

IMPLEMENTATION OF IMR IN VA

Implementation of Illness Management and Recovery in the Veterans Administration: An On-Line Survey

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Abstract

Objective: This study explores the implementation of illness management and recovery (IMR) across Veterans Affairs Medical Centers (VAMCs). The implementation of illness management programming has been mandated in certain programs within VAMCs. IMR is consistent with the Department of Veteran Affairs (VA) emphasis on recovery-oriented, evidence-based treatments. This paper examines both the penetration of IMR within the VA system and the barriers and facilitators to implementation. **Methods:** An on-line survey was sent to local recovery coordinators, who, in turn, identified other local IMR experts. **Results:** Respondents from 107 clinics (representing 101 VAMCs) answered the survey. Less than half of VAMCs provide IMR services. Psychosocial Rehabilitation and Recovery Centers (PRRC) which specialize in services for Veterans with psychiatric disabilities are more likely to provide IMR; however, more than one-third do not. Few respondents had access to IMR implementation tools such as training, consultation, or fidelity monitoring. Only about one-fifth of IMR providers have been trained in IMR. Respondents reported several facilitators to implementation, such as knowledgeable staff members and peer support. Common barriers to implementation included limited staff availability and “intimidating” workbook materials. **Conclusions and Implications for Practice:** The VA is well underway in its implementation of IMR; however, there is room for expansion. Implementation tools such as training and consultation are needed to ensure dissemination and quality within VA. Given the comparative resources and infrastructure of VA, it is likely that equal or greater implementation tools are necessary in other systems of care.

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Key Words: Implementation, Illness Management and Recovery, Schizophrenia, Evidence-Based Practices.

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Illness management and recovery (IMR) is a psychosocial intervention that integrates empirically supported practices for illness self-management into a single cohesive program (K. T. Mueser, Corrigan, et al., 2002; K. T. Mueser, Meyer, Piper S., Penn, D. L., Clancy, R., Clancy, D. M., Salyers, M. P., 2006). The intervention was designed to help consumers with severe mental illness develop their own personal recovery goals, which they worked towards over the course of the program. As a key part of the program, these goals serve as the motivational basis for learning illness self-management information and skills. Three randomized controlled trials (Färdig, Lewander, Melin, Folke, & Fredriksson, 2011; Hasson-Ohayon, Roe, & Kravetz; Levitt et al., 2009) and seven non-controlled trials (Bullock, O'Rourke, Breedlove, Farrer, & Smith, 2007; Fujita et al., 2010; Johnson, 2008; M. P. Salyers, Godfrey, et al., 2009; M. P. Salyers, Hicks, et al., 2009; M. P. Salyers et al., 2010; Michelle P. Salyers, Rollins, Clendenning, McGuire, & Kim, 2011) have examined the impact of IMR on consumer outcomes. Findings indicate improved illness self-management (as reported by both consumers and clinicians) and reduced objective, rater-assessed symptoms (McGuire et al., in press).

The Department of Veterans Affairs (VA) is transforming care to promote evidence-based, recovery-oriented mental health services (Axelrod & Wetzler, 1989). According to Goldberg and Resnick (2010), the VA aims to create a system where veterans have the right to direct their own treatment and are encouraged to develop recovery-oriented action plans for themselves. Given that such independence and action plans are core tenets of IMR, the program fits well within the VA's overall vision for mental health services (Dept. of Veterans Affairs, 2008). Using policy to guide the change, the Uniform Mental Health Services Handbook (Handbook 1160.01) mandates the inclusion of "illness management and recovery groups"

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within Psychosocial Rehabilitation and Recovery Centers (PRRCs). Other efforts to transform the VA's system of care include local recovery coordinators (LRC)s, who are embedded within each VA Medical Center (VAMC) and tasked to "help transform local VA mental health services to a recovery-oriented model of care" (Dept. of Veterans Affairs, 2008, p. 27).

