BUILDING A FOUNDATION FOR A HEALTHY FUTURE: GROUNDWORK FOR PEDIATRIC ADVERSE CHILDHOOD EXPERIENCES SCREENING IN LETHBRIDGE PRIMARY CARE CLINICS

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DEDICATION

To my husband and son who supported me through all my ups and downs, my smiles and tears, my successes and failures. You continue to support me and push me to reach for the stars. You are my FOREVER. You are my WHY.

ABSTRACT

There is substantial evidence that adverse childhood experiences (ACEs) are events experienced in childhood that can negatively impact an individual's quality of health. ACEs, preventable toxic chronic stressors, can increase chronic illness costing Alberta billions in direct health care costs and lost revenue each year. Primary care family practice clinics have a solid structure for preventive screening across the lifespan. Building a strong foundation through early intervention screening in young children age 0-5 years and using a trauma-informed care approach can help build protective factors and resiliency skills for the whole family. The ACEs and Resiliency Screening Implementation Guide can help clinicians to engage in this screening once pilot testing is completed. By promoting education about ACEs and strategies to build resiliency through community connections, we are investing in the lives and health of the patient population we serve.

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SECTION ONE: INTRODUCTION

Practice Problem

Albertans have a high incidence rate of preventable chronic illnesses that cost billions annually (Alberta Health Services, 2016, 2019a). These preventable chronic illnesses are shown to reduce life expectancy and affect the overall quality of life (Alberta Health Services, 2019a). One predictor of chronic illness in adults is levels of adversity experienced in the formative years of their lives, especially during brain development (Bick & Nelson, 2016; Melville, 2017). High levels of these adverse childhood experiences (ACEs) are most often accompanied by multiple chronic illnesses, poorer quality of health, and lower-income and education, compared to those with fewer to no adverse childhood events (Bryan, 2019; Melville, 2017). Alberta Health (2016) identified prevention as a major focus of primary healthcare, however, description of this focus reveals that it is for people aged 18 and older and the measured outcomes indicate only management of chronic illness, which is a secondary prevention tactic at best (McKenzie et al., 2017). With the rising prevalence and cost of caring for chronic illness in Alberta (Government of Canada, 2019), it is critical to refocus efforts on primary prevention by building resiliency skills at an age where intervention can make the difference.

Project Rationale

ACEs are specific experiences relating to abuse (physical, mental, and sexual) and neglect, as well as loss of a parent (death, imprisonment, or divorce), exposure to substance abuse, caregiver mental illness, and family discord (Alberta Family Wellness Initiative, 2020; Burke et al., 2011; Center for Youth Wellness, 2017; Center on the Developing Child, 2019; Felitti et al., 1998). The ground-breaking study by Felitti et al. (1998) shows that the more adversities experienced with a toxic stress outcome the greater the likelihood of poorer adult

health. Since that study, consecutive research shows that one way to combat the negative effects of toxic stress is to build resiliency, both in the child and in the family (Bellis et al., 2018; Center on the Developing Child, 2015; Gartland et al., 2019; Joyce et al., 2018; Kalergis & Anderson, 2020; Woods-Jaeger et al., 2018). To provide interventions to build resiliency, it is vital to engage in screening to understand who needs such interventions (Anda et al., 2010; Bethell et al., 2017b; Dobrow et al., 2018; Melville, 2017).

A strategic location for engaging in primary prevention lies within primary care family practice clinics. The Chinook Primary Care Network (CPCN) was developed, along with 41 other networks in Alberta, in response to the need to improve healthcare delivery for all Albertans (Chinook Primary Care Network, 2009). The central focus of PCNs is to support family practice clinics to improve consistency of and reasonable access to care (Chinook Primary Care Network, 2009, 2016). Considering this focus, family practice clinics that have partnered with the CPCN have taken on the charge to engage in preventive health practices with a person and family-centred emphasis (Chinook Primary Care Network, 2009, 2016; Patwardhan et al., 2017). With that charge in place, it creates the prime space to deliver screening and education and provide supports for the entire family.

Project Goal

To deliver an ACEs and Resiliency screening program implementation guide that is ready for pilot testing, we need to include three vital components. First, adopt screening tools for a primary care family practice setting. Second, develop a standardized process for administering the screening tool. And third, create a referral care pathway to access community resources based on identified needs. The development of the standardized procedure and referral pathway supports the use of an approved screening tool to be administered in a family physician's office.

The risk-free aspect of this screening must consider caregiver reaction to the serious questions and how this may affect the most accurate answers (Conn et al., 2018; Watson, 2019). The implementation guide, including instructions on how to use the components mentioned above, is the first step towards initiating a screening program in the clinic setting. The screening program, with the support of family physicians, will deliver a multi-fold benefit by providing caregivers with information on what ACEs are, how they affect early brain development and future health, how to increase resiliency to stress (Bryan, 2019), and by providing community resources for the family. Engaging in this screening may reduce the long-term rates of chronic illness and ultimately promote reduction in health care costs (Alberta Health Services, 2016; Bryan, 2019).

SECTION TWO: LITERATURE REVIEW

Search Terms

Using the following search terms and inclusion and exclusion criteria as seen in Table 1, all articles and published literature using the following search terms were found in the following databases: CINAHL, MEDLINE, PubMed, and Google Scholar. There is also a plethora of gray literature that provides excellent resources that include the World Health Organization (WHO), Centers for Disease Control (CDC), Alberta Family Wellness, Center for Youth Wellness (CYW), and the Harvard Center on the Developing Child to name a few which will provide supportive data and statistics. All articles were reviewed for relevancy and merit to the focus topic of this paper.

Table 1

Adverse Childhood Experiences Search Terms, Inclusions, and Exclusions

Screening Criteria

- Adverse Childhood Experiences
- Toxic Stress
- Nursing
- Canadian[a]
- ACEs
- Childhood Trauma
- Chronic Stress
- Primary Care
- Childhood Adversity
- Trauma Screening
- Pediatrics
- Meta-analysis

Inclusion Criteria

- English Language Only
- Time Frame - 2010 – 2021[b]
- Items with Full Text
- Scholarly / Peer Reviewed Materials
- Discipline – Medicine / Nursing

Exclusion Criteria

- Theses / Dissertations
- Book Reviews / Chapters
- Newspaper Articles

Note: [a]Any available articles with Canadian content were flagged for review, however, there is limited Canadian data related specifically to ACE screening in primary care clinics, so additional articles with international data on the above topics were flagged for review.

[b]A few key articles that are outside the date inclusion criteria were selected to be of relevance after review of the reference lists of the selected articles.

Scope and Nature of the Problem

Acute vs Chronic Stressors

The term adversity often connotes repetitive negative situations or experiences, but its root is not negative in and of itself. There are arguments that adversity is necessary and beneficial to developing resiliency attributes (Center for Youth Wellness, 2017; Center on the Developing Child, 2016), which may be termed acute stress. Consider for a moment the events surrounding the change from caterpillar to butterfly and the opposing force that is required to break free from the cocoon that was its protective shell or the chick who needs to summon the strength to push against the eggshell so that it can be free. Aiding the butterfly or chick by breaking those protective barriers for them hinders their growth and reduces their potential for survival. This shows that adversity or experiencing something difficult can have some benefit for all humankind. Stressful experiences cause an increase in cortisol and other hormone levels (Bick & Nelson, 2016; Hughes et al., 2017; Petruccelli et al., 2019). An acute stressful experience will increase the levels telling the body and brain that it needs to pay attention, learn, and grow, and will then typically return to homeostasis within a short timeframe. This can be described as an adaptation process (Bellis et al., 2018; Bick & Nelson, 2016; Center for Youth Wellness, 2013, 2017; Cronholm et al., 2015). Toxic stress, is long-term or chronically stressful situations where the body cannot adapt to the perpetual hormone highs, which puts the body in an almost constant fight-or-flight mode. Toxic stress can physically change the brain and body and leads to poorer health outcomes (Bellis et al., 2018; Bick & Nelson, 2016; Center for Youth Wellness, 2017; Center on the Developing Child, 2019; Cronholm et al., 2015). It is this experience of stress that has led to the development of the term adverse childhood experiences by Felitti et al. (1998) and used regularly over the last 22 years.

ACEs and Long-Term Health

The term ACE resulted from a study (Felitti et al., 1998) on the common experiences of a group of adults that were seeking special treatment for severe obesity with further co-morbidities. Dr. Felitti (1998) accidentally identified a common thread, typically sexual abuse, in the history of his patients. Further studies grew from this concept and evaluated the responses of over 9000 patients where common themes included psychological, physical, and sexual abuse, witnessing violence in the home or living with anyone that was mentally ill, a substance abuser, or ever imprisoned (Felitti et al., 1998; Heidinger & Willson, 2019; Poole et al., 2016). Today the accepted definition of ACEs includes exposure to abuse, neglect, and household dysfunction that results in a lack of nourishment to the physical and emotional self that young children need from caregivers (Alberta Family Wellness Initiative, 2020; Anda et al., 2010; Center on the Developing Child, 2016; Stillerman, 2018). The study results showed that those with high ACE scores, meaning four or more categories present, the greater likelihood of having multiple chronic illnesses and co-morbidities, and self-ratings of poorer health. Similar findings have been found in subsequent studies however, some studies identified a threshold of three or more ACEs (Patwardhan et al., 2017).

The links between ACE experiences show a connection to multiple chronic diseases such as hypertension, diabetes, heart disease, and obesity, as well as psychological illnesses and increased likelihood of engaging in risky behaviours (Borja et al., 2019; Koball et al., 2019; Petruccelli et al., 2019). There is no indication of a connection between a particular ACE to a specific chronic illness. Some studies show a weaker connection to chronic illnesses in adulthood with three or fewer ACEs however, authors suggest that is due to the limitations of the studies (Cronholm et al., 2015). In most cases, as studies are conducted with adults attempting to recall

personal histories, it is harder to remember any positive interventions that may have helped to build resilience. One of the commonly accepted definitions of resilience is the capacity of an individual to adapt and cope when confronted with a stressful situation (Alberta Family Wellness Initiative, 2020; Joyce et al., 2018). There is some innate resiliency ability passed via genes (Bellis et al., 2018; Redford, 2016), however, and to mankind's benefit, there are ways to increase development of resiliency in the population. These resiliency skills can be built through interventions at any stage of life, however, an intervention during critical brain development could reverse or even prevent the negative effects of toxic stress (Beckmann, 2017; Melville, 2017). As primary care clinics are striving to enhance services to the population, it would be most beneficial to provide early interventions to build resiliency skills in families with young children.

Impact of the Problem

Internationally

The Declaration of Alma-Ata (World Health Organization, 1978) recognizes that wellbeing or health is a fundamental human right. The W.H.O. has played an important role in identifying inequity at a global level and recognizing the connection with poorer health and increased morbidity (World Health Organization, 2017, 2018). The top ten causes of death accounted for over 50% of global deaths in 2019 and include ischemic heart disease, strokes, chronic obstructive pulmonary disorders, and diabetes mellitus (World Health Organization [WHO], 2020). Investigating sources of inequity throughout the world, the W.H.O. identified violence towards children as a significant source of strain that reduces wellbeing and adds to the burden of illness that is shown to have detrimental effects on economies (World Health

Organization, 2006, 2020). Globally, it is estimated that over 1 billion children between the ages of 2-17 years have experienced abuse in the previous year (World Health Organization, 2020).

In the United States, the CDC reports a national increase in healthcare spending to manage chronic illness into the billions (National Center for Chronic Disease Prevention and Health Promotion, 2020). The majority of the recommendations on preventing chronic illness relate to quitting smoking, living active and healthy lifestyles, and knowing your family history (Henchoz et al., 2019; Hughes et al., 2017; Koball et al., 2019; Petruccelli et al., 2019). Within the European Union, about 75% of health care spending is spent on chronic disease maintenance and has also continued to rise over the last several years from 4.3% increase in 2014 to 5.3% in 2018 (OECD/European Observatory on Health Systems and Policies, 2019; Pett et al., 2020). In 2017, preventable and treatable chronic illnesses caused 39% of all deaths in the European Union, including ischemic heart disease, lung diseases, and those with modifiable risk factors related to lifestyle. The numbers continue to rise throughout the world and the W.H.O. has made recommendations to assist with increasing health throughout the world. To further the recommendations, many studies promote early intervention to support families and build resilient communities, which may decrease chronic illness and ultimately health spending (Beckmann, 2017; Chamberlain et al., 2019).

Nationally

Preventive medicine ideals are not new in Canada as is evidenced by the development of the "Chronic Disease Indicator Framework" (Betancourt et al., 2014) by the Public Health Agency of Canada. The goal of this framework is to identify and understand the impact of chronic illness on the population (Betancourt et al., 2014). Gathered data shows that 60% of Canadians age 20 and older have chronic illnesses and that 80% are at significant risk of

developing a chronic illness (Betancourt et al., 2014; National Center for Chronic Disease Prevention and Health Promotion, 2020). On average, the annual cost to Canadians is over $68 billion in direct health care costs and over $122 billion in lost revenue and productivity losses, with the top illnesses being heart disease, stroke, cancer, asthma, COPD, and diabetes, followed closely by mood and anxiety disorders (Betancourt et al., 2014). This remains to be a significant cost, not to mention a burden on healthcare that could instead be focused on treating non-preventable health concerns.

One common cause of chronic illness, especially mood and anxiety disorders, is the experience of ACEs in children. Within Canada, violence towards children remains a significant concern, with over 70% of children ages 0-5 more likely to be victimized by someone within their family network compared to children over 6 years of age (Statistics Canada, 2021). There has been a general increase in family violence in every province and territory within Canada, except for Prince Edward Island (Statistics Canada, 2021). Despite this prevalence, often seen to rise with socio-economic concerns, there is no Canadian supporting data related to the actual implementation of an ACE screening program for children and the Chronic Disease Indicator Framework is reactive, rather than a proactive strategy (Ontario Agency for Health Protection and Promotion, 2020).

Provincially & Locally

In 2012-2013 over 4.5 billion was invested in chronic disease maintenance, meaning over 67% of allocated health spending was spent on maintenance, and the number continues to climb (Alberta Health Services, 2016, 2019a). Provincial and local risk factors are the same as those throughout the world, such as modifying lifestyle to eat better, get more active, and quit smoking, however, the one distinction is the addition of chronic stress (Alberta Health Services,

2016). Chronic stress is a critical risk factor that affects health care costs, which validates the work that identifies the negative impact of ACEs in society. Lethbridge is not exempt from these statistics, as the chronic illness with the highest prevalence was hypertension related to ischemic heart disease, combined with pneumonia and mental health disorders as the top indicators for inpatient hospitalizations (Government of Alberta, 2019). No evidence is available locally or provincially that indicate specifics of ACEs experienced in the pediatric population, however, knowing the relationship between ACEs and chronic illnesses and the identification of chronic stress as a risk factor implies that ACEs cost everyone.

