On the Integration of Mental Health and Substance Use Services and Systems: Main Report

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Preamble

In 2001, Health Canada released the report *Best Practices: Concurrent Mental Health and Substance Use Disorders.* Over the ensuing years this report has had a significant impact in the mental health and substance use service communities in Canada. Demand for the report was such that, in addition to free electronic access, the document was reprinted following the distribution of the initial 30,000 printed copies. The report provided Canadian practitioners, program managers, health administrators, policy-makers, and researchers a consolidated summary of the available evidence on co-occurring disorders[1], including a call for better integration of mental health and substance use services and systems.

The report was also the first in Canada to clearly articulate that integration could occur at different levels thereby highlighting that there were many ways in which programs and services could coordinate and collaborate with each other to ensure an integrated experience of treatment and support for clients. Since then we have witnessed a range of integration-related activities, many at the services-level, but also at the broad systems-level. This includes the complete administrative merger of large organizations or systems of services in some Canadian jurisdictions (Alberta being the most recent example). This report calls for us to step back and "take stock" of the rationale underlying the call for improved integration, and how it has been interpreted and implemented in Canada. In particular, this report offers a reminder that the evidence for integration comes largely from studies at the level of clinical services, where the evidence is reasonably clear that integrated treatment and support for people with co-occurring mental and substance use disorders are more effective than non-integrated treatment and support. A significant amount of the effort aimed at "improving integration" in Canada has, however, been at the systems-level, which in turn typically breaks down to governance/administrative integration (i.e. structural merger) and other kinds of activities and strategies such as joint planning, cross-training, co-location, e-health solutions to information exchange, and which may or may not involve structural merger. Seemingly, at the systems-level, the assumption is made

[1]The terminology related to co-occurring substance use and mental health disorders has evolved over the last two decades. Initially termed a "dual disorder", researchers came to question this definition as it often did not accurately capture those individuals who (often) have more than one co-occurring use disorder. Other terms such as "Mentally Ill and Chemical Abusers" (MICA), "Mentally Ill Substance Abusers" (MISA) and "concurrent disorder" also appear in the literature. "Co-occurring disorder" is an increasingly common term used by experts in the field and is also used in this paper.

that integration at this level is an important, if not critical, precursor for well-integrated services. As noted, however, there are many different types of systems-level integration activities and many questions remain about effectiveness and cost-effectiveness at this level of integration. It is not clear if the benefits of all types of systems-level integration strategies are spread evenly across all those who may be affected, including those with mental or substance use disorders but *not* co-occurring disorders? We also pose the question as to whether the potential risks of various integration strategies have been identified and minimized. This is a particularly important question for high-level structural mergers that will potentially have an impact at the population level. Perhaps most importantly, we ponder the motivations underlying various integration strategies, and raise question about the often exclusive focus on those with co-occurring disorders as the main rationale underlying the integration process. For example, are systems-level integration activities, in particular high-level organizational mergers, the result of forces and the pursuit of objectives above and beyond improved clinical and psychosocial outcomes? The answer is "probably" and this begs the question as to whether such objectives are being achieved, or likely to be achieved? We believe these and many other questions remain unanswered and ask the reader to consider factors aside from the needs of people with co-occurring disorders that may be driving the integration "movement".

Post-2001, national and local symposia and various research and evaluation projects have raised many questions about how integration should be operationalized. Some questions have been clinical in nature, such as how to address the unique needs of people with co-occurring personality disorders; those with severe and persistent mental illness; and other challenging populations. Other questions are more about building community capacity and how best to operationalize a "no wrong door" policy with a limited supply of mental health and substance use services. Still other questions are more in the "political" arena, particularly focused on the distribution of power and resources between mental health and substance use sectors. This paper is, in part, a response to the questions brought forth by our many colleagues in Canada and elsewhere working in the mental health and substance use field since the release of the 2001 Best Practice report on co-occurring disorders. We hope we have been true to these significant questions and helpful in the search for answers.

1.0 Introduction

Historically, the design and deployment of publicly funded human services (e.g., health, social, education, corrections) has been compartmentalized to make the services and supports required to meet the needs of specific populations more targeted and manageable, and arguably more accountable. This explains in large part the initial separation of substance use and mental health services (at least in North America and many other countries), and is similar to the division that has occurred in other service sectors. Other examples include the usual separation of services for people with mental disorders and developmental disabilities, as well as the traditional administrative "carve out" of mental health services from health services generally.

Over time, the complexity and overlap of people's health and social needs have become more evident and this has called into question the initial "siloing" of many health and social services. It may be that this complexity and overlap was always present, but not sufficiently recognized when the service delivery systems were initially designed. Alternatively, the challenges of everyday living may have increased, especially for more marginalized populations with fewer resources to draw upon in times of need, resulting in a more complex needs profile than previously evident. The co-occurrence of mental health and substance use problems is a case in point where a growing body of literature has underscored the more serious health and social vulnerabilities of people challenged by such co-morbidity (Health Canada, 2001a; Substance Abuse and Mental Health Services Administration, 2002). There is also a heightened awareness of the degree of overlap in mental and substance use disorders and the challenges in trying to address people's needs through two largely independent systems of services. The additional need for a wide range of health and psychosocial services such as primary health care, emergency services, supportive housing, employment, education and family supports further challenges the delivery of comprehensive and collaborative care to those with co-occurring disorders.

It needs to be recognized that challenges with the "siloing" of services also depend on one's perspective on the matter. It can be argued quite cogently, for example, that a degree of specialization is critical to the functioning of a health or social system and that "silos" are required to nurture and preserve the resources and competencies required to treat and support people with the most complex needs profile. In other words, the problems that have become

apparent with the two worlds of mental health and substance use services and systems are not necessarily with the separation of a certain degree of specialization but rather the lack of communication and collaboration between the two. Many options are available to improve this situation on behalf of current and future clients and their families.

The "siloing" of services, notwithstanding, the increasing complexity and intractability of a given problem domain does seem to contribute to a "reverse pressure" to form various types of inter-organizational relationships and cross-sectoral strategies to better address people's needs. In some instances, inter-organizational relationships evolve naturally, and often informally, at the community level. In other instances. they become mandated by government – as is the case with the legislative requirements in the United Kingdom for "partnership-based solutions" to the delivery of health and social services (Lindsay & McQuaid, 2008; Dowling, Powell, and Glendinning, 2004; Glendinning, 2003; Glendinning, Powell, & Rummery, 2002).

Another factor driving inter-organizational collaboration and integration among human services generally is the escalating cost of delivering services, and the drive to "rationalize" services in order to reduce expenditures through enhanced efficiency. Health care in Canada, for example, has become an increasingly expensive enterprise – growing faster than Canada's Gross Domestic Product since 1998 (Canadian Institute for Health Information, 2008). Health care services have also grown increasingly less accessible and more challenging to navigate, especially for those with complex needs (Plsek & Greenhalgh, 2001; Wyngarrden Krauss, Wells, Gulley, & Anderson, 2001). Workforce studies in some jurisdictions have shown that the substance use service system is finding it extremely difficult to recruit and retain personnel qualified to manage the complexity and slow progress of many sub-groups of clients (Flynn and Brown, 2008; Gallon, Gabriel, & Knudson, 2003). From a system planning and administrative perspective, such data present a clear challenge: more organizations are competing for shrinking pools of funding and qualified human resources to support clients with severe and complex profiles.

The call for integration has been particularly strong in the substance use and mental health systems, where, for the last three decades, researchers, administrators and clinicians alike have debated about whether, how best, and for whom, integration should occur. Interestingly, amidst

all of this debate, no clear consensus has emerged regarding what "integration" actually means, either theoretically or practically. Further, the movement towards more integration has not been well-grounded in inter-organizational or systems theory[2] despite the strong conceptual basis such theory may offer when considering the likely benefits and costs of various forms of integration for all those likely to be affected. Integration in the context of mental health and substance use services and systems has also largely ignored the models and lessons learned from literally decades of work on the integration of health and mental health services (e.g., Smith & Clarke, 2006; Wulsin, Sollner, & Pincus, 2006). Lastly, and perhaps most importantly, there is not agreement on the "business case" for improved integration across these two service systems. Questions persist such as: What is (are) the main goal(s)? Are these goals achievable through different forms of integration?

Most, if not all, published work in the peer-reviewed media (e.g., Minkoff, 2001; O'Brien et al, 2004; Flynn & Brown, 2008), as well as the major research syntheses (Substance Abuse and Mental Health Services Administration, 2002; Centre for Substance Abuse Treatment, 2005), uses evidence on the high overlap and complex needs of people with co-occurring mental health and substance use disorders as the starting point of the integration discussion. The argument then goes on to link this high degree of overlap, and the more severe needs profile, with the inadequate response of the specialized and separate mental health and substance use sectors in meeting these needs (e.g. inconsistent treatment philosophies; administrative and attitudinal barriers to access and cross-referral; lack of evidence-based screening and assessment protocols; poor preparation and training of managers and staff) (Young & Grella, 1998; Grella, Gil-Rivas, & Cooper, 2004; Todd, Sellman, Robertson, 2002). The end result is typically a call for improved integration of services at multiple-levels (e.g., Substance Abuse and Mental Health Services Administration, 2002). This, in sum, was also the main message from the Canadian best practice report (Health Canada, 2001a).

It is highly likely that many factors other than data on co-occurring disorders have also been at play in the call for improved integration of mental health and substance use services and systems.

[2] See Rosenheck, Resnick & Morrissey (2003) for a notable exception of a research study on integration that draws on inter-organizational theory.

These additional factors have, however, not been clearly articulated in the background literature or Canadian policy documents. An edited book on behavioural health integration (Kiser, Lefkowitz & Kennedy, 2001) is helpful in teasing out various motivations in the United States for a closer relationship between the mental health and substance use sectors; many arguments being only tangentially related to improved service provision for people with co-occurring disorders. These other factors include:

- Economic pressures and the need for a variety of cost-containment strategies and, in particular, strategies to decrease the use of inpatient services and a corresponding increase in need to collaborative, community-based, continuum-of-care models;

- New evidence-based treatment and support models that advocate for more individualized services, again creating pressure for a more comprehensive service mix and increased collaboration;

- A stronger consumer movement that demands more client-centred, user-friendly services and improved access to information for educated decision-making;

- A more prominent role for consumer satisfaction as a performance and accountability indicator which, in turn, makes service providers more open to being flexible and adaptable in the treatment and support package they offer; and

- Advances in the use of information technology for "e-health" which facilitates the sharing of health information as well as other integration activities and strategies supported by tele-health, on-line testing, and other applications.

Experts in the area of organizational behaviour would suggest that the movement towards improved integration of mental health and substance use services and systems also reflects the two main factors underlying most inter-organization network development (Mandell, 1984). These are (1) uncertain environments whereby organizations evolve and seek stability in response to changes in the complexity of the environment; and (2) competition for resources whereby organizations will strive to cooperate and coordinate based on their mutual needs to secure resources. Other theoretical perspectives are helpful as well in positing possible reasons underlying the integration movement. One is the "diffusion of innovations theory" whereby people and organizations are more likely to take up an idea or innovation if it something advocated by opinion leaders, is being implemented by those with similar value orientations, and/or if it will bring a certain measure of prestige or influence (Rogers, 2003; Moore & Benbasat, 1991). Institutional theorists have also ascertained a tendency for organizations to drift

to a level of homogenization – in other words once a set of organizations emerges as a field, a paradox arises: they tend to become increasingly similar through progressive efforts at rationalization. They are, however, not necessarily more efficient (DiMaggio & Powell, 1983)[3].

In Canada, it is unclear to what extent these and perhaps other factors have been behind the call for improved integration of mental health and substance use services and systems. In a recent video-seminar sponsored by the Alberta Alcohol and Drug Abuse Commission (AADAC) presenters from Nova Scotia, Newfoundland, and Manitoba spoke to their own integration experiences and reflected on a range of motivations, including co-occurring disorders but also expected improvements in administrative efficiency and overall service quality. In some jurisdictions, the call for more integration at the systems-level predated most of the literature on co-occurring disorders (e.g., the work of the Manitoba Mental Health Working Group (Pascoe et al. 1983)) suggesting that an agenda based on factors other than co-occurring disorders may also have been operating. Another factor driving integration in the United States, Canada and elsewhere may have been competition across prevailing models of treatment and support (e.g., bio-medical, psychosocial rehabilitation, recovery), and a desire within various disciplines to use the integration "movement" to gain status and influence in the mental health and/or substance use services and systems.

In short, it is probably inaccurate to conclude that the call for improved integration of mental health and substance use services and systems within any one jurisdiction can be traced to any one source. Without systematic qualitative research looking into this question, the key drivers for mental health and substance use integration in Canada may be considered mostly a matter of opinion, building upon the evidence related to co-occurring disorders but also professional experience and anecdotal information. Certainly the clinical and social implications of co-occurring mental and substance use disorders, particularly in specific sub-populations, do play an important role in the integration discussion. However, we would be remiss not to bring attention to other potential factors at play; particularly those aimed at containing costs and increasing efficiencies in the delivery of mental health and substance use services and health services

[3] This is referred in the sociological literature as "mimetic isomorphism"

generally (Chernichovsky, 1995), as well as modifying the power structure of the various actors in the system.

Nor would we want to suggest that the evolution of the relationship between the mental health and substance use services and systems has been, or is likely to be, purely evidence-informed. An examination of sources suggests that little research has been conducted with respect to mental health and addiction service sector integration, including outcome and implementation research (Sacks, Chandler, & Gonzales, 2008). Translating research into action also comes with its own set of challenges (Lavis, et al., 2003). For example, a recent study in Manitoba identified barriers to evidence-informed health service planning and decision making (EIDM) with regional health authorities (RHAs; Bowen & Erickson, 2008). The Manitoba experience provided the following key insights:

- There was almost universal support in principle for the importance of using evidence in decision-making.
- Little consensus was found on what "evidence" is; what kind of evidence is most appropriate; and how "using evidence" can best be demonstrated.
- There was some caution voiced about "evidence-informed decision making" (e.g., many different kinds of information can be considered evidence and should be included in the decision-making process).
- The importance of differentiating between "data-driven" and "evidence-informed" decision-making was identified.
- Evidence-informed decision-making at an *organizational* level proved to be a challenging concept.
- Using evidence was often perceived as an "add-on" to existing activities.

As we move into the next section and consider the rationale for mental health and substance use services and systems integration based on the literature on co-occurring disorders, these cautions need to be kept in mind. Indeed, as the compelling arguments for integration within the specific context of co-occurring disorders have accumulated, it has become important to consider not only the potential benefits but also the risks of various types of integration for the segment of the population served by these two service systems that do NOT have co-occurring disorders. It is

also important to consider potential benefits and risks associated with certain types of integration of mental health and addiction services within the context of the broader health, social and criminal justice system(s), and in light of mounting evidence on the complexity and overlap of mental health, substance use and a range of other physical health and other problems (Dickey, Normand, Weiss et al., 2002). In short, it is important to ask if we are focused on integrating services at the "right" level and for the "right" people.

This paper seeks to more systematically explore the concept of integration as applied to mental health and substance use services and systems. We begin in Section Two with a brief summary of the current Canadian context for mental health and substance use services and systems in which the integration discussion is primarily located. In Section Three we then turn to the issue of co-occurring disorders as the rationale for improved integration and provide an update of the literature covered in the 2001 Health Canada report on best practices. In this update we lend a critical eye to the strength of evidence arising from population and clinical epidemiological studies. In addition we add cautionary notes to the integration argument based on new research syntheses of treatment outcome studies of integrated versus non-integrated treatment and support services. We also bring forward information concerning the impact of systems-level integration; evidence that comes largely from research on the integration of mental health services, as opposed to mental health *and* substance use services. In Section Four we identify and briefly describe different conceptual models of integration as further background information for discussions of the pros and cons of different integration activities and strategies, and to hopefully lend more clarity and consistency to the terminology and concepts being used in these discussions. We think there are three areas of past research and knowledge exchange that have not been adequately explored for ideas and lessons learned relevant to the integration of mental health and substance use services and systems. Firstly, in Section Five we draw the reader's attention to the broader issue of co-occurrence of mental and substance use disorders and a wider range of physical health problems – co-morbidity that raises important questions of the appropriate scope of many integration efforts, in particular the role of primary care services. Section Six then focuses on the potential contributions of both *systems theory* and *inter-organizational network theory* to the topic of integration, two additional bodies of literature which we feel have also been neglected concerning the evidence-based for different types and

levels of integration. In conclusion (Section Eight) we summarize key themes from all the material covered, including a key message that integration efforts across mental health and substance use services and systems need to be clearly targeted (e.g., by sub-group based on severity, case complexity) and implemented in a fashion that is cognizant of the needs of all people who access these services and systems, including those with and without co-occurring disorders. The information we have reviewed also clearly points to a stronger priority being placed on program and policy evaluation, and sharing of lessons learned across Canada and with international partners who are engaged with the same challenges in the planning, delivery and improved integration of mental health and substance use services and systems.

Finally, we remind our readers that our objective is not to make specific recommendations about integration of mental health and substance use services or systems *per se*, or to identify "best practices" related to integration. Rather, key facilitating factors, challenges and other issues are presented which we believe can inform discussions about closer integration or actual integration processes. We do, however, conclude with some suggestions for additional environmental scanning and research that we feel stem from our deliberations here.

2.0 The national context in Canada for working towards improved integration

In Canada, the delivery of health services, including mental health and substance use services is a provincial responsibility[4] and is highly variable with respect to the balance of services, capacity and philosophies of treatment. This variability is further complicated by different historical contexts, the tremendous diversity across the country, with urban, rural and remote environments, northern and southern geographic contrasts, and cultural diversity, all of which result in very practical challenges in the delivery of coordinated and equitable health care services.

Regional mental health authorities were recommended in 1997 as a strategy to create seamless continuity of care across mental health services, and to improve the integration of mental health services with other social services systems, including physical health and substance use services (Health Canada, 1997a; Health Canada, 1997b). This mental health authority model was never implemented in Canada on a large scale, although it was tried in New Brunswick for a period of time, and the Alberta Mental Health Board could be viewed as a close approximation of the model. Provinces and territories are, however, at varying stages of regionalization of health services broadly, the goal being to transfer more control over decision-making to local boards or authorities. It is unknown what the impact of this broader regionalization process has been in terms of closer integration for mental health and substance use services. Anecdotally in Ontario, and that's all the evidence we have at present, it seems to have brought these services together, at least in terms of local planning bodies.

Prior to 2000, addictions and mental health issues, in spite of their social and economic burden, were not yet profiled on the national stage. There had been a fairly longstanding call for more investment in community supports for mental health consumers, as well as best practice reviews for mental health systems (Goering et al., 2000). Comparatively speaking, substance use services have had a more modest profile at a national level, with initiatives focused largely on alcohol prevention, and occasional targeted boosts in funding for treatment within some jurisdictions. The National Drug Strategy was launched in 1987 and focused primarily on national and international enforcement. Commitment to the strategy was renewed in 1992 with the revitalized

[4] With the exception of services for the Armed Forces, people of the First Nations and Inuit, and individuals under the jurisdiction of the federal correctional system.

and renamed Canada Drug Strategy that included a broader focus on prevention and identified five priority populations: youth, women, seniors, Aboriginal peoples, and driving-while-impaired offenders (Health Canada, 1998).

Reports on the burden of disease that were commissioned and led by the World Health Organization (Murray & Lopez, 1996) may have contributed to the increased awareness of the social and economic impact of mental health issues, including substance abuse. Also two major studies on the social and economic costs of substance use and abuse conducted by the Canadian Centre on Substance Abuse (Rehm, et al., 2006; Single, Robson, Xie, & Rehm, 1996) received considerable media and political attention.

Thus, in many respects there was a national and regional state of readiness to address the issue of co-occurring disorders, with "early adopters" and champions in place in many Canadian jurisdictions to facilitate the adoption of evidence-based practices and policies related to co-occurring disorders. Many of these champions were enlisted to work on the best practice report on co-occurring disorders (Health Canada, 2001a), as well as ensuing national/regional conferences and workshops dedicated to the topic.

In effect, the best practice report was a catalyst for action on a topic already of high interest at multiple levels in both the mental health and addiction systems. Several provinces, and specific regions in some provinces, conducted "co-occurring disorder system reviews" to assess the climate for change and develop plans to integrate services and systems. Web-based training was developed through the Centre for Addiction and Mental Health (CAMH) in Ontario and offered to clinicians working with individuals with co-occurring disorders. Across the country, a high interest emerged in screening and assessment of co-occurring disorders as these were viewed as good starting points and topic areas which, in turn, would stimulate a wide range of treatment and support issues, including service integration (e.g., Somers, 2008). At the systems-level, there was also some experimentation with respect to both local integrated treatment systems and broader integration strategies such as Manitoba's Co-Occurring Disorders Initiative, Ontario's Concurrent Disorder Framework, and treatment initiatives of members of Quebec's Fédération québécoise des centres de réadaptation pour personnes alcooliques et toxicomanes (FQCRPAT).

Unfortunately, with no mechanism to share experiences and pool lessons learned, these efforts did not lend themselves readily to a national synthesis.

Recently, both mental health and substance use issues are getting more attention at a national level, and in many of the provinces and territories. A strong call for improved integration of mental health and substance use services was contained in the series of reports of the Standing Senate Committee on Social Affairs, Science and Technology, chaired by Senator Michael Kirby, capturing the attention of the country, and in particular, its politicians. Two of the first three reports (Kirby, 2004a; Kirby, 2004b) reviewed recent trends in government to integrate substance use services into community health and social service delivery systems, making use of a population health lens to address a complex set of health determinants. The reports identified stigma as a major obstacle to the provision of effective mental health and substance use services. It also called for multi-sectoral collaboration and partnerships in the development of a national action plan for mental health and substance use, based on common goals and a population health approach.

The focus of the final report, *Out of the Shadows At Last* (Kirby, 2006), was limited primarily to the mental health system but, importantly, did give attention to the issue of co-occurring disorders. It concluded with recommendations that saw the birth of the *Mental Health Commission of Canada* in 2007, an initiative intended to: be a catalyst for the reform of mental health policies and improvements in service delivery; act as a facilitator, enabler and supporter of a national approach to mental health issues; work to diminish the stigma and discrimination faced by Canadians living with mental illness; and disseminate evidence-based information on all aspects of mental health and mental illness, to governments, stakeholders and the public (Mental Health Commission of Canada, 2008).

Although not receiving the same level of attention, in 2006 the *National Framework for Action to Reduce the Harms Associated with Alcohol and Other Drugs and Substances in Canada* called for improved integration of alcohol and drug treatment services with health care, mental health, education, social services and the criminal justice system in an effort to improve client outcomes. Five specific treatment-related themes were noted for further exploration:

- to articulate the core continuum of care for problematic substance use;
- to implement and share best practices within the specialized substance use treatment system and the broader health system;
- to identify facilitators, barriers and corresponding knowledge exchange activities for decision makers, funders and policy makers;
- to develop an integrated national database for services and supports for people with substance use problems; and
- to take a population-informed approach.

The Canadian Centre on Substance Use (CCSA) provided the national leadership for the development of the national framework and, together with the Canadian Executive Council on Addictions (CECA), subsequently organized a national working group of more than 30 representatives from across the country to develop a report on a *National Treatment Strategy* (National Treatment Strategy Working Group, 2008). This recently released report provides recommendations for improving the quality, accessibility and range of services and supports to address risks and harms associated with substance use. Further, the tiered model of services and supports embodied in the National Treatment Strategy provides a framework not only for the improved integration of mental health services and supports but also improved integration with many other sectors such as primary care and other health services, justice, housing and social assistance, education and natural community supports, to name just a few. Figure 4 in Section Four provides a schematic diagram of the tiered model.

The *National Anti-Drug Strategy* (Government of Canada, 2007), a federal government initiative, provides targeted funding for three areas of effort: prevention, treatment and enforcement. The budget for the treatment component is $32 million and is being distributed over five years through the Drug Treatment Funding Program (DTFP). The topic of co-occurring disorders was identified as one of several priority areas and it is expected that some of the proposals submitted for funding in 2008 will be in this area. Whether any projects are specifically concerned with the integration of mental health and substance use services and systems remains to be seen.

Another important initiative at a national level that may help inform integration efforts is a special call by the Canadian Institutes for Health Research (CIHR) for research on substance use treatment. Special RFA's for CIHR Team Grants have also targeted "co-morbidity".

