

Evaluation and Promotion of Arsenic and You Website **Final Report**

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Arsenic and You Website Evaluation

Executive Summary

Overview

The Arsenic and You website (www.ArsenicandYou.org) is full of comprehensive information on arsenic in food, water, and other sources. Dartmouth Toxic Metals Superfund Research Program (DTMSRP) produced and designed the site to help families, caregivers and vulnerable populations learn about and potentially lower their exposure to this toxic metal and improve their long-term health. Promotion and evaluation of the website was conducted from February 2017 through May 2018.



Priority Audiences

The site is designed to provide information to the public, with a specific focus on those who:

- have small children.
- drink water from a private well.
- eat diets high in rice or rice-based products, including those following a gluten-free diet.
- live near hazardous or industrial waste sites.
- smoke cigarettes.
- may come in contact with pressure-treated wood.

Promotional Activities

- Arsenic and You Site promoted at **34+ in-person** events.
- 9 email campaigns were sent, totaling more than **4,400 individual emails**.
- 14 Facebook posts promoting the Arsenic and You site on @DartmouthSRP reached more than **3,200**

Facebook users.

- More than **10 partners** (such as states and towns) added Arsenic and You to their own websites as a referral link.
- An additional **approximately 100 organizations** were contacted directly to build partnerships and referral networks.

Outcomes

- 11,991 Users
- 13,907 Sessions
- 28,073 Pageviews
- Sessions originating from every state in the country.

86% of survey respondents reported **learning** something from the website in one or more key areas.

100% of evaluation survey respondents reported that they either **have made a change or plan to make a change** related to exposure to arsenic as a result of what they read on the Arsenic and You website.

Lessons Learned:

- Traffic coming to the site directly or through a referral link on a partner site is higher quality than traffic coming from social media or search engines. Spend effort on building referral networks or affinity groups rather than general visibility.
- High quality partnerships and press coverage drive traffic, but can be unpredictable and time intensive

- It is beneficial to use unique links or link extensions in promotion so efficacy of specific campaigns or outreach can be tracked, allowing for quicker adaptation and tailoring of efforts.
- Adoption of smartphones and tablets continues to increase, so it is imperative that website layout and navigation be mobile-friendly to successfully engage website users.

Evaluation and Promotion of Arsenic and You Website

FINAL REPORT

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Introduction

The Arsenic and You website includes comprehensive information on arsenic in food, water and other sources. The Dartmouth Toxic Metals Superfund Research Program (DTMSRP) produced and designed the site to help families, caregivers and vulnerable populations learn about and potentially lower their exposure to this toxic metal and improve their long-term health.

To be certain we were able to measure the effectiveness of a website devoted to promoting health based information pertaining to a single contaminant with multiple exposure routes, the DTMSRP contracted with the Community Health Institute (CHI) to assist with the promotion, distribution and the evaluation of Arsenic and You. Based on our pre-development research, Arsenic and You has fulfilled a knowledge gap by serving as a public health tool that is the only website devoted to providing information on arsenic in water, food and other sources including smoking and pressure treated wood. The information detailed in this report results from efforts conducted by DTMSRP and CHI to ensure that the website reaches priority audiences throughout the United States and evaluate how well it meets their needs.

Evaluation of the Arsenic and You website was conducted from the time it was launched in February 2017 until June of 2018 to determine the value of the website to visitors as well as to ascertain any shifts in information/ knowledge, attitude, or behavior by users of the website. Website analytics were used to track utilization of the website and were implemented to collect data on the following indicators: total visitors to the website, unique visitors, average time spent on site, bounce rates, ranks of individual website pages, referral information and user flow. We also used analytics to track whether partners re-posted links from the website to other platforms or sites. Other additional evaluation methods were also employed and are detailed in this report. These analytics were also employed in service of determining reach and value of the website to the identified priority audiences, outlined below.

Priority audiences include those who:

- have small children
- drink water from a private well
- eat diets high in rice or rice-based products, including those following a gluten-free diet
- live near hazardous or industrial waste sites
- smoke cigarettes
- may come in contact with pressure-treated wood

Definitions

Website metrics have been tracked since January 1, 2017 using Google Analytics and aggregated using Google Data Studio. Google Analytics relies on unique code embedded in the website to track visitor behavior, acquisition, and overall use. There are a number of key Google Analytics terms or features that are used in the evaluation of the Arsenic and You website, which include:

- **Users:** An identified visitor who had at least one session (visited the site at least once) during the specified date range. Specifically, Google Analytics determines which traffic belongs to which user by assigning a unique identifier which is associated back to that user with each session on the site. A higher number of users means that more people are visiting the website, so higher is better.
- **Sessions:** A single session is counted for each period of time a user is actively engaged with the website. A higher number of sessions means the website is being visited more.
- **Pages/ Session:** Pages/Session (Average Page Depth) is the average number of pages viewed during a session. Repeated views of a single page are counted.
- **Session Duration:** The length of a session, or the total amount of time that a user engaged with the website in a single session. A longer session duration is better, meaning that the user spent more time interacting with the site.
- **Bounce Rate:** The percentage of single-page sessions in which there was no interaction with the page (meaning the user did not click, scroll, or otherwise engage with the page). A bounced session has a duration of 0 seconds. A lower bounce rate is better.
- **Source:** Source is where the user is, such as a search engine or another website, when they click through to the site. Said another way, this is the user's location on the web prior to getting to this website.
- **Channel:** The channel describes how users arrived at the website. Values for Channel include **organic** for unpaid search traffic (such as when someone does a Google search and clicks through to Arsenic and You as a result of that search), **none** for direct traffic (where someone has typed in the web address or clicked a direct link not embedded in another site), **referral** for someone clicking through a link from another site (another site has referred them) to reach Arsenic and You, and **social** for traffic from Facebook, Twitter, or other social media sites.

Activities

In the Spring and Summer of 2017, a master email list was compiled of known partners, potentially interested organizations, those with similar interests (such as other institutions doing similar research), and those who had expressed interest in the past. Another email list was compiled by identifying private drinking water professionals in each state. Additionally, several relevant listservs were identified to reach related audiences. Additional specific potential partners and organizations were identified throughout the year and contacted directly.

General List Made up of 539+ emails	State Water Programs Made up of 100 emails	Listsers
Includes: <ul style="list-style-type: none"> • Research partners • Attendees of prior events • Celiac partners 	Includes: <ul style="list-style-type: none"> • State Water Program Professionals identified from 52 state/ territory websites • At least one email address from each state on this list 	Includes: <ul style="list-style-type: none"> • PEPH • SRP • NIEHS • DTMSRP newsletter list
Description: <ul style="list-style-type: none"> • ‘Warmer’ contacts, or contacts with a more direct connection • More likely to be up-to-date 	Description: <ul style="list-style-type: none"> • Colder contacts, or those with no direct connection • Could be out-of-date 	Description: <ul style="list-style-type: none"> • Targeted reach • Not able to use repeatedly

Between February of 2017 and April of 2018, DTMSRP and CHI documented a total of 85 promotional activities for the Arsenic and You website; a breakdown is provided in subsequent sections. Each of these was an activity such as an email blast, social media post, or presentation that reached more than one person. This does not represent the totality of promotion that has been done, as DTMSRP and CHI have also done a great deal of one-on-one outreach to ask an estimated 30-40 additional potential partners to share the Arsenic and You website and further leverage potential connections.

In-Person

DTMSRP staff conducted or partnered with other stakeholders to promote the Arsenic and You website at a total of 34 events since Jan. 1, 2017. At these events, slides were shown promoting the Arsenic and You website and flyers or promotional magnets were shared. Several partners also encouraged attendees of sessions of their own to visit the Arsenic and You website, using an Arsenic and You-branded slide in their PowerPoint slide presentation.

Through these events, it is estimated that more than 3,000 people were reached. An estimated 700 to 1,000 flyers and magnets were handed out through the various events. Flyers included the web address and details about what visitors will find on the site. Magnets included similar information, but were smaller, and could be posted to further spread information. Later versions of the magnet included a QR code, which allows recipients to use their smartphone to scan the code and be brought directly to the site. Website traffic following these events rarely showed a notable change unless there was a news story or other online follow up from the event. Once the QR code was launched in March 2018 (which allows for improved access from mobile devices and more specific tracking), 17 resulting website visits were recorded. While small overall, this does help identify those users who came from seeing a magnet. According to final evaluation survey responses profiled in the Intermediate Outcomes section below, more than one third of visitors (36% of 39 respondents) visited the Arsenic and You site after attending a presentation or live event where it was mentioned. This

suggests that people who heard about the site from an in-person session were more engaged than those who came to the site in other ways.

Online

Email

One of the primary activities involved in promotion was to share the website with partners and collaborators via email communications through MailChimp. These partners and collaborators include state, regional, or non-governmental environmental health programs, environmental safety programs; programs that work with families or parents; and programs that work with populations that consume more rice. This outreach included providing suggestions as to how partners would consider sharing the site as well as including template content for inclusion in social media, blog posts, and eNews articles.

In service of this effort, in June of 2017, an [introductory email](#) was crafted by DTMSRP and its contractor to both make partners aware of the Arsenic and You website and to encourage them to share the website. The introductory emails proposed that potential partners may consider doing the following:

Use the [Arsenic and You](#) website in your own work:

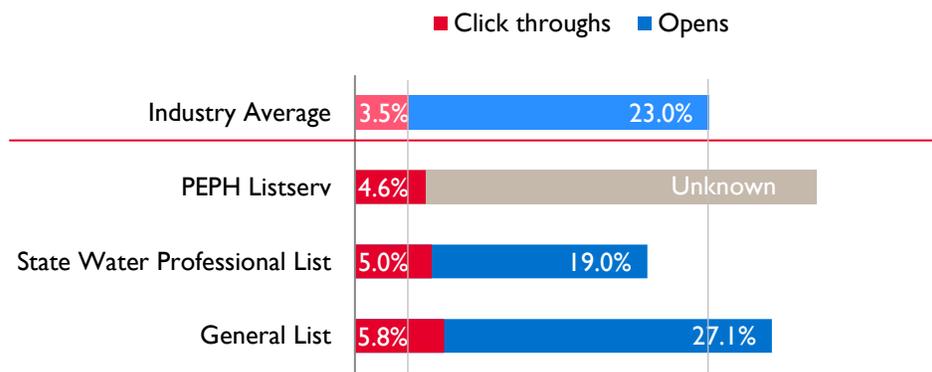
- Link to [arsenicandyou.org](#) **from your website** in sections about environmental health or food and water safety.
- Include [arsenicandyou.org](#) as a **reference in materials** about water and food safety for community members.
 - *For example:*
 - *If you are creating flyers to distribute to homeowners with private well water, include [arsenicandyou.org](#) as a reference on the flyer.*
 - *Use text from the website in your materials, just cite [arsenicandyou.org](#)!*
- Share materials **directing people to the website as a resource** at any events or conferences you may have.
 - *For example:*
 - *If you are holding local events about water or food safety, include [arsenicandyou.org](#) as a recommended site for additional information about the potential risks of arsenic in food and water.*
- Follow [Dartmouth Toxic Metals Superfund Research Program](#) **on Facebook** and share posts that include information about potential risks of Arsenic.
- Include an introduction to the site **in your eNewsletter**.
 - Contact us for a **drop-in article** introducing the website.
 - You may also **use content directly from the website** as articles in an eNewsletter, just link to the site as a reference.
- Share [arsenicandyou.org](#) through any relevant listservs you know of, contact us and we will provide ready-made content for sharing!



Arsenic is a greater concern
for children since they eat about
3X more food
per pound of body weight than adults.

This information was sent via email to each of the email lists noted in the table in the *Activities* section above, including 539 people through a general interest list built from existing contacts, 100 state well water program professionals from 52 states/territories, and to the Partnerships for Environmental Public Health and Superfund Research Program listservs that reach an estimated 700 people. This batch of introductory emails resulted in the following activity, which is shown compared to the industry average. As shown in the chart, the email blast sent to the General List performed better than the industry average for opens (portion of recipients who opened the email) and click throughs (portion of recipients who clicked through a link within the email). Both the PEPH listserv and State Water Professional list outperformed the industry average on click throughs.

