

Data Dissemination Evaluation

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Overview

Purpose of the Evaluation

The purpose of this evaluation is to identify who is using the Utah Asthma Program (UAP) data reports, if the reports are being disseminated in an effective manner, and how the data are being utilized. This evaluation will identify whether reports are reaching the intended target audience. The findings will be used to structure new surveillance dissemination plans.

Background on Data Dissemination

The Utah Asthma Program website has been primarily disseminating materials using four different mediums: regular mail, distribution by Asthma Task Force members, email and website posting. Use of the regular mail system has decreased over the years due to cost. Task force members continue to distribute materials, but this is done by only a small group. Each new report is shared with all task force members on the UAP listserv and emailed upon request. The UAP website is now the primary means of disseminating materials. To date, no usability or data download evaluations have been completed. On occasion, outdated materials have been deleted and new materials have been added to the website.

In data dissemination, the key is not to use one strategy, but many. As stated by Brenda Dervin, a professor in communication, “There is no one right way to disseminate information, and there is no one right message strategy.”¹ Employing several dissemination strategies gives target audiences the freedom to use a medium that serves them best. With burgeoning methods for dissemination, many options exist, such as social media, email, websites, listservs, print, and live media.

The use of technologically-based information methods continues to grow, with more than 74% of adults now utilizing the Internet and many of those seeking chronic disease information.² Email and search engines remain the top Internet uses for adults, but use of social media and video-sharing are growing quickly. The Pew Research Center reports:

- 65% of adults use social networking sites such as Facebook or LinkedIn and
- 71% of adults use video-sharing sites such as YouTube or Vimeo³
- About 34% of Internet users have read commentary on health issues in an online news group, website, or blog⁴
- 25% of Internet users have watched an online video about health or medical issues⁴
- 15% of adults using social networking sites have gotten health information on these sites⁴

Another report by the Pew Research Center, this one focused specifically on chronic disease, found that persons living with a chronic disease are slightly more likely than other Internet users to access health information online.² This report also identified that people living with a chronic disease often participate in blogging and online health discussions, including a listserv or group forum.

One of the leaders in researching the use of social media in health is BJ Fogg, head of the Persuasive Technology Lab at Stanford University. He has worked on several health campaigns

that included social media such as Facebook, Twitter, and health texting. His work includes six components in mass interpersonal persuasion, which are useful only through social networks.⁵ Although the UAP has a small following on Facebook, as use of persuasive technology grows, it will be something to consider for future dissemination directions.

The primary goal of data dissemination should be utilization.⁶ As with all things in public health, if not packaged with utilization in mind, it will not be as effective. Each person may use the data for different purposes and identifying data needs remains a critical component of utilization. Effective dissemination is not only identifying the target audience, but also exploring details such as timeliness, goals and objectives, and ways to measure success.

Methodology

Evaluation Questions

The evaluation questions were written by the evaluation group and reflect the interest of the vested stakeholders in the task force and action groups. These questions will be answered throughout the remainder of the report.

1. Who is accessing/using the data?
2. How are people using the data they are downloading?
3. What information are they downloading?
4. What methods are the most productive for disseminating data?
5. What are the gaps in the data that are presently provided?

Data Collection

Data were collected using two different methods: Internet-based analytics and Internet- and paper-based questionnaires. Much of the data in this report were collected by Google Analytics (GA) and Summary Statistics. The data from these two Internet use programs represent one year of data and were collected from September 2010 to August 2011. The reason for using both programs is that each provides some unique form of data. At times there were differences between the data in the two Internet use programs and, when this occurred, the data from Summary Statistics were used. This is due primarily to the fact that during the evaluation, the UAP website coordinator noticed that the tracking code for GA was not embedded in all of the UAP website pages.

A two-question pop-up questionnaire was developed and added to the UAP website. At first, the two-question survey was built into the website as a pop-up. But due to the fact that most computers block pop-ups, the survey was then embedded into the website. The response rates continued to be poor and an incentive was added. Even after the incentive was added, few people responded to the Internet-based questionnaire. In order to supplement the data on use of the materials, a brief, four-question survey was constructed and administered to 24 partners at the Utah Asthma Summit.

