LITERATURE REVIEW ON WITHDRAWAL MANAGEMENT

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TABLE OF CONTENTS

Introduction 3
Reasearch Goals 3
Background 3

Methods 4
Sources 4

Findings 4
National Context 4
Provincial Context 5
Withdrawal Management in Ontario 5
Special Populations 15

Conclusions 18

References 19

Appendix: Approaches to Improving Outcomes in Withdrawal Management 28
Changes in Drug Protocols 28
Adjunct Behavioural Therapies 29

INTRODUCTION

This report is a comprehensive review of the withdrawal management literature. It was compiled for the Wellington Guelph Drug Strategy (WGDS) in collaboration with various stakeholders in the Waterloo-Wellington region. The review surveys the national and provincial context for withdrawal management as well as highlighting key foci and gaps in this body of literature. The literature review will help to inform a larger consultation conducted by Overlap Associates Inc. and the WGDS aiming to establish recommendations for filling gaps in the withdrawal management continuum in Waterloo-Wellington.

RESEARCH GOALS

The following literature is intended to highlight key foci and directions in the existing academic and grey literature on withdrawal management, with a particular focus on the Ontario context.

BACKGROUND

There is an extensive body of literature investigating strategies for withdrawal management and their effectiveness. Ranging from outcome studies highlighting retention and drop-out rates for various types of withdrawal management, smaller, qualitative studies profiling the patient's experience, to nation- or province-wide scans of addictions treatment systems, the literature reveals a number of key tensions in providing effective and easily navigable services for individuals suffering from addictions. Summarizing and assessing this vast body of literature may help to reveal some areas for further research and strategies for practice. However, this literature review is not intended to act as a province-wide survey of treatment services or to compare approaches to withdrawal management by evaluating the effectiveness of one strategy versus another. It is meant to provide a survey of the existing international literature on withdrawal management practices and services. This review may help to guide the direction of recommendations put forth by the Wellington-Guelph Drug Strategy in collaboration with relevant and linked services in the Waterloo-Wellington area. The larger consultation and resulting recommendations could drive future policy directions for the area; literature that is particularly interesting and useful may help to inform these recommendations for local policy and practice, bolstering ongoing efforts to fill gaps in the service continuum.

Key Terms

- Withdrawal Management often a “first step” in the addictions services continuum, intended to aid clients to withdraw (“detoxify”) from addictive substances (e.g. opiates, alcohol, etc.)

METHODS

SOURCES

The evidence addressed in this review is drawn from a comprehensive scan of the scholarly literature addressing withdrawal management. A broad search of 5 key databases (PsychInfo, ProQuest, Medline, Cochrane Reviews and Google Scholar) was performed using the following keywords:

- Withdrawal management
- Withdrawal
- Detoxification
- Community withdrawal management

The reference lists of articles identified as relevant, particularly Cochrane reviews, were searched to identify further key studies in the area. A general Google search for “withdrawal management” and “community withdrawal management” also helped to identify policy documents relevant to the Ontario and Canada-wide context. A total of 80 articles were reviewed in the development of the literature review, which helped to contextualize the current approaches to withdrawal management and their effectiveness.

FINDINGS

NATIONAL CONTEXT

Drug strategy in Canada and worldwide is continually in the process of evaluating and adapting to fit an ever-changing landscape of community and client needs. Since its inception in 1987, Canada’s National Drug Strategy has undergone a number of phases designed to match policies to desired outcomes; recently, drug strategy has been structured around “four pillars”: education and prevention, treatment and rehabilitation, harm reduction and enforcement and control (Colin, 2006). More recently, the National Anti-Drug Strategy for Health Canada has targeted evidence-based practice, evaluation,

and performance measurement, and knowledge exchange as key areas of emphasis (National Anti-Drug Strategy for Health Canada, 2008, in Rush et al., 2013). Developing methods for monitoring and improving the efficacy and navigability of Canada's addictions treatment system has come into the foreground of national and provincial strategies. At the provincial level, emphasis has been placed on developing standards for quality assurance and integrating systems of treatment that attend to the needs of clients and providers in a system continually in flux (Deschamps et al., 2008). Addiction treatment systems across the continuum have been responding to calls for more integrated services with improved outcomes for clients (e.g. Rotondi & Rush, 2012; Rush et al., 2013).

