DIGITAL MARKETING DEMONSTRATION GRANT

EVALUATION REPORT FOR INTERVENTION 1:

"Happy Families" Marketing Interventions

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. The Michigan Office of Child Support (OCS) was one of the 14 child support agencies selected to participate in the Digital Marketing demonstration grant program.

Grant Purpose

The goal of OCS's Digital Marketing demonstration project is to conduct three digital marketing 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. A key measure of success will be our online application proportion: the proportion of applications received in intervention counties during the intervention period which were online applications, not a referral. Our goal is to increase this proportion by 5 percentage points over all three rounds in the counties implementing this intervention. The first intervention served as a test drive of our messaging and online marketing campaign strategy.

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 in order to maximize the impact of future digital marketing activities.

Intervention 1: Happy Families

Goals

The goal across our three digital marketing interventions is to increase applications among newly opened cases by at least 5 percentage points, compared to a baseline proportion sampled from the same calendar months in the year prior, among counties where the intervention is implemented. The goal of the first intervention was to test drive our messaging and online marketing campaign strategy to determine baseline engagement with our digital ads and explore initial impacts on application rates among newly opened

cases in each county and demographic of interest. These data will be used in intervention rounds 2 and 3, when we will change the messaging and compare the new ads' performance against our baseline data to determine which set of messages seems to be most effective.

Development

Our interventions were developed in partnership with the marketing agency Brogan and Partners and designed to reach the majority demographic in our caseload: single women aged 18-44 with a low-income. Six counties (Genesee, Saginaw, Berrien, Chippewa, Calhoun, and Kent) were geo-targeted for Facebook ads, Google search ads, and mobile ads. We relied on subject matter experts for their expertise in digital marketing strategy and leveraged these prior research statistics to inform our campaign channels and goals:

- 76% of women use Facebook
- 96% of target audience access the internet 5+ times per day
- 99.1% of target audience use their smartphone to access the internet
- 36% of women check their phone within the first five minutes of being awake
- 60% of women own two or more mobile devices and use them daily
- Target audience is 26% more likely than the average online user over age 18 to access the internet using a mobile device
- 33% of target audience are more likely to use an app than a web browser such as Chrome, Internet Explorer, or Safari
- Nearly 60% of target audience use Google when searching the internet

Assuming these characteristics of our target population, we moved forward with interventions geo-targeted in six counties (Genesee, Saginaw, Berrien, Chippewa, Calhoun, and Kent) mixing advertising on three channels: ads on Mobile apps and web browsers (including Google Chrome, Internet Explorer, and Safari for example), Google Paid Search, and Facebook in-feed promoted posts.

The Facebook promoted posts alternated themes during each month of the intervention period. In the first week of each month, Creative A was promoted. Creative B was promoted the second week. A comparison of each variation is included in this report. For Intervention 1, these components were active online starting April 1, 2019 and ending May 31, 2019 using our "Happy Families" marketing theme as our first implementation of our grant resources.

For our mobile app ads, the mobile apps selected for advertising were drawn from a pool of apps determined by our marketing partners and based on our target audience. The most used during our interventions were Word Mocha, Jigsaw Puzzle Collection HD, and Photo Editor Pro - Photo Collage.

Each channel's timeline and motivation are presented in Table 1 on the next page. For example, Table 1 shows that up to 60% of women own two or more mobile devices on which they employ mobile browsers and are likely to encounter our browser advertising over our two-month timeline.

Table 1. "Happy Families" Intervention Channels

Intervention Channel	Target	Timeline	Motivation
Ads in mobile app and browser advertising	Geography, Single low-income Women (18-44)	2 months	60% of women own two or more mobile devices
Google Paid Search	Geography, Search Terms	2 months	60% of target audience search using Google
Facebook posts (paid/promoted)	Geography, Single low-income Women (18-44)	Creative A – first week each month Creative B – second week each month	76% of females use Facebook

Description: County Targeting

Six counties were chosen as small/medium/large counties, mixing urban and rural characteristics, to allow for diverse racial representation. In our county selection process, we considered several factors. First, we wanted to make sure we included counties representing a range of populations. The size of these counties, population estimates and poverty rates were obtained using 2017 data (the most recent available) from the Census Bureau, shown in Table 2 below.

Table 2. Intervention County Population Statistics

County	Population	Female Population	Percent of Total	Target Age in Poverty	Percent of Total
Berrien	154,948	79,113	51.06%	5,979	3.86%
Calhoun	134,327	68,675	51.13%	4,893	3.64%
Chippewa	38,023	17,075	44.91%	1,216	3.19%
Genesee	410,881	212,766	51.78%	17,956	4.37%
Kent	636,376	323,242	50.79%	20,733	3.25%
Saginaw	193,803	99,786	51.49%	7,968	4.11%

Because our study is partly motivated by stricter TANF requirements, we also note each county's poverty rate among females and our age target audience. The target audience column includes all individuals, male or female, in poverty aged 18-44, because the Census does not provide mixed data for poverty and gender. We assume that some of these women may have been eligible for TANF in the past but are no longer eligible based on the new requirements. Therefore, they may be missing the referral to our office and may not realize

they can benefit from our services. These figures are included to describe the best possible estimates of the population exposed to our intervention and to reference when assessing how any changes observed in the application rate among newly opened cases in each county are related to the county's poverty rate.

Throughout these interventions, we use the "application proportion" as the key metric for comparisons. The application proportion is a ratio with the number of online, user-submitted applications for services in the numerator and the number of new cases in the denominator. Online, user-submitted applications are those initiated by a parent not as a result of an automatic referral from TANF or elsewhere. These ratios are further described in Table 3.

For county targeting, we examined each county's application proportion for every month in the past year to identify counties that have recently seen monthly application proportions consistently below the statewide average. Figure 1 below shows the distribution of each intervention county's monthly application proportion from the past year.

