

CPPI Practice Forum

Ensuring intervention success: Assessing fit as an overlooked step of the implementation process

Carrie M. BLANCHARD , Melanie LIVET .

Published online: 7-Dec-2020

Abstract

Ensuring fit between a service and the implementing context is a critical but often overlooked precursor of implementation success. This commentary proposes five key considerations that should be evaluated when exploring fit: alignment with needs and metrics; alignment with organizational resources and capabilities; alignment with organizational priorities and culture; alignment with reimbursement mechanisms for long-term sustainability; and alignment with the regulatory environment. Successful uptake and implementation hinges on careful planning and, most importantly, appropriate fit between the service and the implementing environment.

Keywords

Pharmaceutical Services; Pharmacists; Implementation Science; Reimbursement Mechanisms; Organizational Culture; Health Resources; Planning Techniques; Organizational Innovation; United States

Implementation science can accelerate adoption and scaling of evidence-based services into real-world practice, ultimately increasing their impact on health outcomes and well-being. More specifically, implementation science has been defined as “the scientific study of methods and strategies to promote the systematic uptake of evidence-based innovations into routine practice, thereby increasing the quality and effectiveness of these services”.¹ Application of implementation science principles boasts the ability to reduce the research-to-practice gap from 17 to 3 years.² For patients to benefit from timely provision of effective services, time to translation needs to be accelerated significantly. The pace of practice transformation efforts can therefore be positively impacted by use of implementation theories, principles, and frameworks.

The field of implementation science has matured in the last decade and, with it, an increased awareness of how it can advance pharmacy practice.²⁻⁴ The profession is noticing successful application of implementation science to pharmacy practice transformation efforts.^{3,5-7} Despite these successes, failures to implement well-researched health care services are still a reality.

One of the most often cited barriers to implementation is a lack of “fit” between the intervention and the practice setting.⁸ This fit issue has also been described by Proctor and colleagues as “appropriateness,” one of the eight implementation outcomes typically included to assess implementation success.⁹ Appropriateness is defined as

“the perceived fit, relevance or compatibility of the innovation or evidence-based practice for a given practice setting, provider, or consumer; and/or the perceived fit of the innovation to address a particular issue or problem.” Similarly, Rogers identified compatibility as a core concept in his Diffusion of Innovation theory.¹⁰ Fit is recognized as a multi-faceted construct that should take into account various stakeholders’ perspectives (e.g., providers, managers, team members, patients) and organizational levels (e.g., health system, clinic, or pharmacy).^{11,12} Several implementation frameworks include contextual fit as a critical pre-condition or pre-implementation step.¹³⁻¹⁵ Despite its recognized importance, the concept of fit has not been subject to extensive study. There is limited guidance on how to select an appropriate service or intervention and evaluate its compatibility with a given implementation environment.^{8,16} Unsurprisingly, we are continually confronted with this lack of guidance in our own work.

As colleagues with implementation science expertise, we often collaborate with pharmacists looking to implement new services. Through this work, we have experienced failed implementation efforts by seemingly ready organizations with the resources, capacity, and motivation to implement a new service or intervention. One example involved a project focused on implementation of comprehensive medication management (CMM) into a team-based, at-home care program. The program had significant investment from the organization, pharmacy leadership buy-in, motivated pharmacists who were committed and capable of delivering the intervention, and various implementation supports in place. Yet, after a year of trying to implement CMM in practice, this seemingly well-planned implementation effort was abandoned. When we probed into what happened, interviews and surveys from the practitioners and team members suggested that CMM did not fit the overarching goals of the organization and larger program. The organization’s leadership wanted a program to stabilize acutely ill patients to prevent rehospitalization with pharmacists serving in transitional rather than longer-term roles with these patients. CMM, a

Carrie M. BLANCHARD, PharmD, MPH. Division of Practice Advancement and Clinical Education, Center for Medication Optimization, Eshelman School of Pharmacy, University of North Carolina. Chapel Hill, NC (United States). carriem@email.unc.edu
Melanie LIVET, PhD. Division of Practice Advancement and Clinical Education, Center for Medication Optimization, Eshelman School of Pharmacy, University of North Carolina. Chapel Hill, NC (United States). melanie.livet@unc.edu

Articles in the CPPI Practice Forum section are the sole responsibility of the VCU School of Pharmacy Center for Pharmacy Practice Innovation and do not undergo the standard peer review process of Pharmacy Practice. The opinions expressed in this publication are those of the authors and not the CPPI.



longitudinal service designed to help manage chronic conditions, simply was not the right intervention for the needs of the overall program and organizational goals.^{17,18} This leaves one to wonder – why was it selected in the first place?

