Policing & CSWB in Canada: the next 50 years

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By the time the year 2067 rolls around and people celebrate Canada 200, my youngest granddaughter will be approaching the age I am today. Like grandparents everywhere, I often wonder what kind of society she will inherit, shape, and ultimately lead forward for others yet to come. For her and me, this soon-closing Canada 150 year stands as a kind of mustering point for our shared experience spanning over a century of history. As an adolescent long ago, I vividly recall looking ahead to my time. In this themed issue of our *Journal*, we look ahead to hers.

Of course, the nature and role of policing in a society is but one aspect of that future, but when combined with our broader partners in community safety and well-being, there is much that our vital institution might help to shape. We are fortunate to draw upon an interesting range of perspectives to inform this exercise. The age span between our oldest and youngest contributors to this issue is wide, with 62 years separating their birthdates. One began his policing career the year before I was born. The other is hoping to begin hers very soon. Together and with several others in between, these individuals have generously helped to guide this discussion, and some form the editorial mix of this special issue.

LOOKING AHEAD TO THE PAST

When our oldest contributor first looked ahead to his policing career, Canada was in the midst of post-war optimism, and the baby boom was at its apex. Immigration levels were high and almost exclusively western European in origin. A police officer was almost certainly a white male, whose near-term ambitions were to support his family, with wages on par with his workmen neighbours but well behind the white collar professionals who lived a few blocks away. Chief of Police (retired) Robert Lunney recalls that his first two decades were guided by a much narrower conception of policing, citing "the obdurate and enduring conception that policing is all about law enforcement, a view still held by a few police practitioners, serving or retired".

For him, one of the most notable and encouraging tides that began to turn in the 1970s and 80s was the introduction and gradual uptake of 'community policing'. He recalls this being impelled by "a cadre of American academics coupled with an emerging generation of college-educated police chiefs" and, as a result in his view, Canadian policing "vaulted ahead to provide a higher and more attentive service to the public" (personal correspondence, October 15,

2017). Two other retired Chiefs of Police, Trevor McCagherty and Barry King, also cite this development as a defining watershed during their tenure. McCagherty observes that this trend became increasingly reflected in the change in language from 'police force' to 'police service'. Prior to this turn, he recalls, "the force had a simple mandate to protect life and property … prevent and detect crime". As more police services embraced a community policing model, "this enabled the police service to contribute in a greater way to community building." He adds an interesting question, "Did we bite off more than we can chew"(personal correspondence, October 16, 2017)?

King sees this a bit differently. He notes, "Reasonable community expectations were built on trust and respect, the local structure of leadership, base police duties and the citizen's appreciation of being assisted, protected, and supported by their police department, force or service, as it evolved over time." Even in the majority of small to mid-sized police forces, he observes, "beat and patrol officers contributed in large measure to effective relationship building" (personal correspondence, October 26, 2017).

Current Senator and former Commissioner of Police Gwen Boniface describes another pervasive trend that tracked her decades-long career. She offers that, "The biggest change in my career was the impact of technology. It created new crimes and facilitated new accountabilities for police officers" (personal correspondence, October 27, 2017). She and others note the impact of those technological changes on everything from the costs of equipment, to the challenges of continual training, and the still-elusive pursuit of common and reliable standards (Boniface, 2017; King, 2017; Lunney, 2017; McCagherty, 2017).

One mid-term development, perhaps more than any other, seems to have been a common punctuation point for all of these early contributors to our discussion: the 1982 introduction of the *Canadian Charter of Rights and Freedoms*, and of course, much of the jurisprudence that has followed in its wake. King observes, "Once royal assent was received we faced a significant training curve, and the creation and adoption of new policies and procedures which required a large investment in time and training for all staff." He notes that over the subsequent years of his career, police members at all levels came to discover that many new terms and definitions were shaping their vocabulary, such as "accountability, rights, due process, trust, and constant organizational change". Notably in his view, this also introduced "an enhanced

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vision for policing and a commensurate expertise and level of executive leadership necessary to integrate and sustain it" (personal correspondence, October 26, 2017).

LOOKING AROUND TO THE PRESENT

King's latter observation leads nicely to today. Retired Police Superintendent and Executive Director of the Canadian Association of Chiefs of Police Peter Cuthbert observes that, as he compares his own experience to his son's early career as a second-generation police officer, he sees several fundamental differences in the nature of their core competencies and their life balance expectations. Cuthbert believes that in many ways, these differences are framed by stark changes in the socio-economic position that police members now hold, the complex nature of the services they are expected to deliver in response to mental health and other social conditions, and the attendant requisites for education and continuing access to and applica-tion of research-based evidence and social science (personal correspondence, November 2, 2017). Through advances in technology, new complexities in our globalized economic and social structures, and ably assisted by more than a generation of collective bargaining, today's police members both reflect and enjoy a very different level of professional status, but as one certain result, they also face a much-expanded suite of public expectations, risks, and accountabilities. Continued attention to the safety and well-being of our members must remain a priority in the years ahead.

In this issue of our *Journal*, Kalyal, Peladeau & Huey (2017) explore some of these changing requirements as they exam-ine the views and expectations of today's police recruiters. Shipley (2017) considers new challenges for police members and their command teams in coaching and evidence-based learning. Paluck, Banka, McCarron et al. (2017) share in-depth research results that, among other insights, serve to high-light today's complex intersections among criminal justice, mental health, and addictions. And from their recent global examinations into the emerging dimensions of public trust, Clark, Davidson, Hanrahan, et al. (2017) implore Canadian policing to "professionalize relentlessly" and to "embrace accountability", among other considerations.

LOOKING AHEAD TO THE FUTURE

As of this writing, the government of Ontario has just recently introduced its *Safer Ontario Act*, proposed legislation that aims to update that province's policing and related systems for the first time in almost 25 years. Reflecting similar devel-opments taking form across the country, Deputy Minister of Community Safety Matthew Torigian (personal communica-tion, November 3, 2017) describes this as "historic changes … potentially transforming emerging and socially innovative work into the cornerstone of a new law in Ontario", while others have called it "the greatest overhaul of policing in a generation" (Gillis & Gallant, 2017). The proposed act seeks to support sustainability for First Nations policing, to enhance police accountability, to modernize police roles and service delivery models, and to anchor the future of policing within more collaborative, whole-of-system approaches to commu-nity safety and well-being (Ontario Ministry of Community Safety & Correctional Services, 2017).

Meanwhile in Saskatchewan, similar advances continue to expand in ambition and form as leaders there seek to "signal and support a sustainable culture of collaboration, while also taking decisive steps to reduce institutional and data sharing barriers to advance a new normal" (Dale R. McFee, personal correspondence, November 2, 2017). As we look ahead from a world already transformed by the prolif-eration of information and communications technologies (ICT), to one with yet untold capacities for data analytics and intelligence-driven responses to community needs and social disorders, we must consider how social equity and consent of the people will remain firm anchor points for policing. Further to her observations on technology's omnipresent advance over the past 50 years, Boniface (2017) also notes, "technology … can either build public trust or damage it" adding that "I expect or perhaps hope over the next 50 years that policing will re-invent itself. I am not convinced the mandates assigned to policing can remain so broad and numerous in a changing society."

With expanding insights into the social conditions that will affect families and shape communities in the years ahead, it remains vital that policing continues to seek and find its own footing. A further recommendation from Clark et al. (2017) advocates that policing must learn to "relate independently" to harness that critical element cited by King above, wherein community engagement offers the long-proven potential to forge trusted and lasting bonds with all members of society.

Looking ahead, Lunney cautions that "the principles of inclusivity and partnership must be sustained and strength-ened into the future" (2017). Also in this issue, Nilson reports on promising research that could significantly advance both of these elements by harnessing ICT technologies to expand the reach of collaborative community safety and well-being to all corners of the nation, including those communities most marginalized and often under-serviced by the system as a whole (Nilson, 2017). We find further evidence and momentum for these approaches in the Crofts & Thomas feature where they introduce Canada as a first-time host of the 2018 International Conference on Law Enforcement and Public Health. Such a partnership may push Canadian policing even further toward its nexus with other public and community-based services, committed together to reduc-ing risk factors while contributing to the essential social determinants of healthy, safe, and just societies (Crofts & Thomas, 2017).

SERVING AND REFLECTING AN INCLUSIVE SOCIETY

A society must be inclusive to be truly just. As we look to the next five decades, there is perhaps no more certain projec-tion than the continuation of an ever-diversifying Canada. We are a country where our patterns of immigration derive from all reaches of the globe and are expected to continue as our primary source of growth. We are also a country where growth in our indigenous population is forecast to outpace all others, both on reserve and in urban centres. In the decades ahead, we will most certainly be a country where our ability to embrace inclusion over division may ultimately determine our fate as a nation.

Commitment to this ideal also requires us to fundamentally re-think the ways that policing and all of our public institutions, serve—or maybe too often fail to serve—the needs of the 51% of the population that are female. Worthy of examination is an apparent juxtaposition in the message of the recent '#metoo' social media campaign and the reported frequency of an 'unfounded' designation being assigned to sexual assault complaints, as just one example. Some promising advances are occurring in the way police investigate and respond to crimes most often committed against women, notably the recent national adoption of a framework for addressing intimate partner violence (Gill & Fitch, 2016), but much more needs to be done across the full spectrum of gender-based crime and victimization.

From race and religion, to gender and gender identity, if we do not get this right inside our own sector, we will not get it right in our service to Canadians.

Further, the complex individual, family, community, and economic impacts endured by all victims of crime will continue to call on us to balance our efforts and ensure that services to victims and reduced impacts from victimization take a higher priority in our overall service delivery mix (Johnson-Way & O'Sullivan, 2016). As observed by Boniface, technology will create new forms of crime. As victimization from cybercrime inevitably expands and diversifies in the decades ahead, the argument grows stronger for more victim-centred responses, as well as for greater collaboration across the entire public–private system aimed at prevention (CACP Global, 2015).

A FUTURE UNDERWAY

Says Lunney (2017) in closing his reflections, "I would restate my belief that partnerships developed between the academic community and the police prior to the close of the 20th century were absolutely essential to progress." We can only imagine how much more knowledge we will need to build and share together in the first half of the 21st.

This issue of the *Journal* features our youngest contributor to date, as 22-year old Brandi co-authors with her father Robert their inter-generational perspectives to the question, "What are we doing to protect newcomer youth in Canada, and help them succeed?" (Chrismas & Chrismas, 2017). Here is another two-generation policing family potentially in the making, and one that might exemplify the evidence-based policing culture of the future. The younger is completing her undergraduate degree in criminology and hopes to begin a policing career soon after. The older is a 28-year veteran of the Winnipeg Police Service, who just last month earned his PhD in Peace and Conflict studies.

The younger also offers us some hopeful projections on the next 50 years with, "I think we are growing out of racism and sexism, so that is a good thing. We are not quite there yet, but now police agencies have a larger percentage of female leaders and racism is becoming unacceptable in the public discourse. This, I believe has changed a lot over the past 20 years." At the same time, she cautions that perceptions of police culture among the public may not yet realize on this ideal, and that "mainstream and social media representations of the police hold the potential to enhance or deteriorate those perceptions" (B. Chrismas, personal correspondence, October 17, 2017).

If this young author is correct, we face some important questions. Whatever comes to define our society as a whole in the next half-century, our place within it and our influences upon it are already being formed by the choices we make and the actions we demonstrate today and in the years ahead. Will we chart a determined course? And, are we prepared to guide our own relationship with Canadians—all Canadians?

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Law enforcement and public health: finding common ground and global solutions to disparities in health and access to criminal justice

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Health states are intimately related to socioeconomic status—in general, the higher the status of an individual, the better their health and the longer their life. Socioeconomic status itself relates to the major direct determinants of health, which include access to and quality of health care, the individual's social and physical environments, and their health behaviours. It also relates to indirect social determinants of health such as inequality in access to education, quality of education, income inequality, and occupational environment. At the same time, access to justice and the outcomes of people's involvement with the criminal justice system are also intimately related to socioeconomic status and social class. It is increasingly becoming recognized that these disparities affect the same communities in ways that are inextricably linked—those communities on the lower rungs of health scales also have more involvement with the criminal justice system with worse outcomes. Therefore, in order to effect change and seek to improve the health- and justice-related outcomes for communities, both disparities must be addressed jointly.

Health inequalities which have major impacts on socially disadvantaged groups, including mental health issues, violence, and suicide, have long been acknowledged as being preventable and amenable to change—with income redistribution and equitable access to support and services (Whitehead, 1991). There is a vicious spiral in the relationship, too. Ill-health commonly worsens social disadvantage and makes it more difficult to overcome, especially among already marginalized communities; further marginalization, as happens in someone from an ethnic minority or Indigenous background who develops a mental illness, perpetuates and magnifies their marginalization even within their own communities. Professor Sir Michael Marmot, doyen of studies on social inequalities and health, has clearly demonstrated that acknowledging that the major determinants of health are social also means recognizing that the remedies for these inequalities also need to be social (Marmot, 2005).

> "It is time to be explicit that the heart of a commitment to addressing health disparities is a commitment to achieving a more just society" (Braveman, et al., 2011).

People presenting frequently to health services or with health needs unmet because of lack of access to health services, and people frequently enmeshed in criminal justice services internationally are, on the whole, the same people from the same communities. They have complex issues; they are often disengaged from services, from their families and from their communities; and often present with layers of intergenerational, ingrained, and multifaceted social and economic disadvantage, with a vast array of interconnected complex needs, risks and vulnerabilities. No one agency or service is adequately equipped, resourced or even skilled enough to even begin to adequately address the multiplicity of needs presented by these individuals. This is why our current service responses and models, which remain professionally siloed, continue to fail them.

As we look towards a focus for policing for the next 50 years, in line with changing social patterns of crime and distress, and with growing understanding of their precursors and of the impacts of inequality and disparities, we must adopt more collaborative approaches. We need to fully embrace the possibilities and opportunities afforded by formally bringing together law enforcement and public health to tackle what remain highly significant and common challenges for both. It has been posited that such an approach simply leads to a 'blurring of traditional roles' (Smith, 2014) and increased workloads and conflict over territory. There may be some truth to this at times, but the boundaries reinforced by these traditional roles and mindsets, and the failure to work together to define and respect sensible shared and complementary roles, are a big part of the problem. It is disruptive thinking that facilitates progressive conversations which start with the acknowledgement of the need for a shared responsibility, then set out to determine common goals and seek innovative solutions.

Global shifts are taking place in the culture and orientation of law enforcement agencies which have seen their role as purely focused on public safety, specifically crime combat and maintenance of public order, but are increasingly beginning to understand the inextricable links between public safety and public health. In part this has resulted from deliberations about 'community policing', 'problem solving policing',

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Announcing the… GLOBAL LAW ENFORCEMENT & PUBLIC HEALTH ASSOCIATION AND ITS FORTHCOMING CONFERENCE

The first Law Enforcement & Public Health (LEPH) conference was held in Melbourne, Australia in 2012; its focus was on 'state of the art' thinking and collaboration. Our second conference, held in Amsterdam in 2014 (LEPH2014), moved the focus to what makes effective partnerships. Our most recent conference, again in Amsterdam, in 2016 (LEPH2016) considered the development of sustainable development goals to overcome marginalization. At this point, we created the Global Law Enforcement and Public Health Association (GLEPHA), which was legally constituted in 2017, to begin to formalize the international network of researchers, practitioners, and policy makers that has been, and continues to be, developing through these conferences. We are now delighted to announce that LEPH2018 will be held in Toronto from 21st–24th October, 2018.

The central theme of LEPH2018 will be the differential impact of socioeconomic gradients on people's health and their involvement in the criminal justice system. A particular focus of this conference will be on special interest groups and traditionally marginalized communities for whom health inequalities manifest at disproportionate levels and for whom criminal justice involvement is commonplace. Major themes at the LEPH2018 conference will include violence (especially domestic and gun-related), mental health including wellness and resilience (of first responders as well as marginalized communities), alcohol and other drugs, and corrections (prisons as public health institutions). The conference will especially examine these issues as they affect those communities hardest hit by disparities in both health and criminal justice access, including Indigenous communities and vulnerable populations.

This conference, in which the Community Safety and Knowledge Alliance is a major partner, will be an important vehicle for moving forward towards the goals of Community Safety and Wellbeing and scoping out and uncovering some innovative solutions to complex social problems. We look forward to continuing the conversation there.

'joined-up policing', and 'smart policing'. Being responsive and forward thinking has led police agencies, particularly in the Global North, to consider the range of social and economic issues that underpin insecurity and risk. Police are now engaging as nodal actors in the governance of both public safety and public health; how this is configured varies according to existing resources, skills and network actors.

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Collaborative risk-driven intervention: research supporting technology-enabled opportunities for upstream virtual services in rural and remote communities

Chad Nilson*

ABSTRACT

In 2011, Canada's Hub Model of Collaborative Risk-Driven Intervention was launched in Prince Albert, SK. Since that time, over 60 communities across the country have replicated the initiative, resulting in over 9,500 rapid interventions of acutely-elevated risk. For the most part, however, these multi-sector efforts to detect elevations in risk, share limited information, and mitigate risk before harm occurs, have taken place in small-to-large-size communities. Still uncertain, is how the benefits of the Hub Model can be expanded to support individuals in rural and remote communities. This article represents a compilation of extracts from a larger body of work conducted to research, explore, and propose a pilot project for application of collaborative risk-driven intervention in a virtual environment. Part of this effort includes a review of literature on the Hub Model, adaptations of human service initiatives, and the relationship between human service provision and information and communication technology (ICT). Consultations with 199 different human service and ICT professionals lay the groundwork for development of theory, assumptions, risks, options, and solutions for implementation of a tech-enabled Hub. Of course, the implications for service mobilization through a remote presence extend far beyond just the Hub Model. Therefore, this article aims to encourage and inspire action-based research that propels a wide variety of tech-enabled opportunities for improving community safety and well-being.

Key Words   Hub; technology; risk; innovation; collaborative risk-driven intervention; human service.

INTRODUCTION

In 2011, the journey for what has now become known as "Canada's Hub Model" started in Prince Albert, Saskatchewan. In response to a measurable need to mitigate acutely elevated risk before harm occurs, human service providers embarked upon a new process of risk detection, information sharing, and rapid multi-sector intervention (Nilson, 2014). Since that time, the Hub Model of collaborative risk-driven intervention has been replicated in over 60 communities across the country (Global Network for Community Safety, 2016). Although the model has been applied in some smaller urban (Gray, 2016) and First Nation (Nilson, 2016a) communities, there remain significant resource and geographic barriers to its expansion into rural and remote communities.

To overcome these barriers, Community Safety Knowledge Alliance requested the University of Saskatchewan's Centre for Forensic Behavioural Science and Justice Studies to lead the development of a research-based pilot project plan that would set the stage for the Hub Model to be tested in a virtual environment. The preparations for that pilot project plan uncovered several important and valuable findings from both a research and practitioner perspective. To further disseminate these findings, this article extracts key components of the larger document aimed to guide implementation of a tech-enabled Hub in Saskatchewan (and/or other provinces). Its purpose is to present original research, while also exploring the art of the possible concerning virtual applications of human service delivery in rural and remote communities where human services are limited or non-existent. While the focus of this article may be on Tech-Enabled Hubs, the utility and reach of findings presented herein extend well beyond the field of collaborative risk-driven intervention.

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LITERATURE REVIEW

The project's literature review focused on identifying key themes and lessons learned in three major areas: collaborative risk-driven intervention, adaptations of other human service models in remote communities, and applications of information and communication technology in the human services. Due to the diverse nature of these three topics, several search strategies were employed. These include direct communication with Hub evaluation authors, web-based searches, requests to government, published literature searches, and reference-based snowballing.

In reviewing the respective literatures on all three topics, thematic analysis was conducted to highlight major themes and widespread agreement in evidence-based practices concerning the Hub Model, human service adaptations, and information and communication technology. Key words used to search for relevant literature included collaboration, risk-driven intervention, human service adaptations, information and communication technology, remote presence technology, and virtual human service delivery. Key databases for literature included JSTOR, EBSCOhost, Google Scholar, and Academic Search Complete. The following sub-sections summarize main lessons from those literature bodies.

