

**DIGITAL MARKETING DEMONSTRATION GRANT
EVALUATION REPORT FOR INTERVENTION FOUR
Michigan Department of Health and Human Services
Office of Child Support
Planning, Evaluation and Analysis Section**

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Background

The Digital Marketing grant program, sponsored by the federal Office of Child Support Enforcement (OCSE) within the U.S. Department of Health and Human Services' Administration for Children and Families, is a 24-month demonstration project with the goal of researching how digital marketing may help the child support program more effectively reach and serve families. In September 2018, OCSE awarded funds to 14 child support agencies to test digital marketing approaches and partnerships to reach parents that could benefit from child support services and create or improve two-way digital communication and engagement with parents.

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 what child support services are available to them. This grant opportunity allows OCS to increase its outreach efforts to those families via digital marketing channels. It also allows for the testing of messaging and channels to maximize the impact of future digital marketing activities.

Grant Purpose

The purpose of the Michigan Office of Child Support (OCS) Digital Marketing demonstration project is to conduct interventions to research how digital marketing may help the child support program more effectively reach and serve families by increasing awareness of child support services. We ran online ads to reach our target audience on three different online media channels: mobile apps and browsers, Facebook ads, and Google paid search. We also changed the concept and design of the ads between three messaging strategies to test which worked best. We chose a target audience of single, low-income women between the ages of 18 and 44 for all channels where targeting was possible.

A key measure of success was the percent of applications received from our online portal. Our goal for the completion of this grant was to increase this proportion by at least five percentage points from the measured baseline. In the first two rounds, we showed ads from two messaging strategies, Happy Families and Helpful Services, with mixed results; neither outperformed the other. In Intervention Three, we introduced a new messaging strategy, Value and Service, and it was shown by itself.

Intervention Four is the first round to run all three of our messaging strategies simultaneously, with the hope of making a "head-to-head" comparison. The highest performing ads for each strategy from the previous three rounds were run on mobile apps and browsers simultaneously. Our Facebook ads, which had only shown one messaging strategy in prior rounds, rotated between all three throughout Intervention Four. We also saw continued optimization in Google Search, which is based on targeted keywords.

Intervention Four

Goals

The primary goal across our rounds of digital marketing interventions was to increase our application proportion by at least five percentage points compared to a baseline proportion sampled from the same calendar months in the year prior. Application proportion refers to the total number of new cases opened with an online application over the total number of new

cases during the intervention. We also used the data to compare our messaging strategies against each other to determine which is best for our purposes.

The first intervention was designed to test our messaging and marketing strategy and determined our baseline engagement with our digital ads. We explored the initial impacts of marketing on our application proportion in each selected county and in the target demographic. The mobile application pool was the only channel to have two different messaging strategies. The second intervention was very similar to the first – in the same audience, we ran the two messaging strategies on mobile, one on Facebook, and further honed our Google Search terms. However, the results did not confirm our hypothesis from the first intervention round regarding the most effective messaging. In the third intervention, our goal was to implement a third messaging strategy to further test best practices. However, running this strategy alone did not allow us to compare directly to our prior results.

This final intervention round was the first to implement all three messaging strategies for a more direct comparison. They were visible to the entire state of Michigan, not only the six intervention counties, with the goal of showing which messaging strategy is most effective.

Development

This grant project is divided into rounds of interventions, with time between rounds to adjust tactics based on results. The dynamic development design process aided in determining the most effective messaging strategy in terms of communicating with our audience. Although only three rounds were originally planned for, there was enough surplus in the grant budget to execute a fourth round of digital marketing. This fourth round became crucial to the analysis because although all three messaging strategies were implemented in previous rounds, they were not done so simultaneously and therefore could not be compared with confidence.

Messaging Strategy Descriptions

All three strategies were simultaneously active on mobile and Facebook during the fourth intervention round. Table 1 summarizes when and where each was active throughout the project.

- **Happy Families.** These ads were designed to emphasize smiling faces, and the positive emotional outcomes that our services can provide. Images show mothers with smiling babies and text emphasizing a better and happier life for children.
- **Helpful Services.** These ads are more practical and less emotional. The images show busy moms and emphasize how we can help them navigate the child support system.
- **Value and Services.** These ads are more practical, like Helpful Services ads, but focus more on the tangible value child support services provide. Images show children receiving vital care, like getting healthcare and shopping or eating with parents.

