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Bridging the spinal cord injury research-to-practice gap: Lessons learned from the evaluation of the 2016 Praxis Conference

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Issue

The Rick Hansen Institute (RHI) is a Canadian-based, not-for-profit organization committed to addressing the knowledge translation (KT) gap in the area of spinal cord injury (SCI). In April 2016, RHI developed and hosted an innovative conference called Praxis. Praxis intended to address the research-to-practice gap by bringing together a diverse group of stakeholders to develop solutions for overcoming the challenges of translating SCI research, to be summarized post-conference in a Praxis Action Plan. Using various data sources, this project sought to evaluate RHI’s efforts to address this KT gap with Praxis.

Objectives

RHI funded an independent team to evaluate Praxis. The evaluation was guided by the RE-AIM framework which proposes the evaluation examine Reach, Effectiveness, Adoption, Implementation, and Maintenance. Findings were derived from various data sources including interviews with attendees and organizers, pre-post attendee questionnaires, fidelity assessments, and observation notes from seven observers.

Results

The conference reached a wide range of attendees, but attendees agreed that more involvement of SCI community members was needed. Praxis improved attendees’ knowledge about KT barriers and solutions, and increased the number of groups attendees believed they needed to work with to translate research. The conference was implemented as intended including the publication of the Praxis Action Plan. However, attendees reported the need to understand the type of conference and its goals prior to joining. Regarding maintenance, RHI continued to use the Praxis approach to address SCI research-to-practice gaps but stated that further leadership is required to ensure activities identified in the Action Plan are implemented.
Lessons learned

First, efforts to include SCI community members early in the process are necessary. Second, a communication plan to inform potential attendees of the innovative format and goal of the conference can enhance active involvement of attendees. Third, future solution-building conferences such as Praxis 2016 need to identify leadership and funds to facilitate long-term efforts.

Main messages

Developing and implementing a solutions-focused conference that brings together a diverse group of SCI stakeholders was challenging and rewarding for attendees and organizers. Other domains could learn from, adopt and build on the Praxis approach to address research-to-practice gaps.

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2 Unbottling change: A policy change analysis of the introduction of beer, wine and cider in Ontario grocery stores

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In September 2015, the Government of Ontario announced a decision to expand the sale of alcohol beyond the jurisdiction of the Liquor Control Board of Ontario and The Beer Store to include grocery stores—the biggest change in alcohol-related policy in Ontario since the repeal of prohibition in 1927. The following year, this policy was further expanded to include the sale of cider (June 2016) and wine (October 2016).

Many groups including the Ministry of Finance, small craft brewers and grocery store owners praised this policy change, stating that it would modernize the sale of alcohol, increase competition, improve customer experience and strengthen economic revenue for the province. Other groups representing the broader health sector raised concerns due to public health evidence that shows that an increase in the number and type of alcohol retail outlets could result in higher rates of alcohol consumption in the Ontario population, and a corresponding increase in alcohol-related harm.

This presentation will provide an overview of the policy change that introduced the sale of beer, wine and cider in Ontario grocery stores, with a phased implementation from 2015 to 2017 and beyond. It will undertake a detailed analysis of the factors that influenced this change through the perspective of three relevant theories: Punctuated Equilibrium Theory...
(PET), Advocacy Coalition Framework (ACF) and, to a lesser extent, Multiple Streams Framework (MSF). This work will explore the conference theme of the challenge of using evidence and will focus on the subtheme of communicating evidence, through an exploration of how this policy change occurred despite strong evidence showing potential harm. The presentation will summarize each theory and discuss its application, utility, strengths and limitations. It will use PET to explain a dramatic departure from a decades-long policy of alcohol retail quasi-monopoly. ACF will help to understand this policy change through an understanding of two major coalitions operating within an alcohol-related policy subsystem and how the public health coalition was not mobilized. MSF theory offers an interesting, but more limited understanding of alcohol policy change in Ontario due to the fact that the change was rapid rather than within a context of ambiguity. These theoretical policy frameworks can help us to learn how multiple interests will be represented in the development of future government policy on this critical issue and how public health researchers could better mobilize to share public health evidence with policy makers.

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3 Exploring community gardening as a complex public health intervention: An action research study

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Interest is growing in the potential of community gardens and allotments to promote healthy eating. A number of studies have recognized the broader effects of gardening on mental health, wellbeing and physical activity levels. With participants engaging in food-growing activities over extended periods of time, there are various potential avenues through which sustained improvements in health behaviours and mental health could occur. A substantial body of evidence exists concerning the health and wellbeing impact of exposure to green and natural surroundings, including urban green space, which has been extensively reviewed in peer reviewed journals and stakeholder reports. However, only a relatively small proportion of this work relates to the health and wellbeing benefits of private and community gardens, and even less is known about the effects of allotments. Over the past few years, there has been a growing interest and investment in embedding assets-based approaches such as co-production and community based research in reshaping how public services are designed and delivered. By including communities as co-designers of an intervention, the opportunity arises to really tailor the intervention for that specific community. Interventions that are
tailored are generally perceived to be more successful. The aim of this study was to engage and involve local people in the development of a tailored community gardening intervention and its evaluation. The study was informed by a co-production approach, and utilized a nested qualitative design. Focus groups were carried out in three community venues in County Durham. Convenience sampling was used to recruit a total of 20 participants. NVivo was used to manage the data collated from the focus groups, with the data analyzed using thematic content analysis.