Collaborative Risk-Driven Intervention

Collaborative risk-driven intervention is the process of risk-detection, which leads to disciplined and limited information sharing, and that is followed by a mobilization of multiple human service providers to intervene and mitigate risk before harm occurs (Nilson, 2016a). The core manifestation of this process in Canada is the Hub Model. In short, the Hub is "an evidence-based collaborative problem-solving approach that draws on the combined expertise of relevant community agencies to address complex human and social problems before they become policing problems" (McFee & Taylor, 2014 p. 2). As the first evaluation of the Hub Model in Canada describes:

> The Hub is structured as a venue for human service professionals from a variety of human service disciplines, to meet and collaborate on interventionist opportunities of addressing situations of acutely-elevated risk. The Hub itself is inherently risk-driven, and lends itself to both secondary and tertiary efforts of prevention. The Hub meets Tuesday and Thursday mornings for up to 90 minutes each day. The focus of these meetings is to identify complex risks of individuals or families that cannot be addressed by a single agency alone. When situations are brought to the table by one of the partner agencies, the appropriate human service professionals become engaged in a discussion, which results in a collaborative intervention to connect services and offer supports where they were not in place before. The goal of the Hub is to connect individuals-in-need to services within 24 to 48 hours. (Nilson, 2014 p.9)

The Hub was designed to be a venue for risk detection, limited information sharing, and collaborative intervention planning. It is not an entity or an organization, but simply a forum for multi-sector collaboration (Nilson, 2014). The Hub was not created to coordinate case management nor provide intensive follow-up to families in need. These are the responsibilities of agencies after a Hub discussion (Russell & Taylor, 2014). Instead, the Hub Model brings human service providers together in a very efficient, disciplined discussion process to simply identify client risk factors, determine the best possible supports for the client, and plan an intervention that offers these supports. Once an intervention is deployed, the relevant human service agencies involved in the discussion take over outside of Hub (McFee & Taylor, 2014).

Since 2012, a number of evaluations have been completed on the Hub Model. The very first evaluation of the Hub Model was Nilson's (2014) Preliminary Impact Assessment of the Prince Albert Hub. The main findings of that report indicate that the Hub was effective at breaking down long-standing institutional silos and gaining clients quicker access to services. As the model started to be applied in Ontario, evaluations were conducted in Toronto (Ng & Nerad, 2015), Brantford (Babayan, Landry-Thompson, & Stevens, 2015), Kitchener (Brown & Newberry, 2015), Guelph (Litchmore, 2014), Ottawa (Lansdowne Consulting, 2016), Barrie (Nilson, 2017), Chatham-Kent (Nilson, 2016b), and Cambridge (Brown & Newberry, 2015; Newberry & Brown, 2017), to name a few. Outside of Ontario, Public Safety Canada sponsored an evaluation of Canada's first on-reserve application of the model in Maskwacis, Alberta (Nilson, 2016a).

Some of the initial findings reported in the evaluation literature include increased service access (Nilson, 2014; Nilson, 2017); clearer determination of client needs (Babayan et al., 2015); improved communication among agencies (Ng & Nerad, 2015); reduced barriers to support (Brown & Newberry, 2015; Nilson, 2017); improved client-service provider relations (Nilson, 2016a); and increased efficiencies in human service delivery (Lansdowne Consulting, 2016). In addition to these findings, other evaluations describe the model's application in large urban areas (Ng & Nerad, 2015), small urban areas (Babayan et al., 2015), and rural on-reserve communities (Nilson, 2016a).

Adaptations of Other Human Service Models in Rural and Remote Communities

To learn from the adaptations of other human service models in rural and remote communities, five short case reviews were conducted in the areas of mental health crisis intervention (Skubby, Gonfine, Novisky et al., 2013); family violence programming (KYRHA, 2015); homelessness and housing (Waegemakers-Schiff & Turner, 2014); home visiting (Del Grosso et al., 2014); and healthy learning (Naylor, McKay, Scott et al., 2009). A case study approach was elected to highlight the practical implications of service model adaptation. Following a careful review of the human service literature, each case study was chosen for its ability to demonstrate how existing human service models have been adapted to fit rural and remote environments. Central to the case study process was identifying different lessons to consider in moving forward with adaptation of the Hub Model in rural and remote communities. While some of these lessons may be more applicable to tech-enabled Hubs than others, they all have significant value for the planning process required to

implement a remote presence initiative. The following lessons were gleaned from the above case studies:

1) Be prepared to adjust expectations and roles.
2) Strive for equal ownership and a shared value of the initiative among community partners.
3) Allow for more time in the preparation stage than in other less remote environments.
4) Be willing to adjust training and logistical needs to meet service provider capacity and need.
5) Look within the community to find and mobilize what resources are available (as opposed to focusing on resources that are not available).
6) Consider a regional perspective for expanding service access and resource availability.
7) Implement video communication technology to overcome limitations in service access or quality.
8) Incorporate culture and tradition into delivery of the model.
9) Be prepared for variation in the adaptation practices across rural and remote communities.
10) Keep the model simple and easy to implement.
11) Make sure ongoing support is accessible and responsive to community needs.
12) Allow for cultural infusion, which will foster community ownership, stakeholder buy-in, and target group engagement.

Information and Communication Technology

One of the challenges with understanding ICT is that defining the term Information and Communication Technology becomes tedious in light of the diverse applications of the term within several different contexts and treatments. Some experts (Rouse, 2005) define ICT as an umbrella term that includes any variety of communication devices such as radio, cellular phones, computers, and video conferencing. Others (TechTerms, 2010) explain ICT as a term that refers to technologies that provide access to information through telecommunications in real time, such as instant messaging, voice-over-Internet, video conferencing or social media.

Several observers see ICT as a useful tool for education (Trucano, 2005), economic growth (Avgerou, 2003), and social development (Kozma, 2005). In fact, some researchers (Caperna, 2010) argue that ICT is not simply a tool, but a crucial aspect of sustainable policy that is capable of mitigating various community challenges such as literacy, community involvement in planning, geography, and service access.

Even when discussing applications of ICT, there are differences between use in the business (Akomea-Bonsu, 2012), tourism (Dimitrios & O'Connor, 2005), education (Pelgrum, 2001), adult learning (Selwin, Gorad, & Furlong, 2006), community planning (Silva, 2010), social (Wang, Carley, Zeng et al., 2007), and even technology (Cohen, Garibaldi, & Scarpetta, 2004) sectors. Overall, this variation in context and application makes defining ICT a difficult endeavour.

To ease this burden, Zuppo (2012) presents a framework for hierarchical classifications of ICT definitions and terms. Her purpose was to not only highlight the truly multidisciplinary nature of ICT, but also to streamline global definitions and applications of the term to help foster more precise keyword searches, resulting in more efficient and effective gathering of information relating to ICT. Relevant to the current research, two of Zuppo's lower level classifications illustrate the difference between ICT infrastructure and ICT devices. Whereas the former refers to connectivity, access, and signal availability, the latter refers to whether users of technology possess devices such as phones, computers, or tablets.

Considering all of this, for the purposes of this article, ICT refers to a technology with diverse applications that—via appropriate infrastructure and device(s)—enables real-time communication between two or more recipients through text, voice and/or video signal.

CONSULTATION PROCESS

To develop a well-informed pilot project, key stakeholders from policing, education, justice, victim services, mental health, addictions, social welfare, child protection, probation, culture, leadership, community outreach, housing, family services, and child protection were consulted in the process (N = 199). Participants to the consultation process represent four different groups: Hub practitioners (n = 97), non-Hub human service professionals (n = 65), model adapters (n = 16), and information and communication technology experts (n = 21).

Engagement of consultation participants involved a combination of different recruitment strategies. Hub practitioners were selected based upon several factors related to service area, jurisdiction, involvement of technology, and level of rurality. Hub practitioners from Ontario and Saskatchewan, as well as those representing on-reserve and off-reserve Hub tables, were engaged in the process. Non-Hub practitioners were selected based upon either their delivery of service to rural/remote communities and/or their involvement in multi-sector collaboration while also not having any experience with the Hub Model. Model adopters were identified through a review of literature on applications of pre-existing models in rural/remote communities. Finally, information and communication technology experts were identified through suggestions within the ICT community.

Dialogue from these four cohorts was captured in a few different ways. A majority of participants (n = 119) were engaged through face-to-face interviews in a group or individual setting. Others were consulted via telephone (n = 47). A small minority (n = 12) participated through an email exchange. Lastly, in the spirit of information and communication technology, group interviews with members of two separate Hubs (n = 21) were conducted through video conference.[1]

Each stakeholder group was asked a series of different questions. Hub practitioners were asked questions pertaining to adaptation of the Hub Model, requirements for collaborative risk-driven intervention to occur in a technological environment, and potential challenges and barriers to such an approach. Human service professionals not currently involved in Hub were asked to discuss their reaction to providing services to clients in a multi-sector technological

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[1] The Weyburn/Estevan/Carlyle Hub in Saskatchewan and Durham Connect in Ontario each meet weekly through video conference. The author was able to facilitate the consultation process remotely from Prince Albert, SK.

environment. Model adapters were asked to share their experience and knowledge of adaptations of existing human service models in rural, remote, or technological communities. Finally, ICT experts were asked questions about current ICT capacity, potential capacity, and key factors to consider in enabling human service collaboration and service provision through a technological environment.

To analyze data from the consultation process, responses were first organized into similar groupings under the same question. From these various groupings, feedback was then examined using thematic analysis. During this process, several key themes repeatedly appeared in the dialogue of each respondent cohort. Analysis of respondent dialogue revealed multiple mentions of adaptability, key ingredients, potential barriers, technology considerations, appropriate ICT formats, and tech-enabled Hub discussant qualities. In addition to these themes, three main concerns were also highlighted by several consultation respondents.

First, many of the Hub practitioners were initially resistant to the idea of a tech-enabled Hub, simply because it lacks conventional face-to-face human interaction. However, when confronted with the reality that some communities literally have no services, many respondents were quick to realize the utility of a tech-enabled Hub. In the end, there grew considerable enthusiasm and support for the concept of a tech-enabled Hub among consultation respondents.

Another major concern during the consultation process was the fact that not only are rural and remote communities lacking resources for a proper onsite intervention, but they also have no services for ongoing support post-intervention. As a result, a lot of dialogue during the consultation process focused on the actual day-to-day service provision to clients engaged through a tech-enabled Hub. Overall, many of the consultation respondents were favourable to exploring ways in which they could provide services to rural and remote clients in an ongoing tech-enabled capacity.

A third major concern among consultation respondents was the resource makeup of a so-called tech-enabled Hub. Assumingly regional and/or provincial in nature, there were numerous questions around who would make up the tech-enabled Hub and, more significantly, who would fund it. This sparked conversation around a number of different options, designs, locations, and governance structures. Ultimately, several consultation respondents favoured a purely tech-enabled Hub with discussants located in different parts of the region (or province). This allows for more physical coverage of at least one team member, to be accompanied by a local human service provider (e.g., referring agent), and the rest of the tech-enabled intervention team.

Overall, there was a variety of suggestions and ideas provided during the consultation process. These suggestions provide a lot of new questions to consider in planning a pilot project or pursuing related research. In aggregate form, feedback from respondents in the Hub discussant, human service provider, model adopter, and ICT expert consultation cohorts is summarized within Table I.

PROPOSING A PILOT PROJECT

The literature review and consultation process were instrumental in the design of a proposed pilot project for implementing collaborative risk-driven intervention in a virtual environment. In an effort to fulfill the main goals of this project, the following subsections present different components of the overall pilot project plan.

Theory of Change
The purpose of the Hub Model, including a tech-enabled application, is to contribute towards community safety and well-being. To achieve this, a number of key activities are undertaken to better inform and engage appropriate human service providers—thereby improving human services and reducing risk.

To conceptually map this process, a logic model is illustrated in Figure 1. The theory of change for a tech-enabled Hub suggests that risk detection by local assets (e.g., RCMP, community health worker) triggers a referral to the so-called tech-enabled Hub. This team then begins the tech-enabled discussion process, where they share limited information and begin planning a tech-based intervention. During the intervention (and with the help of a local technology access coordinator), services become mobilized, which triggers integrated service delivery from relevant human service professionals. As a result of these activities, there occurs an increase in multi-agency awareness of risk factors and client needs become addressed. The resulting human service improvement and risk reduction contributes towards improved community safety and well-being.

Risks to Consider
Throughout the implementation of such a project, there are a number of risks that the implementation team should be aware of. Having a plan to overcome these risks will be critical to the success of the pilot project. The risks shown in Table II have been identified through research on collaboration-based human service models, a review of adaptations of other models, and consultations with key stakeholders. This list is not comprehensive and should only be used as a starting point to provide some idea of potential risks to consider in the implementation process. Furthermore, the strategies to overcome these risks are also limited and should be expanded.

Key Assumptions
Moving forward with a tech-enabled Hub requires a few key assumptions to be met. Making sure these assumptions are true will improve the probability of success for the implementation of a tech-enabled Hub. Where any of these assumptions are not true, the implementation team must work together to identify a solution.

- There is a group of motivated and experienced human service professionals who are interested and available to be part of this project.
- There is support from various levels of government (e.g., local, provincial, Aboriginal, federal).
- There are rural and remote communities with limited to no access to human service delivery.
- As a collective, the membership organizations will work together to secure appropriate technology access.
- Accessible, user-friendly, and reliable technology is available to all project partners.

- Local human service professionals will identify risk and make referrals to the virtual Hub.
- There is a source or provider of mobile technology made available to clients.
- There are locally-based coordinators of technology access and onsite support to clients.
- There is a set review period that will allow for reflection, trouble-shooting, and improvement.

Team Configuration Options

Throughout the consultation process, a number of different team configurations emerged. For the most part, there was usually consistency in the delivery of service post-intervention. That almost always involved a human service provider continuing the client-care provider relationship using an ICT solution. Where differences emerged was in the actual structure, resourcing, and location of the Hub team itself. As

TABLE I A summary of feedback from the consultation process—organized by theme

Theme	Feedback from Consultation Respondents
Adaptability	• The risk detection process will require additional community outreach/support • Resourcing of the Hub with full time positions will be required • The discussion process (and Four Filters) will remain the same • The intervention will have to be supported by onsite and remote presence discussants • Collaboration and integrated supports will have to continue after the intervention • Service providers involved in the intervention should also provide the ongoing services • The tech Hub should be structured to meet regional/provincial needs (not just local)
Key Ingredients	• Clear cost-effectiveness • Local champions • Effective communication • Fidelity to the original Hub Model (i.e., Four Filters) • Supportive and flexible coordination • Community ownership • Protocol and structure within a technological environment • Dedicated positions for Hub discussants • Proper skillset in intervention and comfort with technology • Roll out of pilot must be slow-paced and supported • Security and confidence with the technology • Mechanism of self-referral and/or community referral • Someone onsite to provide ICT access to clients • Guaranteed access to human service supports
Potential Barriers	• Limited risk detectors in rural/remote communities • Staff/leadership turnover • Limited anonymity/confidentiality in rural/remote communities • Attention drift to other priorities • Historical distrust for government agencies • Loss of face-to-face client interaction • Limited skills/knowledge/comfort with ICT • Limited access to reliable technology • Long institutional legacies of face-to-face service provision • Loss of cultural/community familiarity with regional/provincial approach
Technology Considerations	• Technological connectivity, access, strength, reliability, capacity, acceptance, affordability • Local bandwidth, data coverage, network access • Single provider of ICT solutions • Local knowledge on operating ICT solutions • Support for clients in using the ICT • Video-based solutions are preferred over text or voice-based solutions • Mobile video devices are critical for the intervention • Stationary video solutions could be used for discussion process and ongoing support
Appropriate Technology Formats	• Stationary video-solution (discussion process) • Mobile video-solution (interventions and ongoing service provision) • 4G/LTE wireless, satellite signal, fiber optics
Tech-Enabled Hub Discussant Qualities	• Must be experienced human service professionals • Must be adaptive, flexible, and innovative in their solutions • Must have some level of decision-making authority • Comfortable in a technological environment • Committed to position for longer period of time (low turnover)
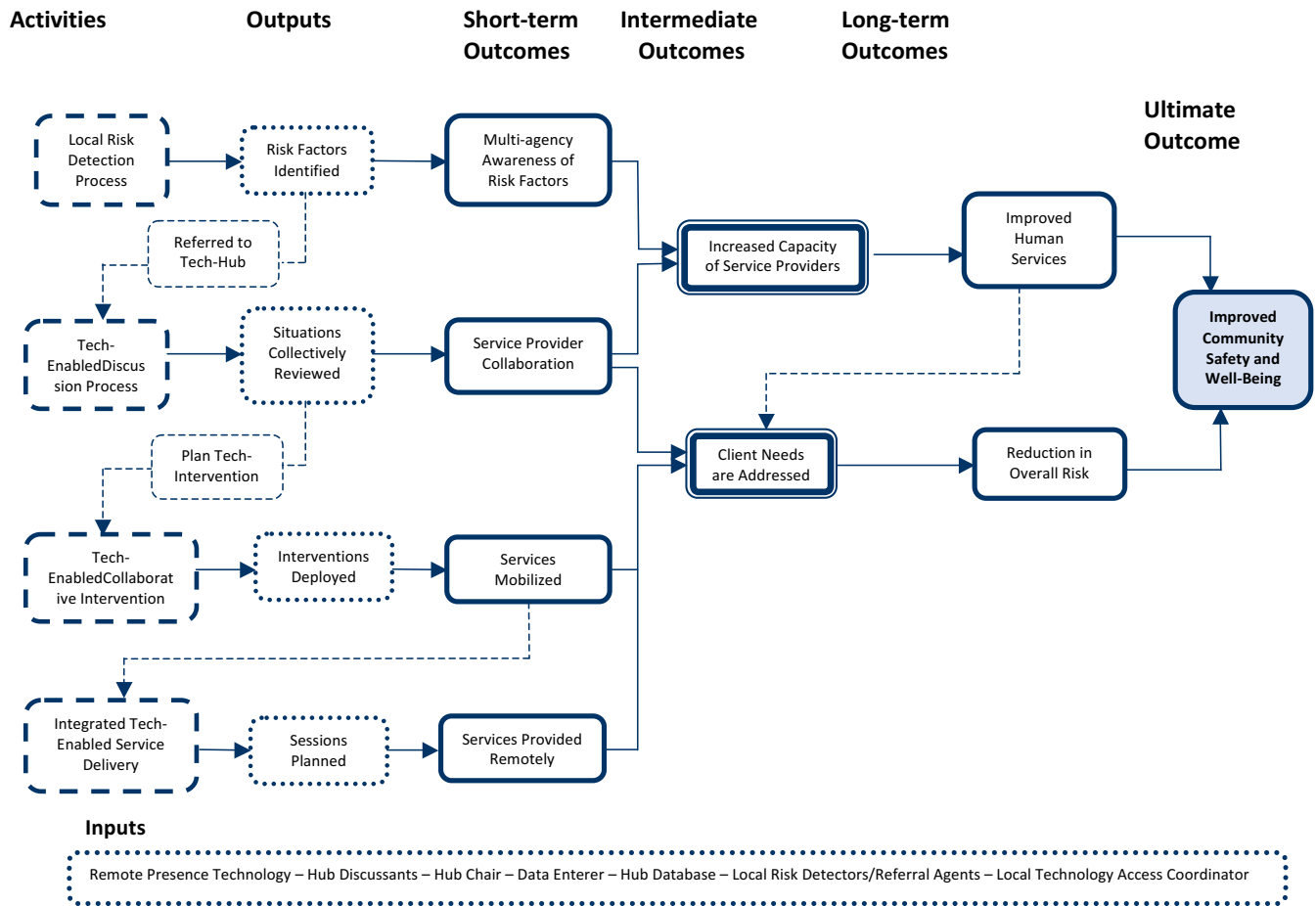
FIGURE 1 An illustration of a conceptual understanding of the linkages between outputs and outcomes to be generated by the Tech-Enabled Hub.

Table III illustrates, there are three different configurations under which a tech-enabled Hub could operate.

As Table III describes, each of the team configurations presents its own strengths and weaknesses. In many ways, there is a trade-off for one configuration over another. For example, in the regional or provincial configuration, there is a greater opportunity for at least one member of the team to accompany local human service professionals on the initial intervention (while the others join remotely). Unfortunately, this does not allow the team very much face-to-face time with one another. In contrast, the single location tech-enabled Hub provides an opportunity for Hub discussants to build rich, strong personal working relationships. This, of course, comes at the expense of opportunities for at least one member of the team to attend the actual intervention door knock with local service providers (and/or the technology access coordinator). To illustrate the reach of a potential tech-enabled Hub, Figure 2 maps a provincial configuration applied in Saskatchewan.

Appropriate ICT Solutions

Beyond the configuration of the tech-enabled Hub, a number of suggestions for a technological format have also been offered. Many of the consultation respondents converged around the notion that the ICT solution can differ depending upon the stage of collaborative risk-driven intervention. As Table IV illustrates, actual Hub meetings would be suitable in stationary video conferencing environments like Telehealth, GoTo, or Skype. Actual interventions, however, must be done using mobile telepresence technologies on a satellite or 4G/LTE Internet platform. The actual post-intervention service provisions could be done using a variety of formats—depending upon client comfort, interest, and capacity.

