

Who's Talking About Health? An Analysis of Tweets to Inform the Informers.

Info 290 Final Project

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10/24/2014

- 1. Survey says**
- 2. Methods**
- 3. Findings**
- 4. Conclusions**

1. Survey says

2. Methods

3. Findings

4. Conclusions

We use the internet to find out about health.

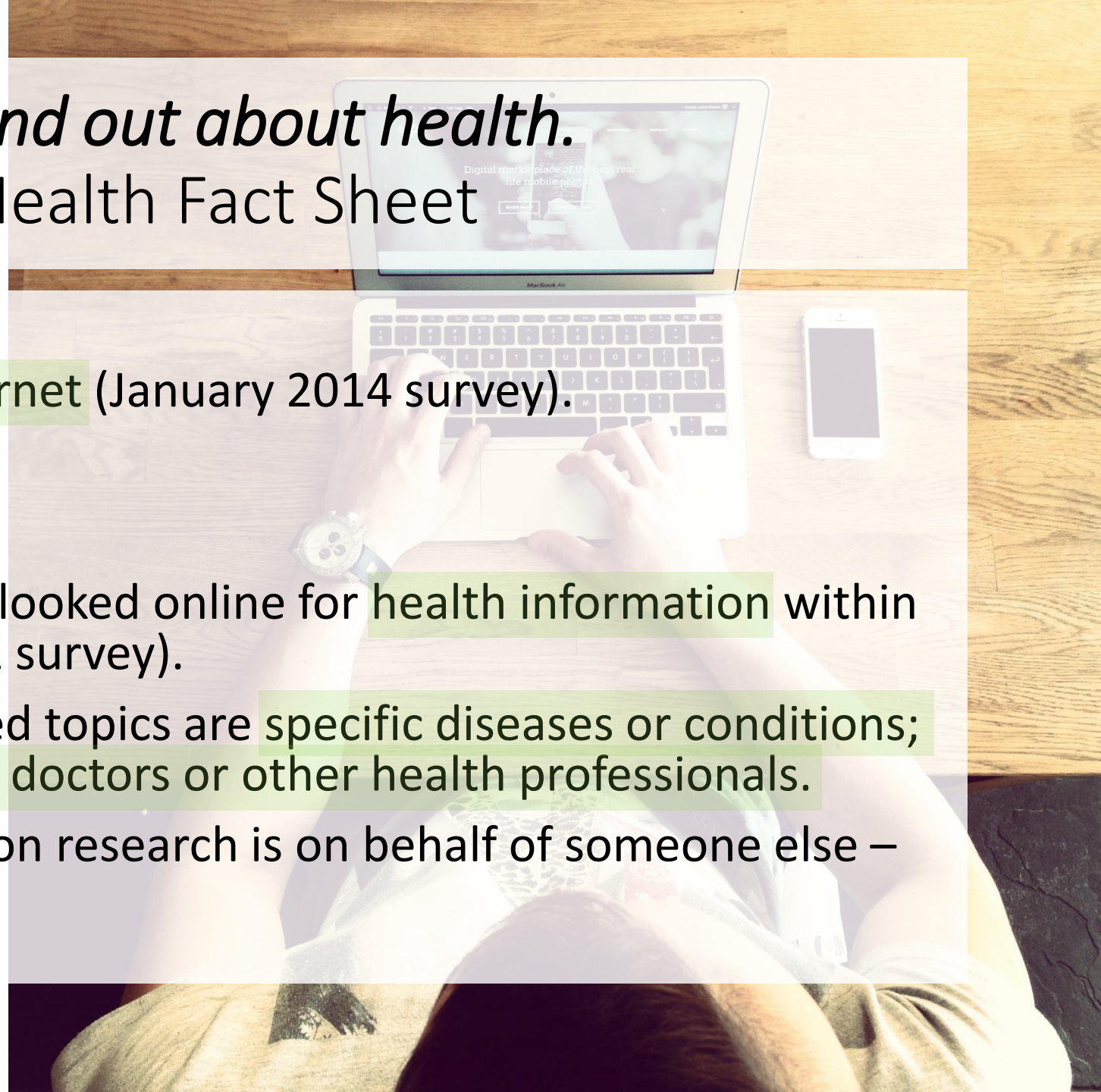
Pew Internet Project's Health Fact Sheet

Internet access:

- 87% of U.S. adults use the internet (January 2014 survey).