A number of themes and sub themes emerged from the data collected. There were three overarching themes: (1) Physical features of community gardening sites; (2) Practical barriers and facilitators to accessing community gardening programs; and (3) Social factors impacting on uptake and retention.

This study set out to identify factors that would increase the success and sustainability of a community gardening intervention. The findings from this research suggest that a simple activity such as community gardening can contribute in part to the solution to addressing a myriad of complex health problems, both physical and mental. The themes that were identified were incorporated into an action plan and informed the design of a future community gardening intervention called ‘Nourishing Neighbourhoods’.

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## 4 Systems modeling to estimate effects to comprehensive smoke-free policies in two communities

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### Issue

Implementation of comprehensive smoke-free policies is a focus of many community advocates and stakeholders. In encouraging policy makers to support smoke-free policies, it is crucial to show the potential effects of the policy on the health of community members. Through a cardiovascular disease (CVD) prevention system dynamics model, we were able to estimate the potential impact of smoke-free policies that were passed in two communities in 2016-2017 as part of an American Heart Association initiative to implement community-based policy, systems, and environment (PSE) changes.
Objectives

Through a systems dynamics model adapted from the New York Academy of Medicine Cardiovascular Health Simulation Model, we estimated the potential impacts of passing smoke-free policies in two communities: 1) Arlington, Texas and 2) Mesquite, Texas. The model was used to determine the interaction and effects of the intervention on reducing CVD risk over time. This information can be utilized to build support smoke-free policies in other communities.

Results

In Arlington, Texas, the smoking intervention is estimated to decrease the proportion of population with diabetes from 20.3% to 20.2%, the proportion of population with myocardial infarction from 4.9% to 4.7%, and the proportion of population with stroke from 3.0% to 2.7% in 10 years. The prevention effect of the smoking intervention is more pronounced in 20 years, as all the reductions are statistically significant (p<.001).

Lessons learned

This study shows the importance of merging community-based and research strategies to work toward comprehensive initiatives.

Main messages

This model was used to estimate the potential long term impacts of smoke-free policies. This tool can be used to build support for smoke-free policies or other CVD interventions in a variety of communities.

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5 The role of peers in supervised consumption site: A literature search

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Issue

Peer engagement in public health harm reduction efforts has well-identified political, ethical, legal, economic, and health outcome benefits. With the growing illicit drug overdose crisis in Vancouver, this paper identifies through a literature search the range of documented roles for peers, including a search for how they are involved in conducting research and impacting public policy formation.
Objectives

To identify literature that details a role for peers in supervised consumption sites specifically, or through other harm reduction efforts. This also includes identification of how peers are engaged in conducting research and creating knowledge, as well as being involved with informing policy- and decision-makers on how to implement this knowledge in harm reduction efforts.

Results

Overall, the results reveal a paucity of documented peer involvement. A total of 21 documents were identified, with the majority of the results coming from Vancouver, Canada (15 of 21). The majority of the efforts involve direct harm reduction, harm reduction education, or peer support. No examples of identified of peer engagement in research assistance or in advisory committee work.

Lessons learned

Unlike more established and formal roles such as health professionals or academic researchers, identifying roles for peer engagement is very difficult given the lack of a standard definition for who is a ‘peer’. Further, peer engagement when it is documented exclusively discusses the role of active engagement with dissemination of knowledge from a peer to other peers, or in service delivery. No examples were identified of knowledge creation or translation. Finally, after discussions with organizations involved with harm reduction, it is clear that knowledge creation and translation is happening, but is not being documented for reasons related to resources, time, or legality.

Main messages

- In harm reduction efforts, peers have an important role to play, including in knowledge creation through formal research opportunities and the translation of this information into healthy public policy.
- However, this role appears underutilized or perhaps undocumented.
- This represents an opportunity to enhance diversity in public health policy and achieve better outcomes in ongoing harm reduction efforts.

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COMPASS Study in Quebec: A partnership approach toward youth health

**Issue**

The complex, multifactorial and changing nature of adolescent health requires, for the implementation of tailored and effective public health policies, programs and actions, the development of strategies that support the interventional process. In this perspective, few approaches allow the initiation of a cyclical process linking research to action through partnerships.

**Relevance**

COMPASS is a longitudinal study whose central device is based on secondary school cohorts. Its purpose is to collect evidence on adolescent health risks and behaviors in an interventional perspective. The Quebec component of the study is characterized by an innovative knowledge transfer (KT) process based on a partnership approach involving researchers, public health authorities and schools. The action-oriented process involves stakeholders’ commitment to the co-construction of a common understanding of realities, aiming at the development and implementation of evidence-based school-based interventions tailored to local realities.

**Objectives**

The present project aims to present a descriptive analysis of this KT process and to demonstrate how it fits into a collaborative, active and co-constructed relationship, favorable to the adhesion and commitment of partners.

