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**Evaluation of the
Medicaid Value Program:
Health Supports for
Consumers with Chronic
Conditions**

*McKesson Health Solutions
Case Study*

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MCKESSON'S DIABETES GROUP EDUCATION INTERVENTION

McKesson Health Solutions, a unit of McKesson Corporation, is a for-profit care management services firm whose mission is to improve the efficiency and effectiveness of health care through disease management and other services. Its Medicaid Value Program (MVP) intervention consisted of group educational sessions designed to strengthen diabetes management (through lifestyle changes and improvement in self-care skills) for nondual Medicaid beneficiaries who are aged, blind, and/or disabled (ABD) and enrolled in McKesson's disease management program in selected states. Patients with diabetes or congestive heart failure (CHF) and a diabetes comorbidity were eligible for the intervention.

The intervention added diabetes education in a discussion group setting to McKesson's standard disease management program that provides telephonic and face-to-face nurse services to patients. Certified diabetes educators trained in motivational interviewing techniques (a method for enhancing motivation for change by exploring and resolving patient ambivalence to change) led the sessions along with community-based registered nurses. The intervention is designed to improve patients' self-efficacy, knowledge of their disease, confidence to manage their disease, and self-care skills. Research on group educational sessions designed to motivate patients to manage their conditions suggests that motivational education helps patients augment regular medical treatment and may improve their health.

During MVP, one educational module consisted of four weekly 1.5-hour sessions. McKesson's goal was to have 300 patients complete a module across all study states with a target of 24 patients per each four-session module. This strategy would have required at least 13 modules to be implemented across study states, assuming every patient attended all four sessions. However, McKesson fell short of that goal with only 28 patients in total completing modules in Oregon and New Hampshire; there were four modules, two in each state. After determining whether patients were interested in the intervention, McKesson randomly assigned interested patients to the educational sessions and standard disease management (treatment) or to only standard disease management (control). Despite this rigorous program design, the small number of participating patients makes it difficult to evaluate this intervention's outcome measures in the short MVP time frame.

ORGANIZATIONAL CONTEXT

McKesson Corporation's primary businesses are pharmaceutical distribution and hospital information technology software development. McKesson currently contracts to provide disease management services to nine state Medicaid agencies and was a Medicare Health Support program contractor in Mississippi, where it provided services to Medicare beneficiaries with heart disease or diabetes. The MVP intervention's group educational sessions are an enhancement to McKesson's disease management model. Typically, clients who participate in the McKesson disease management program receive services by telephone from nurses in a care center or work-at-home environment and/or face to face from nurses in the field.

McKesson first became interested in facilitated learning models of patient care when it learned that research on physician-led group visits by University of Colorado researchers demonstrated that patient outcomes (such as clinical quality measures, utilization, and satisfaction) could improve after such visits. McKesson staff noted that its primary motivations for pursuing the intervention were to test an innovative model of care, to assist beneficiaries in becoming better skilled at managing their chronic health conditions, and to improve patients' overall health status. Staff also noted that one benefit of the intervention is that McKesson may be viewed as an organization willing to conduct innovative research. While the return on investment is important to McKesson, staff noted that it does not expect to evaluate the intervention's business benefits for more than a year after MVP, due primarily to its commitment to developing the educational sessions and attracting enough participants to gauge the potential impact of the intervention. Furthermore, McKesson views its MVP experience as an investment for further research into group educational sessions in other states.

McKesson has an incentive to identify effective methods of changing patient behavior; in particular, its disease management contracts can include financial risk if it does not meet cost-saving and clinical quality goals, such as the proportion of patients with HbA1c tests or the proportion of patients taking appropriate medications. In Oregon and New Hampshire, McKesson's contracts are based on fixed fees per member per month for which McKesson has a percentage of fees at risk if it does not meet pre-specified financial and/or clinical goals at fixed contract intervals. Staff noted that if McKesson could demonstrate that the group educational sessions provided a benefit above its existing program in terms of reducing emergency department use and hospital admissions, it could enhance the effectiveness of its disease management programs.

