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ORIGINAL ARTICLE

Engaging Stakeholders in Review and Recommendations for Models of Outcome Monitoring for Substance Abuse Treatment

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We present an example of a collaborative process designed to review models of outcome monitoring for substance abuse services, with a view to assessing the feasibility of different approaches in Ontario, Canada. A conceptual framework that describes the parameters of an outcome monitoring system and four models of outcome monitoring were identified. Consultations were held with stakeholders (managers, directors, researchers, clinicians, and governmental representatives) about the types of information they would like to obtain from an outcome monitoring system. Our process is useful as a model for collaborative research with respect to performance measurement. The study's implications and limitations are noted.

Keywords outcome monitoring, substance abuse services, stakeholder engagement, collaborative research, performance measurement

BACKGROUND

Comprehensive information systems for clients of substance use services exist in many countries, including the United States (Drug and Alcohol Services Information System, 2009), the Netherlands (The IVZ Foundation, 2010), United Kingdom (National Drug Treatment Monitoring System, 2010), Australia (Alcohol and Other Drug Treatment Services, 2010), and Canada (Drug and Alcohol Treatment Information System, 2011), as well as the European Union (Donmall, 2006). A recent theme across these jurisdictions has been a shift in emphasis from the description of client characteristics and the services provided to measuring and reporting on both the processes and outcomes associated with the delivery of substance abuse services. This trend reflects the mushrooming interest in performance measurement (PM) within health care services (Canadian Council on Health Services Accreditation, 1996). It also flows from the increased feasibility of measurement and analysis through information technology and data linkage protocols (Rush, Corea, & Martin, 2009).

Rush et al. (2009) have advanced a comprehensive framework for an alcohol and drug treatment information system that includes a strong emphasis on end-user involvement in design, implementation, analysis, and interpretation of client information. Stakeholder engagement is also a key element of the four-step process described by Adair et al. (2006) for the design and implementation of a PM system in the health field: conceptualization; development of indicators; data collection and processing; and reporting and using results. A "blending" of research and practice through collaboration is recognized as being necessary in providing more effective treatment in a practical manner (Carise, Cornely, & Gurel, 2002). As noted by Leshner (2003), fostering the incorporation of scientific principles into ongoing substance abuse treatment requires the development of partnerships between researchers and practitioners. This approach is expected to close the "gap" between treatment and research in the substance abuse field (Gleghorn & Cotter, 2003; Sorensen, Guydish, Rawson, & Zweben, 2003).

The purpose of this paper is to present an example of a collaborative process designed to review models of outcome monitoring for substance abuse services with a

We would like to thank our many national and international colleagues who contributed their time and advice to our consultation process. Our thanks also go to the Ontario-based treatment agency managers, system planners, and government decision-makers who also participated.

[1]The journal's style utilizes the category *substance abuse* as a diagnostic category. Substances are used or misused; living organisms are and can be *abused.* Editor's note.

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view to assessing the feasibility of different approaches in Ontario, Canada. A unique partnership between diverse stakeholders was formed early in the planning phase, in order to ensure greater input and investment in the project. This process may be useful as a model for collaborative research with respect to PM in the area of substance abuse treatment.

METHODS

Project Overview

The project concerned the publicly funded substance abuse treatment system in Ontario, Canada, which consists of approximately 160 treatment agencies that provide specialized, publicly funded services to all regions of the province. A sub-sector of services for youth includes 50 outpatient services and nine residential programs. Additional components of the system include 30 needle exchange programs, a drug and alcohol user treatment registry (CONNEX: http://www.connexontario.ca/), which provides information on the availability of treatment within provincial substance abuse (and mental health) services, and the Drug and Alcohol Treatment Information System (DATIS: http://www.datis.ca/), which collects data on client characteristics and monitors service utilization. The project team has had a long-standing relationship with the treatment system and stakeholders, resulting in a significant amount of trust and collaboration. Examples of key partnerships include the development of an information system in which provincial stakeholders were involved, consultations on local needs assessments, dissemination of research and evidence-based practice, and provision of support to stakeholders, especially government representatives, on policy initiatives related to the treatment system.