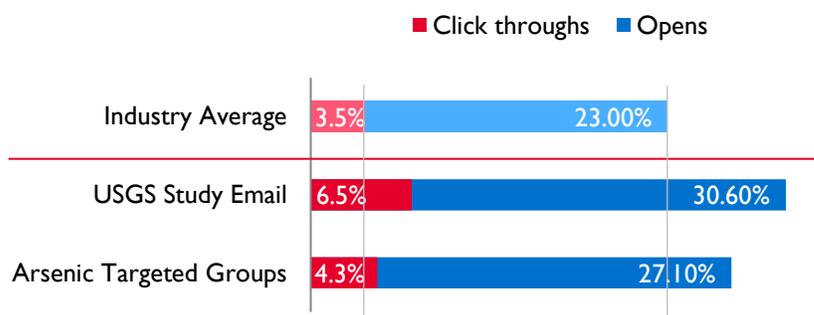
Opens and Click Throughs from Introductory Email



This email was likely forwarded on to others, such as additional listservs and partners, but we do not have tracking information for those.

Following the Introductory Email, two more emails were sent in late 2017 to drive additional traffic to the Arsenic and You site, and further encourage recipients to collaborate to promote the website. As shown below, both of these email blasts had a better rate of opens and click throughs than the industry average.

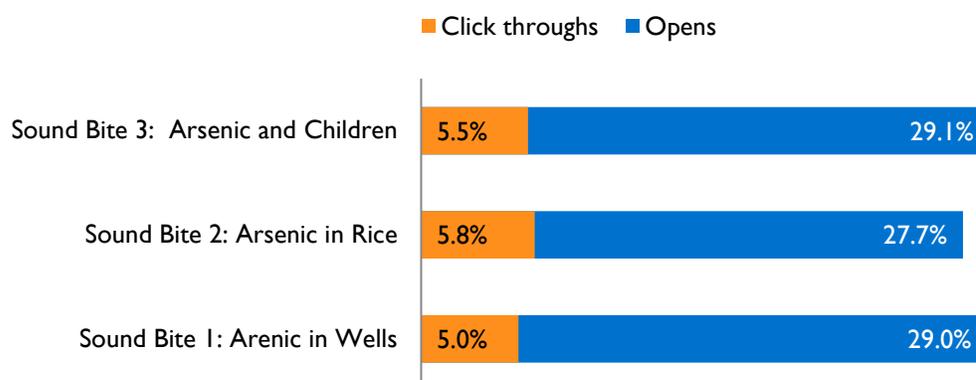
Additional General Emails



In the Fall of 2017, at the recommendation of the New Hampshire Arsenic Consortium, DTMSRP and CHI created a series of *Sound Bite* emails, each focusing on a specific component and audience for the Arsenic and You website. Each is structured so that it can be forwarded, used as a social media post, or used as a drop-in article in an eNews communication. Three *Sound Bite* emails were sent from Fall of 2017 to Spring of 2018 to

between 570 recipients and 685 recipients each, and the resulting activity is detailed below. Anecdotally, we have heard that several partners have passed this content along to their own contacts, but we do not have data to further validate that. This content has also been posted to social media, both Facebook and Twitter.

Activity from Sound Bite Emails



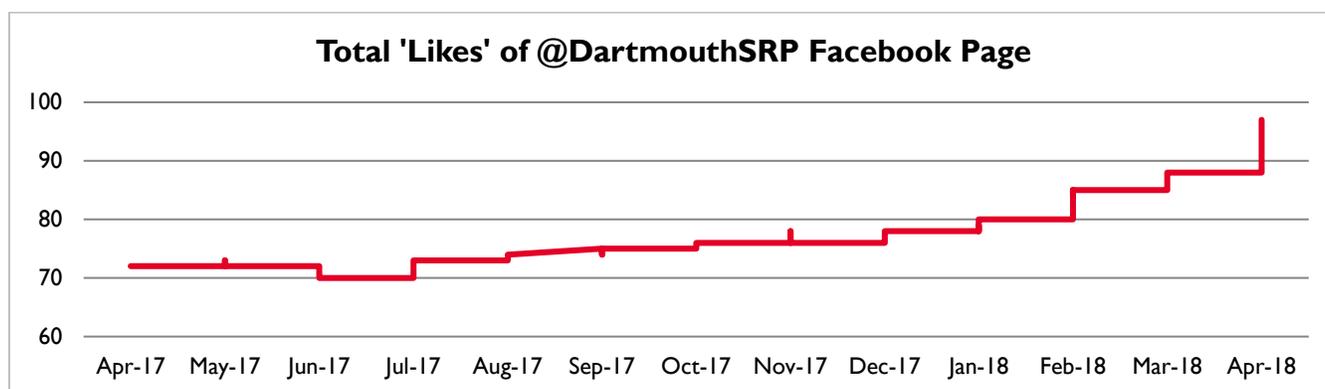
Again, these email blasts had a better rate of opens and click throughs than the industry average and, in general, this analysis found the number of click throughs and opens increasing based on the email having a focused topic as opposed to a general promotion of the website.

An estimated 100 additional organizations or potential partners were contacted directly by DTMSRP and CHI. While this contact took a significant amount of the effort spent on promotion, there is minimal tracking available or known return on those efforts. More detail on this is available in the *Challenges and Lessons Learned* sections below.

Social Media

Between April 2017 and April 2018, fourteen Facebook posts were used to promote the Arsenic and You website. Details about the interaction that these posts generated are outlined in the table below. *Reach* refers to the number of people who saw the post; *Organic Reach* describes reach based on unpaid methods such as reaching those who have “Liked” the page or who see it through one of their Facebook friends sharing it, and *Paid Reach* refers to reach from using Facebook targeted paid promotion to “boost” a post to reach Facebook users with specific interests or characteristics. Three of these Facebook posts, those in March and April 2018, were promoted using Facebook targeted paid promotion. Those posts had considerably more reach, meaning that they were seen by far more people, as highlighted in the *Paid Reach* column below. Higher reach also resulted in increased Link Clicks, driving traffic to the Arsenic and You website. Evaluation results suggest that paid targeted promotions increased traffic to the Arsenic and You website, but that traffic was not as high quality as other website traffic, and will be discussed in more detail in later sections. Through these activities, “Likes” of Dartmouth Toxic Metals Superfund Research Program’s Facebook page increased by 34%, allowing each subsequent post promoting the Arsenic and You website to reach more people and generating an added benefit for the DTMSRP.

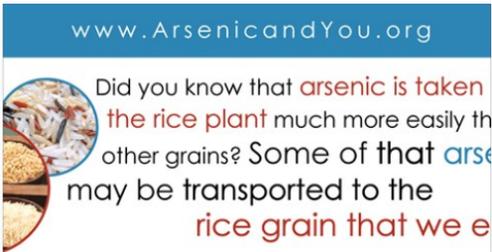
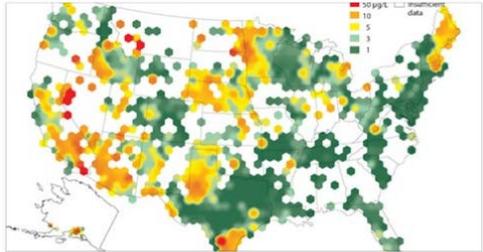
Date	Post Summary	Organic Reach	Paid Reach	Shares	Post Clicks (see more of post)	Link Clicks (to website)	Reactions + Comments
4/11/2018	Arsenic in rice	117	66	2	12	4	3
3/22/2018	Featured in NHPR's The Exchange	39	1117	0	1	56	1
3/14/2018	Ground Water Awareness Week	400	702	6	21	53	8
2/8/2018	Test water regularly	193	0	4	10	3	6
12/14/2017	USGS Well Water Study	176	0	2	5	3	3
9/26/2017	Children's Environmental Health Day	125	0	0	4	0	0
8/31/2017	Celiac Disease Foundation shares ArsenicandYou.org	20	0	0	0	2	0
8/3/2017	Bangor News Arsenic Story	16	0	0	0	1	0
7/25/2017	WellOwner.org features ArsenicandYou.org	15	0	0	0	0	0
7/14/2017	Do you drink water from a private well?	131	0	3	73	1	2
6/14/2017	NIEHS newsletter features ArsenicandYou.org	47	0	0	1	0	2
5/11/2017	Fruits and Vegetables	38	0	0	0	0	0
4/25/2017	Dartmouth news and final invite to launch event	11	0	0	0	0	0
4/24/2017	Invite to launch event	48	0	0	2	0	2



The value of Facebook as a promotional tool, and particularly using paid promotion for Facebook posts, or “boosting” posts, to generate additional traffic to the website can be considered through several metrics. One metric focuses on key characteristics of Facebook generated traffic, including bounce rate, session duration, and pages per visit, as shown in the first table below. The metrics of reach and cost per click through to the Arsenic and You website, as shown in the second table below, are also important to consider. Posts were also shared on Twitter, but detailed analytics on those tweets are not readily available. Google analytics show 92 sessions originating from Twitter, but that likely does not reflect the totality of traffic from Twitter.

Nearly 10% of total site traffic between Jan. 1 2017 and June 30, 2018 came from Facebook. This includes traffic from the Facebook mobile app and Facebook website. This Facebook traffic is also from DTMSRP posts and from partner posts.

Metric	Facebook Traffic	Facebook compared to overall site traffic
Total Users	1,0161	
Total Sessions	1,253	
Session Duration	1:02 minutes	48.3% lower than overall session duration
Bounce Rate	70.79%	6.4% higher than overall bounce rate
Pages per Session	1.68	16.2% lower than overall pages per session

Post Promotion Date	Boosted Post	Target Audience	People Reached	Link Clicks	Cost per Click Through
4/11/2018	<p>In addition to those who eat a lot of rice as part of their daily diet, those eating gluten-free foods may have higher exposure to arsenic because many gluten-free products use rice flour or are otherwise rice-based. Similarly, as you may have seen in the news recently, some baby foods are rice-based and therefore can have higher levels of arsenic. Learn more about arsenic in rice and what choices are likely to have less arsenic at https://www.dartmouth.edu/~arsenicandyou/food/rice.html</p>  <p>Dartmouth Toxic Metals Superfund Research Program</p>	<p>Living In United States Age: 30 - 65+ Interests: Gluten, Baby food, Children's food, Moms, New Moms</p>	71	3	\$0.55
3/22/2018	<p>Our own www.ArsenicandYou.org featured on The Exchange on NHPR. Check out the episode and be sure to visit www.ArsenicandYou.org to learn more Arsenic in water. http://nhpr.org/.../magical-drinking-or-magical-thinking-trut...</p>  <p>Magical Drinking or Magical Thinking? The Truth and Myth About Drinking "Raw," Untreated Water</p> <p>There are 27 springs in New Hampshire that some Granite Staters use as their primary water source. NHPR's OutsideIn visited these springs, and</p>	<p>Living In United States People who like @DartmouthSRP and Friends of people who are connected to @DartmouthSRP</p>	538	18	\$0.72
		<p>Living In Maine; New Hampshire; Vermont Age: 30 - 65+ Interests: NPR</p>	586	34	\$0.29
3/14/2018	<p>More than 13.2 million households, a total of 34 million people, have their own private well. Recent estimates suggest that up to 20% of these wells may have elevated levels of Arsenic. Visit https://www.dartmouth.edu/~arsenicandyou/water/testing.html to learn more about the risks of arsenic and WellOwner.org for other information on well water. #GWAW2018</p>  <p>Dartmouth Toxic Metals Superfund Research Program</p> <p>Private well owners could be at risk from harmful exposure to arsenic in their drinking water. You can't see, taste or smell arsenic, so test your water and take action if you</p>	<p>Living In Arizona; Nevada; New Hampshire Age 30 - 65+ Interests: Water pollution or Environmental science and Home Ownership; Homeowners</p>	725	44	\$0.32

Results

Through the promotion activities described, a number of important outputs and outcomes have been achieved. These include outputs or results of activities as well as short, intermediate, and long term outcomes, as shown in the logic model in Appendix 4.