The need for appropriately selecting services that are compatible with the implementing context has been noted in the pharmacy practice literature.¹⁹⁻²² In one effort to implement a targeted medication adherence intervention in U.S. community pharmacies, both early adopters and traditionalist practices reported questioning the program's fit in light of the other services offered and given the larger chain pharmacy's vision.²⁰ Another study of professional pharmacy services in Australia reported that service fit with the needs of the patient population was rarely considered in early implementation efforts, but increased throughout implementation.²¹ Similarly, Turner *et al.* identified a positive association between the perception of how well the service fits with organizational mission and both implementation success and service reach.²² Finally, based on a recent study we conducted exploring the relationship between implementation readiness and early implementation outcomes, readiness levels were predictive of acceptability, feasibility, and intent to adopt, but not of appropriateness when accounting for clinic type. This result underscores the importance of determining fit prior to engaging in readiness building activities to maximize the benefits of this preparatory process. These examples highlight the need for implementers to thoughtfully examine how they select new pharmacy services or interventions within a given context.

KEY CONSIDERATIONS FOR ENSURING FIT

Ensuring selection of the appropriate intervention for the patient population, setting, and organizational goals early in the implementation process is critical for implementation success. Without carefully considering the compatibility of the service, a fit issue may not be realized until after significant resources and efforts have been expended. This can result in slowed progress and decreased motivation of stakeholders involved in the implementation process. Given the importance of ensuring fit, here are some key considerations implementers should thoughtfully assess when selecting an intervention or service in the pre-implementation phase. These considerations are derived from the National Implementation Research Network's Hexagon tool and the Wandersman and team's Getting to Outcomes framework, as well as our own professional experience.^{23,24}

It is important to note that evaluating fit should be preceded by completion of several planning steps. Fit considerations hinge on understanding: the problem to be solved; the needs of the patient population that is being targeted; the objectives and metrics that need to be achieved by implementing this new service; and the available menu of relevant services and programs that are available for selection. The services considered should first and foremost have demonstrated evidence of effectiveness. Available data should be evaluated within the context of an organization's needs. Only effective interventions that align with the issue that needs to be addressed, the target patient population, and the

outcomes of interest should be included in your menu of program options. Additionally, the service itself should be clearly defined with identifiable core components or features so that implementers can fully operationalize, replicate, and assess service effectiveness. Ensuring that the intervention is "usable" or defined well enough to ensure standardization of delivery across pharmacist and health care settings is critical to success.²⁵ The insights gained through this initial process are foundational to understanding and assessing the following fit considerations.

Alignment with needs and metrics

Assuming an understanding of the problem to be solved, of the needs of your targeted patient population, and of the metrics you are trying to impact, you should be able to narrow down the list of relevant services to consider. If you are unable to find a service that checks all of the boxes, you have the option of adapting the intervention to your needs. Because your menu of services only includes "usable" interventions, you should be able to make necessary adjustments without negatively impacting the core components of that service (i.e., ingredients essential to producing the intended outcomes). The ability to make thoughtful adaptations to an intervention for better fit has been found to increase its uptake and success.¹³ Finally, one should always approach the patient population and their needs with a focus on equity – being particularly aware of the existing health disparities, cultural differences, and social needs of the patient population.

Alignment with organizational resources and capabilities

General resources and capabilities, including staffing, infrastructure (e.g., technology), and initial operational expenses necessary to carry out a program should also be considered when selecting an intervention. The implementing organization needs to assess their current employees' abilities to carry out the service. If adequate staff does not exist, the investment necessary to hire new employees needs to be addressed. Not only should these staff members have the content knowledge, practical skills, and credentialing needed to carry out the service, but they should also have the cultural and language skills necessary to serve the population in need.

In addition to staffing, the broad infrastructure support, such as technology and data capabilities, should be considered. Existing technology may need to be modified or additional documentation systems built out. You should evaluate whether existing equipment and devices can collect pertinent patient data needed as part of the service. A monitoring and reporting system should also be available for continuous quality improvement and evaluation of the service.

Finally, initial operational startup expenses should be reviewed. Leadership needs to reach consensus on the value of the service to justify this upfront investment and integrate these startup costs into strategic planning and budgeting.

Alignment with organizational priorities and culture

Considering fit requires thinking through how well the service aligns with the priorities of the organization, the organizational culture, and the organizational leadership. Selecting a service with a clear connection to organizational



goals can increase probability that it is prioritized and invested in. Additionally, it is important to have an understanding of the other initiatives within the organization. Finding synergies with existing initiatives will reduce the likelihood of duplicative efforts, highlight complementary services, and protect against competing priorities.

Fit of the service with the organizational culture and patient care philosophy are also critical to successful uptake. Organizations who embrace continuous quality improvement initiatives, are willing to try new things, or are frequently trialing new services may be more supportive of innovations. The tenets of the patient care approach underlying a particular service need to be aligned with the organizational patient care philosophy. For instance, CMM assumes a patient-centered, collaborative team-based approach to patient care.²⁶ As such, it will only be successfully delivered in health care settings with a similar philosophy of practice.