Online health information:

- 72% of internet users say they looked online for health information within the past year (September 2012 survey).
- The most commonly-researched topics are specific diseases or conditions; treatments or procedures; and doctors or other health professionals.
- Half of online health information research is on behalf of someone else – information access by proxy.

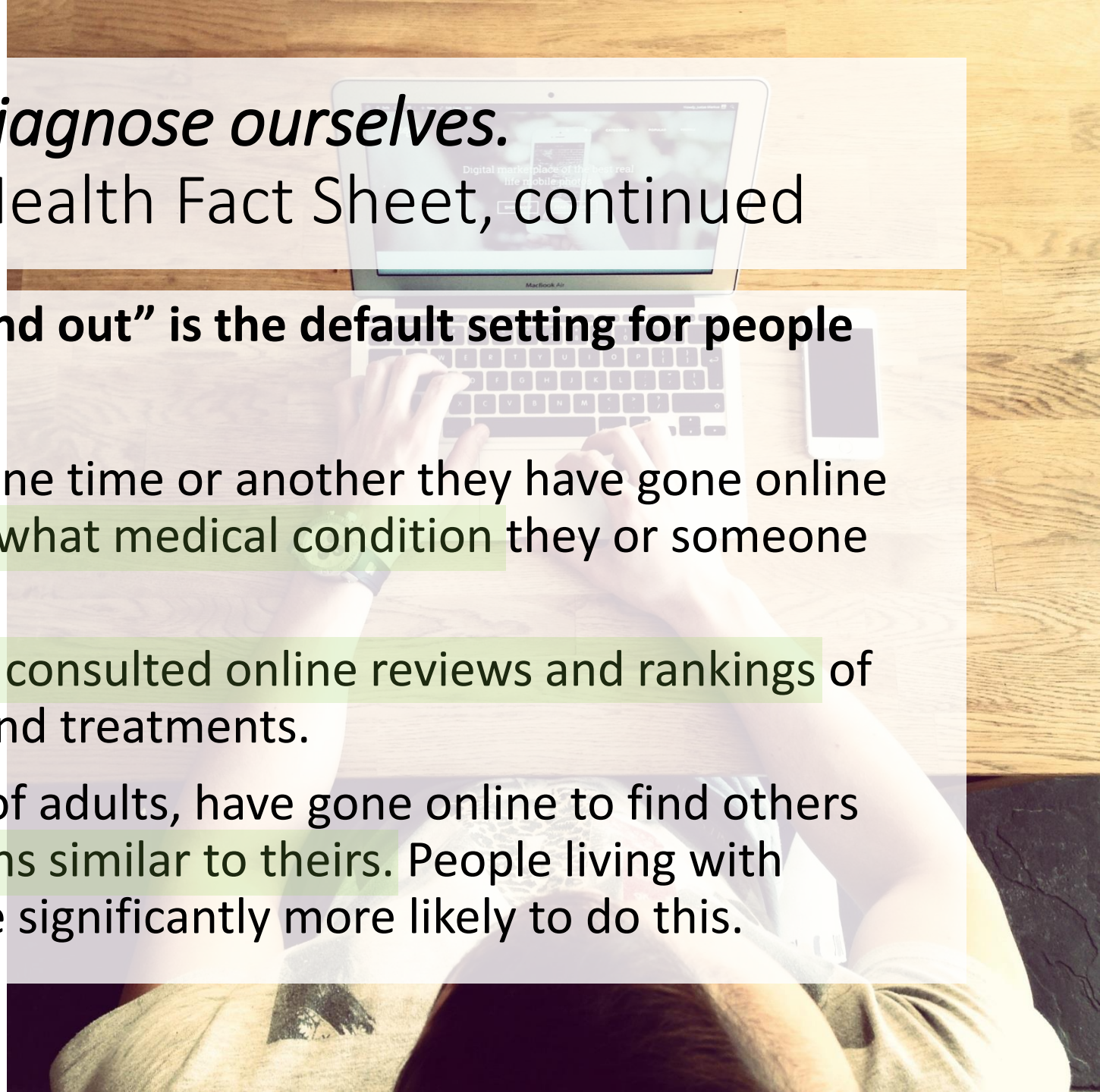


We use the internet to diagnose ourselves.