Key Outputs/ Results of Activities

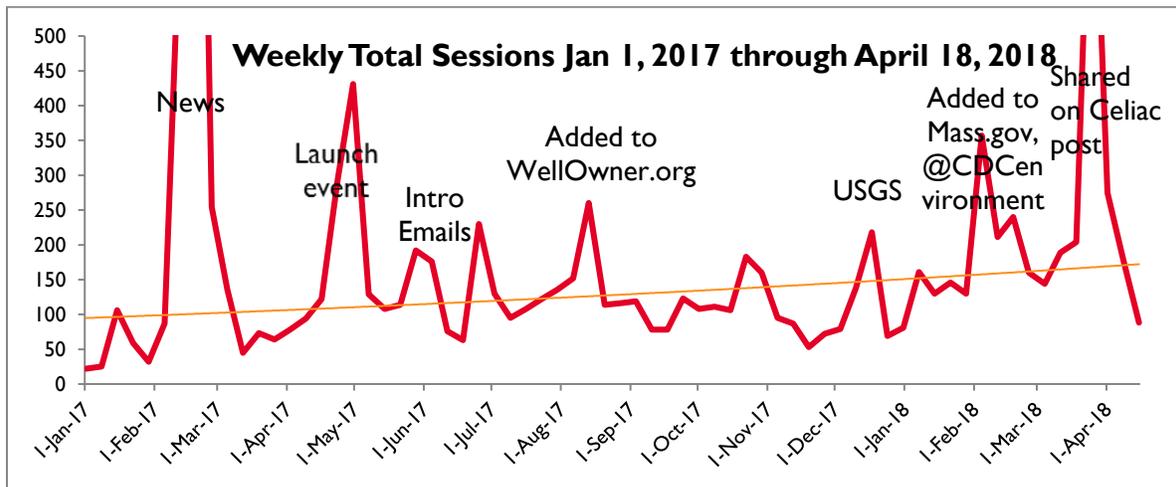
- **Website shared through partners and collaborators**
- **Website sessions**
- **Measured through:**
 - **New website users**
 - **Website satisfaction**
 - **Reach to Primary Audiences**

Dartmouth's partners and collaborators are sharing the Arsenic and You website on their own sites as well as including the Arsenic and You site in publications, references, and presentations with others. These generate additional awareness, more site visits, and improved quality of traffic to the site, which are detailed later in the Outcomes section.

Partner Promotional Activity	Number	Examples
<i>Through April 2018</i>		
Featured on partner website	10+	<ul style="list-style-type: none"> • State of Wyoming • State of Mass. • WellOwner.org • Town of Barrington, NH • ChildrensHospital.org
Featured in email, newsletter, or blog	8	<ul style="list-style-type: none"> • Celiac.org • Hanover COOP
Featured in publication	3	<ul style="list-style-type: none"> • NH Comprehensive Cancer Collaboration Emerging Issues Brief • University of Kentucky Extension • <i>Effectiveness of table top water pitcher filters to remove arsenic from drinking water</i>, Environmental Research
Featured on partner social media	20	<ul style="list-style-type: none"> • @CDCEnvironment on Twitter • @deborahblum of MIT on Twitter • @WellOwner on Facebook
Featured in in-person session	34	<ul style="list-style-type: none"> • AAAS Session <i>Arsenic in Food: From Soil to Plate to Policy</i> • DES Source Water Protection Conference • Town Presentations with NH DES

This list is not comprehensive, as not all partners let us know if they shared our information, and not all links can be tracked back with Google Analytics. Additionally, this does not include features that were not known to be related to outreach to partners (such as sites that chose to link to Arsenic and You without being asked to or contacting us).

The chart below shows the total number of sessions on the website each week from January 1, 2017 through April 18, 2018. Both points where the chart is above 500 are a result of news and partner promotion. Other labels are promotional activity that evidence suggests led to this spike in sessions on the website. Overall, we see an increase in weekly traffic since the website launched in early 2017, as shown by the trend line.



Website Visits and Visitors

General Audience

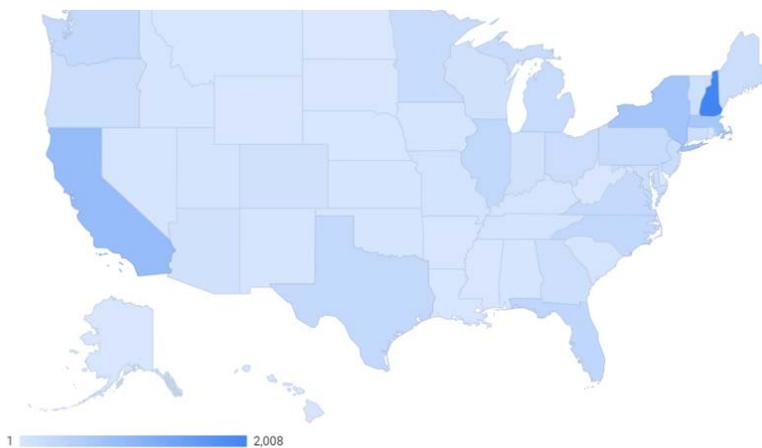
From Jan. 2017 - June 2018

- 11,991 Total Users
- 13,907 Total Sessions
- 28,073 Total Pageviews

A general overview of users of the Arsenic and You website is important in order to better understand overall reach including geography, source of traffic, and type of device used. **The map shows that the Arsenic and You site has had multiple sessions originating from every state in the nation.** On the map, a darker color denotes more visitors from that state. The state with the lowest number of originating sessions is North Dakota with just 4 sessions, many more states

Sessions by Region:

Map shows United States; List shows top 10 overall regions



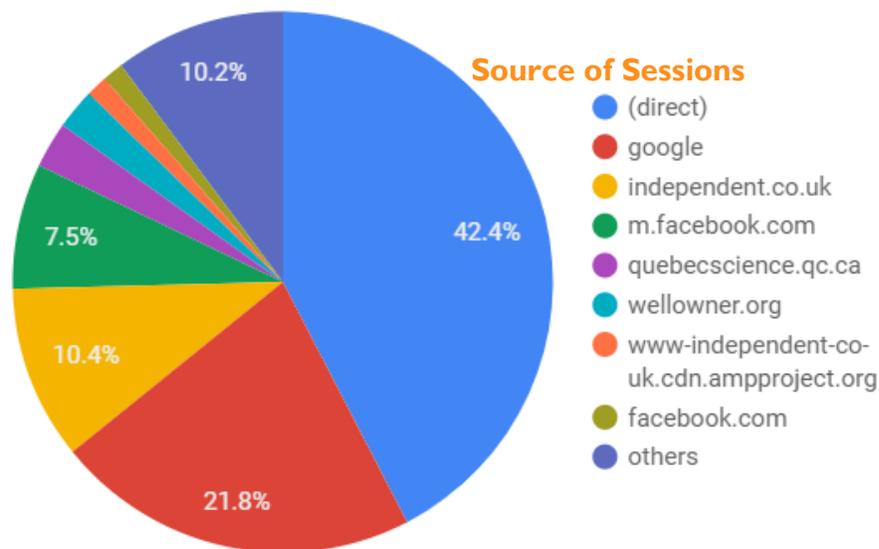
Region	Sessions
New Hampshire	2,007
England	993
California	886
New York	706
Massachusetts	652
Quebec	409
Florida	331
Illinois	318
North Carolina	310
Texas	295

have 200+ sessions. The top 10 regions by number of sessions, are shown in the right column (England is the second highest, the remaining are U.S. states).

When considering how accessing the site through different technology impacts traffic, the following table shows that the majority of visits were on a computer (while labeled desktop, this would also include laptop computers, both PC and Macs), and that those visits on computers lasted longer and the users went to more pages in each session than those who accessed the site via a mobile device such as a smartphone, or by tablet such as an iPad. Most likely, this can be attributed to the differences in how each device type is typically used; computers tend to be used for longer term or more in-depth tasks while other devices tend to be used for quicker or more temporary needs. However, **the difference in traffic quality (session duration, bounce rate, and pages per session) for each does highlight the ongoing need to ensure that websites are optimized for all devices used to access content on the internet;** this was a focus of Arsenic and You all along but opportunities for improvement still exist. This point becomes even more important when looking at the source of traffic in the pie chart below, which shows that Facebook’s mobile platform (m.facebook.com) is the 4th largest source for traffic to the Arsenic and You site.

Type of Device Used to Access Site

Device Category	Sessions	Avg. Session Duration	Bounce Rate	Pages / Session
desktop	7,445	00:02:39	60.64%	2.31
mobile	4,844	00:01:10	74.24%	1.63
tablet	1,060	00:01:42	64.91%	1.95



Priority Audiences

Priority audiences for the Arsenic and You website, as outlined earlier, include those with private well water, families, and those with rice-based diets. All the priority categories are listed in the table below with the Arsenic and You site pages that focus on that audience; the right column shows how many users have come to each of those pages. This allows for a better understanding of how well we are reaching each of these primary audiences. For example, this table suggests that fewer people who smoke cigarettes are being reached with pertinent information and more people with private well water are being reached with pertinent information.

Primary Audience	Primary Page(s) for this Audience	Visits to Page(s)*
Families, caregivers, and those with small children	arsenicandyou/health/children.html	682
Those who drink water from a private well	arsenicandyou/water/testing.html arsenicandyou/water/treatment.html	1,691
Those who eat diets high in rice, including gluten-free	arsenicandyou/health/gluten-free.html arsenicandyou/food/rice.html	4,416
Those who eat fruits and vegetables grown in potentially contaminated soil	arsenicandyou/food/fruitsandvegetables.htm l	1,969
Those who smoke cigarettes	arsenicandyou/sources/smoking.html	172
Those who live in areas with high risk of arsenic, or near hazardous or industrial sites	arsenicandyou/sources/locations.html	733
Those who may come in contact with pressure-treated wood	arsenicandyou/sources/wood.html	234

* Number of visits to page(s) as of May 8, 2018.

To determine whether these pages are meeting our outcome measures, which include increased awareness of the website, increased interaction with the site, and an increase in visitors seeking additional information, we look at the quality of the traffic that begins on that page. For example, if someone clicks through a link to the Gluten-Free page, we can assume that they are looking for more information related to Arsenic and a gluten-free diet. We will examine this using four characteristics of traffic.

- First, how frequently are visitors coming in on that page? We look at this using Page Rank. Page rank refers to the popularity of that page as an entrance or landing page compared to all the other pages on the site.
- Second, what is the average session duration when visitors enter on this page? By looking at how much time a user spent on the site after they entered from that page we can get a sense of whether we have the information those visitors are looking for. A longer duration suggests that they found more of what they wanted or more value in the content than the shorter duration.
- Third, we consider pages per session, which looks at how many pages a user visits when they enter on a given page. Much like session duration, more pages per visit suggests they found more value in the content of the pages.
- Fourth, and lastly, we consider Bounce Rate, which is the portion of people who come to a given page and immediately leave, and suggests that they did not immediately see what they were expecting to find on the page, though it can also be a result of accidentally clicking on a link or immediately navigating away for other reasons.

In each table below, these characteristics are shown for the pages most relevant to our priority audiences. The statistics included within are compared to the weighted averages across all landing pages of the

website¹. The green in individual cells indicates those statistics are *better than average* compared to other landing pages.