Finally, leadership buy-in is often cited as a key component to implementation success.^{27,28} Not only does leadership need to support the trial of the service, but they also need to create the organizational conditions that will drive successful uptake. For instance, staff should be empowered to take ownership over areas of improvement in their practice and encouraged to do what it takes to meet the needs of their patient populations.

Alignment with reimbursement mechanisms for long-term sustainability

For a service to be viable and sustainable long-term, one needs to think through the financial resources necessary to sustain the service should it produce the intended benefits for the patients. Understanding potential reimbursement mechanisms and how to bill for the service should be considered when assessing service fit. You may need to think creatively about how the service will contribute to the organization's overall goals or investment priorities if direct

reimbursement avenues are not available for that service. For example, pharmacists providing CMM often cannot bill directly for the service, but CMM has been linked to increased cost-savings through helping organizations decrease hospital readmission rates, thus showing positive return on investment.¹⁸

Alignment with the regulatory environment

Finally, selection of the service should be informed by the regulatory environment both at the organizational and state levels. For instance, different organizations may interpret compliance and regulations differently, so you will want to make sure to do your due diligence prior to your decision to adopt. Likewise, if the service requires autonomous prescriptive authority but your state's scope of practice does not allow for this, you may want to consider selecting a different service or adapting the service to align with your state regulations.

CONCLUSION

To avoid frustration, lost motivation, and, most importantly, limited impact on the patients in need, a service or intervention should fit the context in which it is being implemented. Ensuring fit between a service and the intended health care setting is a critical step to implementation success. In this commentary, we reviewed five key considerations that should be evaluated when exploring fit. Successful uptake and implementation hinges on careful planning and, most of all, appropriate fit between the service and the implementing context.

CONFLICT OF INTEREST

No conflicts of interest to disclose.

FUNDING

No funding is associated with this work.

References

1. Eccles MP, Mittman BS. Welcome to implementation science. *Implement Sci.* 2006;1(1):1-3. <https://doi.org/10.1186/1748-5908-1-1>
2. Livet M, Haines ST, Curran GM, Seaton TL, Ward CS, Sorensen TD, Roth McClurg M. Implementation Science to Advance Care Delivery: A Primer for Pharmacists and Other Health Professionals. *Pharmacotherapy.* 2018;38(5):490-502. <https://doi.org/10.1002/phar.2114>
3. Curran GM, Shoemaker SJ. Advancing pharmacy practice through implementation science. *Res Social Adm Pharm.* 2017;13(5):889-891. <https://doi.org/10.1016/j.sapharm.2017.05.018>
4. Smith MA, Blanchard CM, Vuernick E. The Intersection of Implementation Science and Pharmacy Practice Transformation. *Ann Pharmacother.* 2020;54(1):75-81. <https://doi.org/10.1177/1060028019867253>
5. Blanchard C, Livet M, Ward C, Sorge L, Sorensen TD, McClurg MR. The Active Implementation Frameworks: A roadmap for advancing implementation of Comprehensive Medication Management in Primary care. *Res Social Adm Pharm.* 2017;13(5):922-929. <https://doi.org/10.1016/j.sapharm.2017.05.006>
6. Watkins K, Wood H, Schneider CR, Clifford R. Effectiveness of implementation strategies for clinical guidelines to community pharmacy: a systematic review. *Implement Sci.* 2015;10:151. <https://doi.org/10.1186/s13012-015-0337-7>
7. Hohmeier KC, Wheeler JS, Turner K, Vick JS, Marchetti ML, Crain J, Brookhart A. Targeting adaptability to improve medication therapy management (MTM) implementation in community pharmacy. *Implement Sci.* 2019;14(1):99. <https://doi.org/10.1186/s13012-019-0946-7>
8. Lyon AR, Ludwig K, Romano E, Koltracht J, Vander Stoep A, McCauley E. Using modular psychotherapy in school mental health: provider perspectives on intervention-setting fit. *J Clin Child Adolesc Psychol.* 2014;43(6):890-901. <https://doi.org/10.1080/15374416.2013.843460>
9. Proctor E, Silmere H, Raghavan R, Hovmand P, Aarons G, Bunger A, Griffey R, Hensley M. Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Adm Policy Ment Health.* 2011;38(2):65-76. <https://doi.org/10.1007/s10488-010-0319-7>
10. Rogers EM. *Diffusion of innovations*, 4th Edition. New York: Free Press; 1995.



