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Sep 28th, 4:15 PM - 4:35 PM

# Information Literacy of Online Health Consumers in Minnesota

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## Recommended Citation

Hunt, Shanda; Theis-Mahon, Nicole; and Chew, Katherine, "Information Literacy of Online Health Consumers in Minnesota" (2018). *Georgia International Conference on Information Literacy*. 89.  
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# Information Literacy of ● Online Health Consumers in Minnesota

Georgia International Conference on Information Literacy  
September 27 - 29, 2018  
Savannah, GA

Slides: [z.umn.edu/GICOIL-onlinehealth](http://z.umn.edu/GICOIL-onlinehealth)

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Health Sciences Libraries

Minneapolis, MN

# ● OVERVIEW

○ Background

Setting

Methods

Results

Recommendations



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# BACKGROUND

Minnesota Electronic Health Library



# MeHL

Minnesota Electronic Health Library

## Data Collection

Studies of civilians, pharmacists, physicians

## More Information

<https://hsl.lib.umn.edu/about/mehl>





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## SETTING

Minnesota State Fair

# MINNESOTA STATE FAIR

Two  
Million in  
Attendance





# Driven2Discover



Image: <http://d2d.umn.edu/>



alamy stock photo



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# METHODS

Mixed Methods



## ● THE RESEARCH QUESTIONS

○ What online sources do Minnesotans use to answer their health questions?

How do Minnesotans use the online health information they find?

How confident are Minnesotans' in their ability to evaluate the quality of online health information?

What do Minnesotans feel is missing from online sources of health information that are currently available?



## ● THE SURVEY

- Sample of surveys we used:
  - Patient Activation Measure - 13
  - eHealth Literacy Scale
  - Indicators of Accuracy of Consumer Health Information on the Internet

We created additional questions on navigation of websites, demographics, and the “perfect” online health source.



## ● LIMITATIONS

### ○ Convenience sample

Response bias

Limitations are a part of every study, and are often balanced out by other considerations.

