



Patient Portal Funding Opportunity Evaluation

*Implementation Phase
Final Version*

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Summary of Findings

TO WHAT EXTENT WAS THE IMPLEMENTATION OF A CLINIC-SPECIFIC PLAN FOR INTEGRATION OF A PATIENT PORTAL SUCCESSFUL?

<ul style="list-style-type: none"> ✓ All fourteen participants successfully launched/re-launched portals ✓ Utilization of all four key portal features increased over the implementation period ✓ 41,253 patients viewed, downloaded, or transmitted to a third party their health information using the portal during the implementation period 	<ul style="list-style-type: none"> ✗ Only eight participants met measurable result goals. Five of the eight participants who met goals were Cohort 1 participants. ✗ Portal reporting capacity remains limited. There were no portal features that all 14 participants could report on
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✓/✗ **Providers' experiences with the portal varied.** Portal Champions had an overwhelmingly positive experience with the portal and experienced positive outcomes of the portal for both patients and clinics. Superficially Satisfied but Infrequent Users did not actively use the portal but were satisfied with its basic functionality. Super Users with an Increased Portal-Related Workload use the portal everyday and utilize most portal features but do not find it easy, efficient, or time-saving to use.

Success Factors:

- **Staff Engagement** was among the most commonly cited success factors. Participants shared three broader successful strategies for engaging providers in the patient portal: ongoing and targeted education, a strong portal team, and incentives.
- **Dedicated FTE.** All 14 participants cited having dedicated FTE as important to the success of their portal projects. The ability to hire a full-time person to shepherd the portal project was cited as a primary benefit of participating in the funding opportunity and critical to maintaining a focus on the portal throughout the implementation period.

Challenges:

- **Vendor** challenges were overwhelmingly the most cited challenge among participants, and remained largely unresolved throughout implementation. Challenges pertained to the functionality of the portal, including customization, timeline delays, challenging enrollment systems, lack of reporting functionality, and lack of a test environment.
- **Staff Engagement** had the most overlap as both a success factor and a challenge. Challenges included identifying and promoting the benefits of the portal, providing adequate repetition of messaging/training, addressing workload issues, and addressing overarching change resistance.
- **Workflow** was commonly identified as a struggle on mini-surveys but resolved by the end of implementation.
- **Spanish Portal.** Participants lamented the fact that a Spanish portal was unavailable through their vendor, and when one was available, the quality was below that of the English portal.

TO WHAT EXTENT WAS THE TECHNICAL ASSISTANCE USEFUL IN IMPLEMENTING THE PATIENT PORTAL?

Overall, technical assistance was perceived as a value-add. Participants commented that they would not have made as much progress as they did without *both* the grant funding and the technical assistance and emphasized that for projects of similar complexity they hoped to see more funding opportunities structured like this one.

The combination of technical assistance components met all participants' needs. Each component (one-on-one phone calls, webinars, an online resource library, and a peer learning community) was identified as the most valuable component by at least one funding opportunity participant, and nearly all participants found value in all four components.

/ Minor suggestions for improvement

Suggestions:

- **Flexible technical assistance.** Participants noted that they would have liked more flexibility in when and how to utilize the technical assistance resources, especially the one-on-one calls with Full Circle. While participation in monthly calls was optional, these participants did not perceive them to be optional.
- **Lessen evaluation requirements** including reducing the provider survey to 2-3 minutes, aligning the grant goals with meaningful use targets, and eliminating portal data collection.
- **Formally facilitate direct participant relationships** by creating formal vendor affinity groups and hosting an in-person meeting.

Funding Opportunity Overview

ORIGINS

During the fall of 2014, the Colorado Health Foundation (the Foundation) launched a funding opportunity “to increase individual and family engagement in their health through the use of patient portals at the clinic level.”¹ Specifically, funding was allocated to support a group of safety net clinics to integrate patient portals into their practice. Funding was not intended to support the purchase of technology; rather, it enabled clinics to engage in activities to maximize the use of patient portals by patients and providers, thus “foster[ing] a culture of patient engagement through information access, availability, and ownership.”² In addition to grant dollars, the funding opportunity provided participants with access to a statewide portal integration partner (Full Circle Projects) for technical assistance, coaching, and tools.

The impetus for supporting patient portal integration emerged from a “growing body of evidence demonstrating that patients who are more activated and engaged have better health outcomes and care experiences and that those who are less engaged have significantly higher costs.”³ Patient portals play an important role in patient engagement by offering secure online access to providers and health records. Yet utilization of patient portals has been low, due in part to “low literacy levels (including health and IT literacy), language barriers, lack of a computer or Internet access, poor training/support, security concerns, limited system functionality . . . workflow challenges, inadequate [provider] training and tools, and physician resistance.”⁴ In response, the Foundation designed the patient portal funding opportunity to support two underlying elements of meaningful patient portal use: process and people (Figure 1). The intent was to “create an environment where patients are empowered to access and take action on their health information no matter the delivery platform.”⁵

¹ Patient Portal Funding Opportunity Memo

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

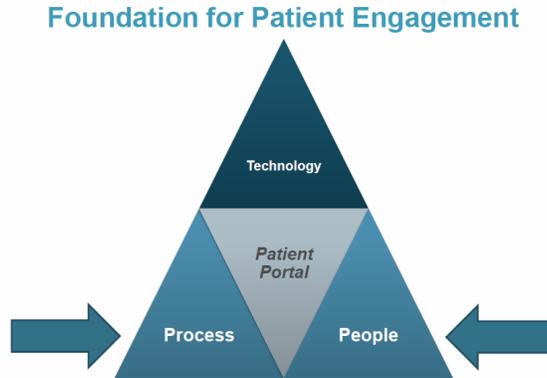


Figure 1. Meaningful patient portal usage requires technology, process, and people

The patient portal funding opportunity supported the Health Care program area by promoting patient access to and use of health information to improve health, under the strategy of empowering individuals and families to manage their own health (Figure 2).



Figure 2. Health Care program strategy

GOALS

The overall goal of the funding opportunity is “to assist safety net clinics [to] fully integrate patient portals into their practices in order to enhance individual and family engagement by providing convenient access to health information and services.”⁶ The funding opportunity theory of change is reproduced below in Figure 3.

⁶ Ibid.

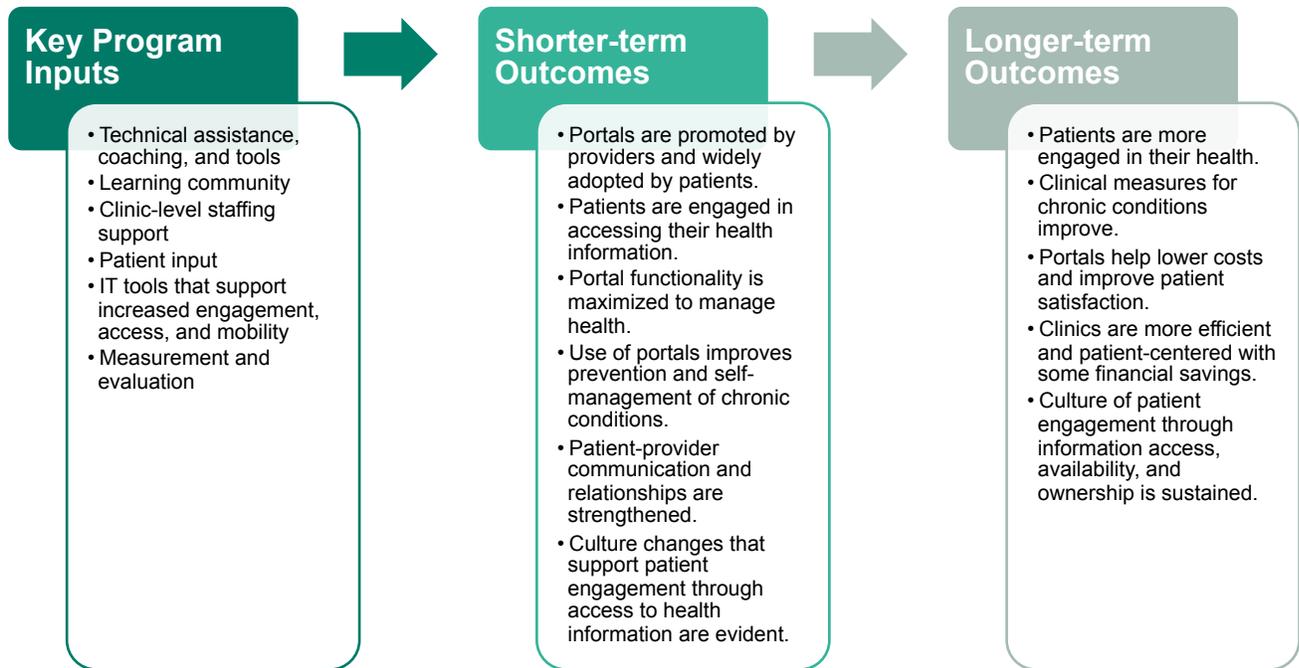


Figure 3. Patient portal funding opportunity theory of change

STRUCTURE

The patient portal funding opportunity followed a different funding model than previous Foundation initiatives. The model adopted a two-step approach (Figure 4). First, applicants submitted a short letter of intent (LOI) about the current status of their patient portal and their future integration plans. A subset of these applicants were selected to participate in the planning phase, where funding opportunity participants received technical assistance from Full Circle Projects to create a detailed work plan. The planning phase provided no grant funding. Second, funding opportunity participants submitted the full work plan as an application for one year of implementation funding. Fourteen of fifteen submitted work plans were then selected to receive one year of implementation funding and ongoing technical assistance from Full Circle Projects. The participant who did not receive implementation funding still had access to an online patient portal resource bank, populated by Full Circle Projects.

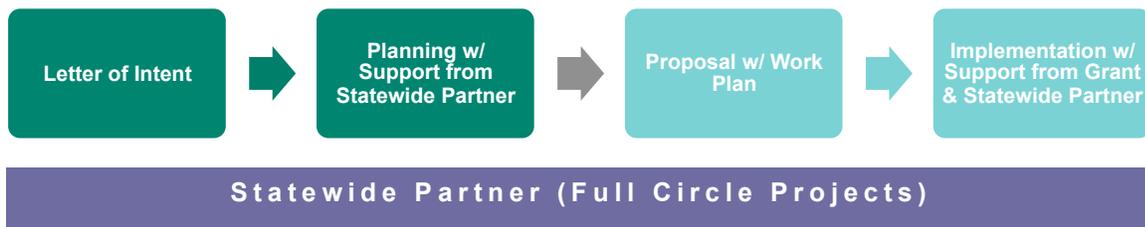


Figure 4. Funding opportunity two-step model

There were two cohorts of funding opportunity participants, one submitting LOIs on October 15, 2014, and the other submitting LOIs on February 15, 2015. Twelve-month grants were awarded to six Cohort 1 participants and eight Cohort 2 participants. *We use the term “implementation phase” throughout this report to refer to the funded period of the portal project: for some participants, this included implementation of a new portal, for others optimization of an existing portal, and others re-launch of a portal.* The evaluation concluded data collection in October 2016; though some participants extended their grant funding past this period, the results of extensions past October were not captured.

	LOI Submitted	Work Plan Submitted	Grant Awarded
Cohort 1	October 15, 2014	February 15, 2015 ⁷	April, 2015
Cohort 2	February 15, 2015	June 15, 2015	September, 2015

EVALUATION

As part of the funding opportunity’s measurement and learning plan, the Foundation engaged Vantage Evaluation as the external evaluation consultant. The evaluation was designed around the key evaluation questions identified by the Foundation and addresses both the planning and implementation phases:

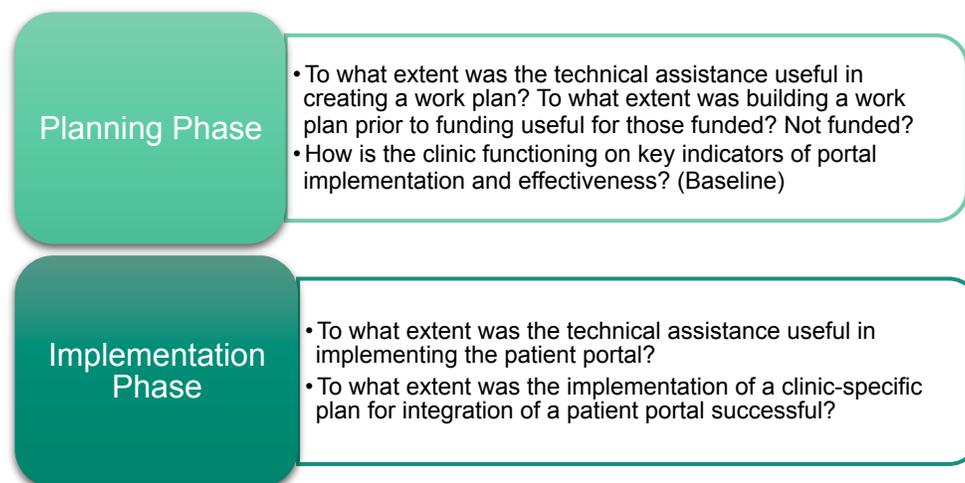


Figure 5. Key evaluation questions

Previous evaluation reports have assessed the planning phase for both cohorts. This report includes findings from the implementation phase only, focusing on the two implementation phase key evaluation questions. Data in this report were generated through monthly mini-surveys completed by each participant’s key contact for the project, quarterly portal data collection about enrollment, utilization, and

⁷ Originally, Cohort 1 funding opportunity participants were permitted to submit work plans at either the February or June grant deadline, but all six Cohort 1 funding opportunity participants submitted their work plans in February.

features, a provider survey to capture the day-to-day experience working with the portal, and an exit interview with each participant's key portal staff and executive sponsor. For details about the methodology, please see Appendix A (page 45). For the purposes of the implementation phase evaluation, the technical assistance encompasses all technical assistance received after award of the grant, including monthly calls, webinars, the resource site, interactions with learning community peers, and ad hoc one-on-one support. For information about technical assistance received prior to the award of the grant, please see the Planning Phase Evaluation Reports.

To what extent was the implementation of a clinic-specific plan for integration of a patient portal successful?