Data Analysis

Output data from GA and Summary have already been analyzed, but more professional charts and graphs were made using Microsoft Excel. These data provide mostly descriptive statistics, though some inferences will be made based on the data. The Internet- and paper-based questionnaires listed above were sorted and analyzed using Excel. Excel was used because very little data were collected and in-depth analyses were not warranted.

Results

Some of the data from the Internet tracking programs will be on a website level, while others will be on a document level. The data from the questionnaires provide more on who is visiting the website and how they are using the reports. Because of the low response rate for the Internet-based questionnaire and the small sample size of the paper-based questionnaire; inferences from the questionnaire results should be reviewed with caution.

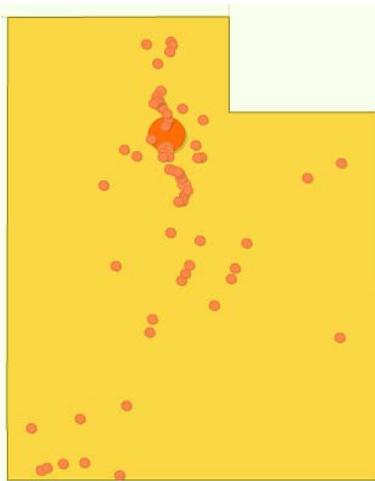
Table 1: Data Sources and Sample Size

Data Source	Page views
Sept 2010-Aug 2011	
Google Analytics	10,336
Summary	12,654

Data Source	Sample Size
Internet-based questionnaire	15
Paper-based questionnaire	24

Who is accessing/using the data?

The properties set up in the currently-used Internet analytics programs cannot give specific information as to who is downloading specific documents on the website. More research will need to be completed on the capacity of GA in order to collect this information. However, a broad scope of who is accessing the UAP website was able to be obtained. According to Google Analytics and Summary, most of the people accessing the UAP website live in Utah. Outside Utah, states with the highest usage rates were California, Ohio, Virginia, Colorado, and New York. The map below shows the density of people accessing the website within the state of Utah.



This information is quite useful in showing where most of the people accessing the website are from in Utah. The large orange circle covers the Salt Lake area and represents the highest density of website use. The other cities with high visit rates were Midvale, Provo, Layton, Orem, and West Jordan. From the map, it appears that website utilization needs to be improved in more rural areas.

The Internet service provider list in Table 2 supplied more information on who is accessing the UAP website and utilizing materials on the site. It shows the top 10 service providers, along with the number of visits, pages visited, and average time spent on the site.

Table 2: List of Internet Providers from Google Analytics

Service Provider	Visits	Pages/visit	Avg. time on site
Utah Education Network	1,031	3.13	2:15
State of Utah	368	2.65	2:04
Quest Communications	344	2.71	1:29
Comcast Cable Communications Inc.	262	2.52	1:22
Intermountain Health Care	226	2.50	0:56
Davis School District	97	3.21	1:26
University of Utah	70	2.87	0:29
Comcast Cable Communications	55	2.42	0:28
Brigham Young University	48	2.56	2:29
Broadweave Networks	45	2.62	1:10

The Utah Education Network includes: the Utah System of Higher Education, local school districts, and the state’s library system. This provider had the highest number of visits and the second highest number of average page visits. Four of the top 10 providers were education-based and include universities and school districts. It can be extrapolated that much of the website and downloads are for school-related asthma materials and for research by university students. One health care Internet provider was in the top 5 and the rest were commercially based.

Those that completed the paper-based questionnaire were members of the Utah Asthma Task Force and include representatives from health care, government, universities, and public schools. Surprisingly, slightly over half (58%) of respondents were familiar with any of the data reports or “fast stats” on the UAP website. This was much lower than expected and indicates many of the UAP’s closest partners are not fully utilizing the data reports.