PROVINCIAL CONTEXT

Ontario's current addictions treatment landscape is comprised of approximately 200 specialized programs, which are operated and administered by 170 agencies. These services are divided into 14 Local Integrated Health Networks (LHINs), which are charged with planning, funding, and integrating services. The addictions treatment system in Ontario has recently undergone some major efforts towards greater integration and monitoring, including the development of The Drug and Alcohol Treatment Information system (DATIS), "a client-based information system monitoring number and types of clients treated in Ontario's publicly-funded addiction treatment services" (Rotondi & Rush, 2012, p. 74). Another information and monitoring system, ConnexOntario, provides key information for health care professionals and the general public about available services for treating drug and alcohol services in the province (Ibid). Together, these systems help to demonstrate the province's commitment to understanding the addictions service system's needs and capabilities for treating drug and alcohol misuse.

WITHDRAWAL MANAGEMENT IN ONTARIO

History

Though the surveyed literature spans several countries, a short outline of the history of withdrawal management in Ontario will help to situate this review. Beginning in 1972, Ontario legislature made it possible for police officers to move those who were arrested for public drunkenness to detoxification centres, developed by the Ministry of Health, rather than sending them to jail (McGuire et al., 2005). As McGuire et al. suggest, 13 centres were established, but services for women, individuals with dual- or poly-substance abuse, youth, and other potentially marginalized groups continued to be

found lacking by those navigating the system. A review conducted by the Phillips Group in 1990 highlighted recommendations, that were implemented in 1992, including the need to develop an official mandate around withdrawal management in Ontario that also encompassed community-based care and an increased emphasis on drug detox (the prior focus had been on alcohol)(Dean, Dellerud & Wagler, 2000). Over the past 11 years, the system has undergone a number of additional changes, including major philosophical and role shifts, as well as increasing customization, flexibility, standardization, innovation, and the development of clinical practice guidelines (McGuire et al., 2005) which will be addressed as this review progresses.

Current Considerations

Withdrawal management has, of late, come to signify a common “first step” in addictions treatment systems, wherein clients may be offered information and referrals (Day, Ison & Strang, 2008; Li, Puri & Marsh, 2007). Though a vital part of the treatment process, withdrawal management is generally considered an insufficient “treatment” in and of itself (Carrol, Triplett & Mondimore, 2009; Gerstein & Harwood, 1990; Kosten & O’Connor, 2003; Myrick, Anton & Kasser, 2003). Commonly, one of the key goals of withdrawal management is the engagement of patients in other forms of treatment, such as a more intensive residential treatment program, once detoxification is complete (e.g. Acevedo et al., 2012; Blondell et al., 2011; Campbell et al., 2009; Chutuape, Jasinski, Fingerhood & Stitzer, 2001; Day, Ison & Strang, 2008).

In Ontario, recognition of withdrawal management as a key step in the treatment process has led to the development of standards designed to ensure the appropriate and timely provision of these services to Ontario residents. Standards for withdrawal management were first established in 1997, and primarily addressed Residential Withdrawal Management (Deschamps et al., 2008). These standards have since been revised on three occasions, in 2001, 2004, and 2008, to add policies and practices for Community Withdrawal Management (2001), Methadone Maintenance (2004), Day Withdrawal Management and Telephone Supported Withdrawal Management Service (2008). The “living document” provides guidelines and protocols that can be used to guide best practices in providing withdrawal management, including administration, programming, client-care, education, and physical structures.

In 2005, McGuire et al. of Cathexis Consulting Inc. published a review of the withdrawal management system in Ontario. This document outlined a number of strengths in the system, including:

- Quality assurance efforts put in place through the withdrawal management standards
- The existence of assessment tools and information systems
- The client-centric approach taken by and commitment from WMS staff
- The wide ranging service capacity of WMS
- Existing linkages between WMS and other addiction services
- Emerging best practices around funding sources, service combinations and links to relevant services in other sectors, e.g. shelters

Also noted in McGuire et al.'s report are a number of critical issues faced by Ontario's withdrawal management services, which include:

- The changing nature of the WMS system, including the need for re-alignment of services within communities, changes to budgets, and shifting sponsoring agencies
- Overworked and underpaid staff without adequate opportunities for training and development
- Increasing complexity of client needs
- The need for deeper integration of WMS and treatment
- Inadequate funding

McGuire and colleagues' report proposes a number of recommendations for improvements to the system, taking into account the current strengths and challenges of the current system. Notably, the report also outlines a number of gaps in the service-provision continuum, including geographical gaps and lacking services for specialized groups including youth and seniors. Despite efforts toward deeper integration of services and better service provision across the continuum through efforts outlined above, these gaps persist some seven years later (e.g. Altass, Salguero, Wilson &

Bergen, 2013; Hiller et al., 2007; LaMarre, 2011; Minozzi, Amato & Davoli, 2009; Rush, 2012).

