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**Dissemination & Implementation Barriers & Facilitators Measurement Toolkit**

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## **Overview**

Despite efforts to extend research findings into clinical practice and community settings, research translation faces many challenges. One approach to address these challenges is to identify factors that affect implementation outcomes and tailor implementation strategies to overcome negative factors (barriers) and enhance positive factors (facilitators).<sup>1</sup> Recent work has identified various constructs relevant to successful implementation.<sup>2-4</sup> This toolkit identifies two approaches to assessing implementation barriers and facilitators, reviews measurement tools for both approaches, and provides examples of previously identified and published barriers and facilitators.

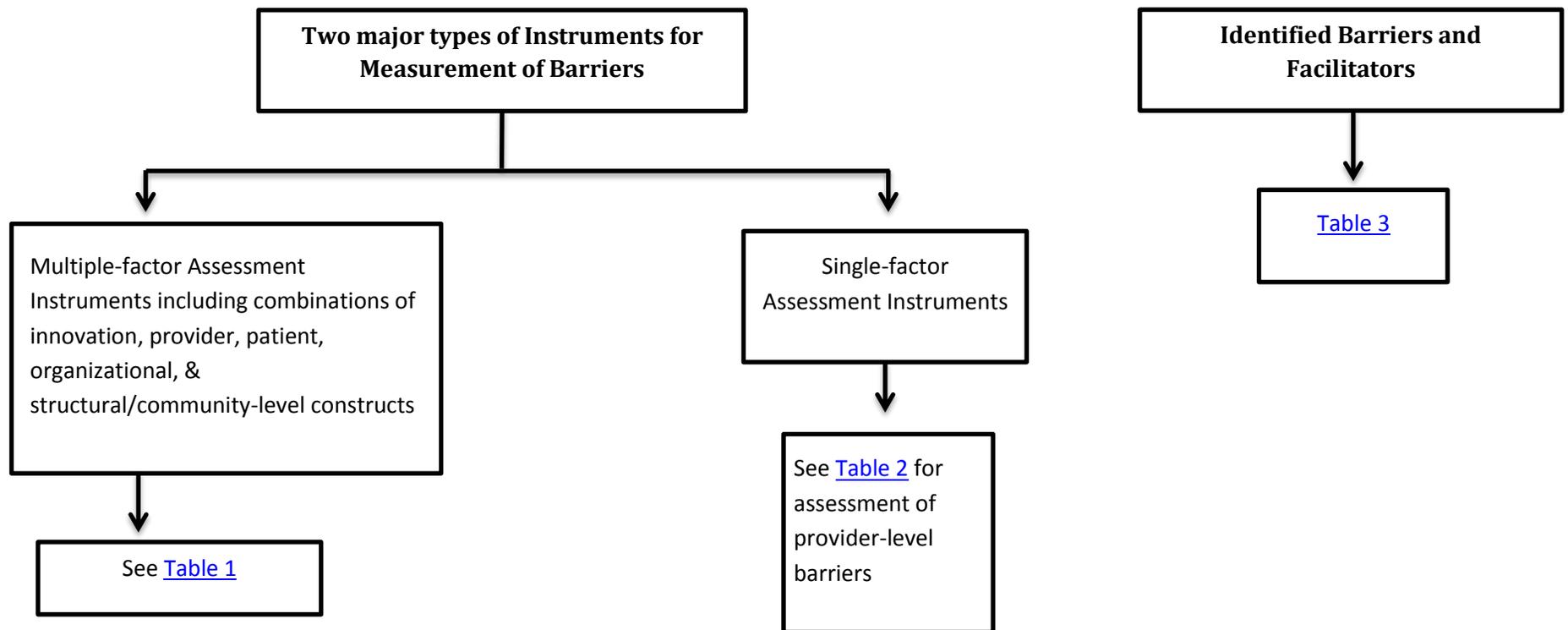
## **Objectives**

This toolkit is designed to help further your understanding of factors that affect successful implementation and to help you identify and measure implementation barriers and facilitators that are most relevant to your research and that may improve the impact of your implementation strategy.