Pew Internet Project's Health Fact Sheet, continued

“I don't know, but I can try to find out” is the default setting for people with health questions

- 35% of U.S. adults say that at one time or another they have gone online specifically to try to figure out what medical condition they or someone else might have.
- One in five internet users have consulted online reviews and rankings of health care service providers and treatments.
- 18% of internet users, or 13% of adults, have gone online to find others who might have health concerns similar to theirs. People living with chronic and rare conditions are significantly more likely to do this.



We use the internet to share health information.

Pew Internet Project's Health Fact Sheet, continued

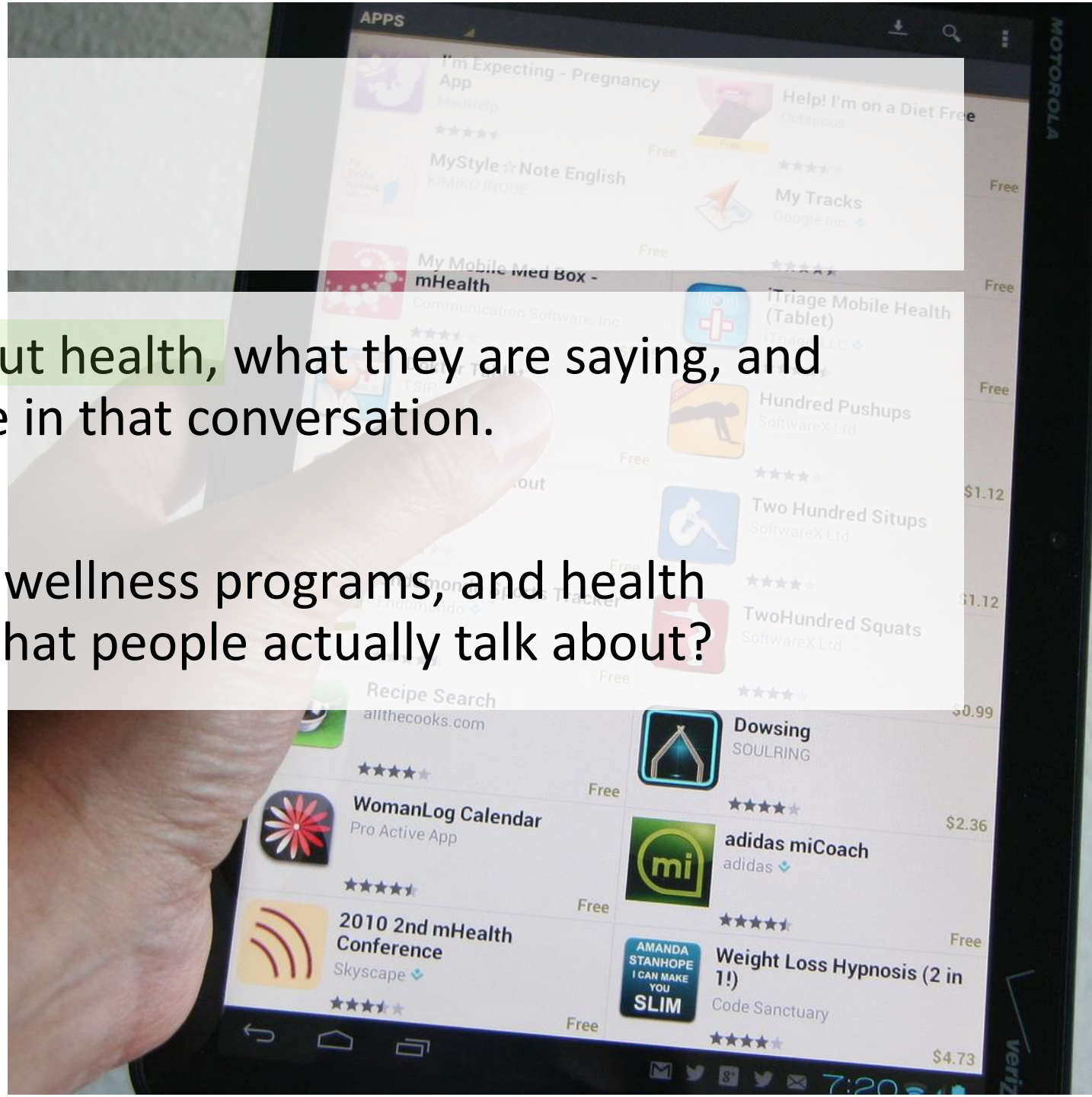
“I know, and I want to share my knowledge” is the leading edge of health care:

- 7 in 10 U.S. adults have tracked a health indicator for themselves or for someone else. Of those, 34% share their health tracking records or notes with another person or group.
- 26% of internet users have read or watched someone else's experience about health or medical issues in the last 12 months.
- 3-4% of internet users have posted their experiences with health care service providers or treatments.