**Results**

The proposed KT process is as follows:

1. Delivery of documents presenting health indicators specific to the school’s youth
2. Partner meeting (researchers, public health professionals, schools) to present, discuss, put into perspective and take ownership of local data
3. Strategy for disseminating results to the school team to help define priorities for action
4. Data mining in response to the concerns of the school team
5. Personalized accompaniment of the school team, provided by public health professionals and experts, for the development and implementation of evidence-based actions

6. Evaluation of the impacts attributable to the actions taken

Lessons learned

The approach of valuing knowledge as part of an active KT process provides a broad base of support that fosters (1) the emergence of an intervention whose relative benefits build consensus and (2) the adherence and the commitment of actors to the interventional process. As the KT process seeks to leverage the potentials and active engagement of all stakeholders, it requires partners to be open to renewing established ways and dynamics.

Main messages

Establishing effective ways of linking research to action is necessary for the co-construction of our understanding of realities and the development of effective and sustainable public health actions in secondary schools. A partnership process based on (1) a collaborative, active and co-constructed relationship, (2) the commitment of all partners to an evidence-based culture and (3) the characteristics of the local environment and context, appears to be a winning solution.

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7 Operationalizing the metaphor: A qualitative interview study of stakeholders’ perceptions of what it means to “work upstream” to reduce health inequalities

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Introduction

The ‘upstream’ metaphor is often used to illustrate the cult of behaviourism and ‘lifestyle drift’ in public health. It is a call to action to move beyond treating the symptoms of a problem, to work at its source or root cause. Despite the presence and influence of the metaphor in the theoretical literature, the process through which it is operationalized in practice is less clear. This study explored how individuals, who are working to reduce health inequalities, operationalize the ‘upstream’ metaphor in their diverse areas of practice.
Method

Participants (n=18) were recruited to the study through a regional research collaboration which has an overarching objective of reducing health inequalities. A purposive sampling strategy was employed to gain a range of perspectives (i.e. core staff and methodologists, research students, principal investigators, public advisors, and practitioners based in health services, local government and third sector organizations). All interviews were conducted face-to-face and audio-recorded for later transcription. Transcripts were analyzed thematically.

Results

All but two of the study participants were familiar with ‘upstream’ metaphor, or had heard of the term. However, six of these participants suggested that they didn’t feel confident in their understanding of the idea, or felt they simply ‘didn’t get it’. Participants discussed their understanding of the metaphor in the context of their current areas of practice, which crossed the spectrum of inequality (e.g. socioeconomic, ethnic, disability). Addressing distinct and observable instances of inequality (e.g. cancer screening uptake) was considered by many to make identifying and working to address ‘root cause’ more ‘tangible’ and thus more easily implemented. However, this notion was more evident for inequalities that related to ‘protected characteristics’, where the sense of unfairness was more notable relative to health inequalities due to income distribution and poverty. There was a diversity of engagement with political ideology and an evident tension between more hard line narratives around upstream action and action that was perceived to be feasible within participants’ scope of practice.

Conclusion

Akin to the translation of research evidence into practice, the ideas underpinning the ‘upstream’ metaphor appear to undergo a process of recontextualization to fit with the immediate requirements of end users. As addressing health inequalities is increasingly everybody’s business, it would seem timely to revisit strategies to better communicate the underlying principles of what is, for many, a nebulous concept and thus build capacity to take action on the root causes of health inequalities.

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Introduction

Statutory restrictions on the availability of alcohol in most countries are based almost exclusively on minimizing crime and public disorder. Similarly, in England currently, there is no explicit ‘licensing objective’ around health, so any legal challenges to new license applications need to be based on the four existing objectives of: (1) the prevention of crime and disorder; (2) public safety; (3) the prevention of public nuisance and (4) the protection of children from harm. We examined the practicalities of using health-related information in local licensing decisions and the prospects for a dedicated health-related licensing objective (HALO).

Methods

Seven local authority (LA) pilot areas were selected for broad representativeness across English regions. Key informants were interviewed at baseline and after 8-12 weeks. Participating LAs were provided with a compendium of health information including data-access agreements and mapping software. A series of ‘mock licensing hearings’ were organized to explore practical challenges in using health data. A particular focus was the use of any innovative frameworks for interpreting existing guidance that would be suited for health related evidence.

Results

Access to localized health information was often problematic. There was also a degree of mismatch between a data-orientated approach by public health and the need for contextualized evidence that local counselors are familiar with. Perceived difficulty in proving that a particular new license would be likely to damage health, effectively discouraged challenges from some public health teams. Attention to ‘whole locality’ based interpretations of impact and to the requirements that the objectives should be actively promoted, were found to be the most promising approaches for restricting unsuitable applications.

Conclusion

Constraints around using health information in alcohol license decision making are not restricted to the presence or absence of a dedicated HALO. While such an objective might
enhance the legitimacy of a public health role in the process, improved access to localized
health information, stronger collaborative working at the whole locality level and training in
how to contextualize evidence for local council committees, will all be critical to improving
local alcohol harm reduction through licensing. Even without the introduction of a dedicated
new licensing objective around health, there is considerable scope for integrating health
related information into the existing four objectives, especially by adopting a locality focus.