- Anonymity
- Benign topics
- Natural behavior
- Data collection on attitudes



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## RESULTS

Online health consumer beliefs and behavior



# ● 255 PARTICIPANTS

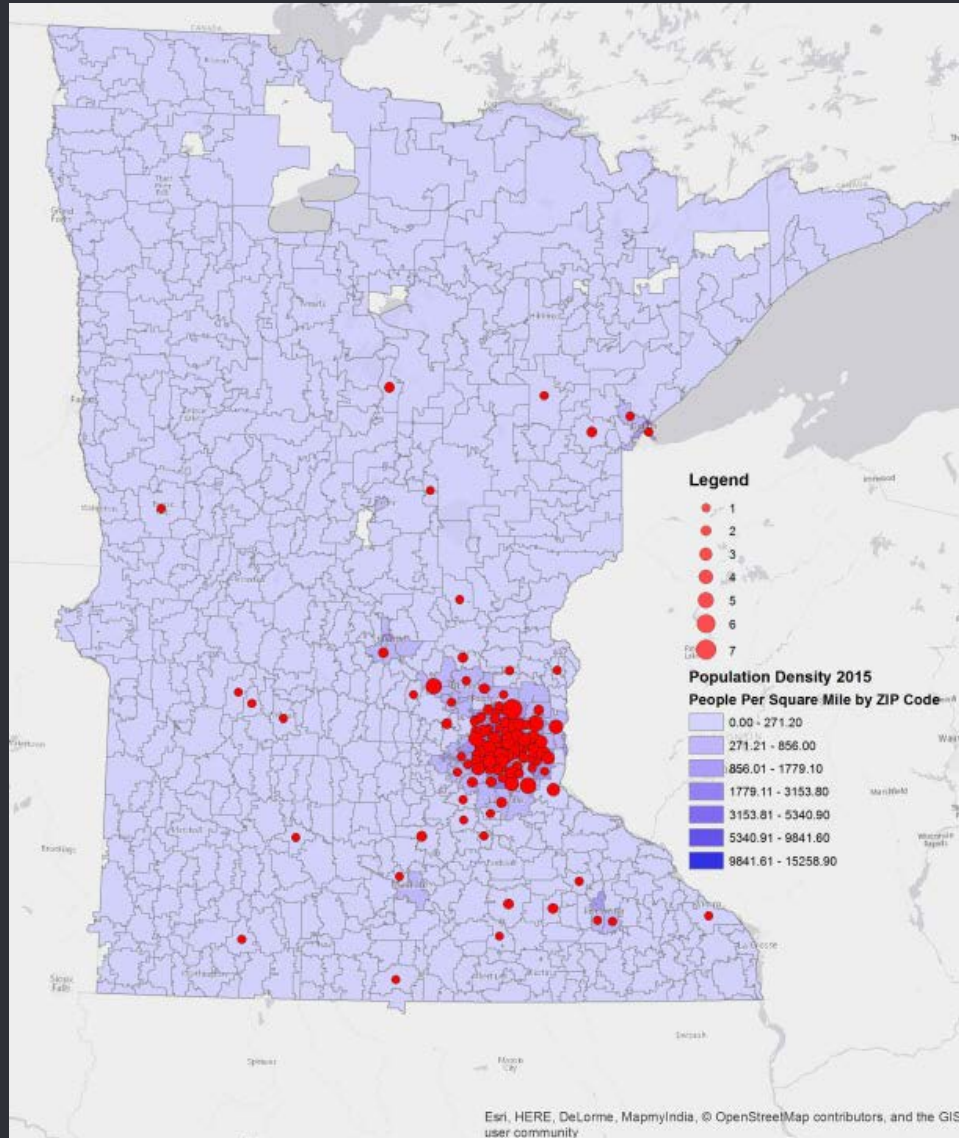
**74%  
Female**

**72%  
Highly  
Educated**

**19%  
Worked in  
Healthcare**



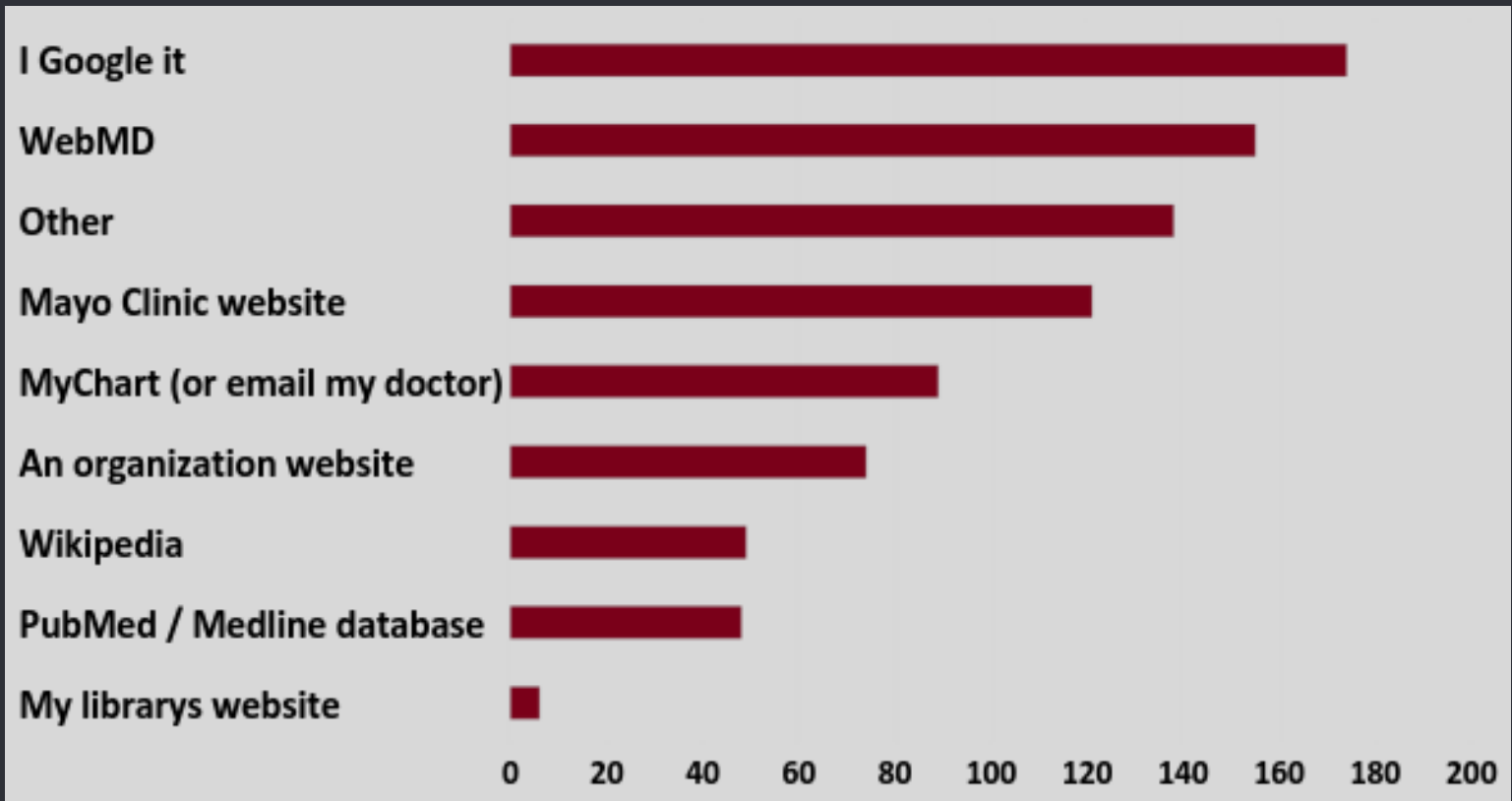
