us with a proven approach that improves health outcomes for equity-seeking populations and also results in improved provider satisfaction.^{7,8} This program focuses on three key dimensions: trauma- and violence-informed care, harm reduction, and cultural safety.

EQUIP Health Care recommends four ways to work in a trauma- and violence-informed way:

1. Build your awareness and understanding
2. Emphasize safety and trust
3. Adapt your language
4. Consider trauma a risk factor

Learn more about equity-oriented health care via the [EQUIP Health Care Toolkit](#).

Addressing childhood and community adversity will require cross-sector collaboration to prevent and mitigate their toxic effects with purposeful actions that build healthy communities in which all of us can thrive. Building community resilience requires “a paradigm-shifting evolution in individual, organizational, and collective mindsets, policies, and practices ... Shifts will emphasize the centrality of relationships and regulation of emotion and stress to brain development as well as overall health. They will elevate relationship-centered methods to engage individuals, families, and communities in self-care related to ACEs, stress, trauma, and building the resilience and nurturing relationships science has revealed to be at the root of well-being. Findings reflect a palpable hope for prevention, mitigation, and healing of individual, intergenerational, and community trauma associated with ACEs and provide a road map for doing so.”⁹

Dr. Meredith MacKenzie is a family physician who has been providing primary care and addiction treatment at Street Health Centre (part of Kingston Community Health Centres) since 2000. She has a special interest in early childhood adversity, particularly in the context of their impact on health and social well-being, including addiction. Dr. MacKenzie is an assistant professor in the Queen’s Department of Family Medicine, and vice-chair of the Quality Assurance Committee, Methadone Specialty Panel, at the College of Physicians and Surgeons of Ontario.

Travis Mitchell is the co-ordinator of Street Health Centre’s Overdose Prevention Site.

Street Health Centre serves people who use substances, those recently released from incarceration, those who are homeless or vulnerably housed, people involved in street work, and high-risk youth. The centre functions as a multidisciplinary team of harm-reduction workers, counsellors, nurses, nurse practitioners, and physicians. Beyond an overdose prevention site, the centre’s services include primary care, rapid access addiction treatment, counselling, hepatitis C testing and treatment, psychiatry, palliative care, shelter outreach, harm-reduction education and supplies, and opioid overdose prevention and training with naloxone kit distribution.

VIDEOS

Alberta Family Wellness Initiative: [How Brains are Built: The Core Story of Brain Development](#)

Center on the Developing Child at Harvard University: [InBrief: The Science of Resilience](#)

References

1. Institute for Clinical Evaluative Sciences (October 2012) – [Opening Eyes, Opening Minds: The Ontario Burden of Mental Health and Addictions Report](#)
2. Public Health Ontario – [Interactive Opioid Tool: Opioid Morbidity and Mortality in Ontario](#)
3. Cancer Care Ontario, Ontario Agency for Health Protection and Promotion (Public Health Ontario) – Taking Action to Prevent Chronic Disease: Recommendations for a Healthier Ontario. Toronto: Queen’s Printer for Ontario; 2012.
4. Felitti V. J., Anda R. F., Nordenberg D., Williamson D. F., Spitz A. M., Edwards V., ... Marks J. S. (1998) – Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14, 245–258.
5. Nurius PS, Green S, Logan-Greene P, Longhi D, Song C. – Stress Pathways to Health Inequalities: Embedding Aces within Social and Behavioral Contexts. *International Public Health Journal*. 2016;8(2):241-256.
6. Harm Reduction Coalition – [Principals of Harm Reduction](#)
7. EQUIP Health Care (2017) – [Key Dimensions of Equity-Oriented Care: 10 Strategies to Guide Organizations in Enhancing Capacity for Equity-Oriented Health Care](#)
8. EQUIP Health Care (2017) – [Trauma-and-Violence-Informed Care \(TVIC\): A Tool for Health & Social Service Organizations and Providers](#). Vancouver, BC.
9. Ellis, Wendy R. et al (2017) – [A New Framework for Addressing Adverse Childhood and Community Experiences: The Building Community Resilience Model](#). *Academic Pediatrics*, Volume 17, Issue 7, S86 - S93

Addressing Inpatient Needs

Substance Treatment And Rehabilitation Team (START)



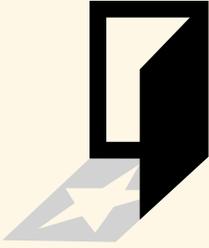
Substance Treatment And Rehabilitation Team (START) members Dr. Adam Newman, Dr. Priya Gupta, Dr. Louise Good, social worker Shannon Ernst, Dr. Raistlin Alexander Majere, and Dr. Taras Reshetukha

By Dr. Adam Newman and Dr. Raistlin Alexander Majere

Canada's opioid disaster is part of a historical and global phenomenon. It extends to neighbouring countries and beyond, and has in fact been implicated in geopolitics since the days of the Opium Wars of the mid-19th century. But as the saying goes, "All politics is local." Looking inward, our Kingston community is distinctly suffering and we'd be wise to look at ourselves in the mirror.