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9  Beyond the evidence base: Ecological advancements in federal
teen pregnancy prevention efforts

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Health issue

Policies and federal initiatives that support evidence-based interventions (EBI) in teen
pregnancy prevention (TPP) have helped drastically reduce teen pregnancy in the United
States. However, few EBI significantly impact underserved subgroups, including racial
and sexual minorities, and often do not address complex social ecological issues such as
access to contraception. This study reviews the state of TPP EBI, specifically limitations in
socioecological level of intervention and evaluation approach. To address these scientifically-
identified gaps, a federal initiative implemented by the Health and Human Services (HHS)
Office of Adolescent Health (OAH) funded a portfolio of innovative TPP programs, including
those targeting and evaluating various socioecological levels of intervention. This study
provides insight on how evidence-based TPP efforts can be built upon to address critical
socioecological gaps. A federal initiative that supports systems approaches in TPP program
development and evaluation helps address these gaps.

Objectives

1. Provide an overview of the existing TPP EBI in the U.S., including details on
   socioecological level of intervention and evaluation approach
2. Discuss how a federal initiative helps address system, environmental, and policy
   programmatic and evaluation gaps to improve TPP in the U.S.
Results

Thirty-seven (37) TPP EBI identified by the Centers for Disease Control and Prevention (CDC) and OAH were assessed in this review. The majority of programs (65%) focused on individual level changes. Thirty per cent (30%) attempted to create change at the interpersonal level. Five (5%) per cent were developed for use within an organization or agency. None of the existing EBIs attempted to intervene at the community or policy level. All measured outcomes at the individual level, regardless of the level of intervention. In total, approximately 70 evaluations occurred. Post evaluation timing ranged from one day after implementation to four years.

Lessons learned

Through this critical analysis of the existing evidence base surrounding TPP in the U.S., a need emerged to address TPP at the population-level using socioecological approaches. Aspects of the federal initiative that aim to address this need can be applied to other countries with similar TPP issues.

Main messages

TPP EBI focus on individual and/or interpersonal change, and are evaluated using the individual as the unit of analysis. These findings represent gaps in system, environmental, and policy-level EBIs. A federal initiative funded to create innovation in TPP, aims to develop and evaluate TPP programs that address these gaps.

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10 Factors influencing service utilization: A focus on cervical screening program

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Introduction

The effectiveness of a cervical screening program (CSP) is characterized by geographical coverage and rates of uptake in different demographical cohorts. Use of cervical screening continues to decline all over, in the UK, with some regions, e.g. North East of England (NE) being particularly hard hit. In addition, women under 35 years of age and those from ethnic minority groups withdraw most frequently from CSP. Underlying causes of deteriorating uptake
of CSP include practical and cognitive factors. Although Public Health Initiatives and policies with the intent of improving uptake of CSP have been introduced at both regional and local levels, data from national surveys suggest that the rate of participation in CSP is still well below the national average of 80%. The reason why these initiatives fail to achieve their goals and the social context they are embedded within is poorly understood.

Objective

To explore factors which impact uptake of CSP by women, aged less than 35 and resident in NE.

Methods

Service users of community centers and the Northeast Cervical Screening Call and Recall Centre and graduate students participated in the study (n=24). Ethical approval was sought from School Research Ethics Committee and NHS Research Ethic Committee (REC). A qualitative approach to interviews and Focus Group Discussion drawing on principles of the constructivist grounded theory was adopted for data collection. Structured interviews were designed to provide an understanding of behavioural elements, personal attitude and social factors which influence uptake of CSP. Data were analyzed using grounded theory techniques of the constant comparative method and theoretical sampling aided by individual sorting and by Mind Genius (Tulloch Gael, UK) software.

Results

Factors influencing uptake in the sample included a range of socio-cultural issues related to, religious and cultural beliefs, education, socioeconomic, gender, variance in the health system and sex-related issues e.g. exposure, anxiety, embarrassment, fear of infertility, and intrusiveness. The sexual association had both facilitator and barrier effects, as shown in an explanatory model.

Conclusion

Analysis of contextual data helped in understanding the diversity of service users’ concerns. These results offer insights which could assist in identification of subtle verbal and non-verbal indicators of sensitivity before and during the procedure, as well as issues related to sufficient knowledge and understanding of cervical cancer and the overall CSP. Consequently, these findings can assist in designing future policies and strategies targeting optimization of CSP uptake.

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Communicating evidence about carcinogens: CAREX Canada’s framework, learnings, and examples from public health

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Issue

CAREX (CARcinogen EXposure) Canada is a multi-institution research program based at Simon Fraser University that acts as a go-to source of knowledge on Canadians’ exposures to carcinogens in workplaces and communities. For the last five years, CAREX has been tasked with mobilizing this knowledge for policy impact. This presentation outlines the framework we developed to focus our knowledge mobilization (KM) efforts and shares several examples to illustrate this experience in public health.

Objectives

Our goal was to prioritize opportunities for impact and identify associated target audiences in order to direct our resources to communicating evidence in a more tailored way that would provide practical support to those working to reduce Canadians’ exposures to carcinogens.

Results

Guided by an Advisory Committee, we developed a multi-step framework for prioritizing opportunities to communicate CAREX evidence. Through this framework, we pursued a combination of opportunities to help reduce exposures. For example, we focused: by carcinogen, where we sought to inform policy action on radon gas exposure; by population, where we worked with First Nations organizations to enhance capacity to investigate local environmental concerns; and by exposure pathway, where we contributed to an emerging conversation on traffic-related air pollution.