## **What's Inside**

Inside this toolkit, you will find a decision tree to help you identify which approach to barrier and facilitator measurement may be most relevant to your research, in-depth reviews of multiple- and single-factor measurement tools, and examples of barriers and facilitators that have been identified in various service settings and clinical contexts.

Recent implementation science research has identified five factors relevant to successful implementation: a) innovation, b) provider, c) patient, d) organizational, and e) structural/community-level constructs.<sup>2-4</sup> There are two types of assessment approaches used to measure barriers corresponding to these constructs: 1) tools assessing multiple factors and 2) tools that assess a single factor. Depending on your research aims, setting, and complexity, using a multiple- or single-factor assessment approach may be beneficial.



*Choosing a  
Measurement Decision  
Tree*

Original Source	Scale Name	Summary	Example Study Using Scale
Corrigan, P. W., Kwartarini, W. Y., & Pramana, W. (1992). Staff perception of barriers to behavior therapy at a psychiatric hospital. <i>Behavior Modification</i> , 16(1), 132-144.	<b>Barriers to Implementation of Behavior Therapy (BIBT)</b>	Assesses: <b>organizational, provider, and patient-level</b> barriers in a mental health setting	Corrigan, P. W., McCracken, S. G., Kommana, S., Edwards, M., & Simpatico, T. (1996). Staff perceptions about barriers to innovative behavioral rehabilitation programs. <i>Cognitive therapy and research</i> , 20(5), 541-551.
**Flottorp, S. A., Oxman, A. D., Krause, J., Musila, N. R., Wensing, M., Godycki-Cwirko, M., ... & Eccles, M. P. (2013). A checklist for identifying determinants of practice: a systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. <i>Implement Sci</i> , 8(35), 1-11.	<b>The Comprehensive Integrated Checklist of Determinants of Practice (TICD)</b>	<u>Assesses:</u> barriers to implementation in healthcare practice including <b>all five factors</b> and based on a comprehensive systematic review of previously published instruments (worksheets available with original publication)  <u>Reliability &amp; Validity:</u> check publications by Flottorp and Eccles group since this 2013 original paper	<i>-have found citations of this however have not found a paper using their tool (worksheets) yet</i>
Funk, S. G., Champagne, M. T., Wiese, R. A., & Tornquist, E. M. (1991). BARRIERS: the barriers to research utilization scale. <i>Applied Nursing Research</i> , 4(1), 39-45.	<b>BARRIERS</b>	<u>Assesses:</u> <b>organizational, providers,</b> and health <b>innovation-level</b> barriers to implementation of EBPs.  <u>Reliability &amp; Validity:</u> Reliable regards internal consistency; doubtfully valid according to a systematic review by Kajermo et al. 2010 who recommended that barriers be assessed more precisely in a context-specific fashion with focus specific to the evidence to be implemented.	Carlson, C. L., & Plonczynski, D. J. (2008). Has the BARRIERS Scale changed nursing practice? An integrative review. <i>Journal of Advanced Nursing</i> , 63, 322-333.  Kajermo, K. N., Boström, A. M., Thompson, D. S., Hutchinson, A. M., Estabrooks, C. A., & Wallin, L. (2010). Systematic Review The BARRIERS scale--the barriers to research utilization scale: A systematic review. <i>Implement Sci</i> , 5, 32.