On the one hand, our community has made great strides in developing a more humane and effective approach to the opioid epidemic. Harm reduction centres such as methadone clinics, the needle exchange programs at HIV/Aids Regional Services (HARS), the Kingston Community Health Centres' Street Health Centre, and the overdose-prevention site at Street Health are of great help to people with addictions. Alcoholics Anonymous and Narcotics Anonymous also offer multiple daily meetings.

Substance users who seek care outside our hospitals have several options available. But it's disheartening that, until recently, there have been no institutional programs to help patients with addictions who are admitted to Kingston General Hospital (KGH). Every week, people suffering from Opioid Use Disorder are admitted to KGH. We doctors see overdoses, of course, but also other substance use-related conditions like very serious infections of the heart (endocarditis) and bones (osteomyelitis). These are very painful, life-threatening, and so difficult to cure that patients often must remain in the hospital for weeks or months. Patients with addiction who are admitted for conditions not directly related to their substance use disorder can have their treatment severely compromised if they suffer from withdrawal.



START

Substance Treatment and Rehabilitation Team

It's a matter of luck whether an addicted patient encounters a physician who is empathetic and knowledgeable enough to help them cope with their substance use disorder. Withdrawal from opioids, for instance, often causes nausea, diarrhea, terrifying emotional swings, and full-body pain. Withdrawal from alcohol or benzodiazepines can be life-threatening if untreated, leading to psychosis or seizures. Many afflicted patients have been known to simply leave – as we say, “against medical advice” – before their treatments are completed. The result is that many come back with a recurrence or worsening of their infections.

For patients with endocarditis, this pattern can repeat until their cardiac valves are beyond repair, often leading to death. Other patients, having temporarily lost access to their regular opioids and not realizing how quickly tolerance can diminish, suffer lethal overdoses as soon as they leave. Additional negative outcomes of untreated addiction can include onsite drug seeking, drug dealing, food hoarding, unclean needle use, unsafe sharps disposal, and even violent events requiring security or police intervention.

Recognizing this unmet need, three health professionals at KGH who shared this common interest began meeting informally in the summer of 2017. Our team began with Shannon Ernst, the social worker from the Connell 9 medical ward, which sees a constant stream of patients with infections due to injection drug use; Dr. Raistlin Majere, a Fellow in General Internal Medicine who trained at St. Paul's Hospital in Vancouver, the home of Canada's first addiction-medicine consult service; and Dr. Adam Newman, a family physician who has worked as a methadone prescriber for almost 20 years and whose practice is now focused on addiction. Since then, we've grown to include physician representation from Queen's Family Medicine, Internal Medicine, Emergency Medicine, Psychiatry, and Anesthesiology. Our interdisciplinary team also includes social work, public health, and community members with lived experience of addiction. We're known as the Substance Treatment And Rehabilitation Team

(START), which you may see emblazoned on posters throughout Kingston's hospitals announcing our monthly Addictions Medicine Journal Club, held on the second Wednesday of every month.

Our first order of business was developing a formal proposal to create an official addictions-medicine consult service. It was well received. In January 2018, Dr. Chris Smith, chair of the Division of General Internal Medicine, used the case of a patient with Opioid Use Disorder and infective endocarditis in a presentation to the Department of Medicine grand rounds. In February 2018, a group of us met with Dr. Stephen Archer, head of the Department of Medicine, who endorsed our project and encouraged us to carry out a formal Kingston-wide needs assessment research project.

During the month of June, we surveyed all health-care professionals at KGH and Providence Care to ask about their patients who might benefit from an addiction medicine consult. June was chosen in part because it doesn't contain any of those notorious days marked by excess – St. Patrick's Day or Queen's Homecoming, for example – that could skew results. We identified 124 relevant inpatients at KGH plus 37 at Providence Care. Additionally, there were 23 unique emergency department patients at KGH. It's likely that even these numbers under-represent the actual population, but they're a useful starting point.