Finally, work within Canada's First Nations community is highly relevant. The *First Nations and Inuit Mental Wellness Advisory Committee* is a national initiative that seeks to identify culturally appropriate solutions to the unique health and substance use issues facing First Nations and Inuit peoples. The committee was established to provide strategic advice to the First Nations and Inuit Health Branch of the federal government. Also, in 2008 a national review focused on evidence-based treatment was launched within the National Native Alcohol and Drug Abuse Program (NNADAP) and this will include an assessment of issues relevant to the integration of mental health and substance abuse services.

Summary: Paralleling best practice reviews in other jurisdictions, the 2001 Canadian best practice report on co-occurring disorders brought the needs of this population to the fore and served as a catalyst for many initiatives aimed at improving integration at the program and systems-levels for this population. Highly relevant work related to the integration of mental health services generally was also conducted in the late 1990's and which still resonates through the mental health sector in Canada. There are currently many regional, provincial and national initiatives in Canada that now provide important opportunities to build upon prior work, and make progress towards improved integration at multiple levels for people with mental and substance use disorders, including but not limited to those with co-occurring disorders. Importantly, no mechanism exists in Canada to share ideas for research, development and evaluation and to synthesize the lessons learned to date with respect to the integration of mental health and substance use services and systems.

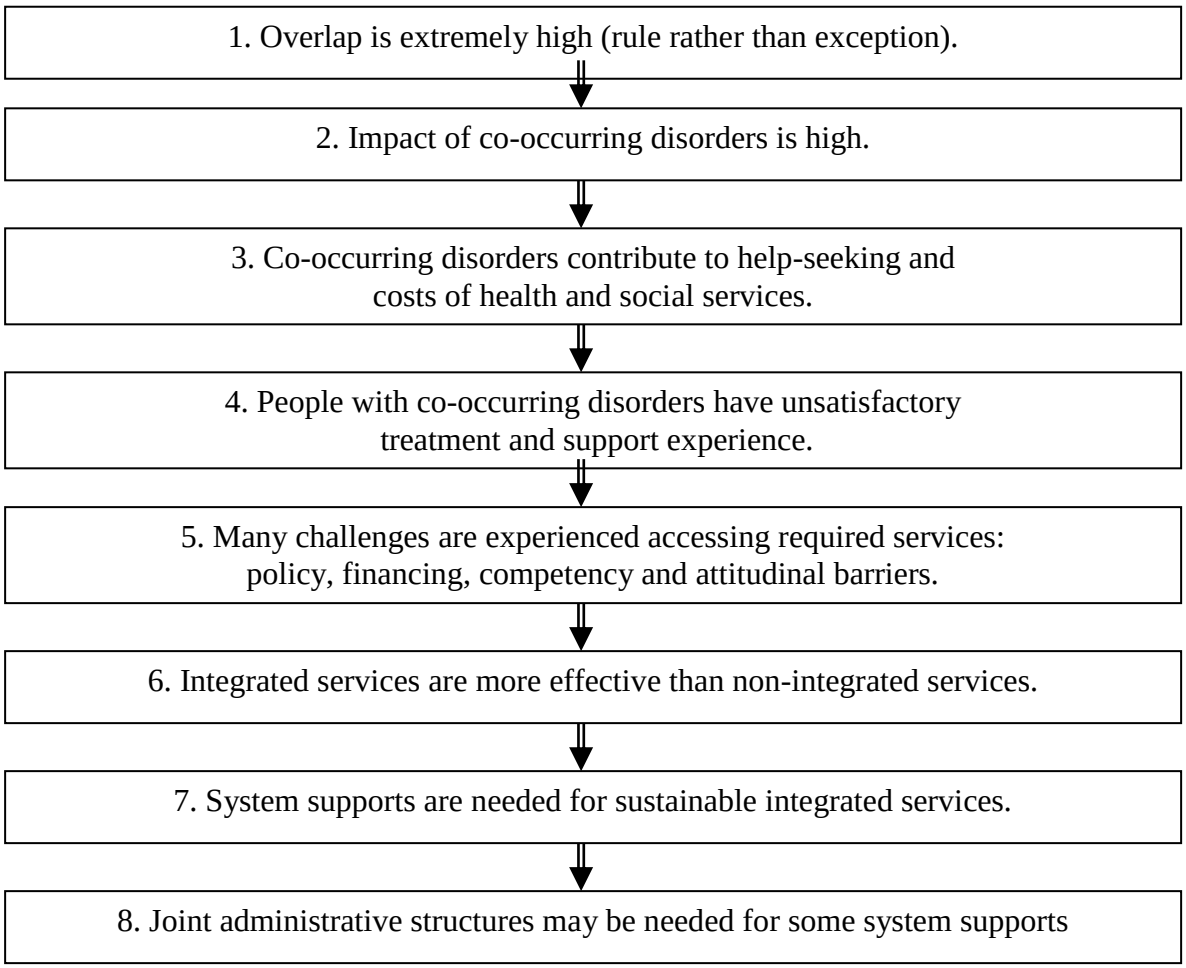
3.0 Rationale and implications of integration for those with a co-occurring disorder.

The rationale for integration of mental health and addiction services is strongest when presented in relation to the target population with co-occurring disorders, especially the narrower and more clinically severe sub-group. Indeed, the research literature and academic and lay arguments on the topic of integration typically draw attention to the high overlap in the two populations, and then proceed to emphasize the impact on treatment and support outcomes, and the challenges for people with co-occurring disorders navigating two disparate systems of services. Integration-related solutions are then proposed or summarized with varying degrees of emphasis given to services versus systems-level integration strategies. Good examples of this "logic chain" can be found in Drake et al. (1998); Drake et al. (2004); Siegfried (1998); Rachbeisel, Scott, and Dixon (1999), SAMHSA, (2002); CSAT (2005); and Burnam and Watkins (2006). Minkoff (2001) summarizes the rationale quite crisply:

> "*First, accumulating epidemiologic data from the 1980's and 1990's indicate that co-morbidity is so common that dual diagnosis should be expected rather than considered the exception. Consequently, the application of best practices cannot be restricted to small populations but rather must be extended to the development of models that apply to the entire system of care and that require integrated system planning involving both mental health and substance abuse treatment agencies."* Minkoff (2001), p. 597.

The logic chain is illustrated below in Figure 1. We contend that this line of reasoning, especially the importance attached to the degree of overlap between mental and substance use disorders, and the apparently critical role of systems-level supports, has set the tone for much of the work aimed at the integration of mental health and substance use services and systems in Canada in the past decade. We will return to Figure 1 after offering an update and discussion of the evidence underlying the logic chain.

Figure 1: Logic chain for integration based on co-occurring disorders



3.1 What are co-occurring disorders?

To help us review the literature it is helpful to briefly summarize some terminology. Health Canada (2001a) defines the co-occurring disorders population as "*those people who are experiencing a combination of mental/emotional/psychiatric problems with the abuse of alcohol and/or another psychoactive drug*" (p. 7). Precise definition aside, the term "co-occurring disorder" belies the many combinations and permutations of mental and substance use disorders (Donald, Dower, & Kavanagh, 2005; Miles, Johnson, Amponsah-Afuwape, et al., 2003; Kandel, Huang & Davies, 2001). Neither does the one all-encompassing term convey the range of severity, either expressed through multiple disorders (variously referred to as "multi-morbidity" (Gamma & Angst, 2001; Angst, Sellaro, & Merikangas, 2002) or "level-of-burden" (Brown, Huba, & Melchior, 1995)), or through differential impairment in functioning and quality of life

(Bijl & Ravelli, 2000; Hasin, Stinson, Ogburn & Grant, 2007)[5]. Largely a term of convenience, the term "co-occurring disorder" may actually detract from a much-needed focus on specific sub-populations and differential problem severity, especially as these relate to the need for specific treatment and integration strategies (Flynn & Brown, 2008).

Although the term "co-occurring *disorder*" is often used synonymously with the phrase *"co-occurring mental and substance use problem"*, technically speaking it refers to a person meeting the criteria for both a substance use disorder and another mental disorder as defined by DSM-based classification systems. This, however, makes the term a bit of a moving target since the classification system itself has changed over time (e.g., DSM-III, DSM-III-R and DSM IV have all been used in population surveys assessing co-occurring disorders and a new version is under development that will again impact the assessment of co-occurring disorders and comparability of data; Nunes & Rounsaville, 2006). It is also challenging to parallel the precise definitional requirements of a DSM-based diagnosis in the context of a survey questionnaire or interview (see, for example, Grant, Frederick, Dawson, et al., 2004), and to include the full range of mental disorders as defined in DSM (e.g., personality disorders). Considerations of sample size and survey costs also mean psychotic disorders are typically excluded in the relevant population surveys. Personality disorders are also typically excluded, a notable exception being the recent NESARC population survey (Grant, Stinson, Dawson, et al., 2004).

With co-occurring disorders, the dimension of time is also critical. A co-occurring disorder may refer to mental and substance use disorders: 1) "co-occurring" simultaneously at a particular point in time; 2) "co-occurring" over a recent time period - that is to say, the person has one disorder now but had the other in the recent past (e.g., the past year); and 3) "co-occurring" in that both were experienced at some point over the course of the person's lifetime[6]. From many perspectives the *current* overlap of problems is the most relevant, for example, in working with a client to develop treatment and support plans and strategies for treatment retention (Broome, Flynn & Simpson, 1999; Rush, Dennis, Scott, et al., 2008a). However, a "lifetime" assessment of co-

[5] The term "complexity" is often used in the wider health and mental health literature to refer to the overlap in physical and behavioural health conditions (e.g., Huyse, Steifel & de Jonge, 2006).
[6] Some authors have preferred the term "successive disorders" to mean disorders experienced by the same person during the lifetime but not at the same time.

occurring disorders is also important from a longitudinal, life-course perspective since the fact that a person may present with one disorder or symptom profile today does not mean he/she did not have relevant disorders in the past, or will not have a co-occurring disorder in the future, given the increased risk that needs to be taken into account. This is important from a prevention and treatment perspective, for example, when considering how onset or remission of signs and symptoms of substance use disorder may or may not prevent a first-time occurrence or trigger a relapse of a depressive episode (e.g. Agosti & Levin, 2006). The opposite is also true for risk of a relapse of substance use disorder based on the course of chronic depression (Hasin, Liu, Nunes, et al., 2002). The link between adolescent conduct disorder and subsequent substance use disorders is well established (Hawkins, Catalano, & Miller, 1992; Fergusson, Horwood & Ridder, 2007; Button, Rhee, Hewitt et al., 2007). The longitudinal association between early cannabis use and schizophrenia is also drawing increasing attention from a policy and clinical perspective (Hall & Degenhardt, 2006), as is the potentially causal link between alcohol or drug dependence, some mental disorders and pathological gambling (Rush, Bassani, Urbanoski & Castel, 2008b; Petry, Stinson and Grant, 2005). In sum, both a cross-sectional perspective (i.e., the implications of co-occurrence in the immediate past) and a life-course perspective (i.e., the implications of co-occurrence over the lifetime) are important when considering the role of co-occurring disorders in the discussion of better integrated mental health and substance use services.

Finally, individuals with a mental and/or substance use disorder may also have many other co-occurring physical health conditions. At one end of the spectrum it is known that co-occurring disorders increases the risk of mortality (Fridell & Hesse, 2006), especially by suicide (Séguin, Lesage, Turecki, et al., 2005), and among people with schizophrenia and substance use disorders (Brown, 1997; Felker et al., 1996). Individuals with severe mental illness who also abuse alcohol or other drugs are also at increased risk of serious infections such as HIV and Hepatitis C (Rosenberg et al., 2001), and many other health problems (Brown et al., 1995). These considerations of co-occurring physical health problems do not factor into current definitions of "co-occurring disorders", although they are getting increasing attention in the research literature (Bilsker, Gilbert, & Samra, 2007; Goldner et al., 2004).

3.2 The case for integration based on co-occurring disorders:

Building the case for integration of mental health and substance use services and systems for people with co-occurring disorders has evolved through three overlapping but distinctive stages (Flynn and Brown, 2008). These stages have been termed:

- the *discovery* stage (i.e., what are the problems or key issues?);
- the *significance* stage (i.e., how important are they?); and
- the *program/policy solutions* stage (what are potential clinical and system strategies to improve and support integration activities, and do these strategies work?).

The primary literature in each stage, summarized in Table 1, emanated originally from the United States, which in turn stimulated similar work in other countries, including Canada. Researchers in the UK, Australia, and New Zealand have also contributed substantively to the evidence-base in the area. It is critical that jurisdictions seek to replicate the core findings on co-occurring disorders within their own context since unique historical, social and cultural issues are likely to be important at each stage of research in a given jurisdiction. This is especially true for understanding the basic epidemiology of mental and substance use disorders, including co-occurring disorders, and factors challenging the delivery of comprehensive and effective services. A case in point is the evidence from the US concerning systems-level barriers related to financing and regulatory policy, barriers grounded in funding strategies such as Medicaid, block grants and Social Security regulations (Burnam & Watkins, 2006; Clark, Power, Le Fauve & Lopez, 2008). There may be financing and regulatory barriers to effective treatment and support for people with co-occurring disorders in Canada, but the specifics and possible solutions will surely be different than in the US or elsewhere.

Further, not all jurisdictions are at the same stage in the research and development process concerning integration, nor are they at the same stage of readiness for change and sustainability of integration processes and structures. Canada, for example, has only recently produced the kind of large-scale epidemiological data that drove much of the integration issue in the United States from the early 1980s onwards. Although the Canadian best practice review (Health Canada, 2001a) did engage key stakeholders across the country, including people living with co-occurring

disorders, there is still much to be done to understand the various challenges to better integrated services at the services and systems-level in the various Canadian jurisdictions. Perhaps most importantly, Canada clearly lags behind the United States in developing and evaluating technical and infrastructure *supports* that are required to facilitate and sustain integration.

Table 1 provides an overview of some of the major studies in the US and Canada exemplifying the three stages. Some of these studies are described in more detail below.

3.2.1 The literature on "discovery"

During the discovery stage the emphasis in the research was on understanding the degree of overlap among mental health and substance use disorders. The call for more integrated services and systems was stimulated in large part by community psychiatric epidemiological studies in the United States demonstrating high overlap of mental and substance use disorders in the general population. The Epidemiologic Catchment Area (ECA) Survey (Regier, et al. 1990), initially administered between 1980 and 1984, found that individuals with a mental illness were at substantially increased odds of also experiencing a substance use disorder in their lifetime, and vice versa. This was particularly true for specific disorders where the likelihood of having a substance use disorder was substantially higher than for the general population - four times for individuals with schizophrenia and five times for those with bi-polar disorder. Collapsing across the various mental disorders, 36.6% of people with a lifetime alcohol use disorder and 53.1% of people with a lifetime drug use disorder had experienced a lifetime mental disorder.

These findings were supported a decade later by the National Comorbidity Survey (Kessler, et al. 1996) demonstrating high prevalence rates of co-occurring substance and mental disorders in the general population – 43% for individuals with a 12-month substance use disorder (alcohol or other drugs). Subsequent prevalence studies reported rates of overlap typically in the 20-40% range for alcohol use disorders and 30-50% for drug use disorders (Merikangas, et al., 1998; Jane-Llopis & Matytsina, 2006). The findings, however, depended a lot on the country, the measures, the time period under study (e.g., lifetime versus 12-month estimates) and others methodological issues.

In 2004, the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) found somewhat lower prevalence rates for co-occurring disorders in the United States: about 20% of all persons in the general population with a current substance use disorder also had at least one current independent mood disorder; and 18% had at least one current independent anxiety disorder. Similarly, about 20% of those with at least one current independent *mood* disorder had a co-occurring substance use disorder, and 15% of those with at least one 12-month independent *anxiety* disorder had a substance use disorder (Grant et al., 2004). One possible factor underlying the lower rates of co-occurring disorders compared to the landmark NCS and ECA studies was the use of a more stringent and accurate protocol for defining substance use disorders according to DSM-IV (e.g., all symptoms must be present within the designated time period specified in DSM- IV, as opposed to intermittently accumulating over the study period).

A large literature also blossomed over this period (roughly between 1990 and 2004) on the frequency and presentation of co-occurring disorders in clinical settings, including both substance use and mental health services. The common finding was for higher rates of co-occurring disorders among clients of specialized substance use services (typically in the 60-70% range) compared to mental health services (typically within 20-50%) (Flynn and Brown, 2008). It was also subsequently shown in later studies that the *severity* of problems seen in the two sectors was different - for example, more severe mental health problems among people with co-occurring disorders in the mental health system compared to those being seen within substance use services (McGovern et al., 2006). This is not a universal finding, however, since at least one good quality study has found no difference in profiles of clients with co-occurring disorders in mental health compared to substance use services, with the main exception being a higher prevalence of cases with schizophrenia spectrum disorders (Havassy, Alvidrez & Owen, 2004).

Researchers have also looked beyond the mental health and substance use services specifically and examined the degree of overlap in people with substance use and mental disorders in other settings such as emergency departments (McNiel, & Binder, 2005), and correctional facilities (e.g., Abram & Teplin, 1991). In particular, the high degree of overlap is correctional settings (in the 90% range) has drawn considerable attention.

Table 1: Research highlights within three stages of research on co-occurring disorders in the U.S. and Canada

STAGES	UNITED STATES	CANADA
DISCOVERY STAGE	• The Epidemiologic Catchment Area (ECA) Survey (general population sample): Regier, et al. (1990): Adults with lifetime alcohol disorders were 2.3 times more likely to have a mental disorders compared to those without an alcohol disorder. Adults with a lifetime drug use disorder were 4.5 times as likely to have a mental disorder compared to those without a drug use disorder. 36.6% of people with a lifetime alcohol use disorder and 53.1% of people with a lifetime drug use disorder had experienced a lifetime mental disorder. • The Epidemiologic Catchment Area (ECA) Survey (institutional sample: *Regier, et al.(1990). 55% of a*dults with a lifetime alcohol use disorder and who had sought help from a speciality alcohol, drug or mental health service had a lifetime mental disorders (6-month rates). For those with a drug use disorder who had sought help the overlap was about 65%. • National Comorbidity Survey: *Kessler, et al., (1996).* 51% of individuals with a lifetime substance use disorder (alcohol or other drugs) and 43% of individuals with a 12-month substance use disorder had a mental disorder. Those with a substance use disorder had about 2.5 times the odds of having a mental disorders compared to those with a substance use disorder. • National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)*: Grant, et al.,(2004).* 20% of all adults in the general population in the US with a current substance use disorder also had at least one current independent mood disorder; 18% had at least one current independent anxiety disorder. • Chicago prison study: *Abram and Teplin (1991).* Among the 728 detainees with a current mental disorder, 90% had a co-occurring substance use disorder; 59% met criteria for two or three co-occurring disorders.	• Mental Health Supplement to the Ontario Health Survey*: Merikangas et al., (1998):*[7] Adults in the general population who met DSM III-R criteria for an alcohol abuse or dependence had significantly higher odds of having other mental disorders, including mood and anxiety disorders, anti-social personality disorders and drug use disorders. About 23% of those with alcohol dependence met criteria for a mood disorder; 39.6% anxiety disorder and 27.6% anti-social personality disorders. • Canadian National Population Health Survey. A series of studies were undertaken on the relationship between alcohol consumption and major depression (Wang and Patten, 2001a; 2001b; 2002) • Canadian Community Health Survey (CCHS; Cycle 1.2; 2002). *Rush, Urbanoski, Bassani et al., (2008c).* Among adults with a substance use problem, including dependence, the 12-month prevalence of mood or anxiety disorders was 15.9%, almost twice the rate as for those without a substance use problem (8.4%). Other studies have used the CCHS 1.2 data to examine co-occurring disorders in different sub-populations (e.g., Currie et al., 2005; Kairouz et al., 2005; El-Guebaly et al., 2007; Tiwari & Wang, 2006) • Ontario Mental Health System study***:*** *Rush & Koegl (2008)***.** A system-wide prevalence estimate of 18.5% for co-occurring disorders within the overall mental health system; the highest rate (28%) was found in specialty inpatient services, followed by specialty outpatient services (19.1%) and community services (17.8%). Across all levels of care having a co-occurring disorder was strongly associated with antisocial and challenging behaviour, legal involvement and risk of suicide or self-harm. • Ontario addiction services***.*** *Rush, Castel, Brands et al. (2008d*)**:** *Ontario addiction service**s.*** In three representative adult addiction treatment programs, the prevalence of any lifetime or current mental disorder was 81% and 70%, respectively. Lifetime and current mood disorders were 62% and 43%, respectively, and for anxiety disorders 51% and 34%**.**

[7] The original Ontario study was published by Ross (1995). However, drug use disorders were included with other mental disorders in the calculation of co-morbidity rates with alcohol abuse or dependence.

STAGES	UNITED STATES	CANADA
SIGNIFICANCE STAGE	Lack of coordination and major gaps between the mental and substance abuse treatment systems (Ridgely, et al., 1987) Co-occurring mental and substance use disorders associated with poorer clinical and social outcomes: higher rates of relapse and rehospitalization (Linszen, et al. 1994; Swofford, Kasckow, Scheller-Gilkey & Inderbitzen, 1996), depression and suicidality (Bartels et al. 1992), violence (Cuffel et al., 1994; Swartz et al., 1998), incarceration (Abram & Teplin, 1991), homelessness (Drake et al., 1990; Caton et al., 1994), and HIV and hepatitis C infection (Dixon et al., 1995; Rosenberg et al., 2001). The negative impact of co-occurring mental disorders on addiction treatment outcomes: McLellan et al. (2000), Rounsaville, Dolinsky, Babor, & Meyer, (1987); Kranzler, Del Boca, & Rounsaville, (1996); Lewis, et al., (1996) ;Pettinati, Pierce, Belden, & Meyers, (1999); Iribarren, Sidney, Jacobs, & Weisner, (2000); Mertens, Lu, Parthasarathy, Moore, & Weisner, (2003); Weisner & Matzger, (2002). Help seeking: Regier et al., (1990) report in the ECA study that individuals with co-occurring disorders are more likely to seek care. Results were replicated with data from the NCS study (Kessler et al., 1996; Wu, Kouzis, & Leaf, 1999) and other studies such as an Australian survey (Burns and Teeson, 2002). Kessler and colleagues (1996) also reported that less than half of the people with co-occurring disorders had sought help in the past year. Other studies reported lower rates of help-seeking (e.g., Regier et al., 1993) Economic Costs: For three groups of clients with schizophrenia receiving services in a community mental health center, the average annual services costs varied substantially--$17,706 for those who currently abuse substances, $14,662 for those who abused substances in the past and $9,617 for those with no history of substance abuse (Bartels, et al., 1993); Another study of a large sample of individuals with a psychiatric disorder receiving Medicaid benefits in found that those with a co-occurring substance abuse disorder accounted for 60% higher psychiatric treatment costs (Dickey & Azeni, 1993)	Help seeking: Individuals with co-occurring disorders are more likely to seek care (Ross, Lin, & Cunningham, 1999). Urbanoski et al., (2007) also showed that Canadians with a co-occurring disorder reported the poorest mental health and were the most likely to seek care. Satisfaction with care: Individuals with a co-occurring disorder reported the lowest satisfaction with care; individuals with a co-occurring disorder were four to seven times more likely to report unmet need compared to those with either a substance use or mental disorder alone (Urbanoski et al., 2007) Social costs: In a 2005 study of 102 cases of suicides in New Brunswick over a 14-month period, more than 60% of the deceased had an addiction problem at the time of death; nearly 70% had a history of addictions problems; only 10% were in contact with substance use services in the year preceding their deaths; a further 70% had an affective disorder at the time of their death (Séguin, Lesage, Turecki, Daigle, & Guy, 2005). Economic Costs: In a study of individuals serving a community sentence within the British Columbia correctional system, the hospital costs per person for those with a mental disorder was $390; for a substance use disorder; $344, and for a co-occurring disorder, $1485) (Somers et al., 2007).