Feedback from Stakeholders

During development of the pilot project plan, a second wave of feedback was requested from 27 key stakeholders involved in the Hub Model. This follow-up cohort included 8 Hub chairs from across Saskatchewan; 1 Hub Chair from Ontario; 3 representatives of RCMP "F" Division; 2 Hub data analysts; 4 Ministry of Justice representatives; 4 key advisors on collaborative risk-driven intervention; 2 Hub supporters; and 3 Hub evaluators. The purpose of this follow-up was to present some basic principles of the emerging pilot project and seek observations and feedback. This feedback was used to fine-tune, adjust, and focus the final project plan presented herein.

Overall, the feedback from the follow-up stakeholder group was quite positive. Most of the respondents were very supportive of the direction of the pilot project plan

TABLE II A listing of the risks and strategies for overcoming risks associated with a tech-enabled Hub

Risks	Strategies for Overcoming Risk
Inadequate access to appropriate technology.	Confirm key components of ICT in communities that will be part of the pilot project.
Lack of community buy-in.	Spend time working with community leaders to build buy-in and support.
Low levels of risk detection at the local level.	Educate and raise local awareness of the utility found in early risk detection and intervention.
Failure to secure full-time Hub discussants.	Work with multiple levels of government and service organizations to secure a proper commitment.
Low client comfort level with technology.	Assist clients in exploring the user-friendliness of the technology with onsite support.
Hub discussants will not be able to create team synergy in a tech-enabled environment.	Provide opportunities for daily interaction and exchange among the Hub discussants.
Some agencies may not be able to participate in a tech-enabled environment.	Work with agency leaders and funding organizations to open up opportunities for full participation.
Conflict and confusion over jurisdictional authority and responsibility of service provision.	Hold planning sessions early on with the appropriate service providers to sort out jurisdictional questions and potential problems.
Geographic and resource barriers to ICT specialists who can service, troubleshoot, and repair ICT solutions onsite.	Identify local or regional ICT resources who can work remotely with central ICT vendor to implement immediate solutions.

TABLE III Three types of configurations for implementing a tech-enabled Hub

Configuration	Description
Single Location Tech-Enabled Hub	The Hub team may be comprised of human service providers located in a single community, where they can work together in-person, but serve clients remotely. The benefit of this is strong team synergy. The challenge with this is lack of client contact and a threat of low risk detection. Depending on the number of new discussions, this design may require full-time resources to the Hub table.
Regional Tech-Enabled Hub	The Hub team is comprised of human service providers from different locations within a specific region of the province. Each Hub discussant may play the lead role in interventions within their service area, while also being supported remotely by the remaining Hub discussants. This design may allow for home agency responsibilities as well as Hub duties.
Provincial Tech-Enabled Hub	The Hub team is comprised of human service providers from different locations throughout the province. Each Hub discussant may play the lead role in interventions within their service area, while also being supported remotely by the remaining Hub discussants. Depending on the number of new discussions, this design may require full-time resources to the Hub table.

and offered only encouraging words. Others, while very supportive, did offer some helpful constructive points for consideration.

The main theme of the feedback was to "get the technology right." In other words, they felt that there was not a lot to change with respect to the actual Hub Model itself. However, the solution chosen to connect Hub practitioners and clients remotely must be perfect. Another theme in the feedback was that there must be a commitment among human service providers to support clients beyond the initial door knock. In a conventional Hub Model application, many Hub discussants connect/refer Hub subjects to other service providers. According to several respondents, that may not be an ideal configuration for this model—as the use of technology is a big enough barrier to rapport, let alone have two or three different service providers from the same agency. The third major theme was that members of the so-called tech-enabled Hub team must be completely comfortable with working in a technological environment. Furthermore, they must be particularly effective at overcoming the human element lost in a technological environment.
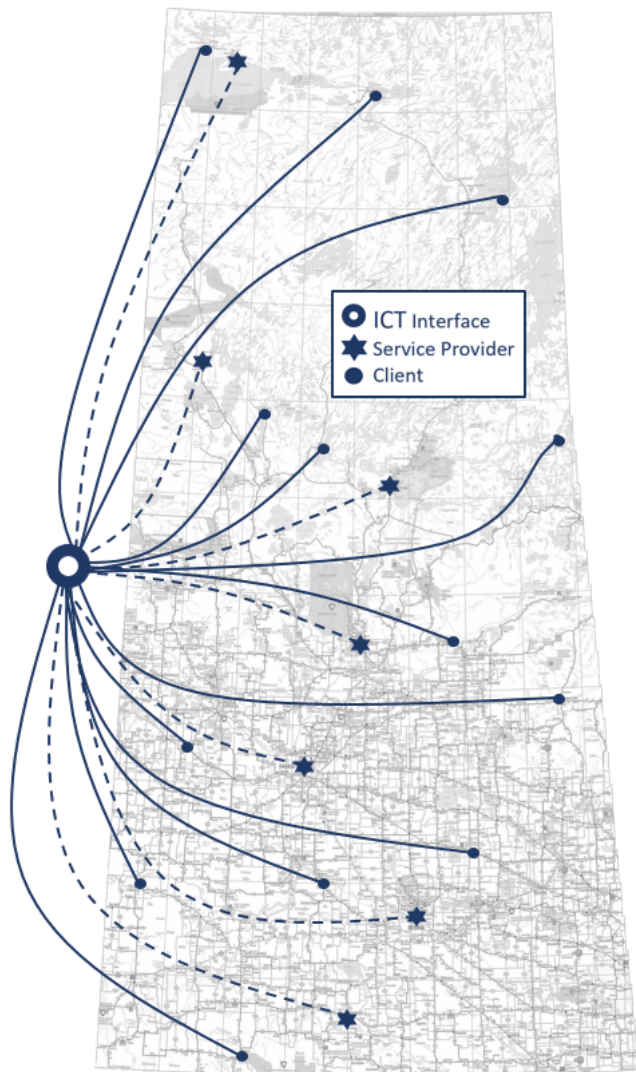
In addition to these main themes, the follow-up stakeholder group offered a few additional suggestions and observations:

- The technology used must offer a reliable, clear, and secure connection.
- The Four Filter process will be able to endure a tech application. Door knocks are individualized anyway, so nothing much should change on the intervention front.
- A regional approach offers a balance of local onsite human service providers with remote professionals.
- There is real merit to incorporating technology not only in the discussion process, but also for both the interventions and ongoing service supports.
- This approach will offer considerable accessibility to services—which continues to be a major burden, even in larger urban environments.
- The concept is a major win for remote locations that face geographic barriers. However, it could easily become an opt-out of face-to-face service provision in urban environments.

- In structuring the service areas, it is important to pay attention to jurisdiction, overlap, and even service competition.
- The key to this will be a mechanism of early risk detection and referral from local human service professionals or community members who are not all that familiar with the Hub Model.
- The only way this approach becomes worthwhile is if service provision is guaranteed after the intervention—even it is done remotely.
- It will be critical to have at least one person on the ground to coordinate access to the technology solution that this approach requires.

Resource Requirements

In preparing to implement this pilot project, it will be important to budget for a number of key resources. These resources are the basic requirements for launching a tech-enabled Hub. As the implementation team begins their work, they may find additional resources that are needed. For now, however, some of the major resource requirements for a tech-enabled Hub are described in Table V.

TABLE IV The appropriate technology format for each stage of the collaborative risk-driven intervention process

Stage	Format(s)
Hub Discussion Process	Stationary web-based video conferencing (e.g., Skype, GoTo, WebEx, or various Wi-Fi telepresence devices)
Intervention Planning	Stationary web-based video conferencing (e.g., Skype, GoTo, WebEx, or various Wi-Fi telepresence devices)
Intervention Deployment	Remote presence technology/mobile video solutions (e.g., satellite video conferencing, mobile telepresence device; 4G/LTE tablet)
Post-Intervention Service Provision	Combination of stationary web-based videoconferencing (e.g., Skype, GoTo, WebEx), mobile video solutions (e.g., satellite video conferencing, mobile telepresence device, 4G/LTE tablet), or text-based communication (e.g., cell phone)

TABLE V The required resources of a tech-enabled Hub by resource type

Resource Type	Description
Personnel	- Hub discussants from multiple sectors who are comfortable and committed to collaboration and ongoing service provision in a technological environment. - Hub chairperson who can steer the meetings (e.g., 2 discussants serving as co-chairs). - Data recorder (could be a Hub discussant, as well). - Onsite technology access coordinator.
Technology	- Diverse ICT solution that allows multi-site stationary video communication. - Reliable ICT solution that allows multi-site mobile video communication. - Access to sufficient 4G, LTE, or satellite networks. - Individual devices (e.g., desktop, tablet) exclusive to Hub discussants.
Training & Awareness	- Training for Hub discussants on effective communication in a technological environment. - Local human service provider awareness on risk detection and referring to Hub. - Training for technology access coordinator to become familiar with the Hub Model, as well as leading practices in supporting client engagement in services.

FIGURE 2 How a provincially-configured tech-enabled Hub could be applied in the province of Saskatchewan.

Legend:
- ICT Interface
- ★ Service Provider
- ● Client

Cost Simulation

The main reason for developing this pilot project is to identify an opportunity for individuals in rural/remote communities to overcome the geographic and resource barriers to collaborative risk-driven intervention (and other service provisions). The fact of the matter is, some

TABLE VI The costs of different human service solutions for supporting a client 200 km away from any given service provider

Solution	Cost Description	1 Client	10 Clients	30 Clients	50 Clients
In-person Visits (with all staff doing in-person visits)	Intervention (4 staff × 1 visit) – travel ($0.45 × 400 km × 4) – meals ($25 × 4 × 1) – pay ($35/hr × 5 hrs × 4)	$1,520	$15,200	$45,600	$76,000
	Ongoing Support (4 staff × 8 visits) – travel ($0.45 × 400 km × 4 × 8) – meals ($25 × 4 × 8) – pay ($35/hr × 5 hrs × 4 × 8)	$12,160	$121,600	$364,800	$608,000
In-Person Visit Total		$13,680	$136,800	$410,400	$684,000
Mobile Telepresence Device (with technology access coordinator attending every session)	Product (1 device) – unit cost ($25,000) – service fees ($600) – network costs ($1,920)	$27,520	$27,520	$27,520	$27,520
	Intervention (1 staff × 1 visit) – travel ($0.45 × 400 km × 1) – meals ($25 × 1) – pay ($35/hr × 5 hrs × 1)	$380	$3,800	$11,400	$19,000
	Technology Access Coordinator (onsite) – travel ($0.45 × 5 km × 1 × 32) – pay ($35/hr × 1 hrs × 32)	$1,192	$11,920	$35,760	$59,600
	Ongoing Support (remotely) – pay ($35/hr × 1 hr × 4 × 8)	$1,120	$11,200	$33,600	$56,000
Mobile Telepresence Total		$30,212	$54,440	$108,280	$162,120
Commercial Grade Tablet (with technology access coordinator attending every session)	Product (1 device) – unit cost ($700) – network costs ($1,920)	$2,620	$2,620	$2,620	$2,620
	Intervention (1 staff × 1 visit) – travel ($0.45 × 400 km × 1) – meals ($25 × 1) – pay ($35/hr × 5 hrs × 1)	$380	$3,800	$11,400	$19,000
	Technology Access Coordinator (onsite) – travel ($0.45 × 5 km × 1 × 32) – pay ($35/hr × 1 hrs × 32)	$1,192	$11,920	$35,760	$59,600
	Ongoing Support (remotely) – pay ($35/hr × 1 hr × 4 × 8)	$1,120	$11,200	$33,600	$56,000
Commercial Grade Tablet (full TAC) Total		$5,312	$29,520	$83,380	$137,220
Commercial Grade Tablet (with technology access coordinator attending only 3 sessions)	Product (1 device) – unit cost ($700) – network costs ($1,920)	$2,620	$2,620	$2,620	$2,620
	Intervention (1 staff × 1 visit) – travel ($0.45 × 400 km × 1) – meals ($25 × 1) – pay ($35/hr × 5 hrs × 1)	$380	$3,800	$11,400	$19,000
	Technology Access Coordinator (onsite) – travel ($0.45 × 5 km × 1 × 3) – pay ($35/hr × 1 hrs × 3)	$112	$1,120	$3,360	$5,600
	Ongoing Support (remotely) – pay ($35/hr × 1 hr × 4 × 8)	$1,120	$11,200	$33,600	$56,000
Commercial Grade Tablet (partial TAC) Total		$4,232	$18,740	$50,980	$83,220

communities simply do not and will not have onsite access to all required services. Considering this, four scenarios are presented.

The first involves all onsite support to the client. The second involves a local technology access coordinator taking an industry-grade mobile telepresence device to the client's home for each session. The third involves a local technology access coordinator taking a commercial grade tablet to the client's home for each session. Finally, the fourth involves a local technology access coordinator limiting their visits with the client to three—only to support them in using the tablet (which will be left with the client).

This cost simulation assumes that any single client who faces a situation of acutely-elevated risk will require a single intervention involving four sectors. During the onsite intervention, all four relevant Hub discussants will attend the intervention in-person, whereas in the tech-enabled interventions, only one Hub discussant will attend the intervention in-person (the rest online). Following the intervention, the client will require multiple services by four different professionals, in eight sessions, over a one-year period. The client is located 200 km from the nearest service delivery centre. In the tech-enabled models, a technology access coordinator from the local community will bring the device to the client for tech-enabled sessions. In the onsite model, the four human service professionals will each visit the client at the client's home (200 km away).

As Table VI shows, there are some tremendous cost differences between onsite support and tech-enabled support. In fact, all three tech-enabled solutions are considerably more cost-effective than complete onsite service provision. Among the tech-enabled solutions, the difference in costs decreases with higher volumes of clients served. In other words, there is a base rate to acquire the technology, but after that, costs for implementing each solution are relatively similar.

CONCLUSIONS

The research and consultations conducted in preparation of a tech-enabled Hub pilot project inform scholars and practitioners of a few things. The first is that there is an appetite and interest in utilizing technology to overcome barriers to human service delivery in rural and remote communities. The second is that the fidelity and strength of collaborative risk-driven intervention, while largely a face-to-face model, should be able to withstand application in a virtual environment. The third is that, out of necessity, parties to this would-be tech-enabled Hub have an un-scripted opportunity to explore ongoing multi-sector coordinated support beyond the point of intervention. This third point in particular, has the potential to open up an entirely new field of practice in multi-sector collaborative community safety and well-being.

One opportunity realized through this project is that the delivery of human services through a virtual environment can extend far beyond the Hub Model. In fact, it could be argued that many barriers to human service delivery (e.g., transportation, anonymity, stigma, comfort) can be just as easily overcome by deploying the right technology in a small or large urban community as in a rural or remote community. With transitions to an ICT platform for banking,

medical diagnostics, post-secondary education, and ordering pizza already behind us, there is little reason to doubt the potential for virtual applications of broader human service delivery.

Concerning the role of academia in this emerging field, there are endless opportunities for action-based research to shape, measure, improve, and sustain the application of collaborative risk-driven intervention in a virtual environment. Getting to a place of consistent and effective tech-enabled human service delivery will certainly require systematic reflection, monitoring, and evaluative reporting. Hopefully this article will inspire community-engaged scholars to mobilize and meet such needs.

Moving forward, Community Safety Knowledge Alliance and its various academic and government partners are pursuing funding opportunities to implement a pilot project. While much work will be required to initiate the pilot, a lot has been learned about the Hub Model, human service delivery in general, and how both can be enhanced through information and communication technology. Beyond just collaborative risk-driven intervention, there is an incredible opportunity for academics, practitioners, and government to further explore this emerging nexus of upstream human service delivery and technology.

CONFLICT OF INTEREST DISCLOSURES

The author of this article holds a business relationship with the Editor-in-Chief of this *Journal*. This paper represents a modified series of extracts from an original document released by Community Safety Knowledge Alliance (available at: http://www.cskacanada.ca/news/81-technology-enabled-hubs-in-remote-communities-final-report-released). See also Nilson (2017). *Collaborative risk-driven intervention: technology-enabled opportunities in rural and remote communities* (A Pilot Project Plan) Saskatoon, SK: Centre for Forensic Behavioural Science and Justice Studies-University of Saskatchewan/Community Safety Knowledge Alliance.

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What are we doing to protect newcomer youth in Canada, and help them succeed?

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ABSTRACT

Growing numbers of newcomers and refugees to Canada compel careful consideration to the risks they may be exposed to, including criminal involvement. This paper explores immigrant youths' exposure in their adopted country and the impacts of peer relationships affected by substance abuse, violence, and education in new cultural milieus.

Key Words   Immigration; refugee; substance abuse; acculturation; assimilation.

INTRODUCTION

Refugee and immigrant youth often struggle with multiple compounded challenges as they adapt to new cultural milieus, often with completely different social structures and new peer relationships. Their challenges are compounded by language barriers and resulting feelings of marginalization. At the same time, they must often struggle with the stresses of leaving behind their old environments, friends and perhaps families, and cultures. We can examine newcomer integration through a cultural lens because culture encompasses the spectrum of human interaction and societal rules. Avruch (1998) notes that there are 150 or more known definitions of culture. However, an overarching meaning, according to Avruch, is that culture is "a learned shared system of actions, meanings and practices, which are socially and psychologically distributed within a group, and is transmitted laterally and intergenerationally" (p. 17). This helps us frame a way of considering the differences that newcomer youth have to contend with as they move to new countries with unique cultures.

People immigrate to other countries for a variety of reasons, usually in search of a better life. Refugees differ from willing immigrants in that they are forced to seek refuge outside of their country, in order to escape war, or they are in need of protection under international law (MacKay & Tavares, 2005, p.7). Today, under United Nations (UN) Conventions, refugee status is conferred to individuals who are unable to return to their country of origin, "owing to a well-founded fear of persecution for reason of race, religion, nationality, membership in a particular social group or political opinion" (MacKay & Tavares, 2005, p.14). Refugees most often have to leave their home, old country and culture in a

hurry without bringing their possessions and any important documents, and without saying good-bye to family members. Their occupations and their children's education are likely interrupted. Immigrants, on the other hand, generally have the time to pack personal belongings, gather important documents, and say good-bye, planning to continue all aspects of their lives in their newly adopted country. So, there are some added elements of trauma in the refugee's experience.

There is an economic class of immigration who has "actively sought to settle in Canada including skilled workers, business immigrants and live-in caregivers" and this class makes up the largest portion of immigrants who come to Manitoba (MacKay & Tavares, 2005, p.14). Family class immigration involves family members who are already established in Canada as permanent residents or citizens, who are sponsoring their relatives entering the country. In doing so, they assume economic responsibility for their sponsored relatives. The different classes of refugee include "Government Assisted and Privately Sponsored Refugees, Refugees Landed in Canada, and Dependents Abroad" (MacKay & Tavares, 2005, p.14). Despite these definitions, an immigrant may actually have faced refugee experiences but may not qualify as a conventional refugee. Regardless of refugee or immigrant status, transplanted youth face a number of unique challenges, which are affected by the relationships they form in their new environments. Refugee and immigrant youth may be vulnerable to peer influences in their new environments as they struggle to separate themselves from their old cultural identities while trying to fit in and become socialized into a new culture and social environment. This paper explores some of the more unique components of culture and challenges that immigrant and refugee youth face. In particular, it explores immigrant youths' ability to interact with other

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children, and some aspects of peer relationship development in new cultural milieus.

Peer Relationships

A study by Dipietro and Mcgloin (2012) asked whether or to what extent refugee or immigrant youth are more susceptible to deviant peers and unsupervised socializing with peer relationships. This study incorporated previous research data and observed 1,799 Chicago youths within six cohorts aged 3, 6, 9, 12, 15, and 18 years old. Each subject was interviewed along with his or her primary caregivers up to three times over a five-year period. They concluded that coming into a new social world, these youth value peer acceptance and desire to conform to the normal behaviour. This could motivate them to engage with deviant behaviour, including violence and aggression.

Nonconformity to peer relationships and groups can result in exclusion and ridicule, an outcome teenagers want to avoid at all cost (Dipietro & Mcgloin, 2012). The study revealed that "spending time with peers in unstructured and unsupervised settings provides [youth] strong situational inducements toward deviant behavior." They further found that delinquency and violent behaviour increased in likelihood under the same circumstances. This confirms conventional parental wisdom about the importance of the friends we choose in our formative years. Refugee or immigrant youth often have added pressures in that they take on adult responsibilities in order to help their parents who may have a language barrier and other transitional challenges; this can limit the youths' opportunities to interact and establish peer relationships. Parents of refugee or immigrant youth may constrain their children from interacting or establishing peer relationships in attempt to preserve their old cultural values and beliefs in their newly adopted cultures. This can create conflicting ideals that affect the youth's social identity among peers. The study by Dipietro and Mcgloin found that immigrant youth may feel greater pressure to fit in, and therefore are at greater risk of conforming to bad behaviour if they fall in with people who are a bad influence.

