

Digital Marketing Interim Evaluation: Intervention Cycle 1

Grantee Agency: Virginia Division of Child Support Enforcement
Grant Number: 90FD0218-01-01
Date of Submission: March 26, 2020
Title of Intervention: Find/Engage/Educate
Key Staff Contact Information: Mariellen Keely
Policy Program Consultant - Initiatives
Virginia Department of Social Services
801 East Main Street, Richmond VA 23219
mariellen.keely@dss.virginia.gov
(804) 726-7923

Contents

- Executive Summary..... 1
- 1. Background 3
 - I. Grant Purpose..... 3
 - II. Problem 3
- 2. Intervention 4
 - I. Goals of the Overall Project..... 4
 - II. Goals of Intervention Cycle 1 (Find) 5
 - III. Cycle 1 Research Questions..... 6
 - IV. Development of Cycle 1 Intervention..... 6
 - V. Cycle 1 Description, Target Populations, and Timeline 9
 - A. Description 9
 - B. Target Populations 15
 - C. Overall Project Timeline..... 17
 - D. Detailed Timeline for Cycle 1 17
 - VI. Cycle 1 Outcome Measures 18
- 3. Results..... 19
 - I. Sample Size 19
 - II. Results 20
 - III. Analysis 21
- 4. Lessons Learned and Next Steps..... 26
 - I. Lessons Learned..... 26
 - II. Next Steps..... 27
- Schedule of Appendices..... 29
 - Appendix A. Project-Specific Landing Page..... 30
 - Appendix B. Web-based Contact Form..... 32
 - Appendix C. 50 Most Productive Search Terms (Ranked by Total Number of Clicks) 34
 - Appendix D. Google Search Ad Assets 36

Executive Summary

This report offers an interim evaluation of the first cycle interventions undertaken by Virginia's Division of Child Support Enforcement (DCSE) as part of the Digital Marketing grant program, sponsored by the federal Office of Child Support Enforcement.

After explaining the purpose of the grant, the problem we intended to address through this intervention, and our research questions, we describe the six major components of this cycle (ordered according to roughly when the associated process began):

1. Conducting a search engine optimization (SEO) analysis of the existing DCSE website and revising that site in alignment with that analysis
2. Developing an independent, campaign-specific website with a distinctive URL
3. Determining which jurisdictions in Virginia seemed most likely to be productive locations for ads
4. Creating an online form to take requests for information from the web and using techniques from behavioral economics to encourage users to complete that form
5. Placing text-based ads inserted into lists of Google search results to attract new users to the site
6. Placing ads combining text and images to be displayed on broad range of websites and in mobile apps

As we describe in more detail below, we succeeded in putting into place all five components of the intervention, including placing both search and display ads through Google, though not all aspects of each component were implemented as quickly or as thoroughly as we had planned.

- The outcomes we measured for components 1 and 2 (optimizing the existing DCSE for search engines and creating a new, campaign-specific website) suggested that search engine optimization can, on balance, benefit new and existing child support websites. We did see declines over the previous year in the number new users who visited DCSE pages through organic search and in overall session time, but views of DCSE pages increased by 45% over the same period during the previous year, new users increased by 42%, and the number of webpages viewed per session increased by 5%. SEO and website-related outcomes are discussed in more detail below, in point 1 of section 3.III.
- Outcomes of component 3 (location targeting) were not measured independently but underlay the results of component 5. A fuller discussion of the relationship between components 1 and 5 appears below, in point 3 of section 3.III.

- Results of component 4 of this cycle (creating a web-based contact form) suggested that users were, in keeping with our overall goal of increasing applications for services, primarily interested in receiving applications for child support services. The total number of submissions, however, fell below our ultimate goal of maintaining a steady stream of 300 submissions per month by July 30, 2020. More details about this aspect of the intervention appear in point 2 of section 3.III.
- The outcomes for component 5 (ads placed in search results) exceeded our goals across every element that we measured: click-through rates (the rate at which users clicked on ads after seeing them), cost per click (the total amount spent on an ad divided by the number of clicks it received), conversion rates (meaning, for this intervention, the rate at which users who clicked on ad eventually submitted an inquiry through the online contact form), and cost per conversion (the total amount spent on an ad divided by the number of users who submitted a contact form inquiry after clicking on that specific ad). While the intervention also made us aware of certain limitations of search ads, we nonetheless feel that search ads are the one aspect of this intervention that we can recommend to other child support programs almost without reserve. We provide a full discussion of this component as point 5 of section 3.III.
- Component 6 of this intervention (ads mixing text and images displayed by Google on third-party sites and in smartphone apps) produced mixed results. While these ads earned a click-through rate well above the industry benchmark and did so at a cost per click that was only slightly more than half of the associated benchmark, they also fell well below the benchmarks we identified for conversion rates and cost per conversion. We discuss this component in more detail, including ideas for how this advertising approach might be more productively approached in the future, in point 6 of section 3.III.

We conclude with a discussion of lessons learned and next steps. A set of seven appendixes provides readers with most of the specific materials that the project team developed for this cycle.

1. Background

I. Grant Purpose

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.

II. Problem

The IV-D program in Virginia faces a challenge common to other programs across the country: how to bridge the gap between the decline in the number of cases in its caseload and the ongoing need for its services demonstrated through analyses of population data. This intervention addresses the problem of how to bring these two sets of data points into better alignment.

Between federal fiscal years 2013 and 2018 the number of total child support cases in Virginia with either current or past child support due declined by 10.8 percent, or more than 35,000 cases. Nearly 20,000 of those cases (or 55 percent of the total decline) came from Former Assistance. Cases classified as Never Assistance, on the other hand, fell by less than 5 percent (approximately 6,000 cases) over the same time, suggesting that there remains a relatively robust and ongoing need for IV-D services among this portion of the caseload.¹

An analysis of Census data and caseload data from the Virginia Division of Child Support Enforcement (DCSE) gives a sense of how significant that need might be. According to Census data for 2015, approximately one in four children nationwide had at least one parent out of the home and appeared to qualify for child support services.² Caseload data for a recent comparable period, Virginia's 2016 fiscal year, showed that approximately one in five Virginia children were receiving IV-D services from DCSE. Presuming that the nationwide figure is roughly representative of Virginia, the difference between the overall need and the caseload data is approximately 93,000 children. Adjusted for Virginia's average of 1.2 children per child

¹ Earlier versions of this evaluation, and other materials submitted as part of this grant, used data comparing July 2013 case data to June 2017. We have updated the analysis here; the overarching picture remains the same.

² T. Grall (2018). *Custodial Mothers and Fathers and Their Child Support: 2015*. U.S. Census Bureau, Current Population Reports. According to correspondence with the author of the report, it has been removed from circulation temporarily to correct a minor error. We have attached a copy of the earlier version with this submission.

support case, this yields a potential increase of approximately 77,000 new child support cases, or 26 percent, over 2018 levels.

More current U.S. Census data suggest that the gap between families eligible for services and those participating in the IV-D program may be widening. According to American Community Survey (ACS) estimates, there were between 540,416 and 561,162 children under the age of 18 in single-parent households in Virginia in 2017.³ DCSE caseload data, on the other hand, identified 301,284 children under 21 in the DCSE caseload in federal fiscal year 2017. That leaves a minimum of roughly 240,000 children in Virginia who could presumably be eligible for IV-D services.⁴

We hypothesize that the reason for this gap in service is that many members of the public either remain unaware of the federal child support program or have significant misconceptions about it. We believe that digital engagement methods can increase awareness about both the program's existence and how it actually delivers services to families in Virginia and elsewhere.

DCSE leadership—particularly Craig M. Burslem, Deputy Commissioner of State Programs for the Virginia Department of Social Services (VDSS)⁵—was largely responsible for defining and prioritizing the project team's focus on increasing program participation, particularly among Never Assistance families, though their collective awareness of declining caseloads was also informed by other discussions and research in the child support community as a whole.

2. Intervention

I. Goals of the Overall Project

The primary purpose of the overall project is to gather information about possible strategies to close the apparent gap, described above in section 1.II.A, between the number of families eligible for services and those currently connected to Virginia's IV-D program. To accomplish that, Virginia seeks to increase requests for child support services, with a focus on applications for the core child support services (locating parents, establishing paternity and child support orders, collecting and distributing child support, and enforcing and modifying child support orders) from custodial parents who are eligible for child support services but not currently

³ U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

⁴ Even this large number may understate the need. Among other factors, the mismatch in the age ranges between the two measures (under 18 for ACS data, under 21 for DCSE data) would necessarily mean there are actually even fewer children under 18 on the DCSE caseload.

