DIGITAL MARKETING DEMONSTRATION GRANT

EVALUATION REPORT FOR INTERVENTION 3

Michigan Department of Health and Human Services

Office of Child Support

Planning, Evaluation and Analysis Section

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Background

Grant Purpose

The goal of the Michigan Office of Child Support (OCS) Digital Marketing demonstration project is to conduct digital marketing interventions to research how they may help the child support program more effectively reach and serve families by increasing awareness of child support services. A key measure of success will be the proportion of online applications received in intervention counties that were not referrals. Thus, we calculate this proportion as the total number of new cases opened with an online application over the total number of new cases during the intervention. Our goal is to increase this proportion by 5 percentage points over three rounds in the counties implementing this intervention. The first intervention served as a test drive of our messaging and online marketing messaging strategy. The second intervention further probed our strategies using Google Analytic goal code to track user habits. The third intervention, described in this report, uses a new creative concept with the same strategies as the prior interventions to test what effect, if any, the messaging strategy has on our campaigns. .

Problem

Changes to TANF eligibility requirements mean that many families in Michigan are no longer referred into the child support program as assistance recipients and may not be aware of child support services available to them. This grant opportunity allows OCS to increase its outreach efforts to those families via digital marketing channels. It also allows for testing messaging and digital marketing channels (Facebook, Google search ads, and mobile ads in this case) to maximize the impact of future digital marketing activities.

Intervention Three

Goals

The primary goal across our three rounds of digital marketing interventions is to increase our application proportion by at least 5 percentage points compared to a baseline proportion sampled from the same calendar months in the year prior, across counties where the intervention is implemented. Application proportion refers to the total number of new cases opened with an online application over the total number of new cases during the interventions. Another goal of the first intervention was to test drive our messaging and marketing strategy to determine baseline engagement with our digital ads and explore initial impacts on the application proportion in each county and demographic of interest. In round two, we used this baseline data to gather more insight to further refine our strategy in the final intervention. In Intervention Three, our goal was to implement our third messaging strategy to see if there was an improved effect.

Development

This grant project is divided into three rounds of interventions, with allotted time between rounds to adjust tactics based on results. We are using this dynamic development design process to test what kind of messaging works best for our audience. We hold constant our online target audience, total investment, and chosen marketing channels and compare creative concepts to observe performance. Intervention Three's development was informed by the performance of

our prior two rounds of marketing. In the past two rounds, our two messaging creative concepts – Happy Families and Helpful Services – did not show a consistent difference in performance. In Intervention Three, we developed a new creative concept designed to communicate the additional benefit child support services can provide: Value and Services. Where Helpful Services was meant to focus on the impartial governmental services provided, Value and Services focuses on the practical needs child support can help with, such as paying for clothes, groceries, extracurricular costs, and healthcare coverage.

Advertisement Channel Descriptions

We used three online digital marketing platforms throughout this project, which we refer to as our intervention's channels. In each round, we are primarily interested in how the creative concept performs, but we also test these three channels to broaden the scope of our campaign, reach more people, and see how the channels perform compared to each other.

1. Mobile Marketing Pool – Sometimes referred in this report as "mobile," this channel refers to a pool of web browser and mobile-app advertisement spots selected to fit our target demographic. Mobile websites, apps, and games each sell ad spots, so there are a lot to choose from. Our marketing partner uses their prior research to design a pool of these ad spots for our ads based on the target we selected.
2. Google Search – This channel includes both search engine optimization and targeted ads placed in google search.
3. Facebook – This refers to promoted posts through the Michigan Department of Health and Human Services (MDHHS) Facebook page.

Outcome Measures

This data provides insights about possible effects these messaging strategies may have on our target population, how we measure each creative concept's performance, and which intervention channel is the most cost-effective.

1. Raw data from our marketing vendor, which further describe each advertisement platform and individual ads run. For each advertisement on each channel, we received a breakdown of:
   - **Impressions:** the number of times an ad is served to a user. Whether a user clicks on the ad is irrelevant to if an impression is created, it only needs to be served to the user.
   - **Clicks:** The number of times users clicked on an ad.

   We also received impressions and clicks for each of the keywords we targeted for Google search optimization. From this, we derive the click-through-rate (CTR) as how many users "click-through" to our landing page after the impression is served.

   - **Keywords:** words or phrases targeted to help search engine providers determine when ads appear.
   - **Click-through-rate (CTR):** percent of users who are served the ad and click it (Clicks/Impressions).