People operate in multiple social environments. For example, "every person operates in numerous cultural groups, some of which are more significant than others at varied times. The cultures in a person's family, between their friends, in their neighbourhood, their region, their country or even their race, all take on varied significance" (R. Chrismas, Culture and conflict: Cross-cultural perspectives; unpublished paper, University of Manitoba, 2013, p. 4). So, it is important not to homogenize immigrant youth or attempt to look at them as being influenced by only one dimension, such as which friends they choose to spend time with. Their family background and environment, the community they are moving from and into, and the school or workplaces they may be engaged in are all significant influences, as well.

Violence and Aggression

Dipietro and Mcgloin (2012) conclude that peer relationships are the first attempt of refugee and immigrant youth to define their identity outside of their family, a significant milestone for youth as they are integrating and socializing into a new culture and a new social world. Adolescents experiment with the 'self', and new behaviours and peer relationships, provide

context for a developing sense of belonging in their newly adopted culture (Dipietro and Mcgloin, 2012). Defining their identity and seeking a place in a new social milieu, these youth are more susceptible to conform to peer pressure, which might include violence and aggression, depending on what type of friends they fall in with. This again resonates with conventional parental wisdom about the importance of the friends one chooses, especially in the formative teenage years.

Rossiter and Rossiter (2009) explain that other risk factors for violence and aggression may include family, peer, school, and community supports. They found that adolescents who are marginalized may also become alienated and are at higher risk of becoming involved with the criminal justice system. They also stress that visible minorities and immigrants are often depicted in the media as being highly involved in crime. A majority of youth gang members are from visible minorities (about 82%), are male, and join gangs as young as 13 to 15 years of age (Rossiter & Rossiter, 2009, p.2). The authors also explain that these young individuals most commonly engage in criminal activities such as drug dealing, property crimes, assault, sexual assault, and homicide.

Substance Abuse

Research has examined the extent to which identification of one's culture, peer relationships, and coping behaviours affects substance use among refugee or immigrant youth. Lim, Stormshak, & Falkenstein (2011) assessed psychosocial adjustment to new cultures and correlations with substance abuse among immigrant and refugee youth. In this study, the authors located 102 Cambodian and Vietnamese immigrants, 12–18 years old, adolescent youth, 58 being girls and 44 being boys, in churches, youth groups, and community resource centres in the United States.

They identified four important factors related to substance abuse among these transplanted Cambodian and Vietnamese youth, including: (1) youth cultural identity level, (2) deviant peer association, (3) coping behaviours, (4) and substance use. They explained, "hierarchical multiple regression was used to assess, first, whether being involved in deviant peer association was related to substance use, and, second, whether cultural identification moderated the relationship between deviant peer association and substance use" (Lim et al., 2011). They discovered a relationship between cultural identity, deviant peer association, and substance abuse among the study participants. They found that when identification is high with the culture of origin, substance abuse is lessoned even when they have chosen deviant peers. This shows that a refugee's or immigrant's culture of origin can serve to protect them from the development of substance abuse behaviour. Lim and colleagues found that the influence of deviant peer association and substance abuse may lessen with age.

Education

According to MacKay and Tavares (2005), a lack of appropriate and specialized programming for adolescent and young adult learners with English as a second language (ESL) needs, especially those from war-affected areas and interrupted schooling backgrounds, exacerbates socio-emotional and learning challenges. In this study, surveys were sent to

school principals of schools teaching grades seven to twelve, Adult Learning and Literacy Centres. The authors report that the survey questions explored programming and supports, success and challenges, and what programming is further needed for these students. They found that a lack of programming often leads to falling out of the school system and limits the long-term educational and life opportunities of these challenged immigrant learners (MacKay and Tavares, 2005). The authors further explain that the stress and frustration that such learners experience tend to exacerbate the challenges they face integrating into a new society and educational system, thereby contributing to the development of a sense of hopelessness. This finding also resonates with conventional wisdom and common sense, as one would expect newcomers to experience these challenges. It confirms and emphasizes that we, as a society, need to provide resources for immigrant and refugee youth in order to help them succeed.

Some research has examined the pressures that newcomer youth face. Kanu (2008), for example, interviewed refugee youth and many said that they had friends who had succumbed to pressures to drop out of school and join street gangs. Kanu describes in the following passage how the allure of street gangs is too much for many immigrant youth to resist. While the findings are based upon anecdotal accounts, they provide us with important insights into the challenges that newcomers face.

"Despite the academic, economic, and psychosocial challenges faced by the African refugee students in this study, none of them was considering dropping out of school before completing high school. Many of them knew African refugee students who had dropped out because of the "easy money" from gang and drug activities and prostitution, and were now in jail. Without significant help at the levels of both the micro and macro systems, these dropouts are likely to fall into Portes and Zhou's (1993) downward spiral resulting in assimilation into an inner-city underclass" (2008, p. 934).

This social organization that challenges and oppresses youth is an example of structural or invisible violence defined by Galtung (1996), when he first described how social structures can marginalize and disempower certain groups. MacKay and Tavares (2005) concluded from their research that, out of 690 public schools in Manitoba, 400 of them have adolescents that use English as a second language (p.33). In Manitoba, 202,164 adolescents were reported to be enrolled in school systems from kindergarten to grade twelve, and 6,174 adolescents are eligible for ESL support grants (MacKay & Tavares, 2005, p.33). At the time of their research, school aged newcomers, including refugees, comprised 50% of all immigrant newcomers to Manitoba (MacKay & Tavares, 2005, p.33). These statistics are 13 years old, and the massive influx of immigrants has been news headline for much of 2017, indicating that there needs to be further research of this topic. Now, in 2017, Canada has 300,000 new permanent residents each year (Canadian Council for Refugees). It has also been found that a majority of school aged newcomers have significant challenges due to ESL. For example, MacKay and Tavares (2005) state, "The majority of learners identified as presenting significant challenges were those that had ESL needs and interrupted learning, followed by those with ESL needs but without interrupted learning" (p.33).

Several issues can result from adolescents integrating into new schools, including:

"Family struggles to support children in school, literacy issues, poverty, cultural differences and unfamiliarity with the new environment, family stress, trauma from moving and resettlement, students confidence challenged, racism, lack of role models, bicultural, marginalization, slower pace of learning, curriculum and resources may be culturally ethnocentric, teachers lack resources and support to be culturally aware and competent, inadequate support for English as a second language (ESL), separation from family and lack of academic support at home, fear and distrust of authority figures, fast-paced curriculum, acculturation stress and limited human resources for ESL" (MacKay & Tavares, 2005, p.40).

Given the complex learning needs that refugee and immigrant students may have, only 25% of schools in Manitoba that reported having refugee students also report having a formal process for screening and identifying refugee learners and their needs (MacKay and Tavares, 2005, p.40). The remaining 75% of schools in Manitoba indicated having no formal process for screening and identifying refugee learners. It is important to note that schools in Manitoba are not required to screen students for refugee backgrounds or war-affected and disrupted schooling experiences. Learning issues that arise after entry into new schools tend to lead to the identification of refugee or immigrant status (MacKay & Tavares, 2005, p. 40). However, Kanu (2008) explains that immigrant and refugee adolescents can find a sense of belonging within school settings.

SUMMARY

Refugee and immigrant youth want to fit into and be accepted into their new social worlds; they do not want to be seen as different or strange (Kanu, 2008). To "build hope" for refugee and immigrant learners and their families it is critical that schools address their needs more effectively by developing specialized programming and interventions (MacKay & Tavares, 2005). Experiences in Manitoba and in other jurisdictions suggest that intensive integrated ESL, literacy, and academic preparation, together with career and socio-emotional supports, can be effective (MacKay and Tavares, 2005).

Existing literature suggests that "newcomer" programs (United States), "bridging" programs (Australia), English language development and literacy programs (Canada), and transitional programs and high school-adult programs (Canada) can be quite effective (MacKay & Tavares, 2005, p.3). Lim et al. (2011) previously found that refugees or immigrant youth have agency and that their choices over acculturation or assimilation are affected by how strongly they identify with their family and the values of their culture of origin. It affects what Lim and colleagues termed "acculturation", in which individuals find a balance between identification with both their culture of origin and their newly adopted one. The authors also reported that "deviant peer association was

connected with substance use, but identification with culture and coping skills buffered this relationship."

When integrating into new social milieus, immigrant youth generally value being accepted by their peers, and desire to conform to the normal behaviour, which, unfortunately, can include delinquency, violence, and substance abuse if that is normal in the group of friends they happen to fall in with. Berk and Meyers (2016) conclude that these factors are "found less among immigrant youth than peers of the same age groups that are incumbent in the communities they are moving into". This highlights that a refugee or immigrant's culture of origin can play an important role in protecting them from the development of risk behaviour. If a refugee or immigrant youth has low English proficiency, they may experience more difficulty integrating into a new culture.

Immigrant youth may experience more racial and ethnic prejudices and tensions between their family and the new culture they are seeking to join. According to Berk and Meyers (2016), immigrant or refugee youth do eventually become adapted into the new social world and culture, and gain cohesion of family and community. While immigrant youth face many challenges entering Canada, there are many opportunities for Canadian society to adapt and provide the supports these youth need to be successful, happy, and productive. By being sensitive to immigrant youths' needs and placing resources intelligently in order to reduce these challenges, we can ensure that everybody wins.

CONFLICT OF INTEREST DISCLOSURES
The authors declare that they have no conflicts of interest.

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Effectiveness of the Dedicated Substance Abuse Treatment Unit in the Regina Correctional Centre: A seven-year retrospective analysis

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ABSTRACT

The Dedicated Substance Abuse Treatment Unit (DSATU) is a specialized unit at the Regina Correctional Centre (RCC) that began providing comprehensive in-patient addiction treatment to male sentenced offenders in 2008. The purpose of this paper is to report on the seven-year retrospective evaluation of the effectiveness of the DSATU. The study consisted of a retrospective analysis of the case files of DSATU participants (2008-09 to 2014-15 fiscal years; n=755) and a retrospective, case-control analysis of DSATU program data and Corrections' Case Management Information System (CMIS) data from the Ministry of Justice. DSATU data spanned from 2008-2014, while CMIS data spanned from 2007-2015 (comparator group n = 535). The effectiveness of the DSATU was measured through Program Fidelity and Treatment Effectiveness, Changes in Institutional Misconduct upon completion of the program, and Changes in Contact with Correctional Services after leaving the correctional facility. Pre- and post-treatment measures of Treatment Effectiveness completed as part of the DSATU program were analyzed. Participants demonstrated statistically significant improvements in their knowledge, beliefs, attitudes, and skills in dealing with substance abuse issues. In the period of time between completing the DSATU program and their release from the RCC, DSATU participants had: a significantly lower rate of Institutional Misconduct (disciplinary offenses) relative to the control group (25.3 vs. 45.8%); a significantly lower rate of re-contact with Correctional Services (recidivism) six months (17.3 vs. 26.4% for the control group) and 12 months (28.3 vs. 40.0%) post-release; and DSATU participants who came into contact with corrections post-release took longer to do so than those in the control group (251.0 days compared to 158.0 days). This study demonstrated that the DSATU program has been highly effective at reducing recidivism.

Key Words   Substance abuse treatment; offender rehabilitation; criminogenic needs; criminal recidivism; treatment outcomes.

INTRODUCTION

The relationship between crime and substance abuse is complex (Bahr, Masters, & Taylor, 2012; MacKenzie, Mitchell, & Wilson, 2011; Newsome & Cullen, 2017; Nordstrom & Williams, 2012). High rates of recidivism combined with a high frequency of substance abuse problems among offenders underscores the necessity of substance abuse treatment programs for incarcerated offenders (Belenko, Hiller, & Hamilton, 2013; MacKenzie et al., 2011). Research has shown that pro-criminal attitudes, impulsivity, risk taking, limited self-control, poor problem-solving skills, and lack of education are associated with substance abuse and recidivism (Prendergast, 2009). Addressing addictions issues in isolation is not an adequate, long-term solution for individuals with a history of criminal behaviour (Bahr, Harris, Strobell et al., 2012).

In 2007, a plan to integrate a standardized substance abuse treatment model within adult correctional facilities in Saskatchewan (SK) was initiated, and in 2008 the Dedicated Substance Abuse Treatment Unit (DSATU) became operational. The DSATU is a specialized unit that provides comprehensive in-patient addiction treatment for high-risk male offenders at the Regina Correctional Centre (RCC). The program is a partnership between the SK Ministry of Justice, Corrections and Policing (CP), the Regina Qu'Appelle Health Region (RQHR), and the SK Ministry of Health. This paper shares findings from a larger evaluation that examined the effectiveness of the DSATU.

Program Description

The goals of the DSATU program are to improve access to substance abuse treatment for high-risk, high-need inmates

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sentenced to custody. The DSATU provides a five-week treatment program for up to 20 inmates at a time, with an annual intake of approximately 120 inmates. In addition to the addiction treatment, inmates participate in cultural and life skills programming to enhance treatment outcomes. The curriculum reflects the conceptual models of Cognitive Behavioural Therapy (Marlatt & Donovan, 2005), Motivational Interviewing (Miller & Rollnick, 1991), and Criminal Lifestyles Training (Armstrong, 1996). The DSATU program adheres to best practices and research outlined by Health Canada (1999), Correctional Services Canada, and the Canadian Centre on Substance Abuse, and is integrated with the principles of Core Correctional Practice (Andrews, 2001; Andrews & Bonta, 2006; Andrews & Kiessling, 1980; Bonta & Andrews, 2007; Dowden & Andrews, 2004; Gornik, 2001; Tellier & Serin, 2001). Additional details regarding the treatment program have been previously reported (Paluck, McCarron, Pandey et al., 2017).

Study Questions

The goal of this study was to evaluate the effectiveness of the DSATU program by addressing the following questions:

1. Does the DSATU screening and referral process identify suitable participants?
2. Does the treatment program positively impact participant knowledge, beliefs, and attitudes pertaining to substance abuse?
3. Upon completion of the treatment program, do participants demonstrate more positive institutional behaviours?
4. Upon release from the correctional centre, do DSATU participants have decreased contact with correctional services?

Study Design

Program fidelity pertains to the consistent delivery of the program according to the intended plan. A comprehensive evaluation and monitoring infrastructure is required to ensure that the program does not begin to drift from its original principles (Bechtel & Pierce, 2011; ODRC, 2008). To that end, a logic model developed by the DSATU Evaluation Sub-Committee prior to the program's implementation served as the framework for the study described in this paper. In addition to the methods described herein, the complete evaluation included a systematic literature review examining the effectiveness of similar substance abuse treatment programs, a literature review of best practices in the field, and online surveys and interviews with program participants, staff, and stakeholders to explore program acceptability (McCarron, Pandey, Paluck et al., 2016).

METHODS

A retrospective analysis of the case files of DSATU participants (2008–09 to 2014–15 fiscal years) and a case-control analysis of DSATU program data and Corrections' Case Management Information System (CMIS) data from the Ministry of Justice (2007–2015) were conducted.

The CMIS and DSATU databases were linked by Offender ID and time of DSATU participation (for the treatment group) or DSATU screening results (for the control group). A database generated from the linkage of CMIS and DSATU databases was used for all analyses. The linked database included: most serious offense (MSO), aggregate codes and times, drug-related offenses, risk score/category, involvement periods, and time of DSATU participation (for the treatment group) or DSATU screening (for the control group). The study received approval from the Research Ethics Board of the Regina Qu'Appelle Health Region (REB-15-54).

The effectiveness of the DSATU program was measured in three areas:

1. Program Fidelity and Treatment Effectiveness
   a) Fidelity of the program screening and assessment process;
   b) Completion rate of DSATU participants; and
   c) Changes in participants' criminogenic thinking as well as knowledge, beliefs, and attitudes toward substance abuse and addiction.
2. Changes in Institutional Misconduct upon Completion of the Program
   a) Number of disciplinary actions and rates of institutional misconduct.
3. Changes in Contact with Correctional Services after Leaving the Correctional Facility
   a) Rates of re-contact with correctional services at 6, 12, and 24 months post-release;
   b) Severity of offences resulting in re-contact;
   c) Time to re-contact; and
   d) Frequency of re-contact with correctional services after leaving the RCC.

Definition of Study Variables

Institutional misconducts are infractions of the institutions' rules such as a serious breach of security, violence, harm to the safety or well-being of others, or the repetitive violation of the rules that have been reviewed by the Assistant Deputy Director Operations and referred to the appropriate discipline panel for a hearing. It was calculated as a dichotomous (yes/no) variable.

Re-contact with correctional services is defined as the occurrence of any new legal status where the offender returned to the supervision of Saskatchewan Correctional Services (SCS) following release from RCC. This includes remand, provincial and custody sentences, probation and conditional sentences, and bail and undertakings, but does not include the writing of reports for the courts such as pre-sentence reports. It was calculated as a dichotomous (yes/no) variable at 6, 12, and 24 months.

The *time to re-contact* is the amount of time that elapsed between the DSATU participants' and control group members' release from RCC and their subsequent contact with SCS. For participants who did not have contact with SCS, the end of the data collection period (October 27th, 2015) was used to define the release period.

The *severity of re-contact* was determined by the MSO related to subsequent contact with SCS. The Canadian Centre of Justice Statistics, Statistics Canada, in collaboration with its justice-related partners, has established an index to measure the overall seriousness of crime. The index ranks the severity of police-reported crime and covers all Criminal Code

violations, including traffic as well as drug violations and violations of all federal statutes (Johnson, 2005).

The *type of legal status* on re-contact identifies the official intervention that is responsible for the subsequent re-contact with corrections. It provides another indication of the seriousness of the criminal behaviour committed by the offender post-release.

Frequency of re-contact is the number of subsequent contacts DSATU participants and control group members have with SCS within the 12 months following their release from custody.

Measures

Screening and Assessment Tools

The provision of high intensity treatment programming should be prioritized to inmates who have the highest risk to re-offend (Bahr et al., 2012; Bechtel & Pierce, 2011; Bogue et al., 2004; Latessa, 2012; Serin, 2005). Matching the intensity and duration of treatment to an offender's degree of risk produces the most effective outcome at the lowest cost (ASCA, 2009; Kopak, Hoffmann, & Proctor, 2016). Thus, the screening and assessment phases are critical components to a program. Screening is considered to be the initial activity that identifies offenders with addiction problems and potential to re-offend (criminogenic risk factors), while assessment is the process that helps determine the extent of an individual's problem with alcohol and other drugs and the appropriate level of treatment. Screening is a one-time process, whereas assessment should be ongoing throughout treatment (ASCA, 2009; Pearce & Holbrook, 2002).

In addition to the institutional screening process for criminogenic risk, the DSATU utilizes an additional four screening tools and an assessment interview to determine addiction severity (treatment need) and treatment readiness (Table I). Eligible candidates are then further screened by DSATU program staff, by considering offender age, level of literacy, severity of mental health and/or behavioural issues, and compatibility with other participants. The tools are briefly described below.

The Primary Risk Assessment Tool (PRA) is a component of the Offender Risk Assessment Management System (ORAMS) and is used to determine the risk to reoffend (i.e., criminogenic risk). It is administered to all sentenced inmates upon entrance into the RCC. The 15-item assessment measure was modeled after the principles of risk, need, and responsivity (Patrick, Orton & Wormith, 2013). By considering both static and dynamic risk factors, the PRA is able to predict general recidivism in adult offenders. Criminogenic risk levels (i.e., low, medium, high) are assigned to each offender based on their numerical score (Patrick et al., 2013).

The Alcohol Use Questionnaire (previously known as the Alcohol Dependence Severity questionnaire or ADS) is a clinical tool for measuring the severity of alcohol dependence and assessing inmates with alcohol problems. It consists of 25 items that are designed to tap into the alcohol dependence syndrome (Edwards & Gross, 1976). The term "alcohol dependence syndrome" is part of the original description of the ADS, but this term is no longer in use. The ADS provides a measure of the extent to which the use of alcohol has progressed from psychological involvement to impaired control. This case classification system is supported by previous research, using the aforementioned scale (Skinner & Horn, 1984). The ADS references the "12-month period prior to arrest" in establishing a severity level.

The Drug Use Questionnaire (DAST 20) was modelled after the Michigan Alcoholism Screening Test (MAST), but is used to assess the severity of problems associated with drug use. Quantitative severity levels of none (0), low (1–5), moderate (6–10), substantial (11–15), and severe (16–20) are based on normative data for the scale (Robinson, Porporino & Millson, 1991). The DAST 20 includes items concerning frequency of use, symptoms of dependence, extent of drug-related interference, feelings of guilt, and prior treatment (Boland, Henderson & Baker, 1998). The DAST also references the "12-month period prior to arrest" in establishing the severity of drug abuse.