\*denotes one of the 12 consensus-selected checklists from Flottorp et al. 2013; \*\*denotes Flottorp's consensus instrument

**Table 1. Multiple factor assessment instruments**

Original Source	Scale Name	Summary	Example Study Using Tool
<p>*Cabana, M. D., Rand, C. S., Powe, N. R., Wu, A. W., Wilson, M. H., Abboud, P. A. C., &amp; Rubin, H. R. (1999). Why don't physicians follow clinical practice guidelines?: A framework for improvement. <i>Jama</i>, 282(15), 1458-1465.</p>	<p><b>Clinical Practice Guidelines Framework for Improvement</b></p>	<p><u>Assesses:</u> adherence by physicians to clinical practice guidelines; organized according to knowledge, attitudes and behaviour of physicians. three main categories of barriers to following guidelines are distinguished: barriers related to knowledge, barriers related to attitude, and external barriers that are subdivided into several subcategories.</p>	<p>Lugtenberg, M., Zegers-van Schaick, J. M., Westert, G. P., &amp; Burgers, J. S. (2009). Why don't physicians adhere to guideline recommendations in practice? An analysis of barriers among Dutch general practitioners. <i>Implement Sci</i>, 4(54), 5908-4. <b>(Table 3)</b></p> <p>Lugtenberg, M., Burgers, J. S., Besters, C. F., Han, D., &amp; Westert, G. P. (2011). Perceived barriers to guideline adherence: a survey among general practitioners. <i>BMC family practice</i>, 12(1), 98. <b>(Table 3)</b></p>
<p>Huijg, J. M., Gebhardt, W. A., Dusseldorp, E., Verheijden, M. W., van der Zouwe, N., Middelkoop, B. J., &amp; Crone, M. R. (2014). Measuring determinants of implementation behavior: psychometric properties of a questionnaire based on the theoretical domains framework. <i>Implement Sci</i>, 9, 33.</p>	<p><b>Determinants of Implementation Behavior Questionnaire (DIBQ)</b></p>	<p><u>Assesses:</u> determinants of healthcare professionals' implementation behavior; is based on the 12-domain version of the Theoretical Domains Framework (TDF)</p> <p><u>Reliability &amp; Validity:</u> Internal Consistency Reliability ranges .68-.93; good discriminant validity but note two correlated domains</p>	<p>Huijg, J. M., Dusseldorp, E., Gebhardt, W. A., Verheijden, M. W., van der Zouwe, N., Middelkoop, B. J., ... &amp; Crone, M. R. (2014). Factors Associated With Physical Therapists' Implementation of Physical Activity Interventions in the Netherlands. <i>Physical therapy</i>.</p>
<p>Upton, D., &amp; Upton, P. (2006). Development of an evidence-based practice questionnaire for nurses. <i>Journal of advanced nursing</i>, 53(4), 454-458.. <i>Implement Sci</i>, 5, 32.</p>	<p><b>Evidence-Based Practice Questionnaire</b></p>	<p><u>Assesses:</u> provider attitudes regarding evidence-based practice (in general)</p>	<p>Kim, S. C., Brown, C. E., Ecoff, L., Davidson, J. E., Gallo, A. M., Klimpel, K., &amp; Wickline, M. A. (2012). Regional evidence-based practice fellowship program: Impact on evidence-based practice implementation and barriers. <i>Clinical nursing research</i>, 1054773812446063.</p>

**Table 2. Single factor assessment instruments**

Following are references to studies which identified barriers and facilitators along with a brief account of examples of the barriers and facilitators they identified and the scale or method they used for identification.