Despite a mandate to incorporate illness management and recovery into services, no effort to assess the implementation of IMR within the VA system has been conducted. Moreover, although specific EBPs are often cited in VA roll-outs, practice indicates that multiple programs are regarded as meeting the spirit of the mandate. Data from another evidence-based psychosocial intervention within VAMCs, social skills training (Bellack, Mueser, Gingerich, & Agresta, 2004), indicates that programs specified in the Uniform Mental Health Services Handbook are not implemented universally. A 2009 Office of the Inspector General report stated that only 74% of required VAMCs provided social skills training; this percentage referred to any form of social skills training and not necessarily the "formal, evidence-based" intervention (VA Office of Inspector General, 2009). Moreover, only 51% of VAMCs had established PRRCs—another required program change for transforming the VA into a more recovery-oriented institution (VA Office of Inspector General, 2009). These examples of uneven implementation are consistent with broader implementation research, which has demonstrated the difficulty in implementing evidence-based practices (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). Regarding IMR specifically, the implementation literature has found numerous challenges to IMR implementation, such as high dropout rates, low penetration, low completion rates, and poor fidelity (McGuire et al., in press).

The current study aimed to assess implementation of IMR within VA mental health services. The VA system was chosen as the focus of the study for several reasons. First, the VA

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is a large provider of mental health care, particularly regarding the treatment of veterans with severe mental illness (SMI). Of the 6.8 million VA health-care system enrollees, 95,875 Veterans were treated for schizophrenia in 2002 (Wu, Shi, Birnbaum, Hudson, & Kessler, 2006) and 73,964 Veterans were treated for bipolar disorder in 2003 (Sajatovic, Valenstein, Blow, Ganoczy, & Ignacio, 2006). With the mental health needs of consumers with SMI expected to expand in the future, the VA system will continue to grow as leading provider for SMI. Second, the VA can serve as a model for other large-scale mental healthcare providers (e.g., HMOs, state mental health authorities). Finally, the VA system may represent a favorable setting for IMR implementation due to system-level facilitators, including imbedded recovery champions (local recovery coordinators) and policy commitment to recovery and evidence-based services. Moreover, the VA is relatively shielded from the financial strain faced by community organizations (Levit et al., 2013). However, the VA has not supported systematic training and consultation on IMR specifically.

A rich body of literature outlines the process and potential factors affecting the implementation of a given practice (Damschroder et al., 2009; Fixsen et al., 2005; Greenhalgh et al., 2004). In the present study we were guided by the consolidated framework for implementation research (CFIR; Damschroder et al.), which includes five broad factors thought to impact implementation, as derived from a systematic review of the implementation literature. These factors include the inner setting (i.e., the proximal service context), outer setting (larger system context), people providing the program, the program itself, and the implementation process. CFIR provides several advantages, including a comprehensive framework, nomenclature that can be compared across studies, and a combined focus on implementation structure and process.

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Using the CFIR as a guiding framework, we examined several facets of the implementation process of IMR within the VA system. First, we examined *adoption* of IMR (i.e., the number of VAMCs and clinics attempting implementation). Secondly, we examined *penetration* (i.e., the number of Veterans receiving IMR services) and *fidelity* (i.e., the degree to which programming adheres to prescribed model elements) of IMR at the clinic level. Finally, we examined perceived barriers and facilitators to IMR implementation, as well as suggested tools to facilitate further implementation.

Methods

Participants

Participants were recruited through a hybrid two-stage sampling strategy. The first stage included all VA LRCs and the second stage included a snowball sample of local IMR experts. For the initial sample, we attempted to recruit all LRCs in the VA system, based on a national LRC contact list provided by the Acting Director of Recovery Services. LRCs served as the starting point for recruitment because they provide a broad perspective of recovery-oriented and evidence-based services for Veterans with severe mental illness at each VAMC. Thus, we relied on LRCs to provide a facility-level perspective on IMR implementation. For the second stage of sampling, participating LRCs were asked to identify up to three people knowledgeable about IMR or other illness management services at their facility. These referrals were also asked to identify additional staff at their facility who were knowledgeable about IMR, until saturation was reached.