What Is Known from the Evidence

The likelihood of experiencing an ACE event increases exponentially with each additional experienced ACE event (Patwardhan et al., 2017). Though ACEs are no respecter of income or status, many of those who experience higher levels of ACEs may have poorer health quality, an increased likelihood of partaking in risky behaviours, and earlier mortality relating to the effect of chronic stress on brain functioning and development of neural pathways (Felitti et al., 1998; Koball et al., 2019; Petruccelli et al., 2019). Though acute experiences of stress are beneficial, chronic stress states prevent the body from adapting and can break down the ability to cope now and in future experiences. This can perpetuate the decline in health quality over time in a function that is similar to the cycle of poverty or poverty trap, where it is difficult to break out of the cycle without intervention (Oxford Reference, 2021). Evidence supports that a single stable relationship with an adult can help to combat the negative impact of ACEs, which is best done with early intervention, such as from age 0-5 years (Anda et al., 2010; Bryan, 2019; Stillerman, 2018).

Current Strategies to Address the Problem

Internationally

The W.H.O. focuses on global guidelines that support changing the status of social determinants of health to build sustainable and healthy communities. This indicates the significant impact of social determinants of health on the physical, mental, and emotional health of all people (Chamberlain et al., 2019; Stillerman, 2018; Wang et al., 2018; World Health Organization, 2018). Beyond the social determinants of health, another global recommendation is to reduce violence towards children by bringing awareness and developing policies and frameworks that can be adopted at the national level (Alberta Family Wellness Initiative, 2020; World Health Organization, 2020). One such policy encourages screening for ACEs to better understand how past experiences can affect current decisions and acceptance of care (Anda et al., 2010; Bethell et al., 2017b; Dobrow et al., 2018; Flynn et al., 2015; Fuemmeler et al., 2017; Gillespie, 2019; Kia-Keating et al., 2019; Le, 2019; Melville, 2017; Purewal et al., 2016). There are limitations with this screener being used for aged 18 and older, such as how a retroactive recall of experiences as a child may be faulty or romanticized. It is also difficult to isolate interventions that occurred since those experiences may counteract the negatives associated with ACEs (Anda et al., 2010; Petruccelli et al., 2019).

The global focus on violence reduction provided opportunities for countries throughout the world to assess the effect on health status and quality of life. In the UK, a study by Lester et al. (2020) focused on understanding the needs of teenagers in building skills to accept and heal from ACEs. Identified needs discussed having stable relationships with care providers that are non-judgemental and empathetic, supporting continuity of care, and providing resources for emotional and physical supports. These values align heavily with both person-centred care and trauma-informed care principles (Le, 2019; Oral et al., 2016). Further studies identified the need

for interventions to build skills and mitigate trauma and toxic stress. These include programs such as parenting education courses, home visiting programs, and school programs aimed at building resilience in the community (Beckmann, 2017; Bethell et al., 2017a; Marie-Mitchell & Kostolansky, 2019; McCalman et al., 2017; Purewal Boparai et al., 2018). There were also noted limitations, such as financial and time burdens on families to participate in education offered outside of the home and the financial burden on local economies to support home visiting programs despite the benefit (Flynn et al., 2015; McCalman et al., 2017).

Another strategy is to engage in primary prevention of ACEs through awareness and resiliency capacity building to prevent toxic stress experiences in the first place, which can be accomplished through early childhood screening for ACEs with a primary care provider (Dobrow et al., 2018; Flynn et al., 2015; Gillespie, 2019; Melville, 2017; Oral et al., 2016; Purewal et al., 2016). Several organizations in the United States have worked to develop an ACE screening tool that is completed by the child's caregiver. The ideal is to open lines of communication, build therapeutic relationships, and provide support to families when requested (Center for Youth Wellness, 2015; Center on the Developing Child, 2016; Centers for Disease Control and Prevention, 2019). This helps to fill the toolbox of skills needed for parenting in today's world. Though there are strong recommendations for early screening, it is important to recognize the potential consequences of being unprepared when engaging in this type of screening. Several crucial steps for running a successful ACEs screening program include knowledge of ACEs and trauma-informed care approaches, being prepared to engage in tough conversations as needed, being aware of critical resource supports in the community, and choosing the right tools for screening (Finkelhor, 2018; Gillespie, 2019; Purewal et al., 2016).

Nationally

In Canada, the idea of toxic stress as a health hazard has led to the development of several provincial frameworks to address and prevent ACEs (Alberta Health Services, 2019b; Ontario Agency for Health Protection and Promotion, 2020; Varin et al., 2019). National data support the frameworks for chronic illness and experiences with family violence, as well as by studies throughout the world discussing the merits of interventions to prevent and mitigate the effects of ACEs (Flynn et al., 2015; Government of Alberta, 2019; Lester et al., 2020; Oral et al., 2016; Purewal et al., 2016; Statistics Canada, 2021; World Health Organization, 2018). The Kootenay Region of British Columbia has developed an ACE screening tool kit that provides an outline and resources to support ACE screening (Divisions of Family Practice, 2019). Public Health Ontario published a review that first acknowledges the adverse effects of ACEs, makes recommendations for early screening, and compiles various intervention strategies (Ontario Agency for Health Protection and Promotion, 2020). It is evident that ACEs are prevalent and researchers agree that something must be done. However, despite developing such programs and resources, there is no national resource data related to early interventional screening of young children by caregivers for ACE experiences in life. This may be attributed to physician's unwillingness to engage in any activity with a potential towards re-traumatization of caregivers and families (Kerker et al., 2015). McLennan et al. (2019) argue that routine screening of ACEs is not recommended, citing the potential for re-harm and false positives, especially without resources to support the family.

In the Maritimes, Dr. Michael Ungar has been heading up research and validating tools for assessing resiliency skills to identify how to help communities build pathways to resilience. Some of this work currently guides provincial and local focus on helping families to identify

what protective factors are already in place (Coelho et al., 2020; Palix Foundation, 2017; Resilience Research Centre, 2018).

Provincially

Currently, Alberta Health has committed to health prevention screening in adults 18 years of age and older (Alberta Health Services, 2016, 2019a). The Bowmont Medical Clinic, in Calgary, engaged in a screening project to better understand the role trauma plays in long-term health by screening adults for ACEs. The program screened adult patients with an Adverse Childhood Experience survey during a regular appointment and found that 93% responded favourably to screening and felt better cared for by the clinic (Bowmont Clinic, 2018). Only 5% wanted to connect with a behavioural health therapist to enhance the healing of past experiences (Bowmont Clinic, 2018). Clinic staff reported feeling more comfortable discussing childhood trauma and a greater understanding of the patient when developing care plans, however, this results in tertiary prevention only, which is focused on treating the long-term effects of ACEs experienced as a child (Felitti et al., 1998; Oral et al., 2016). Despite the sharing of these results at a primary care conference, no peer-reviewed data has been specifically published regarding ACE screening in Alberta, beyond the recommendations to do so.

Further research into the Bowmont Clinic's motivation for screening revealed a large body of research being done around ACE experiences, the resiliency metaphor, and how to increase protective factors, though this research is still awaiting peer review for final publication. The Alberta Family Wellness Initiative (Alberta Family Wellness Initiative, 2020) developed "The Brain Story" certification course to help bring awareness that trauma is prevalent and can affect one's health and ability to cope, and that resilience to stress is not just inherent, but a learned skill as well. The education from this course has been adopted across multiple platforms to

change policies on program delivery in the education system, the penal system, and trauma-focused health systems.

Locally

There is a current movement that is being driven through the Lethbridge School District, in combination with Lethbridge Early Years, Building Brains Together, Parents as Teachers, and the Lethbridge Family Centre to bring awareness of toxic stress and our ability to help children build resiliency (Early Childhood Coalitions of Alberta, 2021; Family Centre, 2017; Lethbridge Early Years, 2021). Health Unlimited Television (HUTV) is an Alberta-wide video network for healthcare providers that displays a campaign that supports building awareness of toxic stress and ACEs that are run on televisions in waiting rooms of primary care clinics within the Chinook Primary Care Network. The short videos engage caregivers in brief visuals to understand what ACEs are and how they can make a difference in children's lives (Alberta Family Wellness Initiative, 2020; Health Unlimited Television, 2021).

There is also splendid work being done at the University of Lethbridge around validating different tools for using play or games to help children build executive functions, which helps support healthy brain development and build resiliency (R. Gibb, personal communication, May 3, 2021). Much of the validated methods have been for preschool-aged children, though there is currently work underway to develop games and tools for pre-teens and teenagers (Coelho et al., 2020). Building executive function combined with strengthening therapeutic relationships will promote healthier communities in the long run (Alberta Family Wellness Initiative, 2020).

What Is Working to Address the Issue

Early Intervention and Screening

Earlier screening of ACEs for young children has benefits and limitations. The limitations, though important, can be addressed and even eliminated. Concerns with being unprepared to respond to patients' questions, offending caregivers, availability of resources to support caregivers and families, and the perceived extra time requirement (Finkelhor, 2018; Gillespie, 2019) are countered with responses from caregivers indicating that discussing ACEs and potential concerns work to strengthen relationships with the healthcare provider (Conn et al., 2018; Gillespie, 2019; Rariden et al., 2021; Williams et al., 2019). Planning by building linkages with community supports will provide clearer access and referral resources to answer questions and provide supports. Furthermore, providers engaging in screening have also shown that it doesn't add more than five minutes to a medical appointment and pays off in the end by helping the provider to understand how past experiences may affect the cooperation and collaboration of care with patients (Conn et al., 2018; Gillespie, 2019; Rariden et al., 2021). Awareness-only campaigns are beneficial; however, they have not fully reversed the number of ACEs nor reduced violence towards children in the last two decades of research and discussion (Government of Alberta, 2019; Statistics Canada, 2021). Screening for the sake of screening is useless and potentially harmful (Finkelhor, 2018), but by providing resources and supports within a setting that is already established, such as with primary care providers, it is possible to improve the quality of health of our nation.

Trauma-Informed Care Approach

The current movement to engage in trauma-informed care, is not about asking 'what is wrong with you?' but 'what happened to you?' to bring understanding to patient health, compliance, readiness for change, resiliency skills, and desire to engage in self-care (Le, 2019; Oral et al., 2016; Selwyn & Lathan, 2021). By engaging in the principles of trauma-informed

care, providers are more readily able to recognize risky situations and engage in discussions with caregivers (Le, 2019). This type of intervention can help to interrupt the negative cycle to rebuild and strengthen healthy neural pathway development for a healthy brain and ultimately a healthy body (Bick & Nelson, 2016; Kia-Keating et al., 2019; Koball et al., 2019).

Building Resiliency Skills

Building resiliency skills is essentially helping caregivers to identify strategies to endure, overcome, and avoid the negative effects of toxic stress (Bellis et al., 2018; Woods-Jaeger et al., 2018). Engaging in conversation about experiences opens the door to further discussions about tools that can help and offer opportunities for outside resources when necessary (Kerker et al., 2015; Rariden et al., 2021). It is about strengthening the network of the community, one family at a time. Engaging in early screening can identify needs and provide opportunities for the caregiver to heal from personal ACEs and other forms of toxic stress. This is done by learning about the impact of ACEs, what resiliency is and how it can be fostered, building social connections and enhancing social and emotional competence in children and adults (Conn et al., 2018; Rariden et al., 2021; Watson, 2019).

Gaps in Literature

Both the Canadian Nurses Association ethical guidelines and the College and Association of Registered Nurses standards of nursing mandate a nurses' duty to care and prevent harm (CARNA, 2013b; CNA, 2008). A trauma-informed approach to care signifies that to prevent harm means to mitigate re-traumatization and provide resources for support (Finkelhor, 2018; Gillespie, 2019). To expand on Alberta's framework for preventive measures to reduce preventable chronic illness, an early screening of ACEs shows potential, however, there are two noticeable gaps from a local perspective.

Lack of Standardized Screening Process

There is no data, provincial or local, relating to the screening of pediatric patients, meaning there is no current tool to roll out this type of screening program in pediatrician or family medicine practices. An implementation guide for staff in primary care clinics can help to prepare providers to engage in this beneficial screening.

Lack of Awareness of Available Resources

There is no formal collection of referral resources to help build caregivers' skills for reducing toxic stress and building resiliency. Potential resources are available online, but without awareness of the need to build these skills in the first place, there are under-used services for families within the community.

Future Implications

With the increasingly high cost of caring for preventable chronic illness in Alberta, there is an urgency to engage in primary prevention tactics, which means providing interventions early in life and reducing the abundance of chronic illnesses in the future. Chronic toxic stress, now recognized as a global health disorder, had the largest impact during critical brain development of neural pathways, typically in age 0-5 years. Early screening of ACEs may have a significant influence on reducing the long-term effects of chronic toxic stress. By collecting a caregiver's ACE history, caregivers can learn what ACEs are and how they impact the family, how to reduce experiences with chronic toxic stress, and how to build resiliency in the family. Further work in this area will help broaden the local understanding of screening implementation programs and the impact on the communities involved.

SECTION THREE: PROJECT DESCRIPTION

Background and Planning

The purpose of this project was to develop an implementation guide, to the point of pilot testing, that would support the development of a clinically based ACEs and resiliency screening program for families with young children, age 0-5 years. This early intervention program is intended for primary care family practice clinic settings as preventive screening is already commonplace and provides opportunities to open dialogue and strengthen therapeutic relationships. (Anda et al., 2010; Conn et al., 2018; Flynn et al., 2015).

Target Audience and Key Stakeholders

The target audience for the implementation guide includes physicians, nurses, educators, or any designated staff in Lethbridge primary care clinics. The family practice clinic is an ideal location to engage in ACEs and resiliency screening because this is typically the first point of access for families into the healthcare system (Petruccelli et al., 2019) and screening is already underway with well-baby or well-child visits (Chamberlain et al., 2019; Healthwise Staff, 2019).

Key stakeholders for this project include clinical care coordinators and nurse leaders in various primary care clinics in Lethbridge. These stakeholders are invested in preventative screening programs to support health across the lifespan and strive for clinics to meet Chinook Primary Care Network screening benchmarks.