What about **everything else**
that impacts health?

Purpose

- To find out who's talking about health, what they are saying, and what the knowledge gaps are in that conversation.
- Are consumer-focused apps, wellness programs, and health interventions aligning with what people actually talk about?



1. Survey says

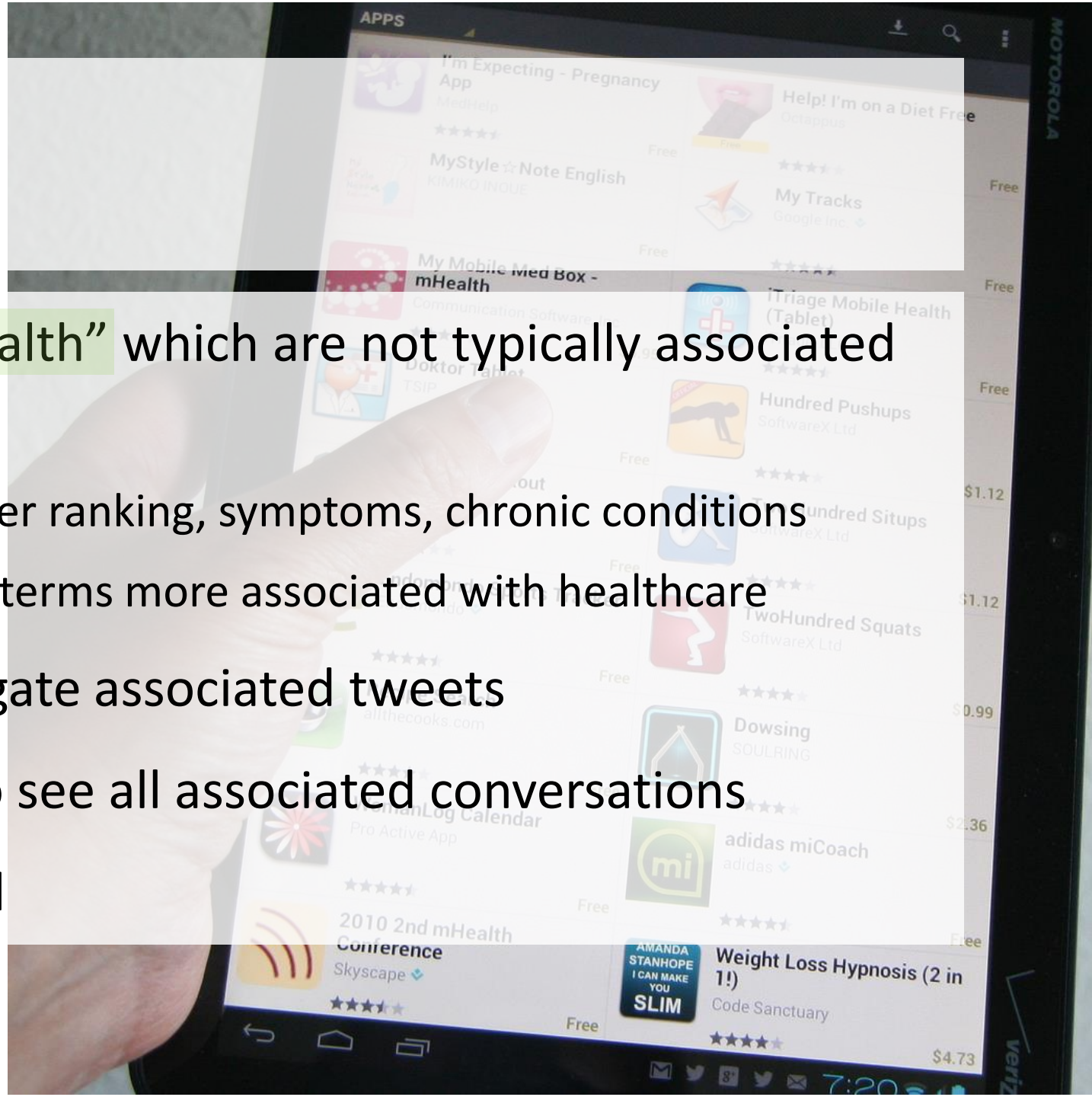
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Methods