<input checked="" type="checkbox"/> All fourteen participants successfully launched/re-launched portals	<input checked="" type="checkbox"/> Only eight participants met measurable result goals
<input checked="" type="checkbox"/> Utilization of all four key portal features increased over the implementation period	<input checked="" type="checkbox"/> Portal reporting capacity remains limited
<input checked="" type="checkbox"/> 41,253 patients viewed, downloaded, or transmitted to a third party their health information using the portal during the implementation period	

/ Providers' experiences with the portal varied

Success Factors:

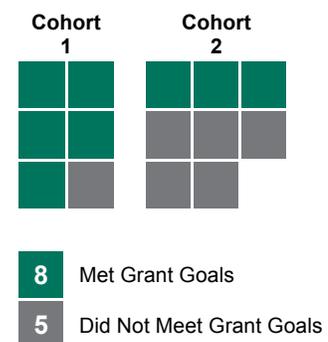
- Staff Engagement
- Dedicated FTE

Challenges:

- Vendors
- Staff Engagement
- Workflow (resolved by the end of implementation)
- Spanish Portal

PORTAL UTILIZATION

All fourteen funding opportunity participants successfully launched or re-launched a patient portal during the implementation phase. Eight of fourteen funding opportunity participants (57%) met their measurable result goal for the grant (the number of unduplicated patients who have viewed, downloaded, or transmitted to a third party their health information using the portal). Utilization goals varied by funding opportunity participant: The funding opportunity required a minimum goal of 10% (twice the meaningful use target) and some participants set higher goals for themselves.⁸ If we consider the 10% target for all participants, nine of fourteen funding opportunity participants achieved 10% of patients who have viewed, downloaded, or transmitted to a third



⁸ Due to individual circumstances, Participant N retained a 6% goal.

party their health information using the portal. A greater proportion of Cohort 1 participants (5 of 6 participants, 83%) were successful in meeting portal utilization goals than Cohort 2 (3 of 8 participants, 38%). According to Foundation staff, Cohort 1 included a larger number of participants that had already started working on implementing a portal prior to the funding opportunity.⁹

The pattern of portal adoption varied by funding opportunity participant. Some participants experienced relatively linear increases in utilization from the launch of the portal to the final quarter of the grant period (see Participants B, C, D, I, N in the graph below). Others experienced a steep initial increase followed by a leveling off (see Participants E, H, G, L, M in the graph below). The two participants with drops in utilization (A and K) reported an error in their data capture systems that was subsequently fixed. (The portal utilization data for each participant is presented in more depth in the Supplemental Participant Summaries document, along with a full-sized version of Figure 6.)

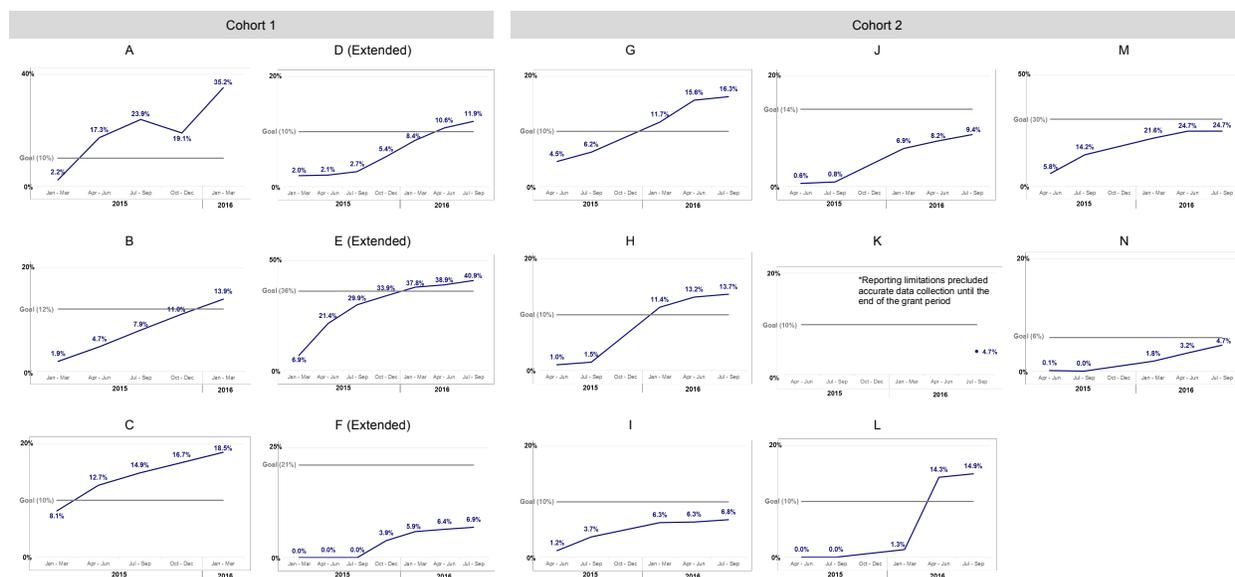


Figure 6. Portal utilization trends across funding opportunity participants

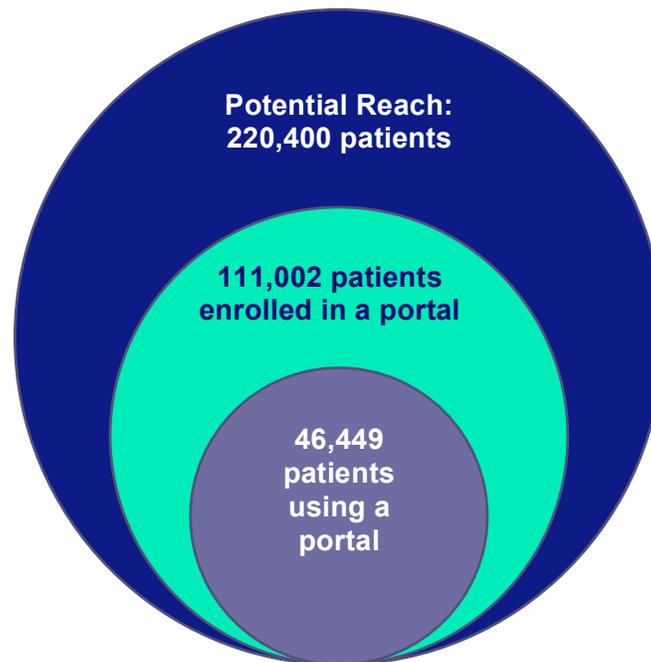
41,253

patients viewed, downloaded, or transmitted to a third party their health information using the portal during the implementation period

In total, funding opportunity participants serve approximately 220,400 patients. Of these patients, a total of 111,002 were enrolled in patient portal by October 2016 (50% of the total

⁹ The implementation evaluation also captured three months of grant extension for three Cohort 1 participants (whereas no length of grant extension was captured for Cohort 2 participants). Yet this did not affect achievement of grant goals: two of the three Cohort 1 participants with extensions met grant goals, and both were meeting goals by the original grant end date.

potential reach). And across all funding opportunity participants, 46,449 patients had viewed, downloaded, or transmitted to a third party their health information using the portal by October 2016 (21% of the total potential reach). At baseline, 5,196 patients were already using portal (at sites with portals active prior to the implementation phase), so 41,253 patients viewed, downloaded, or transmitted to a third party their health information using the portal during the implementation period.



The percentage of patients enrolled in the portal at the end of the implementation period ranged from 7% to 68% with a median across clinics of 38%. The percentage of patients who viewed, downloaded, or transmitted to a third party their health information using the portal by the end of the implementation period ranged from 5% to 41% with a median across clinics of 14%. Generally, participants reported more than a 20 percentage-point difference between the proportion of patients enrolled in the portal and patients who used the portal (high: 53% difference; low: 0% difference; median: 25% difference, Figure 7). For example, Participant C enrolled 67% of their patient population in the portal, but only 19% of patients had viewed, downloaded, or transmitted to a third party their health information using the portal by October 2016. Three participants (F, H, I) reported that every patient enrolled in the portal had used it. During the exit interviews, Vantage learned that participants had distinct workflows for enrolling patients in the portal and encouraging portal usage. Generally, enrollment was spearheaded by non-clinical staff, such as front desk staff and enrollment specialists, and encouraging use was the responsibility of clinical staff, such as physicians, medical assistants, and lab technicians. It was unclear what, specifically, the three participants with all enrolled patients utilizing the portal were doing differently than those with lower levels of conversion from enrollment to use.

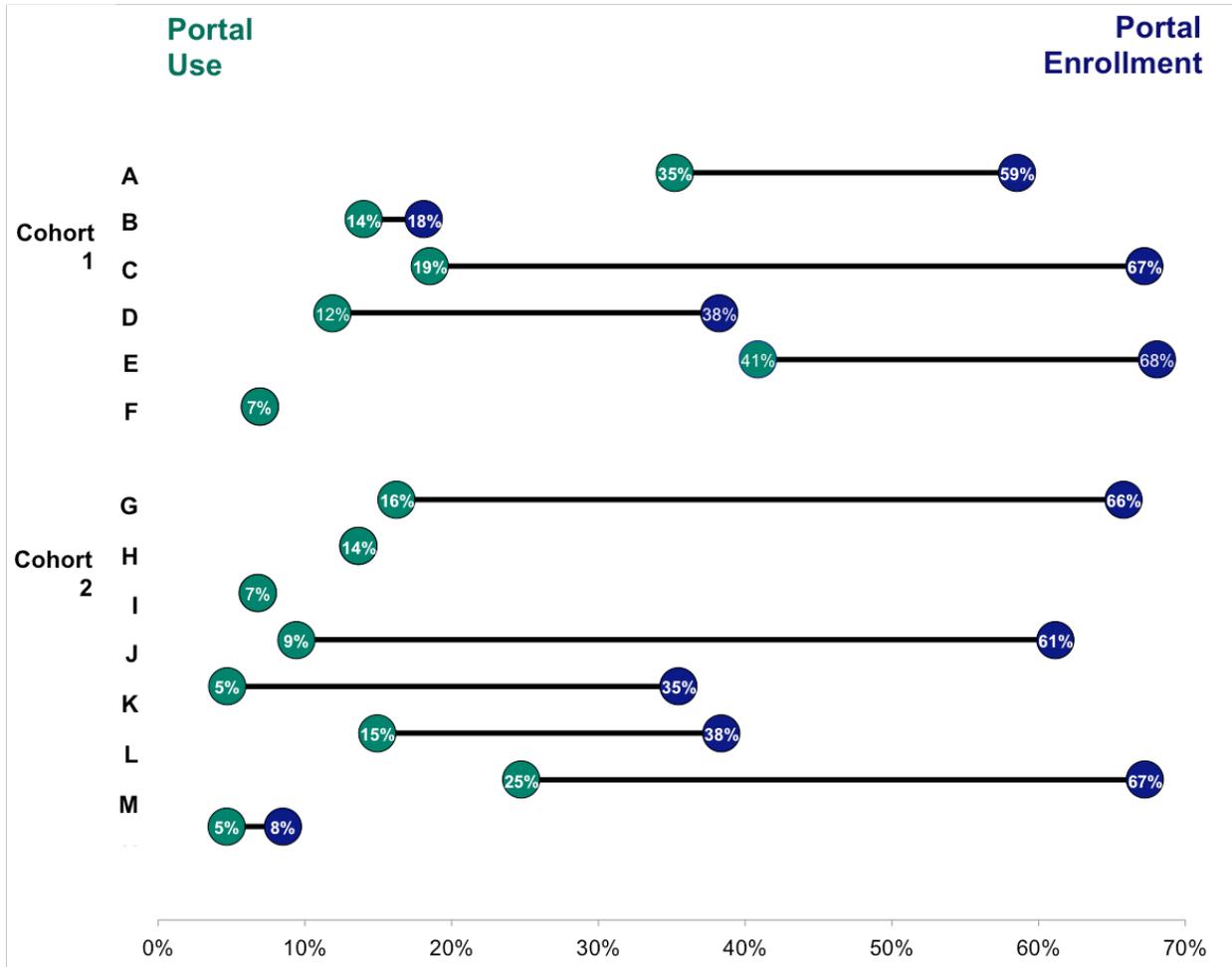


Figure 7. Portal utilization lagged behind enrollment

Portal Features

Our ability to report on utilization of specific portal features across funding opportunity participants was limited by the reporting capability of participants. While reporting capability increased from baseline to the end of implementation, participants were not consistently able to report on utilization of specific features (Figure 8). For example, though the number of participants able to report on the average number of times patients logged into the portal increased from two at baseline to seven at the end of implementation, half of participants were still unable to report on this data point. To avoid drawing erroneous conclusions based on an incomplete dataset, we report only on the data points with six or more participants' data.

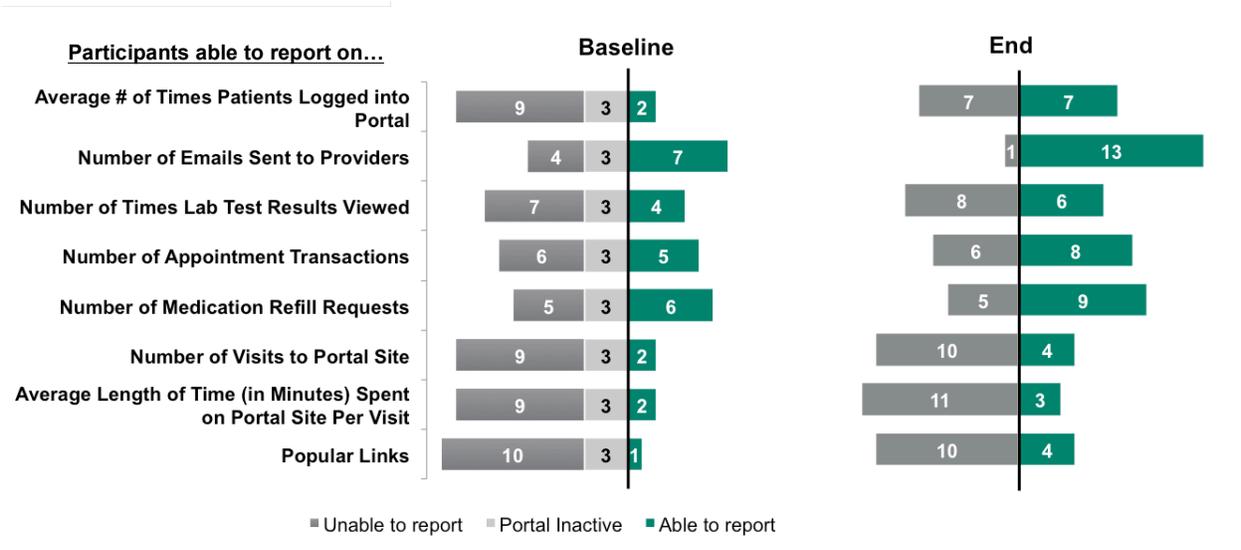


Figure 8. Reporting capacity increased during the implementation period, but remained limited

Logins. Among the seven participants who were able to report the average number of times patients logged into the portal in the final quarter of implementation, averages varied substantially (Figure 9). Yet all averages were above one, indicating that on average, patients used the portal more than once per quarter (minimum: 1.5, maximum: 12.4).