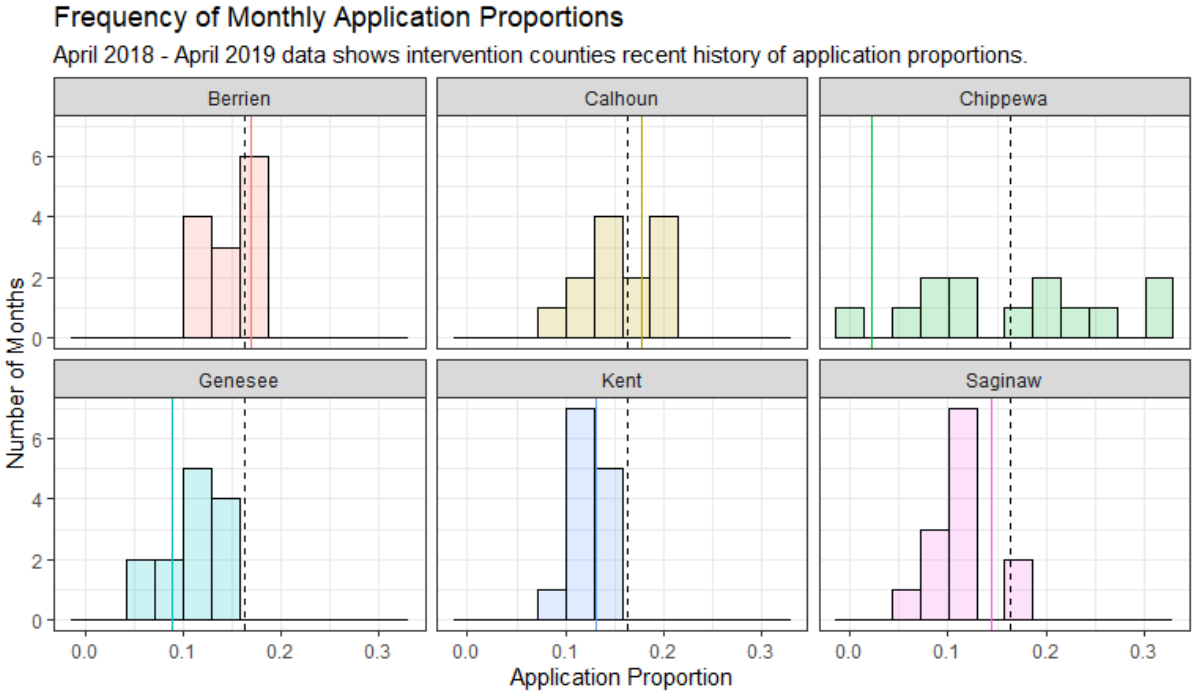

Figure 1. The prior 12 months of monthly application proportions are shown. The black dashed line represents the Statewide average in that time, .16, and the solid colored lines represents each county's baseline proportion from Apr/May '18.

The frequency charts in Figure 1 show some skewed distributions, but most are centered mostly below the black dashed line representing the state average. We examined all counties based on their past year of proportions and selected these six counties based on their size and this prior application proportion history.

Chippewa shows the most spread distribution here but was included despite this based on its population size and our decision to mix larger population counties with smaller, more rural counties. Many of the smaller counties in Michigan see a similar range of monthly

application proportion rates over the year, which may be a weakness to note in our choice of application rate as a measurement parameter. The other counties selected center their distribution below the state average, which indicates a recent history of measuring below the state average, and so were included strategically to allow for as much improvement as possible.

Outcome Measures

To measure progress toward our goal of increased application proportion, we measured changes in the proportion of IV-D cases opened through applications across all new cases and for subgroups of new cases. Case data including custodial party's race, age and county has been collected to complete these subgroup analyses. Case data is collected via the Michigan Child Support Enforcement System (MiCSES).

With our Happy Families messaging, we test drove our digital marketing process by examining how our intervention group reacted to the elements of our campaign at county, race, and the target demographic level, established baselines for each intervention channel, and considered lessons learned for future campaigns. During this intervention, we identified key online metrics to be tracked and used as a baseline against which we will test the performance of future campaigns on other channels and using other messages. These online metrics are listed below Table 3.

Table 3. Evaluation Measures

Research Interest	Measure	Primary Source
Has our campaign affected application proportions overall?	$\textit{Across all intervention counties}: \frac{\textit{New Cases from Online Applications}}{\textit{New Cases Total}}$	MiCSES Case Data
Has our campaign affected application proportions in intervention counties?	$\textit{For each intervention county}: \frac{\textit{New Cases from Online Applications}}{\textit{New Cases Total}}$	MiCSES Case Data
Were we more effective in reaching a certain age or race demographic?	$\textit{Across all intervention counties}, \textit{For each race or age group}: \frac{\textit{New Caess from Online Applications}}{\textit{New Cases Total}}$	MiCSES Case Data
What digital marketing baseline metrics have we established with our Happy Families campaign?	Online Metrics* Cost Data	Facebook Google Analytics
On what channel was our money best spent?	Online Metrics* Cost Data	Facebook Google Analytics

*__Online Metrics__ *refer to selected baseline metrics from various online sources: Facebook link clicks, web traffic sources, page hits for our landing page, and how many visits proceed from the landing page to the child support application page. In this intervention, we capture unique traffic to the new landing page, but not what traffic continues to the application page itself and completes an application, which will be included in future interventions.*

Results and Analysis

Our first intervention saw a total of 44,410 pageviews on the unique landing page from over 9 million total impressions[1] across all channels in all intervention counties. Because this campaign directed users to a new landing page created specifically for this intervention, we know that each pageview can only be attributed our marketing campaign, since only our intervention ads point to the landing page for that intervention. In fact, Google Analytics data also shows page activity only during April and May 2019, with only a few views before and after that we attribute to testing. In those two months, we saw 380 user-submitted applications of a total of 2,948 total new cases in our intervention counties. This represents an overall user-submitted application proportion of 0.1289 (or 12.89%) of all new cases. The landing page has information and directs users to the online application page, which did not have source tracking code during intervention one, so we refer specifically to the landing page performance in the analysis for round one.

Research Interests

We investigated the MiCSES case data from these 2,948 cases for changes in the user-submitted application proportion during our intervention period as discussed. Ninety percent confidence intervals for the estimated mean difference in our intervention proportion and the baseline from this time last year are reported. Confidence intervals shown are a range likely to contain the true change in user-submitted application proportions, so an interval containing zero indicates that the true effect of the intervention could be zero. A summary of proportion testing methodology used for MiCSES case data is included with this report.

We also investigated our online metrics mentioned above to establish baseline metrics for future analyses and make inferences about cost effectiveness for each channel based on our page activity. Source tracking from each of our intervention channels was used to track pageviews on the landing page across channels.

The first row from Table 3 (Evaluation Measures) shows our first evaluation measure and the ratio used below to evaluate the change in user-submitted application proportion overall.

[1] Impression refers to each instance of an online advertisement being displayed on an internet user's device.

What is the relationship between our campaign and the application proportion across all intervention counties in Michigan?

Overall effect of interventions: To determine whether our intervention increased the proportion of new cases that submitted applications for services, we compared the application proportion across all intervention counties during the intervention period to the average proportion across the same counties over a comparable period last year. Over the course of the three intervention rounds, we aimed to increase new non-referral cases by 5% in counties exposed to our intervention.

Here we estimate any change during the first intervention period by calculating the application proportion of the total intervention subset. The numerator of the proportion is the total online applications from intervention counties in the two-month period and the denominator is all applications, referrals included, from these counties.