Ethical Considerations

Ethical implications of the project were assessed through the “A pRoject Ethics Community Consensus Initiative” (ARECCI) screening tool (Alberta Innovates, 2017).

Screening results indicate no ethical risk to stakeholders who participated as subject matter experts, as the project was deemed a quality improvement piece (see Appendix A).

Project Development

The ACEs screening program was identified after an assessment of clinical needs and interests (McKenzie et al., 2017); A logic model was developed with specific interventions to help realize the goal (see Appendix B). Strategically using principles of adult learning and the guidance of trauma-informed care and the normalization process theory, the implementation guide consists of eight components designed to be a planning resource for ACEs and resiliency screening.

Theoretical Frameworks

Trauma-Informed Care (TIC). Adverse childhood experiences (ACEs) (Felitti et al., 1998) are chronic toxic stressors that can alter the body physically and mentally (Oral et al., 2016), denoting that trauma alters the lens through which people view their lives. There are four key domains of TIC (Oral et al., 2016). First, to realize and accept that trauma is prevalent and harmful to overall health. Second, recognizing the signs and symptoms of trauma in the patient population helps to understand how the impact of trauma alters one's actions, reactions, and ability to adapt. As traumatic experiences may prevent a patient from seeking and engaging in care plans, the third domain of TIC is to respond by incorporating TIC principles into clinical policies and procedures used to deliver care. The final domain is to adapt, implement, and monitor policies and practices to prevent potential re-traumatization during service delivery.

Normalization Process Theory (NPT). NPT is an implementation theory that seeks to define how the dynamic and fluid relationships of the environment and its people interact when

striving to embed an intervention into everyday practice (May, 2013; May & Finch, 2009). NPT aids in understanding the contexts in which the providers perceive their roles and responsibilities, practical application in daily practice, and in the assessment of resources to implement the intervention. NPT is about clearly defining the work to legitimize and validate the effort and contribution of those who will use the intervention (Mishuris et al., 2019). The four main domains of NPT include coherence, cognitive participation, collective action, and reflective monitoring (May & Finch, 2009; McEvoy et al., 2014; Mishuris et al., 2019; Murray et al., 2010). Coherence defines the work to be done, how it differs from current practice, and validates why this change is necessary. Cognitive participation describes how people and groups mutually join together to support an intervention. Individual contributions are legitimized by defining the working relationship between co-workers. Collective action defines how the work should be performed within the organization to become embedded in practice. Reflective monitoring clarifies why the work happened the way it did. It defines the experience and offers suggestions for change (Murray et al., 2010). The four domains of NPT may appear to be separate but often occur simultaneously, aiding the user to find and address gaps.

Integration and Application. Using the TIC model to build the implementation guide helped to ensure the right work is being done correctly and by the right people, without intentionally causing harm to the patient population. NPT was used as a guiding theory to inform the key steps in developing the implementation guide, allowing a concurrent evaluation of the implementation guide components to increase the potential uptake and utilization of the implementation guide. The fully updated implementation guide is in Appendix C and further description of the developed components is discussed in the following section.

Components of the Implementation Guide

1. **Introductory Pages (Page 1-3 of the Implementation Guide).** The introductory pages provide a brief introduction to the implementation guide for the target audience. Included is a brief background on ACEs, the problem ACEs pose to human health in the long term, and current solutions being employed throughout the world. Including this component helps to strengthen commitment through re-engagement of the topic (Johnson & May, 2015). The NPT domain of coherence had a major impact on the development of this component because the goal was to provide clarity on what the implementation guide is meant to accomplish and what role the clinic plays in helping to accomplish this work.
2. **Resource Chart (Page 4–5 of the implementation guide).** Practice change benefits from evidenced-based support (Curtis et al., 2017). The resource chart identifies specific tasks to consider and how best to support the adoption of an ACEs and resiliency screening program in the clinic. Each task includes rationale, who is responsible, how to accomplish the task, and when the task should take place. The NPT domains of coherence, cognitive participation, and collective action were used to identify a comprehensive list of evidence informed tasks for primary care clinics to contemplate prior to engaging in an ACEs and resiliency screening program.
3. **Standardized Clinical Protocol (Pages 6-8 of the Implementation Guide).** Practice guidelines, procedures, and protocols are a requirement in Canadian businesses (Government of Canada, 1985; HMC Lawyers LLP, 2018) and provide clarity in roles, expectations, and encourages accountability for action. Protocols are supported within healthcare and are an expectation within primary care clinics (CARNA, 2013a). The written protocol meets the NPT domains of cognitive participation and collective action by addressing the responsibilities of all parties. A standardized clinical protocol was

developed to accompany the implementation guide to provide a consistent message for staff in program delivery.

4. **Flow Maps (Pages 9-11 of the Implementation Guide).** Using flow maps is common practice in healthcare and subsequently primary care clinics (Sutton et al., 2020). Here, the intention of using flow maps was to illustrate the written protocols, which supports the ideal of alternate learning methods (Sutton et al., 2020). The clinic staff responsibilities were colour-coded based on clinical role (i.e. physician, nurse, reception) and linked to the suggested scripts intended to assist each staff member in their respective task. The flow maps, included in the implementation guide, meet the NPT domain of collective action by setting in place how the action of screening occurs.
5. **Suggested Scripts (Pages 12-14 of the Implementation Guide).** Developing scripts is another way to support the NPT domains of cognitive participation and collective action, as well as support alternative learning methods (Canadian Literacy and Learning Network). Using Alberta Health Services and other provincial resources from across Canada, scripts were developed to help facilitate discussion in the screening program (Alberta Health Services, 2019b; Divisions of Family Practice, 2019). To aid in screening, the scripts were colour-coded based on specified clinical roles.
6. **Screening Tools (Pages 15-17 of the Implementation Guide).** The ACEs screening tool for adults was adopted from the California Department of Health Care Services (2020). Two resiliency screening tools, one a 5-point Likert scale, the second with the same questions and a 3-point Likert scale, were adopted from the Resilience Research Centre (2018). The two resiliency screening tools were included to provide options based on individual clinic desires and needs.

7. **Community Resource Guide (Page 18 of the Implementation Guide).** For registered nurses, there is a mandated duty to provide care that is safe, ethical, and minimizes harm. This requires a plan to provide patient support in any program that may interfere with this mandate (CARNA, 2013a; CNA, 2008). Community resources were packaged into three categories: green, yellow, and red, similar to a stoplight. The stoplight effect in resource tools is readily used to educate healthcare providers and patients, such as with the asthma action pathway (University of Calgary, 2018). For the Building Resiliency Community Resource Guide, green resources are targeted at patients and families who have protective factors in place and request additional supports. Green resources offer a variety of websites and community linkages to help families strengthen their resiliency skills. Yellow resources are targeted at families with the potential for one or more ACE and limited protective factors. These resources require referral by clinic staff and were included to connect families with community programs that can assist them through the process of strengthening resiliency skills. The red resources are targeted at families that require immediate intervention. Nurses and physicians have a duty to report if a child or family member is in imminent danger. Therefore, the resources included will provide one-on-one supports to build skills and help strengthen families. Using this stoplight effect offers a quick visual of what to do and where to refer patients when the need arises, which relates to the coherence, cognitive participation, and collective participation domains of NPT.
8. **Supporting the Program Going Forward (Pages 19-20 of the Implementation Guide).** The last component of the guide provides suggestions on how to support the embedding of the screening program into the daily practice of the clinic. All domains of

NPT were used to develop this section by redefining the expectation of the program, identifying additional supports for the program and staff to support role changes, and through encouraging evaluation of the program at regular intervals.

Using NPT as an overarching theory to direct the development of these eight components of the implementation guide allowed for continuous reflection and evaluation to enhance each component. The focus of NPT is to define the expectations to embed the new process into daily work routines. The deliverable for this MN project is an implementation guide that intends to help clinic staff engage in an ACEs and Resiliency screening program.

Evaluation Methodology

Formative evaluation is used to inform and guide the development of a deliverable before pilot testing with the target audience (McKenzie et al., 2017). Identifying the goals of this project and using the elements of formative evaluation from McKenzie et al. (2017), I used a combination of qualitative and quantitative questions to evaluate the implementation guide with a small group of subject matter experts employed in the Chinook PCN and PCN clinics. Using a 4-point Likert scale, part one of the feedback tool included nine questions that addressed all eight components of the implementation guide. Also, nine open-ended qualitative questions were included for the developer to gain a deeper understanding of how to improve comprehension and increase the potential for use of the implementation guide. Part two of the feedback tool included six questions covering the overall flow and usability of the guide. A copy of the questions on the feedback tool can be found in Appendix D. The Likert scale response types included the four following statements, No, Somewhat No, Somewhat Yes, and Yes. The feedback tool was followed by an online meeting with subject matter experts to discuss the strengths, weaknesses, opportunities, and threats of the overall implementation guide.

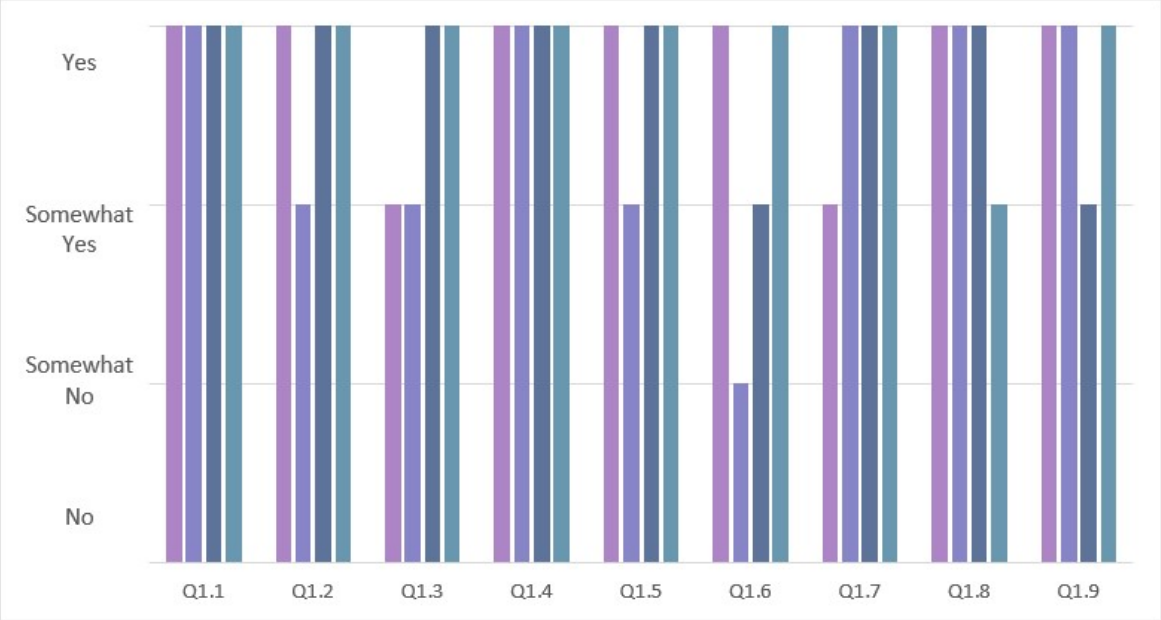
The implementation guide and evaluation questions were sent to five subject matter experts (SMEs) with skills in policy development, community linkage building, social work, TIC practices, program development, and direct nursing care management. The data collection process for the evaluation questions was anonymous. The virtual meeting was not anonymous, however the feedback was collected in a group format without specific identifiers. All feedback was collated and analyzed using Microsoft Excel.

Results

Four of the five subject matter experts (SMEs) responded to all the questions on the feedback form. Of the nine Likert Scale questions for components one to eight of the ACEs and resiliency screening implementation guide, all but one response was in the somewhat yes or yes category, with one response for question six in the somewhat no category (see Figure 1).

Figure 1

Subject Matter Expert Responses (n=4) to Questions 1 to 9 on Part 1 of the Feedback Form



Note. Part 1 of the feedback form is focused on the 8 components of the implementation guide

For question 1.1, four out of four SMEs indicated yes, thus all agreed that the introductory information on pages 1-3 of the implementation guide supported the development of a screening program within their organization, however, written qualitative feedback suggested that more detail on time allotment for a readiness assessment and the amount of time needed for staff training should be included.

For question 1.2, three out of four SMEs indicated yes, with one indicating somewhat yes, that the resource chart on pages 4-5 of the implementation guide clearly outline the resources required to successfully implement the program. Again, written qualitative feedback suggested the need for clarification on time requirements for staff education. Additionally, concerns were noted regarding the level of success in organizing a screening program if the clinic cannot complete a specific task in the resource chart.

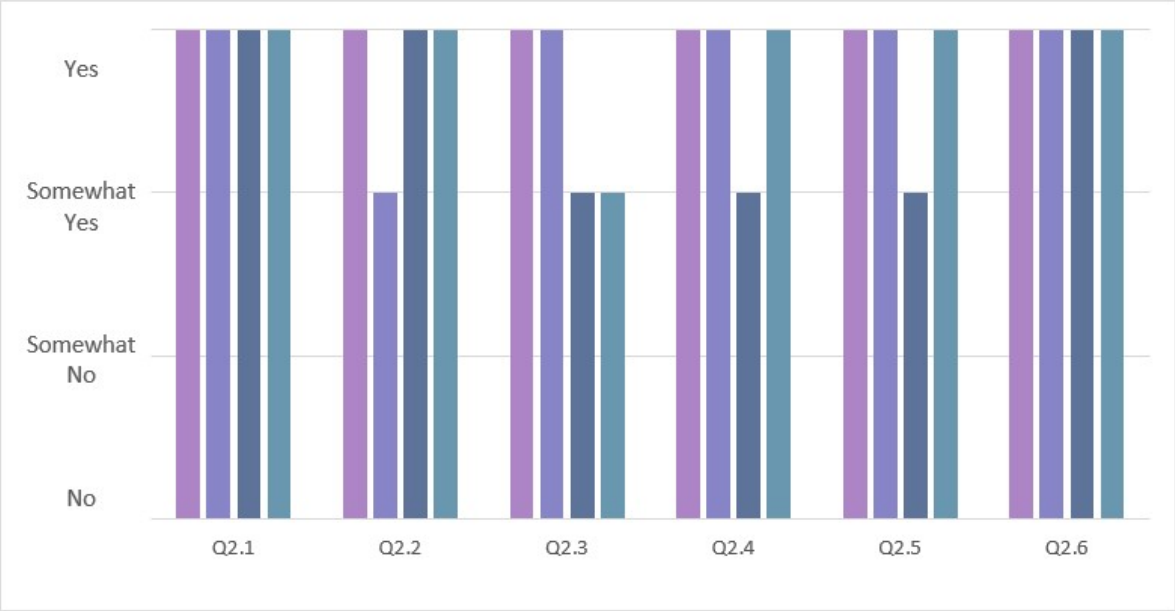
Question 1.4 and 1.5 relate to the same flow map. For question 1.4, four of four SMEs responded yes, thus they agreed that the flow map on page 9 aligns with the clinical procedure on pages 6-8 of the implementation guide. The written qualitative feedback suggested difficulty in legibility of the flow map, which is indicated in question 1.5 as well, where the legibility is hindered related to font size and colours.