Table 1. Messaging Strategy Summary

Messaging Strategy	Channel	Round 1	Round 2	Round 3	Round 4
Happy Families	mobile	ACTIVE	ACTIVE		ACTIVE
	Facebook	ACTIVE	ACTIVE		ACTIVE
Helpful Services	mobile	ACTIVE	ACTIVE		ACTIVE
	Facebook				ACTIVE
Value & Services	mobile			ACTIVE	ACTIVE
	Facebook			ACTIVE	ACTIVE

Advertisement Channel Descriptions

In each round, we were primarily interested in how the messaging strategy performs. We also analyzed our three channels to determine the most effective platform in terms of quantity of people reached and level of engagement.

- **Mobile marketing pool.** Sometimes referred to in this report as “mobile,” this channel refers to a pool of web browser and mobile-app ad spots selected by our marketing partner to fit our target demographic. As there are many mobile websites, games, and other apps selling ad spots, our marketing partner uses their prior research to design an appropriate pool using predictive targeting.
- **Facebook.** This refers to promoted posts through the Michigan Department of Health and Human Services Facebook page.
- **Google Search.** This refers to paid search ads. When a user enters our keywords in the Google search engine, one of our ads is displayed at the top of their results.

Table 2. Intervention Four Channels

Channel	Target	Timeline	Motivation
Ads in mobile app and browsers	Single, low-income women, aged 18-44 years, in Michigan	Two months	60% of women own two or more mobile devices
Google Paid Search	Single, low-income women, aged 18-44 years, searching keywords in Michigan	Two months	60% of target audience search using Google
Facebook posts (paid/promoted)	Single, low-income women, aged 18-44 years, in Michigan	Two posts per strategy, revolving bi-weekly. (six unique posts shown twice each)	76% of women use Facebook

Outcome Measures

We use data from three primary sources to explore our research interests:

1. Raw data from our marketing vendor, which further describes each channel and ad. For each individual ad, 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 shown 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. From this, we derive the click-through-rate (CTR) 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).
 - **Engagement with our Facebook posts:** a measure of clicks and other interactions available to Facebook users, such as comments, shares, and likes.
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 unless they close the page within a few seconds.
 - **Goal completions:** The number of times users complete a pre-defined chain of events, or a goal. In our case, proceeding to the application portal from the dedicated landing page results in a goal completion.
 - **Average page time:** The average time users from each media channel spend on our page.
3. Internal OCS application data, which shows the application proportion (total online applications / total new cases) in the counties tested during each intervention round and throughout the year.

These data provide insights about which messaging strategy (Happy Families, Helpful Services, or Value & Service) performed best, and which intervention channel was the most cost-effective. A summary of these measures and how they relate to our research interests is shown in Table 3.

Table 3. Evaluation Measures

Research Question	Measure	Data Source
Did application proportions increase?	$\frac{\# \text{ New cases from Online Applications}}{\# \text{ New Cases}}$	MiCSES ¹ Case Data
How did each channel perform?	Impressions, click-through-rate (CTR), Google Analytics user data	Google Analytics
How did each messaging strategy perform?	Impressions, click-through-rate (CTR), Google Analytics user data	Facebook, mobile
What channel was the most cost-effective?	Cost data, Impressions, click-through-rate (CTR), Google Analytics user data	Facebook, mobile, Google Analytics

Results and Analysis

This final round differed from the initial three rounds in some significant ways that could affect our perspective:

1. **Statewide ad target.** In this round, we served ads to our target audience in all 83 Michigan counties, as opposed to just the six intervention counties used in the prior three rounds.
2. **Head-to-head testing.** This is the first intervention round where all three messaging strategies are shown in the same period.
3. **Rotating Facebook messaging strategies.** In the past three rounds, only one messaging strategy was shown on Facebook due to a communication error with our partner contact. In this round, all three strategies were used in rotation on Facebook, as opposed to mobile, which showed the same message to different users at the same time.

Mobile Marketing Pool Performance

The data from our marketing vendor’s mobile marketing pool provide the most direct comparison of our messaging strategies this round because Intervention Four was the only round with all strategies active at once.

In Figure 1, the click-through-rate (CTR)² summary chart displays the performance of the three messaging strategies across the four rounds. In this round, as evidenced by the similar CTR, users clicked on an ad at approximately the same rate, regardless of the specific messaging strategy. Happy Families and Values and Services performed higher than Helpful Services, but only slightly.