Original Source	Barriers or Facilitators Identified	Scale Used
<p>Beune, E. J., Haafkens, J. A., &amp; Bindels, P. J. (2011). Barriers and enablers in the implementation of a provider-based intervention to stimulate culturally appropriate hypertension education. <i>Patient education and counseling</i>, 82(1), 74-80.</p>	<p><b>Target Group:</b> Primary Care Providers</p> <p><b>Barriers:</b> specific to implementation of educational training fell into 3 main categories= political context (health care system financing); organizational factors (ongoing organizational changes, work environment, time constraints and staffing) and care provider-related factors (routines, attitudes, computer and educational skills, and cultural background)</p> <p><b>Facilitators:</b> reorganizing practice procedures, team coordination, and providing reminders &amp; additional instructions to hypertension educators</p>	<p><b>Qualitative Design:</b> Analyzed transcripts from collective meetings</p>
<p>*Cochrane, L. J., Olson, C. A., Murray, S., Dupuis, M., Tooman, T., &amp; Hayes, S. (2007). Gaps between knowing and doing: understanding and assessing the barriers to optimal health care. <i>Journal of continuing education in the health professions</i>, 27(2), 94-102.</p>	<p><b>Target Group:</b> Assessed barriers to use of guidelines/evidence/innovation, cognitive/behavioral, <b>patient, provider, and organizational-level</b></p> <p><b>Barriers:</b> <u>Cognitive-behavioral barriers:</u> lack of knowledge, awareness, professional skill, or appraisal skills</p> <p><u>Attitudinal or rational-emotional barriers:</u> lack of efficacy, lack of confidence, lack of sense of authority, lack of outcome expectancy, lack of accurate self-assessment <u>Professional barriers:</u> influence of invariants such as age, experience, gender, lack of motivation, influence of individual characteristics, concern for legal issues, rigidity of professional boundaries, lack of appropriate peer influences or models. <u>Barriers embedded in the guidelines or evidence:</u> lack of practical access, lack of clear structure, lack of utility, lack of local applicability, lack of convincing evidence. <u>Patient barriers:</u> conflicting culture; educational, cognitive, attitudinal behaviors; lack of adherent or concordant behavior. <u>Support or resources:</u> lack of support, lack of human and material resources, lack of financial resources or funding, lack of time. <u>System and process barriers:</u> lack of organization and structure, lack of harmony with health and oversight systems, lack of referral process, lack of workload-outcome balance, lack of teamwork structure and ethic</p> <p><b>Facilitators:</b> not assessed</p>	<p>Identified barriers based on a large <b>Systematic Review</b> of papers published from January 1998 to March 2007; yielded 256 articles that fulfilled established criteria and resulted in 33 emerging themes placed into 7 categories</p>

Original Source	Barriers or Facilitators Identified	Scale Used
<p>de Kok, M., van der Weijden, T., Kessels, A., Dirksen, C., van de Velde, C., Roukema, J., ... &amp; von Meyenfeldt, M. (2008). Implementation of an ultra-short-stay program after breast cancer surgery in four hospitals: perceived barriers and facilitators. <i>World journal of surgery</i>, 32(12), 2541-2548.</p>	<p><b>Target Group:</b> healthcare professionals involved in implementing a program for an ultra-short hospital admission in the treatment of breast cancer</p> <p><b>Barriers:</b> <u>Program-Level:</u> professionals' negative attitude toward: surgery planning recommendations, treatment of nausea and pain, and postoperative visits by home-healthcare workers thought to be insufficiently qualified for wound and psychological care. <u>Provider, Patient, Colleague-Level:</u> professionals' concerns re the acceptability of the program for patients, Patients' income-dependent out-of-pocket costs for home care and their foreseen unwillingness to visit the hospital for wound care, at Colleague-Level, previous poor experience with home care resulting in lack of trust in the home care company and lack of communication between colleagues. <u>Organizational-level:</u> issues related to the type of ward at which the patients would be located, the combination of "short-stay patients" and "long-stay patients" complicated admissions, the use of different communication aids caused confusion about patients' treatment plans. <u>Financial-level:</u> surgeons' fear of loss of income for day care surgery compared to standard admission, and the insurance declaration system in the Netherlands that does not induce healthcare workers to promote ultrashort stay</p> <p><b>Facilitators:</b> <u>Program-Level:</u> the lymphoscintigraphy for the sentinel node procedure performed in an ambulatory setting, planning of breast cancer surgeries early in the morning, pre- &amp; postoperative medications aimed at ultra-short stay, and drain removal before discharge. <u>Provider, Patient, Colleague-Level:</u> provider eagerness to participate in innovative programs, informing patients before surgery about the effects of opiates on the possibility of day care surgery and providing the ward with signed prescriptions for medications to prevent patients from waiting for physicians to prescribe the medications <u>Organizational-Level:</u> not admitting patients before the morning of surgery, placement of all breast cancer patients in one ward, all-week possibility of discharge, and abolition of a time-consuming blood check that had not been proven to be cost effective. <u>Financial-level:</u> intention of insurance companies to pay hospitals for breast cancer surgery independent of the admission time, payment of extra hours of breast nurse care perceived as cost-effective.</p>	<p><b>Qualitative</b> prospective quasi-experimental design was used- Potential barriers and facilitators for successful implementation were extracted from detailed notes of all contacts between researchers and each participating hospital (N=4)</p>
<p>Glidewell, L., Boocock, S., Pine, K., Campbell, R., Hackett, J., Gill, S., &amp; Wilkie, M. (2013). Using behavioural theories to optimise shared haemodialysis care (SHC): a qualitative intervention development study of patient and professional experience. <i>Implementation Science</i>, 8(1), 118.</p>	<p><b>Target Group:</b> Patients and Healthcare Providers including Nurses and Assistants</p> <p><b>Barriers:</b> knowledge, environmental context and resources</p> <p><b>Facilitators:</b> beliefs about capabilities and skills</p>	<p><b>Qualitative</b> design was used- Individual semi-structured <b>interviews</b> with topics based on Theoretical Domains Framework. Data were coded to behavioural theory</p>