Lessons learned

Focusing priorities allowed us to direct our resources to better understanding the landscape into which we were communicating our work, opportunities for impact, and appropriate audiences. Through interviews with those audiences, we assessed capacity and readiness, and identified needs for additional evidence to overcome the many challenges audiences faced in addressing exposures to carcinogens. We established strategic partnerships to collaboratively apply CAREX knowledge and expertise for policy impact related to these priorities, thereby serving as models for other jurisdictions.
Main messages

Many frameworks have been developed for mobilizing research evidence, however their application to a complex body of evidence such as CAREX Canada is limited. For this reason, we developed our own framework that supported setting priorities and target audiences, and resulted in a series of examples of successful uptake for policy impact.

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12 The impact of indoor tanning legislation on youth: A systematic review

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**Issue**

Many countries around the world have implemented indoor tanning legislations to protect youth from the dangers of artificial ultraviolet (UV) exposure. Voluntary artificial UV radiation exposure can lead to several detrimental health outcomes, including an increased risk of skin cancer. It is important to determine the effect indoor tanning legislations have on the prevalence and frequency of indoor tanning amongst youth, as these changes will have the greatest long-term impact on health outcomes. Evidence around the impact of indoor tanning legislations has not yet been synthesized.

**Relevance**

Public policy must be effective in its pursuit of promoting and protecting the health of individuals. Research evidence must be used to determine the effect of existing policy. This can lead to improvements in policy or enforcement if the expected changes are not observed.

**Objective**

To conduct a systematic review of peer-reviewed literature about the impact of indoor tanning legislation on youth prevalence of indoor tanning.

**Results**

There were six articles, all from the United States, which compared use of indoor tanning
by youth by presence or absence of legislation. The impact of indoor tanning legislations varied between studies. Some studies found no association between youth-access indoor tanning legislation and changes in the prevalence of indoor tanning legislation, while others reported significant changes in indoor tanning prevalence. Most studies found decreases in youth indoor tanning prevalence when comparing prevalence before legislation to after, although most were not statistically significant (range=1%-6% decrease, mean=3% decrease). The prevalence of youth indoor tanning was lower in states with indoor tanning legislation compared to states without legislation (range=1%-7% lower, mean=3% lower). Prevalence of youth indoor tanning use never decreased to 0%, which is the goal of indoor tanning legislation restricting youth use. Variation in impact may be due to differences in legislations, compliance with and enforcement of legislations, and temporal differences.

Lessons learned

The impacts of indoor tanning legislations varied, and never met the intended effect. Indoor tanning legislation was limited in terms of its impact on the prevalence and frequency of indoor tanning. This suggests the compliance and enforcement of indoor tanning legislations must be improved.

Main messages

The enactment of indoor tanning legislation banning youth indoor tanning has had varied success in reducing youth access. Understanding the key components of the legislation that make it successful must be explored further.

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13 A systematic review of compliance with indoor tanning legislation

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Issue

Youth indoor tanning is a significant public health problem, as there is a substantial increase in risk of lifetime melanoma skin cancer with use of indoor tanning at a young age. Many jurisdictions have enacted indoor tanning legislation in response to the health risks of artificial ultraviolet radiation exposure. Key components of these legislations include banning access
to minors, requiring parental consent or accompaniment, providing protective eyewear, posting health warning signs, and communicating important health risk information. However, legislation must be complied with to be impactful. Evidence around compliance with indoor tanning legislations has not been synthesized, and is an important step toward determining changes in indoor tanning practice due to legislation.

**Relevance**

Though indoor tanning legislation has been implemented, its effectiveness may not be optimal. This review aims to synthesize existing research evidence around compliance with indoor tanning legislations. For these legislations to become more effective, policy-makers must consider research evaluations which have been done of the current legislations, and work to implement changes to make the legislations more effective.

**Objective**

To determine compliance with indoor tanning legislation worldwide using a systematic review of peer-reviewed literature.

**Results**

There were 15 articles from around the world included in this study. Compliance with most aspects of indoor tanning legislation varied. Compliance with age restrictions ranged from 20% to 89% (mean = 55%; SD = 27), while compliance with posting warning labels in the required locations within a tanning facility ranged from 8% to 72% (mean = 44%; SD = 27). There was good compliance for provision of protective eyewear (84% to 100%; mean = 92%; SD = 8).

**Lessons learned**

Variability in compliance with indoor tanning legislation suggests there may be problems with enforcement of the legislations which indicates they are not having their intended protective effects on the public’s health. The reasons for such low and varied compliance with certain aspects of legislation, and high compliance with other aspects of legislation, deserve further attention in future research to inform optimal practices around ensuring high and consistent compliance with indoor tanning legislations worldwide.

**Main messages**

Overall, greater provisions for enforcement of indoor tanning legislation are needed, as without enforcement, compliance is unlikely to improve. Optimal compliance with all areas of indoor tanning legislation will likely require increased inspection, mandatory and stricter penalties for infractions, and effective public health messaging.