People with rice-based diets, including those with gluten-free diets

	arsenicandyou/health/gluten-free.html	arsenicandyou/food/rice.html	Weighted Avg. across Arsenic and You pages
Page Rank <i>(lower is more popular)</i>	#2	#6	N/A
Avg. Session Duration <i>(higher is better)</i>	1:11	1:04	1:13
Avg. Pages/Session <i>(higher is better)</i>	1.56	1.38	1.52
Avg. Bounce Rate <i>(lower is better)</i>	89.9%	66.1%	78.7%

Parents/caretakers of children

	arsenicandyou/health/children.html	Weighted Avg. across Arsenic and You pages
Page Rank <i>(lower is more popular)</i>	#8	N/A
Avg. Session Duration <i>(higher is better)</i>	00:33	1:13
Avg. Pages/Session <i>(higher is better)</i>	1.38	1.52
Avg. Bounce Rate <i>(lower is better)</i>	83.3%	78.7%

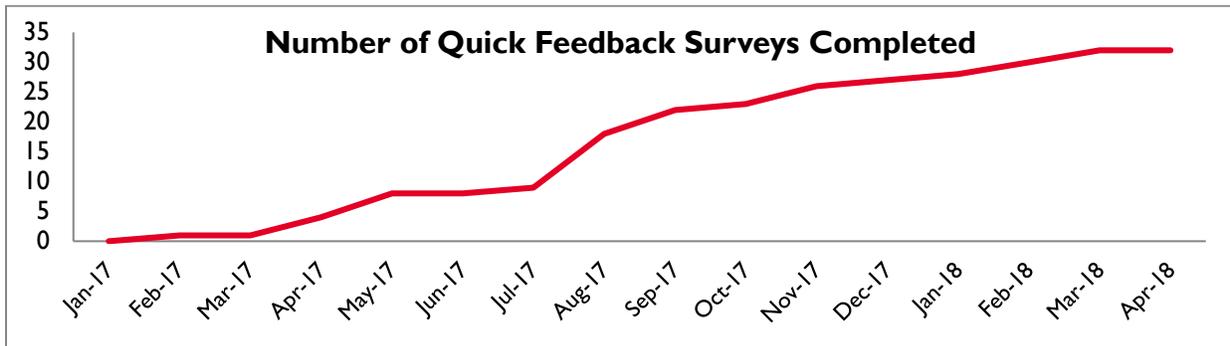
Private well owners

	arsenicandyou/water/testing.html	arsenicandyou/water/treatment.html	Weighted Avg. across Arsenic and You pages
Page Rank <i>(lower is more popular)</i>	#7	#13	N/A
Avg. Session Duration <i>(higher is better)</i>	1:32	0:55	1:13
Avg. Pages/Session <i>(higher is better)</i>	1.52	1.38	1.52
Avg. Bounce Rate <i>(lower is better)</i>	74.8%	81.9%	78.7%

Website Satisfaction

As a final key output, we looked at the pace and content of survey completions. Many of the pages on the Arsenic and You site include a link to a survey where users were encouraged to provide feedback on the site. A total of 32 website visitors from 10 different states took the quick feedback survey, shown in Appendix 2, that was available in the sidebar of the website from early 2017 through April 2018. There appears to have been an increase in feedback provided when participation was encouraged at in-person meetings, such as the April 26th launch event. **More than 80% of respondents said that the Arsenic and You site answered their questions about arsenic extremely well** and that it was extremely easy to understand the information on the website. More than 70% of respondents reported that they have an improved understanding of whether they should be concerned about arsenic and what they should do about it.

¹ This comparison varies slightly from averages used elsewhere in this report, as this looks at only the primary, public-facing pages that can be accessed from the navigation bar on the website (such as the [Testing](#) page and [Exposure](#) page). It is a weighted average (weighed by number of sessions with each landing page) of these pages.

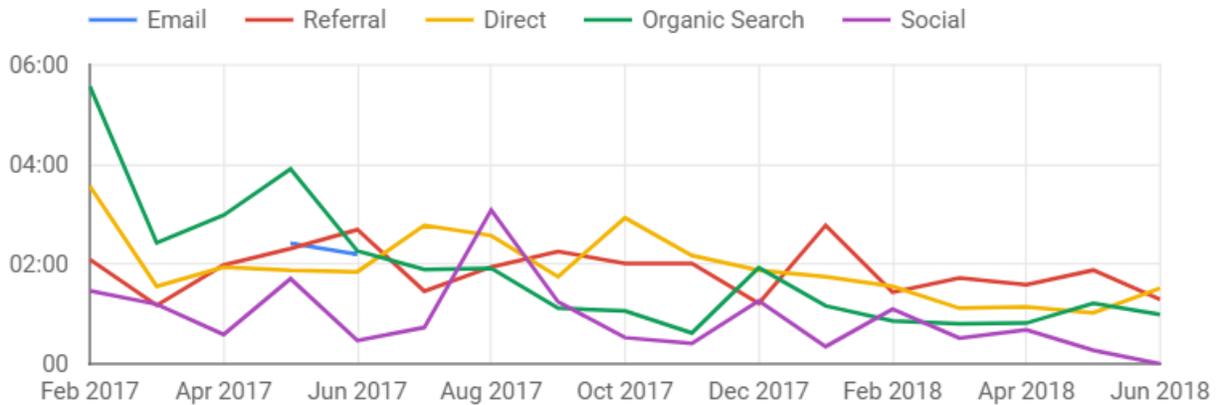


Outcomes

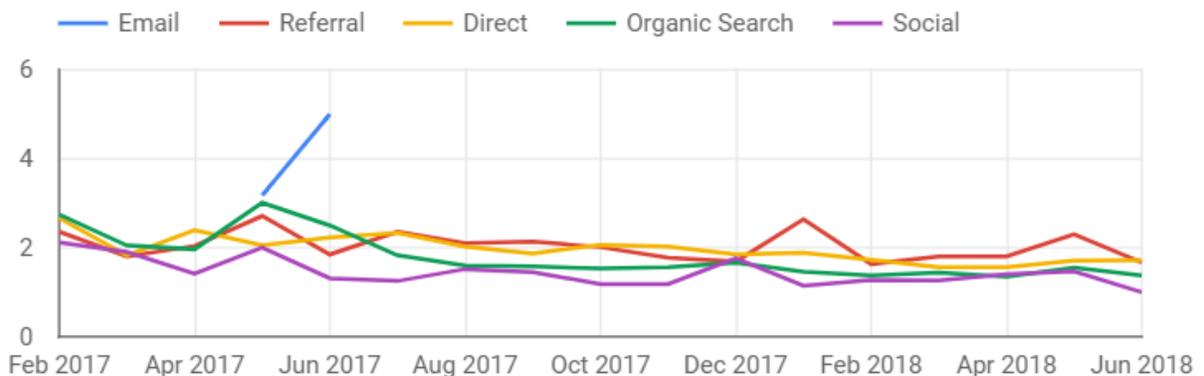
Short Term Outcomes

- Increased awareness of website
- Increased interaction with information on the website
- Increase in visitors seeking additional information
- Measured through:
 - Number of sessions (visits to the site)
 - Length of site visit (avg. session duration)
 - Number of pages viewed per visit
 - Numbers of click throughs on links
 - Returning users and whether those users are interacting with site more extensively
 - Change in users from referral links/ sites and quality of the resulting sessions

Session Duration by Traffic Type



Pages per Session by Traffic Type



The above graphs show both session duration and pages per session by type of traffic from February 15, 2017 to June 30, 2018. Generally, these charts show that there has been little change over this time frame, and that referral and direct traffic consistently have higher session duration and pages per session than organic search and social traffic (which refers to traffic from social media). Of note is the high number of pages per session for traffic generated by email in 2017, which suggests that outcomes from email are better and should be tracked more closely to continue to generate positive outcomes. Session duration among social traffic in July and August 2017 was notably higher than other periods. During these months more posts were being done about the Arsenic and You website, therefore suggesting that social media may be more useful if done more frequently with posts specific to priority audiences.

In addition to the key numbers above, we also looked at returning and referral website users. We examined whether there is an increase in returning users and whether those returning users are interacting with the site more extensively (such as spending more time on the site and visiting more pages). Further, we looked at what portion of users are coming from referral links that encourage people to visit Arsenic and You for additional information. For example, this includes town and state websites with links to Arsenic and You, as well as news stories that link to the site for more information.

When looking at returning users and whether those users are interacting with the site more extensively we find: about 90% of total users (9,434) have been new users, while 10% are returning users (1,003). The true portion of returning visitors is likely to be a bit higher, as Google analytics rely on IP addresses to identify visitors, and if a person uses a different device or perhaps uses a Virtual Private Network (VPN), it will have a different IP address and therefore not register as a returning visitor. Returning users spent nearly twice as long on the site as new users (4:10 compared to 2:09 for new users) and visited 24% more pages than new users (2.57 pages/ session compared to 2.08 pages/session), suggesting that they are more engaged with the content of the site, and therefore seeking and finding more information.

A total of 109 referral sites or links have referred to Arsenic and You, and these account for a total of 24.5% of traffic to the website. Reviewing visits back to January 1, 2017 shows that at some points in time referral traffic accounted for more than a third of site traffic. The bounce rate for these visits is substantially lower than the overall bounce rate (43% compared to about 64% overall), suggesting that when people click through from a referring site, they are more often finding what they are looking for than users in general.

Intermediate Outcomes

In May-June 2018, a different survey of Arsenic and You site visitors was done to discern the impact of the website on visitor's awareness, knowledge, and intention related to arsenic exposure. This is referred to as the *Evaluation Survey* and can be seen in Appendix 3. Forty-five participants began the evaluation survey, with 35 completing it to an extent that allowed responses to be included in the final analysis. Four survey respondents also participated in 30-minute follow-up key informant interviews to answer further questions about what they learned, and how they have applied or intend to apply the information that they have learned.

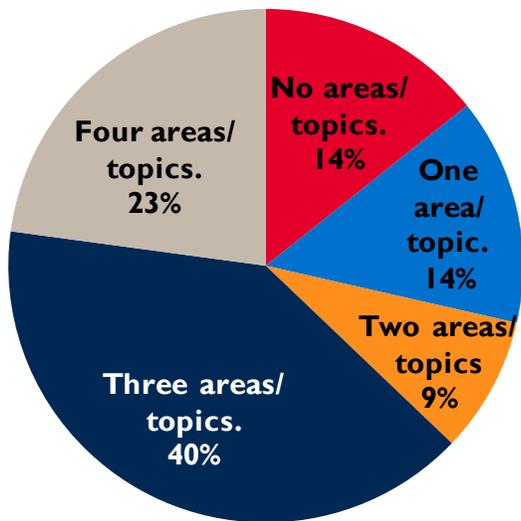
The survey asked respondents if they learned anything new from the Arsenic and You website in the four following areas:

1. Risks of arsenic exposure
2. Arsenic in food, steps to reduce related exposure

3. Arsenic in water, steps to reduce related exposure
4. Other potential sources of arsenic, steps to reduce related exposure

Of 35 responses to the learning series of questions, nearly 86% of the respondents said they learned something new in one of the given areas/ topics, and 63% of total respondents said they learned something in three or more topic areas. Many responses referred to specific learnings from the website, including several

Respondents report that they learned something from the Arsenic and You website in...



about the importance of eating a variety of rice and grains and looking more closely at where rice comes from and where it exists in one’s diet. Others noted learning about the importance of testing water, doing so more regularly, and point-of-use and filter options. Smoking, pressure treated wood, and hazardous waste sites were mentioned as other potential sources of arsenic that respondents learned about from the website. **The breadth of responses affirming that new information was learned suggests that knowledge about arsenic exposure was increased for users.**

The survey also sought to understand how respondent’s level of concern about arsenic exposure was impacted by the website. As shown in the corresponding graph, about half reported that their concern had increased and half reported that their concern remained about the same. In

probing this further with Key Informant Interviewees, it was suggested that those who responded their level of concern about arsenic was about the same likely fell into two categories: first, they were already concerned about it, and that is how or why they came to the website, or second, that they found information on the website about how to mitigate risk therefore allowing people to be proactive, rather than increasing or decreasing one’s level of concern. Similarly, one of the respondents who chose ‘Other’ specified that they were “split” on how concerned they are, because “it is more prevalent than I realized but your website gave specific advice to deal with it.” Others intimated that they were looking for information for their community or classes they teach, and the website provided that, so they were not looking for information with a lens of concern. Based on this feedback, we can assume there has been a change in knowledge about the relative risk of arsenic and basic understanding of the sources of arsenic and effective approaches for reducing arsenic exposure.

Level of Concern After Visiting Arsenic and Your Website



Long Term Outcomes

The final evaluation phase addresses the question, what, if any, long term outcomes have resulted from the Arsenic and You website. To this end, both the evaluation survey and the key informant interviews asked participants what, if any, changes they planned to make based on the information they saw on the website. **Of**

Since visiting your website, I have sought out other websites with additional information, and as a result of all of this, we have gone from eating rice virtually every meal to just 2-3 times per week. — Key Informant

those who participated in the survey, all of them (100%) reported that they either plan to do something different or have done something different as a result of information found on the Arsenic and You website. The chart below shows the specific break down of what people plan to do differently or have done differently.