While we expect that exposure to our marketing campaign may affect the application proportion across all intervention counties, we acknowledge that forces outside our intervention could have reinforcing or opposing effects on the application proportion. Our estimates are only based on available MiCSES data, and do not control for other independent variables or secular trends in application proportions. (As with any marketing intervention is impossible to control for all variables.) In addition, we recommend caution when interpreting a change in proportions. An increase in the application proportion represents a *relative* increase in the number of new cases with applications compared to all new cases. However, without presenting additional information, we do not know whether the relative increase is due to absolute growth in the number of applications (a boost to the numerator), an absolute reduction in referrals (a reduction in the denominator), or changes to both.

Table 4. Application Proportion Testing - Intervention Counties Overall

Application Proportion				Confidence Interval		p value
Measure	Applications	Total Cases	Proportion	Lower Bound	Upper Bound	
Observed (2019)	*380*	*2948*	*12.89%*			
Expected (2018)	*381*	*2983*	*12.77%*	*- 1.31%*	1.55*%*	*0.923*

Our p value (0.923) is above the .10 threshold for statistical significance; this means we cannot conclude that there is a significant difference between the application proportion achieved during the intervention compared to a comparable period last year.

Analysis: These results suggest our interventions did not significantly affect the application proportion overall. There was not a significant increase *or* decrease in application proportion across all intervention counties. These results were not entirely

unexpected; we understand that we're establishing our baseline with this first intervention. It may take time to build a child support audience on the MDHHS Facebook page and our messaging is mixed with other MDHHS subjects not pertaining to child support. Building trust and awareness requires a long view.

What is the relationship between our campaign and the application proportions in each intervention county?

County-level effect of interventions: We chose our counties primarily based on population and application proportion history. Genesee and Kent were selected as large size counties, Berrien and Saginaw were medium, and Chippewa and Calhoun were small. Chippewa, Saginaw, Kent, and Genesee have consistently seen application proportions below the state average.

At the county level, we test the same application proportions. Again, we assume exposure to our marketing campaign is one possible reason for the difference between the two proportions for each county but acknowledge that there may be other factors in any county that also cause a change in these proportions. The results of each county's testing are show in Table 5 below, with determinations based on a confidence level of 90%, and significant results bolded.

Table 5. Application Proportion Test - Intervention Counties Individually

Application Proportion			Confidence Interval		Proportion Testing	
County	2019	2018	Lower Bound	Upper Bound	p value	Significance
Berrien	*13.09%*	*16.88%*	*-8.41%*	*0.73%*	*0.204*	*Not Significant*
Calhoun	*16.67%*	*17.84%*	*-6.11%*	*3.86%*	*0.779*	*Not Significant*
Chippewa	**30.95%**	**2.17%**	**17.26%**	**41.69%**	**0.001**	**Significant**
Genesee	**12.81%**	**8.89%**	**1.54%**	**6.33%**	**0.009**	**Significant**
Kent	*12.47%*	*13.17%*	*-3.21%*	*1.8%*	*0.695*	*Not Significant*
Saginaw	**9.04%**	**14.43%**	**-9.23%**	**-1.59%**	**0.027**	**Significant**

Based on these proportions, the change in application rates seen in Chippewa, Genesee, and Saginaw counties are statistically significant, meaning they are unlikely to have occurred by chance alone. Saginaw's proportion was a noticeable decrease from the prior year, which may indicate significant noise from other factors or that our campaign had a negative effect. Below, Figure 2 shows the application proportions over the past year, with the intervention month proportions shown as dashed lines.

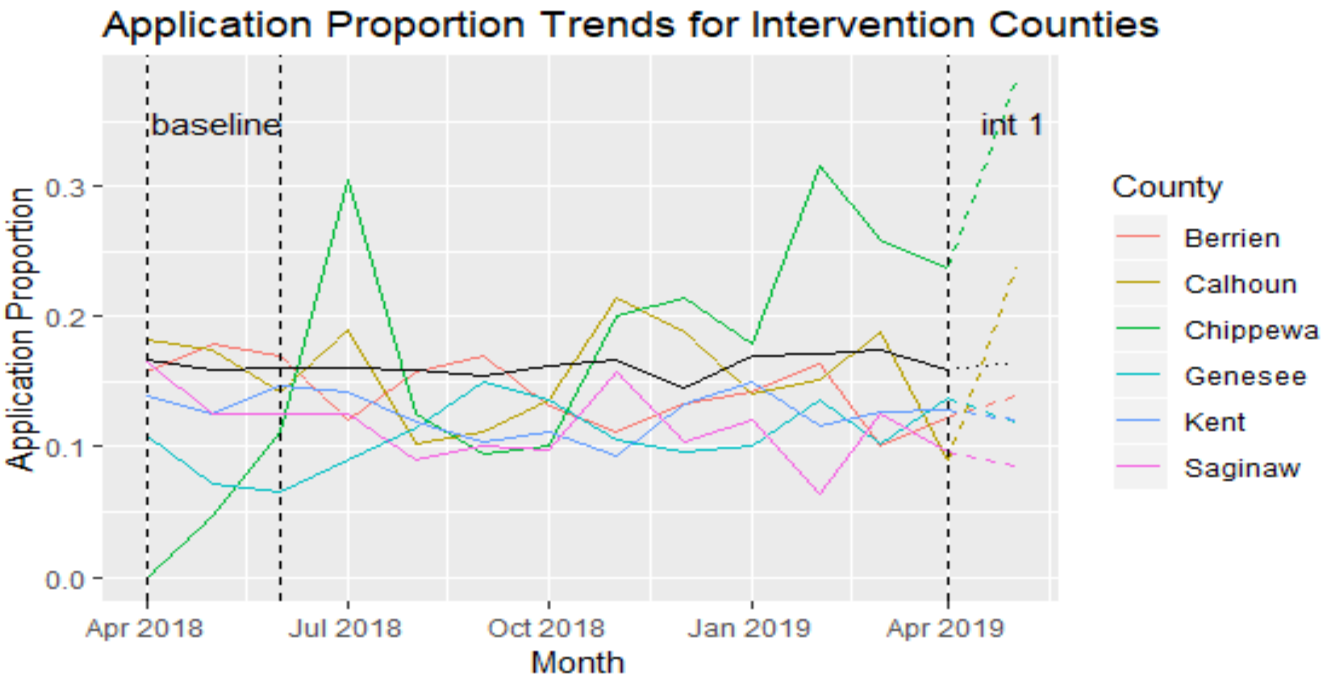

Figure 2. The past year of monthly application proportions show our counties consistently below the black line, representing the State average. Chippewa, Genesee, and Saginaw counties showed significant difference in the time of intervention 1 when compared to the baseline from the prior year.