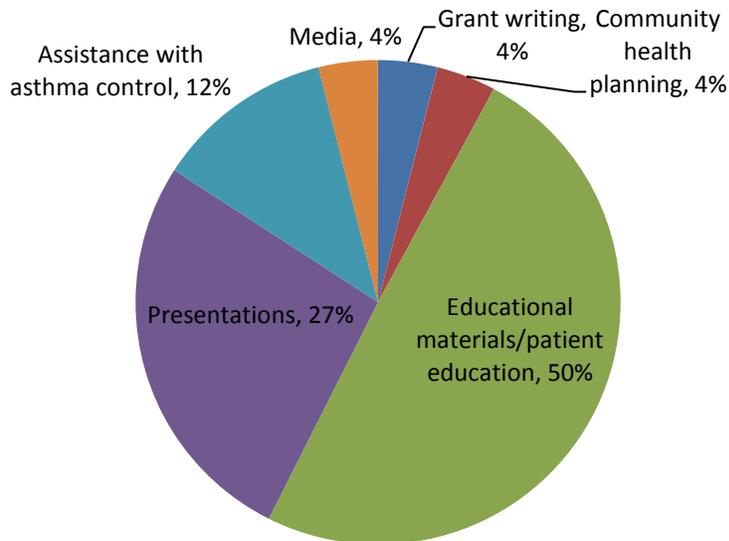
The Internet-based questionnaire sample included: person with asthma (33%), medical professional (27%), local asthma coalition (13%), other state asthma program (13%), educator (7%) and student (7%). With such a small sample, not much can be extrapolated, but the data do show that a large range of people access the UAP website. It is encouraging to see that people with asthma visit the UAP website, though they may actually represent a small proportion of UAP website users.

How are people using the data they are downloading?

Unfortunately, GA and most Internet-based analytics software were created for use in the business arena. In business, return on investment and marketing initiatives drive the use of analytics, with the end result being product purchases. In public health, the “why” question is often important because data and reports are more likely to be utilized after being downloaded when the content is relevant and useful. Making content relevant and useful is often accomplished through answering the “why” question. Therefore, the Internet- and paper-based questionnaires were used in collecting data to answer this question. Figure 1 shows that half of

the questionnaire respondents used the data reports for educational materials or patient education.

Figure 1: How the UAP Data Reports Were Used

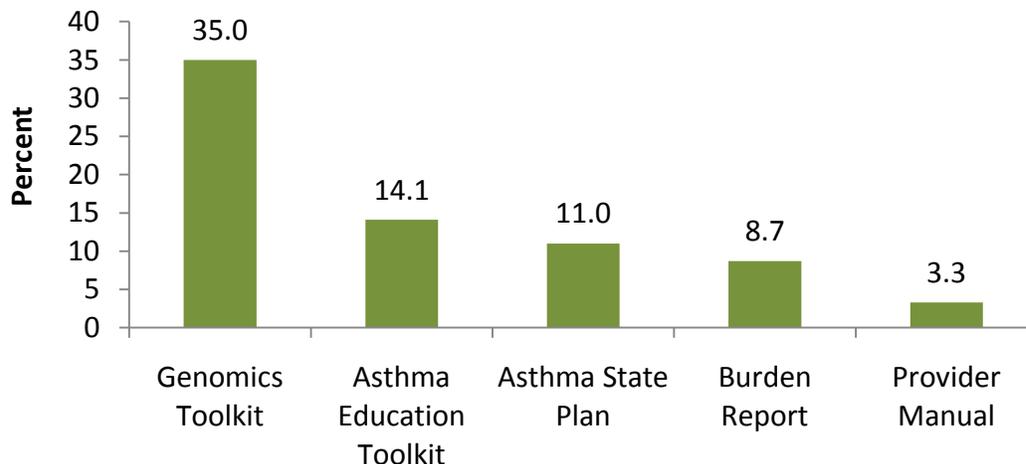


Many other respondents reported using the data reports for presentations and as educational materials.

What information is being downloaded?