   In terms of Facebook, we also received the engagement of our post. This is a measure of clicks plus other interactions available to Facebook users, such as comments, shares, and likes.

- **Engagement:** The number of times users "engage" with an ad, including the sum of all clicks, likes, comments, and all other reactions available on the platform.
2. Google Analytics website data for each messaging strategy, which shows:
   - **Pageviews:** the number of instances users have a certain page open in their web browser. Typically, each click corresponds to a pageview.
   - **Google Goal completions:** The number of times users complete a pre-defined chain of events, or a goal. In our case, opening the application portal or downloading resources from the campaign landing page results in a goal completion.
   - **Average page time:** How long users spent on our page by visitors from each media channel.
3. Internal OCS application data, which shows the application proportion in the counties tested during each intervention round and throughout the year.
   - **Application proportion =** Total online applications / Total new cases

Results and Analysis

Intervention Three featured a new creative concept — Value and Services. Besides new creative, there are other differences in Intervention Three to remember during our comparison.

1. **Value and Services**
   While each round of marketing had the same amount invested for each intervention channel and ran for two months, the third round was the only round to expose our target audience to just one messaging strategy for the duration. In the past two rounds, each user was shown an ad from one of two distinct campaign. This round, Value and Services ads will only be shown.
2. **Google Search Optimization**
   Our marketing partner has used performance data from the prior rounds to improve our search strategy as the project progressed. We started with 24 keywords we thought our target audience might be using to find us, and changed the list based on what worked. . Thus, our Google results may reflect a more optimized ad scheme rather than a reaction to our messaging strategy.
3. **COVID-19**
   The onset of the novel coronavirus has clearly impacted the world in many ways. Some of the effects on our study were clear. Originally, this intervention was scheduled for April/May of 2020. However, due to office closures in county offices and courts, and the transition to work from home, we decided it was best not to increase advertising during a time when our systems were already stressed. Other effects on our study were more directly related to our ad platforms -for example, MDHHS's Facebook page saw a flood of negative comments from users airing grievances about the pandemic, ultimately leading to a decision not to post unpaid content during Intervention Three.

While we cannot account for every difference in our interventions, these three items are important to remember as we evaluate our grant project.

Comparing Creative Concepts

Our mobile marketing pool data ended up being the most consistent data to compare creative concepts. Facebook used the same concept in interventions one and two, and Google ads weren't part of the themed campaigns. Across all three interventions, we extracted CTR from our mobile marketing pool data to compare the creative concepts. We measured the number of impressions, or times each advertisement was displayed to a viewer, and measured the rate of people who clicked the ad shown to them. These are three primary indicators we used to compare each media channel's effectiveness.

We also used Google Analytics to further track user behavior called "goals." A goal can be set up for many user actions. Our goal was established to tell us a user's step after their ad-click. We implemented this goal in Intervention Two to determine which intervention channels led more users to proceed to the child support application portal.

First, an impression was generated every time an ad was displayed on a website. Next, a click was generated if a user clicked on the ad, which tells us the CTR. Once the user was on our landing page, which is distinct for our grant project, we could tell on average how long they spent there, and ultimately see how many of our goals were completed (the number of users who went to the portal).

Mobile Marketing Pool

As in the past two rounds, Intervention Three shows a high number of impressions, but relatively fewer clicks per impression. As Table 1 shows, Value and Services showed a CTR of 0.47%, the lowest round and creative concept yet. The table also shows the effect of investing the same total amount in one campaign (Intervention Three) that we had previously split between two campaigns (One and Two).

Table 1. Mobile Creative Performance

Concept	Intervention One April/May 2019			Intervention Two October/November 2019			Intervention Three October/November 2020		
	Impressions	Clicks	CTR	Impressions	Clicks	CTR	Impressions	Clicks	CTR
Happy Families	5,128,953	28,384	0.55%	3,988,721	28,433	0.71%			
Helpful Services	4,144,851	24,364	0.59%	5,408,902	36,910	0.68%			
Value and Services							8,972,076	42,460	0.47%
Total:	9,273,804	52,748	0.57%	9,397,623	65,343	0.70%	8,972,076	42,460	0.47%

To compare our messaging strategies on mobile, our only channel to receive all three strategies, we compiled the above data for each creative concept in Figure 1 below. Even though Happy Families outperformed Helpful Services in Intervention Two, Helpful Services had a higher overall combined CTR. In Intervention Three, Value and Services did not perform as well in terms of clicks as either of the first two creative concepts.