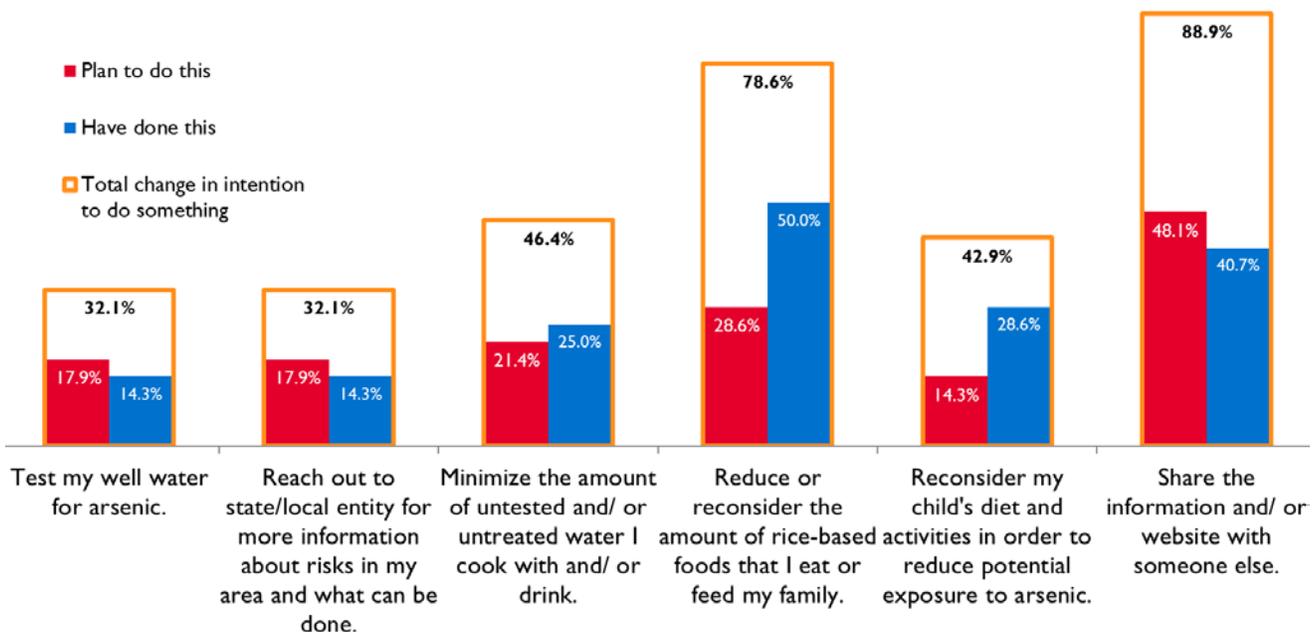
Most reported that they have or will share information and/or the website with someone else. **More than three quarters of survey participants reported that they plan to or have reduced or been more thoughtful about the amount of rice-based products their family eats.** All

key informants noted rice-based foods as their primary point of action from the website as well, noting that they have reduced the amount of rice they eat weekly, are more conscious of where the rice they eat is from, and are sharing this with others. Among those participants who report sharing this information with ‘someone else’, they shared that those include fellow parents, as well as their doctors and nutritionists. Other examples of changes participants have made as a result of the information

As a person living with cancer who is also gluten-free, this was critical information. I have since changed what I feed my grandchildren, and shared this information with my nutritionist and doctor. — Key Informant

they learned from the site are also called out in the boxes in this section. A smaller portion (32.1%) of survey participants and key informant interviewees reported that they planned to or had tested their well water (though several reported they didn’t include this because they did not have a private well) or that they plan to reach out to state or local entities about arsenic in their area.

We tend to get unusual rice, not white or brown. So while I got a lot of info from this I am left wondering about my forbidden rice, pink rice, green rice and red rice. It has prompted me to do further research on them. —Survey Respondent



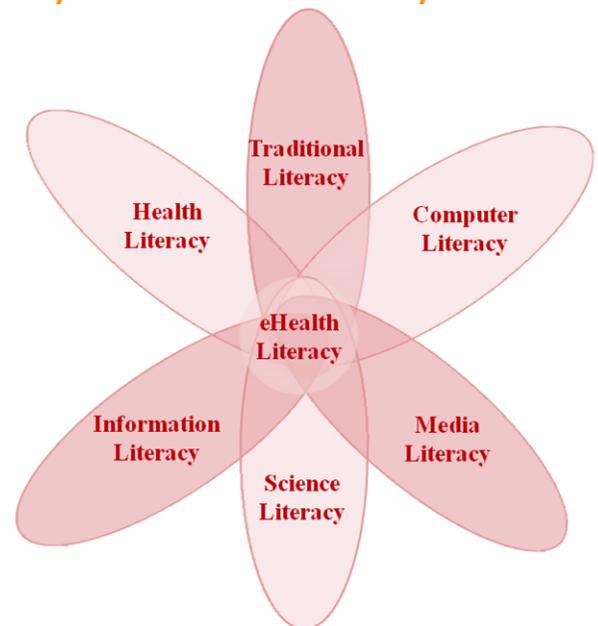
Conclusions

Challenges

There are several challenges to evaluating the Arsenic and You site. Some are inherent to the internet and are in play when we consider this website: the range of skills and literacy visitors need to fully understand the site content, the lack of ability to get direct feedback, inability to fully differentiate traffic of those working on and promoting the site from those who are visiting for information, and the limited capacity to track down all links or shares to the site. eHealth literacy theory² as demonstrated in the Lily Model, below, suggests that the success or value of information technology as a tool for health requires literacy in all of the following: computers, media, information, health, and science, in addition to traditional literacy and numeracy. This rings true for the experience of the Arsenic and You site; a great deal of work was put in to ensure that the site was clearly and simply written (addressing traditional literacy), provided specific action items and takeaways with context (to facilitate understanding for a range of information, media, and health literacy levels), and extensive user testing was completed to ensure ease of use for varying levels of computer literacy. So while all literacy components were considered and addressed in the site's development, the challenges of science and information literacy have persisted. The science presented on the Arsenic and You site still has some areas of uncertainty, as is common in the scientific world. Science literacy, as defined in the 1996 National Science Education Standards³, is the ability to evaluate the quality of scientific information on the basis of its source and the methods used to generate it, have the capacity to pose and evaluate arguments based on evidence, and to apply conclusions from such arguments appropriately. Often related is information literacy, which is the ability to successfully identify, locate, evaluate, synthesize, present, and translate information related to a desired topic.⁴ Many survey respondents spoke passionately about the need for concrete numbers or advice. Unfortunately, as is common in science, the nature of the existing research and variability of humans does not allow for concrete numbers or advice. Therefore, higher levels of science and information literacy may be needed for visitors to fully evaluate, understand, and appropriately apply or translate the information on the Arsenic and You site to their own lives.

Challenges also exist with connecting “on the ground” or in-person activities with the website. Our results suggest that in-person events complete with handouts and pitches to visit the website had a limited impact on website traffic (little new traffic appears to be generated, though those who do visit following in-person sessions are likely to be highly engaged). We cannot discern if that is because people got the information they needed in the session, they lost the handout, or they were not interested. Similarly, behavior change is very complex and multiple exposures to information are needed to spur change, so while we can gauge interest

Lily Model of eHealth Literacy



² Norman CD, Skinner HA eHealth Literacy: Essential Skills for Consumer Health in a Networked World *J Med Internet Res* 2006;8(2):e9

³ [National Science Education Standards](#), 1996.

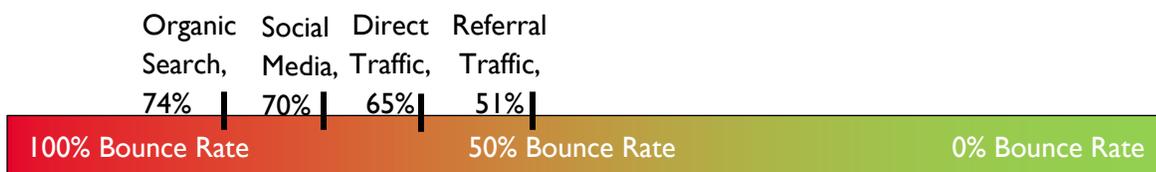
⁴ Association of College & Research Libraries, Information Literacy Competency Standards for Higher Education (Chicago, 2000)

and engagement of website traffic and intent to change from other evaluation activities, people actually executing intended changes are less measurable.

Building, promoting, and evaluating a website intended to increase awareness, knowledge, and create change in intention and action takes a great deal of planning and consideration. This report outlines the activities, outcomes, and resulting lessons learned from DTMSRP and CHI’s work on the Arsenic and You website. Our hope is that others planning to convey information that is key to public health can apply the recommendations and lessons learned outlined below to help them achieve positive outcomes for similar projects.

Lessons Learned

- It’s important to note that not all activities undertaken and included in this report are equal in time and effort required. As such, we believe that it is important to attempt to quantify *return on effort*. Similarly, not all Users and Sessions are created equal, so we think it is important to attempt to gauge the *quality of traffic* resulting from various efforts.
 - Return on effort could be defined as the volume of traffic generated by a unit of effort (such as an hour of staff time spent on a task). Without an explicit tally of units of effort expended on promoting the Arsenic and You website, it is challenging to do this calculation. We recommend that others considering undertaking similar efforts track time spent on outreach and promotion from the outset.
 - **Recommendation:** Consider tracking time spent on each type of outreach and promotion from the outset in order to conduct analysis of Return on Effort. This will allow for better targeted use of time and effort over time.
 - Quality of traffic could be gauged based on number of pages per session, length of session, and bounce rate. Identifying those referral sources that generate higher quality traffic could likely support increased return on effort. As shown below, referral traffic (links from other sites, for example), have a much lower bounce rate. On the other hand, the organic search bounce rate is the highest, meaning that those users who come to the site from a regular Google search are less likely to stay on the site. Therefore an increase in organic traffic is not as high quality as an increase in referral traffic.



- Partnerships are an important driver of high quality traffic. For example, links from partner sites drive the highest quality traffic, and Facebook shares by partners generate additional engagement. However, these partnerships take a great deal of time, energy, and coordination to become fruitful. This can be the result of many components, including the fact that every organization has different rules around what links can be added to their websites or shared through their social media channels, in addition to having different staffing structures, communication structures, and other components that need to be

navigated to facilitate successful sharing. Generally, many follow-ups with several contacts are needed to secure partner sharing.

- **Recommendation:** From the outset, plan on those who have the strongest relationships with partner contacts doing a great deal of follow up (bi-weekly or monthly for several months) including specific recommendations as to where information could be shared (e.g., which website page, as a Facebook post or via Twitter), and what exactly is being asked.
- Very little return was generated from cold contacts, such as those contacts with whom there was no existing relationship. The State Water Program Professional email list (a list of 100 contacts from water programs across the country) was generated from cold contacts, and emails sent to that list had lower open and click rates and a higher rate of unsubscribes. Additionally, a great deal of one-on-one outreach was done to organizations or contacts with similar missions or audiences as well as to press contacts, with very little response.
 - **Recommendation:** Consider engaging press offices or others with established relationships early, as it will take time and continual follow up. Time is likely better spent cultivating relationships and referrals.
- Press coverage drives traffic, but securing high quality press coverage is unpredictable and challenging. For example, on February 17, 2017, the Arsenic and You website was featured at a news briefing with 15 attendees during the AAAS Session *Arsenic in Food: From Soil to Plate to Policy* organized by DTMSRP and based on the Collaborative on Food with Arsenic and associated Risk and Regulation (C-FARR). Following this event, a news article in the Independent from the United Kingdom quoted Dr Keeve Nachman, of Johns Hopkins University in Baltimore and referred people to the Arsenic and You site⁵ which has generated considerable traffic on an ongoing basis. This story drove nearly 1,500 users to the Arsenic and You site, and these users visited an average of 2.2 pages per session which lasted about 1 minute and 45 seconds, which is slightly better than average.
- Google Analytics is helpful for parsing drivers of website traffic, but has limitations including how it is embedded in the site, whether the available measurements are pertinent to desired measures, and lack of some detail of referral traffic.
 - **Recommendation:** Use unique links or link extensions in marketing efforts so that efficacy of specific campaigns or outreach can be tracked more closely. Doing so allows quicker adaption and tailoring of efforts.
- As adoption of smartphones and tablets continues to increase, it is imperative that websites be mobile-friendly in layout and navigation in order to successfully engage website users. Planning for this from the beginning is important, as is continual improvement, as appropriate, based on feedback received.
- Using some promotional funding can help drive initial traffic, which can expand the pool of contacts who can be leveraged for future outreach. For example, using paid promotion through Facebook can increase likes, which increases the audience for future posts. However, based on quality of traffic, spending on promotion does not take the place of leveraging partnerships to reach the appropriate audience.