¹ Michigan Child Support Enforcement System

² view a page, email, or advertisement.

Figure 1. Messaging Strategy CTR on Mobile

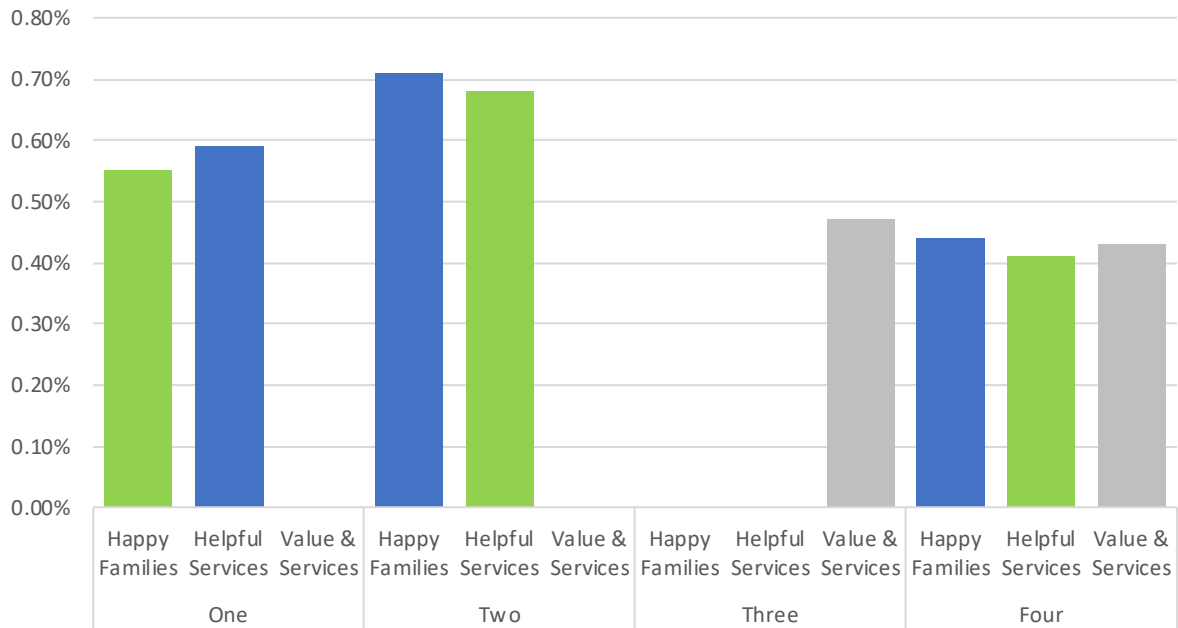
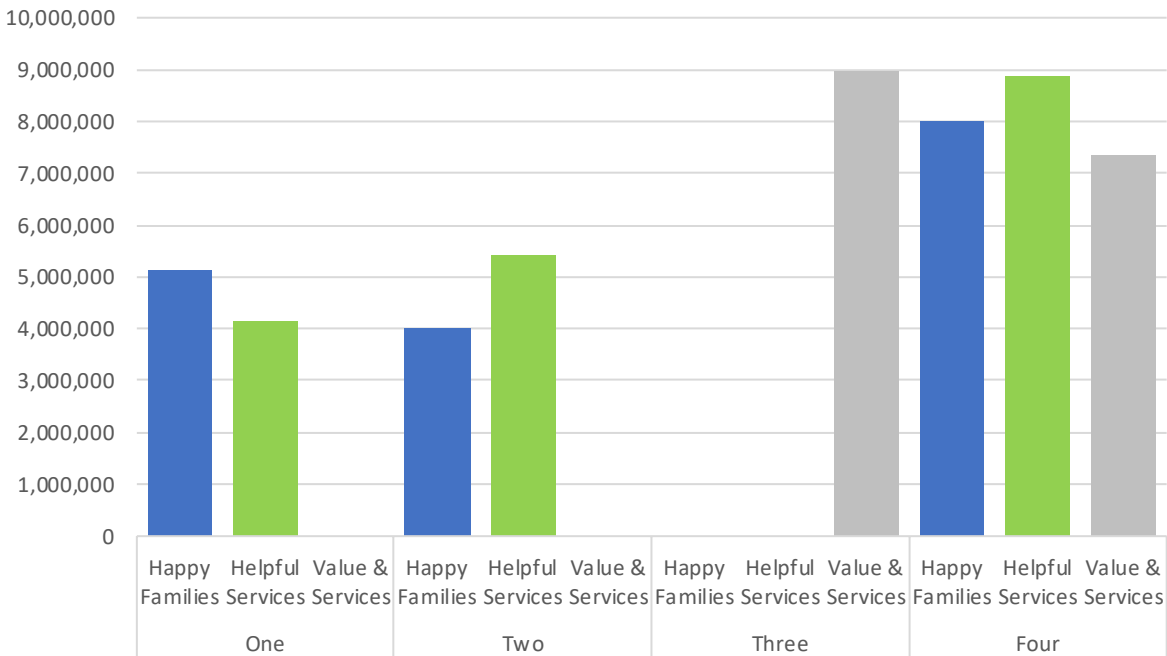