In 87 per cent of the cases at KGH, the reporting physician felt that managing the addiction was not within their scope of practice. In 98 per cent of cases, they felt the patient would benefit from an addictions specialist consultation. Sixty-eight per cent of the admissions were primarily addiction-related. The most common admitting diagnoses were alcohol-related (21 per cent), infections (20 per cent), opioid-related (12 per cent), and chronic obstructive pulmonary disease (COPD)/pneumonia (10 per cent). The majority of infections were endocarditis in the setting of injection drug use (35 per cent), osteomyelitis (19 per cent), sepsis (19 per cent), and cellulitis (15 per cent). The overall 30-day revisit

and readmission rates were 41 per cent and 26 per cent, respectively. These last numbers were hugely troubling, as they represent avoidable bad outcomes.

At KGH, while opioids were mentioned most frequently as being the drug of use (45 per cent), alcohol (39 per cent), tobacco (37 per cent), cannabis (23 per cent), and amphetamines (20 per cent) were also identified as substances for which consultation was requested. By contrast, at Providence Care, the most named substances in descending order of occurrence were alcohol, marijuana, and cannabis, with opioids only the fourth-most-commonly implicated substance. Our survey demonstrated that our hospitals' needs are not uniform.

The most common services that would be sought in a consultation request were counselling (75 per cent), community resources (64 per cent), withdrawal management (56 per cent), discharge planning (56 per cent), basic needs (38 per cent), behavioural support (35 per cent), chronic-pain management (30 per cent), alcohol use disorder management (33 per cent), opioid agonist therapy (OAT) initiation (27 per cent), and OAT maintenance (26 per cent).

In the month after completing the survey, representatives from our group met individually with the heads of family medicine, psychiatry, emergency medicine, anesthesiology, obstetrics and gynaecology, and surgery to share our results. We discovered near unanimous acclaim for our bid to submit a formal request to the Southeastern Ontario Academic Medical Organization (SEAMO) for funding of two addiction medicine FTEs. Dr. Michael Green (Family Medicine) and Dr. Paolo Soares (Psychiatry) have since jointly submitted an application for the next funding cycle.

In November 2018, an essay describing our effort (co-written by Drs. Archer, Smith, and Majere) was published in *The Conversation*, then picked up by *The National Post*. An academic article describing the outcome of the needs assessment has been accepted for publication in the *Canadian Journal of Addiction*. Members of our team have also joined Kingston Health Sciences Centre's addiction task force, whose purpose is to guide the implementation of consistent

approaches and best practices in the care of patients with addictions. In December, Dr. Newman and Dr. Majere had the opportunity to present our project at the Department of Family Medicine grand rounds.

Finally, in January this year, Dr. Majere began an elective with Consult-Liaison Psychiatry during which he is fielding referrals for patients with specific addictions issues with or without concurrent disorders. He is being jointly supervised by Psychiatry as well as the START members who have KGH privileges in addiction medicine – Drs. Priya Gupta, Louise Good, Irene Zouros, and Adam Newman, all members of the Department of Family Medicine.

Our long-term goals for this new service are as lofty as the situation is severe. We've begun with the most urgent need, which is treating the addictions of our inpatients. Beyond that, we envision instituting an addictions medicine training program for our medical students and residents, supporting researchers, and opening an outpatient Rapid Access Addictions Medicine clinic. Eventually, we hope to have space in the hospital to offer inpatient medical withdrawal management and addiction rehabilitation.

Aside from creating a teaching centre that will train clinicians to deliver state-of-the-art care for people living with addictions, this is the beginning of our journey to make Kingston and Queen's University centres of excellence in comprehensive, evidence-based care for patients with addictions, and to produce original research. It has been a unique opportunity for family physicians to participate in a multidisciplinary team that will make a meaningful contribution to improved care for some of our sickest hospitalized patients.

Adam Newman has been a family physician in Kingston for more than 20 years. His practice is now focused on obstetrics, addiction, and those who overlap.

Dr. Raistlin Alexander Majere is a new General Internal Medicine specialist who believes every patient deserves respect and poetry. Together, along with START's other members, they have worked to improve the opportunities for those who suffer from addiction.



*Looking inward,
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KFL&A PUBLIC HEALTH

Prevention, Harm Reduction, and Active Surveillance

By Angela Vaughan and Dr. Linna Li

Kingston, Frontenac, Lennox & Addington (KFL&A) Public Health is the local health unit serving the City of Kingston, the County of Frontenac, and Lennox & Addington County. We work with communities, local organizations, and individuals to protect health, prevent disease, and promote health and well-being for people across a variety of life experiences. One of our areas of focus is preventing drug use and addiction, including opioids.