The preliminary steps of this project included a literature review and consultation with 10 experts (from Canada, the United States, Australia, the United Kingdom, and the European Union) in the substance abuse intervention field one-on-one by telephone/email, as well as group discussion at a conference. The results of this process included (1) a review of a conceptual framework that describes the range of potential parameters of an outcome monitoring system (adapted from work in the mental health field; see Tansella & Thornicroft, 1998), and which had been previously used by the project leads in developing performance indicators for the addiction treatment system in Ontario; and (2) identification of four models of outcome monitoring. Three consultations were then held with provincial stakeholders about the types of information they would like to obtain from an outcome monitoring system, along with their perceptions of desirability/feasibility of the four outcome models. The goals of the preliminary and stakeholder consultations were to qualitatively validate the utility of the overall conceptual framework for substance abuse services specifically and distinguish the types of system, program, and client-level outcomes that would need to be considered for outcome monitoring.

Conceptual Framework—The Matrix Model

Within substance abuse services, "outcome" has traditionally been concerned with the evaluation of post-treatment client functioning. This focus on client "success" typically fails to consider the input and process factors that can impact how well the substance abuse treatment system meets clients' needs. Tansella and Thornicroft (1998) have proposed a framework for mental health services research that has utility in describing the full range of potential variables to consider in developing a system of outcome monitoring for substance abuse services. This matrix model consists of both population and temporal dimensions. The former describes three *levels* of service delivery: *system*, *program*, and *client.* The temporal dimension divides service delivery into three phases: *inputs*, *process*, and *outcome*. Inputs refer to resources that are put into the system at three levels. These may be "visible" (staff, funding) or "invisible" (attitudinal competencies). The process phase describes the activities involved in the provision of service. Outcomes refer to changes in functioning or performance at the three population levels. Table 1 illustrates the application of this 3×3 matrix model to substance abuse services, based on previous work by Rush et al. (2009). Each of the nine cells describes issues applicable at that particular level and phase of service delivery. No system of outcome monitoring can address all the issues contained in the nine cells. *For decision-makers and researchers alike, the challenge is to identify priorities based upon the questions of the greatest interest and the feasibility of obtaining valid and useful answers.*

Models of Outcome Monitoring

Outcome monitoring involves the systematic application of evaluation procedures to address issues such as those listed in Table 1. Marsden et al. (2000) have distinguished five main types of evaluations as applicable to the treatment of substance use: (1) needs assessment; (2) process evaluation; (3) client satisfaction; (4) outcome evaluation; and (5) economic evaluation. A system of outcome monitoring may borrow from any of these types of evaluations to address its objectives. Among the existing approaches to outcome monitoring, four models were identified as potentially applicable to an outcome monitoring system for Ontario. The models are described below.

Performance Measurement (PM)

Adair et al. (2006) suggest that "performance" usually refers to how an entity does relative to articulated goals or other entities. McLellan, Mckay, Forman, Cacciola, and Kemp (2005) describe PM as an approach to monitoring that is typically aimed at the program/system level. The authors use quality improvement activities as examples of PM at the program level and coordination/integration issues as applicable to the system level. The focus is almost always on process measures with data collected *during treatment*; for example, the following four indicators proposed by the Washington Circle Group (McCorry,

TABLE 1. The matrix model framework for outcome monitoring in the addictions treatment system

Temporal dimension			
Population dimension	(a) Input phase	(b) Process phase	(c) Outcome phase
1. System	1(a) Funding of addiction services. Training and development of human resources. Treatment services policy. Range of services available. Capacity of services. Regional health and social services integration policies. Information systems.	1(b) Regional variations in services, capacity, and accessibility. Development of "Best Practice" guidelines. Training and support for the implementation of "best practice" guidelines. Integration of substance abuse treatment services with other health and social services.. Coordinated planning of system enhancements.	1(c) Amount of funding per capita and per person in need of service. Penetration of services into in-need populations. Cost-effectiveness of treatment options by client characteristics. Impact of substance abuse treatment on social and health population indicators. Prevalence of substance abuse problems. Responsiveness of policy and funding decisions to evidence from the Outcome Monitoring System.
2. Program	2(a) Clinical and admin. staff resources. Technical support resources. Staff training and competency. Case mix. Provincial/regional policies regarding service delivery to clients with substance abuse problems.	2(b) Services consistent with agency mandate. Policies and procedures concerning agency administration, client care, and accessibility. Application of principles of stepped care, chronic care, and harm reduction to the delivery of substance abuse treatment services. Written treatment protocols for each service. Continuous quality improvement program. Development and maintenance of staff competencies. Inter-agency agreements.	2(c) Comparison of service outcomes with benchmarks and like services. Accessibility of services. Engagement and retention of clients. Efficiency of service delivery (e.g., cost per visit). Compliance with ministry data systems. Compliance with "best-practice" guidelines. Accreditation.
3. Client	3(a) Perception of services. Expectations of services. Substance abuse severity. Coexisting problems. Social functioning and support.	3(b) Barriers to efficient service delivery. Motivation to participate in treatment. Involvement in assessment and treatment planning. Compliance with treatment plan. Participation in post-treatment monitoring/continuing care. Involvement in development of clinical protocols.	3(c) Client improvement in substance abuse. Client improvement in health, social, and psychological functioning. Harm reduction. Client satisfaction. Utilization of health and social services. Attribution of client improvement to treatment.