The Problems Related to Drinking Scale (PRD) was derived from the MAST. This 15-item scale quantifies the number of problems related to alcohol use. The PRD score is divided into four levels: no substantive alcohol problems (score of 0), some problems (1–3), quite a few problems (4–6), and a lot of alcohol problems (7–15) (Kunic & Grant, 2006).

TABLE I DSATU program screening and outcome measurement tools

Tool	Pre-Screening	Screening	Pre-Treatment	Post-Treatment
Primary Risk Assessment Tool (PRA)	•			
Alcohol Dependence Severity (ADS)		•		
Drug Use Questionnaire (DAST 20)		•		
Problems Related to Drinking Questionnaire (PRD)		•		
Treatment Readiness Inventory (TRI)		•		
Assessment Interview		•		
Beliefs & Attitudes about Substance Abuse (BASA)			•	•
Craving Belief Questionnaire (CBQ)			•	•
Coping Behaviours Inventory (CBI)			•	•
Drug Avoidance Self-Efficacy Scale (DASES)			•	•
Transtheoretical Model of Behavioural Change			•	•
Program Satisfaction Questionnaire				•

The Treatment Readiness Inventory (TRI) (Serin & Kennedy, 1997) outlines the relative readiness of an inmate to attend a treatment program based on five domains: denial ("I do not have a problem with drinking/drug use"), awareness ("I know I drink/use too much"), resistance ("I do not want anyone telling me what to do about my drinking/using"), acceptance ("People can help me with my drinking/using problems"), and readiness ("I need help now for my drinking/using problems"). The TRI scoring is divided into five levels: non-readiness (0–1.9), low readiness (2–2.8), moderate readiness (3–5.5), positive readiness (6–10), and high readiness (11–15) indicating an excellent prospect who would complete treatment and do very well.

DSATU staff conduct an assessment interview with potential program participants using a 110-item interview guide. The interview gathers information regarding demographic, psychosocial, and situational variables that are used to identify participants who will be a suitable fit for the program and are pertinent to tailoring each participant's treatment plan.

Measures of Treatment Effectiveness

The DSATU program uses five measures to monitor treatment effectiveness (Table 1). Four measures are administered to program participants within the first week of treatment and again during the last week of treatment. The fifth instrument, a participant satisfaction questionnaire, is administered upon completion of the program.

The Beliefs and Attitudes about Substance Abuse (BASA) Inventory measures many of the commonly-held beliefs about drug and alcohol use. Responses are provided on a 9-point Likert-type scale ranging from completely disagree (1) to completely agree (9). A decrease in the total score on this scale is indicative of improvement (Grant, Kunic, MacPherson et al., 2003).

The Craving Belief Questionnaire (CBQ) measures beliefs about the craving phenomenon. The questions are answered on a 7-point Likert-type scale with responses ranging from totally disagree (1) to totally agree (7). A reduction in the score on this scale indicates improvement (Grant et al., 2003).

The Coping Behaviours Inventory (CBI) was designed to assess the behaviours and thoughts used by alcohol-dependent individuals to prevent, avoid, or control the resumption of heavy drinking. The respondent indicates how often he/she uses each coping behaviour in order to avoid relapse. Frequency of use is rated on a four-point scale from 0 (I have usually tried this) to 3 (I have never tried this) (Litman, Stapleton, Oppenheim et al., 1983).

The Drug Avoidance Self-Efficacy Scale (DASES) was developed to assess offenders' self-efficacy in coping with risky situations without the use of drugs. DASES is useful as an outcome measure because scores on the scale have been shown to predict subsequent drug use (Martin, Wilkinson, & Poulos, 1995).

The DSATU program uses the Transtheoretical Model of Behavioural Change to assess participants' readiness for change along a continuum. The Transtheoretical Model of Behavioural Change is a theoretical framework that describes behavioural change as a process of five stages that individuals must work through (Pre-Contemplation, Contemplation, Preparation, Action, and Maintenance) (Prochaska & DiClemente, 1983).

As part of the program's quality assurance process, a Participant Satisfaction Questionnaire is completed by all program graduates. The questionnaire has three sections: Program Satisfaction, which consists of eight open-ended questions; Program Delivery, which consists of nine Likert-type questions; and Program Effectiveness, which consists of four Likert-type questions. Only the responses from the Program Effectiveness section of this questionnaire are reported in this paper.

Participants

DSATU Group: A total of 43 five-week sessions were conducted between 2008 and 2014, which represented 862 cases of participation in the program. Sixty-six individuals did not complete the program. Of the remaining 796 cases, 36 were from individuals who had completed DSATU program more than once. Only the data from their most recent program completion were retained. Thirteen additional cases were omitted because they were missing from either the DSATU or CMIS databases. Ultimately, this left 747 unique cases retained for analysis (Figure 1).

Control Group: Program staff screened an additional 553 inmates who were considered eligible for the treatment program based upon their criminogenic risk assessment (PRA score), but who did not go on to participate in the program. Of these 553 cases, 18 were missing from the CMIS database, leaving 535 valid cases for analysis. Reasons why control group members were not enrolled in the DSATU program are described in Table II.

DSATU participants and controls ranged in age from 18 to 76 years. On average, DSATU participants were slightly older than controls (M = 34.7 yrs, SD = 11.9 vs. M = 32.4, SD = 11.0), t (1198) = 3.565; p = 0.99, NS). The distribution of participants within their criminogenic risk categories (PRA) was not significantly different between DSATU and control groups (χ^2 = 3.124; p = 0.21; NS) (Table III). Therefore, it is reasonable to conclude that the DSATU and control groups were comparable in terms of age and criminogenic risk.
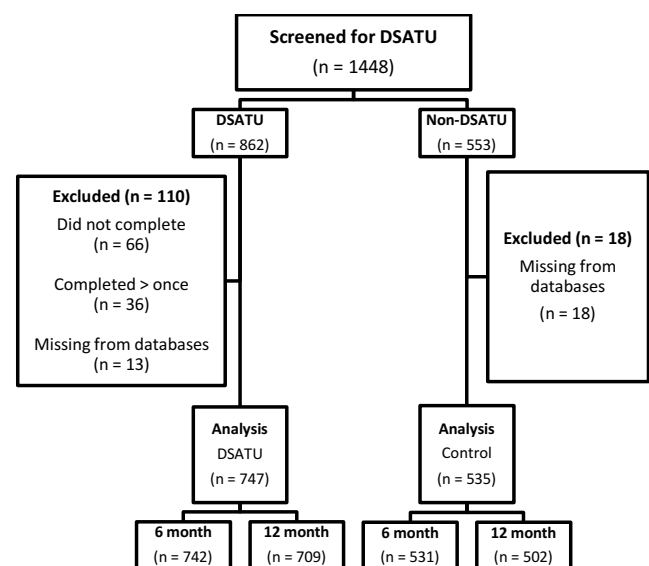
FIGURE 1 Inclusion/exclusion process for DSATU and control groups.

Statistical Analyses

Frequency data were used to determine the addiction treatment needs and readiness of participants admitted to the DSATU program, as measured by the screening tools. Paired samples t-tests were conducted to compare participants' pre- and post-treatment scores on all four measures. The Participant Satisfaction Questionnaire was analyzed descriptively. Changes in the frequency and severity of re-contact with corrections were also analyzed descriptively using frequencies, means and/or medians, as appropriate. A chi-square test was used to test difference in proportions of re-contact between the DSATU and control groups. Survival distributions were shown with a Kaplan-Meier survival curve to compare differences between the DSATU and control groups for time to re-contact following release from the RCC.

TABLE II Control group participants' reasons for not entering the DSATU

Reasons	Frequency	Percent
Excluded based on assessment tools (ADS, DAST, PRD & TRI) & clinical assessment	172	32.2
Declined treatment	142	26.5
Transferred to another facility or participated in another program	125	23.4
Behavioural or compatibility issues	60	11.2
Released prior to DSATU start date	21	3.9
No space	8	1.5
Other	7	1.3
Total	535	100.0

TABLE III Treatment and control group demographics

Demographics	DSATU (n = 747)	Controls (n = 535)
Age (years)		
≤19	5.8%	8.6%
20-29	33.3%	46.7%
30-39	29.7%	18.7%
40-49	20.2%	15.9%
50-59	9.7%	7.5%
≥60	1.3%	2.6%
Ethnicity		
Non-Aboriginal	33.3%	33.3%
Métis	7.2%	9.0%
Non-Status	3.1%	2.6%
Status	56.3%	54.4%
Unknown	0.1%	0.7%
Criminogenic Risk Category (PRA)		
Low Risk (1 to 5)	2.7%	4.5%
Medium Risk (6 to 11)	39.9%	38.6%
High Risk (12 to 21)	57.4%	56.9%

Cases were right censored if they did not have contact with corrections before the end of the study. The log-rank test was used to statistically compare the survival curves of the two treatment groups. Statistics were calculated using IBM SPSS® Statistics 22.0 (© IBM Corp., 2013).

RESULTS

Program Fidelity and Treatment Effectiveness

Screening and Assessment

Screening results from the PRD, ADS, and DAST 20 instruments reveal that the vast majority of DSATU participants (88.2%; n = 666) were classified as requiring a high intensity addiction treatment program (Figure 2). Results from the TRI were more variable. One third of participants (36.2%) were screened as having a positive or high level of treatment readiness (Figure 3), but 175 (23.1%) participants demonstrated low or no treatment readiness.

Completion rate of the DSATU Program

Over the seven-year period, a total of 66 participants either withdrew from the program or were removed from the
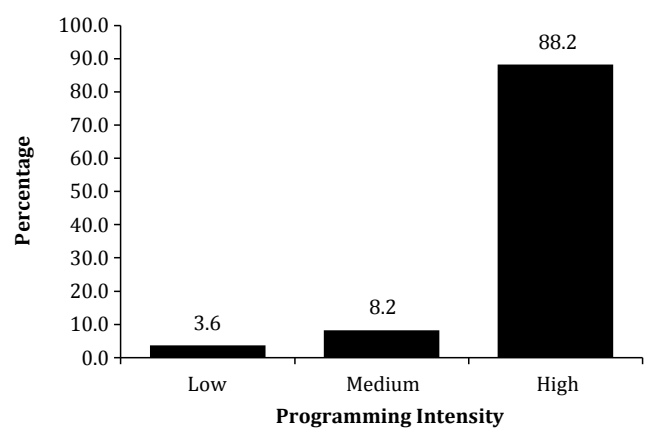
FIGURE 2 Recommended programming intensity for DSATU participants based upon screening and assessment process (N = 755).
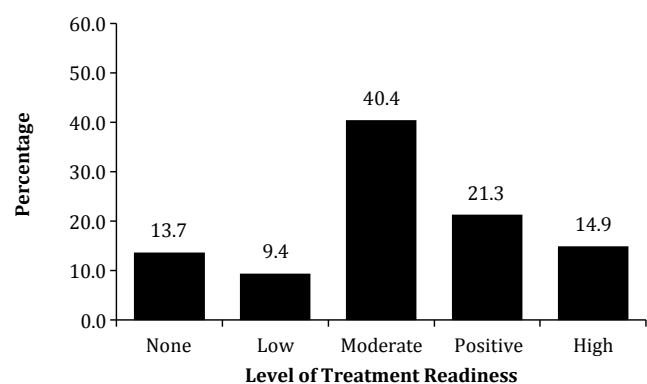
FIGURE 3 Number of participants in each level of treatment readiness, as measured using the TRI (N = 754; missing data = 1).

DSATU program, representing a completion rate of 92.3% (with yearly completion rates ranging from 88.7% to 95.7% over the seven-year period). The most common cause for removal from the DSATU program was behavioural issues (44 of the 66 incidents).
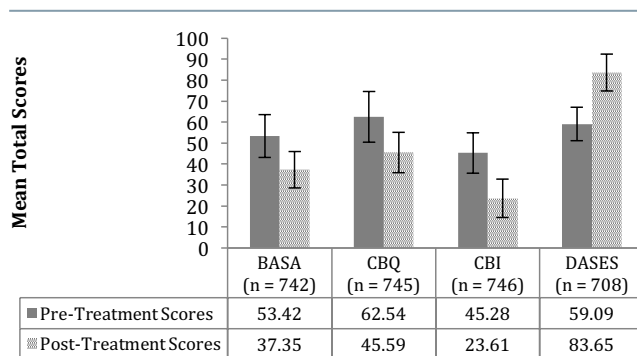
Participant Knowledge, Beliefs, and Attitudes

The pre- and post-treatment measures of treatment effectiveness were analyzed to determine whether participants showed improvement upon completion of the program (Figure 4).

Beliefs and Attitudes about Substance Abuse (BASA) Inventory: There was a significant decrease in BASA scores from pre-treatment (M = 53.42, SD = 20.49) to post-treatment (M = 37.35, SD = 17.23), t (741) = -20.14, $p < 0.001$ (two-tailed). The mean decrease in BASA scores was -16.07 (95% C.I.: -14.51, -17.94), which is indicative of a positive change in beliefs pertaining to substance use.

Craving Belief Questionnaire (CBQ): There was a statistically significant decrease in CBQ scores from pre-treatment (M = 62.54, SD = 24.10) compared to post-treatment (M = 45.59, SD = 19.22), t (744) = -18.83, $p < 0.001$ (two-tailed). The mean decrease in CBQ scores was -16.95 (95% C.I.: -15.18, -18.83). This decrease indicates that overall, participants hold more accurate beliefs about craving phenomena after they complete the DSATU program.

Coping Behaviours Inventory (CBI): The results show participants' ability to develop coping skills and strategies significantly improved as demonstrated through a reduction in participants' post-treatment CBI scores (M = 45.28, SD = 19.08) compared to their pre-treatment CBI scores (M = 23.61, SD = 18.31), t (745) = -26.24, $p < 0.001$ (two-tailed). The mean decrease in CBI scores was -21.68 (95% C.I.: -20.06, -23.30).

Drug Avoidance Self-Efficacy Scale (DASES): On average, participants' scores increased from pre-treatment (M = 59.09, SD = 16.07) to post-treatment (M = 83.65, SD = 17.68), t (707) = 29.10, $p < 0.001$ (two-tailed). The mean increase in DASES scores was 24.56 (95% C.I.: 22.91, 26.22). This increase indicates that self-efficacy is enhanced post-treatment, and that participants feel more confident in their ability to cope with situations that put them at risk of relapsing.

Transtheoretical Model of Behavioural Change: The assessment of an inmate's Stage of Change was not measured in the first seven sessions of DSATU programming. Thus, data were not available for 120 participants. The majority of program participants (n = 536) entered the treatment program in the contemplation stage. Of the 635 participants who had pre- and post-data available, it was established that 349 showed improvement by moving to the next stage of behavioural change (55.0%), 283 showed no change (44.6%), and three participants regressed a level (0.5%).

Participant Satisfaction

Perceived Program Effectiveness: Only 51.7% (n = 400) of program participants reported that they fully understood the concepts and techniques introduced throughout the program (Table IV). However, despite that potential limitation, 71.1% (n = 550) described the program overall as being very useful and 73.2% (n = 563) rated it as being excellent.

Changes in Institutional Behaviour

Institutional Misconducts: Upon completion of the DSATU program, participants spent an average of 90 days in the RCC prior to their release. This was used to define the period of interest for the analysis of disciplinary actions. The 90-day period just prior to release was also used for the control group. In the average span of 90 days prior to their release, there were a total of 434 incidents within the correctional centre by both DSATU participants (n = 189) and controls (n = 245) that resulted in sanctions by the RCC Disciplinary Panel. The ratio of offenses was significantly lower in DSATU participants than in controls (25.3% vs. 45.8%) ($\chi^2 = 58.76$; df(1): $p < 0.001$, two-tailed).

	BASA (n = 742)	CBQ (n = 745)	CBI (n = 746)	DASES (n = 708)
Pre-Treatment Scores	53.42	62.54	45.28	59.09
Post-Treatment Scores	37.35	45.59	23.61	83.65

FIGURE 4   Comparison of mean total pre- and post-measures of treatment effectiveness.

TABLE IV   Descriptive statistics of program effectiveness responses from the Program Satisfaction Questionnaire[a]

| Question	Program Effectiveness				
	1	2	3	4	5
1. Now that the program is over, how would you rate the overall usefulness of the program for you? (n = 774)	1 (0.1%)	6 (0.8%)	49 (6.3%)	168 (21.7%)	550 (71.1%)
2. Do you feel you are in a better position now to effectively deal with your substance abuse problem than you were before you started the program? (n=773)	0 (0.0%)	2 (0.3%)	32 (4.1%)	166 (21.0%)	573 (72.5%)
3. How well do you feel you were able to understand the concepts and techniques introduced throughout the program? (n=774)	3 (0.4%)	2 (0.3%)	96 (12.4%)	273 (35.2%)	400 (51.7%)
4. Overall, how would you rate this program? (n=769)	2 (0.3%)	7 (0.9%)	44 (5.7 %)	153 (19.9%)	563 (73.2%)

[a] The rating scale range is 1 (representing a negative response) to 5 (representing a positive response).

Changes in Contact with Correctional Services

Re-Contact Rate: Relative to the control group, DSATU participants had a statistically significant lower rate of re-contact at six months (9.1% lower rate, $\chi^2 = 15.48$; df(1); $p = 0.001$). This difference remained statistically significant at both 12 months (11.7% lower rate; $\chi^2 = 19.20$; df(1); $p < 0.001$) and 24 months (5.9% lower rate; $\chi^2 = 4.37$; df(1); $p = 0.04$; Figure 5).

Time to Re-Contact: The median number of days from when a DSATU graduate was released from the RCC until a re-contact with corrections occurred was 251 days (IQR = 85–418 days). This value was approximately three months (94 days) longer than the median number of days for control group participants (157 days; IQR = 22–293). The survival curve in Figure 6 shows delayed time to re-contact for the DSATU group compared to the control group up to 550 days post-release. One year survival Kaplan-Meier rate estimates of the DSATU group is 70.5% (95% CI = 67.2–73.9%) and is 57.8% (95% CI = 53.6–62.3%) for the control group. The log-rank test showed a statistically significant difference in survival curves between the two treatment groups as well, $\chi^2 = 11.6$; df(1); $p < 0.0001$. This illustrates that for those inmates who
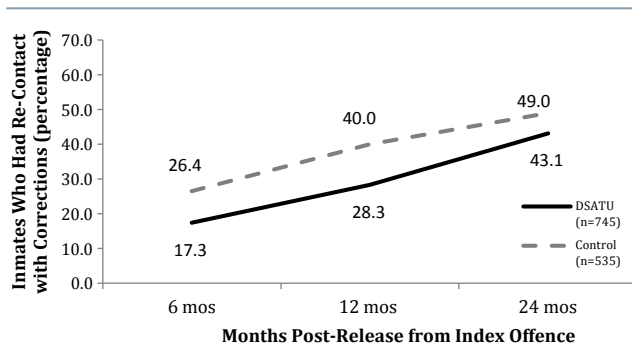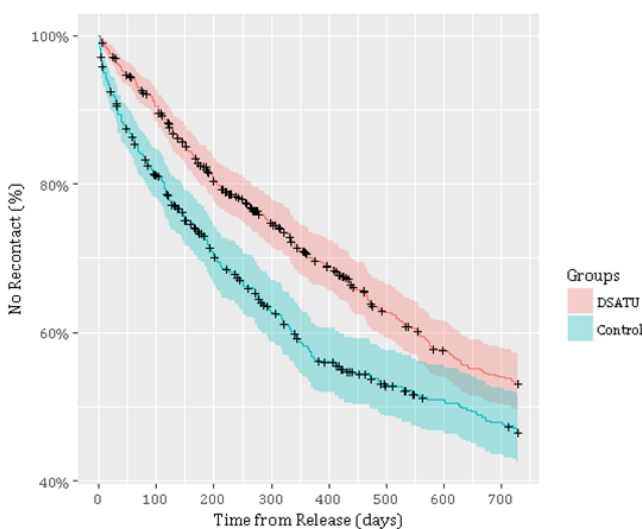
had re-contact with the Saskatchewan Corrections, DSATU participants remained in the community longer than the members of the control group before re-contact.

Severity of Re-contact: There were 424 individuals (DSATU n = 211, Controls n = 214) that became re-involved with corrections within 12 months of their release. Relative to their index offence, both the DSATU and control groups demonstrated an improvement in the crime severity ranking of their subsequent offence. The median seriousness ranking of the DSATU group's index offence was 98 and was 109 for their second offence. Control group participants had a median crime severity rating of 87 for their baseline offence and a rating of 108 on their second offence. Higher seriousness rankings reflect less serious offences.