STAGES	UNITED STATES	CANADA
SOLUTIONS STAGE	***Treatment Research*** • Development of specific evidence-based clinical protocols including assessment for co-occurring disorders (Mueser, Noordsy, Drake, & Fox, 2003), manualized components of integrated treatment programs (Najavits, 2002) and fidelity scales for planning and monitoring (Mueser, et al., 2003, Substance Abuse and Mental Health Services Administration, 2003). • Seminal reviews of the effectiveness of integrated versus non-integrated treatment (Drake, Mercer-McFadden, Mueser, et al., 1998); (Drake, Mueser, Brunette & McHugo, 2004); and, most recently, (Drake, McNeil, & Wallach, 2008). ***Systems-level Work*** • Published syntheses contributing to evidence-based knowledge dissemination (e.g., Centre for Substance Abuse Treatment's *Treatment Improvement Protocol* (2005); Substance Abuse and Mental Health Services Administration's (SAMHSA) *the Co-Occurring Disorders: Integrated Dual Disorders Treatment Implementation Resource Kit.* • A proliferation of infrastructure and capacity-building initiatives aimed specifically at improving and sustaining integration activities and processes (Clark, Power, Le Fauve, & Lopez, 2008) through the national leadership of the Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration (SAMHSA).	***Treatment Research*** • People seeking help for substance use disorders who also have depression achieve good outcomes when mental health services are integrated into the treatment program (Charney, Paraherakis, & Gill, 2001). • Korman et al. (2008), reported on a study conducted at the former Addiction Research Foundation and found that participants in an integrated anger and addictions treatment program had improved anger-related, gambling-related and substance use-related outcomes compared to a standard care model. • A compendium of advice for counsellors working with clients with co-occurring disorders (Skinner, 2005). ***Systems-level Work*** • The 2001 *Best Practices: Concurrent Mental Health and Substance Use Disorders* (Health Canada) report synthesized research literature and expert opinion in the first pan-Canadian source document. The recommendations included u*niversal screening*, a*ssessment*, *treatment and support*, and *systems-level* supports. • Provincial/regional "System Reviews for Co-occurring Disorders" designed to assess the current climate for change and to develop plans to integrate services; Internet-based training developed and offered to clinicians working with individuals with co-occurring disorders; high interest in screening and assessment as a place to start; with some development of integrated treatment programs. • National Treatment Strategy which presented a "tiered model" of a treatment system, including the call for a "no wrong door" policy and improved coordinated care across mental and substance use services (National Treatment Strategy Working Group, 2008)

Canadian contributions:

In Canada, early population-level research on co-occurring disorders was confined to one provincial study in Ontario (Ross, 1995). This study confirmed the higher than expected prevalence of mental disorders among people with alcohol abuse/dependence. An early study within the clinical services of the former Addiction Research Foundation found 78% of a large sample of clients had a lifetime co-occurring psychiatric and substance use disorder and 65% had a current mental disorder (Ross, Glaser, & Germanson, 1988).

More recent work in Canada has contributed population-level estimates of co-occurring disorders for the first time (Rush et al, 2008c), as well as better estimates derived from more comprehensive studies of clinical populations (Rush & Koegl, 2008; Rush et al., 2008d). With respect to population-level estimates, Rush and colleagues (2008c) used data from the 2002 Canadian Community Health Survey (CCHS, Cycle 1.2) to demonstrate that the 12-month *population prevalence* of co-occurring substance use problems and mood or anxiety disorders was 1.7%, representing approximately 435,000 Canadian adults. *Among people with other mental disorders,* the 12-month prevalence of substance use problems was 20.7% - almost twice the rate as for individuals without other mental disorders (11.0%). Likewise, *among people with substance use problems*, the 12-month prevalence of other mental disorders was also almost twice the rate as for those without a substance use problem – 15.9% and 8.4% respectively.[8]

Rush & Koegl (2008) reported prevalence estimates of co-occurring disorders within the overall mental health system in Ontario. The study conducted secondary analyses of provincial data for mental health services under three broad levels-of-care: specialty hospital inpatient, specialty hospital outpatient and community mental health services. By sampling from a large number of programs across a comprehensive system of mental health services, the study provided an estimate of the prevalence of co-occurring disorders that is not highly

[8] Due to the design of the population survey, the analyses did not include personality disorders and several specific anxiety disorders, a limitation that may result in an underestimation of overlap. However, given the high co-occurrence of various mental disorders included in the survey, the degree of underestimation may not be significant. Work with similar data but with other populations has shown that the exclusion of some of the specific anxiety disorders in the Canadian survey probably has a minimal impact on prevalence rates (Streiner, Cairney & Veldhuizen, 2006).

dependent on characteristics of populations served within a single setting. Substance abuse and dependence diagnostic information was captured using the Colorado Client Assessment Record (CCAR) – a functional assessment tool—together with recorded diagnoses of a substance use disorder. The analysis provided an overall prevalence rate of 18.5% for co-occurring disorders with the highest rate (28%) in specialty inpatient services, followed by specialty outpatient services (19.1%) and community services (17.8%). Across all levels of care, co-occurring disorders were also found to be more prevalent for males compared to women (about a 2:1 ratio) and for younger patients. For outpatient and community settings, clients with co-occurring disorders were found to have a more severe and complex profile of needs. Finally, across all levels of care, having a co-occurring disorder was strongly associated with antisocial and challenging behaviour, legal involvement and risk of suicide or self-harm.

Although not based on a provincial sample of addiction treatment programs, recent Ontario research in three representative adult programs yielded information on the prevalence of co-occurring disorders (Rush, et al., 2008d). Axis I mental disorders were assessed with the Structured Clinical Interview for DSM-IV (SCID). The prevalence of *any* lifetime or current mental disorder was 81% and 70%, respectively. Lifetime and current mood disorders were 62% and 43%, respectively, and for anxiety disorders 51% and 34%. Thus, the rates of co-occurring mental disorders were quite high and comparable to recent estimates in large US samples (Chan, Dennis & Funk, 2008).

These two Canadian studies with clinical populations provide important findings as they relate to differences in overlap in the two populations, at least in the Ontario context. For the substance use services, co-occurring mental disorders are clearly the rule rather than the exception. This may be due in part to the neurotoxic effects of substance use—with heavy substance use sub-clinical mental illness manifestations can increase in severity and duration and reach clinical thresholds. Consequently, the severity and number of disorders decrease in most patients with a decrease in consumption. In contrast, among people seeking treatment and support from mental health services, co-occurring disorders are the exception rather than the rule. In this sector the high overlap with substance use disorders is dominant in certain

sub-populations (e.g., with young males and those with personality disorders). These differences in the context and population in which co-occurring disorders are being examined have important implications for service planning and delivery, particularly as they relate to discussions of integration, and the motivations and challenges for integration across the two service systems.

Some cautionary notes on the epidemiological data:

There is some risk associated with using the prevalence data on co-occurring disorders as the primary starting point for arguments in favour of the integration of mental health and addiction services and systems. First, a natural remission of mood and anxiety disorders takes place in most patients with a reduction of substance intake. Second, because it is easy to lose sight of the often substantial group who experience a mental disorder or a substance use disorder, *but not both*. Indeed, at the population level[9], it is clear that the co-occurring group represents the minority, not the majority, of people living with these disorders.

Indeed, a review of the Canadian data for purposes of this report prompted a closer examination of the data emanating from the major epidemiological studies in the United States and elsewhere. In effect, the data are quite consistent in showing that the majority of people *in the general population* with mental and substance use disorders, as defined in the respective surveys, do NOT have co-occurring disorders. This is confirmed in the most recent and exhaustive review on this subject (Jane-Llopis & Matytsina, 2006), as well as an earlier synthesis of projects with a high degree of commonality in survey methodology and instrumentation (Merikangas, et al., 1998). For drugs other than alcohol, the rates of lifetime co-occurrence approach the 50% range. For alcohol use disorders, which are far more common than drug use disorders, the overlap is more typically in the 20-35% range, including the recent estimates published for co-occurring substance use and personality disorders (Lenzenweger, et al., 2007). The degree of overlap for 12-month versus lifetime prevalence is even lower (Jane-Llopis & Matytsina, 2006). Our own Canadian data indicated a degree of overlap in 15-20% range, a level that is on the low end of that reported

[9] This is a generalization based on large-scale population surveys done to date. Findings are likely to be different for some specific jurisdictions/communities such as those of First Nations and Inuit people.

internationally, but only marginally so, and very close to the most precise and up-to-date estimates from the United States (Grant, et al., 2004).

Further, the Canadian data reviewed earlier also show that it is essentially within the substance abuse treatment population, but *not* the overall population served by mental health inpatient, outpatient and community programs, that co-morbidity is the rule rather than the exception. In addition, the prevalence rates of substance use dependency in the Canadian population are much lower than that of the combined mood and anxiety disorders.

We do not mean to imply that the epidemiological data have been deliberately manipulated to draw undue attention to issues related to the effective treatment and support of people experiencing co-occurring disorders. There are also many ways in which the epidemiological data on co-occurring disorders can be reported and this complexity only adds to the challenges in using the information for planning and policy development. For example:

- Is the *lifetime* prevalence of co-occurring disorders more appropriate for planning purposes than data on *current or past-year* prevalence? The former takes a life-course perspective and implies a higher need for primary and secondary prevention. Current or past year prevalence data are typically used for planning and policy development since they are more closely associated with the person's immediate needs? The pros and cons of these options are rarely discussed.

- Should services and systems be planned on the basis of findings from the general population or from the segment of that population who seek help (i.e., clinical samples)? The answer to this question may depend on the jurisdiction or scope of the health system under consideration. At a community-level with a relatively small number of providers working on local integration strategies, drawing upon data drawn from samples of cases in treatment may be most relevant as it reflects the most immediate treatment need and demand. At a regional or provincial level it is perhaps more appropriate to plan on the basis of population-level needs, for example, to estimate the gap between the level of need and current demand and resource supply. Again these nuances of the data for particular purposes are rarely discussed.

- The degree of overlap is often different when assessing mental disorders among those with substance use disorders, compared to substance use disorders among those with other mental disorders. The first approach will typically yield a higher degree of overlap since the prevalence of substance use disorders in virtually any population sub-group is higher than the prevalence of mental disorders, in part due to the neurotoxic effect of the substances. Gender and age differences will also be

substantively different depending on the approach utilized – since, for example, more males have substance use problems than females, and more females have mental disorders compared to males. The method of calculating overlap should depend on the explicit purpose of the data analysis and planning objectives. Raw data such as percentages as well as odds ratios need to be considered in examination the evidence and making decisions.

- Lastly, is it more important to emphasize the actual amount of overlap (i.e., the *percentage* having both disorders) or the *odds* of having a mental disorder for people with a substance use disorder compared to those without a substance use disorder? In the recent Canadian data people with a substance use disorder were about twice as likely to have a co-occurring mental disorder compared to those without a substance use disorder. However, the degree of overlap was only about 16%.

To reiterate, we do not intent to downplay the importance of co-occurring disorders as an important factor impacting access to required services, the benefits received, and the cost of treatment/support. For the group of people with co-occurring disorders, especially multiple severe disorders, the data consistently show that the impact on their quality of life is real and profound, and that there are major issues with respect to accessing services and satisfaction with services received. It is also important to keep in mind that even if the size of the sub-group with co-occurring disorders is small in absolute terms, meeting their complex needs presents many challenges, takes a disproportionately large amount of time and incurs large costs to the system. Further, there is no question that, *within some particular sub-groups* of the population, the overlap in mental and substance use disorders is indeed the rule rather than the exception. Examples that readily come to mind include young adults with personality disorders (Rush & Koegl, 2008; Grant, et al., 2004); people who are homeless (Farrell, Howes, Taylor et al., 1998), people with a history of sexual or physical abuse (Kendler, et al., 2000; Malinosky-Rummell & Hansen, 1993); and those with criminal justice involvement (Abram and Teplin, 1991). The large scale survey data do, however, send up a "red flag" on the need to distinguish between population-level and clinical-level information in the integration discussion. They do tell somewhat different stories.

In sum, given the many nuances in the reporting of the epidemiological data on co-occurring disorders, it is important that people producing and utilizing these data are explicit in their choice of data analysis and reporting methods. It is not difficult to locate a "high number" if the goal is to support integration. Nor is it difficult to locate a "low number" if the goal is to

argue for the status quo. There is clearly no right or wrong method to reporting the data.[10] However, given the most recent data on the level of co-occurring disorders in Canada (and the US for that matter), it is time that data producers and data users got past the simplistic mantra of "co-morbidity is the rule rather than exception", and used the data most appropriate at both the population and clinical level in support of service and system planning. This should include a strong emphasis on reporting by sub-population, including level of severity.

3.2.2 The literature on "significance"

During the late 1970s and early 1980s, mental health researchers in the United States reported on the poorer community adjustment and higher re-admission to hospital among young people with severe mental illnesses, such as schizophrenia, and who also abused alcohol and other drugs (Caton, 1981; Pepper et al., 1981; Bachrach, 1982). Later research began to emerge demonstrating that co-occurring mental and substance use disorders were associated with poorer clinical and social outcomes than those associated with either disorder in isolation. Examples include higher rates of relapse and rehospitalization (Linszen, et al. 1994; Swofford, Kasckow, Scheller-Gilkey & Inderbitzen, 1996), depression and suicidality (Bartels et al. 1992), violence (Cuffel et al., 1994; Swartz et al., 1998), incarceration (Abram & Teplin, 1991), homelessness (Drake et al., 1990; Caton et al., 1994), and HIV and hepatitis C infection (Dixon et al., 1995; Rosenberg et al., 2001).

Research emanating from the substance use field yielded similar concerns regarding co-occurring mental illness, particularly as it relates to treatment outcomes (McLellan et al. 2000, Rounsaville, Dolinsky, Babor, & Meyer, 1987; Kranzler, Del Boca, & Rounsaville, 1996; Lewis, et al., 1996; Pettinati, Pierce, Belden, & Meyers, 1999). The negative impact of psychiatric co-morbidity on substance use treatment outcomes has since been replicated many times (Iribarren, Sidney, Jacobs, & Weisner, 2000; Mertens, Lu, Parthasarathy, et al. Wiesner, 2003; Weisner & Matzger, 2002). Flynne and Brown (2008) have also recently argued that an important finding in the outcome studies has been given much too little attention - namely, that the impact of the co-morbidity, and the benefits of various integrated

[10] Other than simply being mathematically incorrect

treatment options, are highly dependent on the *severity* of the mental disorder and associated functioning.

Population surveys consistently indicate that a significant proportion of people with either a mental or substance use disorder (or both) does not seek services, raising many questions and issues about unmet need. Regier et al. (1993) reported that about 63% of people with a past-year co-occurring disorder had not accessed any services. This is similar to that reported by Kessler et al. (1996) in the NCS study. Kessler et al. (1994) also reported that only 4 of 10 people with a lifetime history of three or more disorders received treatment in a specialty mental health service, and only 1 in 7 received help from a specialized substance use service. Results from a more recent household survey in the US reported that 72% of those with co-occurring disorders had not received any specialty mental health or substance use services and only 8% had received both (Watkins, Burman, King & Paddock, 2001). Harris and Edlund (2005) reported that 65% of individuals with a co-occurring disorder did not receive any help, and that this also depends on problem severity (with the more severe being more likely to receive some treatment).

Although the level of unmet need is extremely high, individuals with co-occurring disorders are, in fact, more likely to seek care than those with mental or substance use disorders alone (Regier et al., 1990; Regier et al., 1993; Wu, Kouzis, & Leaf, 1999; Kessler et al., 1996). This was another fundamental driving force behind the call for improved integration emanating from the early epidemiological surveys on co-occurring disorders. The overlap across people with mental and substance use disorders was not only considered to be very high, the experience of living with this overlap also seemed to increase an individual's personal distress and propensity to seek help. In turn, this clearly begged important questions regarding the nature of their care experience, and their satisfaction with it.

Importantly, the survey data showed that in spite of this tendency for help seeking, and the high prevalence rates and poor clinical and social outcomes for this group, the vast majority of individuals with a co-occurring disorder were not receiving adequate care (Substance Abuse and Mental Health Services Administration, 2002; Watkins et al., 2001). This was

especially troubling for some sub-populations given that problems with substance abuse tend to be chronic for individuals with a severe mental illness (Drake, Mercer-McFadden, Mueser, et al., 1998), and this chronicity contributes to multiple relapses of psychotic symptoms, heavy substance use, and multiple treatment admissions. The recent review by Flynn and Brown (2008) reported that only a minority of substance use services provided programs for people with co-occurring disorders. However, several studies they reviewed also clearly suggest that, given a co-occurring disorder, the chances of receiving help in a substance use service for a mental health problem are substantially higher than receiving help for a substance use problem in a mental health service.

Early reviews of mental health and substance use systems in the United States showed that when individuals with a co-occurring disorder did seek help they were confronted with separation of the mental health and substance use systems, including policy, financing and regulatory barriers, poor information flow, various restrictions on admission, and disparate messages and philosophy regarding treatment and recovery (Ridgely, Osher, Goldman & Tablott, 1987). Other systems-level studies also reinforced the importance of attitudinal factors, social stigma, professional "turfism" and lack of resources as presenting barriers to optimal care (Drake, et al, 2001; Young and Grella, 1998; Grella et al., 2004; Todd et al., 2002; Todd et al., 2004; Burnam & Watkins, 2006; McGovern, Xie, Segal, et al., 2006). If able to access required services at all, the typical result was a failure to engage, motivate and retain people in treatment (Substance Abuse and Mental Health Services Administration, 2002; Drake, Mueser, Brunette & McHugo, 2004; Drake, et al., 1998).

There is strong evidence that the "double trouble" of co-occurring disorders is reflected in the costs of providing treatment and support, and that these costs are distributed in many parts of the health and social service systems. For example, Bartels, et al. (1993) found that among clients with schizophrenia receiving services in a community mental health centre, those who were currently abusing substances were more likely to use institutional services of all kinds, including correctional services, substance abuse-related hospitalization, and emergency services, as compared to those who abused substances in the past and those with no history of substance abuse. In terms of costs, the average annual services costs for the three groups

varied substantially - $17,706 for those currently abusing substances, $14,662 for those who abused substances in the past, and $9,617 for those with no history of substance abuse.

Another U.S. study of a large sample of individuals with a psychiatric disorder receiving Medicaid benefits found that those with a co-occurring substance use disorder accounted for 60% higher psychiatric treatment costs (Dickey & Azeni, 1993). The high costs associated with the provision of outpatient psychiatric services to people with co-occurring disorders has also been found in more recent work in the US (Dickey, Normand, Drake, et al., 2003). Hoff and Rosenheck (1999) tracked the use of health care services and associated costs for a large cohort of people discharged from substance abuse treatment in US Veterans Affairs facilities. They reported that those diagnosed with a co-occurring psychiatric disorder had a higher total health care cost than those without a psychiatric disorder; explained primarily by higher utilization of psychiatric and substance abuse services. Curran, Sullivan, Williams, et al. (2003) reported significantly higher use of emergency services by people with co-occurring disorders, although they did not translate the higher use into a specific dollar value.

Canadian contributions:

The basic finding that individuals with co-occurring disorders are more likely to seek help than people experiencing either disorder alone was replicated in a major Ontario survey in the 1990s (Ross, Lin, & Cunningham, 1999). More recently, Urbanoski, Rush, Wild, et al., (2007) drew upon data from the 2002 Canadian Community Health Survey 1.2 and found that those with a co-occurring mental disorder and substance dependence reported the poorest mental health and were the most likely to seek care. Importantly, the more frequent use of services was similar across the group with co-occurring disorders and the group with a mental disorder alone, thus suggesting that it was not the co-morbidity driving the use of services but rather the mental health component. In terms of satisfaction with care, Urbanoski et al. (2007) reported that individuals with a co-occurring disorder reported the lowest satisfaction with care and were four to seven times more likely to report unmet need compared to those with either a substance use or mental disorder alone. The most common reasons for unmet need included a preference to self-manage symptoms (35%), not getting around to seeking care (16%), not knowing how to ask for help (16%) and being afraid to ask for help (15%).

In a 2005 study of 102 cases of suicides in New Brunswick over a 14-month period, more than 60% of the deceased had a substance use problem at the time of death; nearly 70% had a history of substance use problems; only 10% were in contact with substance use services in the year preceding their deaths; a further 70% had an affective disorder at the time of their death (Séguin, Lesage, Turecki, Daigle, & Guy, 2005). General medical services were consulted by nearly 18% in the last month, and by one-half in the last year. Front-line health care and social services professionals were used by 18.6% of the cases in the last month and by one-third in me last year; 4% turned to police services in the last month and 9% in the last year (17% lifetime). The authors point out the lack of public awareness vis-à-vis the importance of consulting when experiencing distress, and the lack of collaboration between mental health and substance use services leading to a failure to designate a fixed point of responsibility for continuity-of-care between lines of services, and to be proactive instead of waiting for clients to be motivated. This went hand-in-hand with the clients' disengagement (Lesage, Séguin, Guy, et al, 2008)

The limited Canadian data on the health and social costs associated with co-occurring disorders confirm that, while substance use and mental disorders alone represent significant financial burdens, the costs of co-occurring disorders tend to be greater than the sum of either disorder alone. Somers, Carter & Russo (2007) have tracked hospital, social welfare and corrections-related costs for a large group of people in the BC corrections system serving sentences in the community. The *hospital* costs per person for those with a mental disorder alone were $390; for a substance use disorder alone were $344; and for a co-occurring disorder $1485. The *welfare* costs per person for those with a mental disorder alone were $480; for a substance use disorder alone, $1246; and for a co-occurring disorder, $3348. The *corrections* costs per person for those with a mental disorder alone were $289; for a substance use disorder alone $475; and for a co-occurring disorder $428. Thus, in the hospital and welfare sectors, the costs related to co-occurring disorders were clearly higher while in the corrections system this was not the case. For corrections, the substance use disorders irrespective of co-occurring mental disorders appeared to be driving increased costs.

Some cautionary notes on significance/impact of co-occurring disorders: The main cautionary note to add to the above overview of relevant literature on the impact and overall significance of co-occurring disorders is the need to distinguish the group with co-occurring disorders from those with so-called "single disorders". Many reports on the impact of co-occurring disorders compare those with and without co-occurring disorders but do not make it clear just who is in no co-occurring disorders group. This could be a comparison group with no disorders or a group with single disorders or both and unless this is specified it leaves one uncertain as to whether the mental health or the substance use component is most responsible for the negative outcomes observed in a co-occurring disorder group. The ideal situation is to compare three or if possible four groups: no disorders, mental disorder(s) only; substance use disorder(s) only; and co-occurring disorders.

On the face of it this might be viewed as a minor technicality better left for researchers to worry about. But the implications are important. For example, in the data reviewed above we noted in the Canadian population survey data that those with co-occurring disorders were more likely to use services than those with substance use disorders, suggesting higher need associated with the co-morbidity. However, those with co-occurring disorders had the same level of service use as those with mental disorders (but no substance use disorders). This suggests then that it was the mental health aspect that was driving the higher utilization of the co-occurring group and not the impact of co-occurring disorders *per se*. Put another way, it was the substance use-only group that was less likely to engage in help-seeking a finding with important implications for case-finding. This pattern of findings did NOT hold when the authors looked at satisfaction with services received among those who did seek help. Among the help-seekers the added impact of the co-occurring disorders was clear. In other words once in contact with the system, something was lacking in their treatment and support experience that was associated with the co-morbidity itself. Interesting and useful patterns in the cost data also emerge when the co-occurring group is compared to the single-disorder groups. For example, the costs in the corrections system were largely driven by substance use disorders and not the co-morbidity per se, even though the rates of co-occurring disorders were extremely high.

3.2.3 The literature on "program/policy solutions"

3.2.3.1 Integrated services (single-site, team approach)

As evidence continued to accumulate regarding the challenges associated with co-occurring substance use and mental health disorders, published reviews contributed significantly to the definition of "integrated treatment" and concluded that a different approach was needed at the clinical services-level in order to yield more positive health and psychosocial outcomes. The important distinctions were drawn between integrated treatment and either sequential or parallel treatment.[11] The most influential literature reviews concerning integrated treatment were published by Drake and colleagues in 1998 (Drake, Mercer-McFadden, Mueser, et al., 1998); again in 2004 (Drake, Mueser, Brunette & McHugo, 2004); and, more recently, in 2008 (Drake, McNeil, & Wallach, 2008). The earliest research studies were limited in terms of research design but did point toward the value of integrated treatment models of service delivery. Integration, as researched in these studies, was viewed at the *clinical interface* with clients, whereby they receive interventions that share common ground in terms of program philosophy; take a long term approach; and rely on the same team or teams to give consistent explanations and proposed treatment and support strategies (Drake et al., 1998). In short, the same treatment provided specific components for the mental health and substance use problems within a framework that yielded an understanding of the clinical features of the specific combination of co-occurring disorders.

A similar emphasis on clinical integration was taken in the 2004 review by Drake and colleagues, stating, for example, "*the crux of integration is that the practitioner takes responsibility for blending the interventions into one coherent package*" (p. 367). Building upon the 1998 review, the key principles that emerged in this new overview were grounded in an integrated program model, and including stage-wise treatment; engagement and motivational counselling interventions; active treatment (e.g., counselling to promote

[11] *Sequential (serial) treatment* was defined as treatment that deals with one disorder first, and in isolation, followed by interventions for the second disorder; often using differing treatment approaches (e.g., the medical model for mental disorders, the recovery model for substance use disorders). *Parallel treatment* was defined as treatment that addresses both problems at the same time but treatment is in isolation of each other, and again with different clinical approaches.

adherence, behavioural skills training); relapse prevention, long-term retention, and comprehensive services such as housing and educational and health-related supports, and interventions for treating non-responders.