# POPULATION DENSITY OF PARTICIPANTS







# ● NAVIGATIONAL BEHAVIORS





## ● USE OF INFORMATION

●  
78% discussed the information with a health professional

●  
76% shared the information with a friend or family member

●  
74% used the information to decide when to see a health professional



- **SELF PERCEPTIONS**

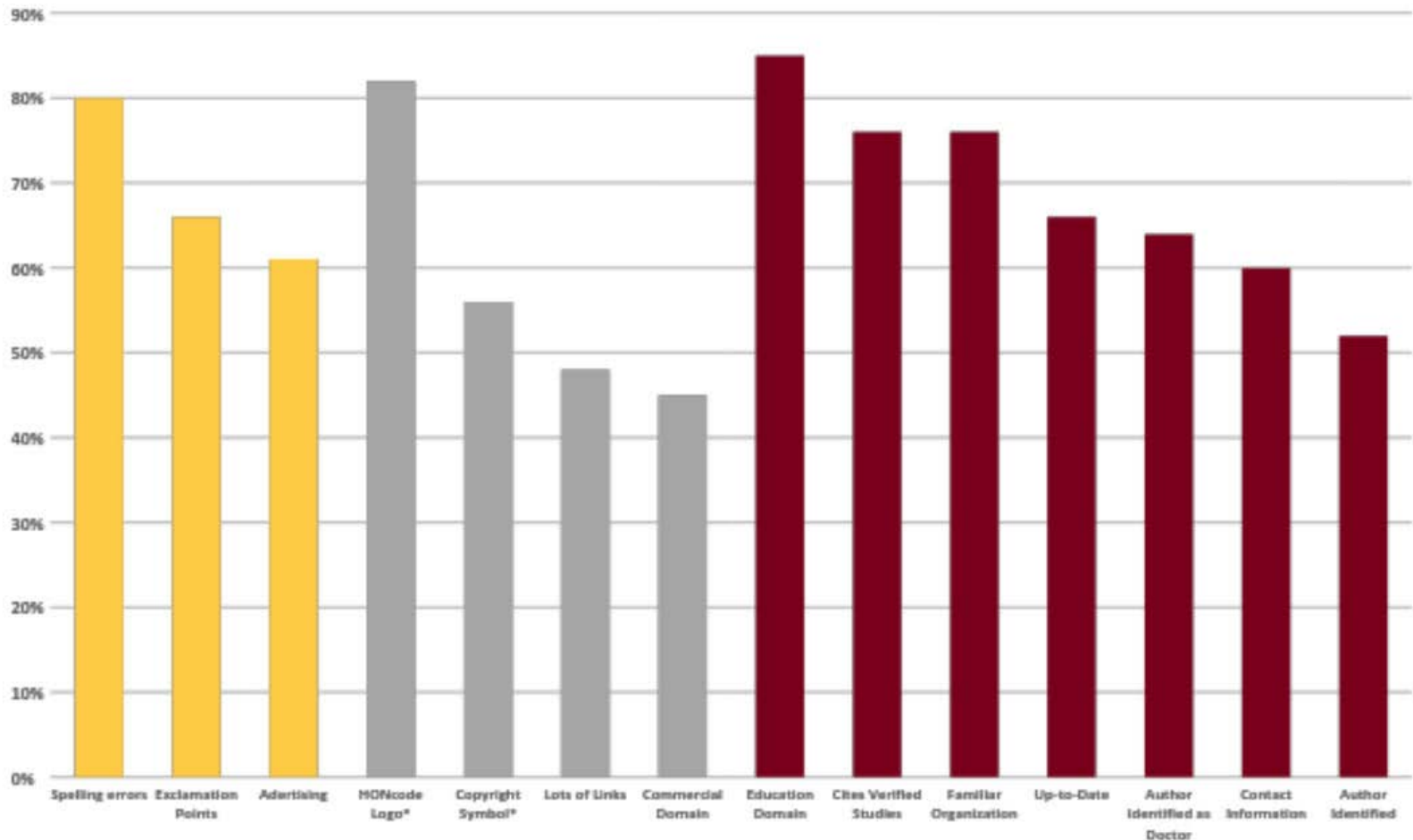
**Increased their perceived knowledge of:**