Defining Withdrawal Management

Corresponding with calls for increased accountability and integration for the addictions treatment system in general, a great deal of attention has been paid to enumerating definitions for the various types of withdrawal management. Broadly, there are two key "settings" for withdrawal management: community and residential (note that telephone and day treatment are increasingly gaining traction; Deschamps et al., 2008). Community and residential withdrawal management can also be broken down into 3 distinct levels based on client needs and safety concerns. The following definitions are drawn from ConnexOntario's drug and alcohol helpline website (http://www.drugandalcoholhelpline.ca/Search/ServiceTypes):

Community Withdrawal Management can be defined as:

assistance with voluntary withdrawal from alcohol and/or other drugs to clients who are under the influence of these substances and/or in withdrawal or otherwise in crisis directly related to these substances. Clients may be simultaneously accessing residential support services, or they may be residing in their home, the home of a significant other or in another community setting, supervised or unsupervised. Care may be provided with or without the aid of drug therapy and/or other medical interventions. Additional support such as discharge planning and early recovery education is provided.

Residential Withdrawal Management can be defined as:

assistance with voluntary withdrawal from alcohol and/or other drugs to clients who are under the influence of these substances and/or in withdrawal or otherwise in crisis directly related to these substances. This care is provided in a Withdrawal Management (detox) Centre, or on an inpatient basis in a hospital. Care may be provided with or without the aid of drug therapy and/or other medical interventions. Additional support such as discharge planning and early recovery education is provided. Service is provided at three levels.

The three levels of withdrawal management are as follows:

Level 1: Staff without medical training are able to safely manage the client's symptoms. Symptoms are manageable via consultation with a physician, after hours clinic, health centre and/or hospital emergency department, when needed. High intensity symptom monitoring is not possible at this level due to client/staff ratios. Medication for medical problems, diagnosed psychiatric problems, and pain related to acute injuries/recent surgeries can be provided in consultation with a physician.

Level 2: Staff without medical training are able to safely manage the client's symptoms. Symptoms are manageable via consultation with a physician, after hours clinic, health centre and/or hospital emergency department, when needed. Management of medications listed in level 1, as well as for clients on methadone or being tapered from benzodiazepines/narcotics may be considered via routine medical consultation.

Level 3: Medically trained staff are needed in order to monitor client symptoms. Medications and circumstances listed in levels 1 and 2, as well as medically-assisted withdrawal, are constantly managed by medical consultation and staff.

The level of withdrawal management provided should align with client needs and clinic capacity. As Daniel, John, Carl & James (1998) suggest, in an "ideal" treatment continuum, "detoxification must be provided in the least restrictive setting that is consistent with reasonable patient safety and meets criteria for medical necessity." Notably, a number of the studies considered in this review (and, indeed, randomized controlled trials of withdrawal management in general) consider medical withdrawal management (level 3) and are often conducted in the U.S., whereas there are far more level 1 and 2 withdrawal management service providers in Ontario. Accordingly, caution is advised when considering the applicability of the results presented in many of these studies.

Navigating the Addictions Services Continuum

Overall, the Canadian system for addictions treatment follows a standard pathway to treatment:

- Detoxification
- Structured treatment
- Stay in a recovery environment
- Longer term sober living

Despite this organization, not all individuals with addictions navigate the treatment system in the same way; pathways through the system may vary based on gender, length of drug use, housing status, prior treatment experiences, beliefs surrounding help needed, and criminal justice system contact (DeVerteuil & Wilton, 2009). Often, patients will enter and drop out of or finish withdrawal management without accessing follow-up, intensive support (Armenian, Chutuape & Stitzer, 1999; Backmund, Meyer, Eichenlaub & Schutz, 2001; Broers, Giner, Dumont & Mino, 2000; Li, Sun, Marsh & Anis, 2008; Li, Puri & Marsh, 2007). Leaving withdrawal management early or not following up with additional support is likely to lead to additional withdrawal management admissions (Li, Sun, Marsh & Anis, 2008). Those who are frequently readmitted to withdrawal management may be labeled “detox loopers,” and may not derive benefit from subsequent readmissions (Richman & Neuman, 1984). Resultantly, a number of studies have attempted to ascertain factors associated with premature drop out, readmission, and leaving detoxification settings against medical advice, and have found the following risk factors:

- Being older (Mark, Vandivort-Warren & Montejano, 2006; Callaghan & Cunninghan, 2002), though other studies note higher drop out for younger populations (e.g. Li, Puri & Marsh, 2007; Armenian, Chutuape & Stitzer, 1999)
- Being male (Mark, Vandivort-Warren & Montejano, 2006), though some studies have found that female clients are more likely to leave detoxification against medical advice (Armenian, Chutuape & Stitzer, 1999)
- Being homeless or unstably housed (Callaghan & Cunninghan, 2002; Callaghan, 2003; Li, Sun, Marsh & Anis, 2008; Svoboda, 2013)

- Having alcohol or multiple drugs as “drug of choice” (Callaghan & Cunninghan; Li, Sun, Marsh & Anis, 2008) particularly when also chronically homeless (Svoboda, 2013)
- Being Aboriginal (Li, Puri & Marsh, 2007)

Li, Puri & Marsh (2007) also note, in their study of pretreatment and treatment dropout from a medical withdrawal management facility in Vancouver, that being discharged on weekends or during welfare check issue periods may result in higher treatment dropout. Long wait-lists for follow-up treatment are also strongly linked to withdrawal management drop out and readmission; up to 30% of individuals on a wait-list may drop out during wait time (Hser, Maglione, Polinsky & Anglin, 1998; Festinger, Lam, Marlowe & Kirby, 2002; Li, Sun, Puri, Marsh & Anis, 2007; Li, Sun, Puri & Anis, 2007).

Pre/Post care

Providing improved after or inter-care (i.e. between withdrawal management and follow-up support) has been noted to be a key step in ensuring the improved navigation of treatment settings, and may help to interrupt the treatment cycling loop. Unfamiliarity with aftercare options following detoxification is a major difficulty for clients attempting to navigate the treatment continuum (Carrol, Triplett & Mondimore, 2009). Aftercare is often among elements of “treatment as usual,” (e.g. Blondell et al., 2012), but some have attempted innovative approaches at bolstering aftercare support.

Among these approaches, service providers have found only limited success with providing network support, including encouraging attendance at 12-step programs, employment counseling and other ancillary supports, and facilitated group outings (Sorensen, Trier, Brummett, Gold & Dumontet, 1992). Others have focused on enhancing the therapeutic alliance, finding some success in terms of entry into outpatient treatment following detox (Campbell et al., 2009). In a Baltimore inpatient detoxification facility with 80% of patients admitted to further treatment following detox, researchers linked the seeking of follow-up support to the type of follow-up treatment available and appropriate for clients; they associated failure to seek aftercare with those seeking outpatient treatment, versus those seeking residential follow-up treatment (Carrol, Triplett & Mondimore, 2009). In another study, Chutuape, Jasinski, Fingerhood & Stitzer (2001) found that clients who sought aftercare or formal treatment following a brief (3-day) inpatient detoxification program had better outcomes, including lower drug use, at 6 month follow up.

Despite an acknowledgement across the literature that follow-up treatment and improved aftercare can help to improve outcomes and facilitate recovery, providing supportive aftercare is not always easily done. Rural settings in particular can pose a challenge to implementing supportive aftercare, particularly subsidized or supported housing (Hiller et al., 2007). One option being considered is the use of "stabilization beds," or beds that provide a safe place for clients to stay prior to or following treatment. For example, a new withdrawal management facility in Sarnia/Lambton will include 6 stabilization beds (Bluewater Health, 2013).

Helping clients of all kinds navigate the system has been suggested to be a key factor in establishing quality, effective withdrawal management. As McGuire et al. (2005) note "a well integrated system is evident when individuals are clients of the addiction system, not a specific agency, with clear pathways of care tailored to individual need" (p. iv). Cross & Sibley-Bowers (2001) also attend to the necessity of increasing availability of information about pathways through the continuum for clients trying to navigate the addictions treatment system. This strongly client-centered document provides addictions service workers with a framework for assessing and guiding clients through the system. Of course, despite manuals like these and a strong client-centered focus in the addictions services continuum, putting policy into practice is a challenge; addictions service workers across the continuum may be overworked and may not have access to additional training and development to help them manage the increasingly complex challenges of individuals with substance misuse (McGuire et al., 2005). In 2009-2010, there were 39744 open cases in Ontario's withdrawal management system, with a significantly larger proportion of these individuals representing new cases than in 2005-2006 (35.4% new cases); this caseload is likely to have resulted in an overload on the withdrawal management system (Rotondi & Rush, 2012).