⁵ At the time of the original grant application, Deputy Commissioner Burslem was the Director of DCSE.

connected to the IV-D program and who have never received public assistance benefits (Never Assistance).⁶

To achieve this goal, we mapped a three-part intervention that reflects a somewhat simplified version of the Transtheoretical Model of Change, originally described by James O. Prochaska and Carlo DiClemente.⁷ While their model described five overall stages (Precontemplation, Contemplation, Preparation, Action, Maintenance, and Relapse), we focused primarily on the three middle sections (Contemplation, Preparation, and Action).

Looking at those stages from the outside—that is, from the perspective of a program such as ours, rather than from the individual decision maker described in the model—we recast those sections into three intervention cycles, which we named Find (Cycle 1), Engage (Cycle 2), and Educate (Cycle 3).

II. Goals of Intervention Cycle 1 (Find)

The primary purpose of the first cycle of interventions was to improve potential clients' ability to find DCSE online. A secondary purpose was to begin setting the stage for future cycles by providing clients with clear, up-to-date information about the program and creating a contact form that would allow users to request information about the program.

We also sought to integrate the Learn, Innovate, Improve (LI²) paradigm into this initial stage.⁸ We viewed the LI² paradigm as particularly important for helping us test potential content, both written and visual, and how images and text might be combined most effectively and adapted for use in Cycles 2 and 3.

⁶ We use “public benefits” here to refer to the small number of assistance programs, primarily TANF, that if not received, qualify a case as “Never Assistance” for purposes of reporting on Form OCSE-157.

https://www.acf.hhs.gov/sites/default/files/programs/css/at_14_09b.pdf.

⁷J. O. Prochaska and C. DiClemente (1983). Stages and Processes of Self-Change of Smoking: Toward an Integrative Model of Change. *Journal of Consulting and Clinical Psychology* 51(3):390–5.

https://www.researchgate.net/publication/16334721_Stages_and_Processes_of_Self-Change_of_Smoking_-_Toward_An_Integrative_Model_of_Change. For a fuller discussion of how the Transtheoretical Model of Change relates to our approach, see our original grant application (“Virginia Child Support Digital Marketing Demonstration”).

⁸ More information about the LI² paradigm is available in the original OCSE funding announcement (“Using Digital Marketing to Increase Participation in the Child Support Program,” HHS-2018-ACF-OCSE-FD-1368, https://ami.grantsolutions.gov/files/HHS-2018-ACF-OCSE-FD-1368_0.pdf) and through 2017 Office of Planning, Research & Evaluation (OPRE) report “Learn, Innovate, Improve (LI²): Enhancing Programs and Improving Lives” (https://www.acf.hhs.gov/sites/default/files/opre/li2_brief_final_b508.pdf). OPRE Report #2017-108.

III. Cycle 1 Research Questions

To evaluate how successfully our interventions supported the goals Cycle 1 (Find), we sought to answer the following research questions:

1. What kinds of digital marketing interventions are most likely to increase public engagement with child support services, particularly around increasing the number of families applying for services?
2. Can targeting digital marketing interventions to specific locations, based on analyses of demographic trends (as indicated by Census data) and child support caseload data, provide a more cost-effective way to increase engagement with child support services?
3. What kinds of digital marketing interventions appear to be the most cost-effective ways to increase the number of applications for child support services?
4. Can the techniques of search engine optimization (SEO) be used to increase web traffic (based on year-over-year comparisons) to new and existing child support web pages?
5. Can concepts from behavioral economics (such as loss aversion, the use of clear calls to action, etc.) be used to encourage users to apply for services?
6. Can the use of certain words or phrases in digital marketing interventions be shown to be particularly effective in increasing engagement with IV-D programs?
7. Can the use of certain kinds of images (or combinations of words and images) in digital marketing interventions be shown to be particularly effective in increasing engagement with IV-D programs?

IV. Development of Cycle 1 Intervention

Plans for Cycle 1 were initially developed by DCSE leadership as part of the original grant application, which described three parts to the initial intervention:

- Creating an independent website with a distinctive URL
- Developing and revising web content through a process of search engine optimization (SEO)
- Creating an online form to take requests for information from the web

These aspects of Cycle 1 remained essentially intact after DCSE staff met with the project's internal partner, the VDSS Public Affairs unit, and its outside vendor, Grays Peak Strategies, in

February 2019. At the same time, a consensus emerged in these initial discussions that Cycle 1 took essentially a passive approach to engagement—working from what might be characterized as an “If we build it, they will come” approach that seemed somewhat at odds with the more active spirit of the grant.

As a result, the initial project team revised the third element and added two additional ones the plans for Cycle 1:

- Creating an online form to take requests for information from the web and using techniques from behavioral economics to encourage users to complete that form
- Determine which jurisdictions in Virginia seemed most likely to be productive locations for ads
- Place text-based ads inserted into lists of Google search results to attract new users to the site and use techniques from behavioral economics⁹ to encourage them to fill out the contact form

We initially imagined placing only text-based ads, but further discussions with a potential outside search vendor and additional input from the SEO and online advertising experts within Grays Peak persuaded us to extend our advertising focus to include visually oriented display advertisements as well. This further subdivided the fifth component in two:

- Place text-based ads inserted into lists of Google search results to attract new users to the site
- Placing ads combining text and images to be displayed on broad range of websites and in mobile apps

The final refinement of our plans for Cycle 1 came as we began to discuss what kinds of information users might be able to request through the online contact form. Since the goal was to encourage applications from people largely unfamiliar with DCSE’s services, we felt it was important to ensure that families were aware that child support services extend beyond the traditional collection and distribution of funds. We hypothesized that potential program participants were likely unaware of the program’s paternity services or its family engagement

⁹ For a concise description of some of the concepts from behavioral economics that have been used elsewhere in the context of child support, see Table 4.1 of the 2017 OPRE report “Nudging Change in Human Services: Final Report of the Behavioral Interventions to Advance Self-Sufficiency (BIAS) Project” (https://www.mdrc.org/sites/default/files/2017_MDRC_BIAS_Final_Report_FR.pdf). Another helpful guide to these concepts is available in the [Google cached copy](#) of the page of behavioral principles used by the behavioral design organization ideas42.

services, which include employment-related assistance and referrals for help with access and visitation.

This led us to expand our target population for this intervention beyond custodial parties alone. By the time the intervention launched in June 2019, we had settled on the target populations described below in section 2.IV.B.

After these various changes, we arrived at a final list of six components for Cycle 1 (ordered to reflect approximate order of implementation):

1. Conducting a search engine optimization (SEO) analysis of the existing DCSE website and revising that site in alignment with that analysis
2. Developing an independent, campaign-specific website with a distinctive URL
3. Determining which jurisdictions in Virginia seemed most likely to be productive locations for ads
4. Creating an online form to take requests for information from the web and using techniques from behavioral economics to encourage users to complete that form
5. Placing text-based ads inserted into lists of Google search results to attract new users to the site
6. Placing ads combining text and images to be displayed on broad range of websites and in mobile apps

At the point of launch, we had budgeted \$3,000 for Google Search ads (component 5) and \$18,530 for Google Display (component 6).¹⁰ Since the Search ads came first and budget planning data from Google suggested we might be successful even if we spent as little as \$1,500 over the course of the 90-day cycle, we initially set our budget on the Search platform at \$17 per day (roughly \$500 per month). Yet we soon realized that we were using up that daily budget by as early as 10 a.m. and on June 12 we increased the budget to \$33.33 per day (roughly \$1,000 per month).

By the end of June, it was clear that interest in our ads far exceeded our budget, and we doubled our daily spending to \$66.66 (roughly \$2,000 per month or \$6,000 over the course of the full cycle).¹¹

¹⁰ For the most part, this report capitalizes the words *Search* and *Display* when referring to the Google networks that publish those types of ads, since those are proprietary structures rather than generic ad types.

¹¹ Between July 17 and July 31, we again increased the budget for Search ads to \$110.00 per day to close the gap between our earlier budget projections for this part of Cycle 1 and the \$6,000 budget we eventually settled on.

To allow for the increase without going over budget for the cycle, we decreased the Display budget by \$3,000. We maintained the \$260 per day budget (\$7,765 per month) for Display ads through the entirety of the campaign. Looking back, however, we might have been better served if we had started with a smaller daily budget for Display and increased it only once we had enough data on conversions (in our case, forms completed on the target webpage) to allow us to pay per conversion rather than per click. As we explain below, in section 3.III.4, we saw some evidence of the benefit of this approach when we targeted conversions rather than clicks at the tail end of the campaign.