Nature and cause of a health condition	<b>88%</b>
Medical treatment options	<b>88%</b>
Preventing further issues with a health condition	<b>75%</b>

**Increased their perceived confidence around:**

Speaking with a provider about concerns	<b>87%</b>
When to seek professional medical care	<b>83%</b>
Maintaining lifestyle changes such as diet and exercise	<b>64%</b>
Making smart decisions as a caregiver	<b>63%</b>

# PERCEIVED INDICATORS OF WEBSITE QUALITY



Low Quality



Unsure



High Quality



- **QUALITATIVE THEMES**

- Trusted versus Distrusted Sources

Characteristics of the Ideal Source



“

*Online health information should come from “...an unbiased source that provides information without trying to sell you something. Company websites are okay; government or educational sites are better.”*



“

*“Clear linkage to clinical study data or summary, or if none exists, then a standard statement saying so.”*

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# RECOMMENDATIONS

Applying results in education





# ● STRATEGIES FOR EDUCATION

## Navigate

Direct students to the most efficient route to online health information and show them how to personalize their experience.

## Assess

Give students the skills they need to accurately assess the value, trustworthiness, and relevancy of a health website.

## Partner

Look to your fellow teachers, including public and academic librarians, for opportunities for mass education.



# Teach Personalization in Navigation

The “one-stop-shop” doesn’t safely exist, so show health consumers how to personalize what is available to them.



# Tailored to language needs

## MedlinePlus

Made for the average consumer  
Providing fewer language sources  
Direct translations  
Many languages  
Audio/visual

## Health Reach

Health information in many languages  
MedlinePlus is referring to Health Reach  
Family planning & some refugee info removed

## Multicultural & Multilingual Health Information

UMN Health Sciences Libraries



# Tailored to specific characteristics

## [NIH Senior Health](#)

Retired in 2017

Referring people to

[Medline Plus](#)

[National Institute on Aging](#)

[Go4Life](#)



## [Eunice Kennedy Shriver National Institute on Child Health & Human Development](#)

Larger mission

A - Z health topics

Women's health (maternal health?)

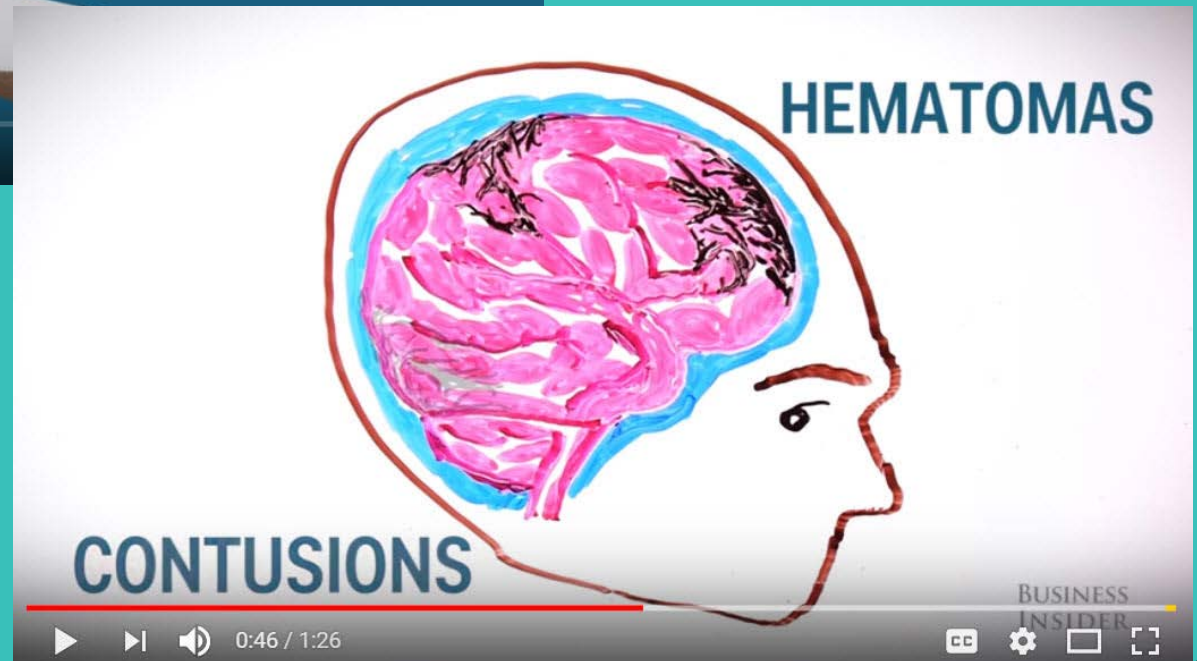
## [Office on Women's Health](#)

More info on National Institute on Aging

# Tailored to learning style



<https://www.youtube.com/watch?v=25HLKjIZA2Y>



<https://www.youtube.com/watch?v=MboxdG2EZA0>



# Teach How to Assess Quality of Health Websites

A set of criteria versus one or two indicators is the best strategy according to the evidence available.