Garnick, Bartlett, Cotter, & Chalk, 2000): initiation of treatment, linkage to detoxification, treatment engagement, and interventions for family members/significant others. The PM model is based on principles applied to quality improvement across a variety of health care domains. Its focus on the program and system levels is in contrast to other models, which are more concerned with client outcome.

Post-Treatment Follow-Up Model

The post-treatment follow-up model has been a traditional approach to evaluate the outcome of substance abuse treatment (McLellan et al., 2005). It typically compares outcome data collected at some point following treatment with baseline data collected at admission. Follow-up contact and data collection are usually managed by research staff who are separate from the treatment process. The methodology of this approach is well developed (Grella, Scott, Foss, & Dennis, 2008).

Although best practice protocols have been developed to achieve high rates of follow-up (Darke, Ross, & Teesson, 2007; Scott, 2004), the process of tracking clients and arranging data collection is resource-intensive (Tober, Brearley, Kenyon, Raistrick. & Morlev.

2000). Telephone procedures such as Interactive Voice Technology, which combines touch-tone telephones with computer-automated data collection and analysis (Mundt, Bohn, King, & Hartley, 2002), have been successfully used to reduce the resource requirements of this model (Alemi et al., 1994). However, the post-treatment follow-up model has been criticized on the basis of its assumption that substance use disorders are *acute* in nature (Hser, Longshore, & Anglin, 2007; McKay, 2005; McLellan et al., 2005). Despite these limitations, the model continues to be used widely in outcome monitoring systems (CalOMS Treatment, 2011; Harrison, Beebe, Fulkerson, & Torgerud, 1996; Moos, Finney, Federman, & Suchinsky, 2000).

Within-Treatment Monitoring Model

The within-treatment monitoring model is based on the systematic use of progress data collected at the beginning of each treatment session (Howard, Moras, Brill, Martinovich, & Lutz, 1996; Lambert, & Brown, 1996). A within-treatment approach is the basis of Concurrent Recovery Monitoring (CRM) advocated by McLellan and colleagues (2005) for substance abuse services. In CRM, the client would, at each therapeutic session, report his/her clinically relevant symptoms in selected outcome domains. McLellan et al. (2005) recommend the use of outcome indicators drawn from each of the following four domains: substance use, health status, social functioning, and risks to society. Aggregated progress data are used to describe outcome. A variant of this approach based on the Treatment Outcome Profile (2010) has been advocated for substance abuse treatment in the United Kingdom. Within-treatment monitoring is also the cornerstone of Client-Directed Outcome-Informed therapy, developed by Duncan, Miller, and Sparks (2004). Client feedback is sought using two brief measures, which offer clinicians an effective tool for tracking outcome and suitability of substance abuse services (Duncan et al., 2004). This approach is being used in at least one region in Canada, i.e., Vancouver, British Columbia (Accreditation Canada, 2009).