Type of Legal Status on Re-Contact: For the DSATU and control group participants who had re-contact with corrections within 12 months post-release, the majority were placed on remand (DSATU = 148 and control = 134) (Table V). The differences between the legal status categories were not statistically significant ($\chi^2 = 7.368$; df(5); $p = 0.75$, NS).

Frequency of Re-contact: In the 12-month period following their release, 211 DSATU participants and 214 control group members had respective totals of 480 and 483 contacts with Saskatchewan Corrections. While the number of DSATU participants and the controls were similar, DSATU participants had slightly lower frequencies of re-contact during this period. A total of 141 (18.7%) of DSATU graduates and 128 (24.0%) of the controls had two or more contacts with Saskatchewan Corrections in their first 12 months following release; however, this difference was not statistically significant ($\chi^2 = 0.887$; df(2); $p = 0.64$, NS).

Limitations

This study was unable to determine the effectiveness of the DSATU at reducing relapse. As this utilized a retrospective study design, a reliable and valid way of establishing rates of relapse in program participants was not available. To achieve this would have required significant resources at the beginning of the program's implementation to prospectively follow participants and have them self-report (less rigorous) or chemically validate their abstinence.

DISCUSSION

There has been a considerable shift in the philosophy and management of correctional institutions over the past 40 years (Mackenzie et al., 2011). Incarceration was historically viewed

FIGURE 5 Rates of re-contact with Correctional Services within 6, 12, and 24 months after release from the Correctional Centre.

FIGURE 6 Kaplan-Meier curve for re-contact survival rates post institutional release for the DSATU and control groups. Cases that did not reconnect with corrections were censored.

TABLE V Type of legal status on re-contact (12 months post-release)

Legal Status	DSATU (n=211)	Control (n=214)
Federal Custody Sentence	1.4%	1.4%
Provincial Custody Sentence	15.2%	18.7%
Conditional Supervision	1.4%	3.7%
Remand	70.1%	62.6%
Probation	5.2%	9.8%
Intermittent Sentence	1.4%	0.0%
Bail	5.2%	3.7%

as a punitive measure, with an emphasis on segregating the offender from society resulting in the trend toward mass incarceration. However, this attitude has given way to an orientation toward correctional management that is grounded in the principles of rehabilitation and reintegration into the community. This philosophical shift paved the way for the introduction of a wide variety of vocational, educational, and behavioural treatment programs into correctional facilities.

This shift in philosophy resulted in an increase in the number of substance abuse treatment programs being offered. MacKenzie et al. (2011) observed that by the 1990s, approximately 94% of federal prisons and most state prisons in the United States provided substance abuse treatment. A similar increase in the number of correctional facility-based programs was also observed in Europe during this period (Kolind, Frank, & Dahl, 2010). Evaluation of such programs offered in the United States and other countries provides valuable insight into the effectiveness of these programs in reducing recidivism and relapse. However, in the early years, there was no consensus as to what the best practices were, and many of the programs lacked a solid theoretical, evidence-based foundation (Weekes & Thomas, 2004). Over time, the evidence base grew and a number of resources providing guidance on best practices and treatment guidelines became available (e.g., ASCA, 2009; Bechtel & Pierce, 2011; Bogue, Campbell, Clawson et al., 2004; Latessa, 2012; Pearce & Holbrook, 2002; Serin, 2005). However, research evaluating the effectiveness of these programs remained challenged due to weak study designs and a low uptake of evidence-based treatment models within facilities (Belenko et al., 2013).

In Canada, the results of a comprehensive evaluation of all federal treatment programs administered by Correctional Service of Canada (CSC) were released in 2009 (Nafekh, Allegri, Stys et al., 2009). Among the programs, the High Intensity National Substance Abuse Program for high risk/high need offenders was deemed to be cost-effective and instrumental in contributing to reductions in criminal behaviour post-release. There have been other evaluations of CSC substance abuse treatment programs (Delnef, 2001) providing similar evidence regarding treatment effectiveness. However, in 2015 when our efforts to formally evaluate the DSATU program got underway, we were unable to identify reports of treatment programs for high-risk, high-need male adult offenders in a provincial correctional facility (Pandey, McCarron, Paluck et al., 2016). Thus, the primary purpose of this paper was to share the findings of the DSATU evaluation and contribute to the searchable evidence in this area.

Best practices in corrections-based substance abuse treatment indicate that high-intensity programs such as the DSATU be reserved for inmates at the highest risk to re-offend, the reason being that providing high-intensity services to low-risk inmates can result in an increase in recidivism (Bechtel & Pierce, 2011; Bahr et al. 2012; Latessa, 2012). This study found that the majority of DSATU program participants were screened as being at medium- (39.9%) or high-risk (57.4%) to reoffend. The vast majority of these inmates (88%) were assessed by counsellors and recommended for a "high" intensity program based upon the severity of their addiction and readiness to receive treatment.

Our evaluation revealed that DSATU participants demonstrated statistically significant changes in their pre- and post-scores of knowledge, attitude, and behaviours. While the scientific literature provides no guidance on the amount of change that is required to achieve clinically significant results in terms of relapse prevention, a more recent study identified some preliminary support for an inverse relationship between the rates of re-contact and the amount of change in pre/post test scores (Simourd, Olver, & Brandenburg, 2016).

DSATU participants who came into contact with corrections post-release took longer to do so than those in the control group. It is difficult to compare the results of the DSATU to similar programs in other jurisdictions because the definition of 'recidivism' is inconsistent, and the weak study design of many published studies dilutes their generalizability (Belenko et al., 2013). The systematic review conducted as part of the full evaluation of the DSATU found that 26% of studies meeting our inclusion criteria were classified as "poor" or "low quality" and could not be considered (Pandey et al., 2016). Acknowledging this limitation, it appears that participation in the DSATU has an equal, if not greater impact on recidivism relative to other programs reported in the literature (Pandey et al., 2016). However, the absence of a pre-treatment phase and access to a structured aftercare component that addresses criminogenic risk factors (in addition to addiction issues) were two best practice guidelines (Latessa, 2012) that were not fulfilled by the DSATU program. The impact this has had on the DSATU's effectiveness is unknown.

Interestingly, the control group in this study also demonstrated improvements in many of the study variables we examined. It is possible that, while the improvements demonstrated by the DSATU reflect the impact of the high-intensity addictions treatment program, the improvements observed in the control group reflect the effectiveness of the core correctional practices and general programming considered to be standard work in Saskatchewan Corrections. The expansion of other evidence-based programming and treatments, which facilitates access for a greater number of offenders, is considered essential in attempting to reverse the effects of wide-scale incarceration (Taxman, Pattavina, & Caudy, 2014).

CONCLUSIONS

To the best of our knowledge, the Dedicated Substance Abuse Treatment Unit at the Regina Correctional Centre was the first of its kind in Canada when it was implemented in 2008. The results of this study validate those reported in the literature stating that multi-modal substance abuse treatment programs, targeted to the right participant, are effective at reducing re-contact with the correctional system. The partnership necessary to operationalize this program was innovative and the resulting program is effective, sustainable, and likely transferable to other correctional facilities wishing to offer this type of programming.

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Public trust in policing: A global search for the genetic code to inform policy and practice in Canada

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ABSTRACT

The Executive Global Studies Program is an experiential and research-driven learning model for succession-ready police leaders and related executives across Canada, operating since 2003. Its research themes for each cohort are assigned by the Canadian Association of Chiefs of Police (CACP). Nominees are each named and funded by their respective agencies with a view to informing domestic public policy and practice, while also providing a developmental framework for building global networks, shared geo-political awareness, and advanced executive competencies among the police leadership community. The program's tenth cohort completed a 15-country study on the subject of public trust in policing, and they recently presented their summarized research results to the CACP for consideration and action. In this paper, these results are summarized and discussed for their potential implications for policy, practice, and continuing study. The primary focus of these authors, all of whom are Global 2017 team members, is to trace and explain the qualitative research process applied by their full cohort as they uncovered and conceived what the team ultimately characterized as 'the genetic code of public trust', a new grounded theory meant to inform and guide those continuing policy and practice considerations in Canada and beyond.

Key Words   Policing; community relations; public trust; police legitimacy; community safety and well-being

INTRODUCTION

The trust of the public is extremely important to any model of policing that purports to be founded on democratic principles, and most notably, under Canada's long-expressed commitment to policing with the consent of the people. Simply put, in policing, perhaps more so than in any other public service, trust matters. Thus, the Canadian Association of Chiefs of Police (CACP) Board of Directors assigned public trust as a research project to be completed by the 2017 cohort in the CACP Executive Global Studies program. CACP Global Studies is a unique professional development program for executives from policing and related public safety and criminal justice agencies. The program spans over six months of intense study and collaboration, and it applies a research-driven and problem-based learning model. The 2017 cohort was challenged to examine public trust domestically and around the world, leading them to conduct field studies in 15 countries, ranging from environments where trust in the police was perceived to be very low, to those with enviable trust indicators on recognized scales of public opinion. The team also examined and considered information from the

United States and Canada, and the 20 members engaged in extensive discussions and debates on the elements of public trust, based upon their own experiences in 13 different Canadian agencies. The specific charge to the team from the CACP was as follows:

Measuring and Responding to New Dimensions of Public Trust & Confidence:
CACP Global 2017 will be challenged, through domestic and international studies, to isolate a new set of dimensions that will best define and/or influence public trust and confidence today and into the future, to produce new methods for more accurately measuring against those dimensions in Canadian communities, and where indicated, to propose new strategies for aligning our police policies and practices to meet evolving public expectations.

A full-team synthesis followed from preparatory domestic studies and multiple sub-team field studies around the globe. One thing discovered very clearly by the research team is that there are no universally accepted methodologies

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to measure or respond to trust, nor even any that could be deemed to be best practices. It seems societies everywhere are still grappling with this question (CACP Global, 2017a). Also learned by all sub-teams was that Canadian policing is very well respected and often envied around the world and, in this regard, Canada is doing many things right.

Yet to ensure public trust continues, the team's research results also argue strongly that there may be an urgent need for a re-orientation of Canadian thinking on matters of public trust. The results discussed below call for the application of new approaches taken together with our communities, and for continuous and more dynamic measurement of mutual trust informed by multiple perspectives, including those of diverse community members in each and every policing jurisdiction throughout the country.

METHODS

Research Model and Ethical Considerations
CACP Global Studies is built on an adult learning foundation that draws heavily on constructivist principles, and a design model that seeks to generate a transformative learning experience for its members (CACP 2006). For such to occur, the 'messy problem' that drives the experience must be one that is both genuine and urgent (Mezirow, 1991). At the same time, the bounded nature of the program limits the available time and resources available to each cohort. As a result, CACP Global Studies has favoured qualitative (QL) forms of research as the preferred vehicle for achieving the desired developmental outcomes. Three key aspects of QL research methods are particularly relevant here.

First, because in QL research the researchers and their personal knowledge and perspectives become an integral part of the research itself, the disciplines associated with bracketing and self-awareness can be valuable tools, important to the transformative impact of the experience (Neuman, 2006; Cresswell, 2009). As a result, much of the formative work behind the field studies is designed to elicit and examine pre-existing biases and assumptions among the members, all of whom have years of immersion in a policing culture and most of whom have held positions of increasing executive responsibility. The assistance of objective academic and practice-based research coaches and extensive literature reviews, guided the development of the research lens and helped to establish an appropriate ethical framework around the entire study (Lawrence, 2017; Maguire, 2017; Valcour, 2017; presentations to CACP Executive Global Studies Program, February 2017).

Secondly, the QL concepts of interpretive inquiry are often new to members of the Global Studies cohorts. This means that new skills need to be learned and practiced before embarking on worldwide field encounters. Global Studies obtained the cooperation of several representatives of locally diverse communities to provide both the necessary preparation and practice opportunities; these representatives were a powerful source of relevant domestic research on the topic, as well.

Thirdly, as is central to such forms of inquiry, a clear mental model needed to be formed and collectively understood, such that field data could be captured by all sub-teams with authenticity and later synthesized by the full team to reveal some level of grounded theory and/or other practical outcomes (Neuman, 2006).

During these initial efforts, achieving a common understanding of the assigned research theme proved to be more challenging than expected. After careful consideration, and based on inputs from academic and practical expert sources, it was determined that the assigned statement "public trust and confidence in the police" needed some refinement, with the team ultimately concluding that the term "confidence" is either a synonym or an antecedent of trust, and therefore was not required within their final research statement.

Following a detailed analysis of the subject matter, a concise research statement was fashioned by the team with the help of their research coaches, to provide consistency to the field research to be conducted by the five sub-teams, each of whom would travel to three countries to complete their studies among a range of interview subjects.

Global Studies 2017 Research Statement
Policing with consent requires mutual trust with the diverse communities we serve. CACP Global Studies 2017 will pursue an international comparative study to examine the relational and internal dimensions that influence public trust. Our goal is to identify measures and responses that will inform Canadian public policy and policing practices.

With the research statement firmly defined, the team further prepared to embark upon the field phase of the study equipped with common, guiding dimensions to assist in the framing of the studies and to shape the later synthesis of observations and data derived from across the five study teams. These dimensions were determined through extensive analysis of the literature and the other expert inputs made available to the team through their preparatory studies. Essentially, on the consensus of the team, these dimensions capture the trust-influencing factors that are operating to varying degrees in the full context that shape and guide policing and its relationship with the public and other state and non-state actors, in any national or local environment. See Appendix A for greater detail on the sub-elements that further inform each dimension.

Global Studies 2017 Research Dimensions
- Sociopolitical: social, economic, and political context that defines, shapes, and influences the demands made upon police
- Policing Framework: structure underlying the delivery of policing services and programs
- Information Management: discipline that directs, supports, and effectively and efficiently shares and manages data and metrics
- Engagement/Communication: clear, consistent messaging of pertinent information via a variety of methods; the interactions, behaviours, and relationships that encourage participation/ collaboration
- Professionalism & Competence: organizational values, specialized knowledge, attitudes, skills, and abilities associated with policing
- Accountability: responsibility for actions, outcomes, decisions, and policies

Literature Review

An extensive review of the extant trust literature was conducted to inform the team's understanding of (1) determinants of trust and overall trust levels across macro social institutions; and, (2) trust in policing and country-specific case studies. The following offers a brief summary, highlighting just some of the team's early findings in each of these streams of the research.

1. Trust in Public Institutions

Research has established that "trust underpins all human and institutional interactions" and without trust, policy-change and the delivery of service to citizens is compromised (Tonkiss, Passey, Fenton et al., 2000; Misztal, 1996). The determinants of trust with the public (Brecher & Flynn, 2002, Latusek & Olejniczak, 2016) have been conceptualized and operationalized differently across many sectors, including government (Blind, 2007; OECD, 2017), health care (Kalra, Unnikrishnan, & Baruah, 2017), and the military (Kasher, 2003) and the following common themes emerge as being key: communication, transparency, regulations/standards, accountability, and competence.

Studies show that trust in government has been declining since the mid-1960s in advanced democratic societies (Tonkiss et al., 1996). While the pattern and pace of this decline in trust varies across countries, political unrest, economic downturns, and corruption scandals have all identified as contributing factors to this decrease. The Edelman World Trust Barometer (Edelman Trust Barometer, 2017) tracks trust across four institutions: government, business, media, and non-governmental organizations (NGOs), and 2017 results showed significant declines in trust levels across these sectors. The erosion of trust was linked to continued globalization, economic downturn, erosion of values, and lack of leadership. Edelman offered the following advice to improve trust in the business sector, but it can be also be applied to other institutions:

> "… communicate frequently with honesty; take responsibility for actions; put people ahead of profit; act transparently and openly; and embrace ethical business practices (Edelman, 2017).

Trust is not a static concept, as it can erode and at times it can be lost. As such, a review of the rebuilding trust literature was also conducted. The findings revealed the importance of relationship building, communication, and leadership (Awan, 2014; Kalra et al., 2017). Edelman's (2017) research went a step further and suggested rebuilding trust was tantamount to restoring faith in the system and required organizations to "step outside of their traditional roles and work toward a new, more integrated operating model that puts people—and the addressing of their fears—at the center of everything they do". Consistent throughout all this literature is the theme that organizations must actively engage in actions and relationships that foster, sustain, and promote trust.

2. Trust in the Police

The police-specific literature establishes the concept of "trust" as fundamental to establishing stability, integrity, and the effective delivery of services (Boda, 2017). Goldsmith's (2005) extensive review of police-trust literature concluded police trust depends upon a range of factors both within and outside police control that are reflective of the Global Studies dimensions discussed above. The works of Tyler and others on police legitimacy and procedural justice also cut across and informed virtually every dimension in the study (Murphy, Mazerolle & Bennett, 2014; Sunshine & Tyler, 2003).

Research into Malaysia and Indonesia, in particular, revealed many linkages to the team's Sociopolitical and Accountability dimensions. Although research indicated there was low public trust in many of the South East Asian countries studied, there had been concerted efforts in these countries to improve public trust in police. The importance of accountability, human rights, and independence from government was very clear in the research, and later confirmed in the field studies. As one example, *Strengthening the Royal Malaysian Police by Enhancing Accountability* (Chan, 2016) also considered the power of the Inspector General of Police and the slew of controversial legislative instruments that afford that office a great deal of latitude in choosing when and how to apply the laws. "This paper argues for the establishment of the Independent Police Complaints and Misconduct Commission [IPCMC] to receive, investigate and recommend a course of action for complaints about the Royal Malaysian Police [RMP]". A follow-up paper in October 2017 advocated for the decentralization of the National Police. Organizations such as the Malaysian Bar and Human Rights Commission of Malaysia [SUHAKAM] also have expressed concerns in accountability and human rights with regards to policing in that country.

Academics have recently explored factors that shape perceptions of trust and police legitimacy in Spain (Bradford, Martin, García-Añón et al., 2016) and found relational and expressive factors in relationships (e.g., quality of police behaviours) are more important than instrumental factors (e.g., enforcing the laws) for establishing police trust. Recent reports indicated despite record level unemployment rates, the crime rate there remained relatively stable (OSAC, 2016). This finding, coupled with the high-corruption rates among government, politicians, and royalty (The Local es, 2017), culminated in Spain being an intriguing country for the team to explore the effects of the Socio-Political dimension on policing.

Europe-related research informed the understanding of societies with higher trust levels and potentially best practices in conceptualizing and measuring police trust. Most of the selected countries in Europe have a mix of national, regional, and local police systems that are similar in concept and construct to those in Canada. In addition, most have experienced many of the same factors of globalization as Canada is now recognizing, including human migration, technological advancement, global organized crime and terrorism, and changing economic and trade patterns (CACP Global, 2016).

The Scandinavian countries, in particular, feature prominently in the literature for their higher reported levels of public trust, although officials there were, later, open in their own observations that the reality of those mutual trust relationships are being increasingly strained due to social changes, on the one hand, and may indeed be over-stated by the currently available measurement regimes, on the other.

Defining the Scope and Executing the Field Studies

To add to the body of domestic and international knowledge the team had gained from the members' own backgrounds, from the team's literature review, and from many online and workshop-based deliberations, the team first tested their research model with members from the invited, domestic diverse community groups referenced above. These highly interactive discussions further developed the dimensions of trust, and helped the team to design specific field questions to later capture these attributes of trust in different global environments. These questions would later be applied in the field, through the conduct of interviews with a wide range of sources in each country selected for the study, including police, government, NGOs, local media, community activists, and members of the public at large. See Appendix B for a full outline of the common interview questions that guided the field studies of each sub-team.

The cohort also recognized that a collective understanding of policing in the United States as it pertains to public trust, and their access to rich sources of information through the International Association of Chiefs of Police (IACP) and other US collaborations, would also provide essential information for the overall study. Through many professional development opportunities and cross-border relations, the team was well positioned to include within the research an overarching appreciation of the dynamics of public trust—and public mistrust—in the police from a US perspective.

Determining the global study sample was greatly assisted through the cooperation of the Royal Canadian Mounted Police (RCMP) International Policing Division, and specifically, the network of Liaison Officers located in regions around the globe. Having settled on a low-trust to high-trust rationale from their earlier deliberations on their mental model, and based on such considerations as time, budget, and safety, the team ultimately selected a total of 15 countries, configured into five logical travel plans. Each of the field studies spanned a period of 12–14 days, and each included upwards of 20 individual and formal group interviews.

Based on all of their preparatory research steps described above, the five research groups selected the following countries, clustered along a scale as determined from the available data, from apparent low-trust to high-trust public perceptions about policing.