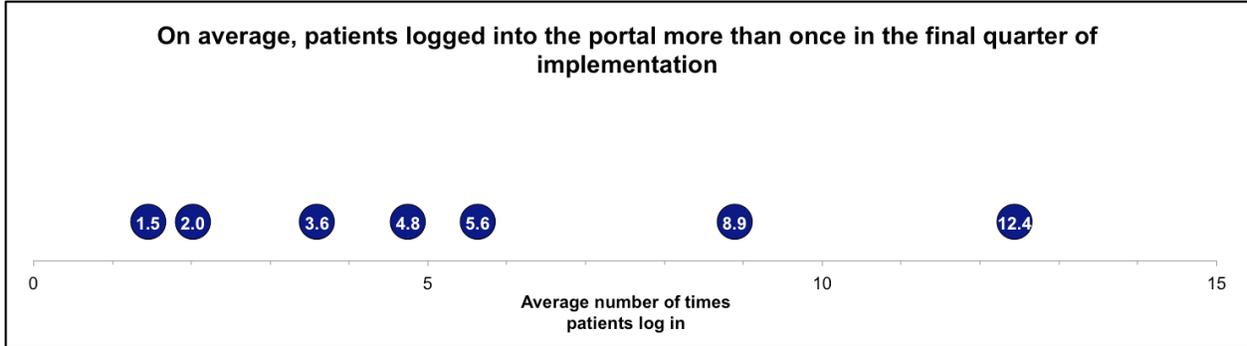


Figure 9. Average logins

Key Features. Utilization of all four key portal features (messaging, lab results, appointment transactions, and medication refills) increased over the duration of the implementation period. The most utilized feature at both baseline and the end of implementation was lab result reviewing, followed by provider messaging. The data pertaining to each of these four features are described in more detail below.

Portal Feature		Median # per Quarter at Baseline	Median # per Quarter at the End	Correlates with Overall Utilization	# Able to Report at End of Implementation
Provider Messaging	↑	39	147	Yes	13
Lab Result Viewing	↑	62	630	Yes	6
Appointment Transactions	↑	1	14	No	8
Medication Refill Requests	↑	4	22	Yes	9

Provider Messaging

In the final quarter of each participant’s implementation grant, thirteen of fourteen participants were able to report on how many emails had been sent to providers.¹⁰ Across all thirteen participants, a total of 4,536 emails were sent in the final quarter of implementation, with a median of 147 per participant. In contrast, at baseline seven participants were able to report on how many emails had been sent to providers, and a total of 6,021 emails were sent in the quarter prior to implementation, with a median of 39 per participant. The net decrease in emails sent between baseline and the end of implementation is attributable to one large participant who saw a decrease in utilization of this feature. For all other participants, messaging increased. Thirteen of fourteen participants clearly identified how messaging fits into their portal workflow when asked during the exit interviews. The participant that did not mention messaging in their description of portal workflow had the lowest number of emails sent to providers in the final quarter of implementation.

39 → **147**
Baseline **End**
Median **Median**

Use of provider messaging was significantly correlated with overall portal utilization such that participants who had a higher number of emails sent to providers also had a higher number of unduplicated patients who viewed, downloaded, or transmitted to a third party their health information using the portal (Figure 10).¹¹

¹⁰ Emails are sent within the portal systems, not to a provider’s email account. These messages are also known as “secure communications.”

¹¹ $r = .603, p < .05$

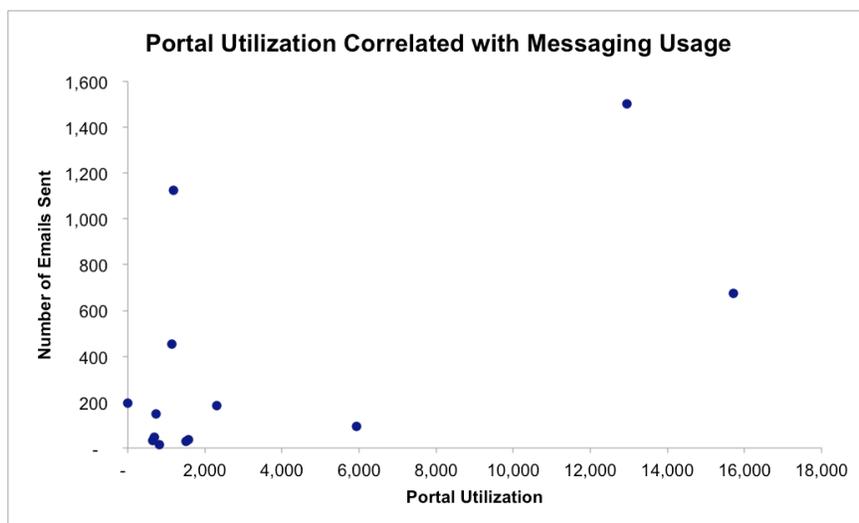


Figure 10. Messaging

Lab Results

In the final quarter of each participant’s implementation grant, six of fourteen participants were able to report on how many times lab results had been viewed. Across all six participants, a total of 9,915 lab results were viewed in the final quarter of implementation, with a median of 630 per participant. Two participants account for 84% of these lab result views. In contrast, at baseline four participants were able to report on how many times lab results has been viewed, and a total of 9,399 lab results were viewed in the quarter prior to implementation, with a median of 62 per participant. One participant accounted for 99% of these lab result views (the second participant who dominated lab result views at the end of implementation was unable to report on lab result views at baseline). Ten of fourteen participants clearly identified how sharing lab results fits into their portal workflow, but no trends emerged to help us understand whether a clear link with workflow influenced how many times lab results have been viewed.

	62	➔	630
Baseline			End
Median			Median

Viewing lab results within the portal was significantly correlated with overall portal utilization such that participants who had higher lab result views also had higher numbers of unduplicated patients who viewed, downloaded, or transmitted to a third party their health information using the portal (Figure 11).¹²

¹² $r = .987, p < .01$

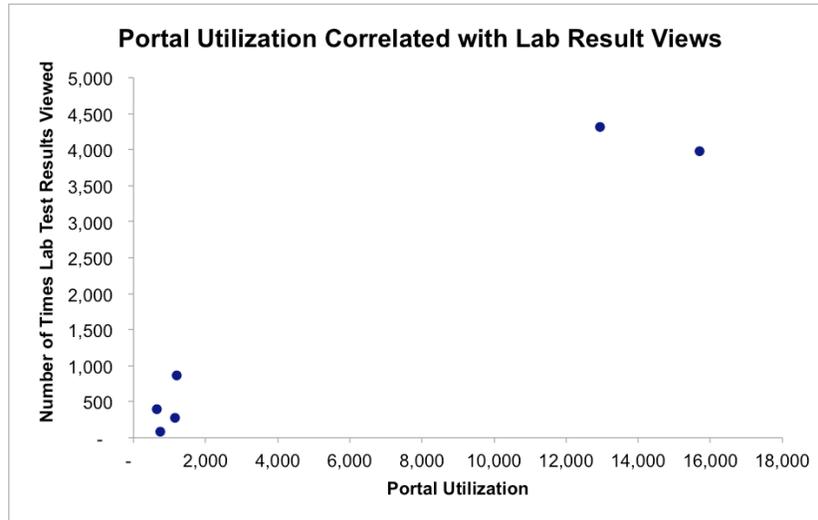


Figure 11. Lab results

Appointment Transactions

In the final quarter of each participant’s implementation grant, eight of fourteen participants were able to report on the number of appointment transactions. Across all eight participants, a total of 918 appointment transactions happened over the portal in the final quarter of implementation, with a median of 14 per participant. In contrast, at baseline five participants were able to report on appointment transactions, and a total of 481 appointment transactions happened in the quarter prior to implementation, with a median of 1 per participant. At both baseline and the end of implementation, the same one participant accounted for the majority of appointment transactions (90% at baseline and 63% at the end of implementation). The number of appointment transactions was not significantly correlated with portal utilization: participants may have had high portal utilization with either low or high numbers of appointment transactions (Figure 12).¹³ The lack of a correlation may be driven by Participant A, which had the highest number of unduplicated patients who viewed, downloaded, or transmitted to a third party their health information using the portal and the lowest number of appointment transactions. Participant A reported during the exit interview that they were *“in the process of testing online scheduling,”* so appointment transactions are expected to increase in the future.

1	➔	14
Baseline		End
Median		Median

¹³ $r = .478, p = .23$

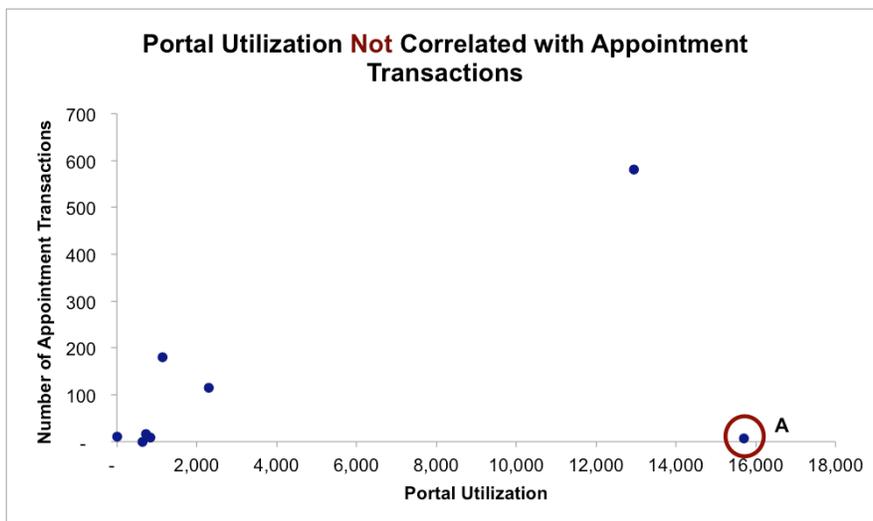


Figure 12. Appointment transactions

Medication Refills

In the final quarter of each participant’s implementation grant, nine of 14 participants were able to report on the number of medication refill requests. Across all nine participants, a total of 1,303 medication refills were requested in the final quarter of implementation, with a median of 22 per participant. In

4	➔	22
Baseline		End
Median		Median

contrast, at baseline six participants were able to report on medication refill requests, and a total of 522 medication refills were requested in the quarter prior to implementation, with a median of 4 per participant. At both baseline and the end of implementation, the same one participant accounted for the plurality of medication refills (95% at baseline and 49% at the end of implementation). Further, there was almost complete overlap between participants that were able to report on medication refill requests and participants who could clearly identify how medication refills fit into their portal workflow. There were only two exceptions: Participant E could not report on medication refills but was able to place medication refills into the workflow, and Participant J could report on medication refills but was not able to place medication refills into the workflow. Yet participant J’s number of medication refill requests ranked 5th, outperforming three participants with a clear link between medication refills and portal workflow.

Medication refill requests were significantly correlated with portal utilization such that participants who had higher numbers of medication refill requests also had higher numbers of unduplicated patients who viewed, downloaded, or transmitted to a third party their health information using the portal (Figure 13).¹⁴

¹⁴ $r = .850, p < .01$

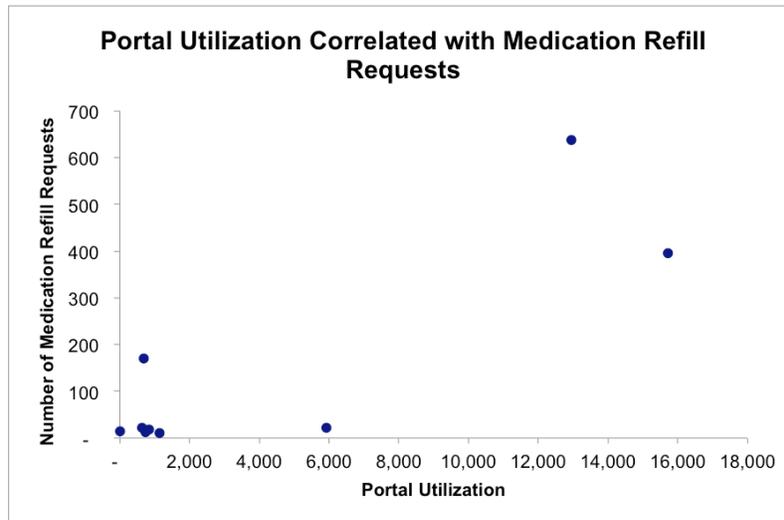


Figure 13. Medication refill requests

SUCCESS FACTORS

To better understand trends that influenced the extent to which implementation of a clinic-specific plan for integration of a patient portal was successful, we sought to identify key factors linked to successful implementation of a patient portal. Each month of the implementation phase on the mini-survey, funding opportunity participants were asked, “In the past month, what has been your biggest success with patient portal implementation/optimization?” The Foundation and Full Circle used these successes throughout the implementation phase to tweak and target technical assistance. Then, during the exit interviews, participants were asked to reflect on their biggest successes during the grant period. In this way, we were able to capture participants’ perspectives on the factors that influenced their success both during their day-to-day work on the portal (mini-surveys) and when reflecting on the grant period as a whole (exit interviews). (Additional details about the mini-survey and exit interview methodology can be found in Appendix A.)

By looking across all mini-surveys and data from the exit interviews, we identified the most prominent success factors related to portal implementation (Figure 14). During the grant period, ten or more participants cited enrollment, staff engagement, staffing, and portal usage as their greatest monthly success on the mini-surveys at least once. Of these four, staff engagement successes remained most salient during the exit interviews (cited by eight participants as critical to success). Each of the four most prominent success factors are discussed in more detail below.