V. Cycle 1 Description, Target Populations, and Timeline

A. Description

Cycle 1 of our project had six components,¹² which we put in place in roughly the following order:

- 1) **Conducted search engine optimization (SEO)** analysis of all the pages on the VDSS site related to child support and a wider analysis of sites in Virginia offering information about child support. Our SEO services provider looked at a variety of technical and content-related qualities of the pages to see whether they aligned with the apparent priorities of online search engines such as Google, Bing, and Yahoo. The more closely these pages succeeded in matching the qualities search engines appear to prioritize, the more likely DCSE pages would appear higher in search results—and moving up higher in search results by even one spot can have significant effects on the number of users clicking through to a website.¹³

The SEO analysis of DCSE and VDSS pages produced a lengthy and often quite technical set of recommendations. We implemented as many of these changes as was practicable, given the architecture of the current VDSS site and a redesign of the site planned for the near future.

The most significant of the modifications to DCSE or VDSS pages that we made were:

- Integrating specific high-impact keywords (such as “Virginia child support,” “Virginia child support laws,” and “Virginia child support enforcement”) and more broadly

Though we were concerned that the money might go unused or spent inefficiently, our ads received click-through rates, conversion rates, and so forth that were every bit as strong, and sometimes stronger, than other parts of our campaign, suggesting that a higher overall ad spend may very well have been warranted.

¹² As we noted in our Communications and Evaluation Plans, there was an additional potential element to this cycle—namely, a survey of visitors to VDSS webpages that was planned by the VDSS Public Affairs unit. That survey began as planned on approximately July 1, 2019, and covered such topics as what information the visitors were looking for, whether they found it, and so on. However, this was not formally a part of this project and the results of the survey have not been shared with DCSE or Grays Peak. We predict that the relevant data will be shared with us in due course and will inform our approach to Cycle 3.

¹³ According to the website Backlinko, “On average, moving up 1 spot in the search results will increase CTR by 30.8%.” Brian Dean (2019), “We Analyzed 5 Million Google Search Results: Here’s What We Learned about Organic Click Through Rate.” <https://backlinko.com/google-ctr-stats>.

targeted phrases known as semantic keywords (such as “parent pay,” “pay child support,” “custodial parent,” and “medical support”) into the text of DCSE webpages to attract higher greater interest from organic searches

- Ensuring the VDSS site adequately adjusted for users on smartphones or tablets by changing the size, layout, and proportions of webpages to fit these smaller screens
- Making a consistent choice to either begin web addresses with or without WWW in the URL
- Switching internal and external links that use HTTP to HTTPS, since the latter protocol is more secure and contributes to a higher quality score by search engines
- Optimizing the tagging of content so that headers are used clearly and consistently
- Tagging images with content descriptions
- Shortening page titles to fewer than 70 characters

Style guidelines that apply to all VDSS pages prevented us from inserting certain keyword phrases that required abbreviations (such as “VA child support”). Similar constraints kept us from abbreviating the titles of three DCSE pages to bring them under the 70-character limit recommended by our SEO expert.

Two recommended changes that we did make were:

- Revising the VDSS sitemap to include only HTTPS links (since this too is considered more secure and scored higher by search engines)
- Adding the DCSE contact phone number to the bottom of each page

As noted below, the SEO analysis also informed the language used in the newly created campaign-specific site.

- 2) **Purchased a campaign-specific URL (supportVAkids.com) and created a campaign-specific webpage** to give the campaign a clearer sense of identity and purpose for the target audience and bring additional insight into what types of words or phrases have the greatest impact.

Since there was effectively no way for our internal web development partner, VDSS Public Affairs, to create and maintain an external site, the URL redirected users to a newly created page on the VDSS site: www.dss.virginia.gov/supportvakids/. The site had content addressing each of the three targeted interests: new applications, paternity services, and family engagement services. As with the advertisements we placed to promote the site, the language used on the landing page reflected ideas from behavioral economics and the specific SEO and market-related research we initially conducted as part of this intervention.

Among the behavioral concepts integrated into the language and design of the new site were:

- **Frames that emphasize ease.** The main headline of the site was “Making Virginia’s Child Support Program Simpler.” The first phrase of the next subhead (“An Easier

Application”) supported this,¹⁴ and the use of words and phrases such as “simple” and “convenient” provided further reinforcement. The contact form itself was also designed to be as familiar and easy to use as possible, following standard patterns and prompts and collecting only the most essential information.

- **Statements to activate loss aversion.** At the bottom of the section devoted to the core child support services we added a prompt that read, “Don’t lose out on the money your child needs!” Similarly, in the same spot in the section on paternity testing, we urged users not to “waste money on expensive testing!” These prompts also acted as links that took users directly to the contact form.
- **Present bias.** Above the primary call to action, we added a sentence intended to reinforce the sense of urgency: “Your child’s needs just can’t wait!” We also emphasized that users who completed a contact form could expect a relatively timely response (within two business days) and that results from paternity testing came fairly quickly.
- **Assurances of fairness.** By placing the phrase “Help for Both Moms and Dads” in the second heading, we hoped to reframe child support as acting fairly toward both parents, in contradistinction to the widely held perception that the program is biased toward mothers. We reiterated that framing in the headline used for the description of family engagement services (“Support Services for Dads and Moms”), but in that case we reversed the order of the parents to emphasize fathers.
- **Prompts to action.** Rather than providing information and only minimal or highly involved explanations of how to act on that information, we provided multiple calls to action. The central prompt on the page (“Reach out to us today!”) was highlighted in blue over the header image to maximize contrast. At the bottom of the page, the button used to submit the contact form took a similar form and used a similarly sharp contrast.

Among the words and phrases our SEO analysis recommended we integrated into the new site were:

- DCSE
- Virginia child support
- Virginia child support enforcement
- Child support program
- Child support cases
- Child support payments

A draft version of the site included one additional phrase, “Virginia child support laws,” that we ultimately removed because the project team felt it sounded unnatural—evidence of how difficult it can be to balance the competing demands placed on a relatively short text.

¹⁴ Subtly deploying the same frame in the first elements of the page that users might read uses another behavioral concept: primacy bias. For more information on this idea, see this description from ideas42: <https://www.ideas42.org/blog/principle/primacy-bias/>.

To minimize the possibility of a third party developing a copycat page that could be used to harvest potential client information, we also purchased two related domains (supportVAkids.net and supportVAkids.org) and redirected both of those to the same VDSS landing page.

The text of the site and a screenshot of it are included as Appendix A.

- 3) **Determined locations for ad targeting** by first analyzing aggregate caseload data, Census data (including OCSE reports on Census data), and other relevant information to identify distinctive characteristics of the primary target audience (Never Assistance clients) and then using that to determine where within the state we were most likely to reach them. That information was then mapped and reviewed by DCSE leadership, who decided to expand the areas around the various jurisdictions to be sure to capture the full range of settings (urban, suburban, and so on).

The full rationale for our selections appears in the Communications Plan.

- 4) **Developed a web-based contact form** to capture contact information for service inquiries. Visitors to the targeted webpages were asked to provide contact information and indicate interest in four prescribed service options (opening a child support case, getting help with an existing child support case, learning about employment or other family engagement services) but were also given the option of making a unique request.¹⁵ Information from the complete forms were sent to DCSE Home Office staff through an internal reporting system. They then forwarded that information to the program's customer service staff, who reached out to users directly. If the initial attempt at contact failed, customer service staff made two attempts to follow up, each separated by an interval of several weeks. DCSE Home Office staff tracked this process and reported on it to the wider project team as part of weekly meetings.

The text of the form and a screenshot of it are included as Appendix B.

- 5) **Placed Google Search ads** that users saw mixed in with their search results. Ads appeared online and in apps that used Google as their search engine. Users saw the ads when they searched on certain words and phrases. Some of those words and phrases were selected by the project team based on the SEO analysis. Others were suggested by Google's Keyword Planner tool.¹⁶

Whether a user saw our ad was determined by their location, the exact word or phrase

¹⁵ Though the subject of targeted ads and fully described on the landing page, paternity was not listed among the services that could be requested through the contact form. This error was only caught after the conclusion of the cycle and likely reduced the number of requests for paternity services during Cycle 1.

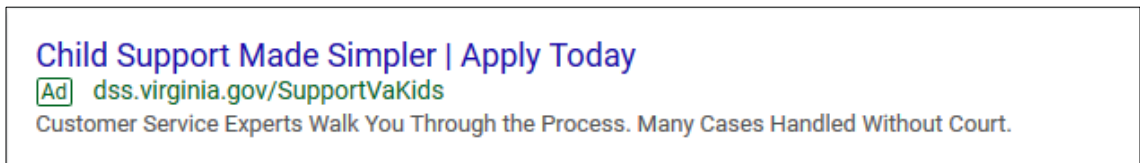
¹⁶ A description of the tool is available at <https://support.google.com/google-ads/answer/7337243?hl=en>.

used in their search, and Google’s assessment of the relevance of that phrase to both the ad and the landing page. By the end of the cycle, about 300 distinct words or phrases had been employed in searches that led users to see our ads. Of those 300, 10 accounted for 51 percent of the 6,025 clicks we received through Search and 50 accounted for 91 percent. A list of the 50 most productive keyword search terms (measured by number of clicks) is included as Appendix C, along with select performance measures, though not each term’s percentage of the total number of clicks.