Question 1.6 reviewed the second flow map that was specific to the assessment of need and how to use the Building Resiliency Community Resource Guide. Only two of four SMEs indicated yes, while one indicated a somewhat yes, and one indicated somewhat no. Qualitative written feedback again noted legibility, however, there were additional concerns noted with lack of clarity on how to refer to community resources, who engages in follow-up, and when follow-up appointments should be scheduled.

Part two of the feedback form used the same 4-point Likert scale with questions related to the overall flow of the implementation guide. Six questions were included and can be found in Appendix D. Of the six Likert Scale questions for the overall flow of the ACEs and resiliency screening implementation guide, all responses were in the somewhat yes or yes category (see Figure 2).

Figure 2

Subject Matter Expert Responses (n=4) to Questions 1 to 6 on Part 2 of the Feedback Form



Note. Part 2 of the feedback form is focused on the overall flow of the implementation guide

For question 2.1, four of four SMEs responded yes, thus agreeing that the implementation guide flows logically from start to finish with no recommendations for changing the order of presentation in the guide.

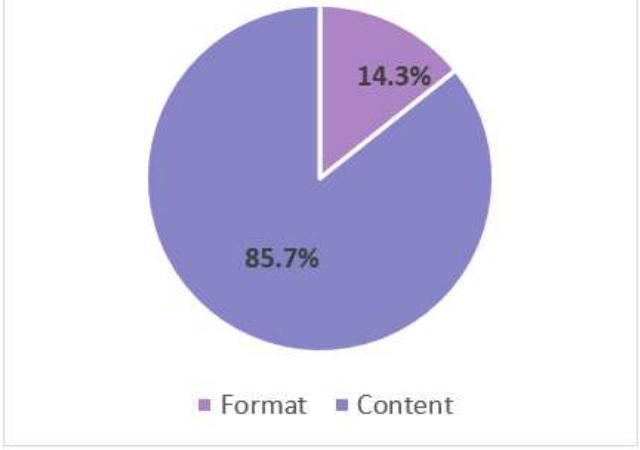
With improvements based on qualitative feedback, question 2.6 indicates that four of four SMEs responded yes, thus 100% agreed they are likely to use this implementation guide in the future within their clinic setting.

Qualitative Thematic Analysis

The qualitative feedback was assessed for common themes across all responses. 85.7% of feedback was related to the content with suggestions to improve information included in the components of the implementation guide. The other 14.3% of the qualitative feedback was on the format of the document (see Figure 3), suggesting changes in layout and fonts for legibility.

Figure 3

Qualitative Feedback



Note. This graph includes both verbal and written feedback

Analysis of each qualitative response, whether written on the feedback form or verbally during the online meeting, revealed five common themes that include:

- Role Clarity
- Time Commitments
- Language
- Missing Processes
- Legibility

Role clarity was mentioned in 8 of 15 of the feedback questions, with one subject matter expert asking “Who is participating in the screening … but who is the specific audience”?

Clarifying exactly which staff member is responsible for which roles were requested to improve understanding of the implementation guide. Another area for clarification was clearer direction in use of scripts and flow maps to perform a specific function, such as when and how to arrange a follow up appointment as well as who would complete this task, either physician or nurse.

Time commitments were mentioned in 4 of 15 of the feedback questions. Clarification on time commitments for educating staff, screening appointments, and follow-up appointments was the most common suggestion.

Language adjustment was specifically mentioned in 4 of 15 of the feedback questions with concerns about potential for censuring or blaming language, whether aimed at staff in the implementation guide or the scripts during screening appointments with patients.

The missing process identified was related to how to manage patients and families that may become distressed related to the screening process. One comment from a subject matter expert suggested to "Maybe add a script for additional debriefing with family if they were distressed with screening results or emotions were brought up while completing the screening tools". This missing process was mentioned in 6 of 15 of the feedback questions.

The final theme of legibility was mentioned in 5 of 15 of the feedback questions and was specifically related to the flow maps and the Building Resiliency Community Resource Guide. Difficulty in reading text that was too small or with a coloured background was one of the most common comments for legibility.

Both the quantitative and qualitative feedback helped me to identify what changes needed to be addressed and how to improve the implementation guide so it is more likely to be adopted into clinical practice. For a complete summary of analyzed results, see Appendix E.

Discussion

The implementation guide was adjusted throughout to clarify roles for who performs the screening and for who is being screened. Estimated time commitments were added; however, pilot testing is recommended for further clarity. Some adjustments to appointment length and education sessions for staff may change based on the staff complement and experience at each clinical site.

The language was adjusted throughout the document to remove potentially judgmental or blaming language, whether directed towards staff in the planning features or towards patients in the scripts. The implementation guide will benefit from further review by a language subject matter expert.

The missing process was specifically related to developing clearer instructions for how to manage patients and/or families experiencing distress related to the screening appointment. Managing distress was identified as a critical piece, since many clinics do not have mental health educators or support staff available for immediate consultation. Using currently available information from Alberta Health Services Mental Health Services, clearer instructions were provided and updates were made in the protocol, scripts, and flow maps.

The legibility was also addressed because it was difficult to read. On reflection, this was related to my lack of skills in merging differently formatted documents, which blurred the writing and darkened the chosen colours. Solidly filled boxes were changed to coloured outlines only. I felt the colours were important to keep because they correlate directly to the scripts for the profession doing the work. For example, physicians' activities on the flow map are a teal colour, which correlates to Scripts 1-3 for physicians. Increasing the font and clarifying roles required splitting the two flow maps into three to enhance legibility.

SECTION 4: REFLECTION

Project Development

My original intention in this project was three-fold to (a) adopt an ACEs screening tool, (b) develop a standardized clinical protocol to guide the development of and engagement in a screening program, and (c) develop a community resource guide. I used the normalization process theory because meeting the key components of this theory helped provide a process that could become embedded in everyday practice.

ACEs Screening Tool

The tool that I intended to use was completed by a caregiver on behalf of the child's history. Going into this project I was using American-based research on early screening interventions and the tool that I chose, focused solely on children's experiences with ACEs as reported by caregivers. I knew fully that there could be a limitation on honest reports if there was concern that the child would be taken away or caregivers reported for some experiences that are documented in the ACEs screening tool such as abuse or neglect. I reached out to the Center for Youth Wellness, who published the tool I intended to use, to see if they had recommendations on how to address this concern. One developer of the tool was Dr. Nadine Burke Harris, who used it in her pediatric practice, so I tried to reach out to that office and also emailed her current assistant, as she is now the Surgeon General for California. No feedback was received and with the looming deadline for this project, I continued to research online until I was introduced to Nancy Mannix, with the Alberta Family Wellness Initiative and the Palix Foundation. I had missed the plethora of local research and program development that was happening in Alberta. I found this ‘miss’ greatly disturbing so to ensure I was not overlooking important data, I

immediately engaged in further research, including the 20hr brain story certification course (Alberta Family Wellness Initiative, 2015), which greatly changed my perspective. Since I want to bring awareness of ACEs and teach how to strengthen the family, I needed to consider two additional factors. First, remove the concern about screening children through their parents and collect the history of the caregiver. This would work because we know that today's experiences can affect up to three or more generations into the future. I knew we could still use caregiver history as the entry to further discussion (Woods-Jaeger et al., 2018). Second, I needed to move along with the province towards understanding the role of resilience and building protective factors (Alberta Family Wellness Initiative, 2020). I re-worked the idea into an ACEs and resiliency screening program implementation guide when I realized that I needed to reevaluate my goals in running this type of program in a clinic, teaching me that learning never stops and best practice is a forward moving target.

Standardized Clinical Protocol and Community Resource Guide

The protocol was based on typical family practice clinic protocols in Lethbridge and was developed in a way to make the information adaptable to meet any clinic format required. I developed the building resiliency community resource guide using a stoplight (green, yellow, red) format (University of Calgary, 2018) to allow for a quick review of referral resources whether for the physician or even as a handout for families. After developing these components, I questioned whether I had met the four NPT domains. I realized quickly that a protocol and resource guide was beneficial, but a missing piece was how to use them, how to understand staff roles, and how to know if the work is understood and accepted as important and necessary (May et al., 2018). My original idea morphed into an implementation guide to help clinic staff feel empowered to engage in this screening program. I chose to develop a chart of resources that

would help encourage success as well as flow maps and scripts that explained who did what work and how that work should be done. It has truly become a piece I feel can help clinic staff engage in this transition together. The regular review of process and subsequent adaptation of my deliverable reinforced the role the nursing process has in everyday work. Though it is not always seen, there is a conscious choice to assess, implement change, and evaluate. This impacts my ability to teach others, develop clinic-based programs, and lead quality improvement activities with a designated clinic.

Timing and Amount of Feedback

Due to time constraints and wanting to provide as much time as possible to the subject matter experts for review of the implementation guide, I left very limited time between the collection of the feedback form and the virtual meeting. The participants did not have difficulty, but I found that I did not give myself enough time to critically review the feedback before engaging in a verbal discussion on the strengths and weaknesses of the implementation guide. In the future I would build more time in the planning section for the initial analysis of data.

In relation to time constraints, I also limited my feedback collection to one review. I would have liked to have adjusted my deliverable with the initial feedback and then send for a second review to ensure that I did capture the ideals of the subject matter experts. One piece that I could not truly address, such as a language subject matter expert review, needs to be addressed in the future before piloting and implementation.

Overall

Throughout the entire process, I became immersed in “what I wanted to accomplish” as well as other's enthusiasm. My stakeholders quickly bought into the idea of early intervention

screening. Unfortunately, this also meant there was a continued and lengthy discussion and suggestions for development that started to push the limits of this project. I quickly learned how to accept the feedback and kindly redirect their enthusiasm to fit within the timeframe of this project.

There was no visible endpoint of research on this topic, one often defined as data saturation (Saunders et al., 2018). I often felt as if I was falling down a rabbit hole, unsure when to stop the research process, and delving into a newer database of local research just prolonged the feeling that data saturation was an elusive endpoint. Since the research studies in Alberta were still awaiting peer-review for final publication, I began meeting with researchers and directors of various organizations engaged in this research. Each meeting brought forth new ideas and information, but I was pleasantly surprised that while engaging in my second to last interview I began to experience data saturation. From that point on, what I learned was supporting all that had come before, but presented nothing new. Finally experiencing this for myself was humbling and yet empowering, recognizing that I was experiencing what I had read about during my entire graduate career and now knowing what to expect going forward.

My original three goals expanded into the implementation guide and I feel that my final product has exceeded my first intentions and expectations. Though it was a lot of work, I feel confident that I have developed a piece of work that will truly aid clinic staff and one that is ready for pilot testing. What seemed so difficult to understand in my previous courses, such as how to plan, implement, and evaluate a program, now makes complete and logical sense. As I was working through each step of program planning, I was so sure I "wouldn't get it". But I can look back on the process now and say not only that I do “get it”, but that I understand how each piece flows together, how that nursing process learned over 15 years ago is a continuous cycle

that drives change every day. This often goes unnoticed but occurs just the same. I have always struggled with how the ideals of theory impact my practice, but it is very clear just how vital a role it plays. It feels like it has become second nature, just as this project development experience. I feel confident that I can continue along in this work and I am excited to realize that I enjoy this kind of work so much.

Lessons Learned

Course Learning Outcomes

The learning outcomes in this course of project development were met by developing and completing my deliverable. I have not only led the development of the deliverable, but I engaged in formal and informal discussions and evaluations. I communicated regularly, effectively, and respectfully with all stakeholders and external participants. I became more adaptable to change, such as when I learned of an untapped wealth of local research and then readily engaged in long hours of certification to ensure that I was using the most up-to-date and relevant literature and recommendations possible during the development of this implementation guide. I could see what barriers and threats presented throughout the development of this deliverable and adapt my plans accordingly. In accomplishing the learning outcomes, I feel that I have delivered a product that can make a difference for our patient population.

The course learning outcomes align with the six learning domains for master of nursing education with the Canadian Association of Schools of Nursing Graduate Education Framework (Canadian Association of Schools of Nursing, 2015). Completing this project has imparted opportunities for increase awareness of complex problems affecting the delivery of nursing care and the health of the population through the in-depth research and review of multiple databases

of literature. Each paper, each class has opened my mind to the social injustices still prevalent and has altered the lens through which I see and choose to live my life. The implementation guide afforded opportunities to enhance best practices within the local context by addressing learning needs of clinical staff. This implementation guide will help clinics to implement trauma-informed care principals into daily practice and is a result of translating knowledge into action. Preparing elevator pitches and group presentations, communicating with staff and delegating tasks, and leading the development of this deliverable has helped prepare me to provide future leadership, oversight, and accountability in my nursing practice (Canadian Association of Schools of Nursing, 2015).

Bias

I always assumed that bias, in this case, would relate to the analysis of data, however, I was surprised to learn that I needed to shift my lens from what I thought was important to include to recognize what others may desire or need in an implementation guide (Marcelin et al., 2019). I had approached development based on what I would need to run it at a clinic level, what would be needed to make it work in the trenches so to speak, but I quickly realized through formal and informal feedback that I would need to appeal to all levels of learners from the academic to the performer. I often see the idea being at the letter 'A' and the action or outcome being 'Z' and my job to connect everything in between. I assumed that I had executed my role, but when looking deeper I saw where I may have skipped a few steps due to time constraints, lack of supports, or belief that particular pieces were not pertinent. I realize this is the bias that was affecting my ability to articulate flow throughout the guide, which is why it became so important to critically analyze my work and develop deeply analytical and open-ended questions to obtain truly useful feedback. I have often felt that feedback, though offered without intended

offence, still hurt. Though some feedback was about preference in look, I could see that without outside input, it limits buy-in from the audience and can effectively close off my creative moments. The feedback can often challenge your thinking so that you can adjust your lens and gather pieces that may have been missing otherwise. It is a sobering and yet inspiring experience to see how critically important evaluation is to helping embed the desired change into daily practice.