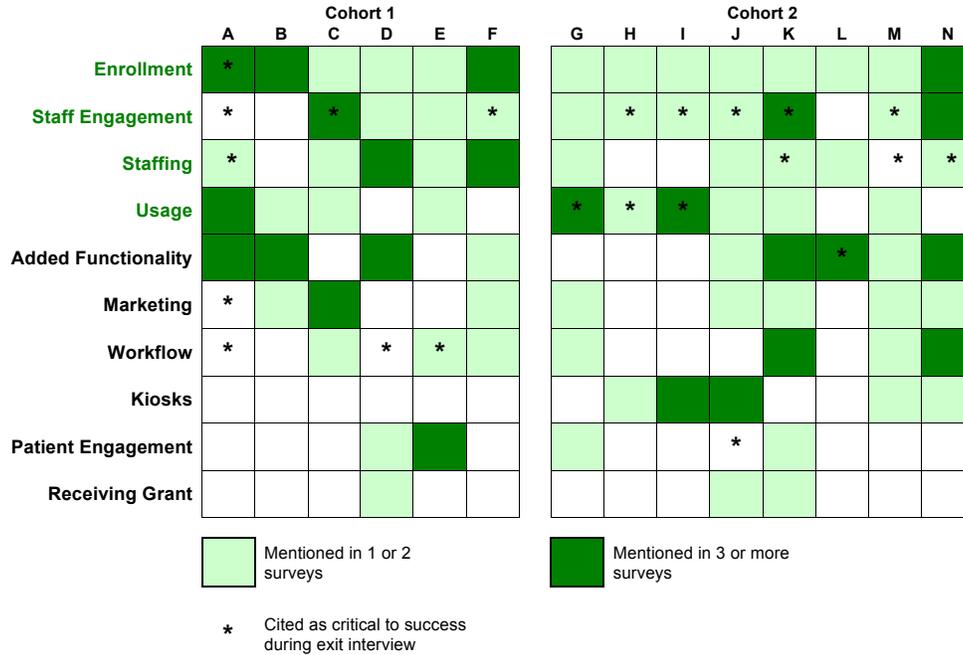


Figure 14. Implementation success factors

Enrollment and Usage

All participants cited enrollment as a monthly success on at least one mini-survey, and ten participants cited usage on at least one mini-survey, which reflects the overall success of the funding opportunity in increasing adoption of patient portals in safety net clinics (see page 11). During the exit interviews, we asked participants to go one level deeper and think about the factors or strategies that increased their enrollment and usage. The one participant that cited enrollment as critical to their portal’s success specifically referred to an auto-enrollment feature they purchased. No other participants mentioned utilizing this technology. All other participants cited success factors that led to enrollment and usage, such as staff engagement and staffing.

“The auto-enrollment functionality that we purchased in 2015 was helpful in our success. [It] addressed the difficulty of enrolling into the system. We found that it allowed the patients to enroll a lot quicker; it was less complicated than the connection the system provided.”

Staff Engagement

The most common success factor participants cited during the exit interviews was staff engagement (8 participants), which was also mentioned at least once in mini-surveys by eleven participants. During the mini-surveys, participants discussed staff engagement in terms of concrete activities, such as trainings

and one-on-one conversations. During the exit interviews, participants shared three broader successful strategies for engaging providers in the patient portal: ongoing and targeted education, a strong portal team, and incentives. Staff engagement was also cited as the second most pressing challenge during portal implementation (page 28), and we learned more about how different providers interact with the portal differently through the provider survey (page 31).

Ongoing and Targeted Education

“It’s just that continuous engagement with our staff members.”

Participants attributed a portion of their success during the portal implementation period to ongoing and targeted staff education. Introducing staff to the portal and training them on its functionality is not a one-time activity. Rather, participants noted that engaging staff and managing yet another change in a rapidly changing environment requires ongoing training and assistance. Participants shared several specific tactics such as:

- **Varying the training modality.** Participants noted increased staff engagement when multiple types of educational resources were available, such as group lecture-style trainings, hands-on workshops, one-on-one trainings, and stand-alone portal resources hosted on an intranet. Different staff members access and retain information in different ways, so by diversifying the training strategy, staff received repeated messages and hopefully at least once in the format best for them.
- **Exposure to the benefits of the portal.** Participants identified a noticeable difference in staff engagement when providers began to recognize the benefits of the portal for their workload and patient care. As one participant reflected, *“It was a struggle getting a lot of the providers on board . . . and just this last month . . . I heard a lot more positive things about the portal and them going from saying, ‘this is going to take a lot more time and we don’t have time for this,’ to saying ‘this is actually a huge benefit.’”* This idea came up again during discussions about successful incentive programs (next page).
- **Directly addressing staff concerns.** Participants recommended taking staff concerns and fears about the portal (such as concerns about security/privacy, workflow, or general resistance to change) seriously and addressing them directly.

“Another piece that really helps [the portal] be successful is managing expectations and fears of our staff initially. We had clinicians who were concerned that they were going [to] be getting hundreds of emails every day from their patients . . . making sure that we address head-on their concerns and didn’t just minimize those helped them feel a lot more secure about rolling it out.”

Strong Cross-Functional Portal Team

Nine participants mentioned the importance of having an active, cross-functional team to engage staff during their exit interviews. Participants emphasized having *“a cross-section from each job area . . . someone who would be a peer leader that could get peers in their positions motivated”* on the portal team. The portal team was perceived as especially important for the long-term sustainability of the portal as the project transitioned away from a dedicated staff position (next page). Participants noted that it *“was a challenge actually getting them all in the room together because clinic time is so valuable”* and without the push from Full Circle to get the right people at the table, the portal teams may not have been as effective.

Incentives

“The incentives were initially helpful in getting people to adopt the messaging on the portal . . . but then after they had used it, the actual usefulness of messaging on the portal itself was self-sustaining. The incentives were no longer the driving force behind getting people to use messaging.”

During exit interviews, seven participants discussed successfully using incentives, such as competitions between staff to meet portal enrollment/utilization goals or prizes associated with meeting certain targets, to engage staff. Incentives were perceived to be most beneficial when they exposed staff to the benefits of the portal, because once staff saw the benefits of the portal their utilization was self-sustaining. The transition to self-sustaining usage required two elements. First, the incentivized

task must expose staff to a benefit of the portal. Most often, participants reported experimenting until they found an incentive structure that engaged staff—yet the incentive structures identified as most effective were those that incentivized use of a specific functionality. For example, when incentives encouraged staff to use messaging or scheduling, the benefits sunk in more than if incentives encouraged only enrollment.

Second, participants reported the greatest success with incentive programs when the staff that was asked to take on portal responsibilities directly benefited from the portal in their day-to-day work. In other words, incentive programs should align with the portal workflow, which in turn should align the work involved with getting a portal up and running with the individuals who will benefit from it. (This idea also came up in the provider survey, described on page 31.) The involvement of case managers provides an illustrative example. Two participants relied heavily on case managers to enroll patients and had very different experiences using an incentive program to engage them. In one case, adoption of the portal was slow but steady among case managers after the incentive program. Over the course of the grant, case managers *“did the bulk of enrollment and got more total people who actually ended up using the portal.”* In contrast, the other participant experimented repeatedly with engaging case managers using incentive programs, but case managers continued to resist the portal. The first participant noted that their *“case managers and*

therapists right now and into the future will continue to see the most benefit in terms of their therapeutic interaction. They're the ones who use direct messaging, for example.” Whereas the second participant described the challenges aligning incentives, workflow, and benefits for their case managers:

“Our case management staff have been definitely the most difficult . . . utilizing the portal is not very natural, and it's not on the top of their minds when they're dealing with crisis. So the feedback that we got was that even though those incentives are really attractive, it just doesn't quite fit in the way that they do business. So that's something we still got to figure out . . . We just need to figure out in what ways the portal is going to add value to that group of people, and I think we know for their patients, but we don't know for the staff.”

Staffing

All 14 participants cited having dedicated FTE as important to the success of their portal projects. For four participants, dedicated portal staff was their most important success factor. In some cases, participants hired new staff to take on portal responsibilities, and in others, roles for existing staff were redefined to include the portal responsibilities. Participants commented that the ability to hire a full-time person to shepherd the portal project was a primary benefit of participating in the funding opportunity and critical to maintaining a focus on the portal throughout the implementation period. For participants who re-launched their portal, having dedicated FTE was identified as a distinguishing factor between this project and previous attempts. There is so much happening in any given clinic between ongoing care delivery and improvement initiatives, like the patient portal funding opportunity, that *“if [sites] don't have someone to shepherd this and work with [staff] day in and day out, it will be an afterthought, and it will not be successful.”* Specifically, participants mentioned the importance of having dedicated staff to experiment with processes, solidify processes, document processes, provide ongoing training (page 21), be available for troubleshooting, champion the portal during the rough patches, and to be the main contact person for staff questions.

“It takes a lot more time and a lot more persistence to get things to where they need to be. You kind of forget that in between some of these projects sometimes the amount of time that it takes for the hand-holding and being down there and consistently talking to somebody about the same thing over and over again.”

CHALLENGES

As the converse to our investigation of success factors, we also sought to better understand the challenges on the path to successful implementation of a patient portal. On the mini-survey each month of the implementation phase, funding opportunity participants were asked, “In the past month, what has been your biggest struggle with patient portal implementation/optimization?” The Foundation and Full Circle used these struggles throughout the implementation phase to tweak and target technical

assistance. Then, during the exit interviews, participants were asked to reflect on their biggest challenges during the grant period. In this way, we were able to capture participants' perspectives on the factors that impeded their success both during their day-to-day work on the portal (mini-surveys) and when reflecting on the grant period as a whole (exit interviews). (Additional details about the mini-survey and exit interview methodology can be found in Appendix A.)

By looking across all mini-surveys and data from the exit interviews, we identified the most prominent challenges related to portal implementation (Figure 15). Throughout the grant period at least half of participants struggled with vendors, staff engagement, workflow, and Spanish portal access. However, when reflecting on the implementation period during the exit interviews, no participants cited workflow as their biggest challenge. In contrast, ten of 14 participants cited their vendor as the biggest challenge throughout the grant period. Each of the four most prominent challenges are discussed in more detail below.

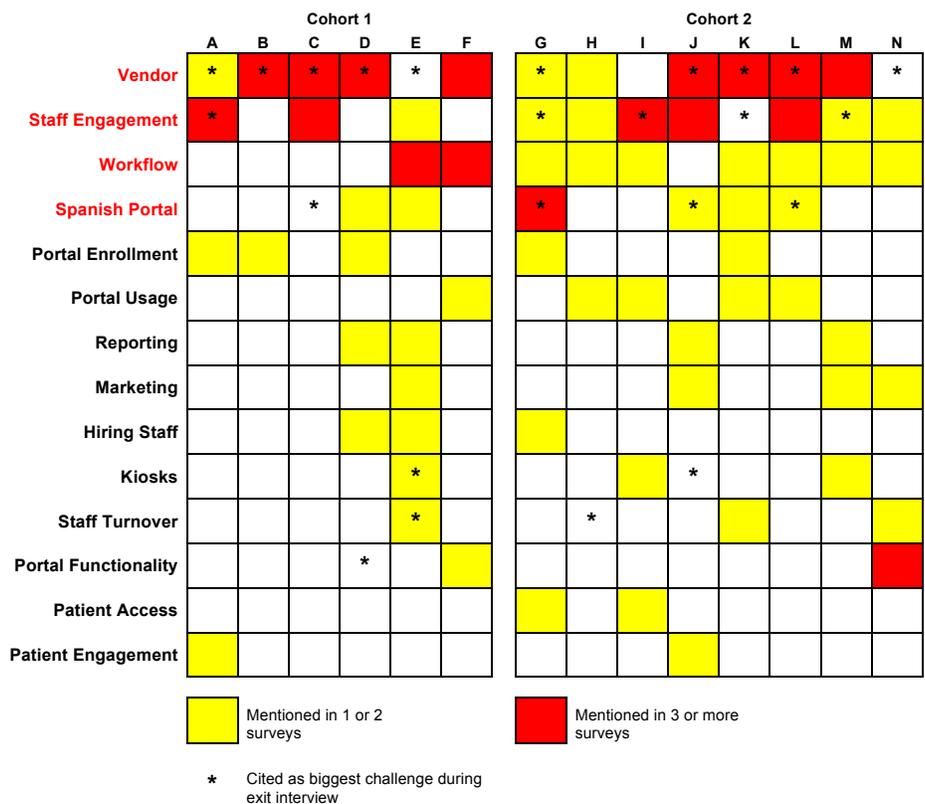


Figure 15. Implementation challenges

Vendor

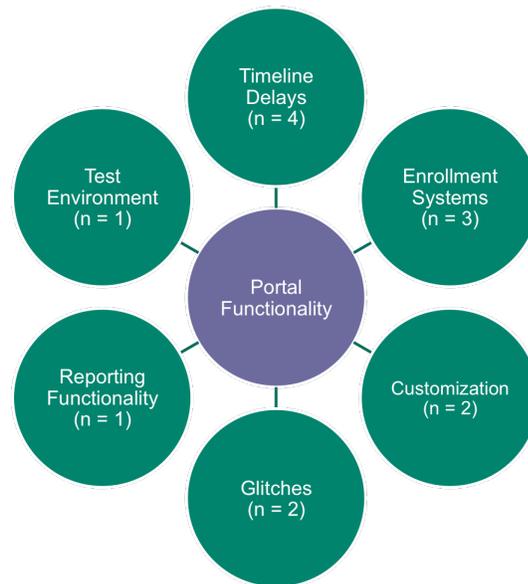
All but one participant mentioned struggling with their vendor on at least one mini-survey, in the exit interviews, or both. Vendors were also the most common repeated struggle on the mini-surveys: of the

*“The whole portal and the whole portal process was kind of an afterthought for [our vendor]. But you know this is the way you move an industry to be more responsive to customers. As more and more of these successful projects are launched and a greater mass of patients find this technology to be attractive, the vendors are eventually going to have to respond to it. **And it’s like the chicken and the egg problem where if they don’t feel there is enough customer demand they’re not going to incentivized to build more elegant solutions,** and so I feel we’re so small on [our vendor]’s priority list but overall collectively their clients will do more and more with the portal, and they’ll, in turn, have to respond and make it easier on us to do that. That is my hope.”*

eleven participants who reported struggling with their vendors, eight mentioned it on three or more surveys. As one participant summarized, *“the vendor is definitely most of our frustrations.”* Vendor challenges were identified as one area that Full Circle was unable to assist (see page 39 for the full list): *“there was only so much [Full Circle] could do when it came to [our vendor], but they were supportive and helpful throughout.”* Participants

reported a lack of responsiveness among vendors that aggravated the specific problems listed below. As one participant summarized, *“getting them engaged enough to really work on [the problem] was another issue. It seemed like they would work on it for a week and then be nonresponsive for three weeks.”* From these experiences, participants inferred that the portal was a low priority to vendors and the quality of the portal product suffered because of it.