Figure 1. Creative Concept Performance on Mobile
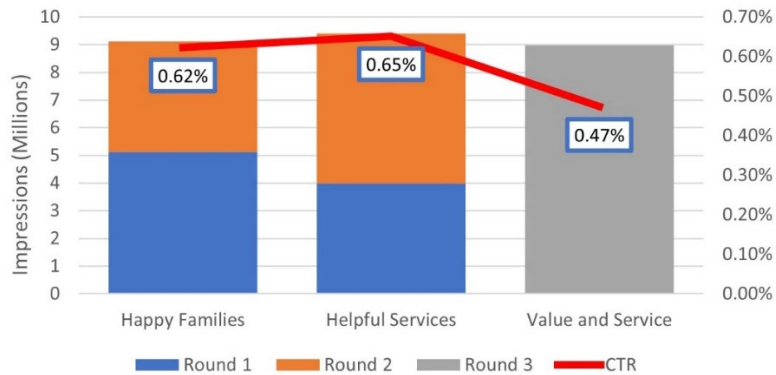
Google Search Ads

Google Ads showed the highest CTR in our first two rounds, and it is no different in Intervention Three. As Figure 2 below shows, although we raked in fewer impressions each round, the CTR continued to improve. Some of this may be accredited to our new creative concept, but there is evidence to show some of our success is due to optimizing our ad strategy.

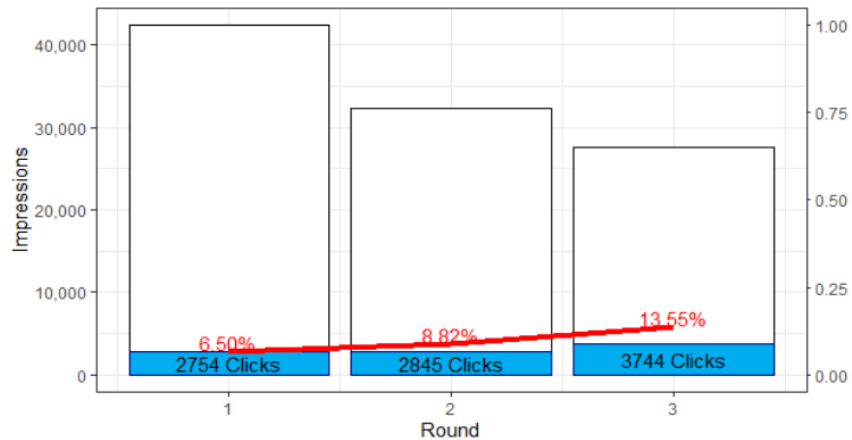Figure 2. Google Search Impressions, Clicks, and CTR

Figure 2. The effects of our Google Search optimization. Even though we served fewer ads, we targeted more appropriate terms and keywords for our audience in later rounds.

The downward trend in total impressions can be explained by our trimming ads. In the first round, we ran seven ads targeted at 24 keywords and in Intervention Two, that was trimmed to three ads targeted at 15 terms. Additionally, Interventions Two and Three leveraged search keywords, denoted in Table 2 by the plus signs, which are search engine optimization tools that can relate our result to a wider array of searchers. For example, the '+child +support' term below includes the +child and +support keywords, which may direct users searching for a variety of children or support related topics.

Table 2. Top Google Search Terms

Intervention One		Intervention Two		Intervention Three	
Term	Clicks	Term	Clicks	Term	Clicks
child support	1202	+child +support	1833	child support	1878
getting child support	451	+Michigan +child +support	665	+child +support	836
child support payments	445	+my +child +support	100	+Michigan +child +support	573

We learned that keyword optimization is key on Google search. In Intervention One, we used no keywords in any of our 24 search terms. Then in Intervention Two, we added '+Michigan +child +support' - the first-time adding +Michigan to our already targeted audience - and it appeared to produce significant clicks. Intervention Three appears to reap the benefit of these earlier rounds, scoring the highest CTR of our project at 13.55%.

Facebook Performance

Throughout this grant project our Facebook posts have been served through the MDHHS Facebook page. The first two interventions served Happy Families themed ads, and the third intervention featured four new ads based on the Value and Services campaign. Figure 3 below shows overall clicks and engagements for all our Facebook posts, with much higher engagements in Intervention Three.