Hybrid Model

The hybrid model combines some features of within-treatment monitoring with post-treatment follow-up. The model is based largely on the Recovery Management Check-up (RMC) approach (Dennis, Scott, & Funk, 2003; Rush, Dennis, Scott, Castel, & Funk, 2008; Scott & Dennis, 2009; Scott, Dennis, & Foss, 2005) developed to monitor and manage the chronicity of substance dependence. In the RMC model, an external agent collects outcome data post-treatment on a quarterly basis similar to a traditional outcome evaluation. The difference lies in its use of an established protocol and a "linkage manager" to engage or re-engage clients whose outcome status indicates the need for further treatment. The use of a linkage manager is predicated on evidence that clients often require several exposures to treatment over time, and that individualized support is needed to encourage participation in treatment (Dennis, Scott, Funk, & Foss, 2005). The linkage manager relies on motivational interviewing techniques (Miller & Rollnick, 2002) and provides practical assistance to facilitate re-entry to treatment. A variant of this approach used in a substance abuse treatment center in the Netherlands (Oudejans et al., 2009) demonstrates how to reduce the resource requirements of this model. The authors indicated that it is feasible to implement a telephonic, low-budget follow-up system for routine outcome monitoring (Oudejans et al., 2009).

Consultations

First Consultation

The first consultation on a provincial outcome monitoring system was organized by the government ministry that funds the majority of substance abuse services in Ontario, in cooperation with the Centre for Addiction and Mental Health (CAMH), and the two relevant service provider associations to which most of Ontario's substance abuse service providers belong: Addictions Ontario (http://www.addictionsontario.ca/) and the Ontario Federation of Community Mental Health and Addiction Programs (http://www.ofcmhap.on.ca/). The event brought together 20 managers, policy analysts, directors, researchers, clinicians, and government representatives to discuss the proposed conceptual framework and the four models of outcome monitoring. The feedback session was facilitated by two of the authors and recorded by a professional meeting recorder/writer.

Feedback on the Conceptual Framework

In order to focus discussion on the matrix model, participants were asked to respond to the following question: *Given the proposed framework, consider what information (type and level) is of the highest value from each of the following three perspectives*?

1. *Client/family/community member*
2. *Program manager/staff*
3. *System planner/administrator*

The session recorder provided a detailed feedback report. Participants in the consultation process were also asked to provide feedback on each of the four models of outcome monitoring.

Second Consultation

A second consultation process was conducted by Webinar to include the participation of representatives from Local Health Integration Networks (LHINs). Ontario is divided into 14 LHINs, which plan, fund, and integrate health care services. Eight representatives from four LHINs participated in this consultation along with a smaller group of policy analysts, planning consultants, researchers, and representatives from governmental and non-governmental organizations.

Final Consultation

Based on previous consultations, a list of guiding principles for developing an outcome monitoring system was

drafted as well as a three-phase approach to its implementation. A final consultation was scheduled by Webinar to discuss these items and summarize the process into a final project report with recommendations going forward. Thirty-three individuals participated, and most had been involved in at least one of the previous consultations.

RESULTS

First Consultation

Client/Family/Community Member Perspective

The input issues that were identified concerned clients' need for information such as program availability and accessibility, and the level of competency of clinical staff. Process-related concerns included confidentiality issues; service quality and integration issues; and the risk of child custody being impacted. From an outcome perspective, participants noted that clients want to know whether treatment works. In this context, testimonials, especially from someone who had a good outcome, were seen as equivalent to, or perhaps more important to clients than outcome statistics.

Program Staff/Manager Perspective

In terms of input issues, the group discussion suggested that staff were concerned about how outcome data may drive compensation equity. Staff were also interested in acquiring more knowledge about what brings clients to treatment. Manager input concerns included per capita funding, capacity issues related to the size of the in-need population, and the impact of case mix on service delivery. Comments about treatment process centered on issues related to program type and quality. Managers were interested in staff competency and productivity, comparisons of costs and outcomes with similar services, and the cost-effectiveness of certain procedures. From the staff perspective, interest in outcome was at a more personal level—"How effective/competent am I as a clinician?"

System Planner/Administrator Perspective

The main input issues that were identified concerned the adequacy of facilities such as maintenance and appearance, including "the optics" of the facility (i.e., is there stigma associated with the venue of services?). Process issues emphasized cost and productivity comparisons and system integration issues. The outcome issues noted as most important at the system level concerned funding levels and the corresponding value received; per capita funding comparisons with other jurisdictions; and the penetration of services to the size and diversity of the in-need population.