- Define key terms around “health” which are not typically associated with “healthcare”
 - Typical terms including provider ranking, symptoms, chronic conditions
 - Include “common” terms and terms more associated with healthcare
- Search on twitter, and aggregate associated tweets
- Use “All” not “Top” tweets to see all associated conversations
- Review tweets to understand



Search Terms

Topic	Search Term
Lifestyle Determinants of Health	Food & Nutrition
	Gym & Exercise
Top Causes of Morbidity/Mortality	Blood sugar & Diabetes
	Heart Health & Cardiovascular Disease
“Hot Button” Topics	Ebola
	Vaccination

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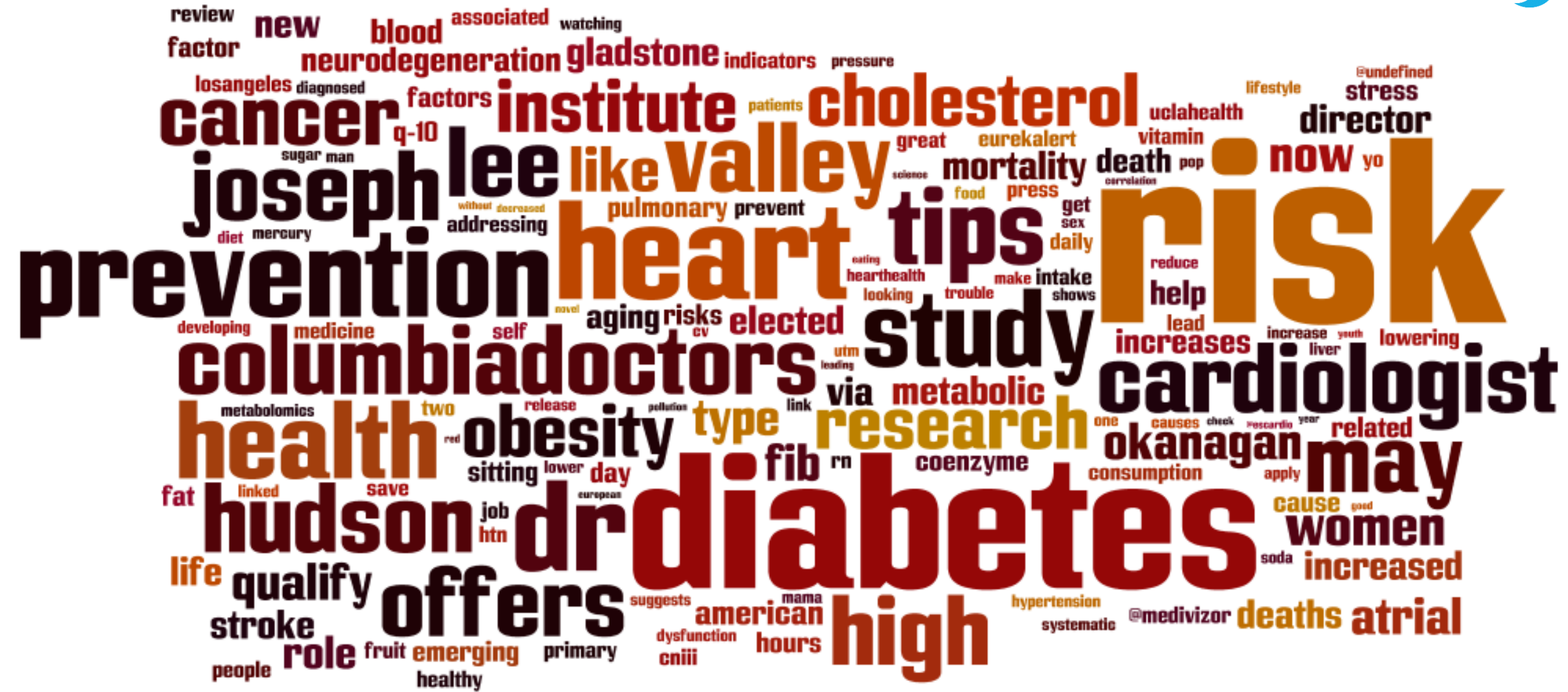
Took out product links
Took out "Optimum"