Figure 2 shows mobile marketing pool impressions³. The significant increase in volume across all concepts in the fourth round is due to our decision to make our audience statewide.

Figure 2. Messaging Strategy Impressions on Mobile



³ Refers to the number of mobile users who were selected by predictive targeting and served one of our ads.

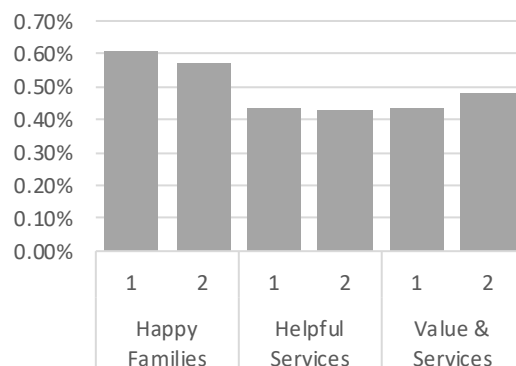
Although this is evidence of the significantly higher exposure, it reminds us why CTR is important: clicks represent how many people proceed to our landing page, not impressions. Even though the fourth round had the highest impressions, the earlier rounds still had more people click through. In general, all three messaging strategies performed similarly on our mobile marketing pool channel. It was consistent for driving the highest number of impressions, but the CTR was consistently the lowest of all the channels (Figures 3 & 4). We hypothesize that the messaging strategy of the ad makes the least difference for mobile users largely due to the nature of the channel: mobile is reaching fewer users who are in need of our services when compared to Google search “end-of-funnel” users. “End-of-funnel” is a term used to describe those users who are primed to take the final step and click the ad.

Facebook Performance

Figure 3. Facebook Post Impressions



Figure 4. Facebook Click-through Rate



As part of our interest in testing new messaging strategies, we rotated six Facebook ads: two for each strategy.



Figure 5. HS-1 Top Facebook Ad (by clicks)

The total impressions generated by these posts are shown in Figure 5. We see a noticeably smaller number of impressions in our older Happy Families ads than the two strategies that were new to Facebook. It’s possible this is due to the overlap in audiences who have already seen that ad or hid the ad on Facebook. When we look at our Facebook post’s CTR in Figure 5, however, we see evidence that even though it had the fewest impressions, Happy Families had the highest CTR. If our assumption that the Happy Families audience was smaller because it was made up of mostly people who hadn’t previously seen or hidden it is true, its higher CTR could be associated with a preference by new users.

This may support using newer material on Facebook in the future – particularly Happy Families-themed. Our audience who saw the Happy Families ads in the first few rounds may have already seen them or hid them, but these ads still performed best in this round.

Google Paid Search Ad Performance

Our marketing partner targeted people who searched for child support topics by leveraging keywords we identified. In Intervention Four, we identified similar text criteria to the prior rounds and geographically expanded our target audience to all Michigan residents. Google paid search ads have shown to be an effective channel for reaching our audience; with a CTR of over 20% this round, amounting to approximately 15,000 clicks, it performed much higher than Facebook or mobile, with CTRs of .46% and .43% respectively. The CTR also increased every round, even before the target audience shifted to statewide. This can likely be credited to our marketing vendor's search optimization. These results are presented in Figure 7, showing total clicks, and Figure 8, showing the CTR, across all four rounds. The large increase in clicks in round 4 was expected and reflects the expansion of the target audience.