The Next Steps

Further revisions by a language subject matter expert to ensure that harmful or judgmental language is minimized or removed entirely is recommended in order to reduce assumptions and minimize potential harm to users of the implementation guide through re-traumatization (Oral et al., 2016). Furthermore, the scripting in the implementation guide were suggestions to direct the conversation, however, these would need to be reviewed to minimize potential harm or re-traumatization of patients and their family.

Pilot testing of this implementation guide will also be critical as it will help to solidify the current estimated time allotments for staff education, clinic preparation, and screening appointments with the family (Hassan et al., 2006; McKenzie et al., 2017). Determining whether the amount of time to engage in this type of screening with families will be different between an experienced and inexperienced nurse will be extremely beneficial.

Development of an elevator pitch and information pamphlet with infographics may also be beneficial to engage the interest of clinics (Yonkaitis, 2020). Once interest is engaged, the clinic can be connected with their integration leads with the Chinook Primary Care Network to begin planning for this monumental and beneficial change to practice.

Implications for Nursing Practice

For early intervention and screening programs that relate to possible mental health concerns, it is important to work collaboratively to change individual clinic and healthcare cultures to accept and realize that trauma is prevalent, that it is no respecter of race, religion, or financial status, and that we do have a responsibility to help. Working collaboratively to change culture would be best addressed in the three following ways:

1. To be more sensitive to trauma-informed care principles and accept that both genetics and experiences of a young child's development can change how and when they as an adult patient accept an offer of care.
2. To recognize the importance of maintaining therapeutic relationships with patients and planning how to do this in a busy clinical environment and with a limited workforce.
3. To realize that staff are part of the patient population and have personal genetic and experiences that may affect their ability to work in certain environments. This may mean incorporating mental health days along with sick days and building in debriefing rituals to help staff deal with potentially re/traumatizing experiences.

Conclusion

There is substantial evidence that more ACE events experienced in childhood can negatively impact the quality of health of individuals. These preventable chronic illnesses have seen consistent increases over the past decade that cost Alberta billions of dollars annually in direct health care costs and lost revenue. With the inception of primary care networks in Alberta, there is a prime opportunity to engage in primary prevention. It is important to build a firm foundation that will help primary care family practice clinics to support families, and using a

trauma-informed care approach to address ACEs in families with young children can help fill the caregiver toolbox with strategies for improving health. The ACEs and Resiliency Screening Implementation Guide can help clinicians to engage in this screening once pilot testing is completed. By promoting education about ACEs and strategies to build resiliency through community connections, we are investing in the lives and health of the patient population we serve.

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APPENDIX A
ARECCI Screening Tool Results Link

ARECCI Screening Tool Results Link:

http://www.aihealthsolutions.ca/arecci/screening/422248/c4d0f83aed1ae3df8e8a6bd9cdcaf78a

APPENDIX B
Project Logic Model

Adverse Childhood Experiences Screening Package Logic Model						
Mission: This package is aimed at helping clinicians implement a screening program to help caregivers of children (age 0-5 years) to understand the negative effects of toxic stress, how to avoid or reduce adverse childhood experiences, and increase resiliency to promote healthy brain development and their quality of life as adults						
Situation & Priorities	**Inputs**	**Outputs (Process)**		**Outcomes (Impact)**		
Goal	**Resources**	**Ottawa Charter Strategies**	**Participants & Activities**	**Short Term (Learning)**	**Medium Term (Behaviour Change)**	**Long Term (Health Impact)**
Support primary care physician practices in reducing toxic stress and building resiliency in families through ACE screening	> Stakeholders: PCN physicians, PCN clinic coordinators (RNs), identified PCN policy maker	**Develop Personal Skills**	1.1.a. Prior to the presentation of a screening program the program planner will adopt an ACE screening tool that will support a safe/shame free environment for caregivers to complete the ACE screener	By May 15/21 , the primary stakeholder will approve use of the adopted ACE screening tool	At 1-year post intervention, the ACE Screening package will be accepted as a PCN standard for primary care clinics	At 2-years post intervention 60% of Chinook PCN clinics will be using the ACE screening program as evidenced by internal audits with clinic leaders
	> Permission from PCN and clinic managers for stakeholders to be part of the project review process	**Strengthen Community Action**	1.2.a. Prior to the presentation of a screening program, the program planner will have developed partnerships with local community programs to determine the appropriate referral resource and how best to improve closed loop information sharing	By the end of the intervention period (June 20/21), the care pathway will be approved for use by the project reviewers	At 1-year post intervention, the care pathway for referrals within Lethbridge will be accepted as part of the ACE screening tool by the PCN	At 2-years post intervention 60% of Chinook PCN clinics will be using the care pathway as evidence by audits of referral resources
	> Time for stakeholders to be part of the project review process	**Create Supportive Environments**	1.3.a. Prior to the presentation of a screening program, the program planner will develop a clinical process for performing ACE screening in the clinic setting	By the end of the intervention period (June 20/21), the project reviewers will approve use of the clinical process for delivering an ACE screening program	At 1-year post intervention, the clinical process for delivering ACE screening will be accepted as a PCN standard for primary care clinics	At 2-years post intervention 60% of Chinook PCN clinics will be using the ACE screening program as evidenced by internal audits with clinic leaders
			3.1.b. Prior to the presentation of a screening program, the program planner will develop a clinical care pathway to identify the best resources for referrals	By the end of the intervention period (June 20/21), the project reviewers will approve use of the care pathway for referrals	At 1-year post intervention, the care pathway for referrals within Lethbridge will be accepted as part of the ACE screening tool by the PCN	At 2-years post intervention 60% of Chinook PCN clinics will be using the care pathway as evidenced by internal audits with clinic leaders
Assumptions:				**External Factors (forces):**		
> Stakeholders understand the link between toxic stress (ACEs) and chronic disease states				> Loss of government funding for primary care networks in Alberta		
> Stakeholders recognize that prevention strategies can decrease future chronic disease				> Stakeholders decide to use government funds in a different way		
> Person-centered care involves the family and is the expectation not the exception				> Stakeholders leave practice		

APPENDIX C

ACES and Resiliency Screening Implementation Guide

Strengthen the One

Strengthen the Family

Strengthen the Community

ACEs & Resiliency Screening Program Implementation Guide for Primary Care Clinics

Developed by Kira L. Scott, RN
University of Lethbridge
Master of Nursing Degree
May 2021

PREFACE

Within the CPCN, it is easy to see how the team makeup (staff complement) of each clinic differs as much as the population served by the clinic differs. Though physician A works differently in the same setting as physician B, the goal remains the same, to provide patient-centered care to help enhance the health and well-being of the community. This implementation guide was developed with the intent to reduce apprehension in engaging in a screening program that will explore potentially traumatic personal histories, by completing the detailed and occasionally heavy prework. Essentially, the cake is made, but there is flexibility in how the clinic team can 'ice this cake'. With the help of a facilitator or integration lead the team can decide which ingredients are the most important and how to balance the rest. The most critical pieces to developing a successful ACEs and Resiliency screening program are:

a. Team member Buy-in
b. Speaking the same language of Trauma Informed Care (TIC)
c. Identifying what you want to accomplish or how you plan to use the information
d. Knowing the tools to use for screening and supports

This guide is one tool to help the team not only with developing a screening program, but also to have the work become embedded in practice. How this information is used is ultimately up to the clinic team.

Remember that many hands can make work light and by striving to improve the health and well-being of the community *together*, success can be achieved.

"Start where you are. Use what you have. Do what you can." – Arthur Ashe

Best Regards,

Kira L. Scott, RN

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Robyn Chelte RN BA, Integration Lead, Chinook Primary Care Network

CONTRIBUTIONS

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LETHBRIDGE PROGRAM CONTRIBUTORS

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Family Health Home Visitation Program

Family Ties Association

South Region Parents as Teachers

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INTRODUCTION

Albertans have a high incidence rate of preventable chronic illnesses that cost billions annually[1, 2]. These preventable chronic illnesses are shown to reduce life expectancy and affect overall quality of life[1]. One predictor of chronic illness in adults is levels of adversity experienced in the formative years of their lives, especially during brain development[3, 4]. High levels of these adverse childhood experiences (ACEs) are most often accompanied by multiple chronic illnesses, poorer quality of health, and lower income and education, in comparison to those with fewer to no adverse childhood events[4, 5]. With the help of primary care physician teams, we can support healthy brain development, reduce ACEs, increase resiliency skills, and improve the general health and well-being of our patient population.

PURPOSE

The purpose of this implementation guide is to assist primary care providers in:

- recognizing that screening for ACEs and protective factors in a clinic setting doesn't have to be complicated or time consuming, and
- understanding what is needed for the clinic to be successful in implementing this type of program

GETTING STARTED

Successful implementation of an ACEs and Resiliency Screening Program can benefit from a willingness to change and commitment to the process. To move toward positive change, the following resources will assist with implementation:

- What ACEs are and how they affect the population
- What resources are needed to engage in this program
- How to conduct the program
- How to support the program going forward

WHAT ARE ACEs AND HOW THEY AFFECT THE POPULATION

- *What do we know?*
  - » ACEs are adverse childhood experiences that occur from conception to age 17 that can affect brain architecture and shape the individual's future capacity to thrive and their overall health and wellbeing[5-7]
  - » ACEs are typically delineated by three categories and are related to chronic toxic stress[8-10]
    a. ABUSE – physical, emotional, sexual
    b. NEGLECT – physical, emotional
    c. HOUSEHOLD DYSFUNCTION – caregiver mental illness, incarceration of household member, mother or other treated violently in the home, caregiver substance abuse, divorce, severely ill caregiver
  - ACEs can also include Environmental Factors that are not controllable[11] such as
    a. War torn countries
    b. Severe political interference
    c. Natural disasters
    d. Pandemics or Epidemics
    e. Violent neighborhoods
  - ACEs are prevalent and exist across socio-economic status being no respecter of race, religion, gender, or orientation[5, 6]
  - The more ACES the higher the chance of chronic illness and earlier mortality[7, 8]
  - The effect of adversity can be combatted with a single stable relationship with an adult by building resilience[5, 6, 12]
- *What works to address the issue?*
  - » Early intervention in families with young children (age 0-5) by screening caregivers for ACEs can help link families with resources to build resilience and support healthy family growth[11-13]
  - » A Trauma Informed Care approach can make the difference in successful screening programs and in building resilient communities[11, 14]

- » Providing supports to build care plans with caregivers and identifying the family's ability to build resiliency skills[14, 15]

- *What does not work?*
  - » Avoiding the issue of ACEs in children or adults[6, 8]
  - » Ignoring the trauma history of patients when striving to develop person-centered care plans[16]
- *Why Primary Care Clinics?*
  - » The most common interaction [with the health system] for children before age 5 is with their primary care provider[11, 17]
  - » Pre-planned screening visits and staff to assist are already in place to reduce workload impact[18, 19]
  - » Opportunity to strengthen previously developed therapeutic relationships with patient population[14, 20]

WHAT RESOURCES BENEFIT IMPLEMENTATION

1. Clinic team members such as the primary care improvement team and integration lead
2. Time allotment for readiness assessment and training (see page 4 for more information)
3. Commitment of all staff including reception, physicians, and nursing staff
4. Generic team education around TIC and ACEs & Resiliency (see page 4)
5. Role delineation
6. Specific education for screening staff (screening tools)
7. Scripts for assisting with discussion around this offer of care
8. Information on community links and resources for family supports
9. A room for screening appointment (i.e. nurse / educator office or patient room)
10. Equipment for screening program
    a. paper/pens OR
    b. laminated sheets/markers/alcohol swabs OR
    c. tablet with online forms directly linked to EMR
11. EMR Vendor help to build forms and documentation templates (prn)

This chart outlines the elements that can benefit the implementation of this program.

	Description of Need	Rationale	How	Who	When
1.	Readiness assessment for organizational change	• To help assess resistance to change hurdles[21] • To identify champions, early, and late adopters for change mobilization[21] • To develop best plan for change[22]	At improvement Meeting: a) Introduction Video to ACEs & Resilience[23] (00:04:05) b) Prosci-ADKAR Model as used by CPCN or other preferred by clinic[24]	• Project Leader • Improvement Team • Integration Lead	• Prior to engaging in clinic wide education piece
2.	Organizational Education a. Trauma Informed Care (TIC)	Every team member 'speaking the same language'[14, 20]: • Ensures consistent information is delivered • Builds positive relationships among staff and with patients • Shows commitment to organizational goals and strengthens buy-in • Builds safe environments for staff and patients • Promotes trust, transparency and fairness	• Free TIC learning modules from AHS[25] (~6hrs) • Could implement at improvement team meetings over a period of time	• All staff members	• Before implementing meeting to identify further needs to meet success
	b. ACEs & Protective Factors		• Alberta Family Wellness Initiative Video "Brains: Journey to Resilience"[26] (00:07:44)	• All staff members	• Before implementing meeting to identify further needs to meet success
	c. Specific Education for Screening Tools and general program	• Prepares screening staff to provide a knowledge driven and fluid experience[27] • Strengthen therapeutic relationship with patients and families[16]	• Familiarize and practice with screening tools • Brain Architect Level 1, (~1hr) [28] • Brain Story Certification (~20hr) from Alberta Family Wellness Initiative[29]	• Nurse, Educator, or Designated Screening Staff	• Prior to start of screening program
3.	Role Delineation: a. Introduce topic and request participation in screening program	• Therapeutic relationship with patient already in place • Still seen as the authority in healthcare system	• Use scripts to discuss topic and invite participation (~1 min) • Give appointment slip for patient to take to reception for booking of next appointment	• Physician	• During any regular appointment or a well-baby screening appointment as desired
	b. Scheduling screening appointment (per physician rebook appointment slip)	• Assist with access for patient population	• Use scripts if necessary • Book [15-30min apt] per patient availability with nurse / educator directly followed by a well-baby visit with the physician	• Receptionist	• When patient presents with appointment slip from physician

3.	c. Perform screening	• To support families in building healthy relationships[30]	• Use scripts prn for introduction of topic • Use the ACEs & Resiliency Screening Protocol (~9min)	• Nurse or Educator	• During booked appointment
	d. Develop care plan with patient prn	• Promotes patient centered care[31]	• Validate both ACE and Resiliency scores with a greater focus on protective factors already present (scripts available to assist) • Provide resources as desired by patient (Building Resiliency Resource Guide) (~6min)	• Nurse or Educator • Physician prn	• At end of screening visit
	e. Follow up on results	• Brings the team approach full circle[20] • Strengthens the therapeutic relationship between patient and clinicians[16]	• Review ACE and Resiliency scale scores while reinforcing family strengths (~1min) • Use scripts prn	• Physician	• Immediately at well-baby visit post screen • All follow up appointments
			• Inquire if family has followed up with referrals or have questions about the resources. Offer appointments for follow up prn. (10-15 min max)	• Nurse / Educator	• Within 2 weeks of initial appointment
4.	Physical Resources Allotment a. Confidential space to accommodate a family	• Support the ideals of family focused care[31] • Aids in building relationships through feelings of safety[16]	• Determine best location of space based on clinic availability and support staff performing the screening	• Improvement Team	• Prior to official start of the rollout
	b. Screening Tools	• Helps determine what is the most appropriate delivery format of the screening tool for the clinic of choice	• Determine method of collecting data as paper/pen; laminated paper/marker; or direct to EMR	• Improvement Team	• Prior to official start of the rollout
	c. EMR Vendor	• For most appropriate documentation for screening and follow up	• Contact EMR vendor to develop chart note and/or screening tool template for direct entry into EMR	• Approval by required parties	• Prior to official start of the rollout

CONDUCTING THE SCREENING PROGRAM

This section includes a suggested clinic protocol, flow maps, scripts, screening tools, and referral guide to aid in conducting the screening program in the clinic. These can be adopted or adapted for best fit within clinic environment.