Figure 2 shows that these counties typically have application proportions below the black state average line, which illustrates our strategy of choosing lower-proportion counties. In April 2019 the interventions began, and Chippewa and Genesee see an increase at the intersection of the Apr 2019 dashed line, in their application proportions from the baseline set marked the year prior.

Genesee appears to be trending down from April to May 2019, but our comparison is between both these points and the similar period marked baseline. Similarly, although we see Calhoun increase from April to May in the intervention period, the jump is not different enough than their proportions in the baseline period to be significant. We also see a slight increase statewide — even though our testing above indicates it was not significant.

Analysis: Showing improvement in Chippewa and Genesee is a success for those counties, but the huge fluctuations in its rate throughout the year are indicative that factors other than our intervention may causes changes in the application proportion in Chippewa. For

example, Chippewa has a small population, so a small increase or decrease in the absolute number of applications or referrals results in large fluctuations in the application proportion relative to counties with larger populations. We chose Chippewa as a small county on purpose because we wanted to explore our effect in rural counties vs urban counties, and as a smaller rural county, its proportions are more sensitive to variation. The p-value indicates the increase is significant, but the wide confidence interval indicates a lot of uncertainty about the amount of that increase. Readers should interpret the results with caution.

Was age related to any change in application proportions?

Effect of age factors on our reach: Our targeted intervention channels were aimed at low income women aged 18-44 who never married. As a result, we expect to see greater positive changes in the application proportions among these age groups than others. *Did the application proportion increase among women age 18-44 more than among women of other ages?*

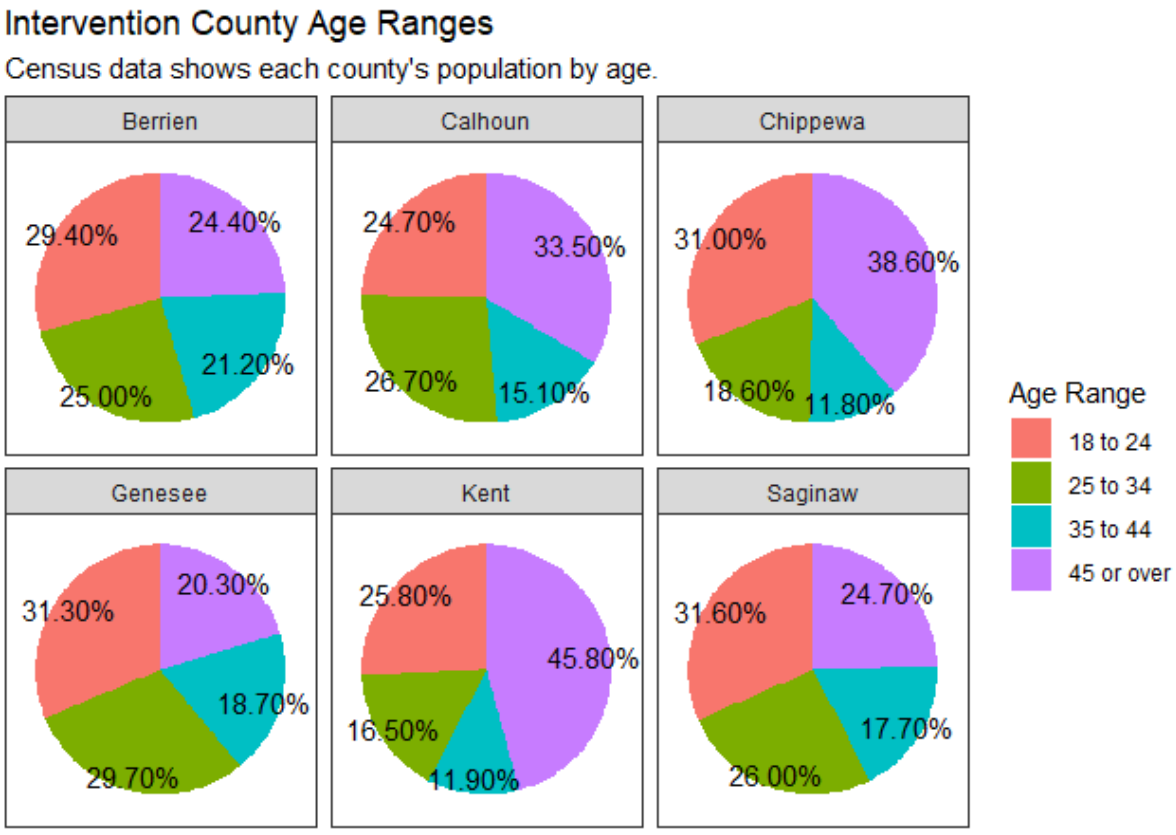

Figure 3. Population age compositions of each intervention county. This represents the total county population, including both men and women, from the most recent Census data available at the time.

The 'Over 45' portion of the Census data in Figure 3 is the only share outside our target range. Our counties all have younger populations, with over half of the population fitting into our target 18-44 range. Kent and Chippewa appear to skew older, with a relatively

larger older population; however, Kent did see a significant increase in the application proportion as Chippewa did

The comparisons below use the same application proportion: user submitted applications over the total all new cases, but in subgroups determined by the age of the applicant. These are not restricted by county lines to allow for the largest possible age group sample size. Results are shown in Table 6 below.

Table 6. Application Proportion Test - Age Subgroups of Combined Counties

Application Proportion			Confidence Interval		Proportion Test	
Age Group	2019	2018	Lower Bound	Upper Bound	p value	Significance
18-24	*3.9%*	*3.33%*	*-1.33%*	*2.4%*	*0.725*	*Not Significant*
25-34	**10.88%**	**8.6%**	**0.17%**	**4.42%**	**0.089**	**Significant**
35-44	**25.13%**	**20.21%**	**0.87%**	**9%**	**0.054**	**Significant**
45-54	*23.14%*	*25.15%*	*-7.77%*	*3.89%*	*0.639*	*Not Significant*
Above 55	**12.41%**	**24.61%**	**-19.03%**	**-5.1%**	**0.009**	**Significant**

Analysis: These results suggest that our ads were effective among people ages 25-44, but do not provide evidence that they were effective among women ages 18-24.

In the 35-44 and 25-34 ranges, we found a statistically significant increase in the application proportion. These results suggest that our targeting to these age groups was effective and we are inclined to continue targeting them in future interventions.

We also notice in the above 55 range that there is a significant decrease in our application proportion. Again, we can infer from this that either our campaign negatively impacted that subgroup, or some outside factor may be affecting this population as well.

Was race related to any change in application proportions?