Original Source	Barriers or Facilitators Identified	Scale Used
<p>Gravel, K., Légaré, F., &amp; Graham, I. D. (2006). Barriers and facilitators to implementing shared decision-making in clinical practice: a systematic review of health professionals' perceptions. <i>Implement Sci</i>, 1(1), 16.</p>	<p><b>Target Group:</b> Health Professionals' (mostly physicians) perceived barriers and facilitators to implementation of shared decision-making</p> <p><b>Barriers:</b> top three were time constraints, lack of applicability due to patient characteristics, and lack of applicability due to the clinical situation</p> <p><b>Facilitators:</b> top three were provider motivation, positive impact on the clinical process, and positive impact on patient outcomes</p>	<p><b>Systematic Review</b> including 28 unique studies; most of the studies used qualitative methods</p>
<p>Kajermo, K. N., Boström, A. M., Thompson, D. S., Hutchinson, A. M., Estabrooks, C. A., &amp; Wallin, L. (2010). Systematic Review The BARRIERS scale- the barriers to research utilization scale: A systematic review. <i>Implement Sci</i>, 5, 32.</p>	<p><b>Target Group:</b> individuals associated with clinical practice- assessment of barriers to use of research</p> <p><b>Barriers:</b> Main barriers reported were related to the setting and the presentation of research findings. Overall, identified barriers were consistent over time and across geographic locations, despite varying sample size, response rate, study setting, and assessment of study quality.</p> <p><b>Facilitators:</b> not assessed</p>	<p><b>Systematic Review</b> of 63 studies that used the BARRIERS scale</p>
<p>Kathol, R. G., Butler, M., McAlpine, D. D., &amp; Kane, R. L. (2010). Barriers to physical and mental condition integrated service delivery. <i>Psychosomatic Medicine</i>, 72(6), 511-518.</p>	<p><b>Target Group:</b> Key Informants included administrators, clinicians, care managers who were directly involved in development/implementation of integrated care program</p> <p><b>Barriers:</b> financial challenges introduced by segregated physical and mental health reimbursement practices</p> <p><b>Facilitators:</b> clinical and administrative champion-led culture shift, which valued an outcome orientation; cross-disciplinary training and accountability; use of care managers; consolidated clinical record systems; a multidisease, total population focus; and active, respectful coordination of colocated interdisciplinary clinical services</p>	<p><b>Qualitative Design:</b> Key Informant Interviews as part of 13 case studies at purposively sampled primary care settings; they developed their own interview questions (semi-structured interviews) which are included in the paper</p>
<p>Légaré, F., Ratté, S., Gravel, K., &amp; Graham, I. D. (2008). Barriers and facilitators to implementing shared decision-making in clinical practice: update of a systematic review of health professionals' perceptions. <i>Patient education and counseling</i>, 73(3), 526-535.</p>	<p><b>Target Group:</b> Health Professionals' (mostly physicians) perceived barriers and facilitators to implementation of shared decision-making</p> <p><b>Barriers:</b> time constraints, lack of applicability due to patient characteristics, and the clinical situation</p> <p><b>Facilitators:</b> provider motivation, positive impact on the clinical process, and patient outcomes</p>	<p><b>Systematic Review</b> including 38 unique studies; most of the studies used qualitative methods</p>
<p>Lugtenberg, M., Zegers-van Schaick, J. M., Westert, G. P., &amp; Burgers, J. S. (2009). Why don't physicians adhere to</p>	<p><b>Target Group:</b> General Practitioners</p>	<p><b>Qualitative</b> study design with <b>focus groups</b>- barriers to the implementation of key</p>