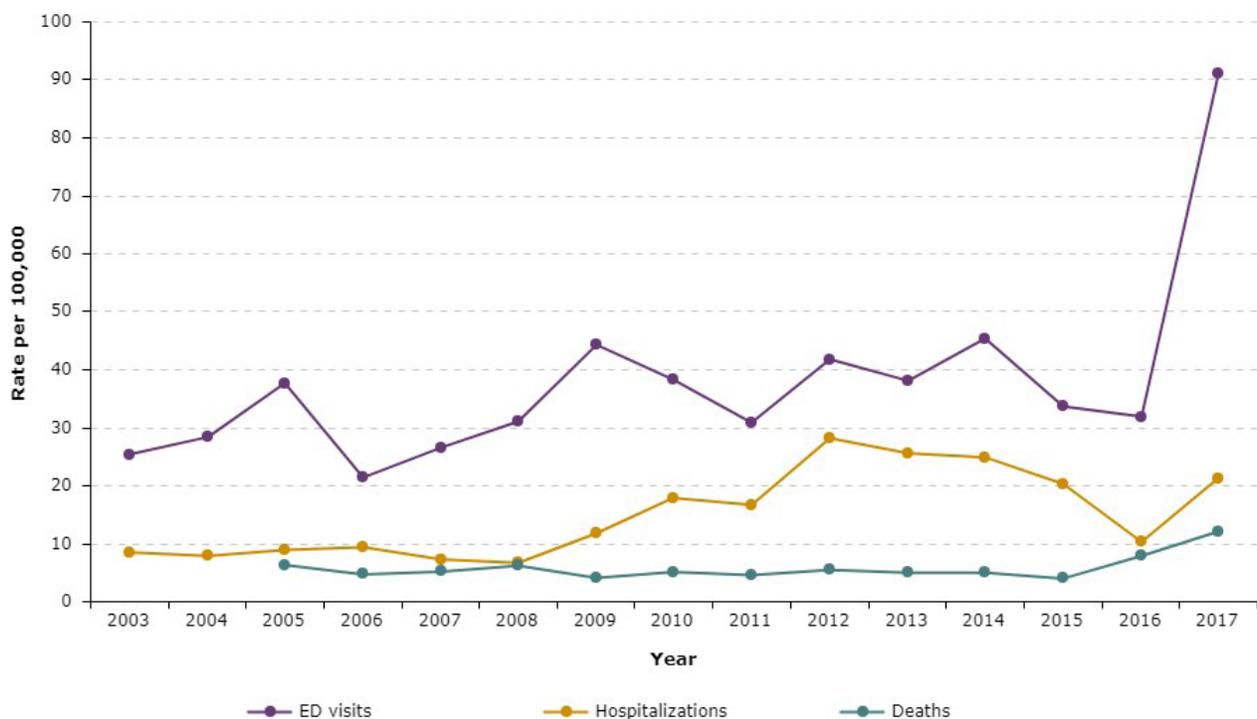
The KFL&A area has been affected by the opioid epidemic sweeping Canada, lying above the provincial average in the rate of opioid-related hospitalizations (12 per 100,000 people in KFL&A, versus nine per 100,000 in Ontario) and deaths (21 per 100,000 in KFL&A, versus 15 per 100,000 in Ontario). The graph below demonstrates the rising