Interestingly, in the 2008 review, integration was taken more as a given rather than a central aspect of the research question being pursued in the review. Integration was presented as an organizing framework that addressed two fundamental concerns:

> "(a) improving access by ensuring that mental health and substance abuse services are available in the same setting; and (b) improving individualization and clinical relevance by combining and modifying the two types of interventions in a coherent fashion" (p. 123). [12]

Given this framework, the primary focus of the review was on the evidence for specific psychosocial interventions that could be included in an integrated model (e.g., individual or group counselling, family intervention, case management, residential or outpatient treatment, contingency management and legal interventions such as jail diversion or other forms of mandated treatment or monitoring). The evidence was said to be strongest for group counselling, contingency management and long-term residential treatment. However, a more ecological approach to the delivery and evaluation of services was also advanced, for example, taking into account the environmental context in which the person lives, and in which the service itself is located. A tailored approach was also recommended with different types of interventions seen as more appropriate for some types of sub-groups and settings (e.g., emphasizing engagement strategies for people who are homeless). A *sequenced* approach was also recommended in some situations, borrowing the concept of stepped-care from the substance use field (Sobell & Sobell, 1999; 2000) and other branches of psychological therapy (Bower & Gilbody, 2005). In a stepped-care model, less intensive and expensive interventions are tried first, followed by more extensive and expensive intervention contingent on the initial response to the first level of care. Improved use of electronic decision-support systems was also recommended. As mentioned earlier, these key ingredients were to be delivered in the context of an integrated, co-located service.

[12] Italics of authors

Canadian contributions: Studies focused specifically on the benefits of integrated treatment are rare in Canada but what research has been conducted supports the provision of routine psychiatric services within separate substance abuse treatment services (Charney, Paraherakis, & Gill, 2001). The most recent review by Drake and colleagues included a Canadian study by Aubrey Cousins, LaFerriere and Wexler (2003) that reported no difference between group therapy and standard treatment. The study did not address the added value of program integration *per se*. Korman, Collins, Littman-Sharpe et al., (2008) reported benefits from an integrated approach to treatment of anger and substance use and gambling problems. Other work conducted at the Centre for Addiction and Mental Health (and the former Addiction Research foundation) is also highly relevant to the treatment of people with co-occurring disorders (e.g., work underway with respect to personality disorders, eating disorder, problem gambling and nicotine dependence) but has not directly compared integrated versus non-integrated approaches.

Some cautionary notes on the integration data at services-level (single-site team approach): Building on the seminal and ongoing work of Drake and colleagues, principles and key treatment practices such as assertive outreach, motivation-based and multi-modal approaches, comprehensive services, a long-term perspective and harm reduction,[13] continue to be emphasized as evidence-based practice for people with co-occurring disorders (Mueser, et al., 2003). However, other recent literature reviews and formal meta-analyses of the integration literature, again at the services level, have been conducted and which conclude with a cautionary message as to the need for integration (Donald, Dower, & Kavanaugh, 2005; Clearly et al., 2008).

[13] Harm reduction has emerged as one of the most significant debates related to approaches in dealing with problematic substance use. Harm reduction, as a public health approach, refers to dealing with drug- and alcohol-related issues in a way that places first priority on reducing the negative consequences of drug and alcohol use (rather than on promoting an abstinence-only approach). Specific harm reduction strategies, such as needle exchange and methadone maintenance programs and the provision of safe and hygienic environments to use drugs and alcohol, are seen as pragmatic approaches whose benefits outweigh the costs in terms of harm to the individual and to society. Critics of harm reduction argue that its strategies promote problematic drug and alcohol use, divert attention away from abstinence-based approaches and impede crime prevention. Comfort with harm reduction varies across federal departments, provincial governments, municipalities and social service sectors. This presents specific challenges in substance abuse treatment, policy-development, and potential integration with mental health systems.

There are two aspects to our caution regarding the veracity of the integration data at the services-level. The first is whether the data on integration is as airtight as many people believe and, secondly, whether people with mental health problems who are receiving treatment in a substance use service derive benefit for mental health problems without having received specific integrated mental health services.

With respect to the first point, it is beyond the scope of this overview to review in fine detail all the evidence supporting integration at the services-level for people with co-occurring disorders. We have summarized above the three seminal reviews by Drake and colleagues. A subsequent review conducted by Donald et al., (2005) selected the best 10 studies of integrated versus non-integrated treatment, from a methodological point of view. All were randomized controlled trials – one comparing integrated and parallel treatment options; seven comparing integrated and standard treatment in mental health services; and two comparing integrated and standard treatment in substance use services. Little evidence was found favouring the integrated treatment options using improvement in symptoms as the outcome criteria. Modest to strong evidence was found for improvements in treatment engagement/compliance and outcomes related to social adjustment. As others have done, including Drake and colleagues, a list of important methodological challenges for doing research in this area is identified.

The most recent research synthesis by researchers outside the Drake group also focused on the effectiveness of psychosocial treatment for people with both severe and persistent mental illness and substance use problems (Cleary, Hunt, Matheson et al., 2008). However, rather than starting from a position that all these interventions would best be delivered in an integrated context, they considered integrated treatment as one of several intervention models to be contrasted with standard care. The other treatment options were non-integrated treatment, cognitive behavioural therapy, motivational interviewing, and life skills training. Results showed that in order to reduce substance use or improve mental health status there was no compelling evidence to support any one psychosocial intervention over another, including integrated treatment. They also emphasized the methodological challenges pooling

and interpreting data across studies in a bona fide meta-analysis given high drop-out rates, varying fidelity of interventions, and varying outcome measures, settings and samples. In short, it was not possible in the current state-of-the-art to show the superiority of one choice over another. These and other challenges identifying the added-value of integrated services are certainly not unique to the field of mental health and substance use (Smith & Clarke, 2006). What all the experts reviewing the literature in this area do agree upon is that, although the quality of research in the area is improving, the *synthesis* of valid literature remains severely challenged by a host of issues such as varying outcome measures, settings and samples.

These two reviews have been very briefly discussed – the Clearly et al. (2008) review because it is so new and not widely available, and the Donald et al. (2005) review because it is so rarely cited. We do not intend to raise major questions at this time about the effectiveness of integrated treatment based on these reviews. A more detailed assessment of the reviews, and how they differ from the research typically cited in favour of integration, is required. However, the informed reader needs to be aware that, at the services-level, the value of integrated services is not clear-cut and much more work needs to be done, particularly with sub-groups based on their clinical features and problem severity.

One of the studies included in the Donald et al., review (2005) reported a marked improvement in anxiety-related symptoms following receipt of the standard substance abuse treatment program (Randall, Thomas & Thevos, 2001) possibly because of recovery through the reduction of substance use and other strategies that have improved quality of life. This leads us to a second cautionary note about integrated services with a single-site integrated team, namely that integrated treatment may not be needed to effectively treat mental health problems among those in substance abuse services and, vice versa, substance use and related problems may be improved with standard mental health treatment. Referring to the issue as the "*effectiveness of single-disorder treatment with co-morbid clients*" the relevant literature on this topic area was reviewed by Flynn and Brown (2008), albeit exclusively from the perspective of substance use services. Their conclusion was essentially that standard, well-implemented substance use services can effectively improve mental health symptoms—that

is, without targeted mental health programs or specialized training. One of the studies cited was that conducted by Hser, Grella, Evans, and Huang (2006) involving over 1,000 clients from 39 different programs representing all major treatment modalities. They reported no differences in outcomes for individuals with co-occurring disorders who received mental health services and for those receiving normative substance use treatment. They conclude that the data from studies in this area point to the need for routine screening and assessment of mental health problems, followed by a careful matching and treatment planning protocol *on the basis of severity*, and which calls upon specialized mental health services/professionals on an as-needed basis for the most severe and complex cases. For purposes of the present paper, the main point is that the effectiveness of single-disorder interventions for people with co-occurring disorders weakens the argument for one-size-fits-all integration strategies. The data continue to point to the need for tailored integration strategies at the services level, and the need for systems-level supports that will best ensure the implementation of this tailored approach.

3.2.3.2 Integrated services (multiple- provider, collaborative care approach)

While the emphasis in the reviews by Drake and colleagues, and many other experts in the field, has been on integrated clinical teams, another approach to integration was evident in the key documents, research syntheses, and individual research studies. Specifically, integrated clinical care and psychosocial support can be delivered by well-coordinated, collaborative arrangements *across two or more service providers and not only in co-located programs*. By 1994, in the initial CSAT Treatment Improvement Protocol on co-occurring disorders, (Center on Substance Abuse Treatment, 1994), integration was defined as an approach that combines elements of both mental health and substance use treatment into a unified and comprehensive treatment program for patients with dual disorders.

The well-known quadrant model also emerged in the 1990s and provided an organizing framework based on a 2X2 matrix that captured severity of the mental disorder(s) on one dimension, and the severity of the substance use disorder(s) on the other (Substance Abuse

and Mental Health Services Administration, 2002; McGovern, Clark, & Samnaliev, 2007).[14] The main contribution of the framework was that the target population was being "segmented" for planning purposes, including different integration options. For example, "high" mental health and "high" substance use problems was seen as being the most appropriate group (quadrant) for a specialized single-site integration model. This compared to the "low" mental health and "high" substance use problems group, which may require treatment within a more traditional substance use treatment service but with basic competencies related to mental health treatment and support (e.g., screening, CBT, brief therapies) and collaborative relationships with external mental health providers as needed. Those with "low-low" problems were seen as likely to be well- served in generic health services such as primary care. In short, despite its limitations[15], the quadrant model distributed the responsibility for treating and supporting people with co-occurring disorders across multiple systems and endorsed the value of collaborative models of integrated treatment and support.

In Canada, the 2001 report *Best Practices: Concurrent Mental Health and Substance Use Disorders* (Health Canada, 2001a) synthesized the research literature and expert opinion in the first pan-Canadian source document on co-occurring disorders. The report clearly articulated that integration did not necessarily mean an administrative merger of mental health and substance use services/systems, but rather that services and systems could be coordinated and collaborate with each other in many ways so as to ensure an integrated treatment experience for people seeking help. Specifically:

> *Program integration* was defined as*: "*mental health treatments and substance abuse treatments are brought together by the same clinicians/support workers, or team of clinicians/support workers, in the same program, to ensure that the individual receives a consistent explanation of illness/problems and a coherent prescription for treatment rather than a contradictory set of messages from different providers".

[14] Interestingly, virtually the same model has been applied to case complexity concerning mental and physical health co-morbidity, although not referenced as such in the literature on co-occurring disorders (Parks, Pollack, & Bartels, 2005)

[15] For example, the model does portray the dynamic movement of people in out of the quadrants over time.

> *System integration* was defined as: "the development of enduring linkages between service providers or treatment units within a system, or across multiple systems, to facilitate the provision of service to individuals at the local level. Mental health treatment and substance abuse treatment are, therefore, brought together by two or more clinicians/support workers working for different treatment units or service providers. Various coordination and collaborative arrangements are used to develop and implement an integrated treatment plan". *(Health Canada, 2001a, p.15-16).*

This definition of "systems integration" is closely aligned with the view of integration as it gradually evolved in the United States, that is, beyond the concept of integrated, single-site treatment teams. In hindsight, however, the definition of systems integration in Canada introduced some confusion over terminology since it was about the integration of direct service delivery across multiple providers AND about activities and strategies such financing and economic incentives, policy development, cross-training) and which were referred to exclusively in the wider literature as "systems integration". [16]

Watkins, Burman, Kung and Paddock (2005) have commented on the confusion that has lingered for some time in the field about the proposed value of the single-site, co-located integration option versus a multiple provider, collaborative care option. However, only relatively recently was a comparison of these two approaches to integration a specific focus of research inquiry (Rosenheck et al., 2003), the research illustrating that the two options did not differ in terms of client access to services or other outcomes. Recent publications like the 2007 *CSAT Co-occurring Centre of Excellence (COCE) Technical Overview Paper Series* (Center for Substance Abuse Treatment, 2007) define integrated services in a way that includes both single site and multiple provider options among a range of optional configurations (Overview Paper #6, p.4).

Some cautionary notes re: integrated services (multiple-provider collaborative care model):

"Integration" at the services-level has come to mean *both* integrated single-site, treatment teams and collaborative partnerships across more than one provider. The evidence continues to support integration, as broadly understood, as a reasonable and desirable organizing principle for meeting the treatment and support needs of people with co-occurring disorders

[16] We will return to this issue of terminology in later sections and conclude the report with a suggestion for terminology on a go-forward basis in Canada.

that can, and probably should, be implemented in a variety of ways tailored to specific sub-populations and organizational and community contexts. That said, the effectiveness of integration at the services-level no doubt depends on how it is operationalized; for what sub-population; in what types of settings; and with what level of program fidelity and with what staff. Certainly more research is needed to strengthen the evidence on services-level integration with single-site, team models as well as multiple- provider collaborative care models, for whom and under what conditions. The best data exist for the single-site model but this is probably because it has been more thoroughly studied. It is also easier to do this type of single-site research than studies that must tease out the specific contributions of integrated care in multi-provider situations (Smith & Clarke, 2006).

The main caution to add to the above discussion is, therefore, concerned with the lack of evaluation studies directly comparing single-site versus multiple-provider models. As discussed below under "systems-level" integration there is some evidence in support of case management and central access models in terms of improving continuity of care (Durbin et al., 2006). Future studies need to do a better job at segmenting the target population on the basis of problem severity and complexity as this will likely be a key factor underlying the ability of individuals and their families to navigate a complex network of service providers.

3.2.3.3 Integration at the systems-level

There is also clearly a wide range of systems-level supports and strategies that can be implemented in the spirit of "improved integration". Give this wide range it is important to separate governance/administrative integration (i.e. structural merger) and other kinds of activities and strategies such as joint planning, cross-training, co-location, e-health solutions to information exchange, and which may or may not involve structural merger. The *function* of different systems-level integration activities and strategies also vary. Some functions concerned with securing an adequate resource base for high quality service delivery, and this is often a critically important, but covert, goal of integration. Other activities and supports aim for cost-efficient administrative operations such as human resources, information technology, procurement and the like. Although the distinction is admittedly a grey area, other systems-level supports and strategies are more directly targeted at improved services for

clients and their families, examples being cross-training and credentialing; policies and procedures for accessing services; joint planning; e-health initiatives that support and safeguard the transfer of client information; and performance indicators and other types of quality improvement processes. What this latter group of system support strategies have in common, or at least *should* have in common, is that they serve a clear and unequivocal function that will improve access to services and the work of the managers, clinicians and other staff, and thereby indirectly impact the cost-effectiveness of treatment and support that is offered to people seeking help. We use the term cost-effectiveness because all systems-level supports and strategies come with a varying cost, and may improve client/family outcomes substantially, minimally, or not all at all. For example, a training initiative or system-wide case coordinator for complex cases may come at a low cost, but yield a high impact.[17] Some policy changes such as introducing a financial incentive or removing an administrative barrier to treatment may also be relatively low cost but with high payoff in terms of treatment access and outcomes. An investment in common client information systems in order to incorporate an electronic health record may come with a high cost and moderate impact through better sharing of information and tracking of client outcomes for clinical and management purposes. A major inter-organizational restructuring of services or treatment systems may come with a high short-to–medium term cost and with expectations of a significant long-term pay-off due to better prevention, case-finding, treatment access and/or health-related outcomes. System integration strategies will always entail trade-offs of costs and benefits and these should be more explicitly outlined in planning proposals.

Our main point for the present discussion is that the onus of responsibility lies with systems-level planners and administrators to: (a) estimate the cost of proposed systems-level supports and strategies; (b) articulate how proposed initiatives will directly or indirectly impact operations and client/family outcomes; and (c) identify the mechanism that will be used to track and report on success in achieving pre-determined goals. A logic model that "connects the dots" back to client and family outcomes is an essential part of systems-level planning

[17] We present these as hypothetical scenarios only and not based on actual cost-benefit analyses.

and evaluation (see Durbin, Goering, Streiner & Pink (2006) for a template of such a systems-level logic model).

Although ideas and assumptions abound for systems-level integration, there is a shortage of research and evaluation data that provide best practice evidence at this level. There is certainly no shortage of opinion on the barriers to care for people with co-occurring disorders and, for that matter, those with substance use or mental disorders alone. In equal measure, an abundance of strategies to deal with these barriers have been proposed and systems planning tools are available to help guide the assessment and prioritization of various types of systems supports deemed to be essential (http://www.zialogic.org/Toolkit_1.htm). However, most of the literature on the evaluation of integration approaches has been at the services level (Siegfried, 1998; Rachbeisel, Scott & Dixon, 1999; Zweben, 2000; Brunette and Mueser, 2006). Even in the exhaustive literature reviews undertaken by Drake and colleagues, no evidence is brought forward that speaks directly to either the added-value of systems-level integration or the necessary/sufficient features at the systems-level that are required to support integration at the services-level.

The most relevant evidence available on the outcomes of systems-level integration comes from the mental health field generally, where a small number of projects have conducted outcome evaluation of various systems-level initiatives (see Durbin et al., (2006) for the most recent and comprehensive review). System-wide approaches that have been studied have included, for example, unified mental health agencies (Goldman, Morrissey, & Ridely, 1994); integration coordinators or bodies (Randolph, Blasinsky, Morrissey, et al., 2002; Morrissey, Calloway, Thakur, et al., 2002); and cross-training and client tracking systems (Morrissey et al., 2002). A review focused primarily on structural integration by Lurie, Everett & Higgins (2001) draws primarily from original research and other reviews on integration in the hospital sector and private sector mergers and acquisitions.

Lurie and colleagues (2001) conclude that there are significant costs associated with high-level structural mergers - costs that often do not translate into improvements in services for clients. Their report is also helpful in describing different merger scenarios (e.g., *extension*

mergers that essentially leave the new partner alone to conduct business as usual; *collaborative mergers* that seek full integration of operations to create a "best of both worlds" culture; and a *redesign merger* whereby the intention of the dominant player is to introduce major change and displace the culture of the smaller partner (Cartwright & Cooper, 1993)). Thus, to an inter-organizational expert, mergers vary substantially in terms of process, and the impact on client services will undoubtedly depend on the *modus operandi* of the merger initiative. The review by Lurie and colleagues also offers an important reminder that structural integration almost always involves a dominant player, something that has traditionally worried people working in the substance use sector about closer integration with mental health services and sectors. Those involved with structural integration activities should be familiar with different tactics and consequences and, in the opinion of the authors at least, be guided by a collaborative merger model.

Durbin et al., (2006) have conducted a thorough review of the five best-designed and resourced projects focused at the systems-level, including one project concerned with the structural integration of mental health and substance use services and services[18] (Bickman; 1996; Bickman, Noser & Summerfelt, 1999). As others have concluded, they found no evidence of impact on client-level outcomes (e.g., symptom reduction, quality of life, housing or work status). Durbin and colleagues did articulate, however, the many challenges in establishing the link from the systems-level to client outcomes, including:

- The improvements in integration were too modest to make a difference;
- The services being offered to clients and their families were inherently ineffective and not improved by integration; and
- The pathway from systems-level integration to client outcomes is fraught with too many potential mediating and moderating variables so as to obviate making strong conclusions about the effectiveness of integration.

The important contribution of the paper by Durbin and colleagues was that systems-level integration strategies were positively and consistently related to improved *intermediate continuity-of-care outcomes.* In other words, when the outcomes examined were more

[18] These substance use services were available to children of military personnel and this may limit the generalizability of the findings.

proximally connected to the integration supports and strategies, the evidence was much stronger than observed for the more distal health outcomes *per se*. When they went on to examine the data for critical features that might help explain the associations, they concluded that systems-level integration was more effective when characterized by stronger management arrangements, fewer service sectors involved and system-wide implementation of intensive case management and centralized access to services. In simpler language the key lessons learned were:

- Control is needed over resources (e.g., contract and pay for performance);
- Be targeted and don't try to do much with too many players; and
- Put structures in place to help people navigate the network.

Thus, there is some evidence supporting systems-level integration if it is targeted, relatively circumscribed and focused on the client access and navigation.

Some cautionary notes re: systems-level integration:

At present, the provision of most, if not all, systems-level supports for people with co-occurring disorders would appear to be grounded on the assumption that the delivery of effective services requires such supports. This assumption is firmly grounded in organizational theory that underlies health and social service delivery. This may well be a safe assumption but it clearly highlights the need for good planning and evaluation, especially when so little is known in this particular area, and the challenges bridging the two worlds of mental health and substance use appear to be so great. Along these same lines, one might be particularly concerned about high-level governance and structural mergers undertaken in the name of "improved integration of services" since they are very expensive. Such mergers should, therefore, not be exempted from the requirements to cost the initiative (and sub-projects); be required to articulate the line of reasoning to specific outcomes; and, if implemented, be required to track benefits accrued at multiple levels, including benefits for clients and their families. As with services-level integration, more research and evaluation is clearly needed to establish the added value of systems-integration, for whom and within what context.

3.2.3.4 Supports for services and systems-level integration

Taking the research on effective models of treatment and support for people with co-occurring disorders one step further, work has proliferated in the past decade on the development and evaluation of tools and supports to help implement evidence-based practices. Specific clinical protocols have been developed including one for the assessment of people with co-occurring disorders (Mueser, Noordsy, Drake, & Fox, 2003); manualized components of integrated treatment programs (Najavits, 2002); fidelity scales for program planning and monitoring (Mueser, et al., 2003, Substance Abuse and Mental Health Services Administration, 2003) and systems assessment tools (e.g., CO-FIT 100, Minkoff & Cline 2002). Several published syntheses, mostly from the United States, contributed to dissemination of evidence-based integrated treatment for co-occurring disorders. This includes the Centre for Substance Abuse Treatment's *Treatment Improvement Protocol, TIP 42,* (Centre for Substance Abuse Treatment, 2005); the Substance Abuse and Mental Health Services Administration's *Report to Congress on the Prevention and Treatment of Co-Occurring Substance Abuse Disorders and Mental Disorders* (Substance Abuse and Mental Health Services Administration, 2002)*;* SAMHSA's *The Co-Occurring Disorders: Integrated Dual Disorders Treatment Implementation Resource Kit; and the Co-occurring Centre of Excellence (COCE) Technical Overview Paper Series, 2007.*

In the United States, findings from research syntheses and major epidemiological surveys have also recently stimulated a proliferation of infrastructure and capacity-building initiatives *aimed specifically at improving and sustaining integration activities and processes* (Power & De Martino, 2004; Clark et al., 2008). Many of these initiatives have been conducted under the national leadership of the Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration (SAMHSA). The SAMHSA contributions have included its Report to Congress (Substance Abuse and Mental Health Services Administration, 2002); the Co-Occurring State Incentive Grant (COSIG) program (which supports states in their infrastructure capacity-building efforts); and the SAMSHA funded Co-Occurring Center for Excellence (COCE) which disseminates epidemiological data and evidence-based practices. Changes in infrastructure have also been supported through the National Policy Academy on Co-occurring Substance Abuse and Mental Disorders which

brings together key leaders to effect cross-agency collaboration and systems change (in the mental health system, the Federal Mental Health Action Agenda provides a similar support function). SAMHSA efforts to strengthen and accelerate effective interventions for people with co-occurring disorders also include the National Evidence-based Practices project, the National Registry of Effective Programs (Torrey, Drake, Dixon, et al., 2001), and the widely used Treatment Improvement protocols (two of which have focused on co-occurring disorders). Critical to the present discussion on the topic of integration, is the fact that this impressive slate of activities supported by SAMHSA and its collaborators, has gone well beyond the best practice syntheses *per se* to focus on the development, implementation and evaluation of specific *supports* aimed at addressing barriers that have challenged integration of services and systems for people with co-occurring disorders.

The fact that such supports for integration activities have been strategically implemented in the U.S. acknowledges the reality that integration doesn't happen simply because someone says it is important. Indeed, since the literature on co-occurring disorders is consistent in pointing out that the two "silos" are separated by deep historical and cultural barriers, it should come as no surprise that considerable support would be required to bridge these two worlds. Data are not available at a national level in Canada to say with confidence what technical and other supports for improved integration have been put in place in the various provinces and territories. While there have been important Canadian contributions to the dissemination of best practice in the area of co-occurring disorders since the 2001 best practice report, the focus has been largely at the clinical, program level (Skinner, 2005; Puddicome, Rush, & Bois, 2004) and with a strong focus on screening and assessment (Rush, 2008, Centre for Addiction and Mental Health, 2006; Somers, 2008). The authors are aware of many examples in Canada of systems-level integration. Decisions appear to be made in an environment that, in theory, supports the use of evidence but once the decision is made there is little if any evaluation of the strengths and limits of the integration process and the results. It would be helpful to have a pan-Canadian environmental scan to take stock of not only the various types of integration strategies that have been tried (at multiple levels), but also the infrastructure and other capacity building activities that may have been developed to support

and sustain integration. In addition, comparative data on patient amelioration would also help clarify effectiveness issues.