Figure 6. Google Search Clicks

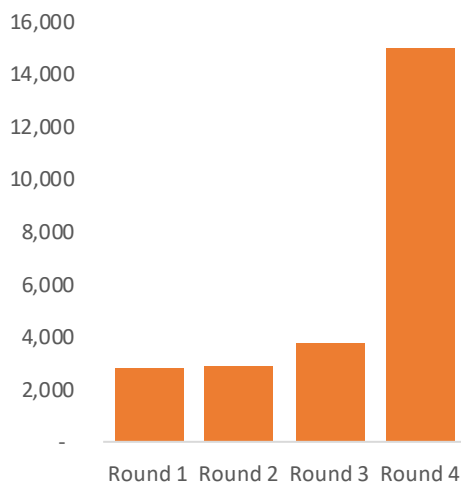
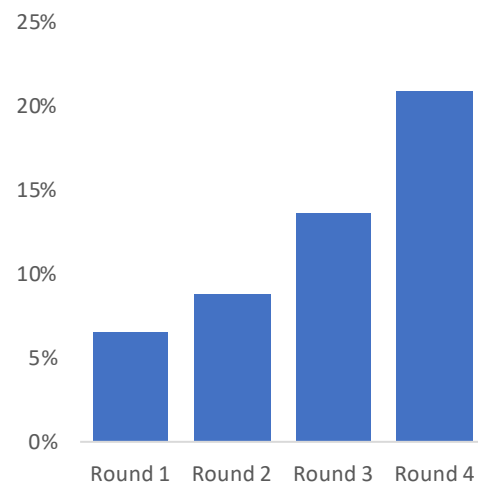