Overall, challenges with vendors pertained to the functionality of the portal, including elements such as customization, timeline delays, challenging enrollment systems, lack of reporting functionality, and lack of a test environment. (Spanish functionality, while often related to challenges with the vendor, is discussed separately on page 30 due to its prevalence). Each participant reported a different combination of challenges with their vendor—and the pattern of challenges did not seem to correlate with which vendor the participant worked with. For example, the participant that discussed reporting functionality shared a portal with two other participants, neither of which mentioned struggling



with reporting functionality.¹⁵ While it is possible that the other two participants struggled with reporting functionality but it was less resonant, this finding corroborates participants' suggestion to introduce more formal vendor affinity groups into future funding opportunities (page 43).

- **Timeline Delays.** Four participants noted delays in promised upgrades. Participants reported that these delays negatively impacted their ability to deliver the benefits promised to staff. This damaged staff engagement with the portal.

"Providers weren't able to message all patients from the portal and it was a huge barrier. People would call me and say I want to message this patient but it won't let me, and I tried getting a response from [our vendor] and they said we can't do it yet, it's not set up that way for pediatric patients . . . For us that was a huge barrier and affected our usage from our providers because that affected their buy-in and their ability to say "this is really something great.""

- **Enrollment Systems.** Three participants noted poor functionality related to their portal's enrollment system. Specifically, participants expressed frustration with using a PIN or automated temporary password for portal enrollments. PINs/temporary passwords limited participants' ability to do mass enrollments and added burden on patients during the enrollment process.

"In other portals that I've worked with over the past ten years, there was always something that the patient knew, like the last four digits of their social security number or the year of their birth, in order for them to access their account for the first time and then sign up for it. Here we have to give them a randomly-generated password per patient, and so there's really no way to do a mass invite, and so we have to really concentrate on the targeted, face-to-face initiatives."

- **Customization.** Two participants reported significant challenges due to the lack of customization in their portal. In these cases, participants had a strong sense of what their portal needed to be able to do to serve their needs, but the standard portal was unable to meet these needs, and the vendor provided no flexibility for customization.

"How much control do you have over the changes you can make to your system? It can create problems if you don't have control over making those changes. And we don't have a lot of control over the customization of our system"

- **Glitches.** Two participants experienced glitches in their portal systems, one impacting HIPAA compliance, the other impacting patient enrollment.

¹⁵ It was not clear from the evaluation data whether any of these three participants had add-on software for enhanced reporting.

"It took a long time to get [portal enrollments] off the ground and then when we got it off the ground it would work for oh, let's say three patients and then we would start getting script errors. And so we'd have to go back to [the vendor] and work through it and find out where the issues were at, and it just was a never ending process until they finally got it."

- **Reporting Functionality.** One participant struggled throughout the implementation period with pulling reports from their portal. Specifically, the participant was unable to get detailed enough information to guide strategic decisions.

"It's really hard to make action steps on certain items if you don't have the greatest data in the world to move forward on. Not having that baseline means, [our portal specialist] had to do some of this by hand . . . It's just not ideal and so that's been a frustrating piece."

- **Test Environment.** One participant expressed frustration with the lack of a test environment to pilot and train functionalities. As a result, they felt unable to adequately train staff or plan workflow in advance.

"We realized really early on that we couldn't go in and just try out [the portal] or give residents access through other providers to a playground environment where they could go in and practice using [the portal]. Unfortunately, that doesn't exist, at least within our system, for our portal. And we worked hard to figure out ways around that."

Staff Engagement

Ten participants identified staff engagement as a struggle on at least one mini-survey—and of these ten, eight cited staff engagement as both a struggle and a success on mini-surveys (though not on the same mini-survey). Five participants cited staff engagement as among their biggest challenges throughout the implementation period—and of these five, four identified staff engagement as both their biggest success and biggest challenge over the implementation period. No other topic had as much overlap as both a success factor (page 21) and a challenge, reiterating the idea that **staff engagement is both really hard and really important** to the success of a portal project.

Participants identified four specific challenges related to staff engagement: identifying and promoting the benefits of the portal (n = 7), providing adequate repetition of messaging/training (n = 4), addressing workload issues (n = 4), and addressing overarching change resistance (n = 2).

Identifying and Promoting the Benefits of the Portal

The most commonly identified staff engagement challenge related to positioning the portal as a benefit instead of extra work. While participants recognized that promoting the portal's benefits was key to staff

buy-in, it required trial and error to identify which benefits were most compelling to which staff members.

As one participant described, *“it was a surprise to me that it was so difficult to [find the right incentive model], we had to constantly be revising it and tracking so many different things . . . Okay, we’ll do it this way. No, that didn’t work. All right. Well we’ll do it this way. No, that didn’t work. And then trying to figure out okay well why didn’t this work.”*

“Staff engagement [has been hardest thing] because a certain level, we had some staff that was a lot more resistant about it. But once they started seeing the product and the numbers and the usage and the benefits of it, that engagement turned from being the hardest thing to they just naturally became engaged once they saw it evolve. But it definitely started out as one of the hardest.”

Participants described benefits in terms of certain staff roles (e.g., e-prescribing for providers, scheduling for front desk staff), and the provider survey further informs this

discussion. We found three distinct experiences with the patient portal among providers at funding opportunity participant sites (page 31). These distinct experiences suggest that what works to engage one group is unlikely to engage all groups. And experiences on the provider survey did not align clearly with staff role, suggesting that distinctions between who needs what type of engagement may not be entirely differentiable by role.

Adequate Repetition

“If you don’t keep really putting it in front of them [it get’s lost]—they’ve got 8,000 initiatives we’re working on . . . Nobody is averse to it, but it’s just kind of reminding them to change their flows.”

Participants noted that part of what made staff engagement so challenging was how much repetition was required to get staff bought into the portal. This observation was directly related to the benefits of having dedicated FTE (page 24). It simply took more time and energy to provide enough repetition in messaging and training to demonstrate the benefits of the portal, even once those benefits had been identified.

Workload Issues

Four participants identified significant barriers related to helping staff fit the portal into their existing workload. None of these four participants noted challenges with physician workload. Rather, the barrier pertained to medical assistants (2 participants), case management staff, and front desk staff. In all four cases, participants reported that staff was already overloaded and adding one more thing generated push back from staff.

“There was a little bit of push back from some of the enrollment staff and concern about how [the portal] fit into their time slot with patients . . . they’re thinking about patients with Medicaid, with the health exchange, they have to register patients to vote. So a lot of things have been added to their plate already so even one more you know seems a little daunting, especially during open enrollment.”

Change Resistance

Two participants reported more generalized resistance to change among staff. In these cases, barriers to staff engagement were not necessarily portal specific, rather reflected larger change management struggles across the organization. In both cases, participants overcame this barrier by *“try[ing] to help them get comfortable and gently push[ing] them forward.”*

Workflow

While nine participants identified workflow as a struggle on at least one mini-survey, no participants identified workflow as among their biggest challenges when reflecting on the implementation period as a whole during the exit interviews. By the exit interview, all participants had solidified a process for both enrollment and encouraging use among both patients and providers. The exit interviews asked participants to outline how the portal fit into their workflow: no participant hesitated or expressed any uncertainty about the portal touch points throughout a patient’s clinic experience. It seems that all workflow challenges identified on mini-surveys were resolved by the end of the implementation period.

Spanish Portal

Related to vendor issues (page 25), challenges with a Spanish portal were resonate among participants. Six participants identified the lack of a functioning Spanish portal as a struggle on at least one mini-survey. Four participants identified the lack of a functioning Spanish portal as among their biggest challenges during the exit interview—and an additional seven participants discussed struggling with a

“It’s kind of a legal requirement that you’re providing access to all of your patient population not just one sub-set . . . it feels like you get caught in the middle sometimes because we know it’s what we need to do but I don’t know how to make it happen because we don’t control the vendor side of things.”

Spanish portal, though it did not rise to the top of the list of challenges. The challenge related to a Spanish portal is more straightforward than most: participants lamented the fact that a Spanish portal was unavailable through their vendor, and when one was available, the quality was below that of the English portal. The disparity in portal availability and quality created inequities between patient groups that ran counter to participants’ standards of care and

commitment to their patients. Concerns about language barriers creating access issues extended to other patient populations (*“not just for Spanish speaking patients but for patients speaking other languages as well, there’s a huge limitation”*) and participants expressed frustration that no technology analogous to a call-in language line existed for the portal.

PROVIDER/STAFF EXPERIENCE

At the end of the implementation period, the primary contacts for each funding opportunity participant distributed a provider survey to their clinic staff. We used a broad definition of “provider,” asking participants to distribute the survey to medical and administrative staff that have regular contact with the patient portal (e.g., physicians, NPs/PAs, nurses, medical assistants, front desk staff, other administrative staff). The survey was not intended for portal enrollment specialists. The distribution of survey respondents by role is shown in the table below:

Distribution of Provider Survey Respondents by Role	
Role	n
Administrative*	35
Medical Assistant	31
Nurse	7
Nurse Practitioner	13
Physicians Assistant	15
Physician	36
Other ⁺	24
Total	161
* Includes front desk and receptionists	
⁺ Includes case managers, call center staff, health educators, enrollment specialists, etc	

The survey used Q Methodology¹⁶ to understand providers’ subjective experiences with the patient portal. Q Methodology seeks to find patterns across people rather than across items. The goal is to identify similar perspectives about the patient portal across respondents. Each respondent was asked to sort a set of statements about the patient portal from “Most Characteristic” to “Least Characteristic” of their experience. Vantage generated 45 statements about the people, process, and technological components, as well as anticipated outcomes of successful patient portal implementation using external resources provided by the Foundation. For example, statements included “I find the portal easy to use,” and “Since we started using the portal, my patients take a more active role in their healthcare.” The full list of statements is reproduced in Appendix A (page 51).

¹⁶ See Appendix A, page 48 for a more detailed summary of Q Methodology.

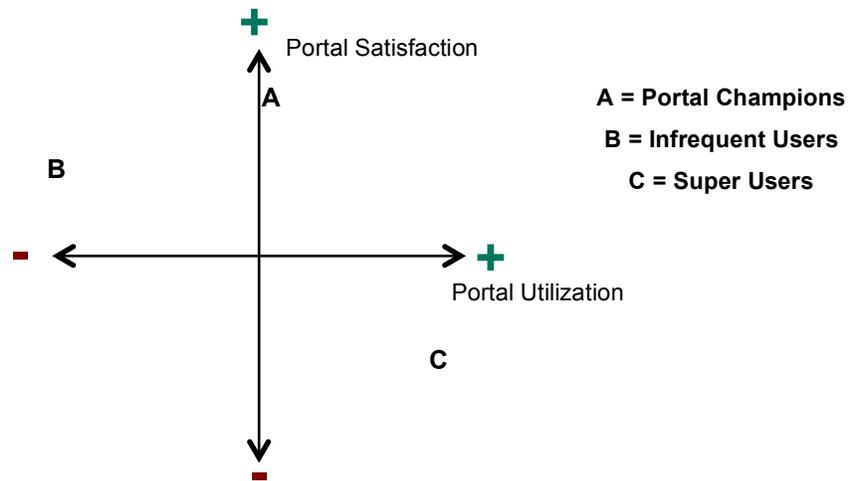
Unlike traditional scaled surveys, where a respondent can select “Most Characteristic” for every item, Q Methodology provides a fixed number of slots per ranking to force respondents to sort statements relative to each other. In this case, the sorting distribution for the 45 statements was:

-3 Least Characteristic	-2	-1	0	+1	+2	+3 Most Characteristic
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>					
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		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>			

The completed sorts are correlated across respondents to uncover sorts that share a similar structure. These correlations between sorts are used to uncover groupings of respondents with a similar experience and to understand how their experience manifests, by examining how the statements were sorted for each group of similar respondents.

Provider/Staff Survey Findings

Respondents clustered into three distinct perspectives on the patient portal: The largest group, with 55 respondents, were the Portal Champions, who had an overwhelmingly positive experience with the portal and experienced positive outcomes of the portal for both patients and clinics. Second, there was a group of Superficially Satisfied but Infrequent Users (28 respondents) who did not actively use the portal but were satisfied with its basic functionality. Third, there was a group of Super Users with an Increased Portal-Related Workload (22 respondents) who use the portal everyday and utilize most portal features but do not find it easy, efficient, or time-saving to use. Each respondent type is described in more detail below.



Portal Champions¹⁷

Fifty-five respondents are significantly associated with this perspective, evenly split between Cohort 1 and Cohort 2 clinics. These respondents were well distributed across provider/staff types with only nurses less likely to be associated with this perspective (20% of nurses associated with this perspective, compared to 50%+ of all other roles). The majority (83%) of respondents associated with this perspective reported a good or excellent comfort level using technology in the workplace. More Portal Champions reported that the portal made positive contributions to their workplace than other respondents (53% of Portal Champions reported a positive or very positive contribution compared to 45% of Super Users and 35% of Infrequent Users).