[Chinook PCN Clinic]

Adverse Childhood Experiences (ACEs) & Resiliency Screening Protocol

Process

1. Physician participation in:
    a. Promoting the aim of screening for ACEs and Resiliency
    b. Review scoring and support referrals
    c. Revisit ACE and resiliency scores at follow up visits annually and PRN
    d. Physician is responsible for charting and/or signing all orders given, PRN
2. Registered Nurse, Educator or another designated staff participation in:
    a. Administering and reviewing the screening with the patients
    b. Providing resources as per Building Resiliency Community Resource Guide and Flow Map Assessment of Resource Need
    c. Notifying physicians of results of screening, referrals made, concerns to address
    d. Performing "warm hand-off" via phone calls for referral resources (see yellow section of Building Resiliency Community Resource Guide
    e. Complying with duty to report if assessment indicates potential imminent danger to child or family member
    f. Document process and outcomes

Patient Outcomes

1. Caregivers will learn about toxic stress, the impact on children, and benefits of building resiliency.
2. There will be earlier detection of adverse childhood experiences (ACEs) and referral to local resources to increase protective factors.
3. Clinical therapeutic relationships will be strengthened with the caregivers.

Procedure

1. At any appointment with the caregiver of a child 0-5 years of age, Physician to:
    a. Introduce screening (See script #1 for elevator pitch)
    b. Inquire if already screened (if no, proceed to c)
    c. Provide caregiver a follow up slip to book with RN for screening prior to next well-child visit.
2. Receptionist to schedule a [15/20/30] min appointment with the [RN] for screening immediately followed by regular physician appointment (See script #4).
3. At appointment RN will introduce self, discuss the purpose of the screening (See script #5) and obtain consent, then engage in the following steps:
    a. Show ACEs & Protective Factor video (https://www.albertafamilywellness.org/resources/video/how-brains-are-built-core-story-of-brain-development).
    b. Explain the ACEs screening tool (See script #6) and have caregiver complete.
    c. Engage in open conversation about the results of the ACEs screening tool (See script #7)
    d. Explain Resiliency screening tool (See script #8) and have caregiver complete.
    e. Engage in open conversation to review the results of the Resiliency screening tool (See script #9). *Remember the goal is to focus on the positive such as the protective factors already in place*.
    f. Inquire if there are concerns that the caregiver would like to address.
    g. Provide caregiver with tools or recommend referral as appropriate and if requested by physician (see Building Resiliency Community Resource Guide - *NOTE any referrals will be made by phone with caregiver in room as a *warm handoff**).
    h. Assess caregiver and family present for any distress caused by screening or another reason. If distress is identified, notify physician (through instant

message / urgent messaging) and continue to debrief as able with family. If required, engage mental health services (if designated mental health educator available) or contact mental health distress line (for Southwestern Alberta) 24hrs at (1-888-787-2880) or locally at (403-327-7905).

i. *If no distress:* Thank caregiver and family for participating (See script #10) and as appropriate have patient / family return to waiting room to await appointment with physician.

4. Document scores of both screening tools in designated chart note or designated location in EMR for both the caregiver and the child(ren) in question.
5. Follow up with caregiver within 2 weeks by phone to review commitments if any resources provided to or for referrals made for family (See script #11).

Documentation

1. Nurse will document screening results, discussion, and actions taken in child's chart.
2. Nurse will document screening results in caregivers' chart.

Review

1. This procedure will be reviewed on an annual basis or PRN as determined by changes within the health zone or by public health recommendations.

Physician Signature in support of ACEs Screening Procedure

General Practitioners:

Dr. A. Apple _____ Date: _____

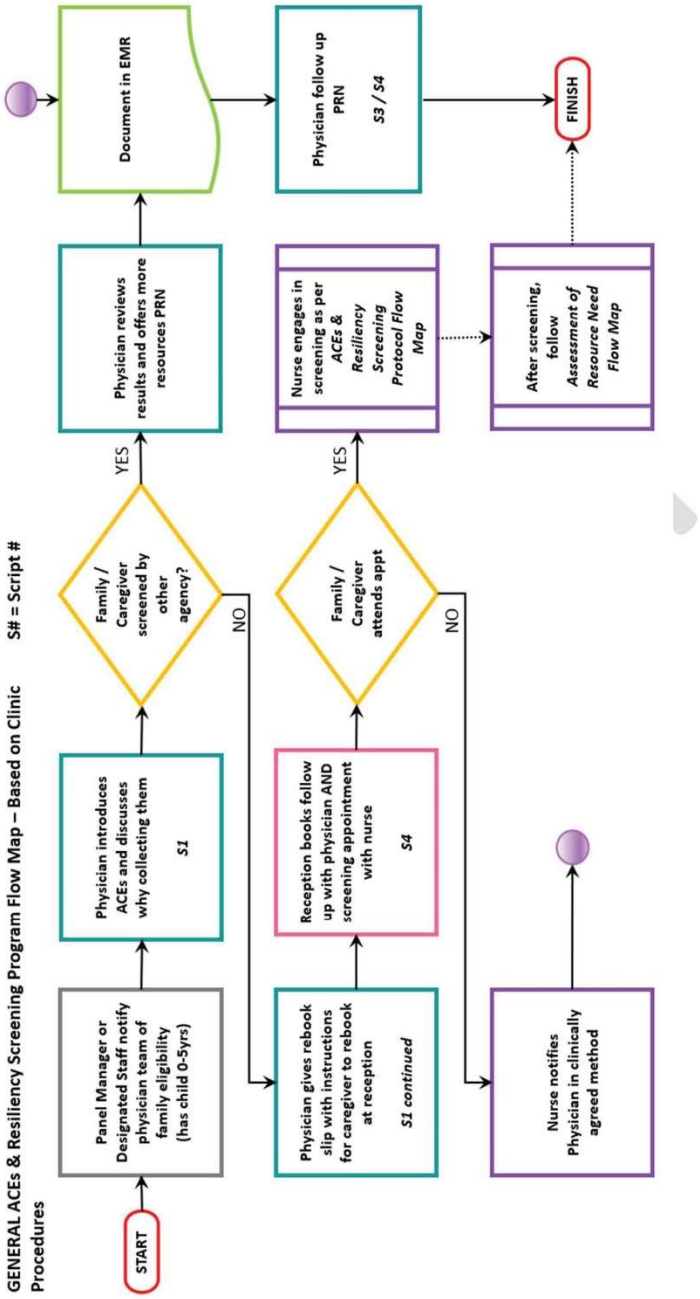
Dr. B. Banana _____ Date: _____

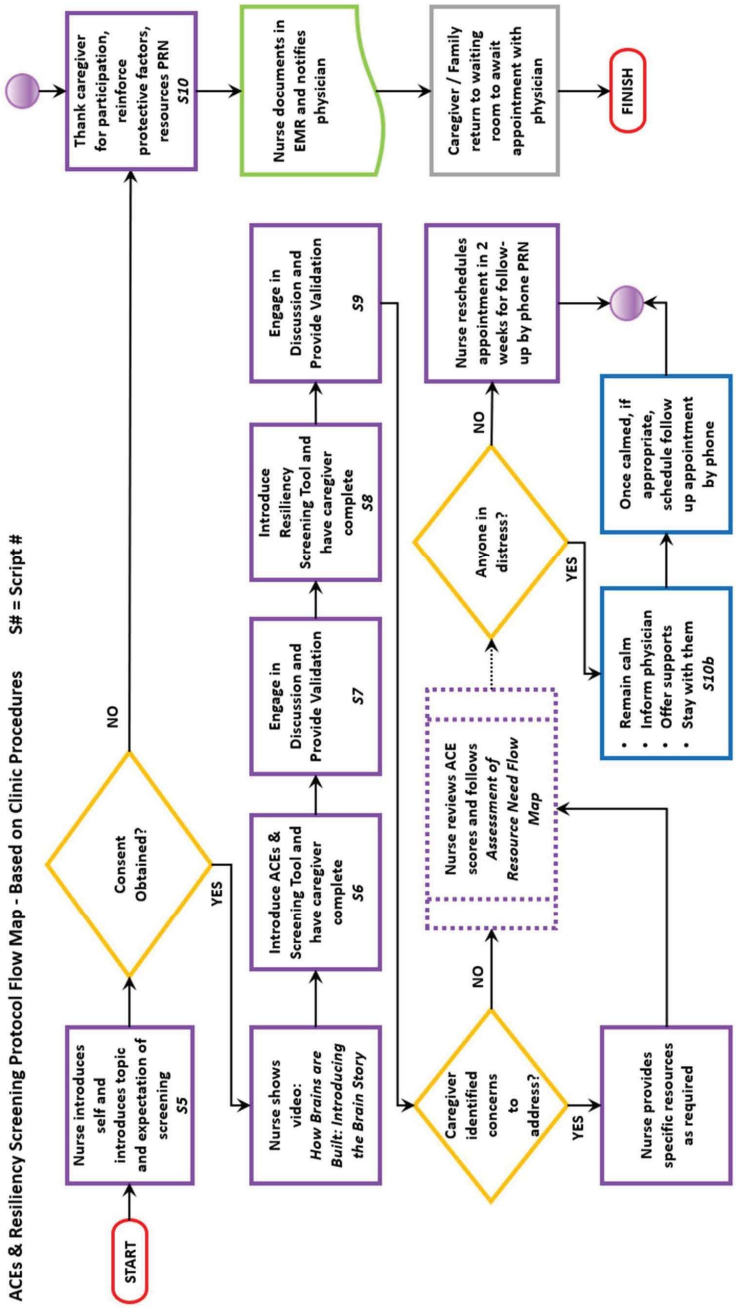
Dr. K. Kiwi _____ Date: _____

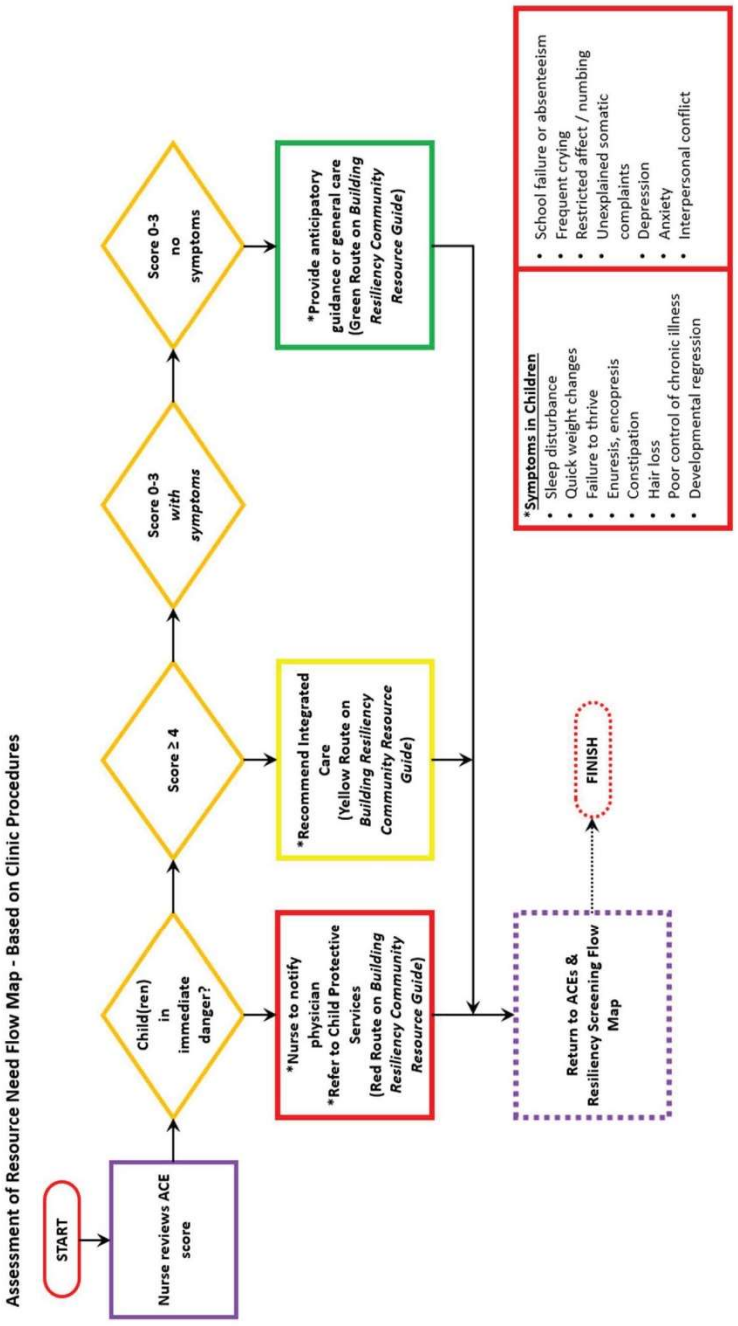
Dr. P. Pickle _____ Date: _____

Developed: May 2021 Approved: _____

Reviewed: _____


GENERAL ACEs & Resiliency Screening Program Flow Map – Based on Clinic Procedures
S# = Script #
START
Panel Manager or Designated Staff notify physician team of family eligibility (has child 0-5yrs)
Physician introduces ACEs and discusses why collecting them
S1
Family / Caregiver screened by other agency?
YES
NO
Physician reviews results and offers more resources PRN
Document in EMR
Physician follow up PRN
S3 / S4
FINISH
Physician gives rebook slip with instructions for caregiver to rebook at reception
S1 continued
Reception books follow up with physician AND screening appointment with nurse
S4
Family / Caregiver attends appt
YES
NO
Nurse engages in screening as per ACEs & Resiliency Screening Protocol Flow Map
Nurse notifies Physician in clinically agreed method
After screening, follow Assessment of Resource Need Flow Map