For MVP, McKesson partnered with staff from the School of Nursing at the Oregon Health Sciences University (OHSU). McKesson launched the intervention in Oregon, in part, because it recognized that OHSU staff were experienced in designing and implementing group educational health interventions. OHSU staff saw the project as an opportunity to examine the impact of interventions on chronically ill Medicaid clients, an understudied population. One OHSU staff member moderated the Oregon sessions with the help of co-facilitators and another trained McKesson staff for the sessions in New Hampshire.¹

McKesson also formed an advisory board that brought together Medicaid officials and academic researchers from Oregon and New Hampshire, a representative from the American Diabetes Association, and McKesson team members. The board provided input on areas of patient behavior to be emphasized during the intervention's design phase. The board met once before the interventions commenced in Oregon and New Hampshire to devise a plan for each state, biweekly during the intervention in each state, and once after implementation in each state to review lessons learned and discuss next steps.

¹ Near the end of MVP, McKesson launched a similar intervention for Medicare patients with diabetes in Mississippi.

PROGRAM INTERVENTION

The intervention, a series of four weekly group educational sessions for patients with diabetes or CHF with a diabetes comorbidity, was designed to help patients build confidence needed to make lifestyle changes and improve their self-care skills. McKesson targeted ABD Medicaid clients who were active participants in its disease management program in states selected for the intervention. Active participants were beneficiaries who received coaching and monitoring by telephone from McKesson nurses at least once per quarter. The group educational sessions were an enhancement to McKesson's standard disease management program in that the sessions provided patients with the opportunity to interact with their peers to discuss challenges in managing their conditions, to identify ways to improve their health, and to set goals for improving their health.

After McKesson identified eligible patients from its enrollment data, a nonclinical staff member called the individuals to elicit their interest in the group educational sessions (see Figure 1). McKesson then randomly assigned patients who expressed interest in the sessions into treatment and control groups and directed nurses to call treatment group patients to schedule them for the group sessions.² McKesson offered patients incentives to attend all sessions in a module. Patients received cash for attending each session, and those who attended all four sessions were entered into a lottery to win a cash prize. To encourage attendance, McKesson also offered food, child care, and transportation assistance; for example, McKesson offered cab rides to patients in New Hampshire and offered bus vouchers to other patients. McKesson staff made reminder calls to patients before each session, reiterating offers of transportation assistance and child care.³ Staff, though, did not believe that the incentives were the primary motivating factor for attendees; rather, most patients exhibited a genuine interest in learning more about their condition and how to manage it.

McKesson conducted sessions in Oregon in April 2006 and in New Hampshire in August 2006 with the goal of having 300 patients complete a module of sessions by the end of the summer. As noted in Table 1, although more than 150 clients expressed initial interest, only 28 patients completed the sessions. In fact, the total number of patients McKesson identified as eligible in Oregon and New Hampshire (237) was smaller than the treatment group's target size.

Diabetes educators led patients through exercises in an educational handbook designed by OHSU staff specifically for the intervention. Each session lasted 1.5 hours and included activities focused on (1) the importance of seeing doctors for follow-up and following physician treatment plans; (2) weight management; (3) activity, fitness, and exercise; and (4) diabetes

² For its group educational sessions in Mississippi, McKesson chose a different recruitment tactic and enlisted the assistance of primary care providers and a diabetes management center associated with the University of Mississippi Medical Center. McKesson staff believe that this approach was integral to its recruitment success there. However, staff acknowledged that there might be inherent differences between Medicaid clients and Medicare beneficiaries recruited in Mississippi.

³ McKesson staff also repeatedly tried to reach patients who committed to attending the first session but subsequently did not attend, but had no success in reaching them due either to disconnected phone numbers or unanswered phone calls.

TABLE 1

PATIENT COUNTS IN OREGON AND NEW HAMPSHIRE FOR GROUP EDUCATIONAL SESSIONS

Number of Patients	Oregon	New Hampshire	Total
Identified as eligible (and called to elicit interest) for the sessions	127	110	237
Identified as interested in participating in sessions ^a	99	54	153
Randomly assigned to treatment group	52	31	83
Attended at least one session	17	11	28
Attended all four sessions	17	11	28

Source: Reported by McKesson on October 11, 2006.

^aMcKesson randomly assigned these patients to treatment and control groups.

symptom recognition and knowing when to visit a doctor. In addition, the sessions addressed what patients knew about managing their conditions, the aspects of management they were willing to improve, and goal setting. Staff reported that patients sometimes had difficulty with abstract concepts, such as gauging how important it is to change their behavior or how confident they were in their ability to make a change. Patients responded more favorably to concrete tasks, such as goal setting and making action plans. At the final session, patients created action plans for reaching their goals that McKesson shared with patients' primary disease management nurses for future followup.