⁵ Johnston, J. [Expert didn't feed any rice to infant children because of risk from naturally occurring arsenic, Independent](#). 17 Feb. 2017.

- Sensitivity on areas of emerging science held up some activities which might have generated more visits. For example, researchers at Dartmouth were hesitant to widely promote certain aspects of their research because while being the best information currently available, they were concerned about potential repercussions and knew additional research could generate additional insight. As such, there was not great eagerness to fully profile some of the newer research.
 - **Recommendation:** Determine talking points and high level takeaways that all stakeholders (researchers, funders, and those marketing) are comfortable with well in advance of launch of marketing efforts. Understand and plan for uncertainty with scientific information or research that is still in progress. In the same spirit, it is important to communicate limits to uncertain or emerging science to visitors, as they are likely to want specific recommendations.

As a final note, we feel our evaluation of the Arsenic and You website clearly indicates that this public health outreach tool is providing a benefit to the intended audiences. Additional research and tools are needed, however, to further measure the effectiveness of website platforms in creating human behavior change that will result in reduced exposure to environmental contaminants, and ultimately improve the health of communities throughout the U.S.

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Appendices

1. List of referring websites

This list shows all websites that have referred (or been the source of) traffic to the Arsenic and You site.

2. Results of Quick Feedback Survey

This survey was posted in the sidebar on the website from April 2017 through April 2018 and collected data from those who clicked through from the site and chose to complete it.

3. Results of Evaluation Survey

This survey was done in May and June of 2018 as part of the final evaluation. It was posted in the sidebar on the website (replacing the Quick Feedback Survey) for this time period, and was shared via email and social media.

4. Arsenic and You Evaluation Logic Model

Appendix I: Full List of Referring Websites

Generated from Google Analytics

Referral Path	Users	Sessions	Bounce Rate	Pages / Session
independent.co.uk/news/science/arsenic-rice-cancer-diabetes-babies-diet-poison-a7586766.html	1215	1387	51.12%	2.28
m.facebook.com/	952	983	68.26%	1.75
quebecscience.qc.ca/Sante/L-arsenic-dans-le-riz-inquiete-les-chercheurs	240	297	53.54%	2.1
wellowner.org/water-quality/arsenic/	225	253	59.29%	2.06
www-independent-co-uk.cdn.ampproject.org/v/www-independent.co.uk/news/science/arsenic-rice-cancer-diabetes-babies-diet-poison-a7586766.html	129	157	54.78%	2.08
facebook.com/	89	127	70.08%	1.61
mass.gov/service-details/arsenic-in-private-well-water-faqs	54	66	57.58%	2.02
quebecscience.qc.ca/L-arsenic-dans-le-riz-inquiete-les-chercheurs	50	50	40.00%	2.28
antena3.com/recetas-cocinatis/comer/cinco-comidas-que-deberias-limitar-contenido-arsenico_201802195a8a8fe80cf21ea6a391171f.html	43	45	86.67%	1.18
unionleader.com/article/20170501/NEWS12/170509981	42	58	48.28%	2.41
l.facebook.com/l.php	38	39	76.92%	1.59
wellowner.org/water-quality/water-testing/	34	34	52.94%	2
unionleader.com/article/20170501/NEWS12/170509981/-1/mobile	32	41	34.15%	2.66
newhampshire.com/article/20170501/NEWS12/170509981&source=RSS	28	29	20.69%	3.45
surveygizmo.com/s3/3255113/Follow-Up-User-Testing-Arsenic-Website	25	29	31.03%	4.21
unionleader.com/article/20170501/NEWS12/170509981/1009/NEWS12	23	24	33.33%	3.21
barrington.nh.gov/Pages/BarringtonNH_Land/index	22	26	73.08%	1.42
t.co/zY6R0cNu96	22	22	86.36%	1.32
l.facebook.com/	20	24	83.33%	1.29
smartnews.com/	20	20	65.00%	1.65
duckduckgo.com/	18	20	85.00%	1.25
t.co/vMs5DsBdpS	18	18	83.33%	1.17
advancepumpandfilter.com/nh_pump_filter_arsenic_removal.php	15	15	73.33%	1.93
t.co/diQq3Zg04P	10	17	82.35%	2.12
amp.antena3.com/recetas-cocinatis/comer/cinco-comidas-que-deberias-limitar-contenido-arsenico_201802195a8a8fe80cf21ea6a391171f.html	8	8	75.00%	1.5
outlook.live.com/	8	12	66.67%	2
radonh2o.com/arsenic-and-you/	8	10	70.00%	1.7
forumhome.org/new-resource-for-families-arsenic-and-you-p27311-1.htm	7	7	28.57%	2.43
mailchi.mp/	7	9	88.89%	1.22
edit.pivotcms.com/toxicmetals2010/scripts/doc.pl	6	18	11.11%	3.28
m.advancepumpandfilter.com/	6	7	100.00%	1
owa.pvhmc.org/owa/redirect.aspx	6	7	57.14%	2
unionleader.com/article/20170501/NEWS12/170509981/-1/news	6	6	16.67%	2.33
coopnews.coop/top-5-ways-to-protect-your-family-from-toxins/	5	6	50.00%	1.67
edit.niehs.nih.gov:9992/Rhythm/Assembler/render	5	6	50.00%	1.5
linkedin.com/	5	5	60.00%	1.6
t.co/71v94gIsCI	5	5	80.00%	1.2
us16.campaign-archive.com/	5	19	63.16%	1.89
www-independent-co-uk.cdn.ampproject.org/	5	6	66.67%	1.83
arsenicandyou.org.seocheckupx.net/	4	4	100.00%	1
deq.wyoming.gov/wqd/know-your-well/resources/common-contaminants/	4	5	60.00%	1.4
des.nh.gov/organization/divisions/water/dwgb/capacity/arsenic.htm	4	4	50.00%	3
lm.facebook.com/	4	4	100.00%	1
t.co/AIWPjISFZ	4	9	66.67%	1.67

Referral Path	Users	Sessions	Bounce Rate	Pages / Session
amp-antena3-com.cdn.ampproject.org/v/amp.antena3.com/recetas-cocinatis/comer/cinco-comidas-que-deberias-limitar-contenido-arsenico_201802195a8a8fe80cf21ea6a391171f.html	3	3	66.67%	1.33
cchic.moodle.decclic.qc.ca/mod/url/view.php	3	5	80.00%	1.2
diabetesandenvironment.org/home/contam/arsenic	3	3	33.33%	2.33
plaistow.com/health-department	3	4	75.00%	1.25
rcapsolutions.org/private-wells/t.co/OhoDb4XNdS	3	3	33.33%	1.67
deq.wyoming.gov/wqd/know-your-well/resources/helpful-links/	2	2	100.00%	1
deq.wyoming.gov/wqd/know-your-well/resources/understanding-your-results/	2	2	100.00%	1
dhhs.nh.gov/dphs/lab/targetedarsenicanduraniumstudy.htm	2	2	50.00%	1.5
europafm.com/noticias/salud-estilo-vida/comidas-cuyo-consumo-conviene-limitar-contenido-arsenico_201802195a8b13cb0cf21ea6a392755c.html	2	2	100.00%	1
groups.google.com/forum/jatarbelllibrary.org/	2	3	66.67%	1.33
jatarbelllibrary.org/index-new.html	2	2	100.00%	1
jatarbelllibrary.org/tabs/links-tab.html	2	2	50.00%	2
localhost:8078/Home/Index	2	4	75.00%	3.5
mail.aol.com/webmail-std/en-us/suite	2	5	80.00%	1.2
mail2.sanfordhealth.org/owa/redir.aspx	2	2	0.00%	2
mailchi.mp/privatewellclass/dv7wciu6ub-1740149	2	4	75.00%	1.5
mobile.nytimes.com/2017/12/07/well/eat/should-you-be-worried-about-the-arsenic-in-your-baby-food.html	2	3	100.00%	1
msn.com/en-us/health/nutrition/what-you-need-to-know-about-arsenic-in-rice-and-4-other-foods/ar-BBARZiS	2	2	100.00%	1
njarsenic.superfund.ciesin.columbia.edu/faq-page	2	2	100.00%	1
nytimes.com/2017/12/07/well/eat/should-you-be-worried-about-the-arsenic-in-your-baby-food.html	2	2	50.00%	1.5
r.duckduckgo.com/	2	2	100.00%	1
t.co/G7fnBjPHs	2	2	100.00%	1
t.co/kujHFsOqpZ	2	2	0.00%	3.5
t.co/m8ypNlBjAm	2	2	100.00%	1
uk.news.yahoo.com/	2	2	100.00%	1
us5.campaign-archive2.com/	2	2	100.00%	1
yahoo.com/	2	2	50.00%	2
2peasrefugees.boards.net/thread/77628/arsenic-urine-toxicology-screen	1	1	100.00%	1
ahrefs.com/site-explorer/backlinks/v5/external-per-domain/subdomains/recent/all/all/8/ahrefs_rank_desc	1	1	100.00%	1
allaboutarsenic.org/docs/links/	1	2	50.00%	2.5
almanac.com/blog/home-health/natural/toxins-your-lunch-breakfast-dinner	1	3	33.33%	2.67
arsenicandyou.org/	1	1	0.00%	2
barringtonnh.pt7.vt-s.net/land-use-department	1	1	0.00%	2
barringtonnh.vt-s.net/Pages/BarringtonNH_Land/index	1	1	100.00%	1
buff.ly/2qlarnM	1	1	0.00%	3
business.facebook.com/	1	2	100.00%	1
ca.zapmeta.com/	1	1	100.00%	1
cdn.ampproject.org/c/www.independent.co.uk/news/science/arsenic-rice-cancer-diabetes-babies-diet-poison-a7586766.html	1	1	0.00%	3
celiac.org/	1	2	100.00%	1
cfl.dropboxstatic.com/	1	2	100.00%	1
chemycal.com/viewchanges	1	1	0.00%	3
connect.niehs.nih.gov/srp/Programs/ProgressReports.cfm	1	1	100.00%	1
connect.xfinity.com/appsuite/	1	2	0.00%	5
dartmouth.edu/	1	1	100.00%	1
email.carilionclinic.org/owa/redir.aspx	1	1	100.00%	1
email.providence.org/owa/redir.aspx	1	1	0.00%	2
extension.unh.edu/fhgec/templates/fhgec_search_edusites.cfm	1	1	100.00%	1
flipboard.com/redirect	1	1	100.00%	1