Defining and Improving Outcomes

Some have estimated that between 20 and 46% of clients engaged in withdrawal management drop out prior to completion (Endicott & Watson, 1994; Gossop, Johns & Green, 1986; Luippold, Zorn & Lewis, 1995; Stark, 1992) or against medical advice (Li, Puri & Marsh, 2007). Given the limited success noted by clinicians and clients alike for withdrawal management of different types (Day, Ison & Strang, 2008; Kenny, Harney, Lee & Pennay, 2011), a number of strategies have been designed with an aim of increasing retention rates and rates of follow-up treatment. Importantly, outcomes such as following up with further treatment and completing intensive detoxification programs have often come to replace complete abstinence as positive outcomes of withdrawal

management. This is in keeping with a philosophical shift toward seeing withdrawal management as a key entry step into treatment, rather than full treatment for addictions (DeVerteuil & Wilton, 2009). Among emerging models attempting to improve outcomes for individuals seeking withdrawal management, the following have found some success:

Changes in drug protocols

As pharmacotherapy is not the focus of this review, the large body of literature surrounding drug protocols was scanned but will not be thoroughly outlined here. Should more information be required, more detail is provided in the appendix, as well as in several studies, including: Amato, Davoli, Ferri & Ali (2005); Backmund, Meyer, Einchenlaub & Schutz (2001); Faggiano, Vigna-Taglianti, Versino & Lemma (2003); Fu, Zaller, Yokell, Bazazi & Rick, (2013); Gossop, Johns & Green, 1986; Robles et al. (2002); Sorensen, Hargreaves & Weinberg (1982); Van den Brink & Haasen (2006); Veilleux, Colvin, Anderson & York (2009); Vidjak (2003)

Relative Effectiveness of Psychosocial Treatments

The methodological issues that plague the addictions treatment literature in general also pose a challenge to evaluating the comparative effectiveness of behavioural or psychosocial components of withdrawal management programs. For example, small sample sizes, vastly different contexts, differently defined outcomes, and non-randomized study designs pose significant issues when attempting to draw conclusions over a number of studies (Ashery & McAuliffe, 1992). In a systematic review for the Cochrane database (one of the most respected review repositories often used to drive practice and policy, particularly in medical contexts), Amato, Minozzi, Davoli & Vecchi (2011) sought to determine the effectiveness of psychosocial additions to pharmacological interventions for opioid detox (versus pharmacological treatment alone). Of 1170 trials considered for inclusion in this review, 66 met inclusion criteria; of these, 55 were excluded, and the authors performed their review on the basis of only 11 studies meeting criteria for inclusion and rigour (p. 9). These studies evaluated two behavioural programs (contingency management, community reinforcement), five structured counseling programs (psychotherapeutic counseling, intensive role induction with or without case management, counseling and education about high risk behavior, therapeutic alliance), and one family therapy intervention. Ultimately, the authors found no differences that were significant enough to point to the clear benefit of one form of psychosocial approach over any other. Of note, however, is that they did suggest that

providing *any* of these types of psychosocial treatments led to reduced dropout, reduced use of opiates both during and following withdrawal management, and reduced clinical absences from the detoxification program versus providing only pharmacological intervention (Amato, Minozzi, Davoli & Vecchi, 2011). Thus, despite a lack of convincing evidence for one form of psychosocial intervention over all others, going beyond simply providing medication in withdrawal management is generally seen as preferable.