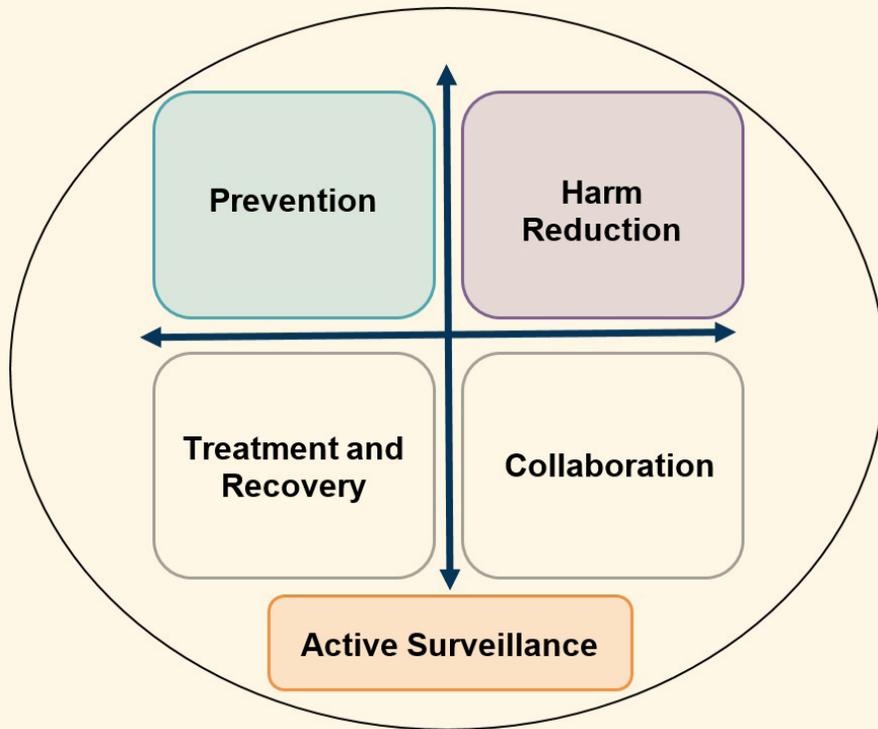
rates of opioid-related emergency department visits, hospitalizations, and deaths over the past number of years in our region.

The factors contributing to this issue are complex, ranging from individual resiliency in response to adversity, to prescription patterns by clinicians, to availability of housing and social supports for high-risk individuals, among others. Accordingly, addressing this complex issue of substance use must involve all levels of society and multiple sectors, including education, health, housing, social services, and many others.

The four pillars drug strategy is a commonly used approach to respond to the opioid crisis. This approach is rooted in the four pillars of prevention, harm reduction, treatment, and collaboration, with active surveillance foundational to them all.

**Rates of opioid-related morbidity and mortality,
Kingston, Frontenac and Lennox & Addington Public Health, 2003 – 2017**





In public health, our focus in preventing substance use and the associated harms centre around:

1. **Prevention** – preventing the illicit use of opioids altogether
2. **Harm reduction** – reducing the harms associated with drug use, such as: wound infections, transmission of blood-borne infections such as HIV, overdose, and death
3. **Active surveillance** – data collection, analysis, and application to ensure we are acting on accurate and relevant local data.

PREVENTION

Prevention uses education, awareness, and advocacy to prevent the onset of harmful substance use. Prevention of problematic substance use can occur at the individual, neighbourhood, and community level and can be presented in various forms.

At KFL&A Public Health, prevention is one of our essential roles in the community. High school workshops, parent nights, and community presentations are used to increase education and awareness of the issues with the goal of preventing the onset of substance misuse. Mandatory education modules on safer prescribing habits for certified and incoming health-care professionals has been an

important tool in advocating for the de-prescription of opioids. Stigma reduction and trauma-informed care for people who use opioids is a growing focus in our work. Prevention messages can be adapted to various populations and are a very powerful tool in increasing public health and safety.

HARM REDUCTION

Harm reduction provides various services that reduce the harms associated with substance use, without requiring cessation. Due to the historic prohibition of drugs, harm reduction is frequently met with controversy as safe substance use is often seen as contradictory to an abstinence approach. However, research and lived experience indicate that the pragmatic, non-judgmental perspective of harm reduction is effective in preventing the harms of opioid use and addiction, and gives people the opportunity to access treatment and cessation services. Harm-reduction services KFL&A Public Health offer include provision of take-home naloxone kits and safer use supplies; needle disposal; and promotion of the Good Samaritan Drug Overdose Act, which assures that people responding to an overdose will not be charged possession of drugs for personal use. We also provide naloxone education to community members, provide kits to community-based organizations and hospitals to distribute to clients and patients, and provide kits to

first-responders for use in emergency situations.

Our region has made great strides in other aspects of harm reduction as well, opening the city's first overdose prevention site in July 2018 at Street Health Centre. The site provides a safe environment for people who use drugs, and encourages safer strategies such as always using with new supplies and never using alone. Street Health also provides clients with opportunities to connect with community and treatment services, and to access harm-reduction supplies.

ACTIVE SURVEILLANCE

Active surveillance is foundational to our work. Providing timely, accurate data and insight at the local level to support effective service delivery is instrumental in ensuring appropriate action is taken to address this issue. We track opioid-related deaths and hospitalizations, the number of people prescribed opioids for pain, the number of people using opioid substitution therapy, and much more. In addition, we are working on early-warning monitoring with hospital admissions and emergency department visits in order to improve communication if there is a spike in overdoses.