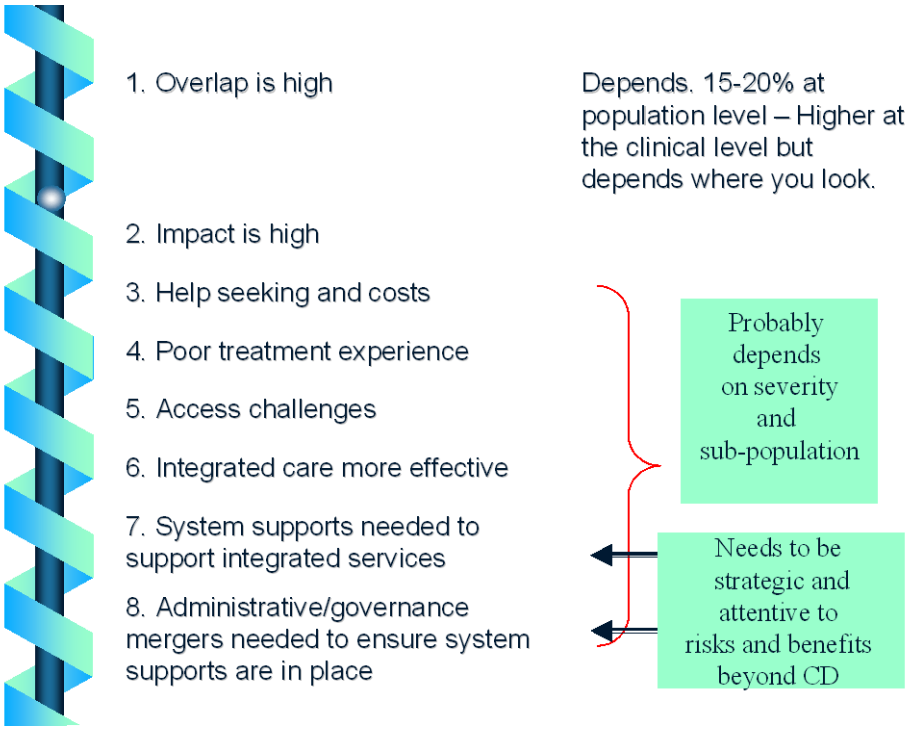
3.3 Summary of services and systems integration based on co-occurring disorders

We set out in this lengthy section of the report to summarize and critically review the evidence for improved integration of mental health and substance use services and supports based on the topic area of: co-occurring disorders. It is important to reiterate that this is not likely to be the sole factor underlying the integration movement, and upon further research found not even to be the most important factor. It does, however, appear to be the most salient and widely discussed aspect of the rationale for integration. To that end, we gave it considerable attention and suggest additional research and environmental scanning be conducted to identify and document other overt and covert motivations for improved integration between these two service systems.

In the research literature the call for improved integration of mental health and substance use services and systems began at the services level, driven primarily by research focusing on the high overlap in the populations and the challenges of co-occurring mental health and substance use disorders. At the present time, systems integration, defined by SAMHSA/COCE (2007) as '*the process by which individual systems or collaborating systems organize themselves to implement services integration to clients with COD and their families',* is recommended as part of the 'how to' of implementing integrated services. Thus, what began as a clinical, service-related issue focused on people with co-occurring disorders has since evolved to a discussion of broad systems-level integration on the assumption that improved integrated systems would support improved treatment and support services. While there is reasonably good, but not air-tight, evidence in support of the need for integrated services at the services-level for individuals with co-occurring disorders, the search must continue for the most effective, cost-effective and individually tailored program models and clinical interventions. In particular, more work is needed to assess how the need for integrated services depends on clients' level of severity and complexity. Also, while a foundation for such research has been laid at the services-level, less is known at the systems-level. Some good evidence is available for outcomes related to continuity-of-care but more

work is also clearly needed. Systems-level integration, and in particular, governance/administrative mergers needs to be sensitive to the benefits as well as potential risks for some sub-populations that will be affected. Figure 2 below summarizes our overview in relation to the "chain-of-logic" identified previously.

Figure 2: Revisiting the rationale for integration based on co-occurring disorders



Also, while Canada has significantly improved its epidemiological data to support planning of improved integration, it clearly lags the United States in providing infrastructure and other kinds of supports likely to be required for sustained integration models and strategies. The success of the efforts in the US is not known at present, or whether all States have participated equally.

4.0 Models for services- or systems-level integration

The mental health and substance use sectors encompass a broad range of *individuals* (e.g., those with or without co-occurring disorders, at-risk, with emerging problems, diagnosed, or in recovery), *services* (e.g., prevention, treatment, psychosocial supports) and *systems* (municipal, provincial/territorial, federal governments, communities, health care and justice); three different aspects which have been combined (and, in some cases we believe, confused) in different permutations to construct and apply distinct models of integration. The following is not an exhaustive description of the models available in the literature[19], but it does present a few theoretically distinct conceptualizations.

4.1 Integration as a hierarchy of levels

In its 2002 Report to Congress, the Substance Abuse and Mental Health Services Administration (SAMHSA) refers to three levels of integration:

1. *Integrated Treatment* - interaction between the mental health and/or substance abuse clinician(s) and the individual, which addresses the substance abuse and mental health needs of the individual.

2. *Integrated Program(s)* - the organizational structure for providing integrated treatment, the mental health and/or substance abuse program is responsible for ensuring an array of staff or linkages with other programs to address all of the needs of its clients. The program is responsible for ensuring that services are provided in an appropriate and easily accessible setting, services are culturally competent, etc.

3. *Integrated System* - the organizational structure for supporting an array of programs for people with different needs, including individuals with co-occurring substance abuse disorders and mental disorders. The system is responsible for ensuring appropriate funding mechanisms to support the continuum of services needs, addressing credentialing/licensing issues, establishing data collection/reporting systems, needs assessment, planning and other related functions.

The distinction drawn in the SAMHSA report between integrated "treatment" and an integrated "program" is subtle since treatment usually involves more than one clinician

[19] Space considerations in this report inhibit a description of integration models as conceptualized and evaluated within the area of mental health and health services broadly (see for example, Wulsin et al., 2006). There is a strong parallel and high applicability to the discussion of mental health and substance use services and systems.

operating in some inter-professional context. More recently the 2007 overview papers from COCE describe two levels: *Services Integration*, encompassing integrated programs and/or integrated, and *Systems Integration*, as defined previously.

As noted in an earlier section of the report (Section 2.1.3), the Canadian best practices report (Health Canada, 2001a) also drew a distinction between program and system integration but used the term system integration to mean treatment and support provided across more than one provider or treatment team. This differs from the SAMHSA and COCE use of the term and is probably confusing to those accessing multiple documents to support their planning activities.

Going forward, and consistent with the recent COCE approach, we propose the terminology focus on *two* levels of integration: 1) services-level integration, whether that be with a single clinician/worker; a program or set of clinical/psychosocial services; or an integrated network of services in the community, and 2) systems-level integration which includes the structures and processes (such as training and credentialing, policy, administration and funding models) that ultimately support the services-level.

4.2 Integration as vertical or horizontal processes and structures

Vertical and horizontal integration models have most frequently been applied within the context of optimizing broad heath service delivery systems. The call for horizontal integration came first in the late 1970s and early 1980s in an effort to keep hospitals and other health delivery organizations competitive (Hernandez, 2000). With horizontal integration, relatively independent but comparable organisational units on the same hierarchical level are integrated into multi-institutional arrangements (Bazzoli, Shortell, Ciliberto, et al., 2001). The rationale for this model is threefold: 1) to achieve economies of scale; 2) to make available a greater variety of inpatient services to patients; and 3) to most efficiently and effectively expand the service delivery network (i.e., regional systems organized around a central hub facility with smaller facilities in more remote locations; Hernandez, 2000).

Vertical integration came on the scene somewhat later but was still dominated by a focus on improved efficiencies and containing costs. In this model, however, the focus is on the excessive "transaction costs" of obtaining care (Hernandez, 2000; Shortell, Gillies & Devers, 1995). As such, vertical integration can be understood to refer to:

> "…the ability of one provider of systems (i.e., owner or controlling entity) to provide all levels and intensities of service to patients and health care consumers from a geographically contiguous region when these clients present themselves to that system… In a system of vertically integrated services, a patient presents himself or herself for primary care and moves from one level to another as is medically appropriate, using the most economical and best service necessary and remaining within the ambit of the same provider… a fully integrated system is capable of providing all services to all patients who present themselves for care." (Brown & McCool, 1986; p. 8)

In this way, vertical integration is "envisioned to change the role of the tertiary hospital from that of the "hub" of the system to a peripheral back-stopping role when other system components fail" (Hernandez, 2000, p. 61).

The above speaks to vertical and horizontal integration at the level of health *outcomes.* What of the benefits to administrative and policy spheres of health delivery? There has been a swell of support for the application of vertical integration as described in organizational management and health systems literature—that is, "*the combination or coordination of different systems of production*" (Walston, Kimberly & Burns, 1996, p. 72). This has been particularly true in the United States, with the spread of managed care, and more recently in our Canadian trend toward mental health and addiction system integration in various jurisdictions. This application of vertical integration at the systems-level promises economies of scale, efficient service delivery, reduced administrative costs and increased market influence, to name but a few potential benefits (Walston, et al., 1996). However, these same authors note the ongoing scepticism that these benefits have materialized, mostly due to a lack of empirical evidence. An evaluation of the success of integrative initiatives should be attempted and, ideally, results compared from one jurisdiction to another.

4.3 Integration as a tiered model

The tiered model, developed by the National Treatment Strategy Working Group (2008) positions substance use services and supports in a multi-sectoral and tiered framework (see Figure 3)

.

The five tiers are summarized as follows:

- Tier 1: Services and supports draw on natural systems and networks of support for individuals, families and communities. They may include prevention and health promotion initiatives targeted to the general population or to at-risk populations. Resources and supports to help people self-manage and recover from less severe substance use problems may also be provided. Other supports that are open to all people with problems of varying severity (e.g., Alcoholics Anonymous) would also be included at this level.

- Tier 2: Services and supports provide the important function of early identification and intervention for people with problems not previously detected or treated. These may include screening, brief intervention and referral.

- Tier 3: Services and supports are intended to engage people experiencing problems who may also be at risk of secondary harms (e.g., victimization, medical problems). They include active outreach, risk management, basic assessment and referral services. Individuals accessing services at this level do not necessarily require intensive services.

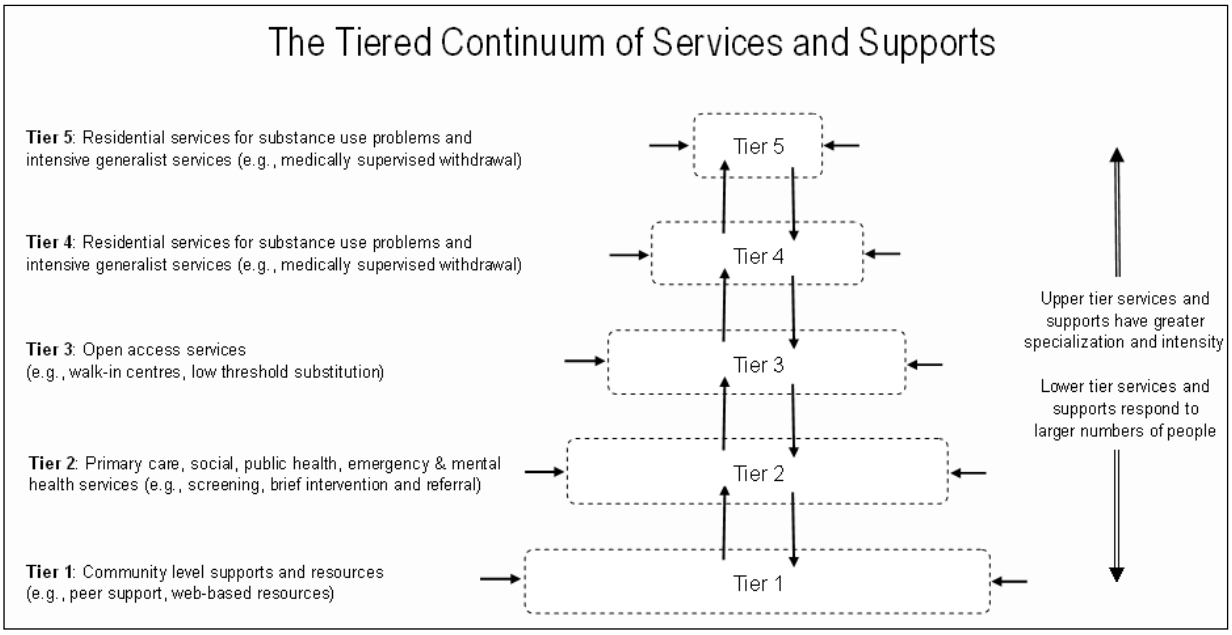
- Tier 4: Services and supports are more intensive and in many cases offer specialized interventions. People accessing services at this level may have multiple problems that needs services and supports from more than one sector or tier. In such complex cases, multidisciplinary or team approaches may be indicated.

- Tier 5: Services and supports are intended to address only the needs of people with highly acute, highly chronic and highly complex problems not adequately addressed by lower tiers. Services may include inpatient treatment and residential services.

The model supports a flexible continuum of services designed to meet the needs of the individual, rather than the individual needing to adapt to a rigid service delivery system. It is based on the principle that *every door is the right door* - people may access the continuum of services and supports by way of any of the five tiers and, upon entry, should be linked to other services and supports within or across tiers according to their needs. Within the five tiers of the model, it is important that people be linked to services and supports of sufficient intensity/specialization to address their initial needs. Once receiving care, people should then be able to access services and supports within and across different tiers as needed, and over time. As their treatment and support journey progresses, people are supported as needed to

shift the focus into services and supports at lower tiers. As individuals move through various tiers based on their needs, their journey should be facilitated by collaboration between providers of distinct kinds of services and supports, at the services-level – through shared care between service providers – and at administrative and organizational levels – through partnerships and/or less formal collaboration.

Figure 3: The tiered continuum of services and supports



As we turn our attention back to the mental health and addiction service delivery system, both the tiered model, and other approaches to horizontal and/or vertical integration, provide for a broad array of services beyond the specialized purviews of the mental health and substance use worlds, such as housing, education, family supports and primary care, required by some people needing mental health and substance use services. Critical linkages are also required with the criminal justice system (Tremblay, 2008). The tiered model is particularly appealing since it envisions a comprehensive mix of services required to address the full range and complexity of needs among those with mental health and/or substance use problems. In short, application of the tiered model would support the integration of mental health and substance use services and systems but do so in the context of a much larger vision.

4.3 Integration as a continuum

Building upon the literature on inter-organizational collaboration and partnerships, some researchers have conceptualized integration relationships along a continuum, with a focus on the degree of particular domains, such as level of trust, between two programs, agencies or systems. Anecdotally, some variation of this approach to modelling integration would appear to have been the approach most commonly applied in Canadian jurisdictions.

One model that may be informative for our present work is the continuum that varies along three domains – governance, administration, and service delivery. *Governance* includes such aspects as system performance accountability as well as strategic direction setting, policy development and the management of resources. *Administration* oversees the day-to-day management of finances, information and human resources. Finally, *service* refers to the delivery of services and supports to clients and may include common admission and assessment procedures, co-case management and shared treatment protocols (Durbin, Rogers, Macfarlane, Baranek, & Goering, 2001). Thus, the overall degree of integration varies depending on the extent to which each of these three domains is integrated.

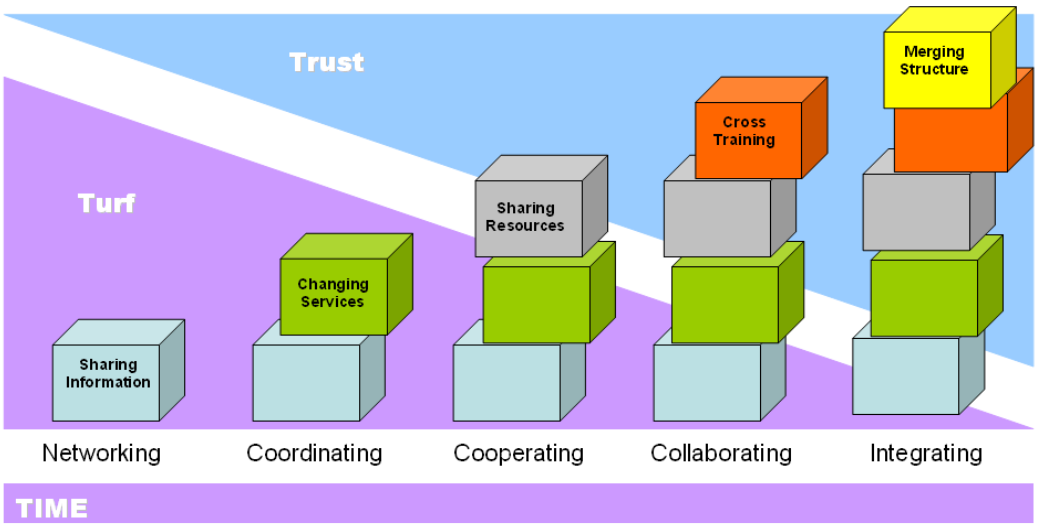
A similar model has been proposed by Bolland & Wilson (1994), which was developed to measure and compare coordination across six service systems. They argue that all organizations providing health and human services have three specific functions that may vary both within and between organizations, in the form of coordination activity. *Planning* (analogous to governance in the previous example) refers to agenda-setting activities and includes identifying and defining problems, formulating solutions and developing consensus around proposed solutions. *Administration* focuses on resource transactions and considers such things as funding, shared staff or facilities, joint programs and technical assistance. Finally, *service delivery* is measured by client referrals between organizations.[20]

An interesting twist on this conceptual framework is defining integration based on common

[20] Boland & Wilson conclude from their research that planning integration is the most difficult to achieve, followed by administration and finally, service delivery; refer to Durbin et al. (2001) for examples of more continuum models.

barriers to collaborative relationships: specifically, *time*, *turf* and *trust*. The degree that agencies are able to overcome the three main barriers will depend on engaging in collaborations of different complexity and commitment (refer to Figure 4).

Figure 4: Collaboration continuum



Adapted from: Himmelman A 2001, 'on coalitions and the transformation of power relations: Collaborative betterment and collaborative empowerment', American Journal of Community Psychology, vol. 29, no. 2.

Networking: Exchanging information for mutual benefit. This is easy to do; it requires low initial level of trust, limited time availability and no sharing of turf.

Coordinating: Exchanging information and altering program activities for mutual benefit and to achieve a common purpose. Requires more organizational involvement than networking, higher level of trust and some access to one's turf.

Cooperating: Exchanging information, altering activities and sharing resources for mutual benefit and to achieve a common purpose. Increased organizational commitment, may involve written agreements, shared resources can involve human, financial and technical contributions. Requires a substantial amount of time, high level of trust and significant sharing of turf.

Collaborating: Exchanging information, altering activities, sharing resources and enhancing each other's capacity for mutual benefit and to achieve a common goal. The qualitative difference to cooperating is that organizations and individuals are willing to learn from each other to become better at what they do. Collaborating means that organizations share risks, responsibilities and rewards. It requires a substantial time commitment, very high level of trust, and sharing turf.

Integrating: Completely merging two organizations in regards to client operations as well as administrative structure.

4.4 Integration as partnership(s)

The literature on partnership covers the study of "alliances", networks", "collaborations"; "cooperation", "joint working" and "integration" to name just a few of the terms that are sometimes used synonymously, sometimes not. Dowling et al., (2004) cite the following definition of a partnership:

> *" a joint working arrangement where partners are otherwise independent bodies cooperating to achieve a common goal; this may involve the creation of new organizational structures and processes to plan and implement a joint programme, as well as sharing relevant information, risks and rewards. (p. 310)*

Further, it is also widely accepted that partnerships exist on a continuum of *breadth* and *depth*. They also evolve over time through various stages, both formal and informal.

Partnerships, and collaborative inter-organizational relationships in general, have become the norm for addressing complex, intractable problems in health and social service delivery. Their attractiveness is based on the very intuitive assumption that the synergy created by bringing together resources, roles and responsibilities from different organizations will be more effective in problem-solving than that brought to bear from any one organization acting alone. As Dowling and colleagues (2004) so aptly put it "*partnership is no longer simply an option, it is a requirement*" (p.309).

The enthusiasm for partnerships notwithstanding, there is surprisingly little research evidence available that shows that partnerships are particularly effective; that is to say, that they yield outcomes above and beyond what might be achieved by entrepreneurial organizational activities (Asthana, Richardson & Halliday, 2002; Boydell & Rugkasa, 2007). Further, virtually no evidence exists that they are *cost-effective* (Dowling et al., 2004). An oft-cited reason for the lack of outcome evaluation is the challenge inherent in measuring the more intermediate and longer-term goals. Put simply, process-related issues are much easier to measure. Thus, most partnership evaluations have focused on the partnership itself (e.g., agreed upon needs and goals, trust, reciprocity, leadership) (Dowling et al., 2004). The stage model of partnership development also posits that a positive "outcome" of one stage may be the transitioning of the partnership to the next stage. Thus progression from one stage to the next is seen as both an outcome and a process indicator.

Interestingly, the burgeoning emphasis on partnership-based approaches to solving complex health and social problems occurred simultaneously with the development of new evaluation methods that experts considered to be particularly *a propos* to the evaluation of partnerships. One reason is that these new methods focus on *complexity* in general. A brief synopsis of one of the more salient models cited in the literature follows – a model known as Realism Evaluation.

Realism (Realistic) Evaluation[21] was developed by Pawson and Tilley (1997) in an attempt to take into account the dynamic environment within which complex interventions take place. Outcomes are derived from a combination of contextual factors and planned program activities, and emphasis is placed on identifying program mechanisms that bring about change. The following simple equation captures the essence of this approach: *context* + *mechanism* = *outcome*. Mechanisms have different effects according to context, and an evaluation seeks to understand what it is about the intervention that works for whom, and in what conditions.

[21] Some writers refer to this as "Realistic Evaluation"

The implications of this perspective for understanding the integration of mental health and addictions services and systems is that both the external context (e.g., regional, provincial or national strategies for mental health and/or addiction as well as health care generally) and, the internal context (e.g., key players from hospital and community sectors; management and accountability structure; resource levels) are critical for understanding both its operational efficiency and its effectiveness from a capacity building perspective. More importantly, at a micro-level, collaborative activity between two or more mental health and addiction service providers may add value in one context (e.g., community; sub-population) but not another.

4.5 Integration as continuity-of-care

While not referring specifically to the integration of mental health and addiction services/systems *per se*, continuity-of-care is included in this discussion as a closely related and very important concept. Bachrach (1981) defined continuity of care as the orderly, uninterrupted movement of clients among the diverse elements of the service delivery system. Saarento, Oiesvold, & Sytema, et al., (1998) defined the concept as: *"the degree to which the service system links episodes of treatment in a seamless, uninterrupted whole, in conformity with the needs of case of the patients"* (p. 521). There are two variations or dimensions of continuity-of-care: (1) namely *longitudinal*, which refers to the individual's pathway through treatment and support, and includes continuity of service provision (i.e. sustained contact), continuity of service provider, and continuity across levels-of-care *(through discharges and transfers)* and *cross-sectional*, which refers to the comprehensiveness and accessibility of the services required to meet the needs of long term clients.

Joyce et al. (2004) summarize the evidence supporting continuity-of-care as being associated with a number of clinical indicators such as better symptom control, decreased length of hospitalization, and improved mental health function and quality of life. The author concluded: "*the failure to achieve continuity of care does not result so much from a lack of knowledge about how to deal with chronic patients as it does from a failure to apply what we know*" (p. 1454). Almost three decades later, health care systems demonstrating effective continuity-of-care have yet to materialize in most jurisdictions. There have, however, been

several attempts to measure continuity-of-care (Joyce et al., 2004; Durbin, Goering, Streiner, and Pink, 2004) and emerging consensus that this must include a component related to the clients own perceptions of the treatment and support experience. These measures, in addition to performance indicators based on the trajectory through a network of services, are no doubt useful for the evaluation of services-level integration activities and strategies.