Feedback on the Models of Outcome Monitoring

The PM and hybrid models received the strongest support, the former because it accommodates both qualitative and quantitative measures at the program/system levels; the latter because of its emphasis on returning clients to treatment. However, support for the hybrid model was predicated on the assumption that a cost-effective alternative to continuous follow-up could be developed. For many, the hybrid model offered all of the advantages of the post-treatment follow-up model with fewer limitations. There were concerns that the within-treatment model had limited application and might not address the accountability issues of system planners. A standardized, system-wide approach to measuring client satisfaction was also deemed an important dimension of PM. Finally, a staged approach to the development of an outcome monitoring system was desirable, beginning with measures for which data were currently available.

Second Consultation

Feedback touched on issues from all nine cells of the matrix model, but greater emphasis was given to the program and system levels. Interestingly, LHIN participants expressed equal interest in information relevant to *planning* and *accountability*. From a planning perspective, there was strong interest in indicators that assess the extent to which population needs are being met. From an accountability perspective, there was interest in both the effectiveness and efficiency of programs. Feedback on the models of outcome monitoring was quite limited; however, there was a clear sense that the models based solely on client outcome did not capture the scope of the information needed by LHINs, and that at least some aspects of the PM model were essential.

Guiding Principles and Recommendations

The following principles reflect general conclusions reached on the basis of literature review and consultations:

1. Outcome monitoring should incorporate elements across the entire conceptual framework.
2. Reliability and validity issues must be key aspects in selecting indicators.
3. Standardization of definitions and reporting procedures is required for good data quality.
4. The indicators should support system planning, increased accountability, and improved efficiency of the substance abuse treatment system.
5. It is important to start on a smaller scale—this may involve the inclusion of some purely descriptive indicators.
6. Developing the system of outcome monitoring should be an evolutionary process subjected to ongoing evaluation.
7. Pilot-testing of some indicators/procedures may be an essential preliminary step.
8. The nature and scope of the outcome monitoring system is dependent on available resources.
9. Incentives operating at the practitioner, program, and systems levels are necessary to ensure the effective implementation and maintenance of the outcome monitoring system.

Proposed System of Outcome Monitoring

The three proposed phases of implementation were labelled as "Ready to Go," "Next Steps," and "Down the

TABLE 2. Summary of "Ready to Go" indicators and related implementation issues

Indicator	Operational Definition	Implementation issues
Per capita funding	• Ratio of funding $ to population ≥ 15 years. • Ratio of funding $ to estimated prevalence.	Ratios to be computed at system and LHIN levels for alcohol, drug, and gambling problems. Prevalence estimates based on population surveys adjusted for increases in population between surveys. Ratios computed for alcohol, other drugs, and problem gambling.
Penetration of treatment	• Ratio of number of clients entering treatment to estimated prevalence of problems.	Prevalence estimates based on population surveys adjusted for increases in population between surveys.
Wait times	• Time lapse from request for to receipt of service.	Procedures to reliably report the timing of the request for service require development. Differences in the nature of "first contacts" will need to be considered.
Cost comparisons	• Program costs per patient day. • Program costs per client visit. • Program costs per staff FTE.	Cost comparisons computed by service category. Guidelines required to standardize reporting of costs and allocation of supervisory positions.
Utilization of residential treatment	• Ratio of clients assigned to residential and non-residential treatment.	Will probably require separate ratios to include clients who receive only assessment as opposed to clients who receive both assessment and some treatment intervention.
Client satisfaction	• Scores on SSS-30 questionnaire (or similar tool). • Scores on SSS-30 residential questionnaire.	Final selection of SSS-30 as the standard system measure. Residential and non-residential versions of the questionnaire will enable application to all service categories. Standard procedures to be established to address variation in client response related to treatment/assessment exposure. Processes worked out for collection, analysis, and reporting of data.
Compliance with ministry reporting	• Percentage of programs meeting DATIS, MIS, and Connex Ontario reporting requirements.	Differences in reporting expectations can cause problems in the interpretation of results. There may be a need to establish a scale to assess degrees of compliance.
Accommodation of physical disabilities	• Percentage of programs with wheel chair access.	Need to account for within program variations in wheel chair access (e.g., different sites or buildings for the same program).
Referrals from WMS to further treatment	• Percentage of WMS discharges referred to another service category.	May need to adjust for the extent to which assessment occurs within the WMS service.