Figure 7. Google Search CTR



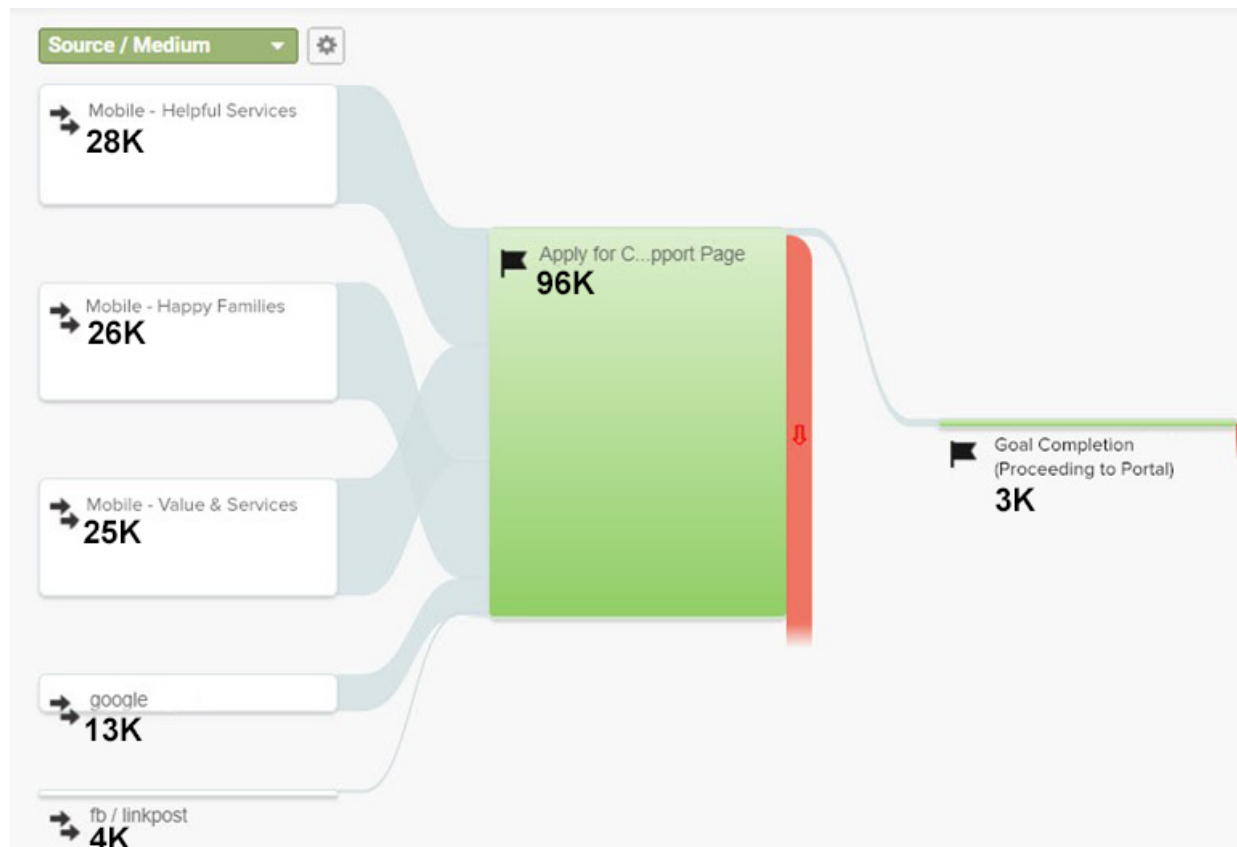
Comparing Intervention Channels

We can also make comparisons across our intervention channels using our goal data from Google Analytics. In Intervention Two, we added Google Analytics to track user activity. Specifically, we traced the path used to reach our landing page and identified which marketing channel users started from.

Figure 8 is a goal flow diagram illustrating the source and volume of each path taken. It shows our three mobile messaging strategies, our Google Search ads, and Facebook links directing users to the landing page. We designed a landing page to separate the grant activity ad traffic from regular traffic.

Our Google Analytics goal was for users to move on to our child support portal to begin an application. When the user clicked the Apply for Child Support button, which linked to the portal, one goal was recorded. Landing page visitors very rarely completed this goal.

Figure 8. Google Analytics Goal Flow



The numbers on the left represent the total user sessions for that source, and the arms represent the volume of the user flow.

Goal completion rate may not be a complete indicator of success in increasing applications through marketing. Some people may have clicked through the ad and, rather than completing the process at that time, may have returned to the page either directly or through a different source at a more convenient time. This could be especially true due to the nature in which people use Facebook and other mobile apps to fill limited free time or as brief distractions; scrolling on your phone while waiting in a line simply is not the right time or place to complete an application.

However, the data from Google Analytics clearly show that the users who arrive on our site through mobile and Facebook ads are not spending much time there, compared to those from Google Search. The amount of time spent on the site, shown in Table 4, is fairly low, ranging from 15 to 28 seconds. A lower bounce rate is considered a good indicator that visitors to your website are getting the information they are seeking. The rate for Google Search users is 55% compared to 91-93% for our those arriving from mobile ads.

Table 4. Google Analytics Conversion Rate by Referral Source

Referral Source	User Sessions	Session Duration	Bounce Rate ⁴	Conversion Rate	Goal Completions
Helpful Services (Mobile)	28,350	0:00:28	91.60%	0.06%	17
Happy Families (Mobile)	26,444	0:00:18	93.87%	0.05%	12
Value & Service (Mobile)	24,547	0:00:22	93.09%	0.06%	14
Google Search	13,160	0:01:16	55.49%	24.29%	3,197
Facebook	4,414	0:00:15	86.97%	3.08%	136
	96,915				3,376

Table 5 breaks down cost effectiveness by channel in terms of impressions and clicks.

Table 5. Intervention Four Channel Budget

Channel	Budget	Impressions	Cost per impression	Clicks	Cost per Click
Mobile	\$ 113,600.00	24,112,678	\$ 0.0047	102,985	\$ 1.10
Facebook	\$ 10,000.00	1,524,798	\$ 0.0066	7,078	\$ 1.41
Google Search	\$ 15,000.00	71,803	\$ 0.2089	14,979	\$ 1.00

These data show that mobile was an excellent method for inexpensive impressions. While Google Search impressions are more expensive, these ads are more likely to generate the least-expensive click. Clicks move the customer closer to our desired outcome of entering an online application. We may leverage these characteristics in future interventions depending on our goals. If a future goal is to lead customers to child support resources to increase their knowledge, mobile and Facebook ads provide us with inexpensive impressions. On the other hand, Google Search displays to fewer people but is better in terms of effectiveness and cost. If we are trying to get participants to click through to sign up for our services, then Google Search is a better value. Comparing these data to that of previous rounds, we also found that expanding our audience to a larger geographic area made the marketing more cost effective. In prior rounds, Facebook was as expensive as \$8 per click, but after expanding the audience in round 4, the cost per click on Facebook ads decreased to just \$1.41.

⁴ Bounce Rate refers to the percentage of visitors to a website who navigate away from the site after viewing only one page.