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Working together for a healthier Richmond

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The Richmond Wellness Strategy 2010-2015, endorsed by the City of Richmond, is a partnership agreement, to promote a healthier community between City of Richmond, Vancouver Coastal Health (VCH) and Richmond School District. My Health, My Community Survey (MHMC) in 2013-2014 was undertaken to gather surveillance data at the community level on the health of Richmond residents. Data from this survey (2,875 Richmond respondents) told us that only 21% of respondents (18 years+) consumed five+ servings of fruits and vegetables per day, the lowest for all of Vancouver Coastal Health.

To create a better understanding of the factors influencing fruit and vegetable intake in Richmond, VCH investigated this question, “Is there as relationship between different aspects of Richmond’s neighborhood food environment, food intake and body mass intake (BMI)?“ We looked at statistical associations between the fruit and vegetable intake of MHMC respondents and where they lived in relation to healthier and less healthy food outlets, including both stores and restaurants. A multivariate logistic regression was done with associations determined by odds ratios, (p < 0.05). Confounders controlled for included: age, sex, time in Canada, education and primary commute mode. Some results include: for every one km away from a limited service food outlet, the intake of fruits and vegetables increased by 40%. People living in neighborhoods with a high density of less healthy food retail were 70% more likely to consume fast food regularly and 2.2 times more likely to consume sugary beverages regularly than those without. A Retail Food Environment Index was calculated to indicate the healthfulness of a food environment (the ratio of the number of healthier food outlets divided by the total number of healthier and less healthy food outlets x 100). A finding was that people living in neighborhoods with a healthier food environment were 43% more likely to have a BMI < 25 than those in a less healthy food environment and 60% more likely to have a BMI < 25 than those in a food desert (with zero food outlets). Knowing these results, the partner’s organizations (VCH, City and School District) are developing the next rendition of the Richmond Wellness Strategy for 2018-2023 and “Healthy Eating” is now one of the top 3 priorities. The intent is to make true the words of Dr. Margaret Chan, former Director-General of the World Health Organization, who said, “What gets measured gets done”.

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Knowledge translation through tailored summaries: Sharing CAREX Canada’s carcinogen surveillance resources

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Issue

CAREX (CARcinogen EXposure) Canada is a multi-institution research program based at Simon Fraser University that acts as a go-to source of knowledge on Canadians’ exposures to carcinogens in workplaces and communities. With over 75 carcinogens in the CAREX library and a corresponding 800+ estimates of exposure, our users identified the need for support in interpreting and applying this body of work. In response, we developed a suite of tailored package summaries that synthesize our data, tools, and resources. These summaries provide a clear overview of priority exposures in various settings and highlight the different ways our estimates can be explored and applied to support cancer prevention research, programs, and policies.

Objectives

The goal of our package summaries is to provide a guide to CAREX resources that uses accessible language and tailored information to inform priority setting, engage new users, and support efforts to apply these resources in various settings.

Results

Our package summaries have been a valuable tool for communicating our research evidence and engaging our users. For example, through these package summaries we’ve contributed to an emerging conversation on traffic-related air pollution, increased capacity to explore and address carcinogen exposures in First Nations populations, informed priorities for exposure reduction at a provincial level, and engaged new users. We collaborated with a number of groups on the summaries, including local governments and First Nations organizations, which allowed us to develop products that are more relevant to users, thereby helping to more effectively mobilize our research.

Lessons learned

Creating knowledge mobilization products with tailored content, clear data visualizations, and thoughtful design was an effective way to communicate our research to various audiences. Engaging key users early and throughout development allowed us to create more relevant resources, improving uptake and application of our research in cancer prevention policies and programs.
Main messages

CAREX Canada’s package summaries have increased access to occupational and environmental exposure estimates and the tools that we’ve developed to explore those estimates. This supports the use of exposure data in guiding and evaluating decisions about cancer prevention research, programs, and policies.

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16 The value of contribution mapping to knowledge translation in policy-making

**Kurt Tulsieram**, University of Western Ontario

Many projects take an insufficient one-dimensional, linear approach to KT, where the diffusion of research through peer-reviewed articles is the primary strategy. Often this leads to poor adoption and application of research findings in policy/practice. This is known as the “knowledge to policy/practice gap”. This gap limits the potential of health research dollars. Because many projects lack the tools for evaluating why or how research impacts policy, the linear approach taken has been referred to as “black box”. This is because it neither provides explanations as to how outcomes have been produced nor identifies the possible causes and contextual factors associated with change.

In order to enhance the potential impact that research can have requires new KT approaches that are able to overcome the knowledge to policy/practice gap. This project will identify specific actions/strategies for researchers to use to move beyond the black box approach. To achieve this, it distinctively uses a contribution mapping (CM) methodology. CM focuses on how research and KT processes evolve to influence policy by tracing how the actors involved in a research project interact with key users.

This approach will be applied to the actors of two active Canadian Institute of Health Research (CIHR) funded sister projects, the Canadian Tobacco Alcohol and Drugs (CTADS) and the Cancer Risk Assessment in Youth Survey (CRAYS). CTADS and CRAYS offer a unique opportunity for utilizing contribution mapping given that: (1) both projects have an aim to influence public health policy change; (2) there are established relationships that exist between various actors (e.g., researchers, advocates, policymakers, users); (3) many actors overlap and are involved with both projects; and, (4) research from both projects has influenced policy change. Thus, this project offers a rich opportunity to explore the causes and context leading to impact, for the benefit of future projects to build capacity.