Clinic respondents. The details of IMR program characteristics (e.g., size of group, format), penetration, utilization, and fidelity is best reported at the individual clinic level, so a clinic-level sample was developed. In instances where there were multiple respondents from one

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clinic and/or one respondent for several clinics, the following rules were used: 1) If an LRC was the only respondent from a VAMC, the LRC was the clinic respondent. 2) If one local IMR expert responded, the local expert's responses were used. 3) If multiple local experts reported on different clinics (e.g., PRRC versus MHICM), all local experts responses were used as separate cases. 4) If multiple local experts reported on the same clinic, one respondent was chosen based on survey completeness and reported knowledge of IMR. If local experts were equal on completeness and reported knowledge, one respondent was chosen at random. In order to resolve discrepancies on IMR and PRRC status between respondents from the same VAMC, the following rules were developed: 1) *IMR Status*. We used the highest level of IMR status (from lowest to highest: no IMR ever, planning IMR, past/not current IMR, current IMR) reported by any respondent from a site. This rule was adopted because some respondents may be unaware of IMR programming existing somewhere else within their VAMC. 2) *PRRC Status*. We used PRRC status reported by staff affiliated with the PRRC when available and, when not available, we used the LRC's report.

Procedures

Several methods were employed to encourage participation in the study. First, the first author spoke on two national LRC conference calls, explaining the study aims, procedures, and importance. During the second call, two LRCs who had already participated were asked to speak about their experience, the ease of participation, and their perspective on the importance of the study. Second, each potential participant was sent an individualized e-mail with the survey link. If the potential participant did not reply, the research staff attempted at least three phone calls and sent at least two reminder e-mails. This study was approved by the Indiana University-Purdue University Indianapolis Institutional Review Board (IRB), the Roudebush VAMC

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Research and Development Committee, the Organizational Assessment Sub-Committee of the Human Resources Committee of the VA National Leadership Board, and reviewed by a union representative.

Measures

All participants completed an on-line survey hosted by SurveyMonkey.com. The survey was specifically created for this study and included 24 close-ended quantitative items and three open-ended qualitative items. Specifically, domains included characteristics of the respondent (3 questions), status of IMR provision (3 questions), number of Veterans utilizing IMR (4 questions), fidelity to the IMR model (14 questions), and open-ended questions about barriers, facilitators, and potential resources to support IMR implementation. Fidelity questions were based on elements listed in the IMR fidelity scale (K. T. Mueser, Gingerich, Bond, Campbell, & Williams, 2002). The open-ended questions asked respondents to report three facilitators to the implementation of IMR at their VA and three barriers to implementation. The survey was tailored for each respondent using skip patterns, meaning that different responses would link to different subsequent survey questions, so that some participants did not answer all survey items. To ensure participants met criteria for the study (e.g. were knowledgeable about IMR), one of the first survey questions asked respondents to indicate their level of knowledge of IMR at their VAMC. Respondents who reported that they were “not knowledgeable at all,” were excluded from further questions. Since the survey measure was created for the study, no prior psychometric data are available.

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Analyses

For quantitative analyses, LRC responses were used for facility-level analyses (i.e., the number/percent of VAMCs providing IMR and the type/location of such clinics). Clinic respondents were used for clinic-level analysis (i.e. number of Veterans served, graduation, dropout, facilitators and barriers at clinic, etc.). For qualitative analyses, responses to open-ended questions were analyzed using a directed content analysis based on a combination of emergent and deductive processes (Hsieh & Shannon, 2005). First, two authors independently read responses to each open-ended question and identified emergent themes. The team compared and developed consensus codes. Since we recognized that many of the categories identified mapped onto a theory of program implementation outlined in the consolidated framework for implementation research (CFIR), we reviewed the CFIR framework to ensure that other elements were being covered (Damschroder et al., 2009). The resulting codebook included 6 overall factors, including the 5 CFIR factors and an additional “Veteran” factor that emerged from the coding, that were broken down into 19 specific topics. Using this revised codebook, two independent raters coded each response, compared coding, and reached consensus in the case of discrepancies.