These respondents had an overwhelmingly positive experience with the portal. They knew how to use the portal, the portal saved them time, increased their efficiency, and was important to their daily work. Like all other respondents, they had staff in the office to help employees and patients with the portal. These respondents experienced positive outcomes of the portal at higher rates than other respondents. They reported that the portal reduced calls to ask non-urgent medical questions, allowed them to communicate effectively with patients, and made a positive contribution to the quality of care. Further, they were less likely to have experienced the negative aspects of the patient portal than other respondents. They did not have concerns about integrating the portal into their work, system outages did not affect their ability to use the portal, neither they nor their patients had privacy and security concerns, and neither portal complexity nor browser compatibility issues affected their ability to use the portal. The pattern of responses for these respondents included no negative experiences, but it also included no mention of using specific functions of the portal or using the portal regularly.

¹⁷ The Portal Champions perspective (factor) has an eigenvalue of 28.22 and explains 16.9% of the study variance.

Differentiating Statements for Portal Champions		
Item #	Statements Ranked as “Most Characteristic” of Portal Champions’ Experience	Rank
21	My patients use the portal to send providers secure messages	+3
28	I know how to use the portal	+3
29	There are staff in my office who help other staff with the portal	+3
30	There are staff in my office who help patients with the portal	+3
Statements Ranked Higher by Portal Champions Than Other Respondents		
19	My patients use the portal to view their health record	+2
45	I believe the portal has made a positive contribution to the quality of care at my organization	+2
10	The patient portal saves me time	+1
11	The portal increases my efficiency	+1
27	The patient portal is important to my daily work	+1
37	The portal reduces instances of patients calling to ask non-urgent medical questions	+1
38	The patient portal allows me to communicate more efficiently with my patients	+1
26	I use the portal to recommend preventative services to patients	0
Statements Ranked Lower by Portal Champions Than Other Respondents		
5	My patients' expectations about how quickly we can review and release information to the portal are unrealistic	-2
6	I have concerns about fully integrating the patient portal into my work	-2
12	System outages affect my ability to use the portal	-2
24	The portal is available in the languages our patients speak	-2
33	I regularly have the chance to discuss my portal experiences with other portal users	-1
32	Patients receive hands-on training/demonstrations on how to use the portal	0
Statements Ranked as “Least Characteristic” of Portal Champions’ Experience		
3	I have concerns about the portal's protection of patient privacy and security	-3
4	My patients have concerns about the security and privacy of the portal's data	-3
13	The portal's complexity affects my ability to use the portal	-3
14	Browser compatibility issues affect my ability to use the portal	-3

Superficially Satisfied but Infrequent Users¹⁸

Twenty-eight respondents were significantly associated with this perspective. More than half (61%) of these respondents work at Cohort 2 clinics and a higher percentage of clinicians (40% of nurses, 33% of nurse practitioners and physician assistants, and 31% of physicians) were associated with this perspective than other provider/staff types. These respondents had the lowest reported comfort with technology in the workplace (25% of Infrequent Users report fair or neutral comfort with technology compared to 0% of Super Users and 10% of Portal Champions). Slightly more than half (57%) of respondents associated with this perspective reported that the patient portal made a neutral contribution to their workplace (1 respondent characterized the portal as a negative contributor, and the only respondent to characterize the portal as a very negative contributor was an Infrequent User).

¹⁸ The Infrequent Users perspective (factor) has an eigenvalue of 17.08 and explains 10.3% of the study variance.

Overall, these respondents were satisfied with the portal. They knew how to use the portal, found it easy to use, and were satisfied with its features and functionality. They were more likely than other respondents to report that the portal interface was clear and easy to use, that the portal automated routine tasks, and that the portal was available in the languages that patients speak. Their primary concerns with the portal were security: they were more likely than other respondents to have concerns and report that patients had concerns about patient privacy and security. Like all other respondents, they had staff in the office to help employees and patients with the portal. Despite their positive perspectives on the portal, they did not actively use it. These respondents did not use the portal everyday, and neither they nor their patients used features of the portal, including secure messaging, referral requests, viewing health records, prescription refills, and online appointments. They also reported that the portal did not make their communication more efficient, reduce visits or calls for non-urgent medical questions, or result in patients taking a more active role in their health care.

Differentiating Statements for Infrequent Users		
Item #	Statements Ranked as “Most Characteristic” of Infrequent Users’ Experience	Rank
1	I find the portal easy to use	+3
28	I know how to use the portal	+3
29	There are staff in my office who help other staff with the portal	+3
30	There are staff in my office who help patients with the portal	+3
Statements Ranked Higher by Infrequent Users Than Other Respondents		
2	I am satisfied with the features and functionality of the portal	+2
15	I find the portal interface to be clear and easy to use	+2
24	The portal is available in the languages our patients speak	+2
4	My patients have concerns about the security and privacy of the portal's data	+1
3	I have concerns about the portal's protection of patient privacy and security	0
9	The portal automates routine tasks such as intake forms and contact information updates	0
Statements Ranked Lower by Infrequent Users Than Other Respondents		
17	My patients use the portal to request referrals	-2
22	I use the portal to send patients secure messages	-2
37	The portal reduces instances of patients calling to ask non-urgent medical questions	-2
38	The patient portal allows me to communicate more efficiently with my patients	-2
43	Since we started using the portal, my patients take a more active role in their healthcare	-1
19	My patients use the portal to view their health record	0
21	My patients use the portal to send providers secure messages	0
Statements Ranked as “Most Characteristic” of Infrequent Users’ Experience		
16	My patients use the portal to fill/refill prescriptions	-3
18	My patients use the portal to make appointments online	-3
23	I use the portal everyday	-3
36	The portal reduces instances of patients coming in person to ask non-urgent medical questions	-3

Super Users with an Increased Portal-Related Workload¹⁹

Twenty-two respondents were significantly associated with this perspective. A majority (68%) of these respondents worked at Cohort 1 clinics and a higher percentage of administrative staff (33% of administrative respondents) were associated with this perspective than other types of providers/staff. All respondents associated with this perspective reported a good or excellent comfort level using technology in the workplace. Slightly less than half (45%) of respondents associated with this perspective reported that the patient portal made a positive contribution to their workplace, and 45% reported that the portal made a neutral contribution (only 2 respondents characterized the portal as a negative contributor).

These providers/staff were active users of the patient portal. They were more likely than other respondents to use the portal everyday and both they and their patients utilized numerous features of the portal, including secure messaging, prescription refills, online appointments, and updating demographic information. The portal was integrated into their workflow more than for other respondents, though they remained concerned about fully integrating the portal into their workflow. Like all other respondents, they had staff in the office to help employees and patients with the portal. Despite, or perhaps because of, their regular, frequent, and substantive use of the portal, they remained frustrated with its functionality and unsatisfied with the portal. They did not find the portal easy to use or the interface clear, and the portal's complexity and system outages both affected their ability to use the portal. For these respondents, the portal did not reduce their workload, reduce time spent on administrative tasks, save them time, or increase their efficiency. Further, they did not notice any changes in their patients' satisfaction or knowledge about their health.²⁰

¹⁹ The Super Users perspective (factor) has an eigenvalue of 15.72 and explains 9.4% of the study variance.

²⁰ Since a high percentage of this group was administrative staff, they may not have direct knowledge of patient-level impacts.

Differentiating Statements for Super Users with an Increased Portal-Related Workload		
Item #	Statements Ranked as “Most Characteristic” of Super Users’ Experience	Rank
22	I use the portal to send patients secure messages	+3
29	There are staff in my office who help other staff with the portal	+3
30	There are staff in my office who help patients with the portal	+3
35	I encourage my patients to use the portal	+3
Statements Ranked Higher by Super Users Than Other Respondents		
6	I have concerns about fully integrating the patient portal into my work	+2
12	System outages affect my ability to use the portal	+2
13	The portal's complexity affects my ability to use the portal	+2
34	I discuss the portal directly with my patients	+2
16	My patients use the portal to fill/refill prescriptions	+1
25	I have updated my workflow to incorporate the portal	+1
18	My patients use the portal to make appointments online	0
20	My patients use the portal to update their demographic information	0
23	I use the portal everyday	0
Statements Ranked Lower by Super Users Than Other Respondents		
1	I find the portal easy to use	-2
2	I am satisfied with the features and functionality of the portal	-2
9	The portal automates routine tasks such as intake forms and contact information updates	-2
26	I use the portal to recommend preventative services to patients	-2
15	I find the portal interface to be clear and easy to use	-1
40	Since we started using the portal, my patients seem to be more satisfied with services	-1
42	Since we started using the portal, my patients are more knowledgeable about their own health	-1
Statements Ranked as “Least Characteristic” of Super Users’ Experience		
7	The patient portal reduces my workload	-3
8	The portal reduces the amount of time I spend on administrative tasks	-3
10	The patient portal saves me time	-3
11	The portal increases my efficiency	-3

To what extent was the technical assistance useful in implementing the patient portal?

<input checked="" type="checkbox"/> Overall, technical assistance was perceived as a value-add <input checked="" type="checkbox"/> The combination of technical assistance components met all participants' needs	
<input checked="" type="checkbox"/> <input type="checkbox"/> Minor suggestions for improvement	
	<p style="text-align: center;">Suggestions:</p> <ul style="list-style-type: none"> • Flexible technical assistance • Lessen evaluation requirements • Formally facilitate direct participant relationships

OVERALL ASSESSMENT

Participants unanimously reported that the technical assistance was useful in implementing their patient portal project. Participants described the technical assistance as most helpful early on in the implementation phase and waning in importance as they became more comfortable and competent with the portal (see page 43 for participants' improvement suggestions based on this assessment).

The value of the technical assistance was increased by the perception that the project was *"a fun grant to work on"* and *"a*

positive experience." Participants commented that they would not have made as much progress as they did without **both** the grant funding and the technical assistance. In fact, participants emphasized that for projects of similar complexity they hoped to see more funding opportunities structured like this one: four participants specifically suggested the approach be replicated, nine were open to replication in the right contexts with the right adaptations (page 43), and only one participant expressed concern with the added workload associated with a transition to a technical assistance/learning community funding model.

"It's been a great experience from the planning to the implementation, very well organized and just really good people on the project and so yeah, if [the Foundation's] planning on going in this direction in the future I think that will be amazing."

Grant Funding

“I really can’t stress enough that I don’t think we’d be where we are now without having the ability to hire [our portal manager] . . . I really think it takes a face to make the portal implementation happen . . . the most valuable piece of the funding that we received was being able to hire her.”

Three participants specified that they would not have been able to tackle a patient portal project without the added financial resources provided by the grant. All three participants echoed an early finding related to the necessity of having dedicated FTE to spearhead the portal project (page 24), which would not have been feasible without dedicated grant funding.

Technical Assistance

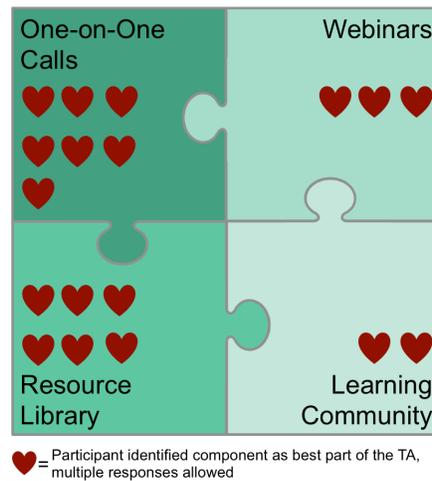
Seven participants specified that the technical assistance was critical to their ability to successfully complete their portal project. Participants highlighted that the technical assistance helped them:

- **“Leapfrog” the portal learning curve:** *“It’s really nice to have had someone else try it first, and then we can piggyback or leapfrog based on their findings.”*
- **Feel guided throughout implementation:** *“It’s very overwhelming when you think about it. We’ve never done it before, and so two people who had two different areas of expertise but yet both [related to portal] . . . were able to help guide us.”*
- **Better understand the power of the portal:** *“We were just overwhelmed by the complexity of this technology and this initiative, and . . . [Full Circle] . . . showed us what was possible. It opened our eyes to the impact it could have on the patients that we serve and even clinical satisfaction.”*
- **Make a small team’s efforts go further:** *“We didn’t have a lot of bodies to throw at this work and so [Full Circle] being an expert extension of the team really mattered.”*
- **Feel free to test ideas out:** *“You can throw money at any problem, and I don’t think it’s going to solve the issue. But being able to . . . try different ideas and having something else to fall back on when it didn’t really work as well . . . It really helped. Otherwise we still might be struggling.”*

TECHNICAL ASSISTANCE COMPONENTS

The implementation phase technical assistance included four primary components: one-on-one phone calls, webinars, an online resource library, and a peer learning community. Each component was identified as the most valuable component by at least one funding opportunity participant, and nearly all participants found value in all four components, suggesting that the combined approach was appropriate

to target participants at all stages of sophistication. Feedback on each component is described in more detail below.



Calls

The patient portal funding opportunity provided an opportunity for each participant to speak one-on-one with Full Circle once a month. Seven participants cited the one-on-one calls as the most valuable component of the technical assistance, and all participants found value in the calls. Participants’ statements about the value of the calls mirrored their feedback on the value of the technical assistance overall (page 38). For example, participants discussed the value of having Full Circle as a source of *“advice and insight”* on individual problems that came up throughout the implementation period. These comments highlighted the value of Full Circle as a *“sounding board”* and their ability to provide *“perspective on what people have done before.”* Other participants valued Full Circle’s role as a *“good counselor . . . listening to the things that we were struggling with and helping talk through some potential work arounds.”* Participants appreciated the opportunity to get feedback tailored to their situation and struggles.

“Every time we talk [Full Circle is] willing to see what my problems are, what our struggles were, what our challenges were, and then for every single situation we had they had a answer for or an idea.”

Fewer than half of participants could identify a time when Full Circle was unable to help with a problem they faced, and only one topic was cited by more than one participant. Topics Full Circle was unable to provide adequate guidance included:

- Handling portal vendor issues (n = 2)
- Providing a sample Spanish policy (n = 1)
- Providing a detailed step-by-step road map, from launch to successful implementation (n = 1)
- Strategies for engaging participant-specific staff roles (n = 1)

- Strategies for long-term staff engagement (n = 1)

Despite participants' positive experiences with the one-on-one calls, this component was also one of the areas for which participants provided suggestions for improvement. Specifically, participants suggested allowing more flexible interactions with Full Circle, with the opportunity to engage with them either more or less frequently than monthly (page 43).