Road." The "Ready to Go" phase would involve indicators for which data currently exist or could exist with minor changes to current reporting procedures. The indicators would be based on the data available in three provincial information systems, or through procedures already pilot-tested in other projects. Table 2 lists the indicators for this phase. Among these, indicators related to cost comparisons and client satisfaction will represent major advancements in assessing the quality of Ontario's substance abuse services.

The "Next Steps" phase would involve adding a client outcome component to the outcome monitoring system in the form of a pilot-test of the hybrid model. First, we would assess the adaptability of the model for measuring within-treatment progress to different types and durations of treatment and test potential measures of clinical progress. Second, we would utilize the infrastructure and resources of an existing information system (CONNEX) to develop and test follow-up procedures based on best practice protocols (Darke et al., 2007; Scott, 2004), and for linking in-need clients with further treatment (Dennis et al., 2003). Table 3 describes the recommended indicators for inclusion in the "Next Steps" phase.

The "Down the Road" phase would involve indicators that require extensive development. Three main examples were identified: (1) the degree to which best practice guidelines are being developed and implemented within the treatment system; (2) the development, retention and competencies of the workforce in the Ontario substance abuse system; and (3) the capacity of programs to access and utilize evolving technology in the delivery and administration of services.

DISCUSSION

The introduction of a province-wide system of outcome monitoring will be a major enhancement to the substance abuse treatment system that is expected to benefit clients, clinicians, programs, and system planners. The process of developing the recommendations has been widely supported by these groups. Furthermore, the systematic evaluation of the outcome of substance abuse treatment has been advocated within many jurisdictions, including Canada's National Treatment Strategy (National Treatment Strategy Working Group, 2008).

While there is a paucity of evidence to project the overall impact of the proposed client outcome monitoring system, the data to be generated should be valuable in assessing the performance of the treatment system and in planning enhancements to improve treatment quality. We view the early engagement of stakeholders as critical to the eventual success of the outcome monitoring initiative; this is a key component of effective organizational/system change (Health Systems Research and

TABLE 3. Recommended indicators for inclusion as "next steps"

Proposed Indicator	Operationalization & Development Issues
Engagement of clients	This indicator would be operationalized as the proportion of clients who attend a prescribed number of sessions within a defined time period. Refinement of DATIS information is required. Variations by service category may need to be considered to ensure reliability and validity.
Patterns of referral	This would be a descriptive indicator showing patterns of referral into and out of the addictions treatment system. At present, a high proportion of clients are considered "self referrals" independent of the original impetus for the referral. A particular focus in the development of this indicator would be a measure of the degree of integration of the addiction and mental health systems.
Progress within treatment	This indicator would constitute a major new initiative to standardize the measurement of client progress in treatment as a first step in the Hybrid Model as a client outcome model. The procedures and measures associated with the indicator would be developed in a pilot project, which would also address the relationship of this initiative to potential changes to the admission and discharge criteria and assessment tools package.
Post-treatment outcome	The development of this indicator would constitute the second stage of the pilot test of the Hybrid Model. It would involve the use of the same or comparable "within-treatment" measures re-administered at defined post-treatment intervals. Data collection procedures could involve telephone contact, and would include procedures for returning clients to treatment when indicated.

Consulting Unit, 2009; Iles & Sutherland, 2001). Facilitating collaboration between researchers, treatment providers, and system planners is important to achieve improvements over the "status quo" by creating shared values and principles of action (Health Systems Research and Consulting Unit, 2009). In fact, system change is facilitated by the formation of networks among people who discover a common goal and work together to achieve it (Wheatley & Frieze, 2006). Innovation (such as the implementation of a province-wide system of outcome monitoring) therefore emerges from "complex collaborations" that brings stakeholders together in a structured process to come to a consensus on what needs to be done (Alexander & Comeau, 2008; Rush, 2008). In general, blending roles/responsibilities from different stakeholders will be more effective in problem-solving than the work of any one organization/individual acting alone (Rush, 2008).