Results

Sample

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LRCs. Of 144 possible LRCs, 101 (70.1%) responded to the survey. When asked how knowledgeable LRCs were about IMR at their VAMC, most reported at least some knowledge. The distribution was: very knowledgeable 20 (29.0%), moderately knowledgeable 27 (39.1%), a little knowledgeable 18 (26.1%), and not at all knowledgeable 4 (5.8%). LRCs who reported being not at all knowledgeable were excluded from further analyses. In addition to the role of LRC, forty-eight (49.5%) LRCs reported having an additional role, including administrative (n = 33, 34.0%) and clinical supervision (n = 35, 36.1%). Most LRCs endorsed affiliations with outpatient mental health clinics (n = 36, 73.5%), with the remaining affiliated with PRRCs (n = 7, 14.3%), inpatient units (n = 4, 8.2%), and domiciliaries (n = 2, 4.1%). Most LRCs reported not providing IMR themselves (n = 30, 60.0%).

Clinic Respondents. One hundred and seven clinics from 101 VAMCs were represented. Most clinic respondents were LRCs (69, 64.5%); in contrast to LRCs in general, most clinic respondents provided IMR directly (n = 38, 60.3%). Most respondents were stationed within outpatient mental health clinics (n = 34, 46.6%) or PRRCs (n = 24, 32.9%), with the remaining in inpatient (n = 5, 6.8%) or domiciliaries (n = 4, 5.5%). Clinic respondents reported knowledge of IMR at their VAMC to be: very knowledgeable (34, 37.2%), moderately knowledgeable (23, 31.9%), and a little knowledgeable (15, 20.8%).

IMR Adoption by VAMC

Less than half of VAMCs reported having current IMR (n = 41, 42.2%) or ever having had IMR (n = 46, 47.4%; Table 1). A few additional sites reported planning to implement IMR.

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IMR status differed significantly by PRRC status ($\chi^2(6) = 23.13, p = .001$). IMR was more common at VAMCs with a certified PRRC, with almost two-thirds of certified PRRC sites currently having IMR ($n = 29, 61.7\%$), and slightly over two-thirds ($n = 32, 68.1\%$) having ever had IMR. Forty percent of sites reported IMR in another clinic, including outpatient mental health ($n = 6, 46.2\%$), inpatient ($n = 3, 23.1\%$), day treatment ($n = 1, 7.7\%$), psychosocial residential rehabilitation treatment program ($n = 1, 7.7\%$), and programs unique to locations ($n = 2, 15.4\%$). IMR was fairly rare in domiciliary clinics ($n = 4, 10.8\%$) and on mental health intensive case management (MHICM) teams ($n = 9, 20.0\%$). Respondents indicated IMR was usually offered in group ($n = 37, 63.8\%$) or both group and individual ($n = 20, 34.5\%$), with only one site (1.7%) offering only individual IMR.

Some sites without current IMR reported having a program “like” IMR ($n = 18, 35.3\%$). Sixteen respondents provided a brief description of services they considered “like” IMR, which included a manualized program based-on or similar to IMR ($n = 6, 37.5\%$) e.g., wellness self-management (Salerno et al., 2011), wellness management and recovery (Bullock et al., 2009),; specific components of IMR ($n = 9, 56.3\%$; e.g., “information about mental illness,” or relapse prevention training), and general recovery-oriented services ($n = 1, 6.2\%$).

IMR Penetration, Graduation, Dropout, and Fidelity by Clinic

Participants reported different rates regarding the number of veterans served by IMR (penetration), graduating from IMR, and dropping out of IMR, as well as the number of clinics adhering to program fidelity. For the 46 clinics ever providing IMR, the mean number of

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Veterans ever served by IMR was 83.6 (median = 29.0, s.d. = 134.29). Most clinics had provided IMR to ≤ 25 Veterans (n = 23, 50.0%), with the remaining serving 26-100 (n = 14, 30.4%), 101-200 (n = 4, 8.7%), or greater than 200 (n = 5, 10.9%) Veterans. Based on the 14 (34.1%) clinics that reported the number of Veterans currently enrolled in IMR, the mean number of veterans was 39.1 veterans per clinic (median = 32.5, s.d. = 50.8). According to ten clinics, the mean number who graduated from IMR was 23.7 Veterans per clinic (median = 15.0, s.d. = 26.7, range 0 - 65). The overall graduation rate for Veterans receiving IMR (i.e. number graduating divided by number ever enrolled) was less than one-third of IMR enrollees (mean = 31.5%, median = 20.5%, s.d. = 35.9%, range = 0 – 100%). Based on seven clinics, the mean number of Veterans to drop-out of IMR was 91.1 (median = 10.0, s.d. = 198.36, range = 1 – 540). The Veteran dropout rate (i.e. number dropping out divided by total number enrolled) is reported by quartile due to the extreme skew: <16.7%, n = 1 (14.3%), 16.7- 30.3%, n = 3 (42.9%), 30.4%-50% n = 2 (28.6%), >50% n = 1 (14.3%). Finally, clinic respondents generally reported a high level of fidelity to the IMR model, with the majority of respondents (at least 50%) agreeing with adherence to all model elements, except the involvement of significant others and small group size (see Figure 1).