In our work at the health unit, the formation of strong, committed community partnerships has been a key strategy to address the needs of those affected by opioid use and addiction. One of these collaborations is the Community Drug Strategy Advisory Committee (CDSAC), which includes participation from police, health and social services, and community outreach organizations across our region. The committee's diversity of partners offers a variety of perspectives and expertise to address the complex issue of substance use. Creating partnerships, exchanging ideas, and working collaboratively to develop a strategy to address substance use in KFL&A is critical in reducing the harms associated with substance use and addressing its root causes in our communities.

What is FENTANYL?

Fentanyl is an opioid that can cause dangerously slow breathing, leading to an overdose or death.

<p>WHY IS IT DANGEROUS?</p> <p style="text-align: center;"> 50 to 100 times more toxic than morphine</p> <hr/> <p style="text-align: center;">Anything can be cut with fentanyl</p> <p style="text-align: center;"> heroin cocaine percs other drugs</p> <hr/> <p style="text-align: center;">You can't see, smell, or taste</p> <p style="text-align: center;"> fentanyl once it is mixed in</p> <hr/> <p style="text-align: center;">Consuming even a small amount of fentanyl can be fatal</p>	<p>SIGNS OF AN OPIOID OVERDOSE</p> <p> tiny pupils  no or slow breathing  does not respond</p> <p> snoring, gurgling sounds, or vomiting  cold or clammy skin  blue or purplish lips or fingernails</p> <hr/> <p>SUSPECT AN OVERDOSE?</p> <ol style="list-style-type: none"> 1. Try and wake the person up. 2. Call 9-1-1 if they are unresponsive or if you are unsure of their condition. 3. Give naloxone. 4. Perform rescue breathing and/or chest compressions, if it is needed and you know how. 5. If there is no improvement after 2 to 3 minutes, repeat steps 3 and 4. 6. If the person begins breathing on their own, put them in the recovery position. <p style="text-align: center;">Always call 9-1-1 because once the naloxone wears off the person could overdose again.</p> <p style="text-align: center;"> Good Samaritan DRUG OVERDOSE ACT</p> <p style="font-size: small;">provides some legal protection, including for simple possession, for people who experience or witness an overdose and call 9-1-1 for help.</p> <hr/> <p>HOW TO AVOID THE RISKS OF AN OVERDOSE</p> <p>If you use drugs, use them safely by:</p> <ul style="list-style-type: none"> • not using while alone, • using only one drug at a time, • not using drugs with alcohol, • using small amounts to test out the drug, and • carrying a naloxone kit.
<p style="text-align: center;">WHAT IS NALOXONE?</p> <p style="font-size: small;">Naloxone is a medication that can temporarily reverse an overdose caused by opioid drugs such as fentanyl, heroin, morphine, and codeine.</p> <p style="text-align: center;"></p> <p style="text-align: center;">can temporarily REVERSE an OVERDOSE</p> <hr/> <p style="text-align: center;"></p> <p style="text-align: center;">WHERE DO I GET NALOXONE?</p> <p style="font-size: x-small;">Free naloxone kits and training are available at KFL&A Public Health, Street Health Centre and local pharmacies. No OHIP card required.</p>	

kflaph.ca/fentanyl

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Angela Vaughan is a Queen's undergraduate kinesiology student.

Dr. Linna Li is a Queen's Public Health and Preventive Medicine resident physician.