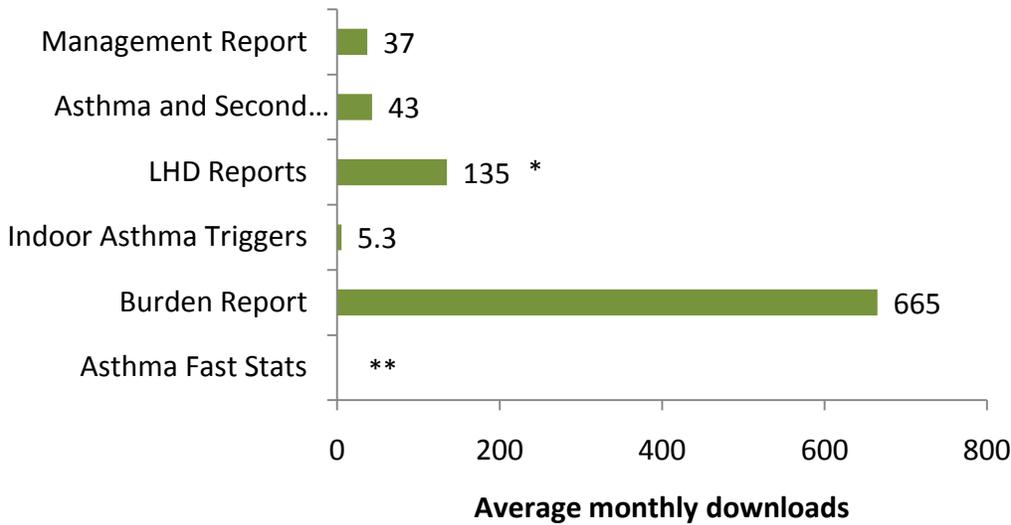
The answer to this question will follow a broad view and end with more specifics on the data reports being downloaded. Summary provides an overview of the number of times a document was downloaded and a percentage as compared with possible downloads. Figure 2 shows the five documents downloaded most frequently.

Figure 2: Percentage of UAP Website Downloads



These five documents have been the highest downloads for several months. It is interesting to note that the genomics toolkit downloads and that there is a data report among the top five. Data report downloads represent a much smaller proportion of downloads when compared with all of the possible downloadable documents, but are still downloaded a fair number of times each month. Figure 4 shows the average number of downloads for the five main data reports.

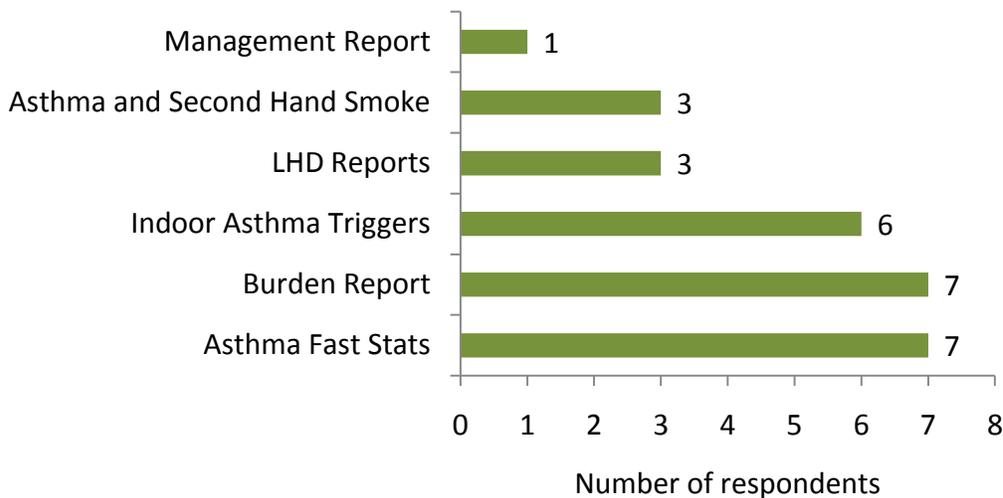
Figure 4: Average Monthly Downloads for Data Reports



* The LHD reports have been on the website for only three months, so this average may decrease as time goes on.
 **The Asthma Fast Stats page is not a downloadable document and data could not be collected on visits to this page.