4.6 Summary

It is necessary to develop clear definitions regarding how we conceptualize the potential types of integrated relationships between mental health and substance use services and systems. This is no simple task as there are ample models from which to draw, and it is important to be sensitive to the complexity of the theoretical and practical aspects of the construct of integration. Clearly defined models of integration are, however, required to facilitate planning and program development with an ultimate view to improving client outcomes (at least for specific sub-populations). These models are also key for further evaluation of the effectiveness of the changes to be put in place.

5.0 Where do more generic health services fit into the integration picture?

Strong arguments can be made that rather than focusing on the integration of mental health and substance use services and systems, a more appropriate use of expertise and resources would be to focus on improved integration of mental health and substance use services and systems AND health services generally, and primary care in particular. Some of the more cogent points for consideration follow.

It is widely recognized within the respective research literatures on substance use and mental health that physical co-morbidities are extremely common. Alcohol is a known risk factor for accidental injury and many illnesses (Room, Babor & Rhem, 2005); and the use of other drugs is also a well-established risk factor for a variety of illnesses and physical conditions including but not limited to sexually transmitted disease, other infectious diseases such as HIV and AIDS and Hepatitis B, C and D; pulmonary-related problems, skin and dental-related disorders, to name just a few strong causal associations (Lowinson, Ruiz, Millman et al., 2005). People with diagnosable substance abuse and dependence, particularly those in treatment settings present with an even more complex morbidity profile (Dickey, Normand, Weiss, et al., 2002; Gossop, et al., 1998), and the risk of early mortality in these populations is also well established (Room et al., 2005).

Similarly, there is no shortage of evidence to show that many mental disorders are closely linked to physical illnesses (Gelder, Lopez-Ibor & Andreason, 2000; Wise & Rundell, 2002), salient examples being diabetes, lung diseases, and liver problems (Jones, et al., 2004; Sokal, et al., 2004). Both alcohol and drug use and some mental disorders (e.g., schizophrenia) are closely linked with tobacco use (de Leona & Diazb, 2005), a common factor that adds another level of complexity and set of health risks. Further, both mental illness and substance use and abuse are linked independently to trauma and victimization. Many of these associations are exacerbated with co-occurring mental and substance use disorders (SAMHSA, 2002; Health Canada, 2001a; Larson, Miller, Becker, et al., 2005)

Contact with health services is common to both areas. Epidemiological and health services research data also consistently show that for both mental and substance use disorders the

primary care physician is the "front line" (Parikh, Lin & Lesage, 1997; Urbanoski et al., 2007). In both the respective "silos" of mental health and substance use, there are evidence-based protocols for screening, brief intervention, treatment and referral. Examples include protocols for alcohol interventions (e.g., Babor & Higgins-Biddle, 2001) and depression and early psychosis (e.g., Bruce, Ten Have, Reynolds et al., 2004; Gallo, Bogner, Morales, et al., 2007). Similarly, the use of emergency services, crisis intervention services and effective use of hospital beds and geriatric care are all aspects of planning for the effective community response to both mental disorders and substance use disorders.

Physical health problems get insufficient attention in both substance use and mental health services, conversely, substance use and mental health problems are under-detected in physical health services and this negatively impact outcomes. There is evidence that physical health problems tend to be under-identified and under-managed in substance use services and mental health services (Cradock-O'Leary, Young, Yano, et al., 2002; Worley, Drago, & Hadley, 1990). There is also evidence that both substance use disorders (and heavy alcohol or drug use) and mental disorders tend to be under-recognized in health care settings, notably primary care (Parikh, Lin, & Lesage, 1997). Universal screening is advanced in both fields as an important step-forward, and yet is rarely if ever considered together despite possible efficiencies in the knowledge translation and of obvious value for that proportion of patients being screened who experience co-occurring disorders (e.g., alcohol and depression). Finally, there is evidence that some co-occurring physical health problems are associated with poorer outcomes for both standard substance use treatment (e.g., retention, compliance, symptom/drug use improvements) (Friedman, Lemon, Anderson, & Stein, 2003; McLellan, Arndt, Metzger et al., 1993) and standard mental health treatment and support (Labrie, et al., 2007; Slade, 2002).

Integration of a number of specialized services with primary care is a topic of high interest and considerable research. There is a large literature in the health field broadly on assessing "case complexity" and both mental and substance use disorders fit well with validated assessment and matching protocols intended to do so. This is especially true for recently developed protocols for assessing case complexity that are firmly grounded in a broad psychosocial perspective (Stiefel, Huyse, Sollner et al., 2006; Huyse, Stiefel & de Jonge,

2006)). Furthermore, since the development of Psychosomatic Medicine or Consultation-Liaison as sub-specialities of psychiatry in various countries[22], a plethora of models have been developed and evaluated on how to better integrate mental/behavioural health with the treatment/management of physical health problems (Wulsin, Sollner & Pincus, 2006).[23] Models of chronic disease management, psychosocial rehabilitation, and as well as brief intervention and stepped care, are additional models of treatment and support shared by the domains of mental health and substance use/abuse.

Discrimination and stigma are shared challenges. People with mental health and/or substance use disorders share the phenomena of stigma and discrimination in the health system as well as other important life areas such as the workplace (Kirby, 2006). While this may be exacerbated by co-occurring disorders, stigma and discrimination are certainly not unique to that sub-population.

The need is recognized in both areas for improved integration with the larger health system. One need look no further than the recent report of the National Treatment Strategy for substance use services (National Treatment Strategy Working Group, 2008), and the most recent Canadian best practice report on mental health systems (Health Canada, 1997b), as well as the Standing Senate Committee on Social Affairs, Science and Technology's final report (Kirby, 2006), to get a strong sense of priority that should be established to achieve better connections with the health system in the interests of people and families needing help.

In light of the many factors outlined above, it is certainly reasonable to ask where the appropriate boundaries are for integration efforts for mental health and substance use services and systems. The data seems to suggest that, from both a person-centred and population health approach, good linkage to primary care services is essential. How this is implemented should no doubt depend on the current structure of provincial and local health systems, as well as past and current reform activities. The National Treatment Strategy, and the

[22] There is no international agreement on the name of this sub-specialty in Psychiatry. Psychosomatic Medicine is the sub-specialty in the United States, whereas Consultation-Liaison is the term used in Canada, Europe and elsewhere. Still various nuances exist around the use of these terms internationally.
[23] Also see the special issue of Medical Clinics of North America (2006) for a full collection of excellent papers on this topic.

implementation processes on the horizon for the tiered model embodied within that strategy, provide a conceptual framework for moving ahead with a broader vision. The tiered model may also emerge as a planning framework for broadly-based mental health services in some parts of Canada[24] and, in that regard, be a model that helps plan services and supports that address needs of the "mild" and "moderate" mentally ill, as well as those with severe and persistent mental illness. There are probably many advantages for mental health and substance use services and systems to be working together within the broader vision of this tiered model. Anecdotally, one often hears the view expressed in both policy development circles and local planning tables that mental health and addictions should "combine forces" or "get their act together" to better compete for resources with other health-related sectors. There is likely some wisdom in this advice. Irrespective of the competition for resources, there would seem to be many advantages for administrators, clients and their families alike if the mental health and substance use sectors were working together with primary care, and other sectors within the health system for that matter. That said, the earlier review of the effectiveness of systems integration would suggest some caution in incorporating too many sectors into a given integration initiative. A staged and targeted approach is probably called for, and the tiered model is likely to be a useful conceptual model to help advance and evaluate various opportunities that are likely to emerge for broader integration with health services at both the services and systems level across Canada.

[24] There are early indicators of this transpiring in Ontario and Alberta, for example.

6.0 Is there a stronger role for network and systems theory?

In the previous chapters we have described the overt rationale underlying the movement toward improved integration between mental health and addictions services and systems and called for more reflection on the pertinent Canadian data and other contextual factors of importance to this issue. We have noted that not only are there different types and levels of integration, but also that there are different sub-populations who will be variously affected by the range of integration possibilities. Research evidence does not clearly point to one type of integration model over another or to the situations where integration may not have any added-value at all.

There have been many different types of studies characterizing and attempting to understand the many issues related to integration in the Canadian context, including epidemiological studies, outcome studies, program evaluation, health economics, policy analysis and community needs assessment, to name but a few relevant methods and disciplines that have been brought to bear by literally hundreds of different authors. In our review of the various models of integration (Section 4), in particular the literature on community partnerships and inter-organizational collaboration, it was evident that two important approaches had not been adequately tapped in the discussion of the integration of mental health and substance use services and systems. One approach was "systems theory" and the other was "inter-organizational network theory". The paucity of work drawing upon these approaches seems particularly noteworthy because the discussion of integration has moved well past integration at the services-level to the systems-level. What might these two approaches offer our assessment of the current situation in Canada?

6.1 Systems theory

One of the major challenges in adopting a systems approach to the study of the integration of mental health and addictions services and systems is the "mind trap" of the traditional view of a "system" (Midgely, 2007). This traditional view holds that a "system" is defined as a set of inter-connected parts working toward a common purpose (or purposes). Examples in everyday life include a stereo system or the plumbing system in one's home. These examples highlight the common purpose (delivering sound or water on demand), and that the

components of the system are organized in such a way that they work together in an organized way. Following this traditional definition focused on connectivity and common purpose, one would naturally think that a systems approach to studying integration of mental health and addictions to be devoted primarily to understanding the various ways in which different clinicians and providers are working together toward positive client outcomes. A case in point might be the conceptualization of "continuity-of-care". More recent thinking in systems theory goes well beyond this traditional focus on relationships, and the linearity and orderliness embodied within these relationships (Foster-Fishman, Nowell &Yang, 2007). True "systems thinking" acknowledges that many situations, including those involving inter-organizational relationships, are better described as "emergent", "unordered" or "chaotic". The theoretical lens through which to examine and understand these situations is variously known as "emergence theory", "open-systems theory", "dynamic systems theory" or "complexity theory".[25]

Emergence theory: Let's start with emergence theory and how it applies to the integration question. "Emergence" is considered to be a property of all living systems and is closely tied to the idea that networks form essentially to adapt to changing circumstances. Thus *networks* of individuals and organizations are seen as the primary mechanism of all change processes – change doesn't happen "*one person or one organization at a time*" but rather through the formation of networks of relationships among people who discover a common goal and work together to achieve it (Wheatley & Frieze, 2006). Importantly, however, emergence theory goes several steps beyond the description of relationships within a network (e.g., network maps and network roles) to aim for an understanding of the *dynamics* underlying the network (e.g., why they form; why and how leadership evolved; what keeps members connected).

The idea of networks evolving over time is an essential element of emergence theory. Emergence (i.e., change) is considered to evolve through three stages. Initially, separate local networks begin to form around a particular topic of common interest (e.g., people with co-occurring disorders being a good example) and the *self-organizing* process begins. The

[25] There are important differences among these terms that are not critical to the discussion here.

second stage is the "community-of-practice" stage whereby the network strengthens and becomes more focused. The main shift in going from a network to a community-of-practice is just that -- the sense of community. This shift is characterized by members making a commitment to mutual reciprocity and serving the needs of the whole above their own self-interest. There is also an interest in advancing something beyond the needs of the group itself; there is an intentional commitment to advance the field of practice and to share their discoveries with a wider audience, especially those doing similar work. The third stage is described as "systems of influence", a stage that can never be predicted. It is the emergence of a system that has real power and influence. Practices that were developed by a few become the accepted standard and policies and major debates and decisions now include the perspectives of the original pioneers.

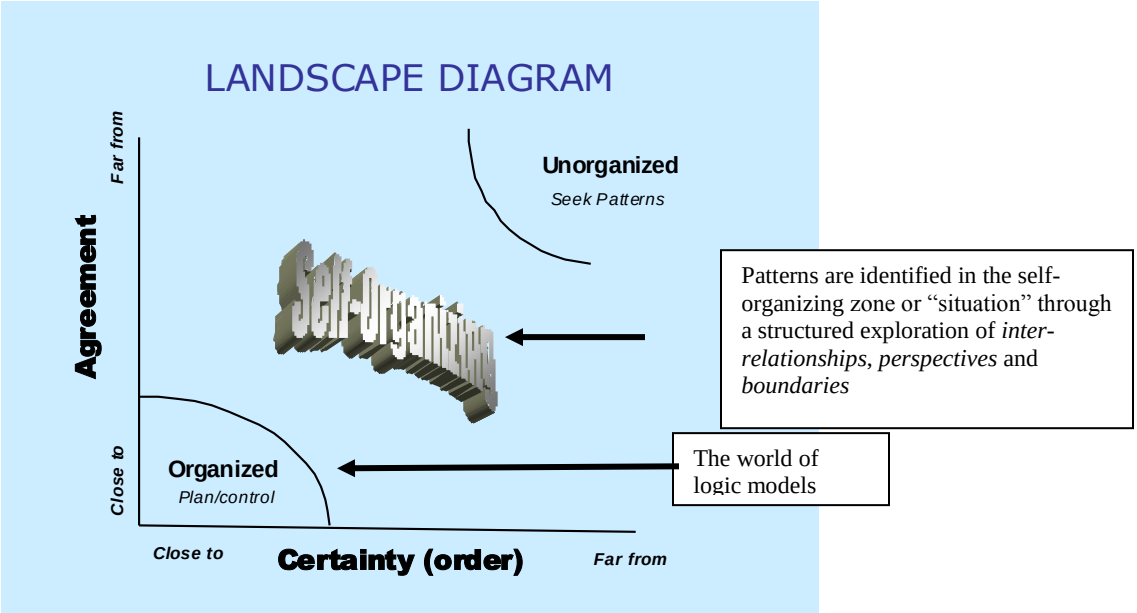
The parallel to the area of co-occurring disorders is obvious, in that what started as an important issue highlighted by a small number of researchers in the 1980's has evolved into a movement of sorts, with clear champions and influence at the policy table. But what exactly has "emerged" and why? And is it consistent with the original intentions and research evidence? In many respects this is the purpose of this paper.

With respect to the integration of mental health and addictions emergence theory also teaches us that real and sustainable change is built from the bottom-up among interested individuals, groups and communities rather than through top-down administrative directives. One doesn't wave a magic wand and just say "OK, thou shalt be integrated!" Integration, from an emergence perspective, can be envisioned and nurtured but the outcome can not be pre-determined. Integration models and mechanisms are also likely to be highly *situation-dependent*. These factors have important implications for planning as well as evaluating integration activities and strategies at multiple levels – the services or systems-levels.

Complex Adaptive Systems: A critical aspect of systems theory, and closely related to the notion of emergence, is a "complex adaptive system". This element of systems theory helps us appreciate how the "emergent" or "chaotic" aspect of inter-organizational networks can inform our understanding of the relationships between the mental health and substance use

services systems. A complex adaptive system (CAS) calls for one to imagine a given situation as containing a certain degree of "certainty" (i.e., the predictability of the phenomena of interest) and "agreement" (i.e., the level of consensus among stakeholders about the nature of the phenomena. At the two extremes of these two variables, a situation may range from highly organized (guided by a specific plan/control) to highly unorganized (without pattern or predictability). The vast majority of situations, however, are within these two extremes and are essentially *self-organizing*. Figure 5 presents what is known as a "landscape diagram". The goal of planning and evaluative activity in a given area is to identify and understand these patterns within each situation so as to better nurture and continuously improve them. This model can be applied at multiple levels, for example, the services-level (i.e., how are our services for people with co-occurring disorders integrated), and the systems-level (i.e., how are planning, financing and accountability structures and processes organized in order to best support individuals with co-occurring disorders).

Figure 5: Landscape diagram



A relatively recent application of the CAS model to adapt community health outreach to community-based organizations provides a helpful framework for understanding what it can contribute to the discussion of integration. Similar to the arguments thus far, Olney (2005) maintains that community-based organizations have characteristics similar to CAS - namely,

unpredictable, relational and constantly evolving. Olney proposes specific axioms related to a CAS derived from substantial literature on organizational theory and summarized below.

- Complex adaptive systems feature an entangled web of relationships among many agents and forces, both internal and external. These influences cause constant change, adaptation, and evolution of the system in an unpredictable, nonlinear manner.

- Complex adaptive systems are self-organizing and patterns are not necessarily created from top-down policy. They emerge through a complicated system of relationships, influences, and feedback loops inside and outside the system. Thus change can not be forced; it must be shaped.

- Complex adaptive systems do not move predictably toward an end goal. Timelines and resources are always in flux; and unexpected developments can either enhance or thwart plans.

- Communication is heaviest at the boundaries of a system. Boundaries exist between two different parts of a system that must adjust *to* and *with* each other.

- Systematic patterns of behaviour can be observed. Although dynamic and changeable, there are system-wide patterns of behaviour that are generated by "attractors", which will be repeated at many levels of the system and can be difficult to alter.

- Feedback loops are the mechanisms for change. If feedback loops are well-designed, they facilitate change and adaptation of the system.

Thinking of the integration of mental health and addictions as a complex adaptive system, and at multiple levels, presents exciting opportunities for planning and evaluation of the integration of mental health and substance use services and systems. This approach can, however, also challenge some key underpinnings of traditional planning and evaluation strategies that may be brought to bear. For example, a complex adaptive system can never be fully represented in a logic model format as it implies too much linearity in the cause and effect relationships between processes/activities and the short, medium-term and long-term objectives (Foster-Fishman et al., 2007). A logic model approach is also inherently inward looking and pays insufficient attention to the external environment; something absolutely critical from a systems evaluation perspective. Similarly, traditional approach to performance measurement is to select a small number of outcome indicators (typically derived from the causal chain in the logic model) that will be monitored over time. A perspective based on

complex adaptive systems challenges the view that these outcomes are going to remain the same over time, or in fact be the most appropriate outcomes for all sub-populations being served in a service delivery system that is constantly adapting to both the needs of its clients/constituency and an evolving external environment. Some non-traditional evaluation strategies such as story-telling or other qualitative methods may be particularly useful to understanding the connectivity across the key players and related outcomes. Such qualitative methods, however, are not usually seen as appropriate for performance monitoring purposes. An evaluation of integration processes based on this type of systems thinking will also pay particular attention to inter-relationships (internal and external). However, an evaluation of integration as a complex adaptive system would also pay particular attention to how sub-systems have self-organized within the network and around the boundaries of the network (e.g., medically-oriented and non-medically-oriented services; the self-help components; the links to primary care and emergency services; the connection to chronic disease prevention).

While the study of inter-relationships is an important aspect of a systems approach it is much more. Two other key concepts that are embedded in some form or another within all systems approaches are perspectives, and boundaries. The focus on perspectives challenges the evaluation to consider the situation (system) from different points of view, and consider how these perspectives change our understanding of how the system operates (e.g. relationships; outcomes expected). For example, from "x" perspective: Who ought to be the beneficiaries of integration? What ought to be different at the finish compared to the start of the integration process? What viewpoint gives integration meaning? Who ought to constrain (i.e., control) the integration process and resulting integrated services and systems? Who or what in the external environment influences but does not control the integration process and resulting integrated services and systems?

Bringing information to bear to answer these questions, and from different perspectives, helps in constructing a "systems" view of the situation, and identifying areas for potential improvement. For example, one might view integration in a given situation as a means to improving clinical and psychosocial services for people with co-occurring disorders. This perspective would contrast with a view of integration as a means of achieving administrative

efficiency in the delivery of mental health and addictions services for people with co-occurring disorders as well as those with mental or substance use disorders alone but not co-occurring disorders. Still another perspective would consider integration as a means to more closely involve psychiatrists and other physicians in the care of people with co-occurring disorders as well as those with mental or substance use disorders alone. Still another shift in perspective would consider integration as a means to share evidence-based practices treatment and support models across the two service delivery systems. In short there is no "correct" perspective, only multiple perspectives. Adopting and working through different perspectives is critical to systems planning and evaluation.

Lastly, the issue of boundaries is also critical to systems thinking and, like perspectives, there are many different ways of looking at boundaries.

- The concepts of "mental health" and "addiction" are themselves two such boundaries, both of which have very blurred edges. For example, mental health can be viewed diagnostically in terms of DSM-IV disorders or more dimensionally in terms of psychological distress, impairment, functioning and/or wellness. Addiction also includes substance abuse and dependence as defined within DSM-IV as well as along key dimensions of frequency and quantity of substance use.
- Another important boundary issue related to addiction includes the range of behavioural health problems that are to be included under the rubric of co-occurring disorders, for example, problem gambling, sex addiction, Internet addiction, eating disorders. Tobacco dependence may or may not be included.
- There are also significant boundary issues and perspectives with respect to what is included under mental health and addiction *treatment*. Do we use the term "integrated treatment" to refer only to the integration of specialized services for addiction and mental health? Alternatively do we mean to include primary care and other generalist services, recognizing that for both mental health and addiction they are more frequently utilized than the specialized services?
- Another boundary issue is the place of prevention and health promotion in the discussion of integrated mental health and addiction services and systems. Related to this are the increasingly blurred boundaries across mental health, addictions and

(other) chronic illnesses. Mental health and mental health promotion have typically been included in broad government strategies for chronic disease prevention; addictions somewhat less so.

- The use of the term "co-occurring disorders" carries critical boundary issues. Although it is a widely used term, and not linked to any particular profession or discipline, it does convey a medical paradigm since it is so closely linked to the language of psychiatric classification of DSM-IV. This was even more the case with respect to one of the predecessor terms - dual diagnosis.
- Lastly, within a given jurisdiction, boundaries may be defined geographically in terms of what is included or excluded under the umbrella of an integration system of services and supports. This is becoming increasingly critical in the context of an expanding or, in some cases, diminishing number and size of regional health authorities in a given province or territory.

6.2 Inter-organizational network theory:

What is network analysis? Network theory is essentially a theory about the number and degree of connections between various players or actors and the nature of these connections—between a few individuals, departments/units, organizations or larger systems. Generally, networks refer to either naturally or artificially developed relationships among organizations that operate as '*mechanisms for communication, cooperation, and collective problem solving*' (Singer & Kegler, 2004, p. 809). The nature of these relationships depend on a variety of antecedents including, at the interpersonal level, actor similarity, personality, proximity, organizational structure; and environmental factors; at the inter-unit level, interpersonal ties, functional ties, organizational processes and control mechanisms; and at the interorganizational level, motives, learning, trust, norms and monitoring, equity and context (Brass, Galaskiewicz, Greve & Tsai, 2004). Given the potential for the virtually endless combinations and degrees of influences on a network, it soon becomes readily apparent that networks of even modest proportions can be very complex.

The term "network" is often used synonymously with "partnership", "collaborative", "alliance", or even "group". However, for planning and evaluative purposes the term is often

used with the specific intention of *describing* the relationships among individuals or organizations (referred to as "actors") and possibly *measuring changes* over time that may be attributed to a network intervention with a particular outcome(s) in mind. Briefly, organizational network analysis involves articulating the boundaries around a group of organizations and then having representatives within each organization indicate the presence or absence (or degree of involvement) of a predetermined list of possible types of relations or "ties" with each of the other organizations. Examples of different types of relations include information sharing and other types of knowledge exchange, resource sharing, client referrals, and joint program planning. Results are presented in graphical form as well as various quantitative indices (e.g., density, centrality, hierarchy). Some analyses combine the results across different types of ties (known as multiplexity) to get an additional sense of the strength of relationships across the network members.

It is important to recognize that network analysis is not just about the assessment and understanding of the relationships within a network. It is also intensely concerned with the "gestalt" of the network and its context (Lawless & Moore, 1989). Luke (2005) articulates this best in his description of network analysis as one of four state-of-the-art methods for understanding the *context* of group and inter-organizational relations. Further, although some people hesitate to use network analysis because of its apparent complexity, it is not difficult to apply with some statistical and programming supports. Interpretation is also becoming easier and more intuitive (see, for example, Cross & Prusak, 2002; Durland & Fredericks, 2005). Hawe et al. (2004) have recently provided a glossary of terms to help navigate the field of network analysis.

Why networks form: Network theorists have postulated that there are two factors most influential in most network development, these being uncertain environments and competition for resources (Mandell, 1984). The first factor revolves around the hypothesis that organizational networks evolve and seek stability in response to changes in the complexity of the environment (*population-ecology model*). A good example that is germane to the integration issue is the increasingly complex and severe profile of client needs. No doubt there are other changes in the external environment that may stimulate a "banding

together" of mental health and addictions services and systems, for example, regionalization of health authorities and increasing competition for resources. In contrast, the *resource-dependence model* posits that organizations will strive to cooperate and coordinate based on their mutual needs to secure resources (a reality for most services sectors). Central to this model is the issue of power; the more an organization is dependent on another for resources, the more its independence becomes a focal priority. Thus, the overt and covert rationale underlying the formation of a particular network, and from different perspectives, is fruitful territory for the evaluation of integration processes. Another implication, arising largely from the resource-dependency model, is the need for a thorough assessment of costs and benefits, and again from different perspectives.