The language for the ads was developed through a series of discussions between Grays Peak staff (focused primarily on integrating SEO keywords and concepts from behavioral economics), DCSE staff (focused on ensuring the accuracy of the content and its alignment with the program’s policies and larger messaging concerns), and VDSS Public Affairs staff and leadership (focused on alignment with the agency’s overall approach to public messaging). Early drafts of these ads were circulated in a spreadsheet that also listed the behavioral concepts at work in each ad, the child support points each ad was meant to address, and a list of SEO-based keywords.

As noted above, Google determines which users will see the ad and how much it will cost based in part on the relationship between the language of the ad and the language on the targeted landing page. Search and Display ads thus intentionally echoed language on the landing page and, as a result, employed many of the same behavioral concepts used on the landing page. At the same time, the compact nature of the ads required us to combine as many different elements as possible, including behavioral concepts as well as keywords we were targeting with search and integrating from our SEO analysis.

Figure 1: Sample Search Ad (Formatted for Desktop)



A sample of one of the Search ads, given above as Figure 1, exemplifies the overall approach. The first headline (“Child Support Made Simpler”) uses a phrase (“child support”) that we targeted for advertising as a result of our SEO analysis and places that first, with the hope of increasing its relevance to the user. It also distills the most prominent line on the landing page (“Making Virginia’s Child Support Program Simpler”) in order to both make the ad seem closely related to the destination page and establish the behavioral frame of ease. The second headline (“Apply Today”) provides a clear call to action and speaks to the urgency of that action, while the body text (“Customer service experts walk you through the process. Many cases handled without court.”) reinforces the frame of ease and convenience. The point that many cases in Virginia can

be set administratively addresses parents' widespread fear of having to spend hours or even days in court trying to establish a child support order.

We created three sets of these ads, one for each of the targeted interests (new applications, paternity, family engagement) and used Google's A/B testing technology to pit two versions of each of those three ad sets against each other—for a total of six distinct ads running throughout all of Cycle 1. In all cases, users who clicked on the ads were sent to the newly created landing page.

As the campaign continued, Google optimized ad delivery in a way that appeared to focus on the most successful ad in a given group, seemingly making the A/B testing less robust as time went on, but clearly improving outcomes.

After replacing an application-related ad in June because of concerns about the accuracy of one detail, we waited until mid-July before making additional changes, under the principle that we needed to accumulate enough data to make a sound decision. We then revised or replaced the ad in each ad set that was performing least well. An additional ad was created in early August to replace the lower performing ad in the family engagement set.

A complete list of ads and associated text is included as Appendix D.

- 6) **Placed Google Display ads** that appeared on webpages across all kinds of platforms and in mobile phone apps.

Rather than create a set number of ads to match the most-used commonly used sizes, we elected to use Google's Responsive Display Ad platform, which remixes content into various combinations depending on the location of the ad (for example, on the side of a webpage versus the middle of scrolling text or in an app), and the type of device (for example, a cell phone versus a desktop computer).

For each of the three ad sets, we entered five short headlines (30 characters or less), one long headline (90 characters or less), five descriptions (90 characters or less), a business name (25 characters or less), and a URL (25 characters or less) into the Google Responsive Display Ad platform. We then uploaded one portrait-oriented logo (with an aspect ratio of 4:1),¹⁷ one square logo (with an aspect ratio of 1:1), five portrait-oriented images, and five landscape-oriented images for each of the three ad sets. The language and images were chosen through email and in-person discussions among all of the project partners, with the language being drawn in part from the most successful Search ads. The logo was created by Grays Peak in consultation with DCSE. The results were then mixed into hundreds of possible combinations.

¹⁷ An aspect ratio is the ratio of the width to the height of an image or screen.

Since Responsive Display ads also take in a variety of different headlines, descriptions, and images and then measure which receive the highest level of response from users, it also effectively acts as a testing tool for those ad elements. The results of these tests are delivered by Google in the form of a qualitative rank (Best, Good, and Low) for each asset’s overall performance; the quantitative basis for this ranking is not disclosed. Each combination of text and images was also rated and ranked but no qualitative or quantitative rationale was given. Because the performance rating assigned to the individual assets fluctuated over the course of the cycle (and some assets never received a rating at all), we felt we did not have a clear short-term basis for decision-making and chose to keep them all in place throughout the duration of the campaign.

Beginning on July 20, we used the tracking allowed through Google Tag Manager to create a remarketing campaign for the Display ads. This new campaign delivered Display ads only to users who had previously visited the campaign landing page (presumably in most cases by clicking on another Search or Display ad). The remarketing ads used the same visual and textual assets as the primary campaign, but the differences in audience and circumstances led Google to assign different ratings to some of the assets.

A list of assets and their performance ratings in the primary campaign (when assigned) is given as Appendix E, selected samples of Display ads appear as Appendix F, and selected versions of the logo appear as Appendix G.

B. Target Populations

As noted above, all three interventions target parents in Virginia who are eligible for DCSE services but not receiving them, with an emphasis on custodial parents who have also never participated in public benefit programs. Because we decided to market DCSE’s broader, more holistic model of child support services, the target audience for the first intervention also included parents who are currently receiving or paying child support. These populations and the services associated with each of them are broken out more explicitly in Figure 2 below.

Figure 2: Target Audiences

Group No.	Audience	Associated DCSE Services
1	Custodial parents or guardians in Virginia not currently receiving IV-D services from DCSE and whose benefit status accords with the Never Assistance category used for purposes of reporting on Form OCSE-157	<ul style="list-style-type: none"> • Locating parents • Establishing paternity • Establishing and modifying child support orders • Collecting and distributing child support • Enforcing child support orders • Family engagement (mediation, visitation, co-parenting) • Referral to outside employment assistance
2	Custodial parents or guardians in Virginia currently receiving IV-D services from DCSE	<ul style="list-style-type: none"> • Establishing and modifying child support orders • Collecting and distributing child support • Enforcing child support orders • Family engagement (mediation, visitation, co-parenting) • Referral to outside employment assistance

3	Noncustodial parents (or people with close ties to them, such as a family member or a new relationship partner) who are already connected to the Virginia IV-D program but who we presume have not directly applied for services	<ul style="list-style-type: none"> • Establishing paternity • Establishing and modifying child support orders • Family engagement (mediation, visitation, co-parenting) • Employment resources • Assistance with addressing other barriers
---	--	---

These three groups were further limited by the location targeting described in point 3 of section 2.IV.A above. The final list of targeted locations is given as Figure 3 below.

Figure 3: Location Targets and Extended Focus Areas

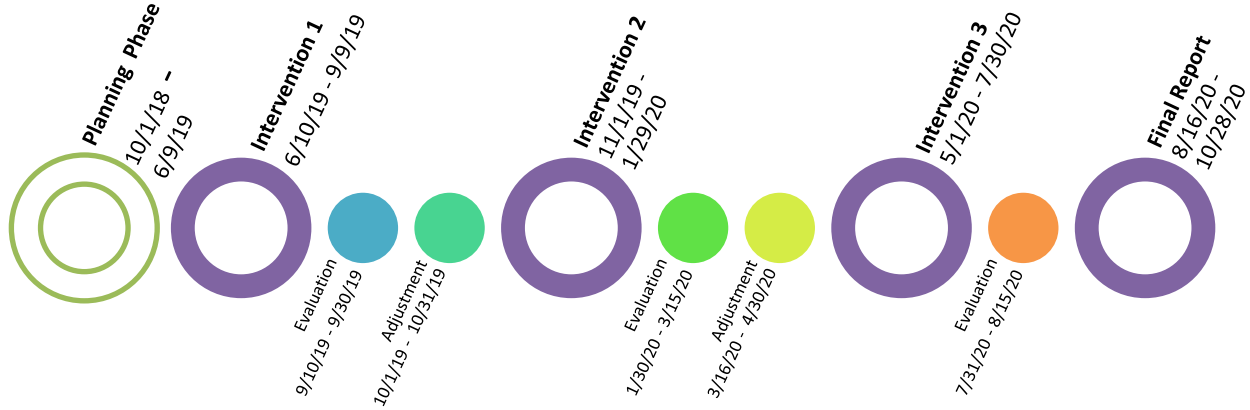
Initial Target Area	Surrounding Areas Included in Ad Target Markets
Bristol (city)	Washington County
Brunswick County	
Caroline County	
Clarke County	
Colonial Heights (city)	Chesterfield County, Prince George County
Danville (city)	Pittsylvania County
Dinwiddie County	
Essex County	
Hampton (city)	Northampton County, Poquoson (city), York County
Henrico County	
Martinsville (city)	Henry County
Nelson County	
Newport News (city)	Isle of Wight County, James City County, Surry County, York County
Norfolk (city)	Virginia Beach (city)
Petersburg (city)	Chesterfield County, Prince George County
Portsmouth (city)	Chesapeake (city)
Richmond (city)	Chesterfield County
Roanoke (city)	Roanoke County
Salem (city)	Roanoke County
Staunton (city)	Augusta County
Suffolk (city)	Chesapeake (city), Southampton County
Waynesboro (city)	Augusta County
Winchester (city)	Frederick County

When we first launched the Search ad campaign on June 10, 2019, we included additional targeting elements. These elements included parenting status and whether the user had shown interest in such topics as K–12 education. The demographic targeting proved too narrow, however, and essentially prevented the ads from being shown. We removed the additional targeting elements the same day as the initial launch, and ads began showing to a full audience on June 11.