Information Provision

Simply providing clients with more information about the process, possible outcomes, risks and benefits of withdrawal management has been linked to improvements in both completion rates and subjective distress associated with withdrawal (Green & Gossop, 1988; Mattick & Hall, 1996; Sorensen et al., 1992). Though the provision of information seems relatively basic, there is a significant literature pointing to barriers posed by lacking information given to clients to assist them in better navigating the treatment continuum from withdrawal management to follow up treatment (e.g. Green & Gossop, 1988; Kenny, Harney, Lee & Pennay, 2011; Li, Puri & Marsh, 2007; Mattick & Hall, 1996; Sorensen, Trier, Brummett, Gold & Dumontet, 1992)

Point of Entry

While not all detoxification programs operate behavioural programs, many see the withdrawal management program as a key entry point for other, more intensive forms of treatment, which may follow the above modalities or others, including community reinforcement, individual counseling (e.g. psychotherapy), or family counseling (Veilleux, Colvin, Anderson & York, 2009). Where possible, providing some kind of behavioural treatment in addition to pharmacotherapy has been noted to have positive impacts on withdrawal management clients, particularly those with more complex needs (Veilleux, Colvin, Anderson & York, 2009).

Other approaches have been employed to attempt to bolster outcomes. Outlined in more detail in the appendix, these may include:

- Contingency management
- Community reinforcement
- Motivation Enhancement Therapy (MET)
- Modified 12 Step Programs (e.g peer-delivered)
- Intensive Role Induction

SPECIAL POPULATIONS

The literature strongly and consistently points to a number of important considerations to keep in mind when considering the appropriate and effective delivery of addictions treatment services in general and withdrawal management services in particular. Notably, up to 37-53% of those who misuse alcohol and drugs, respectively, suffer from concurrent mental health disorders (Skinner, O'Grady & Bartha, 2004). Between 40 and 80% of individuals seeking treatment for opioid use may suffer from comorbid conditions (Strain, 2002) including affective disorders (Milby et al., 1996), post-traumatic stress disorder (King, Peirce & Brooner, 2006; Milby et al., 1996), antisocial personality disorder (Brooner et al., 1997; Havens & Strathdee, 2005; King et al., 2006) and anxiety disorders (Kushner, Sheila & Maurer, 2011). Complicating the recommendation of particular strategies for providing withdrawal management for specialized populations is the limited knowledge generated to date about the most effective ways to provide for these groups.

Despite considerable effort to better serve those who may "slip through the cracks" of the withdrawal management continuum, relatively little is known about the provision of services to these groups. This lack of information is due in part to the exclusion of these groups from large randomized controlled trials that generally guide practice. For example, the majority of studies consulted for this review excluded individuals under the age of 18 (and occasionally over the age of 65), as well as pregnant women. The majority of studies are also situated in large metropolitan areas, rather than rural settings. This acknowledged paucity of research is an ongoing challenge for those interested in better serving these and other groups.

Pregnant women in particular are often excluded from large treatment studies. These women may have multiple and intersecting concerns that complicate the course of treatment and warrant deeper investigation (Haber, Demirkol, Lange & Murnion, 2009; Mackie-Ramos & Rice, 1988). Pregnant women do not make up a large proportion of treated individuals; however, they are at especially high risk of physical and psychological effects both pre- and post-partum and require comprehensive care (Mackie-Ramos & Rice, 1998). Some treatment providers and researchers have sought to determine whether specialized treatment services for women in general might help to improve this underserved population (e.g. Copeland, Hall, Didcott & Biggs, 1993). Others have sought to improve services for specialized populations by improving the matching of needs of clients to services, for example through the provision of transportation, child care, and multi-language services, and have linked such efforts to greater treatment retention (Hser, Polinsky, Maglione & Anglin, 1999).

Youth are another group for which the development of specialist services have been attempted, a need that some have called particularly urgent due to a near doubling of youth heroin and opioid use for youth 13-18 noted in some reviews (monitoringthefuture, 2006 in Minozzi, Amato & Davoli, 2009). In the first large-scale systematic review of interventions designed specifically for youth detoxification from opiates, Minozzi, Amato & Davoli (2009) noted that it can be difficult to conduct trials using young participants for both practical and ethical reasons; accordingly, there are few studies that present convincing evidence for best practices in youth withdrawal management. Efforts are underway in Ontario to better address the needs of special populations, including youth and individuals with co-occuring disorders, for example through the Client Perceptions of Care (which also addresses other specialized populations, including poly-drug users) and the Youth Service System Review (Rush, 2012). Younger youth (i.e. under the age of 16) in particular are generally excluded from large studies of withdrawal management services, and may be excluded from the services themselves. A move away from abstinence-based programming toward a harm reduction model in the withdrawal management continuum may help to engage youth (McGuire et al., 2005). However, harm reduction for youth remains somewhat contentious in light of social and political pressures for promoting drug abstinence and “just say no” among youth (LaMarre, Bergen & Devereaux, 2012; Poulin, 2006).