This presentation/poster will explain how identifying specific actions/strategies that key actors
use in contextually similar projects, can lead to a more successful impact. The poster will illustrate (step-wise) how Contribution Mapping will flesh out these specific actions/strategies that bridge the gap from research to policy/practice.

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**17 Understanding psychiatric and substance use admission rates to the emergency department: A descriptive temporal analysis of administrative records**

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Mental health and substance use (MHSU) problems present at major hospitals are a growing problem in British Columbia. At the most basic level, there appear to be three clusters of patients. For example, the Mayor’s Taskforce on Mental Health and Addictions reported that there has been a 43% rise in psychiatric visits to Vancouver’s major hospitals in the four-year period from 2009 to 2013. More recently, in 2016 the British Columbia’s Provincial Health Officer, Dr. Perry Kendall, declared the opioid crisis a public health emergency. The resulting impact of the opioid crisis has also significantly increased the number of emergency department (ED) presentations for overdoses and other symptoms related to substance use. Further adding to the complexity is the fact that a significant proportion of patients presenting to the emergency department (ED) will have co-occurring disorders. For the most part, previous research study these three ‘groups’ of patients independently though their life course of service use would suggest there may be significant overlaps in the quality and quantity of ED usage. Understanding the temporal trends of when patients are likely to present to the ED is one method for improving care/staffing levels within the ED and other pertinent areas of the hospital. Using a nine-year longitudinal data (2008-2017) consisting of 242,253 mental health and substance use ED presentations from a large health authority in British Columbia, this study seeks to examine the temporal characteristics of patients who are admitted to the ED. For this paper, we will explore both macro and micro measurements of time for each of the three groups of MHSU patients to see if there are differences in when each will present to the ED. Macro level measurements of time are the yearly, seasonally, and monthly variations whereas micro measurements of time are weekly and hourly trends.

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Nurturing and maintaining partnerships between researchers and policy-makers: Experiences from the Knowledge Translation Network (KTNET) Africa

David Walugembe, Western University

Background

To generate evidence around health systems in Africa, the Netherlands Organization for Scientific Research (NWO/WOTRO) awarded Makerere University School of Public Health a three-year grant. The purpose of this grant was to establish and coordinate a health systems-related knowledge translation platform aimed at supporting researchers and research users to maximize the impact of the research evidence generated on health systems to inform policy and practice. This KT platform is referred to as the Knowledge Translation Network (KTNET) Africa and operates across eight Sub-Saharan African countries.

KTNET signed memoranda of understanding with all the partners, held face-to-face and online discussions, conducted baseline KT capacity assessment, and conducted KT capacity building sessions. KTNET held annual partners’ meetings where coalition partners appraised each other regarding progress with their KT-related research aspects and provided coalition partners with hands-on support in packing of evidence products.

Approaches

KTNET trained 26 policy makers, 30 researchers, 24 health workers, and 21 media practitioners in KT and research communication. KTNET also supported packaging of research evidence in multiple formats (22, policy briefs, four evidence summaries, three fact sheets, eight newspaper articles, over 100 blogs, three joint conference presentations, five short videos). KTNET supported the emergence of communities of practice within the network.

Outcomes

KTNET trained 26 policy makers, 30 researchers, 24 health workers, and 21 media practitioners in KT and research communication. KTNET also supported packaging of research evidence in multiple formats (22, policy briefs, four evidence summaries, three fact sheets, eight newspaper articles, over 100 blogs, three joint conference presentations, five short videos). KTNET supported the emergence of communities of practice within the network.

Lessons learned

• Managing stakeholder expectations across varying contexts is challenging
• Customizing KT approaches to meet the uniqueness of each context is essential and necessary for securing, nurturing and maintaining the buy-in of stakeholders
• Early stakeholder engagement is essential towards establishing mutual respect and understanding within KT initiatives
Conclusion

Nurturing and maintaining partnerships between researchers and policy makers requires sustained efforts and understanding of the dynamics of the contexts in which they operate.

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19 Crossing knowledge boundaries between researchers and professionals: Reflections on six years of the Fuse Open Science Blog

**Mark Welford**, Fuse – The Centre for Translational Research in Public Health

The Fuse Open Science Blog was launched to engage knowledge users to improve understanding of Fuse and public health research, to challenge the perception that academics are removed from the ‘real world’, and to build a community. It provides an insight into the realities of working in public health.

Mainstream science communication follows a formal, and often highly structured, format. Blogs provide an alternative, allowing researchers to be both authoritative and informal in a way that they rarely can in peer-reviewed publications. For this reason, blogs have been proposed as “one way to demythologize science”. Although science blogs have grown in popularity, few accounts exist of their ‘inner workings’ and whether they are able to engage knowledge users beyond academia. This poster addresses this gap by reflecting on submissions over the last six-years that explore the evidence and policy cycle, looking at who contributes and from which organizations, and the topics broached.

From 2011-17 the blog has hosted over 400 posts, written by 130 authors (12 per cent originating from outside academia), received more than 412,000 page views, and has an international audience.