Figure 3. Facebook Posts - Clicks and Engagements
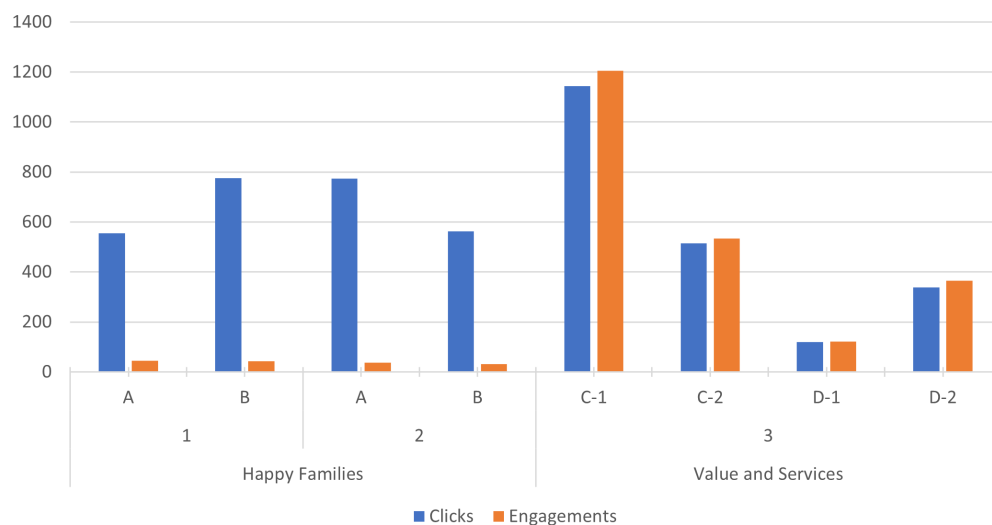
Facebook engagements refer to the total of all "reactions" to the post, including likes, shares, other reactions, and comments other than following the link. As Figure 3 shows, the third round saw an unexpected explosion in post engagement, given the relative low engagement compared to clicks in past rounds.

MDHHS' page also served posts regarding COVID-19 safety policies previously under executive order by our Governor. These posts have been received as politically charged. As a result, MDHHS' page has become somewhat of a lightning rod for disgruntled Facebook users no matter what the post topic is. The high engagements on ads in Intervention Three, during this public health crisis, must be viewed as somewhat suspect given this factor

Comparing Intervention Channels

The budget for each channel stayed the same for each round, even though some fine tuning has occurred within each channel. We have shown the trend of impressions for the three rounds for Google search above in Figure 3. Figures 4 and 5 show the change in impressions for Facebook and the mobile ad pool.
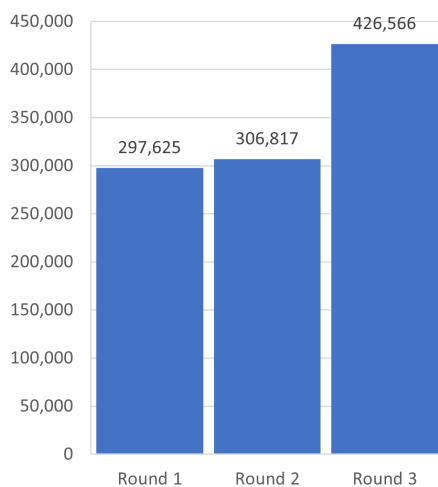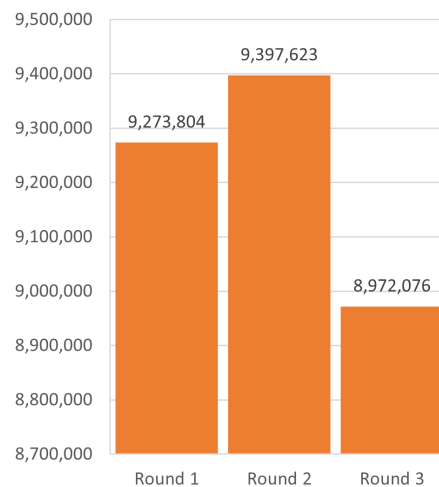
Figure 4. Facebook Impressions

Figure 5. Mobile Ad Pool Impressions

The consistently high impressions on mobile may be due to the nature of mobile advertising: ads are served whether the user is primed and looking for it or not. We do not know what could cause the lower mobile impressions in round three. One possibility is that because the first two rounds included two campaigns, they may include users who saw both ads. Rarely, a user might generate an impression twice by refreshing and seeing the other ad where they would normally only generate one impression. Also, the spike in Facebook impressions may be associated with the lightning rod phenomenon described in the prior section.