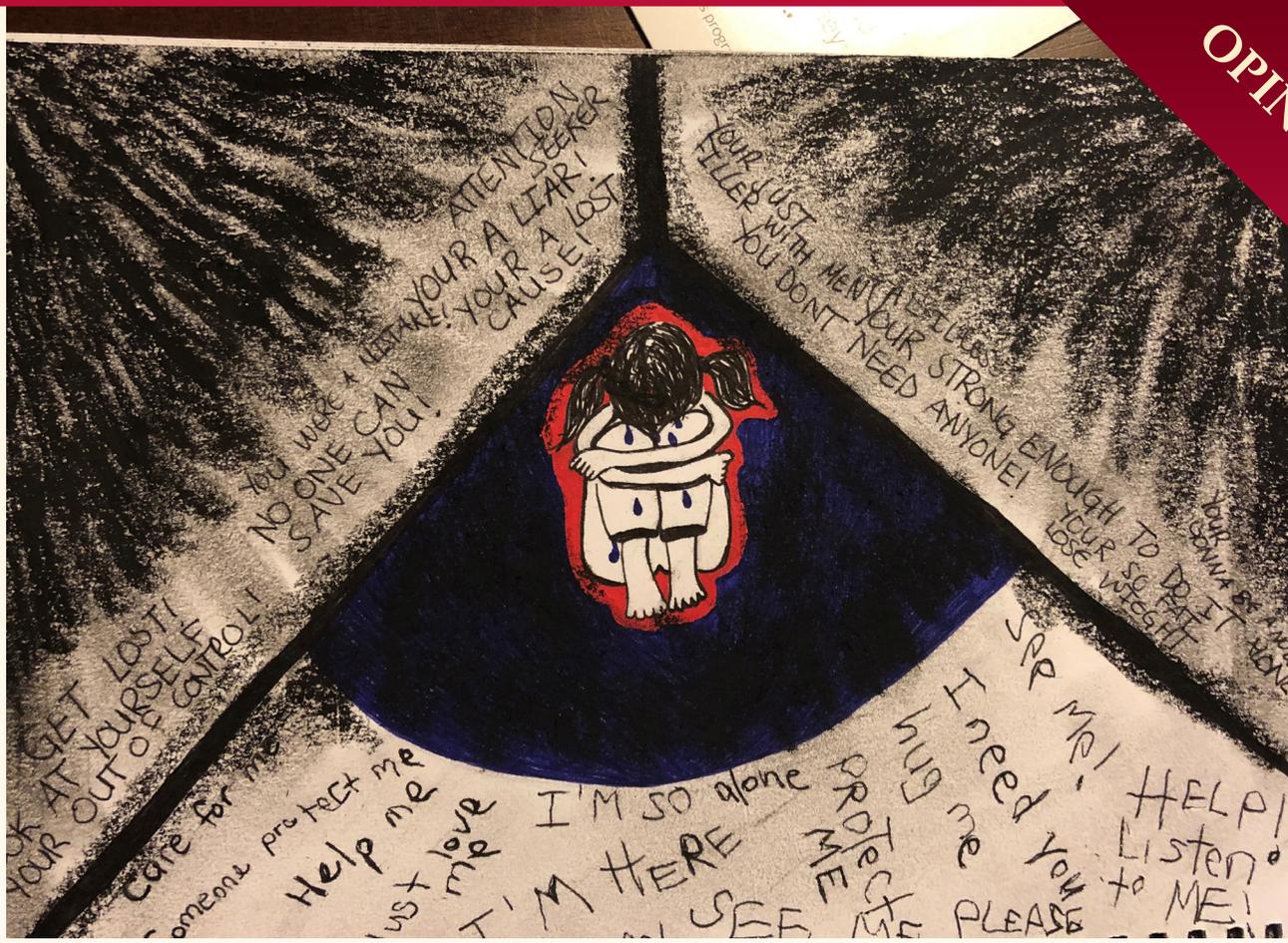


Illustration: Holly Donovan

Holly Donovan, who experienced adverse childhood trauma, struggles with PTSD, anxiety, depression, personality disorder, and addiction. She has been in recovery for two years. Child in the Corner: "The little girl inside my soul is crying out for someone to take care of her, listen to her, and take her out of the darkness she feels trapped in."

Trauma-Informed Care Vital In Setting A Path of Healing

By Dr. Rupa Patel

The opioid crisis has forced the health-care system to take a look at itself. The dramatic increase in opioid-related overdoses and deaths over the last two decades has mandated that the health-care system and providers "look in the mirror" and assess how this crisis occurred.

Multiple issues have been debated as giving rise to the issue of opioid overuse and opioid addiction. These include the sophisticated tactics of pharmaceutical-funded physician education, physician complicity in recommending chronic opioid therapy for chronic pain without adequate scientific evidence, the fragmentation of health care such that a person's health issues are not addressed in a holistic manner, social isolation, and structural barriers to self-efficacy such as inadequate housing and poverty. All of these issues, and many more, play a part in the complex issue of the opioid crisis.

Opioid-related deaths now outnumber motor vehicle fatalities. As we have with motor vehicle accidents, we need to have a co-ordinated effort to address this issue. Ontario's four pillar drug strategy aims to use prevention, harm reduction, law enforcement, and addiction treatment to address the opioid crisis. I believe the prevention component is the most important but the most difficult pillar.