IMR Training and Implementation Tools

Almost all clinics reported having exposure to the IMR toolkit (n = 57, 87.7%). However, respondents reported a low level of IMR-relevant training. Less than half of clinic respondents (n = 44, 41.1%) reported having any training relevant to IMR, including IMR-

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specific training (n = 21, 19.6%), cognitive-behavioral (n = 27, 25.2%), motivational interviewing (n = 30, 28.0%) or some other training deemed relevant (by the respondent) to IMR (n = 14, 13.1%). Regarding direct providers of IMR (n = 38), 27 respondents had received IMR-relevant training (71.1%), but only 14 (36.8%) respondents had received IMR-specific training. Respondents from only 5 clinics (7.7%) reported tracking IMR fidelity. Fidelity appeared to be higher for curriculum-based elements (i.e., established curriculum, education-based techniques, educational materials, coping skills training, and relapse prevention) than for clinical skills not specific to a particular IMR module (goal follow-up, motivation-based techniques and cognitive-behavioral techniques).

Barriers and Facilitators

Through two open-ended questions, respondents spontaneously mentioned a variety of facilitators and barriers to implementation of IMR (see Table 2). Responses were coded based on their relationship to the inner setting, outer setting, people providing the program (i.e. staff factors), the program itself (i.e. IMR factors) and the implementation process (i.e. implementation tools). In addition, “Veterans” was determined to be an important factor and was added as a code. These 6 factors were further broken down into sublevel coding to reflect more descriptive facilitators and barriers to implementation (see Table 3).

To elucidate factors that may determine whether a site implements IMR, we examined differences between current IMR sites and non-IMR on stated barriers and facilitators. The only significant difference between current IMR sites and non-IMR sites was IMR factors (50.8% vs. 11.8% $\chi^2=8.345, p<0.01$ as a facilitator; 33.3% vs. 0%, $\chi^2=7.684, p<0.01$ as a barrier). Because

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current IMR sites have direct knowledge of IMR implementation, the following analyses and results focused on responses from respondents at current IMR sites. As shown in Table 3, the most frequently reported facilitators were staff factors (n=45, 71.4%), which included staff knowledge and experience (50.8%), specific staff (17.5%) and staff availability (11.1%). The second most frequently cited facilitators were IMR factors (n=32, 50.80%), including IMR materials (41.3%) and fit of IMR for the program (11.1%). Inner setting factors were the third most frequently cited facilitators (41.3%) and included type of program at site (19.0%) and non-human resources (12.7%). Outer setting factors were cited just as frequently (n=26, 41.3%) and included leadership and policies at the site (see Table 3). Finally, implementation tools and veteran factors were the least frequently reported facilitators for implementation (22%; 19.0% respectively).

Interestingly, staff factors were most frequently reported as the biggest facilitator, but also the biggest barrier to implementation (n=25, 36.7%). Regarding specific topics, respondents reported barriers with staff availability (27.0%) and staff knowledge/experience (17.5%). Inner setting factors were the second most frequently cited barrier (39.4%) and included the specific topics of non-human resources and type of program at site (see Table 3). The third most frequently cited barriers to implementation were IMR factors and Veteran factors (n=21, 33.3%) for both. Specific topics for these factors included IMR materials (23.8%), fit of IMR for program (17.5%), Veteran characteristics (23.8%) and Veteran attendance (12.7%). Finally, the implementation tools and outer setting factors were mentioned least frequently as barriers to implementation (see Table 3).