Our budget has remained constant for each round, so we have consistent data to relate the cost of each channel to its outcome. Figure 6 compares pageviews to each channel and their click-through-rate and shows cost-per-pageview as total pageviews divided by allotted budget.

Figure 6. Cost-Per-Pageview and CTR
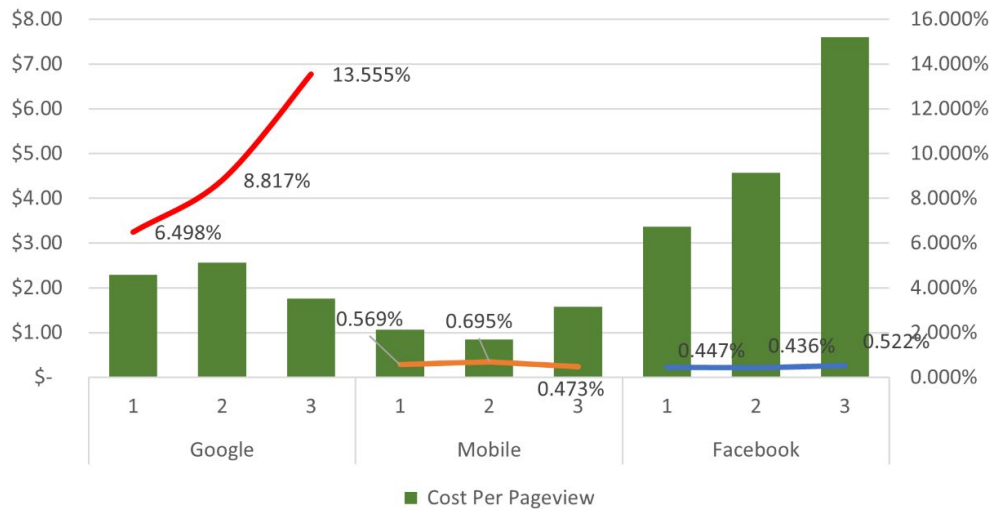
Cost Per Pageview

Google Search optimization is associated with a higher CTR and cheaper pageviews. Even though Facebook had a lot of engagement on its posts, it generated only 236 landing page views, which made Facebook our least cost-effective investment again in round three. Mobile had the cheapest pageviews, but it also showed the lowest CTR.

Evaluating Internal Data

We hoped to show a 5 percent increase in the proportion of new online applications as a measurable result of our interventions. Each round, we measured this proportion as the new cases from online applications divided by the total new cases during the intervention period. In Intervention Three, like the prior two, we did not see a significant change in this proportion.

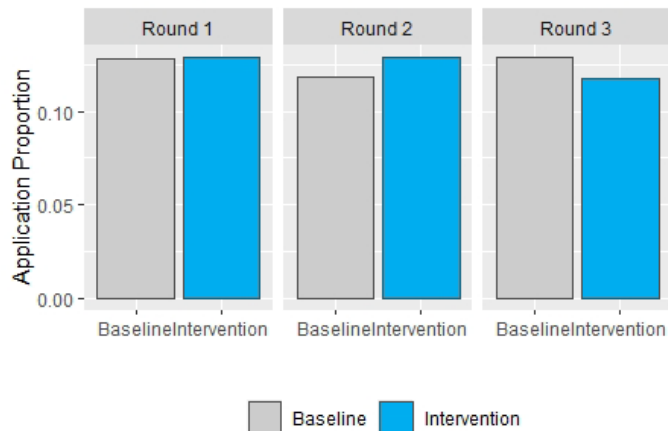Figure 7 here shows the application proportion for the intervention counties combined. We also show the application proportion for each county in Figure 8. Intervention Three showed no significant differences from

Figure 7. Overall Application Proportions

Baseline   Intervention

Figure 7. The application proportion for each round's intervention period compared to a baseline from one year prior.

its Round 3 baseline for any county except our smallest county, Chippewa, which showed a decrease for the first time. In general, we do notice some trends: Berrien, Chippewa, and Genesee's intervention proportion seems to fall each round. This may be some evidence of a diminishing returns effect. For example, if we picked up a lot of new applications from the first

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intervention in a small county like Chippewa, there may be a lot fewer eligible applicants left in that county after round one, so the following rounds may be less effective.