Original Source	Barriers or Facilitators Identified	Scale Used
<p>guideline recommendations in practice? An analysis of barriers among Dutch general practitioners. <i>Implement Sci</i>, 4(54), 5908-4.</p>	<p><b>Barriers:</b> Barriers included lack of agreement with the recommendations due to lack of applicability or lack of evidence, environmental factors, e.g., organizational constraints, lack of knowledge regarding the guideline recommendations, &amp; guideline factors such as unclear/ambiguous guideline</p> <p>Recommendations</p> <p><b>Facilitators:</b> not assessed</p>	<p>recommendations of guidelines were discussed; Focus groups were audiotaped and transcribed. Data analyzed using <b>Cabana et al., 1999 (Table 2)</b> framework of barriers.</p>
<p>Lugtenberg, M., Burgers, J. S., Besters, C. F., Han, D., &amp; Westert, G. P. (2011). Perceived barriers to guideline adherence: a survey among general practitioners. <i>BMC family practice</i>, 12(1), 98.</p>	<p><b>Target Group:</b> General Practitioners</p> <p><b>Barriers:</b> Some of the barriers related to attitude and external factors prevented GPs from applying recommendations consistently in practice. The most perceived barriers to adherence across key recommendations were patient ability and behaviour, patient preferences and lack of applicability in general and more specifically to individual patients. Other barriers that did not seem to be relevant across all recommendations were lack of evidence and lack of outcome expectancy.</p> <p><b>Facilitators:</b> not assessed</p>	<p>Used a <b>focus group</b> to identify potential barriers to guideline adherence; Identified barriers were classified according to framework of <b>Cabana et al., 1999 (Table 2)</b> framework of barriers in order to develop a questionnaire which was then sent via email to participating GPs</p>
<p>Lundgren, L., Chassler, D., Amodeo, M., D'Ippolito, M., &amp; Sullivan, L. (2012). Barriers to implementation of evidence-based addiction treatment: a national study. <i>Journal of substance abuse treatment</i>, 42(3), 231-238.</p>	<p><b>Target Group:</b> Addiction Treatment Center Staff and Program Directors</p> <p><b>Barriers:</b> overarching theme was factors associated with capacity; <i>Directors</i>- larger degree of program needs, higher levels of immediate training needs, fewer office resources, less clear organizational mission, and higher levels of stress</p> <p><i>Staff</i>- program duration, EBP type, program needs, and experiencing stress in the organization</p> <p><b>Facilitators:</b> not assessed</p>	<p>Lehman, W. E., Greener, J. M., &amp; Simpson, D. D. (2002). Assessing organizational readiness for change. <i>Journal of substance abuse treatment</i>, 22(4), 197-209.</p>
<p>Owczarzak, J., &amp; Dickson-Gomez, J. (2011). Provider perspectives on evidence-based HIV prevention interventions: barriers and facilitators to implementation. <i>AIDS patient care and STDs</i>, 25(3), 171-179.</p>	<p><b>Target Group:</b> HIV prevention service providers</p> <p><b>Barriers:</b> <u>Intervention-level</u>: discrepancies between the intended target of the intervention and the agency's target population, "lack of fit" as perceived by providers (e.g., providers felt that cultural background and age of client population often made intervention less feasible, institutional context, participant recruitment and retention, time and length of program making inconvenient for staff and clients, intervention costs, conflict with "broader organizational identity" <u>Organization-level</u>: Organization level barriers, staff turnover, inability to retain highly skilled staff, changes in leadership causing shift in agency priorities, competition between programs for funding, funders' restrictions on the ways in which money can be used, unpredictable and low funding levels, and funders' lack of awareness of community prevention needs. <u>Program-level</u>: concerns about intervention adaptation, modification, and fidelity (e.g., confusion about what</p>	<p><b>Qualitative</b> design based on 22 semistructured interviews with HIV prevention service providers</p>