Discussion

The current study examined the implementation of IMR within the VA system. Despite the VA being a large healthcare system with many features that could enhance implementation – we found the spread of IMR programming to be low and implementation tools to be rarely utilized in VAMCs. Regarding the adoption of IMR, IMR was available in less than half of VAMCs. Even when including other structured programs (e.g, wellness self-management (Salerno et al., 2011) and wellness management and recovery (Bullock et al., 2009), less than half of sites met this criterion. PRRC status was highly related to IMR availability; sites with PRRCs were much more likely to implement IMR, and PRRC clinics were the most common placement of IMR services. Moreover, having an active PRRC was noted as an important facilitator to implementation, while the lack of a PRRC is considered a barrier. PRRCs specifically target Veterans with severe mental illness and it appears this programmatic targeting has resulted in increased availability of IMR for these Veterans. In order to replicate the increased adoption realized in PRRCs, future research should explore the mechanisms by which having a PRRC relates to increased probability of IMR implementation.

Given that illness management services are mandated within PRRCs (Dept. of Veterans Affairs, 2004), a direct explanation of the relationship between PRRC and IMR implementation would be that this mandate results in implementation of IMR. However, almost a third of PRRCs had never implemented IMR. Moreover, other mandated EBPs have not been implemented universally (Bellack et al., 2004). As an alternative explanation, respondents frequently cited the importance of staffing and therefore it may be the particular staffing configurations or expertise

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represented within PRRC that facilitate IMR implementation within PRRCs. Finally, PRRCs are specifically designed to provide recovery-oriented services, therefore, the philosophical fit between IMR and PRRCs may be key.

Additional supports are necessary to achieve universal implementation of IMR. In regards to these supports, with the exception of the IMR toolkit, sites have not accessed IMR implementation tools. Most notably, few respondents, including those providing IMR, had been trained specifically in IMR. Certainly, this is a substantial barrier to adoption. An extensive review of the implementation literature (Fixsen et al., 2005) showed that, amongst other factors, organizational support for ongoing training, consultation, and performance feedback to clinicians is associated with sustained implementation of numerous practices. In a related area of implementation, Sholomskas and colleagues (Sholomskas, 2005) found training and supervision to increase therapist adherence to Cognitive-Behavioral Therapy as compared to therapists who simply reviewed the training manual.

Estimated numbers of Veterans served by clinics, graduating, and dropping out must be viewed with caution. Only a small proportion of respondents reported these numbers and some numbers (e.g., number of Veterans served) seemed suspiciously high. However, given that all reports were objectively possible and we lacked solid reasons to exclude any data, we reported the full data. Another limitation of these numbers are that currently enrolled Veterans generally are cannot have graduated (unless they are repeating the program). Finally, it is unlikely for a Veteran receiving IMR in an inpatient setting to graduate from the full IMR curriculum (we note that there are abbreviated versions of IMR specifically for this population (Lin et al., in press). With these caveats, we note graduation and dropout rates indicate room for improvement, given

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that this study found less than one-third of Veterans graduate from IMR and at least one-third dropout from IMR services. It should be noted that this graduation rate is slightly higher than the median rate across other IMR studies, although studies varied widely in estimates of graduation rates (McGuire et al., in press). The dropout rate is also similar to other IMR studies and is comparable to dropout rates for other EBPs (e.g., cognitive-behavioral therapy for psychosis (Bados, Balaguer, & Saldaña, 2007)); however, our sample also included IMR provided in inpatient settings, which may have inflated dropout rates as it would be difficult to complete IMR during the length of most inpatient stays. We would note that “dropout” is not a perfect corollary of “dose.” Veterans may have varied in terms of modules completed in a given time period due to intermittent attendance, group pace, etc. Nonetheless, given the negative impact of program dropout on consumers (Masi, Miller, & Olson, 2003; Pekarik, 1983, 1985) and system resources (including 3.1 million “no-shows” and 1.8 million appointments cancelled with an estimated to cost the VA over \$800 million (VA Office of Inspector General, 2008), efforts should be made to reduce dropout rates and improve retention and graduation rates.