Figure 8. County Application Proportion Comparison
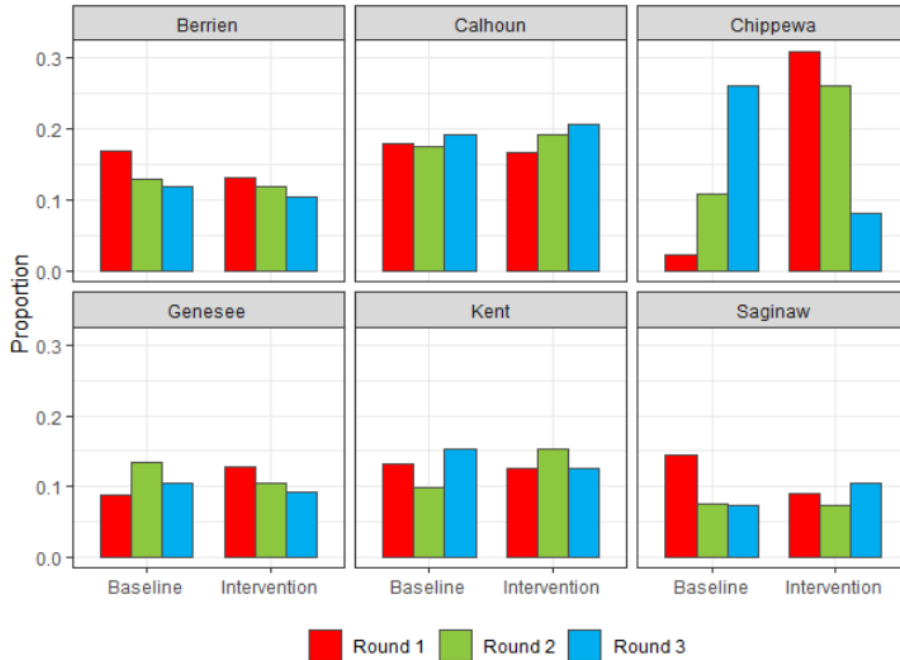
Genesee's intervention proportion seems to fall each round. This may be some evidence of a diminishing returns effect. For example, if we picked up a lot of new applications from the first intervention in a small county like Chippewa, there may be a lot fewer eligible applicants left in that county after round one, so the following rounds may be less effective.

Figure 9 shows the total counts for intervention county's online applications during the intervention, the numerator for our application proportion measurement. It shows the scale of the counties and shows how the application proportion is affected by total applications.

Figure 9. County Online Applications (Counts)
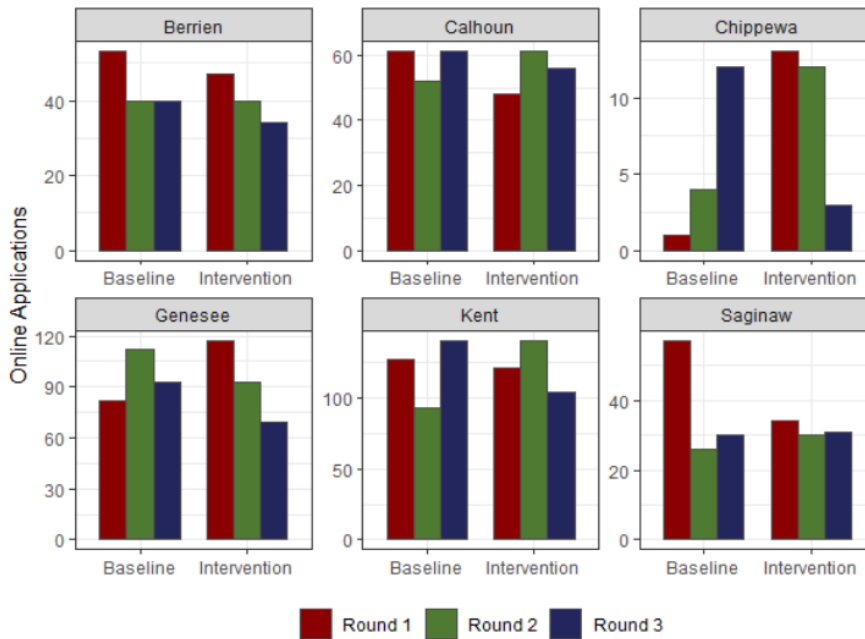
Lessons Learned – Google Analytics

One thing we learned was that most users who navigated to the application portal did so through Google. Figure 9 shows the Google Analytics results of all web traffic to the portal page during Intervention Three. It shows that the largest chunk of users are direct Google searchers. Further, traffic that came from our unique landing page was also directed there from our Google ads. The red bars represent funnel exits – about 97% of users left the grant landing page rather than proceeding to the application portal, and 95% of users left the application portal rather than download resources or start an application.