Based on the recommendations of educators in Oregon, McKesson modified the workbooks in two small ways for the sessions in New Hampshire. First, some vocabulary was changed to make the wording easier to understand for a less-educated audience. Second, the session where participants were asked to weigh the benefits and barriers of changing behavior was simplified. These small changes were implemented because educators felt that participants' education level was lower than originally anticipated.

Owing primarily to the location of the intervention states and the availability of staff within the organization, McKesson used different staff to conduct the group sessions in Oregon and New Hampshire. However, in both states, McKesson employed two facilitators for every session. Staff reported that the staffing level was crucial to keep sessions on track, allow time to answer patients' questions, and to ensure that patients understood instructions. In Oregon (where the first sessions were held), the lead facilitator was a registered dietitian from OHSU with more than five years of experience in facilitating group educational sessions. McKesson used a different co-facilitator to assist the lead facilitator at each Oregon site (Portland and Medford) because it was unsure of participants' mental and physical health characteristics.⁴ The co-facilitators in Oregon included a mental health nurse and a nurse with diabetes expertise.

⁴ McKesson was uncertain as to whether or not participants would benefit more from having a co-facilitator with expertise in mental health or one with diabetes expertise. After the sessions in Oregon, staff noted that the co-

The two facilitators in New Hampshire (Dover and Manchester) were a registered nurse and a certified diabetes educator, both of whom had some mental health training. McKesson chose facilitators with mental health backgrounds for New Hampshire based on the experience it gained in Oregon, anticipating that clients in New Hampshire would have behavioral comorbidities. An OHSU staff member trained the New Hampshire facilitators in group discussion techniques before the sessions.

PROCESS AND OUTCOME MEASURES

McKesson reported both process and outcome measures as part of its MVP project. To provide an indication of the intervention's intensity, process measures included the number of patients attending sessions and the average number of sessions per patient. McKesson also reported both self-reported and claims-based outcome measures for the treatment and control groups. It conducted a chronic disease patient self-efficacy survey (at baseline and 90 days after the first sessions) and collected claims data on prescription drug use, HbA1c tests performed, inpatient admissions (all and cardiac-related), emergency department visits, and total medical costs (at baseline and one-year followup).

The measures are consistent with the goals of improving patients' confidence and self-care skills, particularly measures of patient self-efficacy, HbA1c tests performed, and prescription drug use. For the intervention to be successful (in the future) in both promoting change and educating patients on how to manage their diabetes, treatment group members, as compared with the control group, should demonstrate greater self-efficacy, be more likely to use insulin and oral anti-diabetic medications, and be more likely to have HbA1c tests performed (see Figure 1). Over the longer term, these changes in patients' behavior and attitudes toward their disease may improve their self-care skills, and ultimately may result in fewer emergency room visits and inpatient admissions related to diabetes and comorbid cardiac conditions, as well as lower medical costs and improved quality of life.

Though McKesson reported six months of follow-up data for the Oregon cohort and three months for the New Hampshire group, the small sample sizes make it difficult to infer that the intervention had an effect on outcomes. Moreover, it is likely not appropriate to judge this intervention on these claims-based measures over such a short follow-up period. However, self-reported patient self-efficacy measures provide a snapshot of the intervention's potential impact on self-efficacy, though no treatment-control differences are statistically significant (Table 2).

Among treatment and control clients (pooled across those randomly assigned in both states) who completed baseline and follow-up self-efficacy surveys (66 total patients), 44.7 percent of treatment group members reported higher self-efficacy scores compared with half of the control

(continued)

facilitator with mental health experience was a more valuable resource than the co-facilitator with only diabetes training, as many of the participants had behavioral health conditions.

TABLE 2

SELF-REPORTED PATIENT SELF-EFFICACY MEASURES
AMONG TREATMENT AND CONTROL GROUP MEASURES

	Treatment	Control	Percent Difference
Percent of Patients whose Self-efficacy Scores Improved	44.7	50.0	10.6
Average Self-efficacy Scores			
Baseline	6.0	5.4	11.0
Followup	6.4	5.6	14.4
Number of Patients	38	28	

Source: Reported by McKesson on January 11, 2007.