C. Overall Project Timeline

A broad outline of our project’s overall timeline appears below as Figure 4.

Figure 4: Project Timeline



D. Detailed Timeline for Cycle 1

The detailed timeline for Cycle 1 appears below as Figure 4.

Figure 4: Detailed Timeline for Cycle 1

Step	Plan Element	Approx. Date of Completion
1	Analyze aggregate caseload data, Census data (including OCSE reports on Census data), and other relevant points to identify distinctive characteristics of the primary target audience (Never Assistance clients)	4/11/19
2	Use analysis from Step 1 to generate map and weighting system and prioritize ad targeting locations	4/23/19
3	Analyze data on current DCSE website to set a baseline of April 1, 2018 to March 30, 2019 for key reporting and to determine most common search terms, traffic sources, and related metrics to inform the SEO analysis	4/23/19
4	Meet with stakeholders to discuss initial results of SEO analysis and plan final SEO strategies and larger messaging issues	5/9/19
5	Purchase campaign-specific URL (and related URLs)	5/14/19
6	Finalize report on SEO and related market research (including analysis of the websites of other IV-D programs and private family law attorneys in Virginia)	5/15/19
7	Finalize text of the initial set of Google Search ads for review by DCSE legal staff and leadership	5/15/19
8	Finalize initial development of web-based contact form	5/23/19
9	Deliver final, approved Search ad copy and images to Grays Peak	5/24/19
10	Begin testing of web-based contact form and process for delivering leads to DCSE program staff	6/5/19
11	Post web content on new landing page	6/5/19

Step	Plan Element	Approx. Date of Completion
12	Launch web-based contact form	6/10/19
13	Launch Google Search ad campaign	6/10/19
14	Revise Search campaign to remove all demographic targeting	6/10/19
15	Finalize logos for use in Display campaign	7/9/19
16	Review first round of intervention data (including Google Search data, Google Analytics, program data on contact form) and determine whether to adjust ad copy, targeting, or imagery	7/11/19
17	Input final text and images for Display ads into Google Responsive Display platform	7/12/19
18	Post amended DCSE web content to align with results of SEO analysis	7/13/19
19	Add code from Google Tag Manager to track conversions on new landing page	7/14/19
20	Launch Google Display ad campaign	7/14/19
21	Corrected error on contact form that combined one prompt with another question's answers	7/15/19
22	Begin remarketing campaign for Display ads	7/20/19
23	Review second round of intervention data and determine whether to adjust ad copy, targeting, or imagery	8/1/19
24	Internet Protocol (IP) addresses associated with VDSS servers excluded from receiving Google ads	8/29/19
25	Ended Cycle 1 advertising	9/9/19

VI. Cycle 1 Outcome Measures

For Cycle 1, we intended to look at two types of outcome measures: one focused on online analytics and the other on caseload data. A list of outcome measures and sources, as well as the relevant dates, appears as Figure 5 below.

Figure 5: Outcome Measures for Cycle 1

Data Element	Frequency	Source	Applicable Dates
Pageviews ¹⁸ for DCSE webpages	Cycle total	Google Analytics	6/10/19-9/9/19
New users visiting DCSE web pages	Cycle total	Google Analytics	6/10/19-9/9/19
New users reaching DCSE pages through organic searches	Cycle total	Google Analytics	6/10/19-9/9/19
DCSE webpages viewed per session	Cycle average	Google Analytics	6/10/19-9/9/19
Session duration	Cycle average	Google Analytics	6/10/19-9/9/19

¹⁸ Since the majority of our web-related data will be derived from Google Analytics, we necessarily use its definitions of that data. Google does not appear to publish those definitions as a single source, but a third-party guide appears here: <https://www.lovesdata.com/blog/google-analytics-glossary>.

Data Element	Frequency	Source	Applicable Dates
Click-through-rates (clicks divided by impressions) for Search ads	Cycle average	Google Ads	6/11/19-9/9/19 ¹⁹
Cost per click (amount spent over a given period divided by clicks over that same period) for Search ads	Cycle average	Google Ads	6/11/19-9/9/19
Conversion rates (number of users who were recorded by Google Tag Manager as completing the contact form—in other words, the number of conversions--divided by the number who clicked on ads) for Search ads	Cycle average	Google Ads	7/15/19-9/9/19 ²⁰
Cost per conversion (amount spent on advertising divided by the number of recorded conversions) for Search ads	Cycle average	Google Ads	7/15/19-9/9/19
Click-through-rates for Display ads	Cycle average	Google Ads	7/15/19-9/9/19 ²¹
Cost per click for Display ads	Cycle average	Google Ads	7/15/19-9/9/19
Conversion rates for Display ads	Cycle average	Google Ads	7/15/19-9/9/19
Cost per conversion for Display ads	Cycle average	Google Ads	7/15/19-9/9/19
Requests for services submitted through online contact form	Monthly average	DCSE data collection	6/10/19-9/9/19
Applications for DCSE child support services from Never Assistance clients	Monthly average over same period of the previous calendar year	DCSE caseload data	6/1/19-9/30/19 versus 6/1/18-9/30/18

3. Results

I. Sample Size

We arrived at estimates of the total number of individuals reached by Cycle 1 interventions by looking at three interrelated numbers:

- The number of users who visited DCSE webpages during Cycle 1
- The number of users reached by the Google Search ads
- The number of users reached by the Google Display ads

Of the three, the smallest is the number of users reached by Google Search ads. Though Google tallied 77,431 impressions for Search ads over the course of Cycle 1, Google does not provide estimates for the number of unique users who conducted these searches. Since an individual

¹⁹ For reasons described in section 2.IV.B, Google delivered almost no ads to our audience on the first day of the cycle (June 10, 2019). As a result, we have analyzed results using June 11 as the start date of the Search campaign.

²⁰ Conversion tracking was in full force by July 14, 2019 but because of the delayed launch in the Display ads (occasioned by an unexpectedly protracted approval period), we have tracked conversions beginning on July 15, the same day on which we start tracking the performance of the Display ads.

²¹ As noted above, delays in the launch of the Display ads mean that only a small number of ads were actually delivered on the first day of that campaign (July 14, 2019). As a result, we have generally analyzed results using July 15 as the start date of the Display campaign.

user can search for the same item multiple times, no inference about the number of unique users can be drawn from impressions alone.

The next largest figure comes from Google Analytics, which tracks users who visit the various DCSE webpages. Between June 10, 2019 and September 9, 2019, Google Analytics estimated that 98,174 users visited DCSE pages, of which an estimated 24,403 came from Display ads and 4,389 from Search ads. The remaining 69,382 users came from organic search traffic (as opposed to the paid Search ads we created), various non-search referrals (social media, email, etc.), or as a result of directly entering a DCSE URL into a browser. This total of 98,174, however, accounts for only web traffic and does not take those who saw the ads but never visited DCSE pages.

The largest and probably the most reliable estimate of the sample size is the number reached by Google Display ads. According to Google ads, approximately 7.4 million impressions of the ads were shown to 1,150,770 unique users, for an average of 6.4 impressions per user.

An equation of total sample size takes the total number of unique users who were served Display ads (1,150,770), adds the number of web visitors (98,174), and subtracts the number of web users who reached DCSE pages by Display ads (24,403). The resulting total of 1,224,541 represents a reasonable lower bound of the total sample size, given the additional users who were served Search ads but never clicked on them and visited the site.

II. Results

Results of the outcomes measured in Cycle 1 appear in Figures 5, 6, and 7.

We have compared outcomes to the same period over the previous calendar year for page views, new visitors, pages viewed per session, and session duration.

Since DCSE had never placed Search or Display ads in the past, no comparisons to previous results are possible. Instead, we have used the goals given in our updated Communications and Evaluation Plans.