As noted above, providing effective services for rural clients can be particularly difficult. Not only can it be difficult to access withdrawal management due to lengthy distances (Hiller et al., 2007), but there are a number of other psychosocial barriers to addictions service-seeking among rural individuals. Efforts ongoing in Ontario to address these gaps include providing Telephone-Supported Withdrawal Management Services (Deschamps et al., 2008). In Australia, researchers have found some success in developing increased competency among general health care providers, including nurses, in order to integrate withdrawal management with existing rural health services (Management, 2009).

It is important to better understand and attend to the needs of these and other specialized populations not only to improve the continuum of care, but due to the potential for exacerbated risk among members of these groups. Trezza & Scheft (2006) note that the elderly, homeless, and HIV-positive are more likely to suffer from serious withdrawal symptoms including seizures. Evidently, efforts to better attend to the needs of these groups are encouraged, though the recent literature does not yet point to clear directions beyond managing care in a way that is facilitated, integrated, and tailored to meet individual needs (Daniel, John, Carl & James, 1998; Ogborne, Braun & Rush, 1998; Rush, Corea & Martin, 2009).

Managing Detox in the ER Setting

A number of studies comment on the difficulty of managing withdrawal in the emergency department. While detoxification centres were originally designed to supplant emergency rooms as a safe space for withdrawal management (DeVerteuil & Wilton, 2009), patients who are in withdrawal and desire medical attention may present at emergency departments. Importantly, emergency departments may or may not be equipped to manage withdrawal. Alcohol withdrawal, for example, accounted for 10-30% of all emergency department visits in one study conducted at two Toronto hospitals (Physicians & Complete, 2005). Another study noted substance use (8 target substances assessed) among 56% of women and 69% of men presenting to non-psychiatric hospitals in Tennessee (Trezza & Scheft, 2006). While there is inter-connectivity between health, social and correctional systems in Ontario which can help to facilitate referral between these services (Rotondi & Rush, 2012), there are a number of challenges associated with the potentially large amount of clients presenting to emergency departments in withdrawal. In the high-pressure and fast-paced environment of the emergency department, substance use may not be noted among other presenting factors, or doctors may be unaware of the best ways to assess for and manage

uncomplicated and complicated withdrawal (Trezza & Scheft, 2006). Substance users may also frequently cycle in and out of emergency departments; up to 26.8% of individuals with substance misuse issues visited emergency rooms more than once within a year in one Canadian study (Brubacher et al., 2008). Accordingly, McGuire et al. (2005) propose greater connectivity between emergency departments and medical withdrawal management, as well as other parts of the addictions services continuum. This need is especially pressing as frequent emergency department users are likely to have a number of unmet needs that may pose a challenge to effective and efficient treatment, including housing, mental health, medical and poly-substance use issues (Draanen et al., 2013).

CONCLUSIONS

This overview of the literature relating to withdrawal management in the Ontario context may help to inform recommendations being developed by a working group on withdrawal management in Waterloo-Wellington. While many of the findings are quite general, and often reveal inconclusive results and spaces for future research, the client-centric nature of this body of literature and the ongoing efforts toward improving the efficacy and navigability of withdrawal management and addictions treatment in general is encouraging. With continued effort, some of the methodological issues and gaps in the literature, including often missing specialized populations such as youth, seniors, and pregnant women, and small sample sizes, might be filled. Meanwhile, ongoing efforts across Ontario demonstrate a strong commitment to an addictions treatment continuum that is more closely integrated with other social and health services and a withdrawal management system that corresponds with the complex needs of Ontarians with substance misuse issues.

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APPENDIX: APPROACHES TO IMPROVING OUTCOMES IN WITHDRAWAL MANAGEMENT

CHANGES IN DRUG PROTOCOLS

Many existing clinical trials and large-scale, methodologically rigorous reviews of withdrawal management consider the use of different types of medication for managing withdrawal. To briefly comment on this significant literature, pharmacotherapy is noted to be an important part of detoxification, particularly the use of methadone or buprenorphine (Van den Brink & Haasen, 2006; Veilleux, Colvin, Anderson & York, 2009). A number of studies looking at the varying efficacy of medications in detox that attend to the biological mechanisms of functioning have been excluded from this review. Of those articles reviewed and included, methadone is noted to be the most commonly used, and is generally among the safest options for pharmacotherapy for individuals attempting to stop using opiates (Amato, Davoli, Ferri & Ali, 2005; Gossop, Johns & Green, 1986; Van den Brink & Haasen, 2006). However, methadone is itself addictive, and thus methadone detoxification is another step in attaining complete abstinence, if this is the goal of patients and service providers (e.g. Robles et al., 2002).