Commissioners, embedded researchers and knowledge exchange brokers, have used the platform to share their experiences of crossing the boundary between academia and policy. The blog has explored the challenges and solutions to using evidence in policy-making, for example in alcohol licensing, housing, and sugar tax. There is evidence of impact on policy and practice, and of public and community engagement. For example, a nationwide viral campaign to remove junk food from supermarket checkouts was launched following a series of blog posts. The platform also won a UK Blog Award in 2016 and was shortlisted in a UK National Institute for Health Research competition in 2017. The blog has effectively sparked discussion on social media (#fuseblog) which has helped to establish a sense of community.
It has evolved into an open forum in which not only researchers are compelled to post but those working in other sectors. However, the majority of posts are written by academics and the blog could be developed in the future by encouraging policy-makers to share their experiences. Blogs are a highly impactful communication tool that can facilitate effective communication of research findings and create a dialogue between researchers and policy-makers. Currently policy-makers view themselves more often as the audience rather than contributors.

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### 20 The evolution of capacity building, knowledge production, and knowledge translation for an environmental health research partnership project

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**Introduction**

Research partnerships respond to complex questions by supporting co-production of new knowledge as well as facilitation of knowledge translation and exchange. The process of partnership collaborations is complex considering the different perspectives and expertise involved in such research projects. The DoMiNO (Data mining & Neonatal outcomes) project investigates complex spatial relationships between adverse birth outcomes and industrial emissions, using new data-mining methodology. The project applies integrated Knowledge Translation (KT); in which 24 interdisciplinary researchers, clinicians and knowledge-users, contribute their expertise and perspectives throughout the whole research process. We used this project’s integrated KT process as a case study in a qualitative evaluation of the ongoing research collaboration to understand the components that impact the collaborative process. Following team engagement, data were collected through interviews, focus groups, surveys, and participant observation, all adding to the cumulative understanding of the evolution of the collaborative research process. All data were coded and analyzed using thematic analysis procedures.

**Relevance**

Understanding the components that impact the collaborative process in a research partnership is essential in order to support ongoing and future partnerships efforts towards evidence-informed policies.
Objective

Based on the DoMiNO project, we present the major components that contributed to building team capacity for knowledge creation and KT.

Results

Our findings illuminate the process of building capacity to support the progress of research, co-production of new knowledge alongside KT development. We identified the major components that contributed to building relationships and trust, optimizing team work and building capacity. These interrelated components include the drivers of commitment to the research project while balancing perspectives and priorities; communication in an inclusive and safe environment that through sharing knowledge learning, ongoing rapport and alignment of expectations support transparency between disciplines and the different parties involved in the research and; issues of power and ownership.

Main messages

Several components contribute to the evolution of roles, responsibilities, and ultimately, to building and optimizing a partnership in a complex context. It is an ongoing iterative process that evolves through time, as the team works together, roles of researchers and knowledge users evolve, and capacity is built to enable the production of new knowledge and the development and implementation of knowledge translation. Identifying the essential components of the team development and investing efforts to support and maintain them could optimize the building of team’s capacity towards a successful partnership.

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21 From evidence to policy: Current landscape of BC HTA process

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When translating evidence into policy, health technology assessment (HTA) plays an important role. In this domain, there are two types of decision problems that decision-makers face: (1) whether to adopt a new technology and (2) how to optimize the use of existing technologies including the challenging issue of disinvestment or reassessment. To provide a thorough and fair assessment of the technologies, the HTA report includes background information of
the condition and treatment options, stakeholders' perspectives, assessment of the clinical effectiveness and cost effectiveness evidence, economic model and tailored cost-effectiveness analysis to the context of the application, and budget impact analysis. We present how the scientific evidence is translated into policy recommendations, using one HTA completed for the British Columbia (BC) Ministry of Health as an example.

In 2016 in BC, a policy question was put forward to evaluate whether ceramic-on-poly implant should be covered by the provincial health plan. Patients who were receiving total hip replacement could choose from several options for implants. Patients could choose to use a metal-on-poly implant which was covered by the provincial health plan. Ceramic-on-poly implants were available to patients with some out-of-pocket cost to patients.

The clinical effectiveness analysis found that the available evidence did not show any significant differences in safety and effectiveness between the two types of implants. Over a 20-year time horizon, it was estimated that ceramic-on-poly implants could offer an incremental 0.011 QALYs and avoid 0.05 revisions per recipient compared to metal-on-poly, for an additional cost of $43 per patient due to a slightly better revision profile that produced a cumulative advantage. This result in $3,944 per QALY gained and $863 per revision avoided. More than 80% of implants used in surgeries were metal-on-poly. In a scenario where the use of ceramic-on-poly rises to an equal market share as metal-on-poly, the net budget impact for BC over 20 years is expected to be $15.3 million. The higher cost of the more expensive primary implant ($41.1 million) would be partially offset by the reduction in healthcare costs with revision surgeries over time ($25.8 million overall, comprising $5.8 million in physician fees, and $20 million in health authority costs).

After considering the evidence found in the HTA report, the HTA committee recognized ceramic-on-poly hip implants as cost effective and similar in clinical effectiveness to metal-on-poly hip implants and recommended these to be publicly funded in BC.

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