Original Source	Barriers or Facilitators Identified	Scale Used
	<p>elements of intervention could be modified to meet cultural background of client population; confusion about whether a modified intervention is worth implementing at all), lack of follow-up and accountability built into the intervention, intervention trainers' lack of direct experience with the target population and understanding of the on-the ground challenges the agencies would face with basic components of the program (e.g., participant recruitment), trainers' unrealistic expectations of what types of program would be possible for the agency given staff and resource limitations</p> <p><b>Facilitators:</b> <u>Intervention-level:</u> compatible fit between the intervention's target population and the agencies' client base, the new intervention being able to build on the agency's existing programmatic strengths, client population, and infrastructure. <u>Organization-level:</u> broad support within the organization at all levels (e.g., directors, other frontline staff), flexibility at all levels—from funders, flexibility by other prevention staff and supervisors to respond to needs, balance between management involvement and flexibility, guidance regarding implementation and adaptation, including communication between agencies regarding their implementation experiences, and capacity-building organizations to assist in the process. <u>Program-level:</u> accessible intervention implementation facilitators who could answer questions about the curriculum after the training, provide guidance regarding intervention fidelity, and on “core elements” of the intervention, a clear fit between the intervention and agency target population.</p>	
<p>Patey, A. M., Islam, R., Francis, J. J., Bryson, G. L., &amp; Grimshaw, J. M. (2012). Anesthesiologists' and surgeons' perceptions about routine pre-operative testing in low-risk patients: application of the Theoretical Domains Framework (TDF) to identify factors that influence physicians' decisions to order pre-operative tests. <i>Implement Sci</i>, 7(1), 52.</p>	<p><b>Target Group:</b> Anesthesiologists &amp; Surgeons (targeting behavioral of ordering pre-operative tests)</p> <p><b>Barriers:</b> fell within 7/12 theoretical domains from TDF-key beliefs identified within these domains: conflicting comments about who was responsible for the test-ordering (Social/professional role and identity); inability to cancel tests ordered by fellow physicians (Beliefs about capabilities and social influences); and the problem with tests being completed before the anesthesiologists see the patient (Beliefs about capabilities and Environmental context and resources)</p> <p><b>Facilitators:</b> not assessed</p>	<p><b>Qualitative</b> design- used interviews; interview guide was based on Theoretical Domains Framework (TDF)</p>
<p>Roman, P. M., Abraham, A. J., &amp; Knudsen, H. K. (2011). Using medication-assisted treatment for substance use disorders: Evidence of barriers and facilitators of implementation. <i>Addictive behaviors</i>, 36(6), 584-589.</p>	<p><b>Target Group:</b> public and private substance abuse disorder (SUD) treatment programs; assessed barriers and facilitators to adopting medicated treatment of SUDs</p> <p><b>Barriers:</b> Treatment ideology (i.e., emphasis on a 12-step model ideology was barrier), lack of access to a prescribing physician</p> <p><b>Facilitators:</b> Organizational characteristics: being a for-profit program, a larger program, or a program located in hospital setting, and programs accredited by the Joint</p>	<p><b>Secondary Data Analysis</b> using data from the National Treatment Center Study (NTCS), a family of national studies of substance abuse treatment programs in the United States wherein data are derived from face-to-face interviews as well as</p>