We see this as some evidence to support our hypothesis from Intervention Two that Google users are the most motivated to use our services, or that the other two platforms – mobile and Facebook – while targeted and geofenced, are served to individuals who may not be primed and ready to start an application.
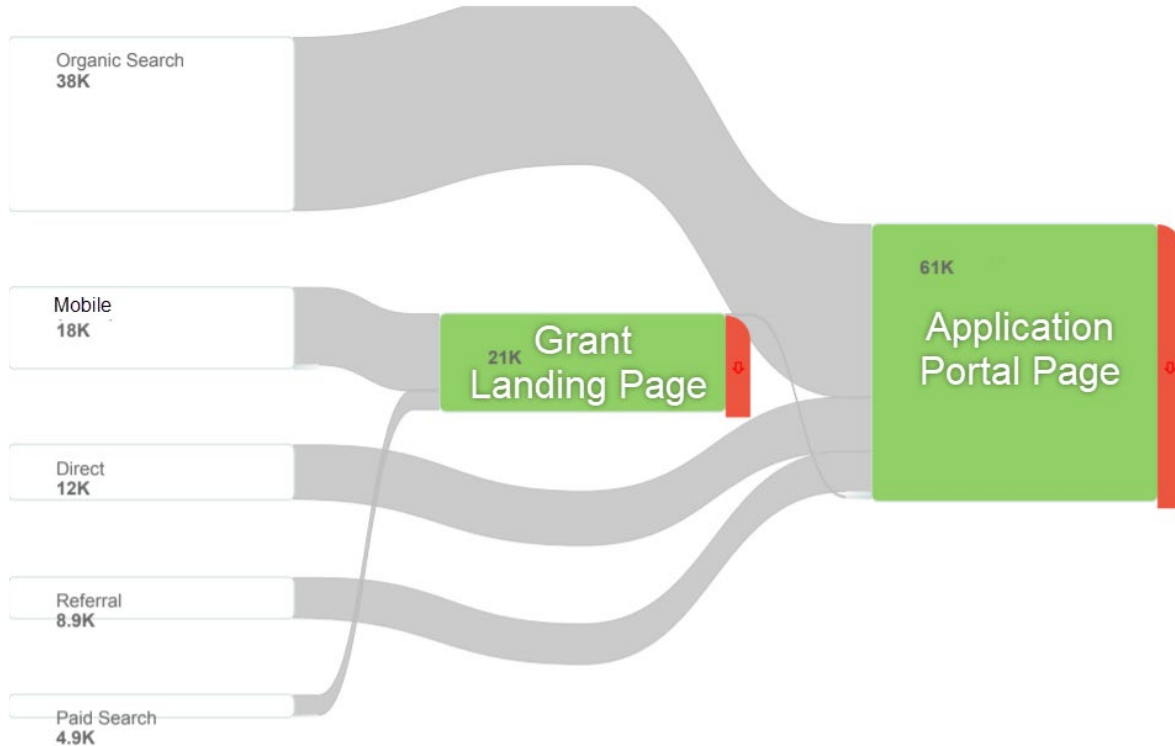
Figure 10. Google Goal Funnel.

Figure 10. Flow of traffic to the application portal during Intervention Three. As in past rounds, only a small amount came through the landing page for our ads, as shown by the small strand moving from the grant landing page to the application portal page.

In figure 10 above, we show Google Search was also the channel that showed the most improvement in its CTR based on search term optimization. Google has consistently proven to be an effective method to reach people who want to find us, even if we could not conclusively link it to an increase in our new cases.

When we posed this question to our marketing partners, they had several thoughts on the reasons our Google Search outperformed the other channels. They mentioned that people clicking from a mobile ad might not immediately be inclined to apply for child support, but they may possibly return to the site at a more convenient time for them. They often refer to Google Search as a "bottom of the funnel" tactic because it captures people who are actively looking for information that can be found on our website, so conversions are much higher than other tactics. However, that doesn't make other tactics less important because they help to increase awareness and deliver mass reach and frequency of messaging. Providing information and increasing awareness are much harder to quantify.