Team Indonesia selected Malaysia, Singapore, and Indonesia (low-trust environments). Although research indicated there is low public trust, there have been concerted efforts in these countries to improve public trust in police. In 2005, the Indonesia National Police introduced a gradual reform program. "Most Indonesians still have little faith in the National Police – even though increasing public trust was one of its main reform goals. This lack of trust stems from, among other things, bad behavior by officers and media exposure of inappropriate and at times illegal conduct by both the institution and its personnel" (Hidayat, 2016). In addition, NGOs such as IDEAS [Institute for Democracy and Economic Affairs] had conducted research and had made strong recommendations for the policing sector. In 2005, there was a Royal Commission to Enhance the Operation and Management of the Royal Malaysia Police. The research team hoped to measure the successes and the barriers to increasing public trust and determine what dimensions had the most impact.

Team South East Asia selected Hong Kong, Thailand, and Vietnam (low-trust environments). One large survey in Thailand was conducted for the study "The Relationships Between Police Performance and Public Confidence: A Case Study of Thailand" (Sahapattanaa & Cobkitb, 2016). The team was interested in comparing public trust across three countries, and analyzing the impact of the change in Hong Kong rule from the United Kingdom to the People's Republic of China. Vietnam represented the first fully communist regime to be visited by any Global Studies team since the program's inception in 2003.

Team Mediterranean selected Malta, Spain, and Gibraltar (medium-trust environments). Spain's stable police-trust results, despite economic and political turmoil, were of particular interest to the research team. By contrast, Malta and Gibraltar offered insight into unique, smaller jurisdictions. The expectation for Malta police has recently expanded to include crimes not typically investigated by police (e.g., domestic violence) and the team was interested in exploring the implications for police-community relations. Gibraltar reported considerable efforts in community and organizational engagement.

Team Europe selected Netherlands, Belgium, and Switzerland (high-trust environments). These countries ranked very high on public trust surveys, and the team wanted to determine which dimensions contributed to this high trust. In addition, Netherlands boasts some of the strongest relationships among police and the academic community, and this afforded the study team with opportunities to interact with others keenly interested and well informed in the research theme. In the case of Belgium, re-earning public trust has been a major focus since significant issues arose more than a decade ago. And in Switzerland, the team was interested to see how that country's restrictive stance on immigration may be affecting public perceptions and confidence.

Team Scandinavia selected Norway, Sweden, and Finland (highest-trust environments). The literature consistently supports a common impression that these nations enjoy some of the greatest harmony among police and an increasingly diverse social order, yet policing styles (e.g., armed vs. unarmed) and levels of diversity (e.g., Finland vs. Sweden) vary to a considerable degree. In addition, prior Global Studies cohorts have observed the deep and evident commitment in these countries to community engaged models of policing, and the team was interested in learning more about possible correlations to trust.

Across the 15 countries visited, over 50 formal meetings were held. These formal, hosted interviews included various police agencies and specific departments, other ministries, non-governmental organizations (NGO's), Ambassadors and High Commissioners and their staffs, local academics, and local or international media sources. Most were held at the various organizations' headquarters. Although the interview questions were structured in advance, in many cases the interviewees had prepared presentations and the researchers had to insert the consistent questions during conversation. At each meeting, a member of the research team took detailed notes and these were analyzed, themed, and documented almost daily. These field journal notes were also shared across all teams via the interactive forum provided within the Global Studies program.

Excellent qualitative information was also obtained from the many impromptu, unscheduled interviews with the public in every country studied, bringing the total number of interview sources to over 100. Teams interviewed taxi drivers, private drivers, business owners and workers, and individuals on buses, planes, and in local cafes.

Due to the narrative form of the data captured from all interviews, and a commitment to respondent and host-country confidentiality as set out in the team's research model, specific data are not shared outside of the program. Suffice to say that the researchers were challenged to distill meaning and insights from the notes and journals of all 20 members of the team, and this was accomplished through a sequence of sub-team presentations and full team discussions of the field data during workshops that followed their return to Canada. This process soon revealed many consistent observations when data were considered against the original dimensions and the interview framework. Evident patterns emerged where characteristics of the policing context, local police practices, and public perceptions of those practices were notable for their contributions to higher trust environments, and conversely, where low trust patterns were explained and supported by the interview data and other local source materials.

Several recurrent themes were captured in this process, using codes and categories built upon the dimensions identified earlier by the research team. Some of these would ultimately serve as the basis for practical recommendations for future consideration in Canada. Others went deeper to the core of public trust as a social construct.

Interpretive inquiry was applied in this study, a qualitative method that enables researchers to trace linkages in their narrative research findings to establish valid associations between human beliefs and exhibited behaviour, and to achieve 'thick' appreciations of lived experience (Neuman, 2006). To be truly insightful, such inquiries must get to "the sidestreets, backyards, and cabarets" (Welton, 1987, p. 66), as was done by all sub-teams in this study. Through such methods, interpretive researchers are able to delve deeply into the apparent attitudes and perceptions of people in order to induce meaningful new grounded theory about the nature of their experience (Neuman, 2006).

As a result, several of the deeper emerging themes began to take on a definitive new shape for the team and became recognized as recurrent underpinnings essential to trusted relationships. These themes led, in turn, to the team's conception and expression of a new grounded-theory model—a genetic code of public trust—as further described below.

RESULTS

"Trust arrives on foot but leaves on horseback"
– Johan Thorbecke, c1860

Research Findings and a Call-To-Action

The CACP Global Studies 2017 cohort was asked to define new measures of trust. Over the entire course of its research study, no definitive methods were uncovered other than the traditional public survey. Moreover, such surveys in wide use around the world vary mostly between 'public satisfaction' with the services delivered by police, and in rare cases, the perceived 'legitimacy' of the police. Very few actually target the issue of trust-in-the-police directly, and those that do are almost exclusive to Western Europe and Scandinavia (CACP Global, 2017a).

Thus, this research was unable to reveal a clear performance measurement methodology to demonstrate public trust in the police. And as such, neither can it confirm that public trust in the police within Canada is empirically heading either up or down. What it can confirm, based on a wide range of indicators, comparative global insights, and domestic observations, is that the Canadian policing community may indeed be at a crossroads as it pertains to public trust … and that it would be wise for policy makers and police leaders to take action. The research results introduce to the Canadian policing community what the study team has characterized as the "Genetic Code of Public Trust"— expressed as seven principles of trusting and trusted relationships in general, derived from the full team synthesis of data following the field studies, that are directly and most certainly applicable among police and the communities they serve (CACP Global, 2017a).

The researchers assert that these seven principles of trust presented below, and recently delivered to the CACP Board of Directors in a separate summary report, collectively embody that genetic code of public trust, and that they constitute a new theoretical model that may help to define the overarching values that Canadian policing must adopt if public trust in the police is to be sustained in Canada.

The Genetic Code of Public Trust in Policing

Trust is Fragile: Trust must be nurtured and can never be taken for granted. It requires a long-term investment, and it can erode quickly and suddenly.

Trust is Reciprocal: Trust goes both ways. Trust is always a two-way relationship, and the public's trust in the police will be affected by the degree to which police actively and visibly demonstrate trust (or mistrust) in each and every community they serve.

Trust Cannot be Aggregated: Each individual in every community matters. Public trust cannot be understood or measured as a collective score. And, trust in the police must be understood as distinct from all other institutions and sectors.

Trust Derives from Peel's Mission: Policing by consent is a Canadian foundation. We must recognize and exhibit that our role is to serve the Charter, with the Criminal Code as just one of many tools available to us. Trust occurs when our policing behaviours validate a community's hope that our interests and our mission will remain aligned with their goals and aspirations.

Trust Demands Validation: Trust cannot be measured in subjective isolation; evidence of trust (or mistrust) must be understood from multiple perspectives.

Trust Demands Transparency: Information must be open by default, and restricted only when there is a valid and openly-explained reason.

Trust Demands Accountability: Policing must be seen to celebrate, invite, and welcome public accountability in all its forms.

Embedding these principles into the codes of ethics for every police organization, and into the early training of every police officer and civilian member, may constitute a primary step to ensuring Canadian police services are truly fostering a culture that will build and sustain public trust. While certainly not easy, the team asserts that building trusted relationships with Canadians might be a lot less complicated than some may think (CACP Global, 2017a). Each serving police member has the ability to give effect to the above principles, and in fact, all of us in general have the necessary experience. As these principles came into focus during the research, the study team discovered that we all apply these methods in our daily lives and in our most important personal relationships.

As outlined below in the team's seven calls-to-action, also included in the final report to the CACP, the team believes that all police services individually and collectively across the country can also apply the principles in practical ways within a policing environment to elicit and sustain the trust of their public. Founded in the above noted principles, the team has recommended these practices to depict the trust-building steps that they believe police at all levels, from the individual to the local to the national, may elect to embrace and put into action (CACP Global, 2017a).

Trust Building Practices: A Call-to-Action for Canadian Policing

Note: The team's summary report to the CACP includes a Table that converts each of these 'calls-to-action' into greater detail, and shows examples of how each can be applied at the level of the individual police member (sworn or civilian); at the local or provincial police service; and at a national level of police leadership (CACP Global, 2017a).

Engage Each and Every Community: Community engagement is everyone's responsibility. It is not a program or simply an expressed philosophy, but it must be evident as our way of doing business. It is a core responsibility of all police officers and civilian staff members to ensure inclusion and engagement of all members of society in each diversely self-identified 'community' we serve. Every interaction must be recognized as an opportunity to build trust.

Relate Independently: Police must be seen as independent from government, other sectors, and politics. Police must remain impartial and focused on our core policing mandates. Police must take responsibility for their relationships with the communities they serve.

Embrace Accountability: Policing agencies must ensure 'visible' accountability in all aspects of service delivery and member conduct, via both internal and external processes. As the police, we are accountable to all Canadians in everything we do.

Professionalize Relentlessly: This calls for shared standards, as much as is attainable across all policing jurisdictions in Canada, and must include both our social skills and our technical competencies, in both our theoretical knowledge and in our practical application. The foundation of trust is established by the pursuit and daily evidence of a national level of professionalism, reflective of pan-Canadian community values and expectations.

Liberate Information: Accessibility and timeliness of information has become an expectation of the public. Withholding information will undermine trust. We must continue to learn what information is meaningful and most important to our communities. Our default position must be to liberate that information except where prohibited, and any such restrictions must be clearly and openly conveyed.

Employ a Mutual Trust Dashboard: All police services should strive to consistently develop and apply mixed method and community-engaged approaches to gain an accurate and continuing measure of trust. Services must work with their community to establish meaningful methods and measures, and proactively share outcomes on a frequent basis.

Celebrate Canadian Policing: All agencies and members must promote a positive Canadian policing identity that reflects the values of our communities, reinforces who we are and what we stand for, and conveys what the public should expect from their police. Public trust will only be achieved and sustained when every Canadian can recognize and believe us in this simple expression: "Canada … We Are YOUR police."

DISCUSSION

"To say we trust you means we believe you have the right intentions toward us and that you are competent to do what we trust you to do"
— Hardin, 2006

Implications for Public Policy and Practice

The CACP has always encouraged its Global Studies cohorts to be mindful of the highly practical and action-oriented nature of police culture in crafting their final deliverables. Thus, in adopting the genetic code language and related imagery that has shaped the team's primary research products (CACP Global, 2017b) (see Figure 1), the team hoped to distill some rather complex ideas into a framework that is elegantly simple in its expression. However, the team is also fully aware that there is a distinct difference between simple and easy. The recommended practices also outlined in the research results may indeed challenge the prevailing culture, attitudes, and day-to-day behaviours of police at every level of the system.

Police services and their governing boards, and even the Canadian Centre for Justice Statistics, remain heavily invested in the regular execution of public satisfaction surveys, even while efforts continue to better refine those instruments, albeit mostly from a police-centric lens to date.[1] Police Act legislation across Canada has paid scant attention to the issues of public trust, instead, to cite one provincial example, focusing adequacy requirements on requiring police services to develop a three-year business plan that establishes "quantitative and qualitative performance objectives and indicators relating to … (ii) community satisfaction

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[1]   Public Safety Canada and POLIS have recently initiated in a pilot study a set of questions designed to capture core indicators for public attitudes toward police.
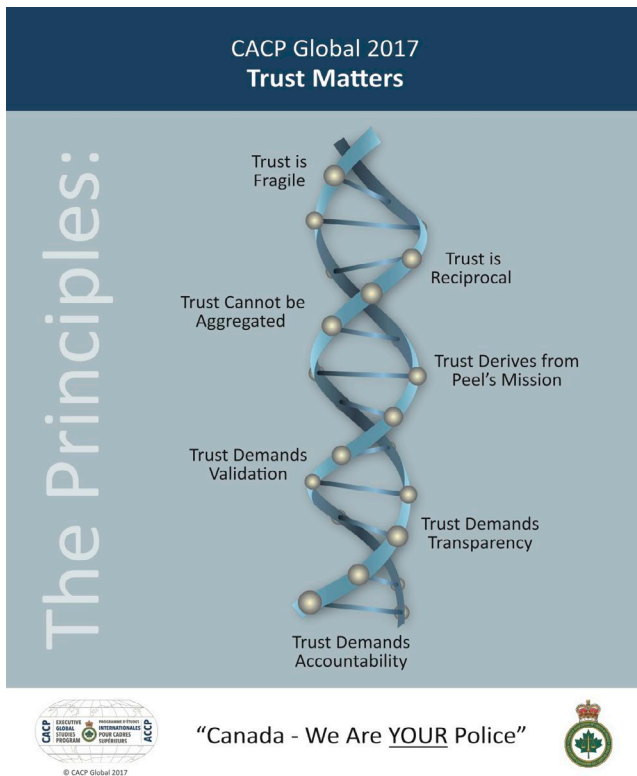
FIGURE 1   Genetic code of public trust principles

with police services" (Government of Ontario, 1999). The resulting tendency to aggregate, publish, and compare scores derived from these methods, in the view of the research team, may be an insufficient way to understand the levels of trust among select communities. Such a practice may also serve to insult and further marginalize those groups whose attitudes and aspirations are not fairly reflected in those positive, yet aggregated, satisfaction scores in the first place.

The Global Studies principles and practices amount to a call for a much more community-engaged approach, and one that is more qualitative than quantitative by design, anchored in rich, recurring, and meaningful conversations among community members and the police members who are there to serve their community safety and well-being (CSWB) needs. Such an approach could align nicely with other CSWB developments underway across Canada, in which police are increasingly adopting a greater balance between their enforcement and suppression roles, and their preventive and early intervention roles performed as just one part of a broader human services system (Hawkes, 2016; McFee & Taylor, 2014; Nilson, 2017).

With regard to metrics of public trust, the research team believes there is an opportunity to craft entirely new language and new models for this, with an emphasis on multiple measures, supported by diverse indicators, and derived mutually among shared community, police, and public policy perspectives.

With reference to their phrasing in one of their recommended practices, "Professionalize Relentlessly", the team is signaling that the only public trust that matters will be one that

is consistently earned and deserved. In other words, policing must continue and expand upon its broad-based commitments to evidence-based practices, and continue to raise its own internal bars with regard to both the technical and social competencies required to meet the needs of a modern, globalized, diverse, and technology-rich society (CACP Global, 2016). By reference to some of the higher-trust countries that formed part of these studies, Canadian policing remains comparatively more heavily rooted in a paramilitary model of recruit attraction, selection, and training (CACP Global, 2016, p10).

Finally, one of the greatest challenges any of us faces is to acquire the correct balance of confidence and humility necessary to both welcome and respond appropriately to being held accountable for our decisions and our actions. Police boards and governing authorities, in particular, will want to pay close attention to the team's recommendations in these areas, and to ensure that the initial responses by police services to questions, complaints, and information requests from the public—and from the institutional and social media—do not transmit a defensive and closed-system attitude.

Strengths, Limitations, and Future Research Directions

As noted from the outset of this paper, this research arose from a bounded program of study for executives and, as such, occurred within strict limits of time, resources, and scope. The Global 2017 team recognized these boundaries throughout and sought to position their results as a form of conversation starter, rather than as any sort of definitive closing argument. Success, they decided early on, would be reflected in the degree of uptake and continuing attention to the issues they would hopefully help to illuminate in new ways and with new ideas for understanding the problems and their potential solutions.

An immediate measure of this took shape just recently, only two months following the release of the team's research findings, when the CACP Board hosted an invitational think-tank session devoted to further exploration of the team's genetic code concepts and their related, proposed actions. As one result from the session, the CACP President has called for the continuing generation of a new 'road map to public trust' across Canadian policing (Taylor, 2017). As another, a new research community has been formed within the CACP's research portal, to stimulate further exchange of ideas, published evidence, and relevant studies.

This work also seems to have ignited considerable interest beyond Canada. The team's work was presented at the recent International Association of Chiefs of Police [IACP] conference in Philadelphia, resulting in expressions of further interest from several countries in attendance, and some very positive conversations about the novel way that the research has been conveyed under the genetic code construct. The authors remain optimistic that such conversations will continue to advance wider interest and genuine attention to the specific issue of public trust in the police, a truly global concern.

CONCLUSIONS

From a 15-country global field study, combined with domestic and US research, the CACP Global 2017 cohort has learned that Canadian policing is very well respected, often envied around the world, and undoubtedly doing many things

right. Comparatively to many nations, the Canadian policing community may be in better shape than many with respect to the trust it enjoys from its public, in generalized terms. However, given the rapid changes and socio-economic and political influences upon an already diverse society, Canadian policing may soon be facing a crossroads.

The research has identified seven principles that may more accurately capture and express the genetic code of trusted relationships. The integration of these principles into Canadian policing culture can perhaps set a new foundation from which to advance public trust in the police. Further, the broad and consistent execution of several calls-to-action, at all levels within the policing community, will entrench a visible commitment to trust-building and continuous self-improvement within Canadian policing, now and into the future.

The research team observes that nowhere in the world does everyone trust the police, and in some countries virtually no one does. Yet, there was always one key group the teams encountered who consistently reported a perception of high trust in the police—that group was the police agencies themselves. Generally speaking, police worldwide appear to have an overly positive perception of how the public trusts them, and this may indeed be just as true in Canada, where aggregated satisfaction scores serve as a primary, but flawed, proxy for gauging public trust.

The research team would assert that police everywhere, and their stakeholders at all levels of the system, may need to listen much more closely to each and every community they serve.

CONFLICT OF INTEREST DISCLOSURES
One of the co-authors of this paper, Norman E. Taylor, serves as Editor-in-Chief of the *Journal of Community Safety and Well-being.*

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APPENDICES

Appendix A: Research Dimensions Definitions

Sociopolitical: social, economic and political context that defines, shapes, and influences the demands made of police
- Economic state
- Political structure
- Judicial system
  - Human rights
  - Legal Framework
- Demographics
  - Immigration
  - Education
- Community (public) mental health and social support programming
- Corruption

Policing framework: structure underlying the delivery of policing services and programs
- Style of policing
- Budget/resourcing
- Composition & #s
- Use of force
- Intelligence model

Information Management: discipline that directs, supports and effectively and efficiently shares and manages data/metrics
- Open data & info sharing
- Metrics/analytics
- Technology & equipment
- Digital evidence management
- Security & privacy

Engagement/Communication: clear, consistent messaging of pertinent information via a variety of methods; the interactions, behaviours, and relationships to encourage participation/collaboration
- Traditional & social media
- Consultation & collaboration at all levels
- Proactive/reactive communication strategy

Professionalism & Competence: organizational values, specialized knowledge, attitudes, skills, and abilities associated with policing
- Training
- Unionization
- Recruitment
- Diversity
- Standards, codes, values, mission
- Member health, commitment, and behaviour
- Add autonomy and discretion
- Integrity

Accountability: responsibility for actions, products, decisions, and policies
- Oversight internal/external
- Perception of management
- Conduct & discipline
- Transparency
- Fiscal accountability

Appendix B: Interview Questions

General Questions
- What do you think will have the biggest impact on policing in the next 5 years?
- What is an ideal trusting relationship look like?
- What leads people to trust or distrust police?
- How important is trust to policing?
- What indicates to you that trust is changing?
- How has your police organization change over the last (25) years?
- What are the police doing to maintain your trust in them?
- What are you doing to maintain the trust in your community?

Sociopolitical
- What are some of sociopolitical influences (factors) that are impact/affecting trust in policing in your country?
- Have these factors changed recently?

Policing Framework
- Tell us about your policing organization/structure – how has your organization evolved?
- How would you describe your style of policing and how would it impact trust?
- What changes would improve your policing framework?
- Do you feel that police are properly resourced to effectively create/maintain trust?

Information Management
- How do you manage and share information in your police organization/and community? Is this managed via technology?
- Tell us about your police technological resources? Are they sufficient?
- What police information is shared – is this effective?
- What freedom of information policies exist within your organization
- Do you have established criteria to determine trust with (employees, public)?
    - How do you measure it (surveys, frequency)?