Referral Path	Users	Sessions	Bounce Rate	Pages / Session
forumhome.org/mdetail.asp	1	1	0.00%	2
getpocket.com/	1	2	50.00%	4.5
groups.google.com/forum/m/	1	1	100.00%	1
gws1.muhlenberg.edu/gw/				
webacc/62c0ecdfb195363b9cc3d5d9a174a9690c7c1/SOAP/HREF/	1	2	0.00%	2
hsclink.health.unm.edu/owa/	1	1	100.00%	1
independent.co.uk/	1	1	0.00%	4
informationvine.com/index	1	1	0.00%	2
izito.com/ws	1	1	100.00%	1
l.messenger.com/	1	1	100.00%	1
library.dartmouth.edu/	1	2	50.00%	6.5
lm.facebook.com/l.php	1	1	100.00%	1
Inkd.in/	1	1	100.00%	1
localhost:8000/	1	1	0.00%	3
localhost:8000/food/rice.html	1	1	0.00%	2
localhost:8000/sources/smoking.html	1	3	0.00%	5.67
mail.bidmc.org/owa/	1	1	0.00%	2
mail.google.com/mail/mu/mp/149/	1	1	100.00%	1
mail.ohsu.edu/owa/redir.aspx	1	1	100.00%	1
mail.shannonhealth.org/owa/redir.aspx	1	1	100.00%	1
mail.weismanchildrens.com/interface/app/email/templates/ mailMessageBody.html	1	1	0.00%	2
mail.yahoo.com/	1	1	100.00%	1
mail.yahoo.com/d/folders/1/messages/33546	1	1	100.00%	1
mail1.sanfordhealth.org/owa/redir.aspx	1	1	100.00%	1
mail2.iuhealth.org/owa/redir.aspx	1	1	100.00%	1
mailchi.mp/07bfbb1638fe/usgs-arsenic-in-wells	1	1	100.00%	1
mailchi.mp/53c9cc45f779/learn-about-arsenic-exposure	1	1	0.00%	6
mewe.com/myworld	1	3	100.00%	1
msn.com/en-gb/news/msn/expert-didnt-feed-any-rice-to-infant-children- because-of-risk-from-naturally-occurring-arsenic/ar-AAAn3ZxU	1	1	0.00%	2
my.customscoop.com/reports/viewclips/reportview.cfm	1	1	100.00%	1
mymail.compass-usa.com/owa/redir.aspx	1	1	100.00%	1
myresearchinterestajsp.blogspot.com/	1	2	50.00%	2
newhampshire.com/apps/pbcs.dll/article	1	1	0.00%	3
nhpr.org/post/magical-drinking-or-magical-thinking-truth-and-myth-about- drinking-raw-untreated-water	1	4	50.00%	1.75
outlook.chs.net/owa/redir.aspx	1	1	100.00%	1
ow.ly/toBD30eOZAV	1	1	100.00%	1
owa.hcmed.org/owa/redir.aspx	1	1	100.00%	1
plaiستow.com/health-department/pages/2017-drought-conditions-and- new-important-update	1	1	100.00%	1
r.search.aol.com/_ylt=A0geKemNf9Ra45cAMSlpCWVH	1	1	100.00%	1
r.search.aol.com/_ylt=A0LEVxbgX3da_gwAcAlpCWVH	1	1	100.00%	1
r.search.aol.com/_ylt=AwrBTzooXGJaSjMAbCdpCWVH	1	1	0.00%	2
raritanheadwaters.org/arsenic-awareness-toolkit-for-local-leaders/	1	1	0.00%	4
raritanheadwaters.org/wp-admin/post.php	1	5	60.00%	1.6
rodalesorganiclife.com/food/foods-contain-arsenic	1	1	0.00%	8
sciencedirect.com/science/article/pii/S0013935117303419	1	1	0.00%	2
search.mysearch.com/web	1	1	100.00%	1
search.xfinity.com/	1	1	100.00%	1
search.zum.com/search.zum	1	1	100.00%	1
searchguide.level3.com/search/	1	1	0.00%	3
sweetsearch.com/search	1	1	100.00%	1

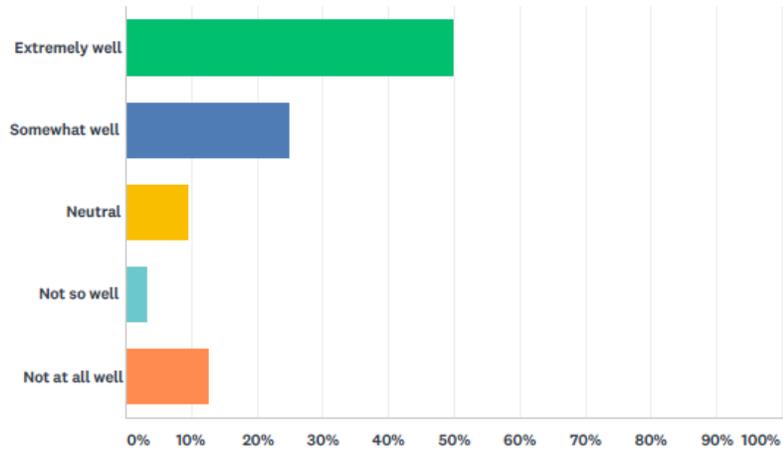
Referral Path	Users	Sessions	Bounce Rate	Pages / Session
t.co/B192Y1gPYY	1	1	0.00%	2
t.co/f9n1h6vWHz	1	7	57.14%	1.86
t.co/gXGmoQv6Tt	1	1	100.00%	1
t.co/J6x9fsUj5Q	1	1	100.00%	1
t.co/QJ7Z5Cb9vm	1	1	100.00%	1
tbsouthafrica.org/node/130	1	1	100.00%	1
touch.facebook.com/	1	1	100.00%	1
unionleader.com/apps/pbcs.dll/article	1	1	100.00%	1
unionleader.com/article/20170501/NEWS12/170509981/-1/ mobile_LOCALVOICES08&template=mobileart	1	1	0.00%	3
unionleader.com/article/20170501/NEWS12/170509981/1005/ NEWS&template=mobileart	1	1	100.00%	1
unionleader.com/article/20170501/NEWS12/170509981/1009/news12	1	1	100.00%	1
unionleader.com/article/20170501/NEWS12/170509981/1019/ NEWHAMPSHIRE1401	1	1	0.00%	7
unionleader.com/article/20170501/NEWS12/170509981&source=RSS	1	1	0.00%	2
us.pressfrom.com/lifestyle/health-fitness/-47178-what-you-need-to-know-about- arsenic-in-rice-and-4-other-foods/	1	1	100.00%	1
us16.campaign-archive1.com/	1	1	0.00%	2
us16.campaign-archive2.com/	1	1	100.00%	1
us2.campaign-archive.com/	1	1	100.00%	1
us9.campaign-archive2.com/	1	1	100.00%	1
vcdcinfo--c.na21.visual.force.com/apex/CaseWorkHistory	1	1	100.00%	1
web2.bobbasement.com/mailer/collectEmails	1	1	100.00%	1
webaccess.childrensdayton.org/owa/redirect.aspx	1	1	0.00%	3
webmail.pa.net/imp/message.php	1	1	0.00%	6
webmail.utmb.edu/owa/redirect.aspx	1	1	0.00%	2
wm.pvhmc.org/owa/redirect.aspx	1	1	100.00%	1

Appendix 2: Results of Quick Feedback Survey

Generated from Survey Monkey

Q1 Overall, how well did this website answer your questions about arsenic?

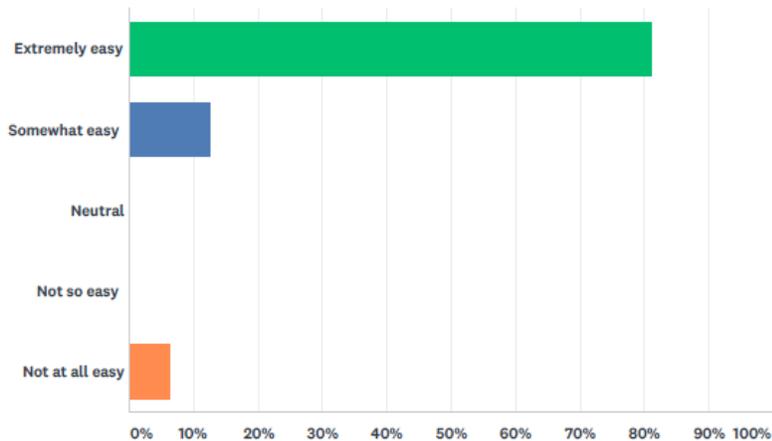
Answered: 32 Skipped: 0



ANSWER CHOICES	RESPONSES	
Extremely well	50.00%	16
Somewhat well	25.00%	8
Neutral	9.38%	3
Not so well	3.13%	1
Not at all well	12.50%	4
TOTAL		32

Q2 How easy is it to understand the information on this website?

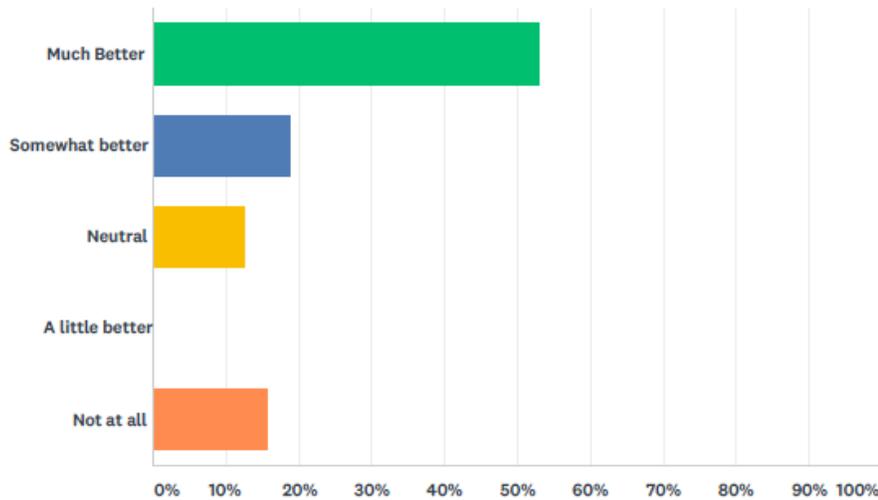
Answered: 32 Skipped: 0



ANSWER CHOICES	RESPONSES	
Extremely easy	81.25%	26
Somewhat easy	12.50%	4
Neutral	0.00%	0
Not so easy	0.00%	0
Not at all easy	6.25%	2
TOTAL		32

Q3 Do you have a better understanding of whether you should be concerned about arsenic and what you can do about it?

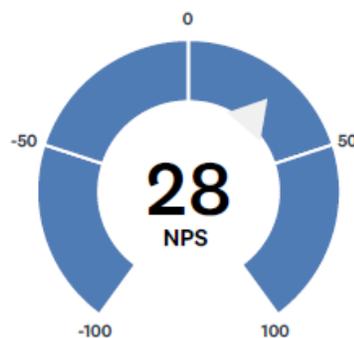
Answered: 32 Skipped: 0



ANSWER CHOICES	RESPONSES	
Much Better	53.13%	17
Somewhat better	18.75%	6
Neutral	12.50%	4
A little better	0.00%	0
Not at all	15.63%	5
TOTAL		32

Q4 How likely is it that you would recommend Arsenic and You to a friend or family member?

Answered: 32 Skipped: 0



DETRACTORS (0-6)	PASSIVES (7-8)	PROMOTERS (9-10)	NET PROMOTER® SCORE
19% 6	34% 11	47% 15	28

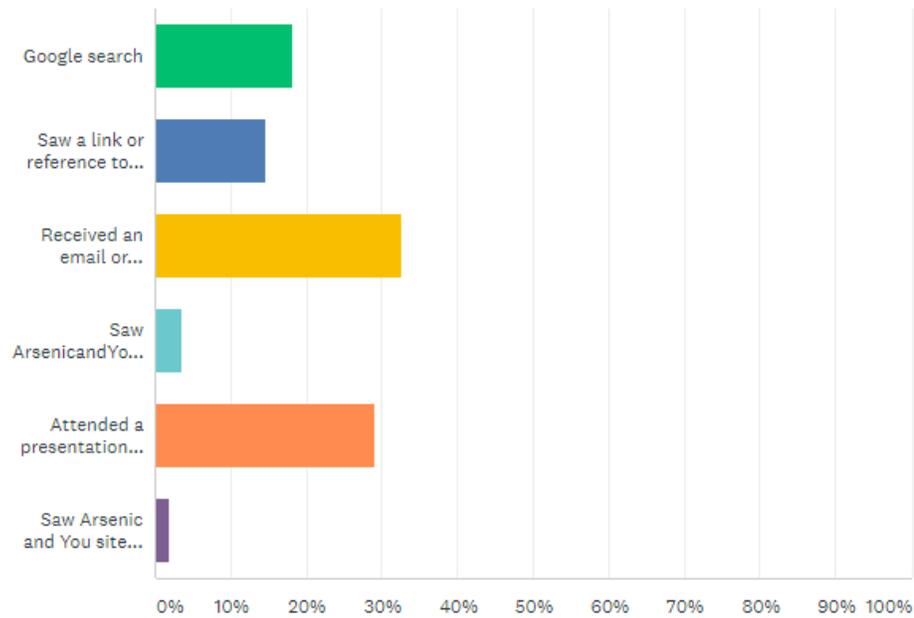
Q5: In what state or U.S. territory do you live? 29 responses from 13 states

Appendix 3: Results of Evaluation Survey

Generated from Survey Monkey

How did you hear about Dartmouth's Arsenic and You site?