Lesson Learned - Advertisement Timing

During our interventions, we consistently saw the highest pageviews and clicks around holiday weekends. This may be evidence that more people are online (high impressions), and we have a better conversion rate (higher clicks) when folks have more time off. These fell on Memorial

Day weekend for Intervention One and on Thanksgiving for Interventions Two and Three. Figure 11 shows the maximum days for each round

Figure 11. Clicks and Impressions Over Intervention Period
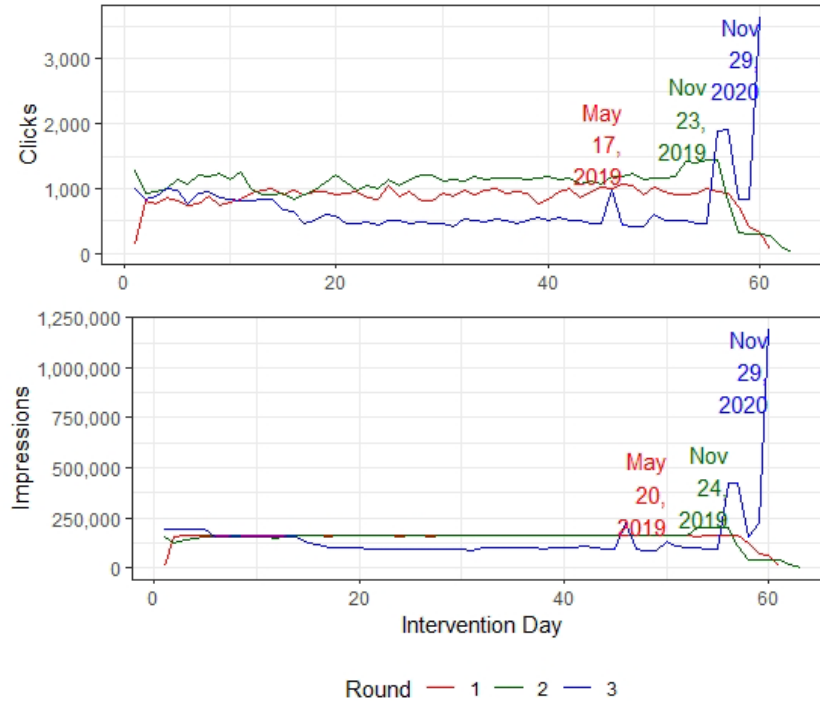
We do not see the same trend in CTR. Because the total number of impressions is much larger in scale, the CTR dips, as shown by Figure 12. This shows CTR alone is not a good measure. With more exposure, days with higher total visitors to the landing page may have lower CTR.

Figure 12. CTR over Intervention Period
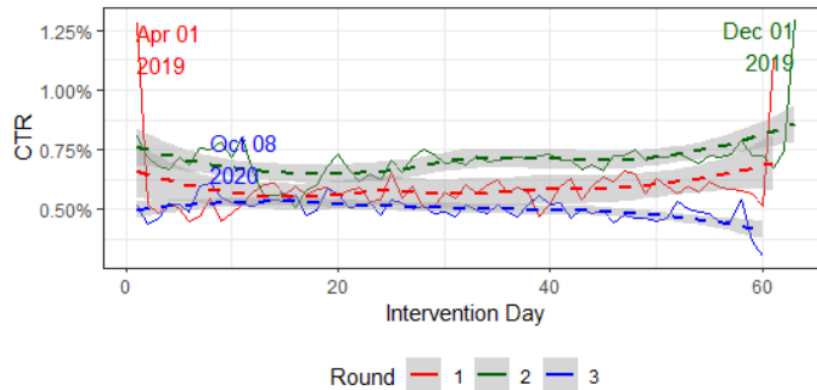
Next Steps

Though the activities proposed in our grant application have been completed, the data comparing our messaging strategies has not provided clear guidance. While Helpful Services performed slightly better with a higher CTR, it is not much higher. Our Facebook engagements were much higher in Intervention Three for Value and Services, but we cannot associate this with the messaging strategy's performance due to pandemic-related issues.

In terms of cost effectiveness, however, we have noticed a pattern emerging. Google and mobile have seemed to work better for OCS, given the increasing CTR on Google and cheap cost per click on mobile. Maybe there is too much "noise" on the MDHHS Facebook page for our message to get across, but it does seem to be giving us the least value returned.

Given what we have learned so far, we are proposing a fourth intervention, using the same three channels, but statewide. We will use the data from the prior interventions to choose only the top performing ad from each messaging strategy and testing the three head-to-head. By taking our messaging to a larger audience but restricting the messaging options to only one from each concept, we will receive information from a larger data pool that may indicate a stronger reaction to the messaging strategy itself. This data will guide our marketing activities long after the grant period has passed and will give us a chance to test digital marketing and offer services with a wider audience.