Effect of race factors on our reach: Prior research suggests that racial inequalities regarding internet access may be a factor in online marketing.[2] However, smart phones have become more affordable and accessible across all income levels — making internet access more common than ever. By examining changes in the application proportion by racial/ethnic group, we answer the question: *Did our campaign affect application proportions for any specific race group?*

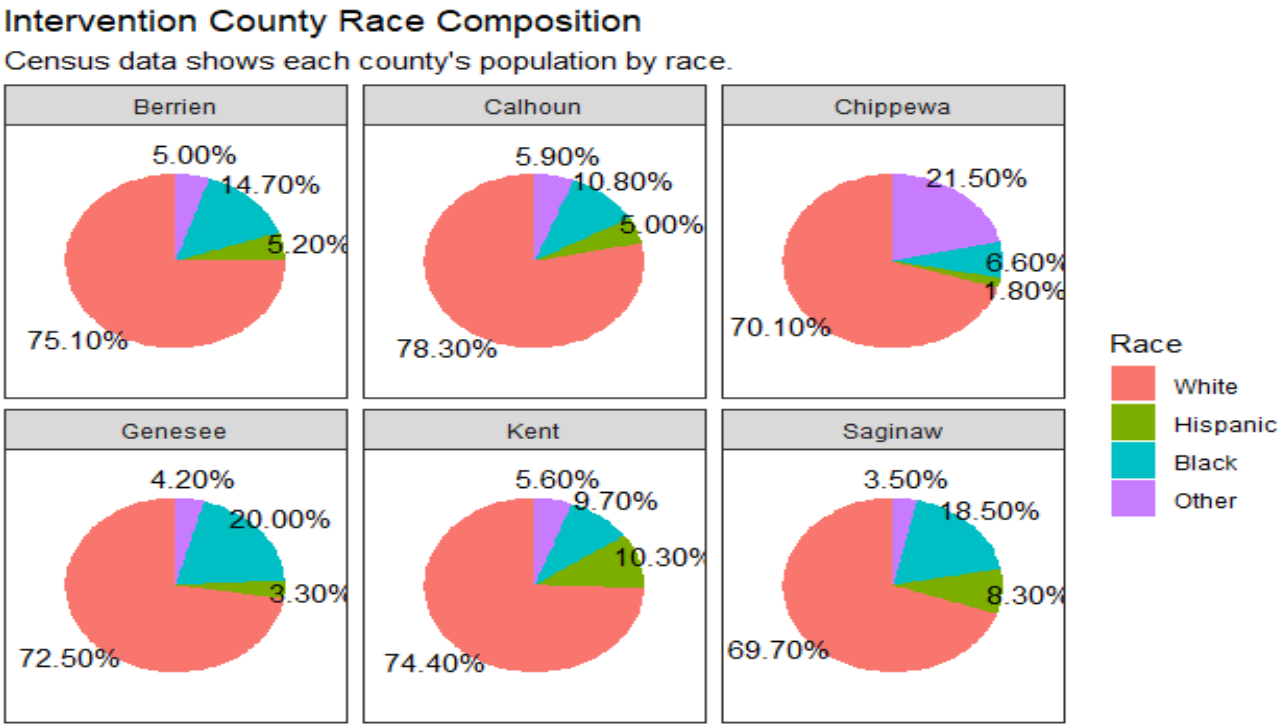

Figure 4. The demographic breakdown of intervention counties. The Census data provides estimates for White, Black, and Hispanic populations in each county. "Other" represents all other races as defined by the Census.

The Census data in Figure 4 shows a demographic breakdown of each intervention county. Our system allows for over 15 possible demographics to be coded for a custodial party. During this intervention, we saw 10 of these distinct racial codes used in our intervention counties. However, some of these codes included only referrals or sparse applications, and all but the three shown above included less than 2% of the total cases.

Chippewa, as a county we showed above to have a significant increase in the application proportion, has a noticeably larger proportion of residents in the 'other' category, so any significant increase in that category might explain Chippewa's success. Genesee, which also

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[2] Perrin, A., & Turner, E. (2019, August 20). **Smartphones help blacks, Hispanics bridge some – but not all – digital gaps with whites**. In *Pew Research Center*. Retrieved from https://www.pewresearch.org/fact-tank/2019/08/20/smartphones-help-blacks-hispanics-bridge-some-but-not-all-digital-gaps-with-whites/

showed improvement, is more of an urban county. Here we see the largest percent of black residents among our intervention counties.

Table 7. Intervention case data by coded custodial party race and testing group.

Test Group	New Case Share	CP Race Code	Applications	New Cases	Percent New Cases
White	45.08%	White	227	1329	45.08%
Black	31.88%	Black	60	940	31.88%
Hispanic	6.68%	Hispanic	13	197	6.68%
Other	4.59%	Other	17	44	1.49%
		Latin American	6	41	1.39%
		American Native	7	27	0.91%
		Pacific Islander	2	19	0.64%
		Cambodian	0	3	0.10%
		Vietnamese	0	1	0.03%
Not Tested	11.77%	*Missing Data*	48	299	11.77%

Our analysis uses the three largest populations corresponding to available Census data – white, black, and Hispanic – and lump all other cases into the 'other' category, acknowledging these distinctly coded groups do not necessarily share similar characteristics. Table 7 above shows the categorical breakdown of cases used for testing.

Testing the intervention proportion for each race category against our baseline data, we make inferences about how effective our ads were at encouraging people in different racial groups to apply for services. Similar proportions are used without regard to county lines to allow for the largest possible race subgroups, shown in Table 8 below.

Table 8. Application Proportion Test - Race Subgroups of Combined Counties

Application Proportion			Confidence Interval		Proportion Testing	
Race	2019	2018	Lower Bound	Upper Bound	p value	Significance
Black	*6.38%*	*6.36%*	*-1.86%*	*1.9%*	*1.000*	*Not Significant*
Hispanic	*6.6%*	*7.43%*	*-5.81%*	*3.71%*	*0.930*	*Not Significant*
White	*17.08%*	*14.98%*	*-0.21%*	*4.43%*	*0.150*	*Not Significant*
Other	**23.7%**	**11.19%**	**5.12%**	**20.07%**	**0.009**	**Significant**

Analysis: We observed higher rates in the white and black categories than last year, but testing shows the increase is significant in only the 'other' category, which suffers from

internal invalidity in the lumping of distinct ethnicities. These results suggest our intervention did not positively affect any one group at the level of race, even though some apparently more diverse counties saw success.

What digital marketing baseline metrics have we established?