Webinars

The patient portal funding opportunity included 14 webinars. Three participants cited the webinars as the most valuable component of the technical assistance, and all 14 participants found value in the webinars. Participants stated that the most valuable webinars were ones that applied to their specific circumstances. The number of participants who identified specific webinars as the most helpful is summarized below:

#	Title	Cited by # Participants
1	Kick-off	-
2	Minor Access, Part 1	3
3	Minor Access, Part 2	
4	Team Operations	-
5	Support Staffing	-
6	Engaging Your Patients and Staff through Successful Feedback	4
7	Engaging Your Patients and Staff through Innovative Ideas	
8	Training	2
9	Sustainment	3
14	Sustainment Best Practices	
10	Appointment Functionality	-
11	Use of Kiosks	1
12	Spanish Language Options	1
13	Best Practice Celebration	3
<i>Note: Rows for similar topics are merged because participants did not mention full webinar titles, only general topics</i>		

Resource Library

The patient portal funding opportunity provided an online library of resources for participants to access as needed. Six participants cited the resource library as the most valuable component of the technical assistance, and thirteen participants found value in the resource library. The remaining participant noted that they did not access the library directly, rather Full Circle would email them relevant resources as issues came up.

The resource library was originally hosted on a Sharepoint site but was transitioned to a Dropbox site in October 2015 (after the implementation phase started). In the planning phase evaluation, participants noted that the resource library was difficult to navigate. These issues seem to have been resolved: no participants reported challenges navigating the resource library during the exit interviews.

By far, participants reported that the most helpful resources available were marketing/advertising materials (n = 10). Participants also mentioned the following helpful resources: minor access materials (n = 2), policy samples (n = 1), sample forms (n = 1), sample staff/patient surveys (n = 1), and provider/patient messaging templates (n = 1).

Learning Community

The patient portal funding opportunity informally facilitated a peer cohort of participants all working on portal projects. Participants were provided with a list of contact information for all participants (including a note about which vendor they used), participants shared with each other over webinars, and Full Circle encouraged direct connection between participants. Two participants cited the learning community as the most valuable component of the technical assistance. Twelve participants reported during the exit interviews that they had interacted individually with at least one other participant. The monthly mini-surveys corroborate this finding. Each month, participants were asked, “In the past month, have you connected with other patient portal funding opportunity participants for advice or support?” Twelve participants reported that they had interacted with another participant at least once, and the two who did not are the same who did not report interacting during the exit interview. Interactions reported on the mini-surveys increased throughout the implementation phase and were at the highest points when both Cohort 1 and Cohort 2 had active implementation grants (Figure 16).

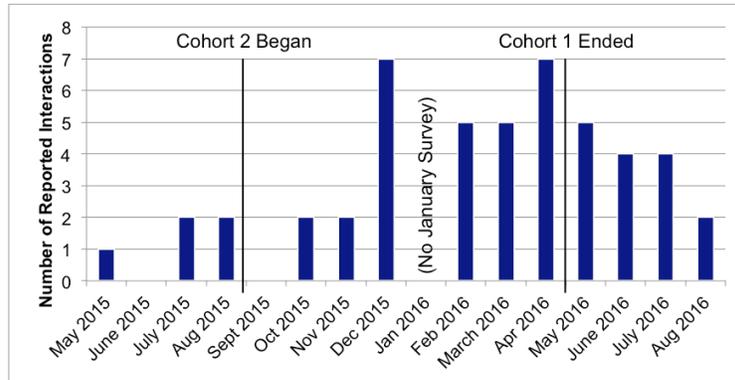


Figure 16. Interactions between participants

Two types of interactions were common, as reported by participants in mini-surveys and exit interviews: connecting with participants with a shared vendor and connecting with participants about a specific topic. Participants reported that Full Circle played an important role in connecting them with other participants who might be able to help. More formal facilitation of direct relationships between participants was among participants' suggestions for improvement (next page).

SUGGESTIONS FOR IMPROVEMENT

Participants had minimal suggestions for improvement, and four stated that they would not change anything about the funding opportunity. Among participants that had suggestions, three ideas emerged: allowing for more flexible use of the one-on-one calls (n = 4), lessening the evaluation requirements (n = 4), and increasing facilitation of direct relationships between participants (n = 3).

Flexibility in One-on-One Calls

Four participants noted that they would have liked more flexibility in when and how to utilize the technical

"The calls with [Full Circle] got really repetitive. I felt like they were really helpful at the beginning, and then as the year went along it felt like we're . . . going over the same things we went over the month before, and it didn't feel as helpful for the second half of the year . . . I think [we should have had] heavier technical assistance available at the beginning and then allow that to phase out naturally but not necessarily be unavailable."

assistance resources, especially the one-on-one calls with Full Circle. One participant would have liked less frequent calls, as they did not feel they required such rigorous technical assistance. Two participants suggested more than monthly calls initially and then tapering towards less frequent than monthly calls by the end of the implementation period, as they felt the value of the technical assistance decreased over time. The fourth participant would have liked more frequent calls, as they felt far behind in the portal process. While the Foundation

and Full Circle emphasized that participation in monthly calls was optional, these four participants did not perceive them to be optional.

Lessening Evaluation Requirements

Four participants suggested reducing the evaluation requirements. Specifically, participants noted that the provider survey was too much to ask of busy providers (*“A two- or three-minute survey . . . that’s the optimal length for providers”*), suggested aligning the grant goals with meaningful use targets (*“it created a lot of confusion at the staff level . . . we celebrate[d] that we met our MU goal . . . [but] then we’re like, no, we’re not done because we also have this Colorado Health Foundation goal that’s different”*)²¹, and suggested eliminating portal data collection to accommodate limited portal reporting functionality (*“basically we need[ed] to take the screenshots every month to see those numbers”*).

Facilitating Direct Relationships

Three participants suggested that the funding opportunity more formally facilitate relationships between participants. Specifically, participants suggested creating formal vendor affinity groups and hosting an in-person meeting. First, two participants with eClinicalWorks mentioned how helpful it was to have a specific conversation with others of the same vendor and wished the conversations were more regular and available for all vendors. Second, participants felt that an in-person meeting would help *“build relationships”* and *“feel more comfortable”* reaching out directly to other participants.

²¹ The measureable result goals for this funding opportunity were intentionally set to be double the meaningful use goals (10% vs 5%) to reflect the increase resources dedicated to patient portals. In addition, the meaningful use goals are per provider whereas the measureable result goals were per funding opportunity participant.

Appendix A. Methodology

For the present evaluation of the implementation phase, we collected data via monthly mini-surveys completed by each participant's key contact for the project, quarterly portal data collection about enrollment, utilization, and features, a provider survey to capture day-to-day experience working with the portal, and an exit interview with each participant's key portal staff and executive sponsor. Each of these sources is described in more detail below.

MINI-SURVEYS

Each month, a three to six question mini-survey was distributed to the key portal contacts at each participant site. The surveys asked about the participant's experience with portal implementation/optimization over the past month. We distributed the survey via QuestionPro, except for one participant who received the survey via a word document and two who received a direct link to the survey (due to firewall limitations). Three questions were asked on every survey:

- In the past month, what has been your biggest success with patient portal implementation/optimization?
- In the past month, what has been your biggest struggle with patient portal implementation/optimization?
- In the past month, have you connected with other patient portal funding opportunity participants for advice or support?
 - If yes, please describe the interaction with other patient portal funding opportunity participant(s) and describe what resulted because of the interaction.

Targeted questions asking about specific portal strategies or participants' suggestions for improving the funding opportunity were added each month, and generally each of the targeted questions was asked only once.

Specific Portal Strategies

- Did participants experience a "dead zone" of decreased momentum between work plan submission and grant award?
- What portal data points do participants actively monitor?
- Provider engagement strategies
- Strategies to target specific patient populations

Suggestions for Improving the Funding Opportunity

- Participant suggestions for technical assistance topics
- Participant suggestions for improving the resource library
- Participant feedback on the usefulness of the one-on-one monthly calls
- Participant suggestions on how technical assistance could best support provider

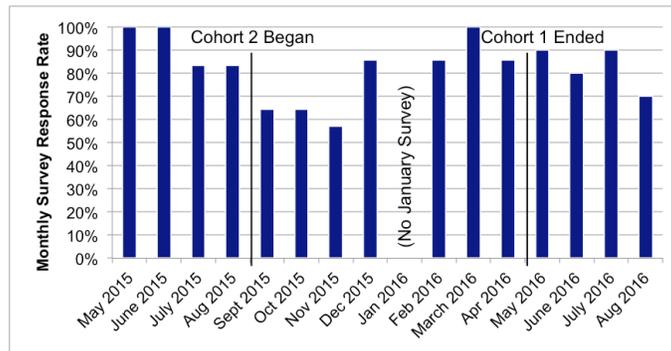
Specific Portal Strategies

- Minor access plans
- Strategies for soliciting patient feedback
- Strategies for encouraging ongoing patient use of portal
- Sustainability strategies
- Leadership engagement
- Barriers to patient access/use of the portal
- Strategies to maintain staff engagement
- Use of portal by behavioral/dental providers
- Strategies to engage medical staff
- Strategies to engage non-medical staff

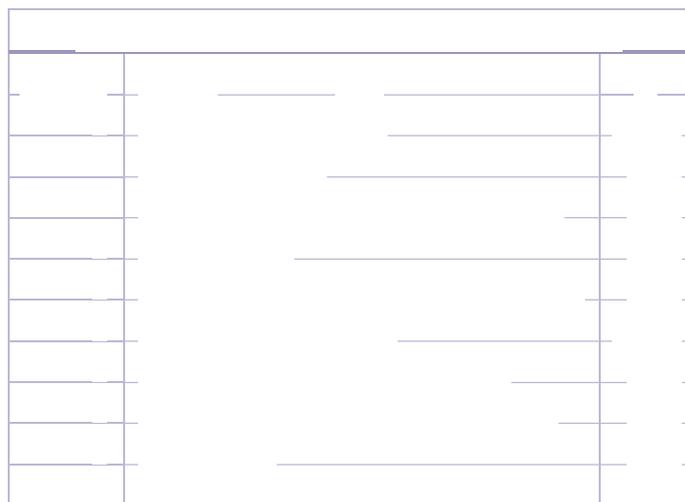
Suggestions for Improving the Funding Opportunity

- buy-in
- Participant suggestions for improving communications from the Foundation, Full Circle, and/or Vantage
- Main barriers to fully participating in FO activities
- Participant suggestions to improve the technical assistance

Survey response rates varied by participant and by month. Five months yielded survey response rates 90% or above and three months yielded survey response rates below 70%.



Over the implementation phase, response rates for each participant varied from 45% to 100%. Three participants responded to every mini-survey, whereas one participant responded to only 45% of surveys.



PORTAL DATA COLLECTION

Participants were asked to report quarterly on key quantitative indicators of portal function, such as the number of patients enrolled in the portal, the number of patients who have viewed, downloaded, or transmitted to a third party their health information using the portal, and portal services used. Participants' capacity to report on various data points was limited (page 14), and participants only submitted the data that was feasible for them to access. An example of the quarterly data collection template is reproduced below. When awarded grant funding, participants were asked to submit portal data for the quarter prior to the grant award (baseline). Each quarter, participants were asked to re-submit portal data, concluding with final quarter of their implementation grant.

Patient Portal Quarterly Tracking								
<table border="1"> <tr> <td>Clinic Name</td> <td></td> </tr> <tr> <td>Data Collection Date</td> <td>October 10, 2016</td> </tr> <tr> <td>Quarter Covered</td> <td>April 1 - June 30, 2016</td> </tr> </table>			Clinic Name		Data Collection Date	October 10, 2016	Quarter Covered	April 1 - June 30, 2016
Clinic Name								
Data Collection Date	October 10, 2016							
Quarter Covered	April 1 - June 30, 2016							
METRIC	VALUE	DEFINITION						
Patient Enrollment and Portal Use								
Total Patient Population (<i>from grant agreement</i>)		Total number of unduplicated patients who receive services at your clinic						
Target Number of Patients Using Portal (<i>from grant agreement</i>)		Your identified goal for the number of unduplicated patients who will view, download, or transmit to a third party their health information using the patient portal <i>over the grant period</i>						
Cumulative Number of Patients Enrolled to Date		Running total of the number of unduplicated patients enrolled/registered to use the portal (cummulative)						
Cumulative Number of Patients who Have Used the Portal to Date		Running total of the number of unduplicated patients who have viewed, downloaded, or transmitted to a third party their health information using the portal (cummulative)						
Population Penetration								
Average Number of Times Logged into Portal		Average number of times patients have logged into the portal <i>this quarter</i>						
Patient Portal Services Used								
Number of Emails Sent to Providers		Total number of emails sent to providers from the portal <i>this quarter</i> (Report only if it is easily feasible with your portal system. If your system does not track this figure, leave blank.)						
Number of Times Lab Test Results Viewed		Total number of times lab results were viewed in the portal <i>this quarter</i> (Report only if it is easily feasible with your portal system. If your system does not track this figure, leave blank.)						
Number of Appointment Transactions		Total number of appointments made via the portal <i>this quarter</i> (Report only if it is easily feasible with your portal system. If your system does not track this figure, leave blank.)						
Number of Medication Refill Requests		Total number of refill requests made via the portal <i>this quarter</i> (Report only if it is easily feasible with your portal system. If your system does not track this figure, leave blank.)						
Other Measures								
Number of Visits to Portal Site		Number of hits to patient portal site <i>this quarter</i>						
Average Length of Time (in Minutes) Spent on Portal Site Per Visit		Average time spent on the portal site <i>this quarter</i>						
Number of Hits to Popular Links on Portal Site		Identify top five links each quarter and document the number of hits to each link						
Link #1: [insert name]								
Link #2: [insert name]								
Link #3: [insert name]								
Link #4: [insert name]								
Link #5: [insert name]								

PROVIDER/STAFF SURVEY

In the final month of the implementation grant, participants were asked to distribute a 20-minute survey to providers. We defined providers as medical and administrative staff that have regular contact with the patient portal (e.g., physicians, NPs/PAs, nurses, medical assistants, front desk staff, other administrative staff). The survey was not intended for portal enrollment specialists. To elicit the providers' perspective how the portal has been integrated into practice, we utilized a Q Methodology. Q Methodology allows for the systematic study of subjective experiences, by seeking patterns across people rather than across items. The goal was to identify similar perspectives about the patient portal across respondents.