The UAP Burden Report had significantly higher average monthly downloads than any other data document. Use of the data documents was asked in the paper-based questionnaire. The results showed that all data reports had been used by at least one person. Further information is listed in Figure 3 below.

Figure 3: Paper-based Survey Results on Data Report Use



When comparing the average monthly downloads with the paper-based results, there appears to be a similar use rate, with the exception of the Indoor Asthma Triggers report.

Because not all visits to the UAP website include downloading a document, another telling measure is the user entry and exit points. Ideally, it is best to have similar entry and exit percentages for website pages; this means that the user went to the page and found what he/she was looking for. According to Summary, the top three entry points were the main page (40%), air quality pages (15%) and telehealth (14%). The top three exit points were the Recess Guidance (10%), telehealth (8%) and the main page/state plan (5%). The above statement holds true except for the main page as it is not desirable to have high entrance and exit rates on the main page. This could mean that the person went to the wrong site, or that they didn't find what they were looking for, neither of which is a desirable outcome.

What methods are the most productive for disseminating data?

Worthy health messages often get lost because of misunderstood audiences, poor packaging, wrong media, bad timing, and other factors.⁷ For this reason, it is critical to have a data dissemination plan for each report that should be tailored to meet the needs of the intended audience. From the survey of the task force members at the Asthma Summit, it is clear that most would prefer to receive notification of a new data report through email (83%) and generally through the listserv. The other 17% said that posting it on the UAP website was sufficient. None of the respondents selected to have a hard copy sent or to be notified using social media such as Facebook or Twitter. This is somewhat surprising given the statistics listed earlier in this document, but could be due to a lack social media usage by task force members or not enough emphasis by UAP on social media options.

As discussed earlier, using multiple methods of data dissemination is most effective and no method should be deleted from the list of possibilities. When data cannot be specifically collected as to the desired dissemination methods for a target audience, generally, the best method is to use as many mediums as possible. Another important element in making dissemination productive is having stakeholders actively engaged in sharing the reports or access to them. Stakeholders need to take a more active role in sharing materials with the public and with their partners.

What are the gaps in the data that are presently provided?

It was difficult to find data and collect results for this question. When comparing the number of data reports on the UAP website with other state websites, the UAP had a larger variety. This does not necessarily mean that there still aren't gaps in the data, but it is positive to note the diversity in the UAP data reports.

In the paper-based questionnaire, participants were asked which data would be most useful to them and their own work. The responses were analyzed and compared with the currently available data reports.

Table 3: Paper-based Useful Asthma Topics

Topics	Response Count
Environmental factors that affect asthma	20
Asthma prevalence data	18
Costs of care	13
Asthma control	11
Meeting Healthy People 2020 goals in Utah	11
Asthma medication use	10
County-level data tables	10
Co-morbid conditions that affect asthma	9
Work-related asthma	6

Environmental factors appear to be of interest to task force members and adding more data to the environmental reports would be beneficial. Nearly all of the other desired topics were covered in one of the data reports on the UAP website. One final note on gaps: it is important to make dissemination accessible, and paying attention to language and literacy needs of the audience is critical in providing useful data.⁸ Data reports can be very technical and keeping them at a literacy level for the general public can be difficult, but important for use.

Recommendations

- The best time for planning dissemination is during the beginning stages.⁹ Use that time to answer the questions related to target audience, content, methods and partners for dissemination, and ways to measure success. Create a dissemination plan for each report.
- It is critical to think about formal and informal networks for disseminating data and to then make a chart of end users and how to reach them.¹⁰ Also, it is important to identify dissemination partners who will take the data to audiences that cannot be currently reached. As a group, brainstorming on appropriate dissemination methods and partners who will engage in the dissemination process would be beneficial.
- Continue to monitor GA and Summary data for reports. Work on improving the accuracy of the GA data by embedding proper code on all pages. Also, continue to research new methods of collecting more specific website data using GA.
- Perform a website usability evaluation.
- Tailor more data reports and data available on the website to universities and public school personnel.
- Discuss enhancing use of social media.
- Continue searching for analytics software or alternative methods to answer the “why” question.

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