Digital Baseline: As our first round, Happy Families provided us the opportunity to create a baseline against which we can measure the performance of future variations in messaging. Our new application landing page, which is only linked to from each intervention channel, ensures that all online metrics include traffic only from our defined intervention. Key metrics were identified in the planning phase of our campaign and measured were:

- Facebook link clicks: **1,331**
- Traffic sources for pageviews:
    - **41,204** from mobile
    - **2,612** from paid search
    - **594** from paid social
- Page hits for our landing page: **44,414**
- How many visitors to the landing page proceeded to the child support application page: **409**

Google Analytics provides further insights to the success of our targeting strategy, as first investigated in the age analysis above. Users who found our landing page through the targeted channels (Facebook and mobile) were almost entirely female and saw majority proportions in the 18-44 range. Our confidence in these results is assured by our beliefs about the effectiveness of age and gender targeting on our online platforms and is confirmed by looking at the breakdown of our pageviews shown in Figure 5 on the next page.

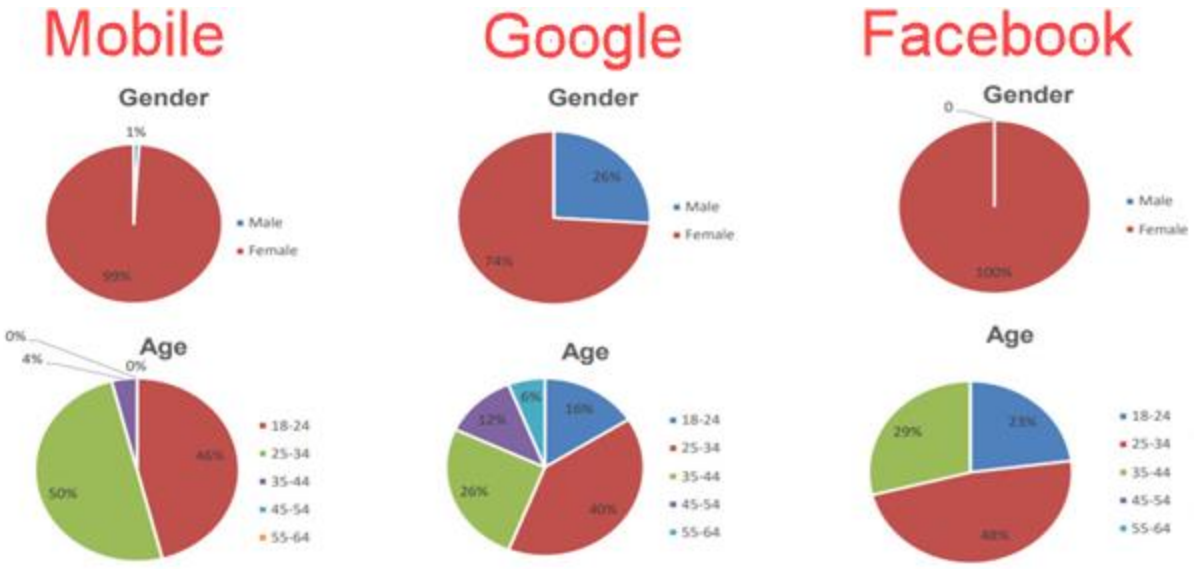

Figure 5. Intervention Channel Pageview Breakdown. Facebook and Mobile marketing utilized a demographic targeting strategy, and so we see larger percentages of pageviews inside our target audience – women aged 18-44 - on these platforms.

This shows the individuals that interacted with our ads reflect the target audience of our ads. Although our age subgroup testing above did not show a significant increase in each area targeted, we saw some significant improvement specifically for the 25-34 and 35-44 group, and a decrease with the over 55 group. Here, it is evident that the over 55 group had very little interaction on Facebook and mobile, which may be a factor in why our campaign did not increase that group. Although the 18-24 group did not show a significant difference, here we see that they are interacting with our ads. It also shows that we did capture a male population in our Google paid search, which was not an area we were necessarily looking for an increase due to our targeting.

Google Analytics also shows mobile as the intervention channel that leads to the longest time spent on our landing page, almost five minutes on average – twice the time users who come from other channels:

Table 9. Intervention Channel Pageviews

Intervention Channel	Pageviews	Average Time on Page
Mobile	*41,204*	*04:51*
Google	*2,612*	*02:14*
Facebook	*594*	*02:09*

There could be many reasons a user spends any amount of time on the page. Perhaps they immediately click away, or leave their window open, but it also takes time to read the page and understand our information, and we see mobile showing the most promise for a user to be doing that.

As a summary relevant to the baseline metrics, we see the following specific insights emerge about each of our channels:

Mobile: Our mobile digital ads display in three different sizes based on device used, and we have data for each of those. We saw the most impressions from the smallest size, but a slightly larger click-through-rate (CTR) from the largest.

The industry benchmark for CTR on mobile digital marketing such as this is 0.16%, which we surpassed in this round. CTR for each mobile ad creative is shown in Table 10 below, and for each intervention channel are shown in Table 12 on page 20.

Table 10. Mobile Creatives - Click-Through-Rates (CTR)

Display Creative Size	Impressions	Clicks	CTR
320 X 50	*5,333,739*	*27,654*	*0.52 %*
728 X 90	*2,851,402*	*17,698*	*0.62 %*
300 X 250	*1,088,663*	*7,382*	*0.68 %*
Total	***9,273,804***	***52,734***	***0.57 %***

This shows how common cell phones are, as the mobile device with smallest ads. Although bigger ads (devices) are less common, they do ultimately lead to more pageviews per impression. This information is valuable in designing advertising campaigns that drive behaviors we want.

Google: Paid Google search ads mix headlines with a theme of returning to child support or getting child support for the first time. These ad groups are *Apply* and *General* for this intervention. Google Analytics shows we got more clicks from the *General* ad group than *Apply* — which was expected, given people already in our program probably search for us. Table 11 gives examples of these ad groups and the number of clicks per group.

Table 11. Google paid search ad messaging vary by theme to hone marketing strategy for future campaigns.

Top Ads by AdGroup		
General	Getting Child Support | See Our Resources | Apply Now www.michigan.gov/childsupport Are You Eligible For Child Support? Learn More About Child Support Services Now.	944 clicks
	Child Support For Single Moms | Are You Eligible? | Learn More Now www.michigan.gov/childsupport Children Whose Parents Are Involved In Their Lives Are Happier, Healthier & Successful. We Offer Impartial, Non-Judgmental Services To Those Raising Children. Learn More & Apply.	757 clicks
Apply	Child Support For Single Moms | Submit An Online Application | Learn More www.michigan.gov/childsupport If You Don't Have A Child Support Case And You Want Help, You May Begin One Online. Learn More About Child Support Services And See If You Are Eligible Now.	330 clicks
	Get Child Support | Submit An Online Application | Apply Now www.michigan.gov/childsupport We Offer Impartial, Non-Judgmental Services To Single Moms. Live Happier. Apply Now.	289 clicks

Facebook: Our twice monthly paid posts alternated between two creatives, Creative A and Creative B, shown below, to compare any differences as part of our baseline metrics above. This time they performed about the same in terms of engagements, but Creative B yielded more clicks and impressions overall. The difference between these ads was the stock photo used:

Creative A

Impressions: 129,650
Clicks: 556
Social Engagements: 45

Creative B

Impressions: 167,975
Clicks: 775
Social Engagements: 43

These will be kept for future analysis, with an interest in the difference between these, future creatives, and any growth in our overall following in terms of engagement over the course of the grant.