Based on our results, it may not be surprising that stakeholders supported a staged approach to outcome monitoring. However, we think our paper is a helpful contribution by illustrating broad system support for a wide range of indicators, starting with those that can be developed with the existing data, and showing a high level of support for moving toward indicators that are more challenging and requiring additional resources. In addition, while the guiding principles and recommendations may seem uncontroversial, it is important to recognize the diversity of the stakeholders that came together to support outcome monitoring and declare their commitment to these guiding principles. Providers varied from perspectives related to harm reduction, abstinence-oriented treatment, medical vs. psychosocial perspectives on addiction, and perceived value of inpatient versus outpatient treatment. In general, stakeholders put aside their differences to work toward a concrete commitment to high-level principles, and did not become encumbered with philosophical debates, resulting in a set of principles with which we can move forward. Nonetheless, we acknowledge the difficulty of engaging diverse stakeholders in discussions, and expect that policy makers, system managers, and service providers will be differentially engaged. In our study, a variety of pre-existing factors and implementation strategies helped us to avoid difficulties in engaging stakeholders, which other researchers may find useful in their own work. First, we have a long history of working with the stakeholders on previous research and system building activities, which fostered an environment of trust. Second, we ensured an open forum for discussing different opinions, which allowed us to move forward to a consensus even if dissenting views emerged. Third, and more concretely, difficulties were mitigated in our consultation processes via good group facilitation. We relied on an experienced consultant known to the system, but who served as an external facilitator. Fourth, we used a focused agenda. Fifth (and final), we reduced complex concepts to plain language in discussing different research and evaluation models.

The consultations described in this paper are just the beginning of an ongoing effort to facilitate stakeholder involvement. As recommended by other researchers (Carise et al., 2002; Guydish, Sorensen, Rawson, & Zweben, 2003), regular meetings will be held involving all partners in order to effectively use feedback. This is essential as we have secured funding for a multi-component provincial project (Drug Treatment Funding Program), an initiative under the umbrella of the National Anti-Drug Strategy that is intended to pilot outcome monitoring for Ontario substance abuse services. Key stakeholders will be invited to join an Advisory Committee for the outcome project. Continuing the collaborative process is vital to all of the future phases of our initiative, including implementation, evaluation, and sustainability. However, one limitation of our approach was that clients of substance abuse treatment services in Ontario were not involved in the consultations. For this reason, feedback from clients will form a key component of the 2-year feasibility study.

While implementing system-wide interventions may result in consequences that are neither anticipated nor desirable (Iles & Sutherland, 2001), we are building on a long history of system change through stakeholder engagement and are therefore confident that our approach will be successful. For example, the involvement of

stakeholders was fundamental to the development of DATIS (Rush et al., 2009) as well as CONNEX, two complementary provincial systems that provide information for system-level planning, evaluation, and research. Undoubtedly, experience from implementing DATIS and CONNEX will be useful to the province-wide implementation of a system of client outcome monitoring. However, adequate resources will be necessary to ensure the success of our recommended approach. The capacity to participate in collaborative processes is often compromised in resource-constrained environments (Health Systems Research and Consulting Unit, 2009). Thus, appropriate levels of funding are required to encourage participation and garner the support of partners in making our vision a reality.

Declaration of Interest
Drug and Alcohol Treatment Information System was funded by the Ministry of Health and Long-Term Care, and operated by CAMH.

RÉSUMÉ

Mobiliser les intéressés dans l'examen et la recommandation de modèles de suivi des résultats dans le traitement de la toxicomanie

Cette étude présente un exemple de processus collaboratif conçu pour examiner divers modèles de suivi des résultats dans les services de traitement de la toxicomanie et ce, en vue d'évaluer la faisabilité de différentes approches en la matière en Ontario (Canada). Les auteurs y définissent un cadre conceptuel servant à décrire les paramètres d'un système de suivi des résultats et quatre modèles de suivi. Ils ont mené des consultations auprès des parties intéressées (gestionnaires, cadres supérieurs, chercheurs, cliniciens, représentants gouvernementaux) au sujet du type d'information que celles-ci souhaitaient pouvoir tirer d'un tel système. Le processus présenté est utile à titre de modèle de recherche collaborative sur la mesure de la performance. Le rapport d'étude comporte des observations quant aux implications de l'étude et à ses limites.