We drew our benchmark for the Search and Display ads from estimates generated by Wordstream.²² While the basis of the estimates is proprietary, Wordstream benchmarks are widely used in the online advertising industry.

²² See <https://www.wordstream.com/blog/ws/2016/02/29/google-adwords-industry-benchmarks>.

Figure 6: Outcome Measures and Results: Web Results
(June 10–September 9, 2018 Compared to June 10–September 9, 2019)

Outcome	Cycle 1 Result	Previous Year Result	Percentage Change over Previous Year
Pageviews for DCSE webpages	425,266	293,900	+44.70%
New users visiting DCSE webpages	80,323	56,583	+41.96%
New users reaching DCSE pages through organic searches	36,985	38,581	-6.89%
DCSE webpages viewed per session	2.75	2.62	+4.91%
Session duration	00:01:24	00:01:50	-23.02%

Figure 7: Outcome Measures and Results: Search Ads

Outcome	Cycle 1 Result	Goal	Difference between Cycle 1 and Goal
Click-through-rate	7.78%	3.17%	4.61 percentage points higher
Cost per click	\$1.01	\$2.69	\$1.68 less
Conversion rate	7.59%	3.75%	3.84 percentage points higher
Cost per conversion	\$13.44	\$48.96	\$35.52 less

Figure 8: Outcome Measures and Results: Display Ads

Outcome	Cycle 1 Result	Goal	Difference between Cycle 1 and Goal
Click-through-rate	0.57%	0.46%	0.11 percentage points higher
Cost per click	\$0.35	\$0.63	\$0.29 less per click
Conversion rate	0.06%	0.77%	0.71% lower
Cost per conversion	\$546.52	\$75.51	\$471.01 higher

The final two outcomes we measured were requests for services submitted through the online contact form and applications for DCSE child support services from Never Assistance clients.

Between June 11, 2019 and September 9, 2019, we received approximately 549²³ contact form submissions, for an average of 183 per month over the three-month cycle or 6.1 submissions per day. Our goal was to achieve 300 submissions per month by the end of the final cycle (July 30, 2020). By the end of Cycle 1, then, we were 117 submissions short of the average monthly goal.

Between June and August 2019, DCSE saw an increase of approximately 2% in the number of new cases associated with Never Assistance clients.

III. Analysis

The outcomes of Cycle 1 suggest that the intervention largely achieved its aims and laying a solid foundation for Cycles 2 and 3.

²³ This figure revises the total of 554 contact form given in the original submission of this interim evaluation. Reviewing the data in preparation for Cycle 3, we realized that five of those submissions came from a member of the project team testing our conversion tracking mechanism.

Below, the six components of Cycle 1 have been grouped into five areas of analysis because of overlaps in the outcome measurements among the various components:

- 1) **SEO Analysis, Splash Page Creation, and Website Revisions** (components 1 and 2).
Cycle 1 saw a marked increase in traffic to DCSE webpages compared to the previous year. Pageviews increased by 45%, new users by 42%, and the number of webpages viewed per session increased by 5%. Given the relatively flat performance for those data points for the year before the intervention began (June 1, 2018 through May 31, 2019), it seems unlikely that these increases simply reflect organic growth.

Even the two outcomes that saw declines may represent relatively positive results. While approximately 1,600 fewer new users visited DCSE pages through organic searches during Cycle 1 than they did during the same period in 2018, much (if not all) of that decline likely came from competition with our organic search campaign, which Google Analytics calculated brought approximately 4,400 new users to the site. Meanwhile, the decrease in average session duration by 36 seconds may be attributable to the greater numbers of people driven to the new splash page, which led users down a clear path of action and reduced unnecessary time users spent finding the information they were seeking.

- 2) **Web-based Contact Form** (component 4). When we initially set a goal of receiving an average of 300 contact form submissions per month by July 30, 2020, we believed that represented a fairly ambitious outcome, given the relative novelty of the approach and the apparent reluctance of the public to engage with child support. For that reason, we felt more than satisfied by the average of 184 submissions per month that we received during Cycle 1.

We were also surprised by the very high proportion of submissions from people wishing to open a new child support case. Of the 549 forms submitted during Cycle 1, approximately 302 (55.0%) were interested in receiving an application for child support services, 129 (23.5%) asked about an existing child support case, 42 (7.7%) were interested in paternity services, 29 (5.3%) in family engagement services, and 52 (9.5%) had questions or requests that fell outside any of these categories.

Nonetheless, the process of creating the contact form and tracking submissions was more challenging than we had anticipated. Technical delays in the development and testing of the website and online contact form pushed the launch date from June 1 to June 10.

More than a month passed after the launch of the contact form before we detected that the prompt “How do you want us to contact you?” was followed by the answers associated with the prompt “How did you find us?” While this probably did not reduce the number of submissions by much, it did create confusion for the DCSE staff who responded to these inquiries.

Similarly, the spreadsheet used to record responses from the online contact form and then track the progress of cases as they move through DCSE was not perfectly adapted to the internal workflow. By the end of the cycle, the various staff within DCSE whose work was affected by this intervention seemed comfortable with the process, but our early experience suggests that a longer period of testing would have been preferable.

Finally, as noted above, paternity services were not mentioned on the contact form as one of the preset reasons for reaching out to DCSE, despite being highlighted on the splash page and advertised through both Search and Display channels. This error likely reduced the number of users contacting us for that purpose and in turn contributed to our later decision not to advertise paternity services in Cycle 2.

- 3) **Location Targeting** (component 3). Our communications plan provides an extensive explanation for how we determined the areas, listed in section 2.IV.B above, that appear to contain groups of families that are both in need of child support services and more disposed than other areas of Virginia to actually open new Never Assistance cases. Cycle 1 provided the first opportunity to test the apparent effectiveness of these targets, but since location targeting was used on all of our ads and did not figure into our website and SEO-related interventions, we cannot confidently distinguish any effect our approach had on outcomes from this cycle of interventions.

Still, we see no evidence that our location targeting negatively affected this cycle's outcomes, as two marketing vendors that reviewed our initial plans believed it would. To reach a sufficient number of users and maximize our return on investment, they argued that we would need to target the entire state.

Our unusually high click-through rates on both Search and Display ads and high conversion rates on Search ads (described below in points 4 and 5 of this section) would seem offer some evidence against those claims, even if that evidence is hardly dispositive. For that reason, the same targeting was retained for Cycle 2.

- 4) **Search Advertising** (component 5). The Search ads we placed through Google appear to have been an unvarnished success, both in terms of driving traffic to the project website at a relatively low cost and guiding users toward completing the newly created contact form. Our click-through rates on those ads were nearly one and a half times the industry-wide benchmark, the conversion rates double, the cost per click less than half, and the cost per conversion barely more than a quarter.

We attribute part of this success to the text of the Search ads, which combined SEO-based keyword usage and behavioral concepts such as loss aversion and the appeal to simplicity.

Some significant portion of the success, however, appears to be based simply on the

nature of search ads, which directly addresses the point of inquiry raised by the user.²⁴ Since the vast majority of Americans in almost every age group now turn to search engines as their primary means of research, it seems obvious that IV-D programs can benefit from engaging with users—especially those new to the program—at precisely that point.

Search ads also appear to offer a high return on investment relative to other options, such as direct mail or in-person outreach. Our Cycle 1 Search ads cost \$1.01 per click (arrived at by dividing the total amount spent on Search ads by the total number of clicks those ads received) and \$13.44 per conversion (determined by dividing the amount spent on Search by the total number of conversions Search ads generate). Online advertising also offers the added benefits of being flexible and fairly simple to implement relative to the complexities of direct mail or in-person outreach.

At the same time, we encountered several surprises with the Search ads over the course of the cycle. As noted earlier, the Search ads that launched on June 10 included targeting details such as location and relevant demographic points, such as parenting status and interest in such topics as K–12 education. The demographic targeting proved too narrow, however, and essentially prevented the ads from being shown. They were removed the same day as the initial launch and ads began showing to a full audience on June 11.

More broadly, while the ads for family engagement services such as employment assistance and links to services for access and visitation were successful in terms of click-through rate and cost per click, relatively few people expressed interest in those services, suggesting that the services themselves are poorly understood or are not intuitively associated with core child support services. Family engagement services may be better suited to a wider campaign of its own—one focused on education and other types of engagement than completing a contact form.

- 5) **Display Advertising** (component 6). We decided late in the planning process to add a Display campaign to this cycle’s interventions, but our overall view is that the ads were a success. With a few changes to their outcome targeting and overall project timing, we believe that they could be a successful adjunct to Search ads in a child support program’s approach to online advertising.