Original Source	Barriers or Facilitators Identified	Scale Used
	<p>Commission (JC) and/or the Commission on Accreditation of Rehabilitation Facilities (CARF), programs that offer detoxification services, programs with access to a prescribing physician, programs that use other medications such as SSRIs, participation in research, being a government-owned program, programs with including the CTN has been a greater percentage of Master's level or higher counselors, treatment ideology, revenues from private insurance and/or the percentage of patients paying for treatment with private insurance is a positive predictor of alcohol use disorder medication adoption</p>	<p>telephone &amp; mailed surveys with administrators and/or clinical directors of public and private treatment programs</p>
<p>Sharp, N. D., Pineros, S. L., Hsu, C., Starks, H., &amp; Sales, A. E. (2004). A qualitative study to identify barriers and facilitators to implementation of pilot interventions in the Veterans Health Administration (VHA) Northwest Network. <i>Worldviews on Evidence-Based Nursing</i>, 1(2), 129-139.</p>	<p><b>Target Group:</b> physicians, nurses, pharmacists, dieticians, quality managers, other clinical and nonclinical staff who participate in planning &amp;/or implementing pilot interventions for cholesterol management in 6 VHA medical centers</p> <p><b>Barriers:</b> inadequate or ineffective planning for interventions, intervention team members not prepared to engage in planning the intervention activities prior to implementing them.</p> <p><b>Facilitators:</b> an effective planning process, having the intervention closely or very closely follow the protocol, ability of intervention to achieve its aims well or very well, strong leadership facilitated intervention at one facility</p>	<p><b>Qualitative</b> interviews with theory-based content analysis using the Promoting Action Research in Health Systems (PARIHS) framework proposed by Kitson et al. (1998;Rycroft-Malone et al. 2002), which identifies three components of successful implementation of evidence-based practice: evidence, context, and facilitation</p>
<p>Swinkels, R. A., van Peppen, R. P., Wittink, H., Custers, J. W., &amp; Beurskens, A. J. (2011). Current use and barriers and facilitators for implementation of standardised measures in physical therapy in the Netherlands. <i>BMC musculoskeletal disorders</i>, 12(1), 106.</p>	<p><b>Target Group:</b> physical therapists</p> <p><b>Barriers:</b> provider competence (lack of knowledge such as when to use which instrument for what patient) and problems in changing behaviour (not focusing on use of outcome measures), practice organisation</p> <p>(no room; no time) and the unavailability and feasibility of measurement instruments, need for a clear core set of measurement instruments with a short user's instruction on application, scoring and interpretation, lack of time; availability; lack of management support</p> <p><b>Facilitators:</b> providers had a positive attitude toward implementation of measures, providers were convinced of the advantages of the use of measurement instruments</p>	<p><b>Qualitative</b> design using literature search/review, semi-structured interviews with 20 physical therapists and, an online survey</p>

**Table 3. Identified Barriers and Facilitators**

1. Kajermo, K. N., Boström, A. M., Thompson, D. S., Hutchinson, A. M., Estabrooks, C. A., & Wallin, L. (2010). Systematic Review The BARRIERS scale--the barriers to research utilization scale: A systematic review. *Implement Sci*, 5, 32.
2. Chaudoir, S. R., Dugan, A. G., & Barr, C. H. (2013). Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implement Sci*, 8(1), 22.
3. Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci*, 4(1), 50.
4. Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American journal of community psychology*, 41(3-4), 327-350.
5. Carlson, C. L., & Plonczynski, D. J. (2008). Has the BARRIERS Scale changed nursing practice? An integrative review. *Journal of advanced nursing*, 63(4), 322-333.

*Cited & Additional  
References*