There are some current initiatives looking at prevention of opioid addiction. In particular, there have been initiatives to reduce the community opioid load. This has occurred primarily in the context of physician prescribing. Responsible opioid prescribing to reduce opioid use and opioid doses to safer limits have been promoted in the community and hospital setting. Kingston Health Sciences Centre has implemented an opioid-prescribing policy that limits the number of tablets prescribed on discharge from hospital. In addition, many family practices in

Kingston have worked with their patients to initiate slow opioid tapering to reduce opioid use to safer doses. These are all part of the “prevention” pillar. It is hoped that reducing the number of opioids in circulation in the community will help to reduce access for new users, especially youth.

However, a deeper look at the issues that affect one’s risk of developing addiction or chronic pain must be understood. Many physicians will note that the person in their practice who has developed opioid-related issues such as dependence or addiction has a personal story. This life story is often one of significant childhood adversity. We know from the [Adverse Childhood Experiences \(ACE\)](#) study that the development of chronic pain and addiction increases as the number of childhood adversities increase. The more “exposures” one has to events such as witnessing violence in the family, maternal depression, parental separation or divorce, a family member with substance abuse, childhood neglect and abuse (physical, sexual or emotional), the more likely one will develop chronic pain or addiction. In fact, the ACE study shows that with six or more exposures of the 10 that were assessed, the risk of injection drug use increases by 46 times or 4,600 per cent. (Consider this in comparison to smoking, which increases the risk of heart disease by two times or 200 per cent.) As well, the ACE

study shows that the risk of chronic pain syndromes increases in those who had exposures to adversity in childhood.

There is now a body of literature that explains the disrupted neurodevelopment that occurs when children are exposed to stressful or traumatic events.

Over time, if these stressors persist and in the absence of secure attachments (adult relationships that are safe, reliable, and predictable), there is an impact on the brain. These changes in brain development have been noted on MRI imaging and affect one’s emotional reactivity, impulsivity, and decision-making processes. This can predispose people to make decisions that increase their risk of ill health and addiction. This new area of research in the neuroscience literature reinforces the need to protect early childhood and support the parenting process. Reducing the stressors on the family by addressing poverty, inadequate



Woman in the Mirror: “As an adult, I can nurture my younger self and have compassion for that young girl who never felt the love, connection, kindness, and protection she so desperately needed.”

housing, and food insecurity are of utmost importance.

This issue of adverse childhood experiences has been a prominent topic at Kingston Community Health Centre over the past year. We have begun a process whereby our staff and management are developing a common understanding and commitment to understanding ACEs and their impact. We have begun training all of our staff – as well as other

health-care providers, early childhood educators, and teachers – about ACEs and the need for trauma-informed care. We hope to create a common language and understanding about ACEs and the importance of a safe early childhood. Understanding adverse childhood experiences and their impact on one’s life trajectory has been an illuminating experience for many of our staff members.

Understanding how to interact with those who have had exposure to ACEs is vitally important, as well. Trauma-informed care recognizes the impact of ACEs on one’s ability to emotionally regulate and make reasonable decisions. In the adult setting, trauma-informed care changes the conversation between patients/clients and providers/staff from, “Why are you doing that?” to “What has happened to you?” Understanding one’s life story and its impact on one’s health can be a transformative experience for all involved.

It is a well-described phenomenon that emotional dysregulation, heightened bodily sensations, and dissociation are a consequence of exposure to traumatic events or toxic stress. Repeat and prolonged stress changes the brain so that the sensitivity to bodily sensations and emotions can be elevated and distressing. This protective mechanism makes sense in the context of evolution; we needed rapid and heightened responses to life-threatening situations such as facing a predator in the forest. However, in modern times, this protective response, when



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triggered repeatedly from social and emotional stressors, can cause a similar response to everyday events. It becomes understandable that muting this excessive response to daily stressors is necessary and can be one of the reasons a substance is chosen to calm this response.

In order to provide ACE-informed or trauma-informed care, we need to take the time to listen to our patients. We need to recognize the importance of time and talk with our complex patients. Overcoming chronic pain and addiction is not easy. But bearing witness to someone’s life story can be therapeutic, and can set them on a path of healing and self-compassion.

In addition to understanding the individual’s experience, we need cultural and structural changes to support the early childhood experience. In fact, the [Heckman Equation](#) describes that the return on investment for early childhood programming is 13:1. That is, for every dollar spent on early childhood, \$13 will be saved in the long term in the health and social services sector.

The opioid crisis will continue to overwhelm if we do not focus on prevention. The need for prevention is clear and cost effective in the long term. Now we must do it.

Dr. Rupa Patel is a family physician at Kingston Community Health Centre and an assistant professor at Queen’s Department of Family Medicine.