11. Fixsen DL, Naoom SF, Blase KA, Friedman RM, Wallace F. Implementation Research: A Synthesis of the Literature. Available at: <https://nirn.fpg.unc.edu/sites/nirn.fpg.unc.edu/files/resources/NIRN-MonographFull-01-2005.pdf> (accessed Nov 1, 2020).
12. Aarons GA, Hurlburt M, Horwitz SM. Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Adm Policy Ment Health*. 2011;38(1):4-23. <https://doi.org/10.1007/s10488-010-0327-7>
13. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci*. 2009;4:50. <https://doi.org/10.1186/1748-5908-4-50>
14. Aarons GA, Sommerfeld DH. Leadership, innovation climate, and attitudes toward evidence-based practice during a statewide implementation. *J Am Acad Child Adolesc Psychiatry*. 2012;51(4):423-431. <https://doi.org/10.1016/j.jaac.2012.01.018>
15. Scaccia JP, Cook BS, Lamont A, Wandersman A, Castellow J, Katz J, Beidas RS. A practical implementation science heuristic for organizational readiness: R = MC 2. *J Commun Psychol*. 2015;43(4):484-501. <https://doi.org/10.1002/jcop.21698>
16. Kilbourne AM, Neumann MS, Pincus HA, Bauer MS, Stall R. Implementing evidence-based interventions in health care: application of the replicating effective programs framework. *Implement Sci*. 2007;2:42. <https://doi.org/10.1186/1748-5908-2-42>
17. Woodall T, Landis SE, Galvin SL, Plaut T, Roth McClurg MT. Provision of annual wellness visits with comprehensive medication management by a clinical pharmacist practitioner. *Am J Health Syst Pharm*. 2017;74(4):218-223. <https://doi.org/10.2146/ajhp150938>
18. Budlong H, Brummel A, Rhodes A, Nici H. Impact of Comprehensive Medication Management on Hospital Readmission Rates. *Popul Health Manag*. 2018;21(5):395-400. <https://doi.org/10.1089/pop.2017.0167>
19. Hanna T, Bajorek B, Lemay K, Armour CL. Using scenarios to test the appropriateness of pharmacist prescribing in asthma management. *Pharm Pract (Granada)*. 2014;12(1):390. <https://doi.org/10.4321/s1886-36552014000100009>
20. Bacci JL, McGrath SH, Pringle JL, Maguire MA, McGivney MS. Implementation of targeted medication adherence interventions within a community chain pharmacy practice: The Pennsylvania Project. *J Am Pharm Assoc* (2003). 2014;54(6):584-593. <https://doi.org/10.1331/japha.2014.14034>
21. Moullin JC, Sabater-Hernández D, Benrimoj SI. Qualitative study on the implementation of professional pharmacy services in Australian community pharmacies using framework analysis. *BMC Health Serv Res*. 2016;16(1):439. <https://doi.org/10.1186/s12913-016-1689-7>
22. Turner K, Trogon JG, Weinberger M, Stover AM, Ferreri S, Farley JF, Ray N, Patti M, Renfro C, Shea CM. Testing the organizational theory of innovation implementation effectiveness in a community pharmacy medication management program: a hurdle regression analysis. *Implement Sci*. 2018;13(1):105. <https://doi.org/10.1186/s13012-018-0799-5>
23. Metz A, Louison L. The hexagon: An exploration tool. Available at: https://nirn.fpg.unc.edu/sites/nirn.fpg.unc.edu/files/imce/documents/NIRN_Hexagon_Discussion_Analysis_Tool_September2020_1.pdf (accessed Nov 1, 2020).
24. Chinman M, Hunter SB, Ebener P, Paddock SM, Stillman L, Imm P, Wandersman A. The getting to outcomes demonstration and evaluation: an illustration of the prevention support system. *Am J Community Psychol*. 2008;41(3-4):206-224. <https://doi.org/10.1007/s10464-008-9163-2>
25. Metz A, Louison L, Ward C, Burke K. Implementation Specialist Practice Profile Skills and Competencies for Implementation Practitioners. Available at: <https://www.effektiveservices.org/downloads/IS-Practice-Profile-10-18-18.pdf> (accessed Nov 1, 2020).
26. CMM in Primary Care Research Team. The patient care process for delivering comprehensive medication management (CMM). Available at: http://www.accp.com/cmm_care_process (accessed Nov 1, 2020).
27. Bleser WK, Miller-Day M, Naughton D, Bricker PL, Cronholm PF, Gabbay RA. Strategies for achieving whole-practice engagement and buy-in to the patient-centered medical home. *Ann Fam Med*. 2014;12(1):37-45. <https://doi.org/10.1370/afm.1564>
28. Summerill C, Pollard SJ, Smith JA. The role of organizational culture and leadership in water safety plan implementation for improved risk management. *Sci Total Environ*. 2010;408(20):4319-4327. <https://doi.org/10.1016/j.scitotenv.2010.06.043>