Statements

Each respondent was asked to sort a set of statements about the patient portal from “Most Characteristic” to “Least Characteristic” of their experience. Vantage generated 45 statements about the people, process, and technological components, as well as anticipated outcomes of successful patient portal implementation. We generated statements by referencing external resources provided by the Foundation, such as the Foundation commissioned American Institutes for Research report on Patient Portals²², key informant interviews conducted by the Foundation, the California Health Care Foundation Clinician Survey²³, the patient portal funding opportunity memo and webinar, and the Beacon Consortium Evaluation Report²⁴. For example, statements included “I find the portal easy to use,” and “Since we started using the portal, my patients take a more active role in their healthcare.” The full list of statements is reproduced on page 51.

Sort Distribution

Unlike traditional scaled surveys, where a respondent can select “Most Characteristic” for every item, Q Methodology provides a fixed number of slots per ranking to force respondents to sort statements relative to each other. In this case, the sorting distribution for the 45 statements was:

²² Elstand, E., et al. (July 9, 2014). Patient Engagement with Health Information through Patient Portals and Personal Health Records. Prepared for the Colorado Health Foundation by the American Institutes for Research.

²³ Full Circle provided this tool to Vantage.

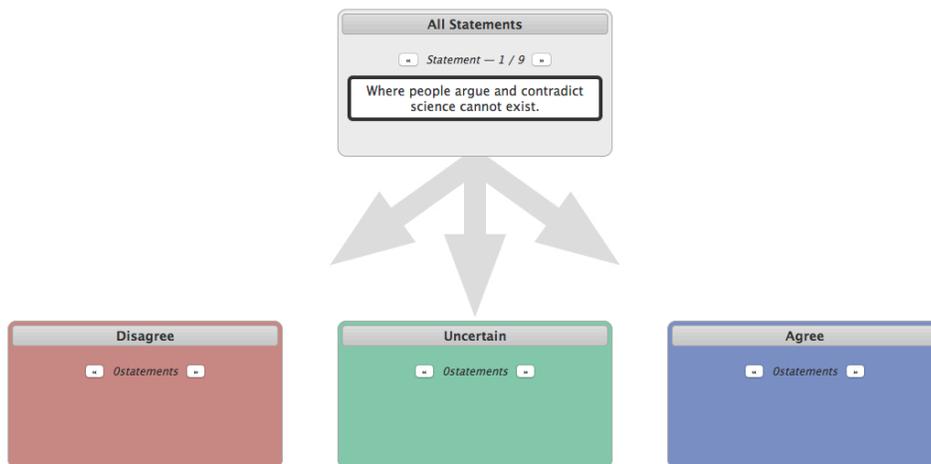
²⁴ Fernald, D., et al. (April 30, 2013). Colorado Beacon Consortium Evaluation Final Report.

-3 Least Characteristic	-2	-1	0	+1	+2	+3 Most Characteristic
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>			

Respondents are asked to sort statements in two steps. The first step asked participants to sort statements into three bins: Uncharacteristic, Uncertain, Characteristic. The second step asked participants to further refine their categorization by dragging each statement into a specific slot in the slot distribution displayed above. The provider survey was hosted on an online platform designed specifically for Q Methodology surveys, Q-Assessor (<http://q-assessor.com/>). Examples of the two steps on Q-Assessor are displayed below. These examples are provided to give a feel for the process, but note that the language differs from our sort: where the example says “agree” we used “characteristic.”

Step One:

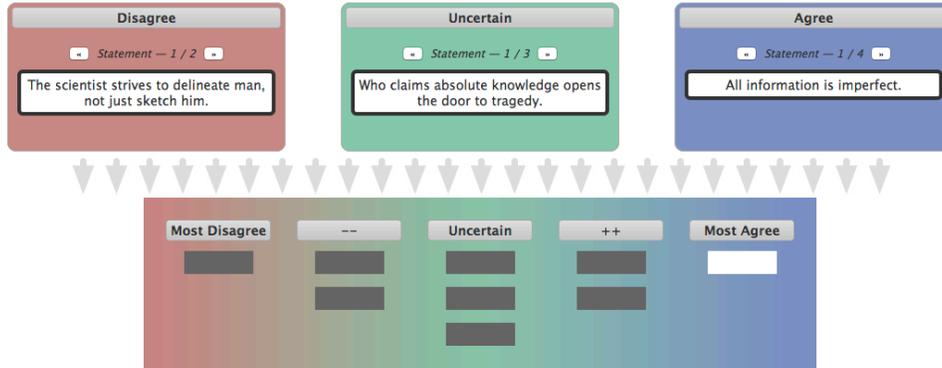
Instructions: Read each statement, decide how you feel about it, and then drag it to the most appropriate box. You can scroll through the statements using the arrow buttons. When you drag a statement, the available destinations where you can drop it will highlight.



Step Two:

Instructions: Sort each statement from one of the three general categories into the grid based on the degree to which you feel the statement qualifies. Scroll through the statements using the arrow buttons. Drag the statements into the grid. Available destination spots are highlighted in white; the spot where you drop a statement will highlight in orange. When placed in the grid, the statements will shrink to fit, but you can read them in detail by moving the cursor over them. To move a statement within the grid, drag it from one spot to another.

You must fill the grid in this order: "Most Agree" → "Most Disagree" → all the rest.



When the provider survey was distributed to the first cohort of participants, the inability to select the same rating for every statement caused confusion among survey respondents. Based on feedback from the main portal contacts, we believe that we did not adequately prepare respondents for a survey that looked so different from traditional Likert scales. For the second cohort, we sought to more clearly set expectations in advance, and used the following language to distribute the survey to main portal contacts:

Here is the link for the provider survey, please distribute as soon as possible to your providers: [Survey Link] By providers, we mean medical and administrative staff that have regular contact with the patient portal (e.g., physicians, NPs/PAs, nurses, medical assistants, front desk staff, other administrative staff). This survey is not intended for portal enrollment specialists. We seek to understand how clinic staff experience the portal in their everyday work. This survey will look different than others you have completed before! The survey is intentionally designed in such a way to capture fine distinctions between items. Rather than having the option to select "agree" for all items, the survey has a fixed number of slots per response choice. We anticipate that the survey will take 20 minutes to complete.

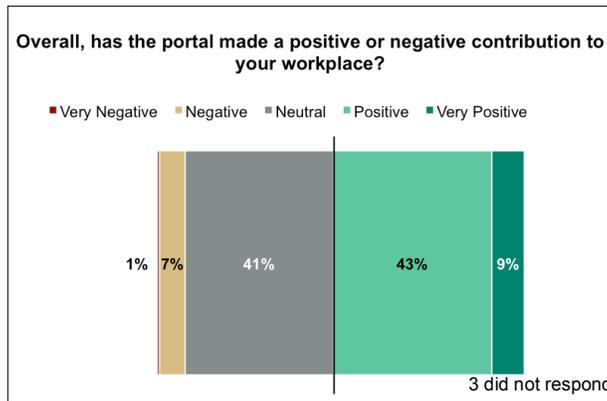
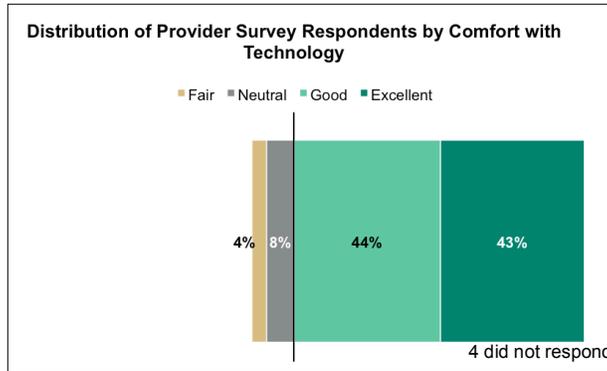
Analysis

The completed sorts are correlated across respondents to uncover sorts that share a similar structure. These correlations between sorts are used to uncover groupings of respondents with a similar experience and to understand how their experience manifests, by examining how the statements were sorted for each group of similar respondents. Specifically, we calculated the intercorrelations among respondents sort patterns then conducted a Centeroid factor extraction on the correlation matrix using a Varimax factor

rotation to center the final three-factor solution.²⁵ All analyses were conducted using the analysis features built into Q-Assessor. In this case, three similar perspectives (factors) emerged and the sort positions of each statement for each perspective are shown in the table below. For example, statement 1 “I find the portal easy to use” was sorted into a -2 (second from left) slot for super users, a +3 (most characteristic) slot for infrequent users, and a +2 (second from right) slot for portal champions.

#	Statements	Category	Sort Position by Perspective		
			Super Users	Infrequent Users	Portal Champions
1	I find the portal easy to use	People	-2	+3	+2
2	I am satisfied with the features and functionality of the portal	People	-2	+2	0
3	I have concerns about the portal's protection of patient privacy and security	People	-1	0	-3
4	My patients have concerns about the security and privacy of the portal's data	People	-1	+1	-3
5	My patients' expectations about how quickly we can review and release information to the portal are unrealistic	People	+1	+1	-2
6	I have concerns about fully integrating the patient portal into my work	People	+2	+1	-2
7	The patient portal reduces my workload	People	-3	-1	-1
8	The portal reduces the amount of time I spend on administrative tasks	People	-3	-1	-1
9	The portal automates routine tasks such as intake forms and contact information updates	People	-2	0	-1
10	The patient portal saves me time	People	-3	-1	1
11	The portal increases my efficiency	People	-3	-1	1
12	System outages affect my ability to use the portal	Technology	+2	1	-2
13	The portal's complexity affects my ability to use the portal	Technology	+2	0	-3
14	Browser compatibility issues affect my ability to use the portal	Technology	+1	+1	-3
15	I find the portal interface to be clear and easy to use	Technology	-1	+2	+1
16	My patients use the portal to fill/refill prescriptions	Technology	+1	-3	0
17	My patients use the portal to request referrals	Technology	-1	-2	-1
18	My patients use the portal to make appointments online	Technology	0	-3	-1
19	My patients use the portal to view their health record	Technology	+1	0	+2
20	My patients use the portal to update their demographic information	Technology	0	-1	-1
21	My patients use the portal to send providers secure messages	Technology	+2	0	+3
22	I use the portal to send patients secure messages	Technology	3	-2	+1
23	I use the portal everyday	Technology	0	-3	-2
24	The portal is available in the languages our patients speak	Technology	-1	+2	-2
25	I have updated my workflow to incorporate the portal	Process	+1	0	0
26	I use the portal to recommend preventative services to patients	Process	-2	-1	0

²⁵ For more details on the statistical analysis used, please refer to McKeown, B., & Thomas, D. B. (2013). *Q methodology* (Vol. 66). Sage. And Watts, S., & Stenner, P. (2012). *Doing Q methodological research: Theory, method & interpretation*. Sage.



EXIT INTERVIEWS

In the final month of the implementation grant, all participants participated in a one-hour phone exit interview. The interview request asked for the participation of “at least the executive sponsor and the day-to-day project lead,” but others were welcome, and participation of the executive sponsor and day-to-day project lead was not enforced. The interviews followed a semi-structured protocol, retrospectively reflecting on each participants experience during the implementation period, as reproduced below. All interviews were recorded and transcribed verbatim. The transcripts were thematically coded using both predetermined and emergent codes.

Interview Protocol

The purpose of today’s interview is to better understand the grantee experience during the implementation phase of the patient portal funding opportunity. Information we learn during these interviews will help inform our understanding of the success of the patient portal funding opportunity and inform how the Colorado Health Foundation uses this two-stage funding model in future funding opportunities.

Your participation is voluntary, and you are free to stop the interview at any time. All the information you share with me will remain confidential. The information you share will be combined with information from others and shared in aggregate with the Colorado Health Foundation and Full Circle Partners. When reporting on the results from the interviews, only anonymous and/or aggregated information will be shared. Neither the information you share nor your choice of whether to participate will have any bearing on current or future grant funding. The interviews will be recorded for analysis purposes only and will not be shared with anyone outside Vantage Evaluation.

Do you consent to participate in this interview? (Verbal consent)

Project: General

- At the very beginning of the planning process, Full Circle helped you map how the portal fits into your clinic workflow, and I want to make sure we close the loop on that. Briefly, please walk me through how the patient portal fits into clinician workflow.
 - How has the portal changed clinician workflow?
- Reflecting on the work plan you submitted last spring, how much did your implementation plan mirror the work plan?
 - In what ways did it change? Why?
- What elements of your portal integration project were most successful?
 - Most challenging?
 - Describe the process you took to work through the most challenging issue (how/why have they been resolved or not)
- To what extent will your organization continue to patient portal work after the grant funding ends?
 - What, if anything, will be next for the project after funding ends?
 - What aspects will change?
 - What aspects will stay the same?
 - How will the organization handle the ongoing portal costs after the grant ends?

Engagement

- To what extent has senior leadership been engaged in the portal implementation project?
 - Please provide an example.
- To what extent have key staff (clinicians, front desk) been engaged in the portal implementation project?
 - Please provide an example.
- To what extent have patients been engaged in the portal implementation project?
 - Please provide an example.

Technical Assistance

- How, if at all, has the support you received from Full Circle influenced your portal project?
- Reflecting on the last year of implementing a patient portal, please describe an instance where the technical assistance (Full Circle, peers, webinars, or dropbox resources) helped you overcome a barrier.
 - Describe an instance where technical assistance was unable to assist. (What did we miss? What were we unable to address?)
- Please describe your interactions with the learning community (other funding opportunity participants).
 - In what ways has your portal project been influenced by these interactions?
- Please describe in what ways, if any, you used the resources provided during the webinars.
 - In what ways has your portal project been influenced by these resources?
- Please describe in what ways, if any, you used the resources provided on the funding opportunity dropbox site.
 - In what ways has your portal project been influenced by these resources?

Value Add

- Reflecting on the entirety of the implementation phase—do you think the technical assistance was a value add independent of implementation funding? Did you enjoy the process? Was it helpful?
 - What was the most valuable aspect?
 - What recommendations for improvement, if any, would you make for future funding opportunities?
- Last question always: We are just about out of time, and I wanted to give you an opportunity to tell me anything that we haven't already discussed but you would like to make sure I know about your experience with the implementation phase of the funding opportunity.