Engagement & Communication
- Tell us how you engage and communicate with your community and with your organization?
- How do you use social media to engage/communicate with community/organization? And, to what degree does social media impact your decision making?
- Do you feel engaged with your policing organization?
- Did you have difficulty in capturing information from the respondents on police trust?
- How is the media influenced by the government (vice versa)?

Professionalism & Competence
- Tell us about the characteristics and competencies you expect of a police officer. Do the police officers in your community exhibit these attributes (13 behaviours of high trust)
- How do you hire police officers? What training do they receive?
- Is your organization a reflection of the community? If so, how does this impact trust?
- Do your policing leaders set policing missions, visions conduct – how do they ensure these standards are being followed? Do these reflect public expectations?

Accountability
- (Why) is accountability important to your policing organization?
- In what matters are police held accountable? (Threshold)
- What can you tell us about accountability processes as they relate to policing? (oversight)
- What if any changes would you make to the accountability process(s)?

Senior officer and recruiter views on "big topics" in policing for new recruits

Hina Kalyal,* Hillary Peladeau,* and Laura Huey*

ABSTRACT

Along with a focus on adopting more proactive approaches due to the changing nature of crime, police organizations today are also faced with the task of attracting and retaining a dynamic and flexible work force. The present study, based on semi-structured interviews with 12 recruiters and 21 senior police officers from police agencies across Ontario, seeks to determine whether these officers find the knowledge of new policing models useful for the professional development of incoming recruits. Despite the exploratory nature of the study, the results highlight the importance of the knowledge of "big topics" in policing prior to joining the service. Not only will such knowledge be useful for future recruits in developing a clear understanding of the challenges and realities of modern policing, but it will also lead to time and cost saving in terms of training and development.

Key Words   Proactive policing; future trends; work expectations; training costs

INTRODUCTION

Owing to the increasing complexity of issues within the policing landscape today, the current focus of police work is shifting from traditional reactive approaches to the development of more proactive, upstream solutions. In view of such changes, an understanding of the 'big topics' in policing—that is, those strategies seen through rigorous trials to enhance the efficiency and effectiveness of police services—may help prepare new recruits entering service. What do we mean by 'big topics'? We have identified three[1] of the most well-known within contemporary policing circles: 1) Intelligence-led policing (ILP), which relies on criminal intelligence and data analysis to manage risks within the community; 2) Problem-oriented policing (POP), an approach in which police develop innovative, local responses to specific community safety and other problems within a local area, and; 3) Evidence-based policing (EBP), which promotes the use of research to inform police decision making.

It has been argued that each of these approaches, singly and in combination, has the potential to assist police agencies in making the transition from reactive to proactive policing. However, each also requires some level of working knowledge of the relevant concepts, methods, roles, and realities entailed. For most police agencies, which are already struggling with increasing training demands, pre-entry knowledge of these 'big topics' might be useful. Rather than simply accept this proposition, we have instead put it to the test. The present paper, which is part of a larger study on the assessment of educational needs for new police recruits, is exploratory in nature and its purpose is to determine whether senior police officers and recruiters believe that a prior knowledge of the big topics in policing through education, can prove useful for incoming police recruits.

METHODS

The present study draws upon data collected for a larger study of educational requirements for incoming police recruits. Using non-probability sampling, we emailed police recruiters and senior officers from all the municipal and provincial police services in Ontario (n = 58). A total of thirty-three (n = 33) officers were interviewed, including twelve (n = 12) police recruiters and twenty-one (n = 21) senior officers (Inspector and above) from eighteen (n = 18) services. Interviews were based on a semi-structured guide with questions related to desirable qualities of future recruits, tools for competency assessment, general views on police education, and opinions on the quality of current higher education programs. This paper is based on the question: "Do you think it is important for the incoming recruits to have some idea of the big topics in policing such as problem-oriented policing, intelligence-led policing, and evidence based policing?" To answer this question, we employed Braun and Clarke's (2006) thematic

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[1]   We did not include community policing under the umbrella of 'big topics' because it has been a staple of policing practice within most communities since the late 1980s and we wanted to focus on more recent innovations.

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analysis approach, using, first, open coding to develop an initial set of themes, and then focused coding to narrow themes and connect them to relevant sub-themes.

RESULTS

Analysis of the data revealed two main themes related to the usefulness of knowledge of the big topics in policing at the pre-recruit level. Both of these are presented below.

Understanding Future Trends and Managing Expectations

The majority of recruiters (n = 11) and senior officers (n = 19) interviewed considered acquiring pre-recruitment education related to evidence-based, intelligence-led, and problem-oriented models to be extremely important, as they saw these models as reflecting the future of policing. Senior officers also believed that the ability to embrace change and value new ideas should begin prior to joining the service, and therefore, pre-recruit education that focuses on the future of policing was considered important. Exposure to such ideas would enable future officers to handle responsibility and future challenges. For example:

> "We are giving them the 'Why's' and we're giving them the 'Here's the possibilities'. So, they see that this is not just about arriving here and being a great recruit, or getting ready for the promotional system. This is actually about doing your job every single day."

Further, one senior officer admitted being overwhelmed by the new developments in police management when he joined the organization and believed that pre-recruit education on these topics would help develop best practices that reduce redundancies and duplication of resources. Similar sentiments were shared by other officers regarding the rapidly occurring changes in policing and the importance of developing the capability for continuous learning. For instance, one stated, "I think those [big ideas] would be absolutely key to their learning … and I think those topics would have to be adapted almost annually or every couple of years to stay current because the world is changing faster than we can adapt to something."

Given the complex environment within which police officers must work today, it was also felt that modern recruits must be equipped with the education to operate at a global level and be aware of the issues affecting not only their immediate environment, but also those issues that cross borders:

> "We want them to keep in-tune with issues that affect policing, because issues that affect the global organization are going to affect them and we want all of our individual parts to be aware and be able to respond to the external pressures that are put on us."

While most officers (n = 30) endorsed prior education related to the 'big topics' of policing, not everyone was convinced of the benefits. A few of the recruiters and senior officers (n = 3) believed that these were simply trends that would fade over time. One such interviewee noted, "You fluctuate from those types of catch-phrase policing, and it

changes every ten years or so." Another expressed concern about justifying the use of funds for such practices and believed that they were simply trends driven by whoever was in power. The same officer seemed convinced that a knowledge of the 'big topics' in policing was deemed more suitable for senior-level officers than frontline officers, who he felt would not have a chance to apply such ideas until later in their careers. Officers in this group also believed that such specialized education could be imparted at the Ontario Police College and was not necessarily useful at the pre-recruit level.

Besides helping develop an understanding of current and future directions of policing, the 'big topics' also create a realistic picture regarding job related expectations. A significant number of senior officers (n = 12) and recruiters (n = 5) agreed that one of the greatest benefits of pre-recruitment education on the 'big topics' would be the development of a clearer understanding of the realities of police work. One senior officer commented how policing was very different in practice, observing:

> "It's not like it is on TV. It's not solving a case in an hour. It's not driving the car fast and arresting people, like it really isn't. That's the fun stuff and we all love to do that, but it's 20% of your work… so having an understanding of community based policing, intelligence-led policing, general community relations generally sets somebody up more for success coming into it because it's not necessarily going to be every day action packed to the end."

A recruiter considered it beneficial for the police departments to hire candidates who were aware of the demands of the profession, and remarked: "That's a great big boon for us because then, generally speaking, there's a match between our candidate… and our future employee as opposed to a lot of dissatisfaction across the page." Another expressed his support for recruits to have stronger educational backgrounds, in general, as this would prepare them for the constantly changing demands of policing, leading to greater job satisfaction and effectiveness. A senior officer shared the challenges experienced at the beginning of his career and stressed the need for pre-recruitment education and exposure to the latest developments in the field would help advance their careers.

Both recruiters and senior officers agreed that knowledge and appreciation of the big topics in policing would be a bonus to help develop a strong foundation for understanding the demands of police work from a corporate standpoint, as well as developing tactical plans. They believed that looking at the bigger picture and avoiding tunnel vision was imperative for effective policing. One of the senior officers strongly supported recruit education in the 'big topics' to encourage new officers to base their ideas on evidence from research, as such practices are being increasingly appreciated by police organizations today:

> "… from a recruit perspective, understanding that when you make a decision, or when you put forth an idea, and this taps into evidence-based again, we embrace all kinds of ideas, from frontline people, right to our senior management … when you're going tocome to the table with a great idea, come to the table with the research that supports why you're articulating this."

Training Time and Costs

A second theme that emerged through our analysis revolved around training efficiencies. Training represents a significant cost for police organizations at an estimated $1 billion Canadian per year (Goudge, Beare, Dupont et al, 2014) and much of the investment in police training is on meeting operational requirements rather than on specialized skill development (Johnson, Packham, Stonach et al., 2007). Given the costs and burdens associated with increasing training requirements, it would therefore be highly beneficial for police services to attract potential candidates who are already familiar with many of the specialized topics in policing.

Although not a major theme of discussions, a few of those senior officers (n = 3) and recruiters (n = 2) interviewed for our project saw a need for the introduction of the 'big topics' identified at the pre-recruit level. They believed that such previous knowledge would not only improve the quality of recruits, but would also reduce later training and educational costs. To illustrate, a senior officer commented that, "The most important thing for us… is for somebody to have good analytical skills, good problem-solving skills. We'll teach you how to be a police officer… You have to come with those other skills." These officers also agreed that there was not enough time available for recruits at the police college to be able to completely grasp the complexities of all, if not many, of the current topics in policing. They believed that the introduction of such concepts and topics at the pre-recruit level would not only set the course for their future career, but would also prove beneficial in saving both training costs and time at Police College.

To be clear, it was also recognized that, whereas reliance on police colleges and related training programs to inculcate knowledge of the array of policing concepts and models—including those discussed here—was not always practicable or financially feasible, the current system of post-secondary education in the province was not sufficiently standardized to ensure that ILP, EBP or POP models, among others, would be taught in each program or consistently within or across programs. One senior officer, in particular, stressed the need for a standardized curriculum at the college and university levels to provide a comparable level of understanding of such concepts across all potential groups of recruits. As our own previous research shows (Huey, Kalyal, & Peladeau, 2017), there is no such content uniformity across various criminology and related programs. It is entirely likely that a potential recruit might graduate from a college- and/or university-based program with minimal knowledge of community policing, and little to no knowledge of intelligence-led, evidence-based and/or problem-oriented policing models.

DISCUSSION & CONCLUSIONS

This exploratory paper drew upon a larger dataset on the educational needs assessment for future police recruits in Canada. We sought to explore whether police leaders and recruiters believed that education related to the current 'big topics' in policing was beneficial for incoming recruits. Based on 33 in-depth interviews, data analysis revealed two themes highlighting the importance of knowledge about these topics to policing and the benefits that agencies could derive from pre-recruitment education on these and other important concepts and ideas within policing.

Emerging from a consensus by senior officers and recruiters, the first theme suggested that a knowledge of the 'big topics' can help prepare recruits for both current shifts and the evolving future of the profession. Policing is no longer solely based on reactive strategies, and the transition from traditional to proactive model of policing requires a strong commitment to research, exercise of judgment, and the implementation of effective performance measures. Therefore, receiving education of such models as problem-oriented policing can set the course for a recruit's future career. The same theme highlighted the importance of the big topics in policing in developing future recruits who are well aware of the demands of the profession. The dynamic nature of the policing environment requires individuals equipped with the skills and ability to continuously learn and adapt to shifting demands (Lucas 2002). Therefore, having knowledge of the 'big topics' is likely to help develop the capacity among new recruits to act as change agents in order to improve the practice of policing (Neyroud, 2011). Not only will they be able to challenge the elements of police culture that maintain status quo, but they will also be more likely to appreciate and implement these ideas more effectively through further in-service training.

The second theme related to savings in training time and costs as a result of hiring recruits who were already aware of important topics within policing. Post-entry training programs for police recruits entail focused professional training that is extremely intensive, often leaving little time for teaching topics that require critical thinking and assimilation of knowledge (Christopher, 2015). Given the high expenditure on training, and increasing budget constraints, it would be beneficial for police organizations to rely on educational institutions for imparting knowledge that should ideally be delivered incrementally over a greater span of time in order to be more effective.

The present study has a few limitations, owing to its exploratory nature. Firstly, the sample size, as well as geographical limitation, prevents us from drawing generalizable conclusions from our study. Future studies would benefit from a larger sample from agencies across Canada. Secondly, we did not test the participants on their own knowledge of the "big topics" in the interviews, which should also be addressed in future studies. Finally, as we had not included new recruits in our study, future researchers could draw a comparison between new recruits with and without prior education on the "big topics" in order to assess the difference in performance and attitudes towards police work.

Although preliminary in nature, the present study has important implications for police organizations. Given the relative importance placed on the 'big topics' of policing by senior police leaders and the increased use of these models within the policing environment, it is recommended that police organizations focus attention on (a) working with those colleges and universities willing to explore the possibility of shaping aspects of course curricula in ways that can be mutually beneficial (for not only agencies, but also for their students), and; (b) consider focusing on attracting and recruiting those individuals who possess not only skills, values, and attitudes deemed desirable, but also those educated

in concepts such as intelligence-led, evidence-based and/or problem-oriented policing.

CONFLICT OF INTEREST DISCLOSURES

The authors declare that there are no conflicts of interest.

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Coaching and evidence-based learning

Peter Shipley*

Although the Ontario Provincial Police has existed since 1909, the Ontario Provincial Police Academy has only existed in various forms since the first 'School of Instruction' was created in 1920. For the first 11 years of the organizations existence, training was not formally delivered. In fact it was very informal and a basic trial and error process by shadowing an already serving, experienced officer. Clearly, over the last century, there have been a significant change in how training is designed and delivered. The Canadian Association of Chiefs of Police Research Foundation, Canadian Association of Police Educators, and the Canadian Society for Evidence Based Policing, among others, are all committed to pursuing a more evidence based approach to training.

In attempting to address the future training needs of police officers, the curriculum needs to be designed with a constructivist principled approach. According to a number of researchers, the essential features of constructivism in practice include the following:

"Learning is characterized by cognitively active learners; learning should happen in context and be structured around related themes or primary concepts; new knowledge constructs are built upon prior knowledge; new knowledge should be applied and feedback provided; learner self-reflection on the learning process is a key learning activity" (Yoders, 2014, p.12).

This process is exactly what needs to occur in police training and education, especially in the training and education of not just new recruits, but Coach Officers, as well. New recruits have to learn basic information that is fundamental to policing such as the Constitution, the Canadian Charter of Rights and Freedoms, and Provincial Statutes, for example, before they can ever 'enforce the law'. We clearly shouldn't be teaching a recruit to handcuff and search someone before they have a clear understanding of what a citizen's rights and freedoms are, as well as what is an indictable or non-indictable offence or what is meant by summary offences. Learning has to be constructed on these related themes and built upon. Subsequent to that, they must understand and apply the correct 'arrest procedure' which incorporates key elements including informing the person that they are under arrest, as well as providing them with their rights to counsel and ensuring that they understand those rights.

As noted in Yoders' book, Vygotsky's (1978) work in the 'zone of proximal development' (ZPD) is absolutely critical in police training, especially for Coach Officers (Yoders, 2014). Schunk (2012) describes this area as the difference between what a learner can do with or without assistance. Vygotsky's early work of overcoming this difference is "how all knowledge is constructed and where cognitive development occurs" (as cited in Yoders, 2014, p.13). In police training, once recruits master the theoretical knowledge required to be a police officer, they have the opportunity to apply this knowledge in practical, realistic simulations. Related to this training is a key element called scaffolding. This process is the educational technique that helps the learner close the gap in cognitive ability found in the ZPD (Yonders, 2014). A well trained, knowledgeable, experienced Coach Officer will be able to effectively guide new recruits through the ZPD.

Another important concept for Coach Officers to understand is what Collins (1991) describes as 'cognitive apprenticeship'. This is where the transmission of expert knowledge to a novice occurs in a gradual manner via specific processes which include:

a) task or problem modelling or demonstration;
b) provision for performance feedback;
c) scaffolding via decreasing levels of assistance as the learner progresses, allowing the learner to become increasingly autonomous; and
d) mentoring by monitoring progress, evaluating performance, and helping overcome specific weaknesses (Collins, Brown & Holum, 1991).

Although this 'cognitive apprenticeship' is exactly what should occur in policing, we can always improve how this is constructed both formally and informally in the field with Coach Officers. The focus of how this 'cognitive apprenticeship' will work in the OPP will be tested significantly when a large number of experienced officers retire and take all of their knowledge with them. Below is an example of how it applies and the appropriate steps as noted by (a, b, c, d).

After the recruits have successfully completed their basic training they are assigned a Coach Officer or Field Training Officer (as they are called in the United States). The recruit is on probation for one year (varies with agency) after they have completed all their basic training requirements. The Coach Officer is responsible for teaching, mentoring, supervising, and assessing their performance. The Coach Officer is also responsible to ensure that a new recruit can transition from the theoretical safe haven of the Academy to real-world application.

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The Coach Officer, for instance, will demonstrate how to conduct a professional vehicle stop, then have the recruit perform that task (a). If they make a mistake on the steps, they are provided feedback (b) and are provided opportunity to demonstrate proficiency again. One of the ways our police training has implemented scaffolding is through a process of feedback and achievement. For instance, recruits will ride with a Coach Officer until the recruit has demonstrated proficiency to the Coach that they have developed the competencies to ride alone. This process enables recruits to have their 'day wings', which means they can ride on their own, with a Coach nearby, because they have demonstrated proficiency in such areas as the safe operation of the police vehicle, knowledge and accurate application of the law, and professional use of discretion. Once the recruit has demonstrated proficiency of being on their own during the day, they receive their 'night wings'; then they become totally autonomous and can be recommended for full-time employment (c).

There have been recruits who have been released during their probationary period because they just cannot make that transition from the theoretical aspects to practical application in the field. Just because a recruit scores 95% on their Academy examinations, that does not guarantee they will make a good police officer. One of the key questions is whether or not they are able to 'apply' what they have learned. Recruits will make mistakes, which is one of the ways in which we all learn. When a learner understands how to apply knowledge in different contexts, then transfer has occurred" (Ertmer, & Newby, 2013, p.52). If, however, the recruit is not demonstrating some of the competencies, then they are put on a 'work improvement plan' (WIP) and provided with opportunities to succeed. They are mentored continually by Coaches who monitor their progress, evaluate performance, and assist them to overcome specific weaknesses (d).

Although behavioural and cognitive strategies are very valuable and applicable to police training, the constructivist strategies appear to have a higher correlation to the levels of learner's task knowledge. "As all students' learning will involve errors, tasks should offer opportunities for self-assessment, correction, peer discussion, teacher feedback, and other 'reality checks'" (Teachers Toolbox, n.d., para 1). In fact Smith (2000) notes that "almost every training program I design benefits from a combination of behaviourist and constructivist approaches" (also cited in Cronje 2006, p. 405). A blend of all three approaches maybe needed or, as Ertmer and Newby (2013) point out, we need 'adaptive leaners' when "optimal conditions do not exist, when situations are unpredictable and task demands change, when the problems are messy and ill-formed, and the solutions depend on inventiveness, improvisation, discussion and social negotiation" (p. 63). In other words, these authors describe very succinctly, that 'police learners' must be 'adaptive learners'. If we are going to develop and support adaptive police learners, then organizations need to develop 'predictive learning analytics' that are specific to the individual as well as to the organization. Although a fairly new phenomenon from higher education, there is a direct application for police leaders to improve how training and education is approached.

Brown, Iszler and Hall (2012) indicate that between 60–80% of learning takes place outside of formal contexts, yet we spend the bulk of our staff development resources on formal training. Van Dam (2012) estimates that the rate is even higher, at a 90%. Still others report evidence of up to 70% of what is needed to learn to perform the tasks of the job do, in fact, occur informally in the field or "on-the-job" (Giovengo, 2017, Biech, 2017, Kirkpatrick & Kirkpatrick, 2015). It is safe to conclude that the majority of our learning occurs informally. The high quality training that recruits receive, make us hopeful that the 'errors' in judgment that new recruits make in the field will be minor in nature. The role of the Coach Officer has never been more critical than it is today. Police training institutions must take an evidenced-based approach to learning in order to design and implement the best possible training curriculum that focuses on supporting the Coach Officer in the field.

This latest research just confirms Collins' (1991) work on the importance of 'cognitive apprenticeship'. If most of the learning is occurring informally, 'in the field' and not at the formal police training institution, then policing needs to pursue more evidence-based approaches, as well as developing the appropriate 'predictive learning analytics' in order to have the right kind of supports available to our Coach Officers in the field.

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