Applications of network analysis and lessons learned for integration: Organizational network analysis has been applied to health care applications focused on long-term care teams (Cott, 1997); primary care (Scott et al., 2005); HIV/AIDS (Kwaite et al., 2001); rural mental health (Fuller et al., 2007); health informatics (Anderson, 2002); services for the developmental disabled (Fredericks, 2005); public health preparedness in Canada (Moore et al., 2006) and the US (Harris & Clements, 2007); jurisdiction-wide tobacco control policies (Krauss et al., 2004); coalitions for diabetes control and chronic disease prevention (Provan et al., 2003; 2004); prevention of lead poisoning through community intervention (Singer & Kegler, 2004); local health policy development (Hoeijmakers et al., 2007); community prevention and community activation more generally (Feinberg et al., 2005; Wickizer et al., 1993). Beyond these topic areas network analysis and network theory/thinking are also making significant contributions to the dissemination and uptake of evidence-informed practices and policies, for example, by linking networks and the diffusion of innovation model (Valente, 1996). These studies are useful not just for the knowledge brought to bear on the topic area of interest but also for the insight one can gain about the different ways of applying network methods, interpreting the results and complementing the findings with other types of data. In regard to the latter, there is virtually unanimous support among experts in this area for using complementary qualitative methods to assist in data interpretation. This echoes the opinions regarding the assessment of partnerships more generally.

Early applications of organizational network analysis focused on mental health services (Tausig, 1987; Provan.& Milward, 1995) and the approach has played a major role in the evaluation on important mental health-related programs such as the ACCESS project for homelessness in the US (Morrissey, Calloway, Thakur et al., 2002) It is a reasonable question, therefore, to ask why the methodology is noticeably absent from the study of the integration of mental health and substance use services and systems. This is unfortunate since important lessons are being learned from the application of network analysis in other areas – lessons that may be particularly critical for the study of mental health and addictions. These lessons are summarized below.

Evidence to support integration based on inter-organizational network solutions has evolved in recent years. As noted earlier, there are no studies specifically in the integration of mental health and addictions services and systems. Provan and Milward (1995), however, did study the effectiveness of several mental health systems using two general network structure concepts, *density* and *overall centralization*, to operationalize the assessment of network effectiveness. Density refers to the extent to which all organizations in the network or system are interconnected to one another. It was measured by documenting the number of referrals sent; referrals received; case coordination; joint programs; and service contracts. Centralization—referring to the power and control structure of the network (or integrated system)—was measured by the degree to which there was a core agency at the centre of activities and the degree of influence of that core agency. Following their comparative analysis, Provan and Milward submitted four propositions for network effectiveness:

- Other things being equal, network effectiveness will be enhanced when the network is integrated, but only when integration is achieved through centralization. Networks that are centrally integrated through a core agency, and decentrally integrated through cohesive links among network members, will be less effective than networks that are predominantly centralized.
- Other things being equal, network effectiveness will be highest when mechanisms of external control are direct and not fragmented. Low network effectiveness will result

when external control is indirect and when strong local mechanisms for monitoring and control are absent.

- Other things being equal, network effectiveness will be enhanced under conditions of general system stability, although stability alone is not a sufficient condition for effectiveness. Networks that have recently undergone substantial change will be significantly less effective than stable ones. The impact of instability on network effectiveness will be greater to the extent that the clients of the network are themselves adversely affected by instability and uncertainty.
- When a network is embedded in a resource-scarce environment, network effectiveness will range from low to moderate, depending on other network/system characteristics. When a network is embedded in a resource-rich environment, network effectiveness will range from low to high, depending on other network/system characteristics.

In their longitudinal study of community capacity building around chronic disease services in a rural community, Provan et al., (2003) concluded that a broad, collaborative network among local organizations can be successful, particularly when collaboration begins modestly (e.g., beginning with information sharing) and builds to increasingly dense relationships (e.g., sharing of resources). The types of relationships may naturally change over time with some organizations assuming more or less involvement. The results also supported the benefits of an external strategy-maker whose role it is to broker collaboration and sustain relationships.

It is important to note that networks may focus on various levels of collaboration, including strategic planning, administration and/or service delivery. Are networks more successful depending on the level targeted for collaboration? Bolland and Wilson (1994) explored this question in their study of six community-based health and human service systems in a mix of rural and urban areas. They found significant differences in coordination efforts depending on the level of collaboration. Integrative *coordination in planning* was found to be the most difficult to achieve where differing organizational agendas and priorities make system-wide consensus difficult to achieve. Integrative *administrative coordination* enjoyed slightly more success but still significantly less so than for service delivery—largely attributed to turf

protection. The relative ease of *service delivery coordination* was seen as a logical extension of common goals and agreement around how best to provide services. Based on these results, the authors caution us that integrative coordination does not necessary equate with effectiveness - effective planning is required to allow services to adapt to changing environments. As such, models of health care reform aimed primarily to achieve efficiency through coordinated service delivery should not occur in a vacuum; inter-agency cooperation in the planning and agenda-setting process are also potentially necessary components.

The importance of small "cliques" and clique analysis: A necessary first step in evaluating an inter-organizational network is to put a boundary around the network for purposes of the analysis. In this boundary setting process there is a tendency to be *over-inclusive* and to include organizations that are more on the periphery of a problem area. Inclusion of these peripheral players tends to work against finding a relationship between network structure and client outcomes. This occurs because important collaborative activities that are focused on specific client needs tend to be clustered within the smaller, more circumscribed, set of organizations whose mandates and services are most closely related to the need areas.

There is some evidence to support building networks based on "small world" principles, where "*the best network has local clustering into dense sub-networks, short paths between all actors, and relatively few ties*" (Brass, et al., 2004; 807). Indeed, Provan & Sebastian (1998) present research supporting this claim, suggesting that client outcomes are more influenced by linkages between *cliques (i.e.,* linkages between sub-groups, members of which share common interests in a client group (Walker, 2000), than by linkages between all the agencies in a service network or system that are more removed from direct client services (e.g., signing agreements on joint program delivery).

Clique analysis is one analytic technique within the broader context of network analysis. It involves the identification and interpretation of small groupings of tightly bound members of a given inter-organizational network (essentially defined by all members being linked to all other members of the sub-group). Provan and Sebastian (1998) showed that within a larger network of organizations that was focused broadly on chronic disease management and

prevention, the inter-relationships among smaller "cliques" of organizations were correlated with positive health and quality of life outcomes at the individual level. Analysis of the inter-relationships among members of the larger network revealed no such pattern. They conclude that, to be most effective, *"clique integration must be intensive, and involve multiple and overlapping links both within and across the organizations that compose the core of a network [a clique]. When this sort of intensive, multiplex integration occurs, clique members learn a great deal about each other, minimize their transaction costs and establish working relationships built on norms of cooperation and trust (p. 460)".* The lesson here, and in other studies focused on "small-world" versus "big-world" integration (Brass et al., 2004), is that large-scale networking and integration efforts may have little impact compared to smaller scale collaborative activities focused on very specific sub-groups of clients and their needs.

What are the implications of these clique analyses for the assessment of integration of mental health and addictions services and systems? In an earlier section of the report, we emphasized that the degree of overlap between mental and substance use disorders varies substantially across various sub-groups, and within specific sectors of the mental health service delivery system. It is likely that both formal and informal inter-organizational networks (cliques) evolve around the provision of services to particular sub-populations (e.g., young males with high criminal justice involvement; women with histories of trauma; people who are homeless, living in extreme poverty and severely marginalized). It is within these service delivery cliques that the concept of "integration" is the most meaningful and perhaps translated directly into improved client outcomes. To understand the benefits of integration from an outcome point of view, a network analysis (quantitative or qualitative) must drill down into a treatment system to assess the meaningful micro-relationships across the various providers of treatment and support services to really understand what is going on and to make the link to client improvement. More importantly, it is clear from this work in the area of chronic disease prevention that the relative contribution of the local service delivery cliques directly engaged in supporting clients is greater than the contribution to client outcome likely to be made by high level "big world" integration of funding and other administrative

processes and structures. In sum, integration at this higher level should ideally be targeted at supporting smaller scale integration that is in turn targeted directly at the individual level.

Types of networks and the importance of brokerage: While a description of the many types of inter-organizational networks is beyond the scope of this paper, elaboration of one in particular - the dynamic network model - has particular relevance as it builds upon the work of Provan and colleagues on the effectiveness of networks. It reinforces the need for a dedicated network broker or facilitator as highlighted in other network-related research (Ford et al., 2004).

Dynamic networks were initially described in the context of private enterprises and later elaborated and applied to the public sector by Lawless & Moore (1989). Dynamic networks develop in response to the fact that "*some problems facing proximate agencies are really individual parts of the same large scale, complex problems that are too extensive and many-sided for any single agency, however large*" (p. 1108). This description seems to fit well within the present discussion of integration of mental health and substance use services and systems. The distinctive features and related propositions of the dynamic network framework are summarized in Table 2 with suggestions of the possible relevance and implications.

There are four essential features of a dynamic network model (1) vertical disaggregation (i.e., the network consists of organizations with specialized tasks and expertise); (2) coordination and governance is non-hierarchical; (3) information is freely shared among network members; and (4) someone or some structure is in a broker role to make strategy, coordinate, facilitate but not control collaborative activities.

Table 2: Distinctive features of Dynamic Networks[26] and their relevance to integration

FEATURE AND RELATED PROPOSITIONS	RELEVANCE/IMPLICATIONS TO MH/SU SERVICES

[26] Summarized from Lawless and Moore (1989, pp. 1173-1178)

	AND SYSTEMS INTEGRATION
VERTICAL DISAGGREGATION	
• Agencies with redundant abilities can specialize in systems-level tasks and abilities beyond the scope and resources of any single member • Provides a more complete complement of resources	• Clients with mental health problems, substance problems, or both require a number of specialized services beyond the scope of those provided by the respective services systems including, but not limited to psychiatric and medical care, housing, employment/education training and support
GOVERNANCE MECHANISMS	
• Non-hierarchical coordination and governance • Contractual agreements provide the governance framework for each member to pursue tasks • For larger, more complex systems, a strategy maker may be required	• Non-hierarchical governance may minimize fears of any one service sector being dominated/consumed by other service sector(s) • Contractual agreements may minimize duplication of both services and administration and maximize specialty services.
BROKER ROLE OF THE STRATEGY MAKER	
• The role coordinates and facilitates but does not command (i.e., little or no formal authority to impose decisions) • Aids in achieving overall system objectives • Promotes integration by acting as the link needed to bring member agencies together. • Mediate and resolve conflict.	• Networks/agencies emerging to integrate mental health and substance abuse services may need to be willing to work without formal authority • The individual or group of individuals who acts in the broker role must be seen as a relatively impartial facilitator between the separate systems. • The broker may be required to negotiate with stakeholders beyond the two service systems.
INFORMATION SYSTEMS	
• Fast, complete disclosure of all information among network members • The degree to which agencies share their values and understand respective operational problems forms a basis for common goals and facilitates coordination.	• Differences in philosophies and approaches to service delivery need to be acknowledged, addressed, and where possible, reconciled, (e.g., client access to services; new resource investments and programs developed or terminated). • Information disclosure may be required beyond the two service systems (e.g., criminal justice, medicine, housing, etc.)

Aside from the dynamic network model, the concept of brokerage has a very important role when inter-organizational networks are viewed through the lens of network theory and systems theory. Organizations have historically been viewed as closed systems with administrative and service processes contained within the seemingly objective (and tangible) boundaries of the system. More recently, however, there has been a theoretical shift to a more open-system perspective where the network is not a closed entity, but is imperfectly bounded by relationships and engaged in a constant interplay with the larger environment (Chaskin, 2001). That said, the dominant perspective(s) and boundaries dictate that

individuals, groups and other organizations will be more or less "in" or "out" of the network. Questions naturally arise as to how clients access services, like medical services, support for AIDS/HIV and other infectious diseases, housing and employment, and which may or may not be situated inside the network boundary. For some network theorists, the answer lies with the broker role (Chaskin, Lawless & Moore, 1989; Mandell, 1984).

Depending on the scope of the organization or system, the broker role may be filled by an individual, a committee of individuals or a separate broker organization. Chaskin (2001) proposes specific roles and attributes of broker organizations including: 1) the broker as a '*matchmaker'*—helping to bring separate organizations together for a particular purpose, 2) the broker as *clearinghouse'*—acting as a conduit and for information and resources, and 3) the broker as '*community representative'*—assuming varying degrees of community governance function. These roles will be dependent, to a large extent, on the degree to which the broker is perceived as able to play the role of a neutral convener, has the capacity to build and maintain relationships and has the necessary legitimacy within the relevant community(ies). Chaskin cautions, however, that these roles are not without their risks, particularly with respect to issues of power and control and they must constantly be negotiated to maintain trust and influence.

6.3 Summary

There is a notable absence in the literature on both systems theory and inter-organizational network theory as they relate to discussions of mental health and substance use service and systems integration. This is unfortunate from conceptual and methodological points of view as they have much to offer. Systems theory, especially that concerned with "emergence" and "complex adaptive systems" teach us that the process of change inherent in moving toward improved integrated services at the individual and systems-levels is inherently context dependent and most likely non-linear and difficult to control or centrally micro-manage. Some of the lessons that can be taken from systems and network theory are that effective functional integration and integrative network formation tend to be highly responsive to emergent perceived need for integration; that development processes are difficult to predict and manage; and that they cannot be effectively mandated.

Systems-related ideas a inform us that real and sustainable integration is built from the bottom up, or perhaps more accurately stated, rarely if ever exclusively from the top-down. Thus, the message is quite consistent with that presented in earlier parts of this report. The role of high-level "big world" systems integration is to support the individually focused and "small-world" integration processes that begin with individual clinicians, case-workers and managers. Systems evaluation also requires a thorough and perhaps non-conventional exploration of relationships, perspectives and boundaries (Williams & Iman, 2007). By unconventional, we mean that systems evaluation typically draws on mixed evaluation methods that go beyond linear logic modelling and causal-based statistical methods. Contextual factors are also critical in interpreting any data on the processes and outcomes of integration.

These lessons learned from systems theory and systems approaches to evaluation are very consistent with many of the ideas and methods that can be drawn upon within inter-organizational network analysis. Network theory helps one understand the factors that underlie the development of naturally formed networks of mental health, substance use and other service providers and, therefore, provide guidance to understanding costs and benefits from different perspectives. The methods of network analysis also aid in mapping out, understanding, and quantitatively measuring the kinds of relationships that are developing in support of better outcomes for individuals with mental health, substance use and co-occurring disorders. Some methods such as clique analysis also help understand the contributions of "small world" and big world" integration, especially as these service delivery cliques revolve around needs of particular sub-populations. Clique analysis also shows the value of bottom-up versus top-down integration, again consistent with systems theory in general. Lastly, network theory helps us articulate the potential value of different types of networks and the importance of the broker role in the dynamic network model in particular reminds us that the potential added-value and sustainability of a network approach to the integration of mental health and substance use services and systems does not just "happen" – it requires facilitation and strategy to maximize the potential.

7.0 Summary and conclusions

What we set out to accomplish*:* Our objective in preparing this report was to raise awareness of several important issues and key data relevant to the integration of mental health and substance use services and systems, and of particular importance to the current Canadian context. We anticipate that a better understanding of these issues, and the nuances around much of the relevant data, will contribute to more informed discussions and concrete planning and policy development with respect to integration. We do not, however, conclude with a set of recommendations to achieve the "ideal" type and level of integration. Indeed we think this type of "holy grail" is an inappropriate goal since the "ideal" must surely be dependent on local and jurisdictional context and the sub-population under-consideration. Rather, our goal has been to "take stock" of the issues related to the integration of mental health and substance use services and systems in Canada. While we have been severely hampered in our ability to actually describe the types of integration strategies that have been tried, and are being planned, in Canada (due essentially to lack of synthesised information), we have marshalled new data on the epidemiology of co-occurring disorders in Canada and reviewed critically existing data; given an update of the literature on integrated services and systems; and brought forward some ideas from other areas that we think should make a larger contribution to the deliberations about the integration of mental health and substance use services and systems in Canada.

Siloed systems and siloed research and development: In the health field generally the topic of "services and systems integration" is certainly not unique to mental health and substance use. Indeed, the topic of mental health and substance use integration parallels a wider discussion, and a much wider research and practice literature, on the integration of mental health and health services generally. Although many of our observations with respect to mental health and substance use are applicable to that wider discussion we feel this larger literature and practice experience concerning health and mental health holds as yet untapped potential for being instructive with respect to the integration of mental health and substance use services and systems. Similarly, the broad and rapidly expanding areas of inter-organizational network theory and system theory/evaluation remain largely untapped for

conceptual, practical and methodological insights. Briefly stated, while the literature on the integration of mental health and substance use services and systems has emphasized the need to bridge these two "silos", the many authors[27] and experts in the area have seemingly fallen into their own silo of sorts and failed to draw upon many other areas of work of potentially high value.

The rationale behind the movement for integration: This report has aimed to trace the rationale and enthusiasm underlying the call for improved integration of mental health and substance use services and systems. While it is apparent that much of the push for integration comes from the literature and expert opinion with respect to co-occurring disorders, we reiterate here that there are likely many other factors also at play, but which remain largely unexplored and undocumented (e.g., anticipated cost-efficiencies by administrators; consumer demand for services that are more easily access and individualized; power struggles between disciplines and models of treatment and support). For that reason we have opted not to "arm-chair" too strenuously about all the possible underlying factors. We have argued instead that there are many types and levels of integration, some of which are of very high relevance to people with co-occurring disorders (e.g., integrated clinical teams; cross-training). Other levels and types of integration are much broader in scope and will clearly be of high relevance to all people with mental and substance use disorders (with or without co-occurring disorders). The best example of the latter would be high-level organizational and structural merger of mental health and substance services and/or systems.

We suggest that the rationale for the integration of mental health and substance use services and systems should rest on a stronger foundation than simply the phenomenon of co-occurring disorders. On the one hand, we argue for a broader perspective and call for planners and administrators to ensure there is a net benefit of integration activities and strategies for those with co-occurring disorders as well as those with mental or substance use disorders but not both. On the other hand we also advocate for a much more targeted and strategic approach based on sub-populations and, in particular, based on the severity and

[27] This includes, by the way, the first author of this report.

complexity of the problems faced by the people needing assistance. Going forward, it seems more prudent for the field to mature into a more nuanced and targeted approach to integration and with a firmer grasp of the subtleties in both the epidemiological data and the data on the effectiveness of integrated and non-integrated treatment (i.e., *what type and level of integration and for whom*).

The current Canadian situation in relation to the larger field*:* In many respects the present report can be viewed as a follow-on document to the 2001 Health Canada report on best practices for co-occurring disorders. This earlier report helped bring much needed attention to the co-occurring disorder "issue" within planning and policy circles that are focused on either or both mental health and substance use. However, much has happened in the ensuing years with respect to the co-occurring disorder topic area within Canada and elsewhere. In particular, progress has been made in understanding the community and clinical epidemiology of co-occurring disorders. There has also been more research, and more research syntheses, focused on the effectiveness of integrated treatment at a clinical, programmatic level. Using the three stages of research in this area—*discovery, significance and solutions*—the process of tracking research and knowledge exchange activity in the United States and Canada proved to be a revealing exercise as it clearly showed the lag time between the stages of research and development in the two jurisdictions. Here in Canada, we have made up considerable ground in the "discovery stage" as we now have our own pan-Canadian data on the prevalence of co-occurring disorders in the general population. Improved systems-level data on treatment populations have also been forthcoming. More information on clinical sub-populations is needed in jurisdictions across Canada. Gaps also remain in other areas. At the clinical services level, Canada is certainly well-positioned in major treatment and research centres to continue to contribute to the larger published literature on the effectiveness and cost-effectiveness of specific interventions (e.g., Skinner 2005). There are also many unique Canadian issues that should be explored in much more depth at the services-level (e.g., the needs of First Nation, Inuit and Metis populations for culturally appropriate treatment and support; partnership models unique to our system of universal health care such as family health teams, and services appropriate to our mix of urban/rural and immigrant/non-immigrant populations).

At the systems-level, however, the research and development gap is particularly glaring since the relevant organizations in the United States have clearly acknowledged the need for *supports* to be in place to nurture, sustain and evaluate various integration models and activities. This acknowledgement has been backed up with resources to create and evaluate better supports for integration, and to provide opportunities for sharing lessons learned. At a national level here in Canada, government departments and organizations such as Health Canada (under Canada's Anti-Drug Strategy), the Mental Health Commission, the Canadian Centre on Substance Abuse, and the Canadian Executive Council on Addictions could provide collaborative leadership in this area, in partnership with various stakeholder organizations. Provincial and territorial jurisdictions should also be proactive in supporting integration activities, for example, with demonstration projects and incentives). The recent launch of the National Treatment Strategy for substance use services and systems affords a particularly compelling opportunity to ensure the integration issue goes beyond rhetoric and trial and error to include focused strategies that to actually support and sustain integration efforts where they are called for.

A major difference of critical importance between the two sectors: The clinical epidemiological data on co-occurring disorders derived from treatment settings here in Canada and elsewhere draw attention to a major difference between the network of specialized substance use services and supports and the network of specialized mental health services. Specifically, in substance use services, co-occurring mental health problems appear to be the rule rather than the exception, and the opposite seems to be true for mental health services where high rates of overlap are restricted to certain sub-populations. The implications of this for integration-related issues need to be more fully assessed. At the services-level there are certainly implications for the two sectors in the areas of screening and assessment (i.e., the training and education needs of managers and staff; the degree of inter-agency collaboration that may be required in the intake, screening and assessment phases of program entry; the degree of specificity required in first-level, diagnostic screening; and establishing criteria to rule-in versus rule-out cases for further assessment). At the systems-level, it is likely that the motivations for improved integration will be different, for example, mental health services may be more likely to seek support with selected, high need cases

(e.g., referral when needed[28]), while the substance use sector may be looking for broader kinds of support and more internal capacity building (e.g., cross-training and extending commonly used interventions such as motivational interviewing and cognitive behaviour therapy to mental health domains; see Parikh (2008) for evidence-based advice in this regard). We offer these few ideas simply to spark further dialogue and analysis about varying motivation for integration within the two service systems, and how these motivations may or may not be related to the prevalence and profile of people with co-occurring disorders encountered in the respective systems.

The role of problem gambling: We have not devoted attention here to the important issues and challenges that arise for the integration of mental health and substance use services and systems due to the overlap and treatment challenges associated with problem gambling.[29] There is no shortage of population-based and clinical epidemiological data showing the close relationship between problem gambling, substance use disorders and a wide range of mental disorders (Rush et al., 2008b) for recent Canadian work on this co-morbidity). Treatment for problem gambling is now essentially integrated into substance use service systems across Canada and the involvement of mental health services is not well-understood. Given the epidemiological data and other clinical research data on treatment outcomes, it is probably time to consider the full spectrum of co-morbidities, including problem gambling, in the discussions about integrated services and supports.

Back to the future with respect to terminology: In this report we have raised the issue of terminology used to describe various levels of integration, an issue that often leaves practitioners, planners, policy developers and evaluators cast amidst an array of potentially conflicting terms. Terminology is important as it helps keep discussions of pros and cons of various options focused. Going forward we suggest the term "**services-level integration**" to connote the integration of clinical and psychosocial services made available to the person with a mental or substance use disorder (and co-occurring disorders) and their families. The

[28] In the literature on integrating mental health and health services this has been termed the "fire alarm approach" to integration (Wulsin et al., 2006)
[29] We use the term "problem gambling" to include pathological gambling as defined by DSM-IV.

key element is the focus on direct service to individuals and/or families seeking assistance. The term should apply whether these services are provided by one clinician; a team; a program; a multi-program organization; or multiple independently operated programs or organizations in the community. We found single-site, team models versus multiple-provider collaborative models to be two types of services-level integration that are also helpful is summarizing literature and considering options. In the end, what services-level integration strategies must share are common messages, consistent policies regarding access and program participation, common treatment, support and continuing care plans at the individual level, and shared information (with the consent of the person being treated/supported).