Evaluating Internal Data

Our goal was to increase our application proportion by at least five percentage points compared to a baseline proportion sampled from the same calendar months in the previous year. Consistent with prior rounds, this goal was not achieved, even with the larger audience in Intervention Four. Figures 9 and 10 show a comparison of the online application proportion on a weekly basis in Intervention Four and overall results, respectively.

In these graphs, as in past rounds, the control proportion is taken from one year prior to the intervention period. In this case, there was no significant improvement in online application proportion. About 17% of our cases were from online applications in the intervention round, compared to about 22% from the same time last year.

Figure 9. Application Proportion (Weekly)

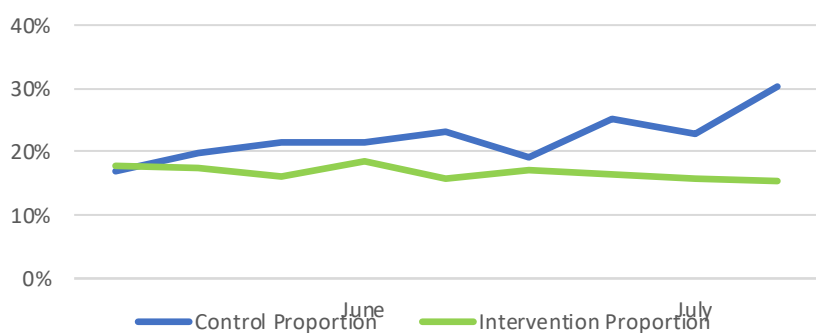
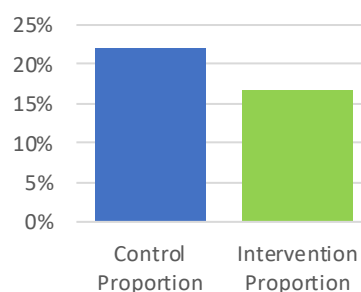


Figure 10. (Overall)



While we did not see an increase in the proportion of online applications compared to a year ago, there are several contributing factors to consider. This round reflects a control and intervention sample, both obtained during the COVID-19 pandemic – the control at the beginning and the intervention much later. Even though both rounds took place during the pandemic, the intervention round does not replicate all the conditions in the control round when COVID was a new threat, such as the additional unemployment benefits, the vaccine not being available, and childcare closures. There was also an unprecedented surge in new child support cases during the beginning of the pandemic, which presumably included an increase in online applications due to office closures and increased phone traffic for IV-D workers.

Results Summary

In general, we found the following results:

Mobile marketing

- Mobile was consistent for driving the highest number of impressions.
- Even though it had the highest impressions, mobile users were not as likely to complete an application or download information as Google Search and Facebook users.
- The messaging strategy did not make a big difference in engagement.

Facebook

- Facebook also had fewer impressions than mobile, but relatively more people clicked ads there.
- Facebook users were also more likely to click through to the application portal or download information than mobile users.
- Facebook users seemed to prefer newer content.

Google Search

- Google Search had the lowest impressions, but the highest click-through-rate.
- Google Search users are considered primed – they're looking for us, not the reverse.
- Google Search also had the highest percentage of people who continued to complete our Google Analytics goal.

In general, our analysis may suggest that mobile and Facebook ads are effective for raising awareness of the program, whereas Google Search is better for targeting people who are most likely to be looking for our services.

Next Steps

The activities detailed in our grant application have been completed, and although we did not see an increase in our application proportion data as we hoped, we did gather useful data about marketing our services to our audience.

Google paid search was a winning channel, demonstrating that it routes our audience directly where we'd like them to be on our website or portal. With our final CTR on Google Search coming to 20%, and each click costing only \$1, this seems to be a cost-effective way to reach people who are trying to find us.

Our interventions did not show a clear winner on our messaging strategies. Helpful Services performed slightly better impressions on mobile and Facebook, while Happy Families had a slightly better CTR on these channels.

This grant also helped clarify what we don't know. **Further audience research is necessary.**

We need to learn:

- what Michigan residents do or don't know about our services
- where does our target audience "hang out" online, if at all
- what channel does our audience prefer to hear from us on
- what messaging resonates and prompts the actions we desire our audience to take

While we don't have funds to direct to these activities presently, we will seek opportunities to budget for them and look for low-cost ways to gather this market research.

We appreciate this grant opportunity and view it as the first steps on our journey into digital marketing. The insights we have received will help us as we move forward in our efforts to connect with our participants. As our grant cohort moves forward, OCS staff will look for opportunities to be involved in further learning and engagement.