Notes: Includes all patients in Oregon and New Hampshire who were randomly assigned to treatment and control groups and who completed baseline and follow-up self-efficacy surveys. The number of treatment group patients is larger on this table compared with Table 1 because a number of patients randomly assigned to the treatment group never attended sessions.

group.⁵ Average self-efficacy scores at followup were slightly larger for the treatment group (6.4) than the control group (5.6), but the difference (about 14 percent) was not statistically significant. The minimum treatment-control difference in self-efficacy scores we could potentially detect with sample sizes this small would be about 24 percent. To detect a difference as small as 14 percent, we would need a sample of 180 patients (split evenly between the treatment and control groups).⁶

Two short-term outcome measures—the proportion of patients with HbA1c tests and prescription drug claims—of sample members in Oregon also provide a glimpse at potential intervention benefits (Table 3). In the first five months after attending educational sessions, 67.6 percent of treatment group members had an HbA1c test conducted compared with 54.3 percent of control group members. Although this 24 percent difference was not statistically significant, it is noteworthy because in the year before the educational sessions there was essentially no difference in this measure between the treatment and control groups. A larger proportion of treatment group members also had fills for either insulin or oral hypoglycemic medications compared with control group members (76.5 percent versus 65.2 percent), though this difference was also not statistically significant. In general, these short-term outcome data are suggestive of a potential beneficial effect of the intervention, but without a longer follow-up

⁵ The treatment group includes five members who reported the same score at baseline and followup, all of whom reported 8.0 or larger (with three reporting 10, the maximum). Excluding these persons from the treatment group sample would result in a slightly larger proportion of treatment group patients reporting higher followup scores (51.5 percent versus 50 percent), but this difference is not statistically significant.

⁶ Estimated using sample variances for the treatment and control groups at 80 percent power and the 95 percent confidence level.

TABLE 3

SHORT-TERM OUTCOME MEASURES AMONG TREATMENT AND CONTROL GROUP MEMBERS
IN OREGON IN THE FIVE MONTHS AFTER THE INTERVENTION

	Treatment	Control	Difference
Proportion with HbA1c Test			
Baseline	71.4	70.2	1.2
Followup	67.6	54.3	13.3
Proportion with Claims for Insulin or Oral Hypoglycemic Drug			
Baseline	88.6	76.6	12.0
Followup	76.5	65.2	11.3
Number of Patients	34	46	

Source: Reported by McKesson on May 23, 2007.

Note: Number of patients reported here is total number at followup; one patient from each group was lost from baseline to followup.

period and larger sample size we cannot conclude that the intervention has a statistically significant effect on these outcomes.

INTERVENTION CHALLENGES

Challenges included a smaller-than-expected number of eligible patients and management of patients' needs during group sessions. McKesson also noted that developing patient incentives and finding locations to hold sessions were resource-intensive tasks. In addition, feedback from the advisory board was slower than expected at times.

Small patient counts were a considerable challenge for McKesson to overcome. In Oregon and New Hampshire, McKesson identified only 237 patients eligible to participate in the group educational sessions.⁷ While about 65 percent of these patients demonstrated an interest in participation, only 28 patients (about one-third of the treatment group) completed the modules in both Oregon and New Hampshire, well short of McKesson's goal of 300 patients. Patient skepticism was a key factor in one-third of eligible members not wanting to participate. McKesson noted that many clients were skeptical of the offer of free services and believed the intervention to be "too good to be true," which is a typical response among Medicaid clients. On a positive note, all patients who began the sessions completed all four modules, suggesting McKesson was successful at retaining patients after the initial group meeting. In fact, patients

⁷ In its proposal, McKesson had noted that 8,193 Medicaid clients in Oregon and 1,020 in New Hampshire were eligible for its diabetes disease management program. However, it did not choose target geographic areas until after being awarded the MVP grant.

who attended sessions were extremely satisfied with them and wanted them to continue beyond the intervention period.

McKesson reported that the barriers to client participation included inability to reach patients by phone, scheduling conflicts, individual crises, and physical ailments that prevented patients from leaving their homes. In the time between eliciting interest in the educational sessions and scheduling clients for the sessions, about 30 percent of clients' phone numbers had been disconnected. Among those members McKesson could reach by phone, staff reported that the available times for sessions in Oregon and New Hampshire were inconvenient for some patients. Staff also noted that patients seemed to be "in crisis" and unable to attend sessions (due to these crises or, sometimes, a physical ailment) even after they had agreed to do so.