Our Display ads earned a click-through rate that was 23% above the industry benchmark, and our cost per click was only 55% of that benchmark for Display advertising as a whole. We attribute that to our reliance on language proven to be effective in the Search ad campaign and to the use of Google Responsive Display Ad

²⁴ For this reason, ads in search engines are referred to as “inquiry-based” advertising. Display advertising, by contrast, may be targeted based a user’s overall set of interests (e.g., clothes, figurines, floor tiles) but those are not necessarily the same as what the user is interested in at a given moment.

platform, which optimized ad placement and content combinations.

On the other hand, our conversion rate of 0.06% is only a fraction of the industry-wide figure of 0.77% and our cost per conversion more than seven times the apparent average for Display ads. While both of these might well have ended up lower than the industry-wide average regardless of how we targeted the ads, we believe that conversions would have improved significantly if we had been able to put conversion tracking in place earlier in the cycle. Instead, for various technical and procedural reasons, it began on July 14, more than a month after the beginning of Cycle 1 on June 10. The late implementation of conversion tracking meant, in turn, that we had to delay the remarketing segment of the Display campaign until Google had enough data to work with to deliver ads to that relatively small subset of users.

We also believe that conversions would have improved if we had set our outcome targeting with Google to conversions rather than clicks. Essentially, we paid Google to deliver clicks and they did—some 42,000 of them in the course of just two months. So we believe that if we had paid Google to deliver conversions, they would have done that with a greater level of efficiency. We saw some justification for this belief when we adjusted the targeting in just that way at the tail end of the campaign.

That said, we wonder whether some of the results from our Display ads may be attributable to the nature of the ads themselves. While our Search ads answered a specific question when and where (in terms of platform) an individual was posing that question, the bulk of our Display ads were delivered to users based on an algorithm's determination that they might potentially have an interest in that content. This portion of our Display ads—that is, all of them that fell outside the remarketing portion—served primarily to develop, sharpen, or reinforce an individual user's awareness of the program and its services rather than speak to a specific, timely need.

Child support itself may not be especially well suited to this type of ad. A post on the site of the marketing and sales integration data integration platform Databox quotes a marketing data analyst as saying that display ads are “great for products that may need more visual demonstration than a text-only search ad; a home decor item or art event, for example.” Search ads, meanwhile, “are often best for ‘moment of need’ purchases. ‘Think pizza (I’m hungry), wireless routers (my Netflix is too slow), or car repair (my transmission is making noise).’”²⁵ While the overall process of child support might be well explained visually, the appeal to potential consumers is not inherently visual.

A final problem with targeting likely had little overall effect on intervention outcomes but shows the potential sensitivity of these platforms to what might seem like inconsequential changes. On August 9 we adjusted the geographical location targeting

²⁵ Dann Albright (2018). “Search vs Display Ads: Which Works Best When?” Databox (August 17, 2018) <https://databox.com/search-vs-display-ads-works-best>.

to eliminate placements that seemed inappropriate in terms of geographical location or content focus. Up to that point, both Search and Display ads included users who were physically located in the targeted location as well as those determined by Google to have an interest in that location. For the Display ads, we decided to require that users receive ads only if they were physically located within the targeted area. However, when that change was put into place in the afternoon of Friday, August 9, it led Google to stop showing Display ads altogether. We detected the problem on the morning of Monday, August 12, when it was quickly corrected by first reversing the change and then adding exclusion filters to the targeting that effectively accomplished the same goal. Why the more straightforward method initially chosen led to such a dramatic drop-off in ad impressions remains unclear, but the negative consequences of the drop-off appeared to be minimal, in large part because weekends were among the least productive advertising days in terms of generating conversions.

4. Lessons Learned and Next Steps

I. Lessons Learned

We see six primary takeaways from Cycle 1.

Four of these takeaways can be classified as outcome lessons related to the intervention itself.

- 1) **Using SEO data and concepts from behavioral economics may improve advertising outcomes.** While we cannot attribute the success of Cycle 1 to any specific SEO practice or behavioral concept, our analysis of outcome data suggests that our steady focus on using both of these to the greatest extent possible may have contributed to the high click-through rates on our ads, our high conversion rates on Search, and the relatively high numbers of submissions through the online contact form.
- 2) **Child support seems to be well-suited to the inquiry-based advertising approach of search ads** when compared with brand awareness marketing approach of display ads. As discussed in point 3 of section 3.III above, we attribute some portion of the results of our Search ads, which achieved outcome levels above the industry standard across multiple measures, to the nature of search ads themselves, which directly addresses the point of inquiry raised by the user. By contrast, the results of our Display campaign were more mixed. As discussed in point 4 of section 3.III above, we again believe that this may reflect how child support as a service relates to the nature of display advertisements, at least outside of a remarketing approach.
- 3) **Taking advantage of the A/B ad testing options on digital marketing platforms can make it easier and faster to understand what content appears to be most likely to support a given advertising goal.** This remains true even when A/B testing technology does not operate in the same way as pure A/B testing, since the optimization process ultimately skews results toward the more successful ad. While the Display campaign fell short in some respects, we attribute at least some part of the positive outcomes of that

campaign to the fact that we carried over to those ads the language that A/B testing had shown to be most successful in the Search campaign.

- 4) **Tracking conversions is essential.** As explained above, in point 4 of section 3.III, we began about a month into Cycle 1 to track whether individual users had submitted an electronic contact form. We classified this as a conversion and our ability to track these conversions made possible both remarketing and conversion targeting in general. Both of those appeared to offer a better return on investment for our Display campaigns and will be reused in Cycle 2.

Two other takeaways from Cycle 1 can be classified as implementation lessons.

- 1) **Taking a flexible approach to budgeting makes sense for this type of intervention.** We changed our Search budget several times over the course of the campaign, as we came to believe that the campaign was underfunded relative to demand. By contrast, the relatively poor return on investment offered by the Display campaign—at least as we executed it, without a full focus on remarketing and conversion targeting—made us wish that we had put less of our budget into that side of the intervention and potentially reserved it for later parts of the project.
- 2) **Allowing extra time to test processes and thoroughly review content can improve short- and long-term outcomes.** Both the contact form itself and the submission process associated with it would have been improved by leaving greater time for testing and devoting more time to reviewing the content associated with it.

II. Next Steps

Our original communications plan described three types of interventions for Cycle 2:

- 1) A social media marketing campaign on Facebook, Instagram, and Twitter
- 2) A web-based application for child support services based on a recently revised, highly simplified print application
- 3) A related social media hashtag campaign as part of the launch of social media accounts devoted to DCSE services

Those three components remain in place for Cycle 2 but the outcomes of Cycle 1 have informed a number of elements of their implementation, including:

- 1) Carrying over to the new platforms the location targeting used in Cycle 1 and described in section 3.III of this evaluation.
- 2) Continuing to use behavioral concepts in crafting the language for Cycle 2 ads and for the online child support application itself.

- 3) Dropping the content focus on family engagement and paternity and largely restricting our messages that encourage users to apply for services. We based this decision primarily on the relatively small number of people who requested those types of services through the online contact form. We also felt that managing a campaign across the three social media platforms that we plan to use for Cycle 2 would be more manageable if we were not also having to create, post, track, revise, and calculate the budgets for three sets of ads on each of those three platforms.²⁶ As part of this narrowed focus only on applications, we created a subdomain of the main landing page devoted exclusively to applications and linked it to the new online child support application.
- 4) Reusing text from the Search campaigns and text and image combinations from the Display campaign into the ads we are posting in Cycle 2 on Facebook, Instagram, and Twitter, all of which combine text with some imagery. We selected the text and images from Display campaigns based on their ratings in the Google Display platform (so that higher ranking assets were selected over lower ranking ones). For the text selected from the Search campaign, we looked at both click-through rates and impressions, since some ads with nominally high click-through rates were not shown all that often, suggesting that Google’s ad delivery algorithm tended to deem them as not relevant to most searches (even if they resonated well in the searches where they were relevant).
- 5) Starting the social media campaigns with relatively small budgets and increasing them incrementally based on performance, in order to invest the greatest resources into the platform or ad set that seems to offer the strongest return on investment.
- 6) Moving more rapidly to add a remarketing element to the social media campaigns and working toward conversion targeting on all platforms as soon as we have sufficient data. As with the Google campaigns, our social media campaigns required some time for us to develop enough data to put these changes in place but we are already seeing benefits from this approach.

²⁶ Three additional factors influenced this decision. First, we planned to use A/B testing on all ads and all platforms, so each ad set consisted of at least two ads. Three ad sets across three platforms, then, did not simply mean creating nine ads, it meant eighteen. Second, we planned to produce both vertical and horizontal videos for each video ad across all three platforms. Since the basic A/B split we were initially planning was to test still photos versus video, we would need to produce a minimum of two additional videos per set, bringing the total minimum number of ads to twenty. Finally, the overwhelming consensus among experts in social media advertising—reinforced in guidance created by social media platforms themselves—is that social media ads go stale quickly. While we generally saw performance increases across all three sets of Search ads over the length of cycle 1, we anticipated needing to refresh certain important details of content and imagery in our social media ads every week. If we had hewed to the original set of three distinct content areas (applications, paternity, and family engagement) we would thus have to create, seek approval for, post, track, and calculate the budgets for a minimum of twenty ads per week—a number that seemed unmanageable for the project team and unlikely to be reproduced by another child support program.