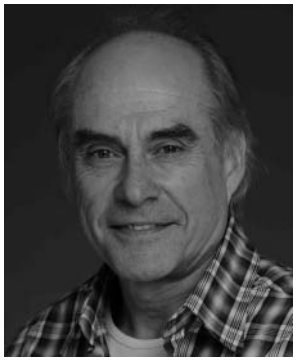
RESUMEN

Participación de las Partes Interesadas en la Revisión y Recomendaciones para Modelos de Monitoreo de Resultados para el Tratamiento de Abuso de Sustancias

Presentamos un ejemplo de un proceso colaborativo diseñado para revisar modelos de monitoreo de resultados (MR) de servicios de abuso de sustancias, con el fin de evaluar la viabilidad de diferentes enfoques en Ontario, Canadá.

Un marco conceptual que describe los parámetros de un sistema de MR y cuatro modelos de MR fueron identificados. Consultas respecto al tipo de información que les gustaría obtener de un sistema de MR fueron sostenidas con las partes interesadas (gestores, directores, investigadores, clínicos, representantes gubernamentales). Nuestro proceso es útil como un modelo para investigación colaborativa sobre la medición de desempeño. Se incluyen las implicaciones y limitaciones del estudio.

THE AUTHORS



Dr. Brian Rush is a senior scientist and head of the Health Systems and Health Equity Research Group with the Centre for Addiction and Mental Health in Toronto, and professor in the departments of psychiatry and the Dalla Lana School of Public Health at the University of Toronto. He holds M.A. in psychology and Ph.D. in epidemiology and biostatistics and has worked for almost 35 years in a research and evaluation capacity in the substance abuse and mental health fields. Brian's research and development portfolio includes the field of co-occurring disorders with an emphasis on epidemiology in general and service populations, service and system level integration, and screening and assessment tools. Related work is focused on treatment evaluation, outcome assessment, and dissemination of evidence-based practices for mental health, substance abuse and co-occurring disorders.

Dr. Garth Martin is a senior consultant in the field of addictions in Ontario. He holds a Ph.D. in Social Work from the University of Toronto (U of T). He worked for 30 years at the Addiction Research Foundation and Centre for Addiction and Mental Health in the areas of treatment, treatment research, and knowledge transfer research. He was cross appointed to the Faculty of Social Work at the University of Toronto, where he was also a past director of the Collaborative Program in Addiction Studies. He has been consulted internationally on treatment methods and the organization of treatment services, and has been involved also in the evaluation of three national DTFP projects. He is currently involved as a consultant on four provincial DTFP performance measurement projects.

Larry Corea is a semi-retired information management consultant with a Master's in Social Work and a long-standing interest in evaluation and information systems. He has had a diverse career in substance abuse and problem gambling treatment, which included being the director of DATIS at CAMH for 9 years. He has established and managed an innovative treatment program for opiate-dependent individuals, acted as a government policy advisor, and taught post-secondary social policy and information technology

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Nooshin Khobzi Rotondi, Ph.D., is a research scientist at the Centre for Addiction and Mental Health (Health Systems and Health Equity Research Group, Social and Epidemiological Research Department) and assistant professor at the University of Toronto (Dalla Lana School of Public Health). As an epidemiologist, Dr. Rotondi has had extensive research experience and interest in the areas of substance use assessment and outcome monitoring, health of marginalized populations, sampling of hard-to-reach populations, community-based research, health services and systems research, and substance abuse and mental health epidemiology. Dr. Rotondi's current research focuses on the development and implementation of a system to monitor the outcomes and recovery of clients' participation in substance use treatment services in Ontario, Canada.

GLOSSARY

Hybrid model: Combines within-treatment assessments of client progress with continuous post-treatment follow-up to link clients back into treatment (if needed).

Matrix model: A 3 × 3 matrix that describes a full range of potential variables to be considered in developing a system of outcome monitoring for substance abuse services. It consists of both population and temporal dimensions. The former describes three levels of service delivery (system, program, and client). The temporal dimension divides service delivery into three phases (inputs, process, and outcome).

Outcome monitoring: It is the systematic application of evaluation procedures to address specific issues such as those covered in the matrix model. While a system of outcome monitoring is by definition concerned with the outcome phase, what transpires at the input and process phases invariably influences outcomes.

Stakeholder: Any person or group/organization who has an interest in the project or could be potentially affected by its delivery or outputs. Examples include clients of substance abuse services, program managers, clinicians, policy analysts, researchers, and system planners.

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