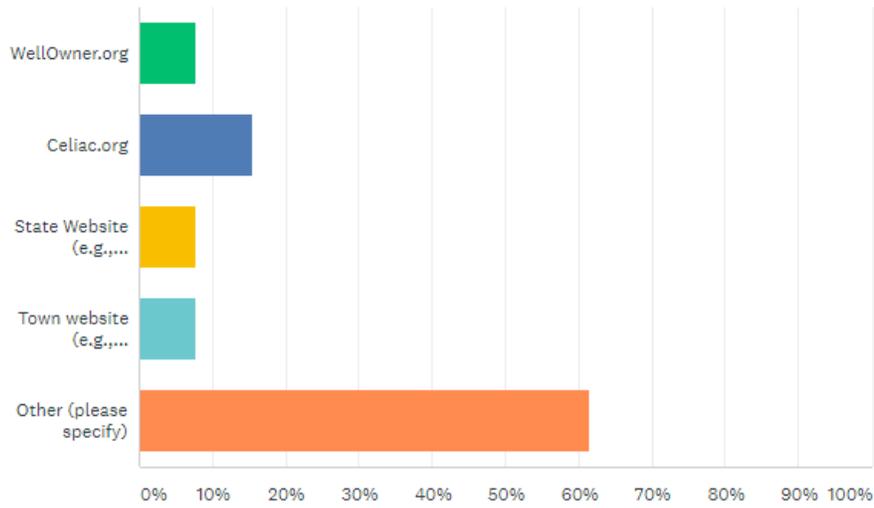
Answered: 55 Skipped: 0



ANSWER CHOICES	RESPONSES
Google search	18.18% 10
Saw a link or reference to ArsenicandYou.org from another website	14.55% 8
Received an email or communication from ArsenicandYou.org or Dartmouth Superfund Research Program	32.73% 18
Saw ArsenicandYou.org or Dartmouth Superfund Research Program on Social Media (such as Facebook or Twitter)	3.64% 2
Attended a presentation where Arsenic and You site was mentioned	29.09% 16
Saw Arsenic and You site in a news story	1.82% 1
TOTAL	55

You answered that you heard about Arsenic and You through a link or reference from another website, which website?

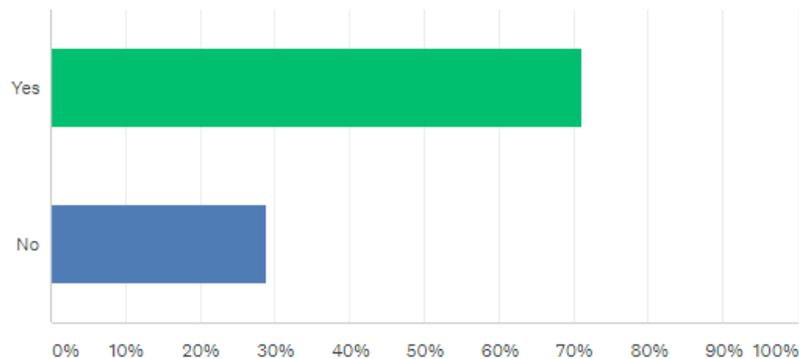
Answered: 13 Skipped: 42



ANSWER CHOICES	RESPONSES
WellOwner.org	7.69% 1
Celiac.org	15.38% 2
State Website (e.g., deq.wyoming.gov, mass.gov)	7.69% 1
Town website (e.g., barrington.nh.gov)	7.69% 1
Other (please specify) Responses	61.54% 8

Did you learn anything new about the risks of arsenic exposure from ArsenicandYou.org?

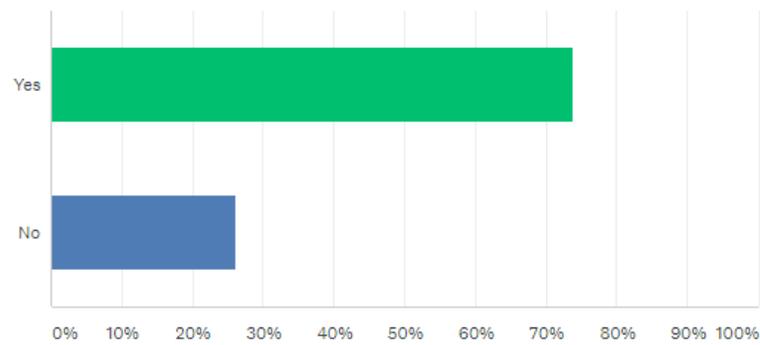
Answered: 45 Skipped: 10



ANSWER CHOICES	RESPONSES
Yes	71.11% 32
No	28.89% 13
TOTAL	45

Did you learn anything new about arsenic in food and potential steps to reduce your exposure?

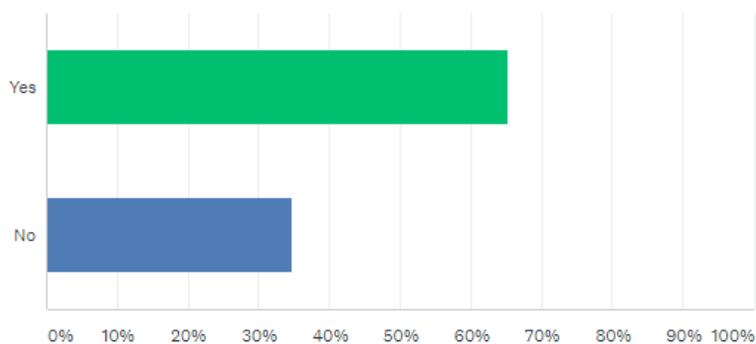
Answered: 46 Skipped: 10



ANSWER CHOICES	RESPONSES
Yes	73.91% 34
No	26.09% 12
TOTAL	46

Did you learn anything new about arsenic in water and potential steps to reduce your exposure?

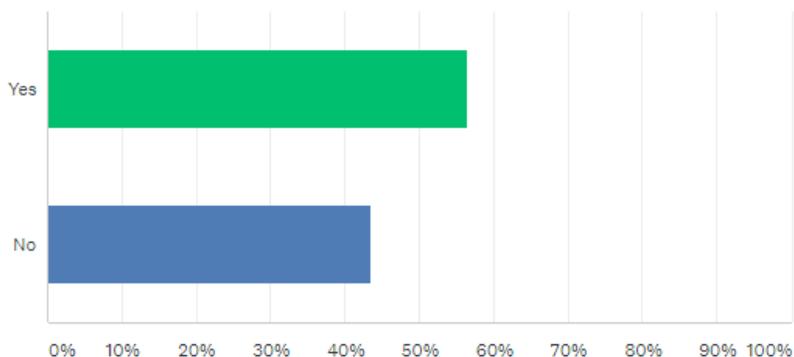
Answered: 46 Skipped: 10



ANSWER CHOICES	RESPONSES
Yes	65.22% 30
No	34.78% 16
TOTAL	46

Did you learn anything new about other potential sources of arsenic and potential steps to reduce your exposure?

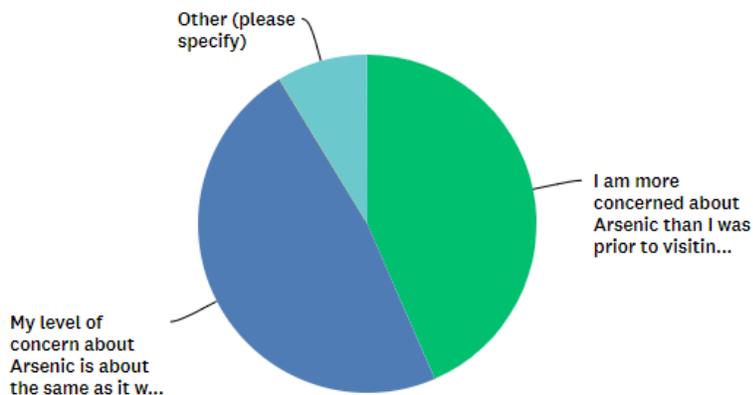
Answered: 46 Skipped: 10



ANSWER CHOICES	RESPONSES
Yes	56.52% 26
No	43.48% 20
TOTAL	46

What best describes your feelings about Arsenic after visiting the website?

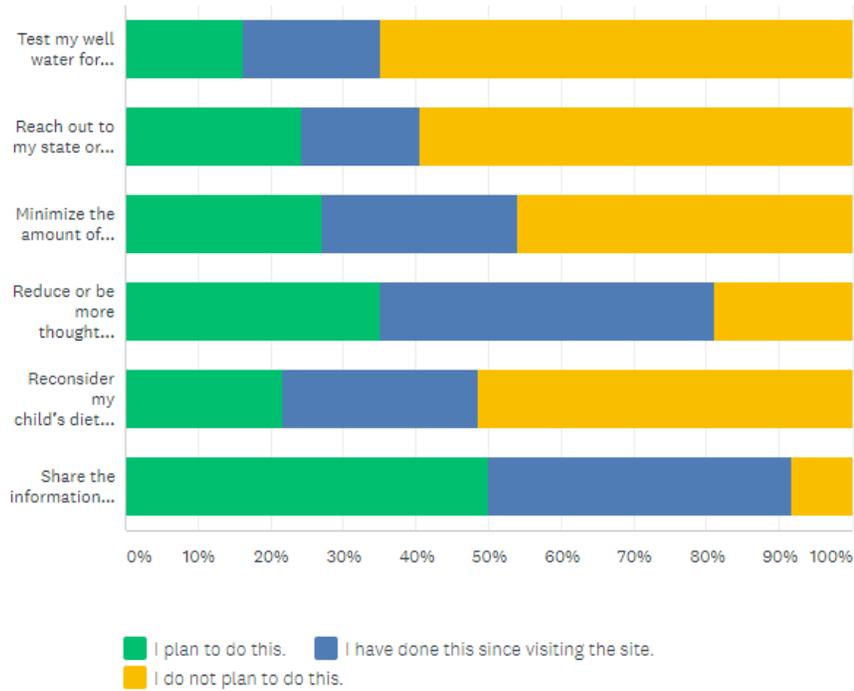
Answered: 46 Skipped: 10



ANSWER CHOICES	RESPONSES
I am more concerned about Arsenic than I was prior to visiting the website.	43.48% 20
My level of concern about Arsenic is about the same as it was prior to visiting the website.	47.83% 22
I am less concerned about Arsenic than I was prior to visiting the website.	0.00% 0
Other (please specify)	Responses 8.70% 4
TOTAL	46

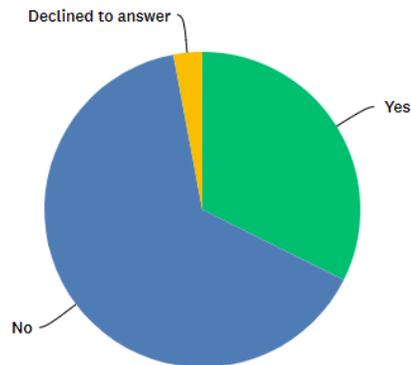
As a result of what you learned on the Arsenic and You website, do you plan to make changes, or have you made changes?

Answered: 37 Skipped: 19



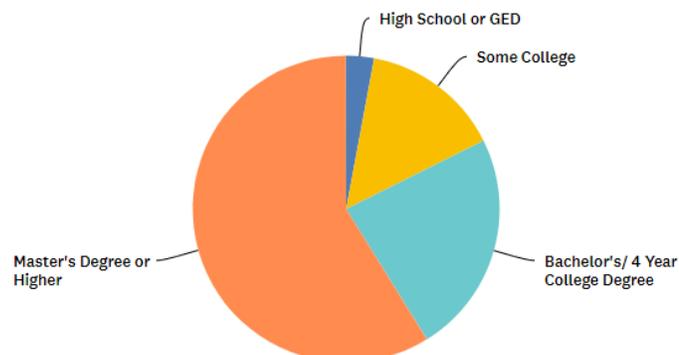
Do you have children at home?

Answered: 34 Skipped: 22



What is the highest level of education you have reached?

Answered: 34 Skipped: 22



Appendix 4: Arsenic and You Evaluation Logic Model