Schedule of Appendices

[A. Project-Specific Landing Page](#)

[B. Online Contact Form](#)

[C. 50 Most Productive Search Terms \(Ranked by Total Number of Clicks\)](#)

[D. Google Search Ad Assets](#)

[E. Google Display Ad Assets](#)

[F. Sample Display Ads](#)

[G. Sample Campaign Logos](#)

Appendix A. Project-Specific Landing Page

Virginia Department of Social Services | Commonwealth of Virginia

Making Virginia's Child Support Program Simpler

An Easier Application, Low-cost Paternity Testing, and Help for Both Dads and Moms

As Virginia's **Division of Child Support Enforcement (DCSE)**, we know the child support program can be hard to navigate. We have **district offices across the state** to support our families, make it easier to receive and pay child support, and even offer low-cost paternity testing.

We're making changes to improve how we serve families like yours...

Your child's needs just can't wait!

Reach out to us today!

We'll respond within two business days.

More Services for Custodial Parents (Parents Wanting to Receive Child Support)	Easy, Low-cost Paternity Testing	Support Services for Dads and Moms
<ul style="list-style-type: none">1. NEW 1-page child support application2. Customer service experts trained to walk you through the process3. Only \$35 annually (and only if we collect more than \$550/year on that child support case)	<ul style="list-style-type: none">1. Costs less than \$30 per person2. Simple, confidential testing in our office with certified genetic testing experts3. Fast results - usually in under 3 weeks	<ul style="list-style-type: none">1. Help the paying parent with some job-related expenses (work boots, uniforms, training, transportation, etc.)2. Convenient ways to make child support payments3. Free parenting and co-parenting programs
Don't lose out on the money your child needs!	Don't waste money on expensive testing!	Don't delay building your child's potential!

Image of Project-Specific Landing Page

The final text of the project-specific landing page (www.dss.virginia.gov/supportvakids/) is given on the following page, with a simplified markup (h1 = Heading level 1, h2= heading level 3, etc.) included to indicate relative importance. Other formatting is used to indicate rough placement of the text.

The contact form is placed below the text on the landing page but is given as Appendix B.

<h1> Making Virginia’s Child Support Program Simpler </h1>

<h2>An Easier Application, Low-cost Paternity Testing, and Help for Both Dads and Moms</h2>

As Virginia’s [Division of Child Support Enforcement](#) (DCSE), we know the child support program can be hard to navigate. We have [district offices across the state](#) to support our families, make it easier to receive and pay child support, and even offer low-cost paternity testing.

<h2> We’re making changes to improve how we serve families like yours... </h2>

Your child’s needs just can’t wait!

Reach out to us today!

We’ll respond within two business days.

<h3>More Services for Custodial Parents (Parents Wanting to Receive Child Support)</h3>

1. NEW 1-page child support application
2. Customer service experts trained to walk you through the process
3. Only \$35 annually (and only if we collect more than \$550/year on that child support case)

Don't lose out on the money your child needs!

<h3>Easy, Low-cost Paternity Testing</h3>

1. Costs less than \$30 per person
2. Simple, confidential testing in our office with certified genetic testing experts
3. Fast results—usually in under 3 weeks

Don't waste money on expensive testing!

<h3>Support Services for Dads and Moms </h3>

1. Help the paying parent with some job-related expenses (work boots, uniforms, training, transportation, etc.)
2. Convenient ways to make child support payments
3. Free parenting and co-parenting programs

Don't delay building your child’s potential!

Appendix B. Web-based Contact Form

Full Name Required

First Name	Last Name
------------	-----------

Phone Number Required

(xxx) xxx-xxxx

What can we do for you? Required

Open a case for you and your child with the Virginia Department of Social Services

Help you with an existing child support case

Tell you about family engagement services (co-parenting, mediation, visitation, and more!)

Connect you or someone you know to employment services

Other

Email (optional)

your.email@example.com

Address (optional)

Street Address	Apt / Suite	
Address 2		
City	State	Zip / Postal

How do you want us to contact you? (optional)

Phone (voice)

Email

How did you find us? (optional)

Internet search

Social media

Friend/family member

Other

SUBMIT

Image of Project-Specific Landing Page

The final text of the contact form appears below.

Full Name (Required)

Phone Number (Required)

What can we do for you? (Required)

- Open a case for you and your child with the Virginia Department of Social Services
- Help you with an existing child support case
- Tell you about family engagement services (co-parenting, mediation, visitation, and more!)
- Connect you or someone you know to employment services
- Other

Email (optional)

Address (optional)

Street	Apt/Suite	Address
--------	-----------	---------

How do you want us to contact you? (optional)

- Phone (voice)
- Email

How did you find us? (optional)

- Internet search
- Social media
- Friend/family member
- Other

Submit

Appendix C. 50 Most Productive Search Terms (Ranked by Total Number of Clicks)

Search Keyword	Clicks	Impressions	Click-through Rate	Avg. Cost per Click
dna blood test for paternity	820	9,707	8.45%	\$1.05
child support law	405	9,185	4.41%	\$1.03
division of child support payment	386	3,484	11.08%	\$1.13
dna paternity	281	4,487	6.26%	\$1.01
dhs child support services	232	1,733	13.39%	\$1.02
legal help for fathers with child support	215	876	24.54%	\$0.77
child support enforcement payment	206	1,164	17.70%	\$0.96
most accurate paternity test	196	3,550	5.52%	\$1.07
support for fathers rights	172	2,408	7.14%	\$0.92
chow ²⁷ support office	170	1,190	14.29%	\$0.99
children websites	168	1,186	14.17%	\$0.96
office of child support	151	866	17.44%	\$0.98
father dna test	136	2,751	4.94%	\$1.06
dna paternity test kit	134	2,302	5.82%	\$1.04
child support information online	130	1,177	11.05%	\$0.94
new child support law	114	523	21.80%	\$0.76
child support back pay	110	526	20.91%	\$0.94
child support obligation	110	558	19.71%	\$1.04
dna testing father and child only	108	5,237	2.06%	\$1.11
child support lookup	100	779	12.84%	\$1.11
child support case search	91	1,157	7.87%	\$1.13
child support custody	89	549	16.21%	\$1.01
view my child support	84	293	28.67%	\$0.63
help for fathers paying child support	73	361	20.22%	\$0.89
child support authority	61	444	13.74%	\$1.10
is the child support office open today	58	272	21.32%	\$0.94
child support visitation rights	56	615	9.11%	\$1.19
child support from father	53	292	18.15%	\$1.11
child support calculator	45	287	15.68%	\$0.92
advocates for fathers paying child support	41	1,190	3.45%	\$0.96
child support enforcement bureau	38	230	16.52%	\$0.93
child support dispute	37	592	6.25%	\$1.21
legal child support	36	505	7.13%	\$0.99
child support online account	34	246	13.82%	\$1.08

²⁷ The phrase *chow support office* is clearly interpreted by Google to mean *child support office*. It was not among the original suggestions put forward by project staff, and its surprising appearance as one of the most productive search terms in this intervention is evidence of the value of Google's Keyword Planner tool.

Search Keyword	Clicks	Impressions	Click-through Rate	Avg. Cost per Click
child support help	30	853	3.52%	\$0.96
getting child support	30	310	9.68%	\$1.06
child care supplement	28	256	10.94%	\$1.06
call child support services	28	140	20.00%	\$1.00
the phone number to child support	27	367	7.36%	\$1.03
men's rights child support	26	158	16.46%	\$1.11
average child support payment	22	187	11.76%	\$1.01
child support enforcement va	21	141	14.89%	\$0.78
office of child	19	140	13.57%	\$0.68
child support order	18	138	13.04%	\$1.04
child support news	17	110	15.45%	\$0.78
family law	16	188	8.51%	\$1.67
check child support balance	16	229	6.99%	\$1.64
dna paternity testing center	14	224	6.25%	\$1.08
the paternity test	14	159	8.81%	\$1.08
can you pay child support online	14	305	4.59%	\$0.92

Appendix D. Sample Campaign Logos

To suit different formats and contexts over the course of the intervention, we created multiple versions of the campaign logo (some without the .com, some without the penguins, some square, some rectangular) and have given four variations below. The square and landscape versions with the .com were the ones used in the Display ads and thus the only ones used in Cycle 1.