ACEs & Resiliency Screening Protocol Flow Map - Based on Clinic Procedures
S# = Script #
START
Nurse introduces self and introduces topic and expectation of screening S5
Consent Obtained?
NO
YES
Thank caregiver for participation, reinforce protective factors, resources PRN S10
Nurse shows video: How Brains are Built: Introducing the Brain Story
Introduce ACEs & Screening Tool and have caregiver complete S6
Engage in Discussion and Provide Validation S7
Introduce Resiliency Screening Tool and have caregiver complete S8
Engage in Discussion and Provide Validation S9
Caregiver identified concerns to address?
NO
YES
Nurse reviews ACE scores and follows Assessment of Resource Need Flow Map
Nurse provides specific resources as required
Anyone in distress?
NO
YES
Nurse reschedules appointment in 2 weeks for follow-up by phone PRN
• Remain calm
• Inform physician
• Offer supports
• Stay with them S10b
Once calmed, if appropriate, schedule follow up appointment by phone
Nurse documents in EMR and notifies physician
Caregiver / Family return to waiting room to await appointment with physician
FINISH


Assessment of Resource Need Flow Map - Based on Clinic Procedures
START
Nurse reviews ACE score
Child(ren) in immediate danger?
*Nurse to notify physician
*Refer to Child Protective Services
(Red Route on Building Resiliency Community Resource Guide)
Score ≥ 4
*Recommend Integrated Care
(Yellow Route on Building Resiliency Community Resource Guide)
Score 0-3 with symptoms
Score 0-3 no symptoms
*Provide anticipatory guidance or general care
(Green Route on Building Resiliency Community Resource Guide)
Return to ACEs & Resiliency Screening Flow Map
FINISH
*Symptoms in Children
Sleep disturbance
Quick weight changes
Failure to thrive
Enuresis, encopresis
Constipation
Hair loss
Poor control of chronic illness
Developmental regression
School failure or absenteeism
Frequent crying
Restricted affect / numbing
Unexplained somatic complaints
Depression
Anxiety
Interpersonal conflict

POSSIBLE SCRIPTS

#1 Physician	Introducing the topic	Certain types of stress can increase your child's risk for illness as they age. Things like abuse, neglect, or seeing crime, parents arguing or hurting each other, or substance abuse are called adverse childhood experiences or ACEs. They can be common and can affect your child's ability to learn and increase chances of health problems. We know that asking about ACEs when children are young can really help to support you and your family. I have started screening caregivers because ACEs can affect your children and grandchildren. Have you already been asked about ACEs from somewhere else? YES: Would you be willing to share the number of ACEs you experienced as a child? Were you connected with any resources? Would you like to speak with someone about how these resources may help you? NO: I'd like you to meet with my [Nurse] before I see you at your next well-baby check-up. They will gather a history from you to help us see if there are ways we can help support your whole family. Please take this card to reception and they will book you for a [15/20/30-minute] appointment with the nurse and then you will see me right after for our regular check-up.
#2 Physician	After Screening Appointment	Hello [patient name]. Thank you for completing the screening with the [nurse]. I see here that you have identified ___ ACEs and a resiliency score of ____. Do you have any questions or concerns about this screening and how it affects to your family? Were resources offered to you? If NO – Would you like any?
#3 Physician	Follow Up Appointments	Has your home life changed in any significant way since we last visited? Has anything bad, sad, or scary happened to your child recently that you would like to talk about? What about anything good or even fantastic?

#4 Reception	Booking the patient with the nurse	Hello again [patient name]. Are you looking to rebook an appointment? (Pt hands rebook appointment card to receptionist. YES – Great, the next opening for this time frame is _____. I can book you with the [nurse] directly before your appointment with Dr. [name]. Does this day and time work for you? If NO – what would be a good time for you? NO – Would you like to call me when you have more information on your availability instead of booking today?

#5 Nurse or Educator	Before beginning screening (Obtaining consent)	Hello [patient / caregiver name]. My name is [name] and I am an [designation]. I am so glad you were able to make it today. During this appointment I will show you a short video and then ask you some questions that are of a sensitive nature. This information is important to help Dr. [name] and [his/her] team give the best care possible. All information will be kept strictly confidential. If during our discussion we identify that you or your child are in danger I have a duty to report, we will do everything we can to support you and your family no matter what. Do you consent to continue with this appointment?
#6 Nurse or Educator	Pre-ACEs Screening Tool	I'd like you to complete this questionnaire. It asks about your experiences as a child and should only take a few minutes. As your doctor may have mentioned, your experiences can affect the health of your children and grandchildren and will help us to better understand you and the potential risks towards your family. This information is kept strictly confidential. Would that be acceptable?
#7 Nurse or Educator	Post-ACEs Screening Tool	VALIDATION – if even 1 ACE • That sounds like it was tough OR • That must have been really hard QUESTION • Do any of those experiences bother you now? OR • How do you think what happened to you may be affecting your life now? AND • How do you think what happened to you may affect your parenting?
#8 Nurse or Educator	Pre-Resiliency Screening Tool	People with high ACE scores often have to work harder in many aspects of their lives. I'd like to give you this little questionnaire to see what helps you manage the hard stuff in life and how you have done so well for yourself. Would that be acceptable?
#9 Nurse or Educator	Post-Resiliency Screening Tool	VALIDATION • These are some fantastic ways to help yourself and your family OR • I really like how you were able to do [this] QUESTION If you think it would be helpful, would you like some resources that might further support you?
#10 Nurse or Educator	Wrap up of appointment	[patient name], I just wanted to thank you again for participating and want you to know that we want to support you in your well-being and the well-being of your family. If at any time you would like to discuss further supports, you can speak with myself or your physician. ***If appropriate to return to waiting room indicate that:*** I will have you return to the waiting room and I will notify your physician that you are ready for your child's check-up.

#10b	***If in distress***	***If patient or family member is in distress:*** • Provide support • De-escalate • Debrief • Safety Plan and Interventions • You can say: • Would you like to speak with a crisis counsellor? OR • Is there someone [on your support team] we can call? • Is there anything we can do to help right now?
#11 Nurse or Educator	Follow-up appointment (by phone within 2 weeks or as needed)	Hello [caregiver name], this is [name and credential] calling from [location]. I am calling to see how you and your family are doing after our discussion at your appointment. I wanted to check in to see: **Green Pathway** – if you had a chance to review any of the resources, or if you signed up for any learning seminars. **Yellow Pathway** – if you have had your first visit with [Family Centre, Family Health Home Visitation, Family Ties] intake worker. **Red Pathway** – if you had met with the case worker or if there is anything I or your physician can do to help you and your family at this time. Do you have any questions I could help clear up for you? Should you need more assistance at any time, please call me as I'd like to help.

Additional Validation Statements	• Your resilience really shows in how you … • You are functioning so well for someone who has experienced so much trauma … • I can see why that makes you very upset / angry / sad / happy / proud. • Your coping skills have really helped you to overcome some difficult things … • Here's what I'm hearing you say (summarize with fact checking) … • I can see how hard you are working … • I can see this is important to you … • It makes sense you would be so upset about … • I can see you're overwhelmed. Can we talk? • I know you're scared. There may be some hard times ahead and I know you will figure it out.
Additional Normalization Statements	• I see lots of people struggling with that, you're not alone. It's just that maybe they keep it to themselves like you have been. • You've needed to do things this way to cope for a long time. It makes complete sense as to why it is so hard to change.

Adverse Childhood Experience Questionnaire for Adults

California Surgeon General's Clinical Advisory Committee

aces aware
SCREEN. TREAT. HEAL.

Our relationships and experiences—even those in childhood—can affect our health and well-being. Difficult childhood experiences are very common. Please tell us whether you have had any of the experiences listed below, as they may be affecting your health today or may affect your health in the future. This information will help you and your provider better understand how to work together to support your health and well-being.

Instructions: Below is a list of 10 categories of Adverse Childhood Experiences (ACEs). From the list below, please place a checkmark next to each ACE category that you experienced prior to your 18th birthday. Then, please add up the number of categories of ACEs you experienced and put the *total number* at the bottom.	
Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?	☐
Did you lose a parent through divorce, abandonment, death, or other reason?	☐
Did you live with anyone who was depressed, mentally ill, or attempted suicide?	☐
Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?	☐
Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?	☐
Did you live with anyone who went to jail or prison?	☐
Did a parent or adult in your home ever swear at you, insult you, or put you down?	☐
Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?	☐
Did you feel that no one in your family loved you or thought you were special?	☐
Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?	☐
Your ACE score is the total number of checked responses	

Do you believe that these experiences have affected your health? ◯ Not Much ◯ Some ◯ A Lot

Experiences in childhood are just one part of a person's life story.
There are many ways to heal throughout one's life.

Please let us know if you have questions about privacy or confidentiality.

5/5/20

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Adult Resilience Measure-Revised (ARM-R)

ARM-R

	To what extent do the following statements apply to you? There are no right or wrong answers.	Not at all [1]	A little [2]	Somewhat [3]	Quite a bit [4]	A lot [5]
1	I get along with people around me	1	2	3	4	5
2	Getting and improving qualifications or skills is important to me	1	2	3	4	5
3	I know how to behave in different social situations (such as at work, home, or other public places)	1	2	3	4	5
4	My family is supportive towards me	1	2	3	4	5
5	My family knows a lot about me (for example, who my friends are, what I like to do)	1	2	3	4	5
6	If I am hungry, I can usually get enough food to eat	1	2	3	4	5
7	People like to spend time with me	1	2	3	4	5
8	I talk to my family/partner about how I feel (for example, when I am sad or concerned)	1	2	3	4	5
9	I feel supported by my friends	1	2	3	4	5
10	I feel that I belong in my community	1	2	3	4	5
11	My family/partner stands by me when times are hard (for example, when I am ill or in trouble)	1	2	3	4	5
12	My friends care about me when times are hard (for example, when I am ill or in trouble)	1	2	3	4	5
13	I am treated fairly in my community	1	2	3	4	5
14	I have opportunities to show others that I can act responsibly	1	2	3	4	5
15	I feel secure when I am with my family/partner	1	2	3	4	5
16	I have opportunities to apply my abilities in life (ike using skills, working at a job, or caring for others)	1	2	3	4	5
17	I like my family's/partner's culture and the way my family celebrates things (like holidays or learning about my culture)	1	2	3	4	5

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Resilience Research Centre | DALHOUSIE UNIVERSITY

Adult Resilience Measure-Revised (ARM-R)

ARM-R

	To what extent do the following statements apply to you? There are no right or wrong answers.	No [1]	Sometimes [2]	Yes [3]
1	I get along with people around me	1	2	3
2	Getting and improving qualifications or skills is important to me	1	2	3
3	I know how to behave in different social situations (such as at work, home, or other public places)	1	2	3
4	My family is supportive towards me	1	2	3
5	My family knows a lot about me (for example, who my friends are, what I like to do)	1	2	3
6	If I am hungry, I can usually get enough food to eat	1	2	3
7	People like to spend time with me	1	2	3
8	I talk to my family/partner about how I feel (for example, when I am sad or concerned)	1	2	3
9	I feel supported by my friends	1	2	3
10	I feel that I belong in my community	1	2	3
11	My family/partner stands by me when times are hard (for example, when I am ill or in trouble)	1	2	3
12	My friends care about me when times are hard (for example, when I am ill or in trouble)	1	2	3
13	I am treated fairly in my community	1	2	3
14	I have opportunities to show others that I can act responsibly	1	2	3
15	I feel secure when I am with my family/partner	1	2	3
16	I have opportunities to apply my abilities in life (like using skills, working at a job, or caring for others)	1	2	3
17	I like my family's/partner's culture and the way my family celebrates things (like holidays or learning about my culture)	1	2	3

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DRAFT - Building Resiliency Community Resource Guide

Self-Referral: **Caregiver education, developmental screening, family supports, play groups, child care, early intervention, after school programs, home visitation, tools and strategies, building protective factors**

AHS Children, Youth, & Families Addiction & Mental Health (www.cfycaregivereducation.ca)

Building Brains Together (www.buildingbrains.ca)

Families Canada (www.familiescanada.ca/initiatives)

Family Resource Network **HUB** - *provides information and referral resources in Lethbridge* (Phone: 403-329-7321_www.famcentre.ca)

Lethbridge Early Years Coalition (Phone: 403-715-4585_www.lethbridgeearlyyears.ca)

Key Connections Consulting - *for children with cognitive / developmental disabilities* (Phone: 403-524-2522_www.keyconnectionsconsulting.com)

Opokaa'sin Indigenous **HUB** (Phone: 403-380-2569_www.famcentre.ca/partners/opokaasin/)

Parents as Teachers (Phone: 403-320-5983_ www.southregionpat.ca) *Referral form encouraged*

Sik-Ooh-Kotoki Friendship Society (Phone: 403-328-2414_www.lethbridgefriendship.ca)

Triple P Parenting (www.triplep-parenting.ca)

We've Got This!

Manage within Clinic and / or with PCN resources

AHS—Family Health Home Visitation—Referral Preferred

PHONE: 403-388-6351 Fax: 403-388-6718

- **Family First Program**—Home visit for prenatal mothers and children 0-3 yrs, child development, parental goal setting, community resource connections.
- **First Steps Program**—Family first program AND addictions help / prevention

Family Centre Society of Southern Alberta—Referral or Self Refer

PHONE: 403-320-4232 Fax: 403-329-7321

- Intake worker can help to assess needs and redirect to community resources

Family Ties—Referral Required

PHONE: 403-320-8888 Fax: 403-320-8878

- **FAMILY TIES**—Family Preservation & Support, Community Asset Group, Essential Services (i.e. supervised visits, transport for appts), Kinship Assessment, Counselling Services, Youth mentorship, Capacity Assessments, Safe Home Assessments
- **FAMILY SUPPORTS FOR CHILDREN WITH DISABILITIES (FSCD)** - Diagnostic letter for func-

We Need Help

Family requires assistance by referral to community resources

AHS South Region Child and Family Services

PHONE: 403-381-5500 Fax: 403-382-4277

- Caseworker Intervention: home supports, preserving family units, connect families with community supports, protection services, rehoming services, child and family assessments, strengthening families.