A significant literature on the interaction of pharmacotherapy and psycho-social-behavioural withdrawal management programs also exists. Among key findings, the acceptability of medication to patients is noted to be a key factor in its use in treatment (Sorensen, Hargreaves & Weinberg, 1982). Further, it is important to note that medication alone, for example methadone maintenance therapy (MMT), is rarely adequate treatment; methadone therapy without adjunct hospital or community-based treatment is unlikely to lead to sustained abstinence or improvement on other psychosocial variables (Vidjak, 2003). Easing the transition to methadone-free settings for those using methadone in the community and seeking detoxification and/or treatment is indicated, however, as the threat of sudden or forced withdrawal from methadone is likely to discourage its use in the first place (Fu, Zaller, Yokell, Bazazi & Rick, 2013). However, MMT prior to entry into a withdrawal management program may positively influence the outcomes of withdrawal management; engaging in MMT may help to stabilize a patient's health and social functioning, which may facilitate withdrawal (Backmund, Meyer, Einchenlaub & Schutz, 2001). The use of methadone maintenance therapy is guided by attending to the goals of treatment; according to Faggiano, Vigna-Taglianti, Versino & Lemma (2003), MMT can be seen in the following ways:

- As a preparation for entry into detox (in the case of seeing addiction as fully treatable and establishing abstinence from opiates as the goal of treatment)
- As a means of facilitating social/personal rehabilitation or harm reduction (in the case of seeing addiction as a chronic disease and complete abstinence as unlikely)

Seeing withdrawal management through a harm reduction lens changes the way that outcomes are defined; for example, a harm reduction approach would envision withdrawal management as a safe place to re-stabilize patients who have relapsed and left more intensive, long-term treatment (DeVerteuil & Wilton, 2009). In Ontario, the use of methadone follows standards set out in the Ontario Withdrawal Management Standards (Deschamps et al., 2008). Surprisingly little is known about how methadone maintenance therapy interacts with psychosocial interventions (Faggiano et al., 2003) despite frequent use of pharmacotherapy in diverse treatment settings.

ADJUNCT BEHAVIOURAL THERAPIES

Community Reinforcement

A multi-component behavioural approach, where clients receive counseling on relationships and employment, as well as education around opioid use and associated risks, while developing new (or re-engaging with old) recreational activities (Bickel et al., 1997), linked to improved outcomes, including sustained abstinence, for opioid users in withdrawal (Abbott, 2009)

Motivation Enhancement Therapy (MET)

Giving clients feedback and enlisting commitment to change has been linked to increased follow-up care seeking, in some cases (Blondell et al., 2011). As enhancing motivation has been identified as a key goal of all parts of the addictions treatment continuum (Daniel, John, Carl & James, 1998) and facilitating movement from withdrawal management to follow-up treatment has been noted as a desired outcome of detoxification (Li, Sun, Marsh & Anis, 2008; Kosten & O'Connor, 2003), it is perhaps not surprising that the use of MET in withdrawal management is gaining traction.

Modified 12 Step Programs

12 step has long been a feature of addictions treatment, and is often considered a minimal measure, particularly in the United States (Arias & Kranzler, 2008), and is sometimes delivered through peer-support (Blondell et al., 2011). Programs based in (e.g. Copeland, Hall, Didcott & Biggs, 1993; Witbrodt et al., 2007) or encouraging attendance at 12-step (e.g. Sorensen, Trier, Brummett, Gold & Dumontet, 1992) have not demonstrated significantly better outcomes overall, though there are only limited rigorous comparative studies in this area. In Canada, a movement toward client-centered care and toward harm reduction has also meant a move away from 12 step programs, though these programs do still operate (DeVerteuil & Wilton, 2009).

Intensive Role Induction

Provides psychoeducation, correction of misperceptions about withdrawal management and treatment, and assistance in overcoming barriers while building a stronger therapeutic alliance and motivation (Katz et al. 2011).