# List of criteria

- Who is sponsoring the information?
- Who is authoring the information?
- Is there reliable contact information?
- Does the information appear biased?
- Can you verify that the information is accurate?
- Has the website been reviewed by qualified professionals?
- Is the information up to date?
- Are there sufficient privacy protections in place?
- Does the website encourage medical advice from a professional?



# Evaluation templates & resources

[Online Health Information Scorecard](#)

[Tutorial: Evaluating Internet Health Information \(16 min\)](#)

[Finding & Evaluation Online Resources](#)

[Trust It or Trash It?](#)



# Address the issue of advertisements

The screenshot shows the Mayo Clinic website interface. At the top left is the Mayo Clinic logo. A search bar contains the text "Search Mayo Clinic". To the right of the search bar are links for "Request an Appointment", "Find a Doctor", "Find a Job", and "Give Now". Further right are links for "Log in to Patient Account" and a language dropdown menu set to "English". Below the search bar is a navigation menu with categories: "PATIENT CARE & HEALTH INFO", "DEPARTMENTS & CENTERS", "RESEARCH", "EDUCATION", "FOR MEDICAL PROFESSIONALS", and "PRODUCTS & SERVICES".

The main content area displays search results for "allergies". It shows "Search results 1-10 of 3280 for allergies". The first result is titled "Allergies - Symptoms and causes - Mayo Clinic" with a URL: <https://www.mayoclinic.org/diseases-conditions/allergies/symptoms-causes/syc-20351497> - 55k. The snippet reads: "... including: Anaphylaxis. If you have severe **allergies**, you're at increased risk of this serious **allergy**-induced reaction. Foods ...".

The second result is titled "Food allergy - Symptoms and causes - Mayo Clinic" with a URL: <https://www.mayoclinic.org/diseases-conditions/food-allergy/symptoms-causes/syc-20355095> - 58k. The snippet reads: "... Other **allergies** .... Similarly, if you have other types of allergic reactions, such as hay fever or eczema, your risk of having a **food allergy** is greater. ....".

On the left side of the search results, there is a "Narrow your search" sidebar with a "Topic:" section and a "View All" section. The "View All" section lists: "Patient Care & Health Information", "Drugs & Supplements", "Doctors & Medical Staff", "Departments & Centers", "Research", "Clinical Trials", "Researchers", "Medical Education", "For Medical Professionals", and "News from Mayo Clinic".

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**Advertising & Sponsorship**  
Policy | Opportunities | Ad Choices

The advertisement features a photograph of a resort with a swimming pool and lounge chairs. The text reads: "Advertisement", "Lowest rates, free wi-fi & earn free nights", and "Royal Palm South Beach Miami".

The screenshot shows the WebMD website with a navigation bar containing "HEALTH A-Z", "DRUGS & SUPPLEMENTS", "LIVING HEALTHY", "FAMILY & PREGNANCY", and "NEWS & EXPERTS". A prominent advertisement for Flonase is displayed, featuring the Flonase logo and the text: "UNLIKE MOST ALLERGY PILLS, FLONASE RELIEVES", "NASAL CONGESTION PLUS ITCHY NOSE", and "ITCHY EYES". Below the advertisement is a link for "Allergies >".

At the bottom left of the screenshot, there is a button labeled "ALLERGIES HOME" and a link for "News".

AdChoices



# Partner with Experts to Maximize Education Efforts

Widespread education is the best way to impart knowledge to online health consumers, preventing the spread of incorrect and dangerous information.

# Potential partnerships

## NNLM Public Libraries Training

**Schools + Public Libraries**

**Public + Academic Libraries**

**Schools + Academic Libraries**

**Community Outreach**





- **PUBLICATION**

- **“Online Health Information Use, Assessment, and Gaps Identified by Minnesotans”**

**Journal of Consumer Behavior on the Internet**

**Nicole Theis-Mahon, Shanda L Hunt, Nora Forbes**



# THANK YOU

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