As might be expected from an ABD Medicaid population, participants' functional and social skills varied widely, influencing facilitators' activities during educational sessions. For example, at one site, two clients could not write, and another was blind; as a result, facilitators had to spend disproportionate amounts of time with these patients. In general, staff believed that if the group sessions had included 24 people each as originally planned (versus the 7 per session, on average) and only two facilitators, the sessions would have been even less productive because of patients' wide range of functionality. In addition, some clients lacked basic social skills, such as waiting for others to finish a comment before offering their own. Staff also noted that some patients brought guests who were sometimes disruptive. Staff reported that participants and their guests tended to speak to one another during sessions, sometimes interrupting the group discussion. Since most participants reported (to McKesson) that the sessions were a positive experience, it appears that these issues were manageable for facilitators at the scale of these pilot sessions.

CONCLUSIONS

The intervention provided important qualitative findings in view of growing interest in the use of group visits among Medicaid agencies, health plans, and other health care organizations. In particular, McKesson's experiences with patient recruitment and participation, as well as the dynamics of group educational sessions for Medicaid beneficiaries, can help inform others of potential pitfalls. Moreover, to guide the design of an intervention for Medicaid patients, it is useful to know the aspects of the sessions to which patients most favorably responded.

Whether or not it is feasible for McKesson, or another organization, to implement this intervention (or one similar to it) in the future will depend on a number of factors. First, implementation is very resource intensive in terms of program development and the ongoing costs of recruitment. Program development includes the design of the workbook, training educators who facilitate sessions, and locating venues to hold meetings, while recruiting costs can include time spent trying to locate patients and money spent on incentives to entice clients to participate. Second, because the intervention is so resource intensive, implementation requires a strong commitment by its sponsor (as was evident with McKesson). Third, the sponsor must identify the optimal participant-to-facilitator ratio that will balance staff burden and the staff's ability to effectively facilitate sessions with the need to engage a large enough group of participants to infer intervention effectiveness on patient outcomes.