Integration at the services-level is distinct from a second level, namely **systems-level integration,** where the focus is on structures and processes such as training and credentialing, policy, information systems, governance, administration and funding models. We found it helpful to draw a distinction between governance/administrative integration (i.e. structural merger) and other kinds of activities and strategies such as joint planning, cross-training, co-location, e-health solutions to information exchange, and which may or may not involve structural merger. The distinction is helpful as it recognizes the different functions and possible added-value of various systems-level integration activities and strategies. For example, governance/administrative integration may be helpful in securing an adequate resource base for high quality service delivery that may be a critical but understated goal of integration. Governance/administrative integration also typically aim for improved cost-efficiency in administrative operations such as human resources, information technology, procurement and the like. Administrative mergers can also be applied differentially at different levels of administration in a system, thereby leading to an array of structural merger options. This may include, for example, a Minister and ADM overseeing a joint services portfolio at the department level but with regional administration levels operating on the basis of separate management and funding structures. Other systems-level integration activities and strategies are more directly targeted at improved services for clients and their families, examples being cross-training and credentialing; policies and procedures for accessing services; joint planning; e-health initiatives that support and safeguard the transfer of client information; and various quality improvement processes. This latter group of system supports

have in common, or at least *should* have in common, a clear and unequivocal link to improved access to services, continuity-of-care, and more cost-effective treatment and support offered to people seeking help.

A logic model articulating the link between these systems-level activities and strategies is essential for good planning and evaluation of outcomes. It is important to recognize that integration strategies with a strong governance/administrative component must attend to the concrete supports required for integrated services that benefit clients and their families. It is equally important that integration efforts that are being driven more from the bottom-up ensure they have adequate leadership and resources to make and sustain improvements in integration at the services-level. Top-down or bottom-up is probably not an either or choice, but rather how best to achieve the right balance for the right organizational and community context.

The implications of this distinction between services-levels and systems-level integration, and the sub-categories we have articulated are consistent with insights gleaned from systems theory, in particular emergence theory and complex adaptive systems, and the study of inter-organizational networks. The essential lesson learned form work in these areas is that the formation of effective *networks* (one important form of integration at both the services and systems-levels) is not a linear, predictable process. Further, network formation is a developmental process that is unlikely to be created *only* by top-down administrative decree. Services-level integration strategies between individual clinicians/support workers and community organizations are often focused on particular sub-populations and are likely critical to a successful treatment and support experience for them. Work in other areas such as chronic disease prevention provides some evidence that such "small-world" integration is likely to make a larger contribution to client outcome than integration activities more distal from the client (e.g. joint membership on planning councils). The high-level "big world" integration of funding and other administrative processes and structures will be challenged even further to impact client outcomes without strategically supporting smaller scale integration that is, in turn, targeted directly at the individual level—which brings us to the important topic of evaluation.

The importance of evaluation*:* Going forward, we would argue that more emphasis should be placed on program and policy evaluation, since much more evidence is needed concerning integration strategies at the systems-level. While important findings emerge from work on integration in the mental health field generally, surprisingly little has been conducted with respect to mental health and substance use services and systems specifically. Without a strong emphasis on evaluation there is considerable risk of *pseudo-integration*, that is, the development of new structures and processes created in the spirit of improved integration, but without a thoughtful assessment of risks and benefits to all concerned, and without any substantive difference being made on the ground for the person and families in need of treatment and support. This suggestion for more evaluation is not meant to downplay the challenges in conducting evaluation on integration-related activities and strategies that transcend individual clinical and program contexts. Although systems-level evaluation[30] is challenging, experience to date in mental health services research and many other fields, show that it is possible if designed and resourced properly. Furthermore, new innovative evaluation strategies drawn from partnership evaluation and other evaluation models such as Realistic Evaluation and Emergence Theory have been largely untested in this area and may prove valuable.

Building upon our two-level distinction as defined above, the over-riding goal of a concerted program of research and knowledge exchange should be to identify the most helpful and, if possible, the *essential*, types of systems-level supports that translate into more accessible, effective and cost-effective treatment and support at the services-level. A variety of evaluation models will be required suggesting that a multi-disciplinary, multi-method approach will be advantageous. Whatever evaluation methods are chosen they must be sensitive to context issues (i.e., specifying under what conditions a particular integration strategy "worked"), including a clear description of the population of focus, as well as organizational and community culture. It will also be important to use the idea of "models" of

[30] The reader is cautioned about the varying interpretation of the term systems evaluation. It is meant to imply here evaluation of strategies intended to achieve better systems-level integration. This may or may not use systems evaluation techniques as illustrated in Chapter 6 and outlined in some detail by Williams and Iman (2007)

integration quite judiciously. “Models” are extremely helpful tools to organize one’s thinking and specifying potential pathways to various outcomes. They are also helpful for categorizing, describing and contrasting alternative approaches. However, model-based planning does not always translate to model-based evaluation strategies. In other words, the goal of evaluation is not necessarily to search for the *optimal model* (since it will rarely be transferable or feasible to implement with complete fidelity); but rather to search for the most important features of different models that seem to be most helpful in what context.

Little information is currently available on the nature and level of integration strategies that have been planned and implemented in Canada. It seems, therefore, that a reasonable starting place for a program of research and evaluation should be to catalogue and describe what has been done to date, and what lessons have been learned. Such a compilation should be done for both services-level and systems-level integration efforts. The breakdowns used in this report as well as typologies used in the literature on the integration of mental health and health services (e.g., Wulsin et al., 2006) may be a good starting point for drilling down and organizing examples within each of these broad groupings

Attending to workforce development: While there are many specific systems-level integration activities and strategies that are worthy of considerable research, the issue of training and education of clinicians and support workers should be high on the list of priorities. This should include identification and assessment of core competencies required to navigate increasingly complex clinical and psychosocial issues that arise in relation to improvements in integration. Core competencies should also be identified for mental health and substance use professionals working in the context of non-specialized services such as primary care, emergency, and corrections services. There are also many other critical issues related to disparity in working conditions and wages across the mental health and substance use service systems; issues of supply in relation to demand; credentialing; job satisfaction and other issues related to workforce retention. In the end, a competent and satisfied workforce will be required to implement and sustain virtually any meaningful services-level integration activity. This is too often forgotten in the discussion of integration “strategy”.

The need to populate a risk/benefit matrix for all integration strategies: Our cautionary notes on the literature on the prevalence of co-occurring disorders *at the population level* clearly shows that the majority of people with substance use or mental disorders do NOT have co-occurring disorders. This also seems to be the case for the current mental health system as a whole, where the high rates of overlap are confined to important sub-populations. In addition, it is important to keep in mind that it is not just the size of the overlap that matters but also the degree of severity and complexity of problems since even a small percentage of people can require high intensity and high cost services. Our review of various models and approaches to integration also shows us that there are many different strategies both at the services and systems-level, and again need to be better considered for different sub-populations. Taken together these observations caution us to be very clear in specifying the benefits AND the potential risks to all those who may be impacted by a given integration strategy, especially in populations where the overlap is not substantive. Table 4 serves as a potential template for such an assessment of risks and benefits. The three main sub-groups are identified across the top, although this could be further broken down according to the needs of the specific situation (e.g., by gender, by age). It is likely helpful as well to break this down by severity/complexity and undertake the exercise for risks/benefits of integration strategies aimed at primary, secondary or tertiary level treatment and support.

Down the left side of the template various integration options would be included again with the level of specificity required by a given situation. For illustration purposes, we have included the two broad categories of services and systems-level integration and two generic breakdowns within each category.

To support future use of the template we have brainstormed a list of potential benefits and risks for the three sub-populations – people with co-occurring disorders, people with mental disorders and people with substance use disorders. The example of integration is administrative integration/mergers. In the interests of space we have not specified a level of severity for the population affected. Our examples are shown below Table 3.

Table 3: Proposed risk/benefit matrix for different types/levels of integration

	Substance Use Disorder Only	Mental Disorder Only	SUD and Mental Disorders
Services-level Integration			
Single-site team approach			
- Risks			
- Benefits			
Multiple-provider approach			
- Risks			
-Benefits			
Systems-level Integration			
Non-administrative			
-Risks			
- Benefits			
Administrative integration/mergers			
-Risks			
-Benefits			

People with Co-occurring Disorders

Potential Benefits:

- Could increase screening and assessment skills of all staff.
- Could increase intervention competencies both in substance use and mental health for all staff.
- Could increase awareness of specific problems associated with mental disorders.
- Could reinforce the need and support for improved dialogue and exchange between specialized mental health and substance use service providers, potentially leading to a convergence in language, philosophy and methodology.
- Could improve access to research and program development funding and lead to better procurement of technical assistance resources for co-occurring disorders via larger scale funding initiatives than might otherwise be possible.
- Could lead to more physical co-location of services and/or joint fully integrated services. More support in general for services-level integration via streamlined decision-making and implementation.
- Possibly greater impetus for improving MH-SA cross-disciplinary pre-service training in post-secondary institution

Potential Risks:

- Could introduce additional treatments that are not needed when reduction of consumption and increased quality of life may lead to substantial amelioration in mental health
- Could impede systems-level support for integration at the services-level via more cumbersome bureaucratic decision-making.
- The provider system that is dominant in terms of resources and influence may overwhelm the other and relegate it to second-class status.
- Risk of changing power structure from a psychosocial base to a predominantly psychiatric base.

People with Mental Disorders

Potential Benefits:

- Could increase screening and assessment skills of all staff.
- Could increase intervention competencies both in substance use and mental health for all staff.
- Could increase awareness of specific problems associated with substance use and dependence.
- More competitive for resources within larger health system.
- Could reinforce need and support for efforts to improved dialogue and exchange between specialized mental health and substance use service providers, potentially leading to more cooperation and collaboration on issues of common concern (e.g., stigma; or access to recovery support services in the community such as independent or supported housing options).
- In some provinces mental health services tend to be relatively under-resourced in areas of technical support infrastructure (e.g., information systems) and could stand to benefit if resources are equalized across the board.
- If impetus for improving MH-SA cross-disciplinary training, then mental health workers will be better prepared to identify substance use problems and intervene. Should lead to earlier detection, better outcomes and reduced health care costs.
- Larger pool of human resources to draw upon with basic training in mental health treatment and support.

Potential Risks:

- If no new money comes with the merger and must be realized via efficiencies, mental health providers may feel that they are subsidizing the equalization of resources and salary scales.
- Potential for over-diagnosis/over-treatment/wrong-treatment models if services gradually became less individualized.
- Potential loss of specialized skills/workforce.
- Some of the larger mental health provider organizations may fear the loss of centralized planning and the ability to respond rapidly to the emerging community needs once they become a small cog in a bigger bureaucratic wheel.

People with Substance Use Disorders

Potential Benefits:

- More competitive for resources within larger health system.
- Could lead to a push for equivalent credentialing across mental health and substance use community-based services with the impact being that substance use workers gain in skills and status as "professionals" and also are better paid.
- If co-location of services results, this could provide better distribution of substance use services and improved access in rural and remote areas.
- In some provinces substance use services not currently included in regionalized health structures tend to be relatively under-resourced in areas of technical support infrastructure (e.g., information systems, quality improvement, research, and planning) and could stand to benefit if resources are equalized across the board.
- The last point may also apply to improvement in financial resourcing and ability to undertake capital and program development projects.

Potential Risks:

- That the neurotoxic or psychosocial syndromes resulting from the substance use be confused with co-occurring disorders, resulting is treatment or diversion that could delay remission, or amelioration.
- If there is a push for equivalent credentialing across mental health and substance use services with the impact being that substance use services become more professional, then substance use providers may fear becoming more closely aligned to the medical model of service and less connected to recovery community.
- Potential for over-diagnosis/over-treatment/wrong-treatment models if services gradually became less individualized.
- The addiction service providers may feel that they will be overwhelmed by the larger mental health service system and relegate it to second-class status.
- Potential loss of specialized skills/workforce.
- Some of the larger substance use provider organizations may fear the loss of centralized planning and the ability to respond rapidly to the emerging community needs once they become a small cog in a bigger bureaucratic wheel.

Although such a template would be of value in local/jurisdictional integration processes it would also be informative to incorporate this tool more formally into a national environmental scan with respect to the integration of mental health and substance use services. This would best be done in a series of national focus groups including a broad range of stakeholder perspectives from across Canada to obtain a better understanding of the range of perceptions concerning risks and benefits for various integration options.[31] This could then provide "normative" data with which to contrast results from a local/jurisdictional integration process. Having results available on a national scale could also contribute to the development of toolkits and other resources to counter perceived risks and maximize perceived benefits.

Further explore similarities that can be leveraged: It is important to note that the literature on co-occurring disorders has tended to highlight the differences between the mental health and substance use services and systems – differences that often serve as barriers to effective and more integrated treatment and support. It is important to further explore these differences in the Canadian context since this will help set some concrete targets for improvement at the systems-level. It will also be helpful in considering which if any of these differences are

[31] Appendix A and B provide an outline of a potential project to conduct such focus groups. This project was in the early stages of planning for the present report and subsequently considered outside the scope of available resources.

unique to the population with co-occurring disorders as opposed to mental health and substance use separately. Some differences are also deeply rooted in the historical development of the two service systems; individual self-selection into the field; training requirements and organizational/system cultures; diagnostic versus non-diagnostic methods of assessment and the role of medical and psychosocial interventions. These differences will not be easily overcome in situations where more integration is deemed desirable.

We suggest, however, that this focus on differences be supplemented with a more *strengths-based paradigm* that systematically assesses the similarities across the respective services and systems; similarities that can potentially be leveraged to the benefit of different types of integration and for different sub-populations. Examples of similarities across mental health and substance use services and systems to build upon include:

- the use of the "continuum of care" approach to system planning and the need for individualized treatment and support within that continuum;
- the importance of a coordinated network of services in the community that includes specialized services as well as other services required on a referral basis;
- the importance of self-help resources and family supports;
- the sharing of common ground in the fight against stigma and discrimination;
- and the common turf offered by chronic care models and a focus on long-term support and recovery when needed.

This list hints at an important point raised at the recent video-seminar on the integration issue sponsored by AADAC, namely that the actual services and supports delivered within the two service systems are rather similar once you get past significant differences in the approaches used for assessment and determination of the problems to be addressed in a treatment and support plan. Indeed one might argue that there are more similarities than differences; the similarities perhaps ignored in the face of some of the major attitudinal barriers to working better together.

Maintain a population health perspective: Health Canada has identified population health as a key concept and approach for policy and program development aimed at improving the

health of Canadians (Health Canada, 2001b). A population health approach has two objectives: 1) to maintain and improve the health status of an entire population; and 2) to reduce inequalities in health status between population groups. In so doing, it must take into account a broad range of individual, environmental, cultural and societal factors that effect entire populations. Given the increasing prevalence and burden of disease related to mental health and substance use problems, the population health perspective has particular relevance to any discussions of improving each sector, either individually, or via integration.[32]

Concretely, what are the implications of a population health perspective for integration of mental health and substance use services and systems? Interestingly, we think this question has never really been asked before.

Firstly, we think a population health perspective requires that we acknowledge the full range of health problems experienced by people with mental health and substance use disorders. The focus of past analyses of population data here in Canada has been on mental health and substance use and much more needs to be done to explore and assess the implications of co-morbidity with other health problems. If the data mimic the complexity seen in clinical samples, and there is every indication the information will, it will argue persuasively for a broader approach to service and system integration than mental health and substance use specifically. In particular, it will point to the need for closer integration with primary care services in order to truly address the full range of needs.

Similarly, a population health perspective requires that we also acknowledge, and incorporate into our planning and policy development, the fact that the primary care physician is currently the first and most common source of help for people with mental and/or substance

[32] Health Canada (2001b) has provisionally prepared key elements and actions that define a population health approach and which bear mentioning in relation to discussions of integration. They are:

- Focus on the health of populations
- Address the determinants of health and their interactions
- Base decisions on evidence
- Increase upstream investments
- Apply multiple strategies
- Collaborate across sectors and levels
- Employ mechanisms for public involvement
- Demonstrate accountability for health outcomes

use disorders. There is likely to be an ongoing and important role for specialized mental health, specialized substance use, and even specialized co-occurring disorder services to provide treatment and support to people experiencing the most severe and complex problems. This is a key message embedded in the quadrant model as well as the tiered model advocated in the new National Treatment Strategy. Both are consistent in pointing the way to a strong role for primary care and other health services, including emergency departments.

As helpful as the quadrant model has been in past planning efforts for integration of mental health and substance use services and systems, our collective thinking on integration might be advanced if it was clearly acknowledged that the *size* of each quadrant depends on the population in question. The same holds true for the relative size of the population appropriate for consideration in the tiered model. Considering the quadrant model for illustrative purposes, the general population data on co-occurring disorders would suggest that the number of people in the "low-low" quadrant is much higher than in the "high-high" quadrant. This argues for systems-level strategies with a more "upstream" focus such as case-identification, brief intervention and referral. Also recognizing the trajectory that many people take *across* the various quadrants through the life-course also places more emphasis on primary prevention

Once the lens shifts to the population currently engaged in treatment and support services, the relative size of the "high-high" quadrant grows significantly and the focus must be on tertiary interventions, including comprehensive assessment of case complexity and appropriate consultation or referral for specialized services. Again a trajectory, life-course perspective calls for adequate supports to help with the transition to lower intensity services and maintaining a good quality of life.

These ideas embody the population health perspective and articulate the essence of both the traditional quadrant model for co-occurring disorders and the tiered model of the National Treatment Strategy that is much broader in its vision. These ideas also point to a glaring lack of longitudinal population-level data that would help us understand the trajectory of people with mental and substance use disorders and, therefore, the degree of overlap from a life

course perspective, as well as a better understanding of the severity of the disorders and the links between the onsets at different points in time. Such data would probably show a much higher degree of overlap than is evident in cross-sectional studies as people transition in and out of mental and substance use disorders, and also speak to the need for upstream interventions that could benefit from closer integration of mental health and substance use services and systems.

Closing thoughts: In closing, we trust this report has offered "food for thought" to assist in deliberations on the integration of mental health and substance use services and systems. We hope it proves useful in de-briefing on past integration experience and offers concrete support for integration efforts currently underway or being considered. We recognize the challenges ahead, as well as progress on integration that has been made in different parts of Canada and with different approaches. Lessons learned from the past have been difficult to identify, hence the strong recommendation for much more evaluation and knowledge exchange. We also recognize that our report offers more in terms of the "why's" and "what's" of integration and rather little in terms of the "how's". Our essential conclusion is that "integration train" has left the station for a wide variety of reasons, and that improved integration offers high potential for more effective services and supports for people with co-occurring disorders, as well as those with mental health or substance use disorders but which are not co-occurring at the present time. However, we also suggest that, collectively, we work to avoid the "integration reflex" and pursue it more thoughtfully and strategically that has been the case in some situations in the past. It is also essential that any integration effort be adequately resourced and supported since many of the changes that are required are in the realm of organizational and systems culture and, therefore, going to require sustained efforts and ongoing corrective feedback loops to ensure the goals are being met for people needing services and supports. In the end, it will be functionally integrated services that make a difference to people's lived experience.

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8.0 APPENDIX A: FOCUS GROUP INTERVIEW PROTOCOL

FOCUS GROUP PROTOCOL

Exploring Mental Health and Substance Use Integration

Sampling:

- It will be important to capture a broad range of stakeholder perspectives from across Canada to explore the implications of integration. To facilitate this, a focus group sampling matrix (refer to Appendix B) has been developed to ensure that representation from all regions, various jurisdictions and levels (i.e., policy, management, service provision) is obtained.
- Following the identification of potential focus group participants, a letter of invitation will be distributed to a brief background and introduction to the study.
- Participants who do not agree to participate in the focus group sessions will be offered an opportunity to participate in a key informant interview vie telephone (following the basic structure of the focus group protocol).

Focus Group Session Structure:

- One focus group per region (i.e., Atlantic, Quebec, Ontario, Prairies, British Columbia, North).
- Focus groups will be limited to 5-6 participants. Focus groups may be supplemented by key informant interviews if necessary.

Focus Group Process:

- Two facilitators will conduct each focus group. Facilitators will alternate between note-taking and facilitation.
- A flipchart will be available to post definitions that will be referred to during the focus group sessions.
- Focus groups sessions will be 2 hours in length.
    - 10 minutes for introductions and description of process
    - 1.5 hours for discussion
    - 20 minutes for wrap-up
- Facilitators will work from the session questions to ensure consistency of data collection.

Focus Group Guide

Introduction

As you know, the integration of mental health and addiction services has been a topic of consideration in recent years at the program, organization, and systems-levels. While research has supported increased integration for specific populations (e.g., individuals with a co-occurring mental health and substance use problem), the benefits and risks of integration more broadly have not been systematically explored. These focus groups will capitalize on a

broad range of stakeholder perspectives from across Canada to obtain a better understanding of the potential implications of integration.

The questions that follow ask your perspectives regarding the similarities and differences of the mental health and substance use domains. Following this, you will be asked your thoughts regarding the potential risks and benefits of integration pertaining to specific populations and across different areas. We will conclude with an opportunity to provide any additional comments you may have.

Similarities and Differences

In the next series of questions, please indicate what you see as the main similarities and differences between mental health and substance use domains. You will be asked to consider such things as the nature of the problem, how we seek to prevent problems, how we plan and deliver services and supports or training and education.

Questions:

Prompts:

Risks and Benefits

Now we will be asking you a series of questions regarding potential risks and benefits of difference types of integration relationships. We will ask you to consider three different populations: 1) individuals with a co-occurring disorder, 2) individuals with a mental health problem, and 3) individuals with a substance use problem (including addictions).

We are going to ask you to think about three levels of relationships when answer these questions:

1. **Networking/Communication:** Exchanging information for mutual benefit. It is the easiest relationship to develop, as it requires a low initial level of trust, limited time and no sharing of resources.

2. **Coordination/Collaboration –** Exchanging information, altering program activities, sharing resources, and enhancing each other's capacity for mutual benefit and to achieve a common purpose. This type of relationship means that organizations share risks, responsibilities and rewards. It requires a substantial time commitment and a very high level of trust.

3. **Integration –** Completely merging two organizations/systems with respect to client operations as well as administrative structure.

Questions:

Prompts:

Risks and Benefits – Co-occurring Disorder Population

Let's begin with the co-occurring disorder population since that is the group most people think about when considering improving sector relationships. For each level of relationship, i.e., networking/communication, collaboration/coordination, and integration, please identify potential benefits and risks for **individuals with a co-occurring disorder**. You may consider benefits and risks for the client, family, service provider, and/or systems – whatever level you feel warrants comment.

	Networking/ Communication	**Coordination/ Collaboration**	**Integration**
Benefits			
Risks			

Prompts:

Risks and Benefits – Mental Health Population

Next we'll consider individuals **with a mental health problem and with no co-occurring substance use problem**. For each level of integration relationship, please identify potential benefits and risks for this population. You may consider benefits and risks for the client, family, service provider, and/or systems – whatever level you feel warrants comment.

	Networking/ Communication	**Coordination/ Collaboration**	**Integration**
Benefits			
Risks			

Prompts:

Risks and Benefits – Substance Use Population

Finally, we'll consider individuals with **a substance use problem, and with no co-occurring mental health problem**. For each level of integration relationship, please identify potential benefits and risks for this population. You may consider benefits and risks for the client, family, service provider, and/or systems – whatever level you feel warrants comment.

	Networking/ Communication	**Coordination/ Collaboration**	**Integration**
Benefits			
Risks			

Prompts:

Additional Comments

We appreciate any other comments you would like to make to identify challenges, issues, and/or facilitating factors related to the integration of mental health and substance use services and systems.

9.0 Appendix B: Focus Group Sampling Matrix

The integration of mental health and addiction services has been a topic of consideration in recent years at the program, organization, and systems-levels. While research has supported increased integration for specific populations (e.g., individuals with a co-occurring mental health and substance use problem), the benefits and risks of integration more broadly have not been systematically explored. As part of the research for this endeavour, we are planning a national key informant survey to collect perspectives regarding a number of areas including 1) similarities and differences across mental health and addiction domains and 2) potential risks and benefits of integration, with a specific focus on the different levels of integration (service/program/system), the degrees of integration, and the subpopulations (i.e., clients with co-occurring disorders versus clients whose diagnoses do not overlap).

We hope to capture a broad range of stakeholder perspectives from across Canada to obtain an improved understanding of the potential implications of integration. The following key informant sampling matrix is presented to provide a framework to obtain representation from all regions, various jurisdictions and levels, (i.e., policy, management, service provision) and, ideally, various stakeholder representation in each cell.

LEVELS	ATLANTIC	QUEBEC	ONTARIO	PRAIRIE	BRITISH COLUMBIA	NORTH
SYSTEM	Name: Organization: Contact Info: Years of Experience:					
MANAGE-MENT						
STAFF						
Total						

Please attempt to obtain the following stakeholder representation in each cell.

- ☐ **Addictions**
- ☐ **Mental Health**
- ☐ **Medical**
- ☐ **Biopsychosocial**
- ☐ **Co-occurring Disorders**
- ☐ **Other**