Southwestern AB Mental Health Distress Line

PHONE: 1-888-787-2880 or locally at 403-327-7905

Urgent—Duty to Report

Child(ren) or family member may be in imminent danger

HOW TO SUPPORT THE PROGRAM GOING FORWARD

A few key notes to support the ongoing success of this program. These practices will benefit from regular review at improvement meetings and in conjunction with an Integration Lead, however how these recommendations are designed is up to the organization and encouraged to be based on the staff complement at each clinic.

For the Organization:

1. Have all staff speak the same trauma informed care language (i.e. AHS TIC learning Modules – see Reference and Resource 25 for link), including new staff that may come on board. Annual review of TIC principles with entire team would be beneficial which can be done with the integration lead at an improvement meeting.
2. Define what a collaborative approach means to your organization and how it will/has been adopted into the clinic to develop care plans with (not for) the patient and family.
3. Communicate regularly (any clinic liaison) with referral sources as needed.
4. Determine what welcoming and respectful language means to the organization (best when including the whole team). Then follow up by encouraging staff to use welcoming and respectful language (even when the staff is 'having a bad day'). *You could set up feedback moments as an example. This will benefit from intra-organizational development of a review format and can occur during improvement meetings as another example.*
5. Encourage staff to accept that there are reasons for all behaviours, positive or negative, whether with respect to patients and families or coworker relationships. This means that not everything that is said is a personal attack on that individual (see next recommendation for methods to address this).
6. Encourage staff to understand their own limitations based on personal experiences and how others actions can trigger personal reactions. This benefits from understanding the lens with which people view the world and self-reflection. Providing opportunity for staff to acknowledge their own personal histories and biases and then teaching them about potential triggers, staff can develop interpersonal boundaries. This will also help to prevent

secondary traumatic stress in the staff (refer to AHS TIC learning modules; link 25 in References and Resources).

7. Provide training as requested on prevention of secondary traumatic stress, encourage whole health and well-being activities, and allow "mental health days" for staff (which may require a culture shift). *One cannot expect to change the world without first changing the culture that guides the work.*
8. Be transparent in goals and methods to achieve said goals.

For the Patients:

1. Focus on:
    a. Helping families build loving and responsive relationships with one another.
    b. Reinforce what families are already doing well
    c. Resources to help build protective factors that increase resilience
2. No need to rescreen every year as regular rescreening may increase the potential of re-traumatization, however an emphasis on "checking in" may allow for further supports. Use the script that asks "has anything bad/scary happened in the last year [to you or your children] that you want to talk about" as an opening discussion.

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APPENDIX D
Evaluation Feedback Tool

DRAFT ACEs AND RESILIENCY SCREENING PROGRAM IMPLEMENTATION GUIDE

Reviewer Feedback Form

My name is Kira Scott and I am a student in the Master of Nursing Program with the University of Lethbridge. Thank you for giving your valuable time to review my project of a draft implementation guide for an ACEs and Resiliency Screening Program that will be for use in PCN clinics.

You will have received a copy of the implementation guide along with this reviewer feedback form that will help improve this implementation guide. The ultimate goal of this guide is to aid clinic teams to engage in this type of screening program. Please email your completed feedback form to me by Wednesday June 9 @ 1200hr, however you can send it back to me at any time beforehand. If you have any questions, please feel free to reach out by email at kira.scott@uleth.ca or to my supervisor Katherine Haight at katherine.haight@uleth.ca.

There are two parts to the feedback form, one for while reading through the guide, and a second for an overall assessment. Please take your time and consider your responses as if this was a new program you plan to implement with a team. Thank you for your time and consideration.

Part 1: Specific Features

1. Does the information on pages 1-3 support the development of a screening program within your organization?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What improvements would you suggest?

2. Does the chart on pages 4-5 clearly outline the elements required to successfully implement the program?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What would help to make it clearer for you? What improvements would you suggest?

3. Does the protocol on pages 6-8 capture all the required elements of a clinical procedure?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What pieces are missing or would help to clarify for implementation in a PCN clinic?

4. Does the *ACEs and Resiliency Screening Program Flow Chart* on page 9 align with the clinical procedure?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What improvements would you suggest?

5. Is this flow map clear and easy to follow?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What improvements would you suggest?

6. Is the *Assessment of Resource Need* flow map on page 10 clear and easy to follow?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What improvements would you suggest?

7. Do the *Suggested Scripts* on pages 11 – 13 support the delivery of the proposed screening program?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What improvements would you suggest?

8. Is the *Building Resiliency Community Resource* document on page 17 clear and easy to follow?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What missing pieces would help to provide clarification?

9. Does the information on page 18 support the development of a screening program within your organization?

   No ..... Somewhat No ..... Somewhat Yes ..... Yes

What additional information is needed to implement this screening program in your organization? What barriers do you perceive need to be addressed?

Part 2: Overall

1. The implementation guide flows logically from start to finish?
   No ..... Somewhat No ..... Somewhat Yes ..... Yes

2. The guide is easy to read and understand?
   No ..... Somewhat No ..... Somewhat Yes ..... Yes

3. The guide provides adequate knowledge, skills, and abilities to implement the program?
   No ..... Somewhat No ..... Somewhat Yes ..... Yes

4. The guide is tailored to PCN clinics to use?
   No ..... Somewhat No ..... Somewhat Yes ..... Yes

5. The guide has potential to be used at multiple locations with minimal adjustments?
   No ..... Somewhat No ..... Somewhat Yes ..... Yes

6. How likely are you to use this implementation guide in the future?
   Unlikely ..... Somewhat Unlikely ..... Somewhat Likely ..... Very Likely

Thank you kindly for your time. It is greatly appreciated!

APPENDIX E
A Complete Summary of Analyzed Results

A Complete Summary of Analyzed Results: Part I

Question	Quantitative Feedback (n=4)	Qualitative Written Feedback (n=4)	Actions Taken
1.1 Does the info on page 1-3 support the development of a screening program within your organization?	4 of 4 subject matter experts expressed agreement that the information on pages 1-3 of the implementation guide 7supports the development of a screening program within their organization.	a. More detail on time requirements for readiness assessment and training for teams	Suggested time allotment noted, however this needs further testing (i.e. pilot test) to gauge actual time allotment.
		b. Clarification on who is being screened, by whom, and why	Adjusted throughout document for consistency and clarification.
		c. Some language is potentially censuring - consider alternate language to support readers and encourage buy in	Language adjusted throughout document. Further review by language subject matter expert is recommended.
1.2 Does the chart on pages 4-5 clearly outline the elements required to successfully implement the program?	3 of 4 subject matter experts indicate that the chart on pages 4-5 clearly outline the elements required to successfully implement the program.	a. More detail on time requirements for education or training of teams	Suggested time allotment noted, however this needs further testing (i.e. pilot test) to gauge actual time allotment.
		b. Potential for lack of buy-in should the team see missing pieces to make it successful i.e. manpower, time, etc.	Preface written to identify the intent of the guide and provide the minimum requirements for the program. The actual look of the program is up to each clinic and the Integration Lead can assist with same. Pilot testing of this document is recommended.
		c. One of four reviewers felt that the format of the table was unclear and preferred a different order of presentation whereas others enjoyed the layout and quick visual	As only one reviewer identified a preference for different format, no changes will be made at this time. Pilot testing of the guide may provide further recommendations.
		d. Community linkage – who in the clinic will have time to stay on top of information. Who is most appropriate for this?	Recommendation is to have a central person for all clinics, such as within the CPCN office. No changes were made to the guide at this time.
1.3 Does the protocol on pages 6-8 capture all the required elements of a clinical procedure?	Half of the subject matter experts reported yes, while the other have reported somewhat yes that the protocol on pages 6-8 capture all the required elements of a clinical procedure, leaving room for improvement.	a. Details on time requirements for screening and follow up	Suggested time allotment noted, however this needs further testing (i.e. pilot test) to gauge actual time allotment.
		b. Clear instructions on how to handle a situation (de-escalate, support, refer) a patient or family that is in distress as a result of the screening	Instructions added to guide to support staff in managing distress caused by screening. Review by language subject matter expert and pilot testing recommended.
		c. Clarity on role delineation in who is responsible for screening and for whom	Adjusted throughout document for consistency and clarification.

1.4 Does the ACEs and Resiliency Screening Program Flow Chart on page 9 align with the clinical procedure?	4 of 4 subject matter experts indicated that the ACEs and Resiliency Screening Program Flow Chart on page 9 aligns with the clinical procedure on page 6-8 of the implementation guide.	a. Format changes to enhance the legibility such as changing colours and font sizes	Flow maps updated by minimizing colour to prevent difficulty in reading and separated into three flow maps to increase font size for legibility.
		b. Format changes to improve consistency of document titles for clarity	Reviewed and updated for consistency in document titles.
1.5 Is this flow map clear and easy to follow?	3 of 4 subject matter experts reported that the content in the flow map was clear and easy to follow.	a. Format changes to enhance the legibility such as changing colours and font sizes b. Format changes to improve consistency of flow map design i.e. either make coloured boxes with legend OR put physician/nurse will do, but no need to include both.	Adjusted throughout flow maps for consistency and clarification by minimizing colour to prevent difficulty in reading and separated into three flow maps to increase font size for legibility.
1.6 Is the Assessment of Resource Need flow map on page 10 clear and easy to follow?	2 of 4 subject matter experts reported lack of confidence on the clarity and ease of following the Assessment of Resource Need flow map on page 10 of the implementation guide.	a. Format to enhance the legibility such as changing colours and font sizes	Adjusted throughout flow maps for consistency and clarification by minimizing colour to prevent difficulty in reading and separated into three flow maps to increase font size for legibility.
		b. Content to clarify reporting structure, follow up appointments, and to identify what supports are in place	Flow maps updated to add clarity on documentation, when to refer, and follow up appointment to provide support and encourage compliance.
1.7 Do the suggested scripts on pages 11-13 support the delivery of the proposed screening?	3 of 4 subject matter experts support the idea that the suggested scripts on pages 11-13 of the implementation guide support the delivery of the proposed screening.	a. Develop scripts to assist staff in managing situations where the patient and or family members may be in distress	Instructions added to guide to support staff in managing distress caused by screening. Review by language subject matter expert and pilot testing recommended.
		b. Review for censuring and judgmental language to encourage participation with patients	Language adjusted throughout document. Further review by language subject matter expert is recommended.
		c. Consider full spectrum of follow up questions, not just negative experiences, but positive as well	Adjusted follow up script (*S4*) to focus on both aspects of experiences.
		d. Clarification on roles and who gets screened and when	Adjusted throughout document for consistency and clarification.
		e. Considering TIC, adjust script to identify whether previous ACE screening has taken place to avoid potential re-traumatization by repeatedly doing work that may have already been done.	Script (*S1*) adjusted to include this question. This was also added to the flow map for additional clarity.

1.8 Is the Building Resiliency Community Resource document on page 17 clear and easy to follow?	3 of 4 subject matter experts reported that the Building Resiliency Community Resource document on page 17 of the implementation guide is clear and easy to follow.	a. Maintains that the stoplight effect works well to represent the types of services required	
		b. Suggests clarifying content such as labeling the Family Services HUB and having more explanation in the green section to make more congruent to yellow and red sections	Family Services HUB highlighted. Document expanded to include more explanation of services. Future recommendations for "green" resources is to develop quick handout sheets for families with more explanation of programs available.
		c. Suggests inclusion or identification of indigenous and rural resources	Indigenous HUB added to document; Further research on rural resources required to enhance Community Resource document.
1.9 Does the information on page 18 support the development of a screening program within your organization?	3 of 4 subject matter experts agree that the information on page 18 of the implementation guide supports the development of a screening program within your organization.	a. Further expansion on some of the key points to ease understanding and encourage action	Expansion of this section occurred to clarify points and link to correct references.
		b. Review language to be supportive in nature, not to be the "fixer" of problems	Language adjusted throughout document. Further review by language subject matter expert is recommended.
		c. Consider how to encourage change in system organization (i.e. allowing staff mental health days may not be feasible r/t culture and need for system change).	Comments added in preface to broach the topic of culture change for successful implementation. Future implications, potentially led with PCN guidance, to affect culture change at a systematic level. This is entirely outside the scope of this project.

A Complete Summary of Analyzed Results: Part II

Question	Quantitative Feedback (n=4)	Qualitative Verbal Feedback (n=4)	Actions Taken
2.1 The implementation guide flows logically from start to finish?	4 of 4 subject matter experts agreed that the implementation guide flows logically from start to finish.		
2.2 The guide is easy to read and understand?	3 of 4 subject matter experts indicated that the guide is easy to read and understand.	Verbal qualitative feedback suggests improvement in legibility related to colours and fonts to improve ease of reading.	Adjusted throughout flow maps for consistency and clarification by minimizing colour to prevent difficulty in reading and separated into three flow maps to increase font size for legibility.
2.3 The guide provides adequate knowledge, skills, and abilities to implement the program?	2 of 4 subject matter experts reported that the guide provides adequate knowledge, skills, and abilities to implement the program.	Verbal qualitative feedback suggests clarity in: role delineation, time allotment for preparation & delivery of screening, and inclusion of missing piece (how to assist patients in distress).	Instructions added to guide to support staff in managing distress caused by screening. Review by language subject matter expert and pilot testing recommended. Adjusted throughout document for consistency and clarification in role delineation. Also suggested time allotment noted throughout document, however this needs further testing (i.e. pilot test) to gauge actual time allotment.
2.4 The guide is tailored to PCN clinics to use?	3 of 4 subject matter experts feel that the guide is tailored to PCN clinic use.	Verbal qualitative feedback suggests slight improvements in clarity of who is responsible for what and to include more detail to support overall implementation.	Adjusted throughout document for consistency and clarification in role delineation. Also, expanded details added to support overall implementation. Pilot testing for further improvements is recommended.
2.5 The guide has the potential to be used at multiple locations with minimal adjustments?	3 of 4 subject matter experts reported confidence that this guide has the potential to be used at multiple locations with minimal adjustments.	Verbal qualitative feedback supports the quantitative feedback, suggesting only increasing supports in dealing with families in distress.	Instructions added to guide to support staff in managing distress caused by screening. Review by language subject matter expert and pilot testing recommended.
2.6 How likely are you to use this implementation guide in the future?	4 of 4 subject matter experts reported that it is very likely they will use this implementation guide in the future.	Verbal qualitative feedback supports the quantitative feedback with comments such as "I am very excited to see where this goes" and "This is an excellent program that will help so many people".	