Despite lack of training, clinic respondents indicated they were using most model elements; however, self-reported fidelity may be prone to bias (Adams, Soumerai, Lomas, & Ross-Degnan, 1999; Lee & Cameron, 2009; Martino, Ball, Nich, Frankforter, & Carroll, 2009) and should be viewed with even more skepticism when the respondents are not trained in the model. Only half of sites participating in the National Implementing EBPs project met criteria for “high” or “successful” fidelity to IMR (Bond, Drake, McHugo, Rapp, & Whitley, 2009; McHugo et al., 2007). These sites received comprehensive training and long-term program consultation. It seems unlikely that VA sites have achieved superior fidelity with less

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implementation support. Few sites track fidelity, Veteran enrollment, or graduation and dropout rates (a limitation not unique to IMR). Sites reporting on these indicators varied greatly in their estimates.

Given the high reported fidelity, in general, the low reported implementation of two elements (significant other involvement and small group size) is particularly noteworthy. Small group size is the one element with an objective measure. Self-reported fidelity may be high, in general, due to a halo effect—one generally believes one is doing good IMR and therefore gives one's self high ratings on each element. However, when faced with a more objective criterion, such as group size, self-raters may be less apt to give a rating reflective of his or her global, subjective assessment. An alternate explanation may be that the aforementioned staff availability issues lead to larger group sizes but do not affect clinicians' fidelity to other elements. It seems unlikely, though, that clinicians under the demands of low staff-to-Veteran ratio environments, without training on the model, would excel in all fidelity elements except group size. Significant other involvement is a particularly time-intensive endeavor and involves communicating with non-Veterans, which may present unique barriers. We additionally note that in our current, ongoing survey of experts regarding the critical elements of IMR, preliminary results show significant other involvement received the lowest ratings of "criticality" and being "defining" of IMR.

The CFIR model (Damschroder et al., 2009) outlines five major domains impacting the implementation of an intervention. Interestingly, staff factors and IMR-specific factors were two of the most commonly cited facilitators *and* barriers to implementation. For IMR-specific factors, findings suggest that IMR components (materials, adaptability; see Table 3) may act as a facilitative factor to implementation when they are adopted by the program and well understood.

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Although the materials and structure of the program are facilitative, the length of the program and the heavy requirements of homework act as a barrier in other instances. For staff factors, having staff that are knowledgeable about IMR (i.e. have received training) is the single largest facilitator to IMR implementation. Additionally, enlisting the support of specific staff members, such as peer support specialists, increases implementation at VAMCs. In contrast, short-staffing and poorly trained staff represent significant barriers to implementation. It is crucial that LRCs and other PRRC staff members receive adequate training in IMR to increase implementation.

LRCs are specifically charged with ensuring the adoption of recovery-oriented services within their VAMC, and therefore could be potential champions for IMR implementation. Surprisingly, almost a third of LRCs reported not being at least moderately knowledgeable about IMR and less than forty percent reported any training relevant to IMR. Yet, LRCs could serve as high-impact targets for dissemination by focusing training efforts on LRCs and supporting them in the practice after training. Additionally, VA central leadership has played a key role in the dissemination of other EBPs (Bellack et al., 2004); however, no central support for IMR training, consultation, or fidelity monitoring exists within VA currently. Previous IMR research has demonstrated the importance of leadership support (Whitley, Gingerich, Lutz, & Mueser, 2009).

In conclusion, our results indicate substantial room for expansion of IMR within the VA as well as specific opportunities for quality improvement. Moreover, additional infrastructure is needed to accurately track the quality and use of IMR within the system. As stated above, the VA is a well-suited context for IMR (and other recovery-related) implementation, with richer supports than most community settings. Even in this context, with mandated use of illness management and recovery services, IMR adoption was variable. IMR implementation in the community may well be sparser; therefore, future research should examine the adoption,

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utilization, and quality of IMR provision in community settings. In addition, future efforts targeting LRCs for the purposes of IMR dissemination, and extant IMR providers to monitor and bolster quality, would be of benefit within the VA system. Finally, more information is needed about what factors may facilitate IMR implementation, both within and outside of VA, with concordant development of IMR implementation tools.

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