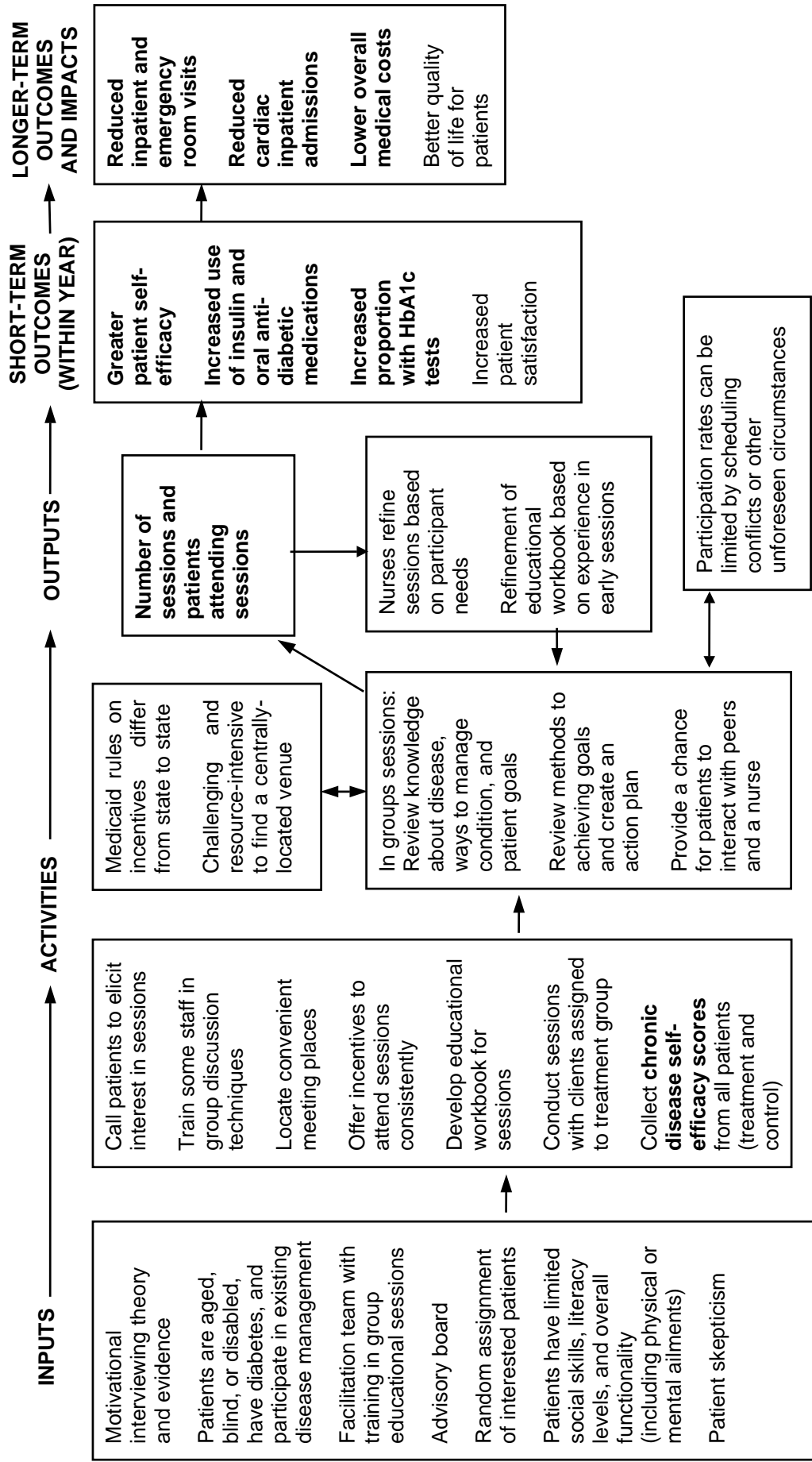
In many ways, these factors are dependent on each other. For example, while a large group is needed to have sufficient power to detect impacts, it also takes long-term commitment of the sponsor to implement a greater number of sessions with fewer patients rather than a few sessions with many patients. Moreover, more facilitators must be trained to lead additional group educational sessions. OHSU staff noted that well-trained educators were a critical aspect to intervention replicability in different settings. Staff reported that educators should have good group facilitation skills, a background in diabetes management, training in mental health issues, and an orientation in motivational interviewing. One potential strategy includes McKesson's plan to use its own community-based registered nurses and local diabetes educators as co-facilitators, training these nurses in motivational interviewing before sessions begin, and limiting sessions to 15 participants.

An important lesson learned in this intervention is that a sponsor will likely face a number of barriers in convincing ABD Medicaid clients to participate in a group educational intervention, including skepticism, disinterest, client mobility (from one residence to another), and individual day-to-day crises. Strategies to improve participation that McKesson did not utilize, but plans to in the future, include sending informational mailings to patients; asking about ailments, disabilities, or other reasons a person might not attend a session; and inquiring about patients' availability before scheduling sessions. In addition, McKesson also plans to conduct provider outreach before recruiting patients into the intervention in the hopes that primary care providers will encourage patients to participate.

It is difficult to assess whether this MVP intervention was successful at improving targeted outcomes (but anecdotally patients were pleased with the educational sessions). On the one hand, from an implementation standpoint, McKesson and OHSU collaborated successfully to create an easy-to-understand educational workbook (which it has already refined based on its experience), making the intervention generalizable to other Medicaid clients with diabetes and, potentially, other chronic illnesses. Moreover, McKesson staff reported that intervention participants appreciated the sessions considerably and were motivated enough to develop care plans and attend all sessions in each module, allowing McKesson to achieve its goal of having all patients who began a module finish that module. On the other hand, treatment-control differences in patient outcomes were not statistically significant. However, given the response of intervention participants, as well as McKesson's commitment to fielding more modules and training facilitators to lead sessions, the intervention does have the potential to be successful at affecting patient behavior and ultimately, with a large enough sample size, have a statistically significant impact on patient outcomes. In particular, high patient motivation suggests that short-term outcomes such as self-efficacy and quality measures (like use of the proper medications and having tests performed regularly) that have a direct association to longer-term outcomes (like inpatient admissions and emergency room visits) might be improved. The trends in reported outcomes data suggest that this MVP intervention's potential as an add-on to existing disease management services is promising.

FIGURE 1

LOGIC MODEL FOR MCKESSON'S DIABETES GROUP EDUCATION INTERVENTION



Note: **Bold** indicates reported process and outcome measures.