A full media recap provided by Brogan and Partners is attached to this report and includes paid search performance by county and by search terms, monthly pageviews, each channel's budget, top ad pages from the mobile campaign, and more.

On which Intervention channel was our money best spent?

Cost Effectiveness: We have invested $54,252.67 so far in our digital marketing campaign across our three paid channels for this round of interventions. *What channel seemed to give us the best return on investment?*

The budget breakdown below shows key metrics above and determines the cost per click (CPC) and cost per pageview (CPV) for each channel in Table 12 on the next page.

Table 12. Intervention Channel Costs

Channel	Cost	Impressions	Clicks	Views	CTR	CPC	CPV
Mobile	*$46,252.67*	*9,273,804*	*52,734*	*41,204*	*0.57%*	*$0.88*	*$1.12*
Google	*$6,000.00*	*42,380*	*17,698*	*2,612*	*6.5%*	*$0.33*	*$2.29*
Facebook	*$2,000.00*	*297,625*	*1,331*	*594*	*0.44%*	*$1.50*	*$3.37*
Overall	***$54,252.67***	***9,613,809***	***71,763***	***44,414***	***0.7%***	***$0.76***	***$1.22***

This shows our overall average cost per click was about $.76; clicks only cost us $1.50 on Facebook, where they frequently did not result in a pageview. This causes the cost per pageview for Facebook to be over three dollars, the highest of all channels.

Analysis: Mobile and Google performed better than Facebook in terms of cost per click, but mobile did the best in cost per view, had the largest share of our impressions and the longest time spend on the page. For this round it clearly outshines the other two channels, although according to our marketing strategists we are surpassing industry benchmarks in those categories as well.

We don't have a goal in terms of cost effectiveness for our grant, although we surpassed industry benchmarks in all three channels according to our marketing strategists. It is hard to quantify the "worth" of a new support case, but we will keep these results in mind as we consider changes and cost for future campaigns.

Lessons Learned and Next Steps

Lessons Learned: The largest improvement evidenced from activities of Intervention I was seen in Genesee County, which has the largest share of its population in poverty of the six counties included in this phase. There was also a significant increase in Chippewa, but its smaller population makes its application proportion more sensitive to small changes in applications or referrals. Testing showed application rates for some of our target age groups did increase. This may indicate that targeting counties with higher female poverty rate, as found in Genesee, is an effective strategy to reach those women who might have previously been referred by TANF.

During our intervention's execution, we increased our knowledge in setting digital marketing goals and the variety of marketing data we collect from each channel in the campaign. We have learned how to set up various analytic goals in Google Analytics. Intervention 1 also provided us with insights on how the data team and our contractors deliver the data, what ways to best characterize our counties from Census data and how to compile these sources into meaningful inferences in the context of our goal.

Another learned lesson from Intervention 1 is related to our subgroup analysis. It may be beneficial to investigate mixed groups if our samples were larger. For example, we could

look at the interaction of age and race. Then, we could further examine what population characteristics seem to correspond to any increase in our application proportion.

Next steps: Based on the cost effectiveness data, we believe that our marketing resources should go to the mobile marketing campaigns, or at least shift funds used for Facebook ads as Facebook had the highest cost per pageview and click. However, our primary experiment is to compare the style of messaging as we meet our 5% increase goal. For consistency between rounds, we have decided to keep the budget about the same throughout the 24 months of the grant to keep comparisons between rounds consistent. We may see our Facebook presence grow over time, as interested parties find and engage with content on the social platform differently than the text ads of a Google search or ads on a mobile game.

In this intervention, we captured unique traffic to the new landing page, but not what traffic continues to the application page itself and completes an application. A Google Analytics goal is now in place to capture the referral source of users who proceed from the landing page to the application portal itself. This will provide a baseline for comparing the following rounds and give us some new things to discuss in our next report.

In future campaigns, examining case data by factors other than age and race may provide another perspective. Intervention 1 has shown age targeting may be effective, even if our testing shows each distinct age range was affected differently. As such, we may not spend time and resources looking further into this. Genesee County, which showed the highest population and poverty rate of our sample, emerged as a county whose application rate significantly increased, which may suggest income, population density or some other outside factor not considered here, may be significant.

Attachments

Proportion Testing Methodology

We use two-tailed proportion testing to determine if the observed change in application proportion is significant, and further analyze social media data for performance as a baseline for future messaging strategies.

Our intervention months produce our observed value for testing and our baseline is the average application proportion from these months last year. The null hypothesis (H_0) states there is no significant difference between the observed proportion (P_{obs}) and the expected proportion (P_{exp}), our baseline.

$$H_0: P_{obs} - P_{exp} = 0$$

$$H_A: P_{obs} - P_{exp} \neq 0$$

- **Observed** proportion is based on data collected during intervention 1 - April-May 2019:

$$P_{obs} = \frac{\text{Application Casess during Intervention 1}}{\text{Total Cases during Intervention 1}}$$

- **Expected** proportion is from baseline data collected one year before intervention 1 - April-May 2018:

$$P_{exp} = \frac{\text{Application Cases one year before Intervention 1}}{\text{Total Cases one year before Intervention 1}}$$

At a determined confidence level of 90%, we reject the null hypothesis where the p-value returned is less than .10.

A rejection of the null hypothesis indicates an increase in the application proportion during intervention months relative to the same months in the previous year.

Confidence intervals for the true difference in proportion are constructed, which indicate a significant increase in our proportion if zero is not contained in the interval.

Testing is done for various subgroups of interest in our intervention counties:

- all cases in all counties exposed to our interventions (overall)
- all cases in each county exposed to our interventions (county-level)
- all cases exposed to our interventions by age group
- all cases exposed to our interventions by demographic groups

As a measure of significant change in our application proportion, these tests are used in analysis in conjunction with our online resources data to determine results and draw conclusions.

Brogan and Partners Media Recap

MDHHS

Campaign Overview

Objective: To direct people who are eligible for child support to the website to learn more and/or enroll

Target: People who are eligible for child support – low income, single mothers who never married

Geography: Counties participating in MiChild Support two-way communications: Genesee, Saginaw, Berrien, Chippewa, Calhoun, and Kent counties

Phase 1 Media Timing: April – May 2019

Budget: $52,026.67

Insights:

- Digital banners drove over 41,000 sessions to the Child Support landing page in Phase 1 – the average user from digital spent almost 5 minutes on the page
- Paid Search Click-Through Rate was over 6x the 1% CTR Benchmark for Google Ads
- While Facebook and Instagram posts optimized to best performing platform, 99% of impressions were served on Facebook due to better performance

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Budget Breakdown

Media	Cost	Added Value	Total Cost	Impressions
Digital	$44,026.67	$2,226	$46,252.67	9,273,804
Paid Search	$6,000	NA	$6,000	42,380
Paid Social	$2,000	NA	$2,000	297,625
Total	**$52,026.67**	**$2,226**	**$54,252.67**	**9,613,809**

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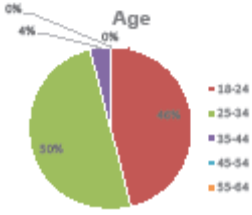
Demographic Data by Tactic

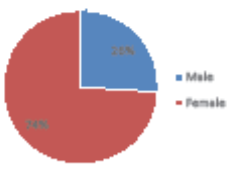
Target Audience
- Low income, single mothers who never married

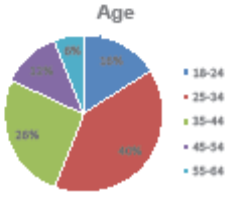
URL
- https://www.michigan.gov//mdhhs/0,5885,7-339-73971_5528_61204_61827_91885---,00.html

Digital

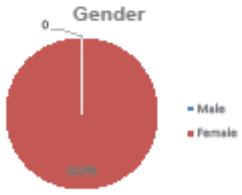


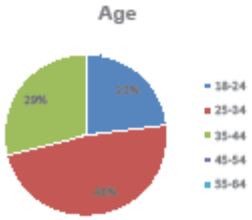
Paid Search





Paid Social





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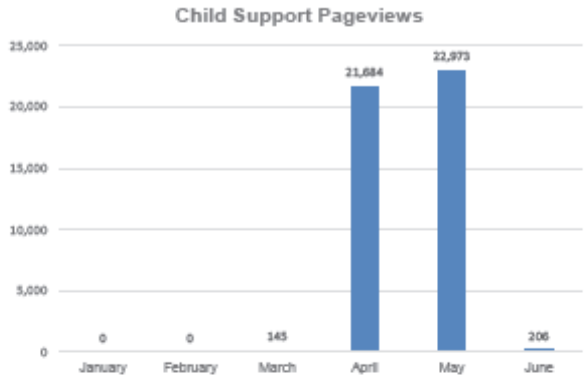
Google Analytics

Media Ran April - May



Media Tactic	Pageviews	Avg Time on Page
Digital	41,204	04:51
Paid Search	2,612	02:14
Paid Social	594	02:09

Mobile

Flight Dates

- April 1 – May 31

Rationale:

- 60% of women own two or more mobile devices

Dollars Invested

- $44,026.67

Added Value

- $2,226

Total Impressions

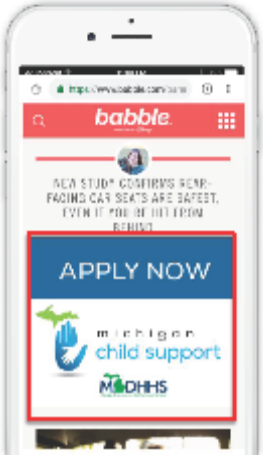
- 9,273,804

Total Clicks

- 52,734

CTR

- 0.57%
  - Benchmark: 0.16%



Top Three Sites/Apps Include:

Word Mocha (0.86% CTR)

Jigsaw Puzzle Collection HD (0.80% CTR)

Photo Editor Pro – Photo Collage (0.53% CTR)

Nielsen @Plan and 2017, Google and Zephoria Marketing 2018

Paid Search

Flight Dates
- April 1 – May 31

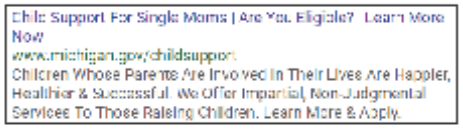
Rationale:
- 60% of the target audience use Google when searching the internet

Dollars Invested
- $6,000

Total Impressions
- 42,380

Total Clicks
- 2,754

CTR
- 6.50%
  - Google Benchmark: 1.0%



Nielsen @Plan and 2017, Google and Zephoria Marketing 2018

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Paid Search

Top 5 Keywords	
Child support	1,202 clicks
Getting child support	451 clicks
Child support payments	445 clicks
How do I get child support	131 clicks
What is child support	107 clicks

Performance by County	
Kent County	1,074 clicks
Genesee County	683 clicks
Saginaw County	400 clicks
Berrien County	277 clicks
Calhoun County	274 clicks
Chippewa County	47 clicks

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Paid Search

Top Ads by AdGroup		
General	Getting Child Support	See Our Resources	Apply Now www.michigan.gov/childsupport Are You Eligible For Child Support?	Learn More About Child Support Services Now.	944 clicks
	Child Support For Single Moms	Are You Eligible?	Learn More Now www.michigan.gov/childsupport Children Whose Parents Are Involved In Their Lives Are Happier, Healthier & Successful. We Offer Impartial, Non-Judgmental Services To Those Raising Children. Learn More & Apply.	757 clicks
Apply	Child Support For Single Moms	Submit An Online Application	Learn More www.michigan.gov/childsupport If You Don't Have A Child Support Case And You Want Help, You May Begin One Online. Learn More About Child Support Services And See If You Are Eligible Now.	330 clicks
	Get Child Support	Submit An Online Application	Apply Now www.michigan.gov/childsupport We Offer Impartial, Non-Judgmental Services To Single Moms.	289 clicks

Paid Social

Facebook/Instagram

Flight Dates

- April - May

Rationale:

- 76% of women use Facebook

Dollars Invested

- $2,000

Total Impressions

- 297,625

Total Clicks

- 1,331

CTR

- Facebook CTR: 0.44%
  - 98% of impressions were served on Facebook due to low Instagram performance

Nielsen @Plan and 2017, Google and Zephoria Marketing 2018

Social

Creative A

Impressions: 129,650
Clicks: 556
Social Engagements: 45

Creative B

Impressions: 167,975
Clicks: 775
Social Engagements: 43

B&P

Media Flowchart

	Apr-19				May-19				Jun-19				
	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24
Mobile													
Paid Search													
Social													

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