Took out Red Hot Chili Peppers song
Took out "unparalleled" advertisement

cardiovascular disease, 10/21 11:30pm PT

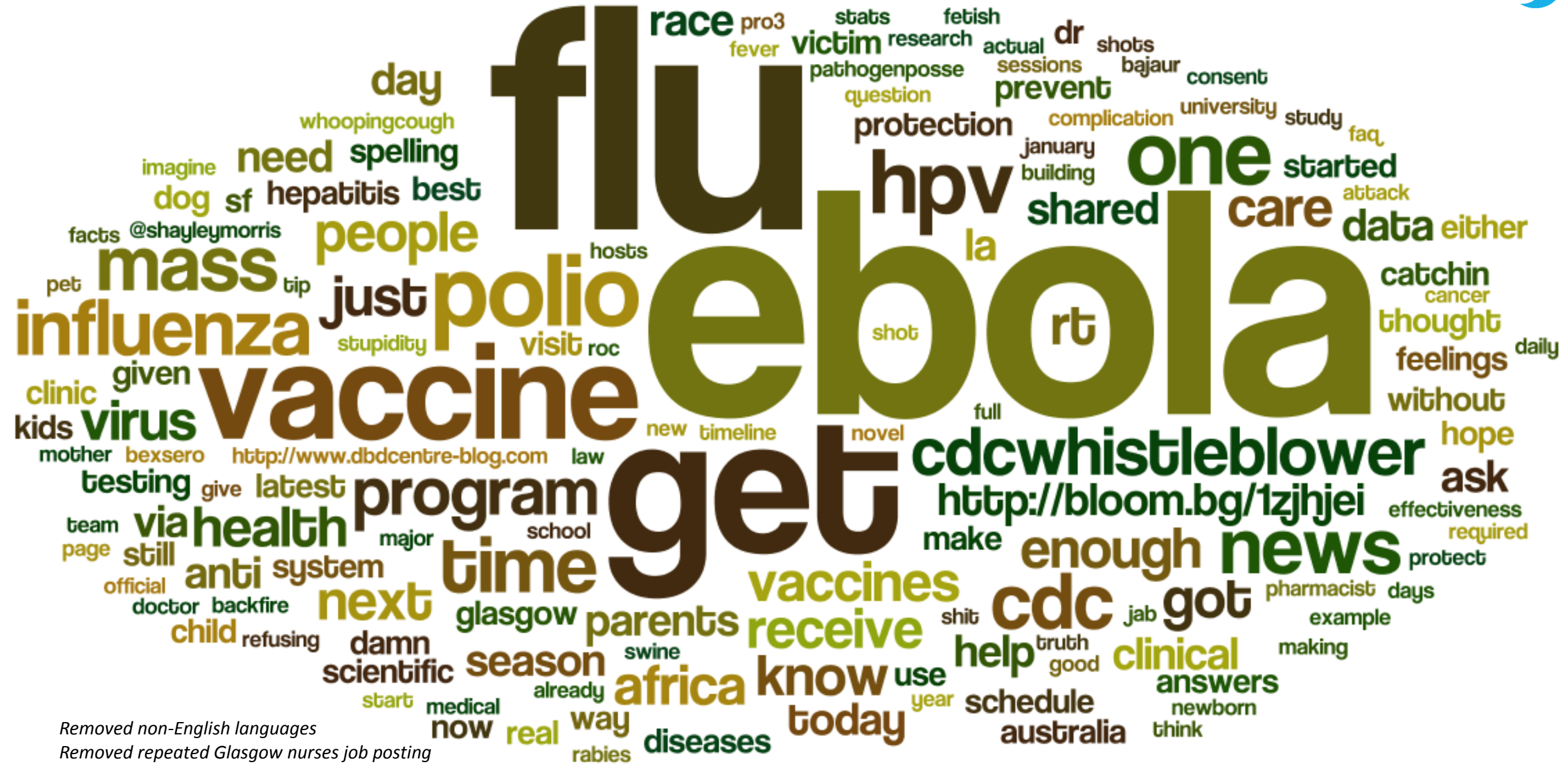
from twitter.com 



Took out product links



Removed pornographic references
 Removed non-English languages



Removed non-English languages
Removed repeated Glasgow nurses job posting



Removed non-English languages

1. Survey says

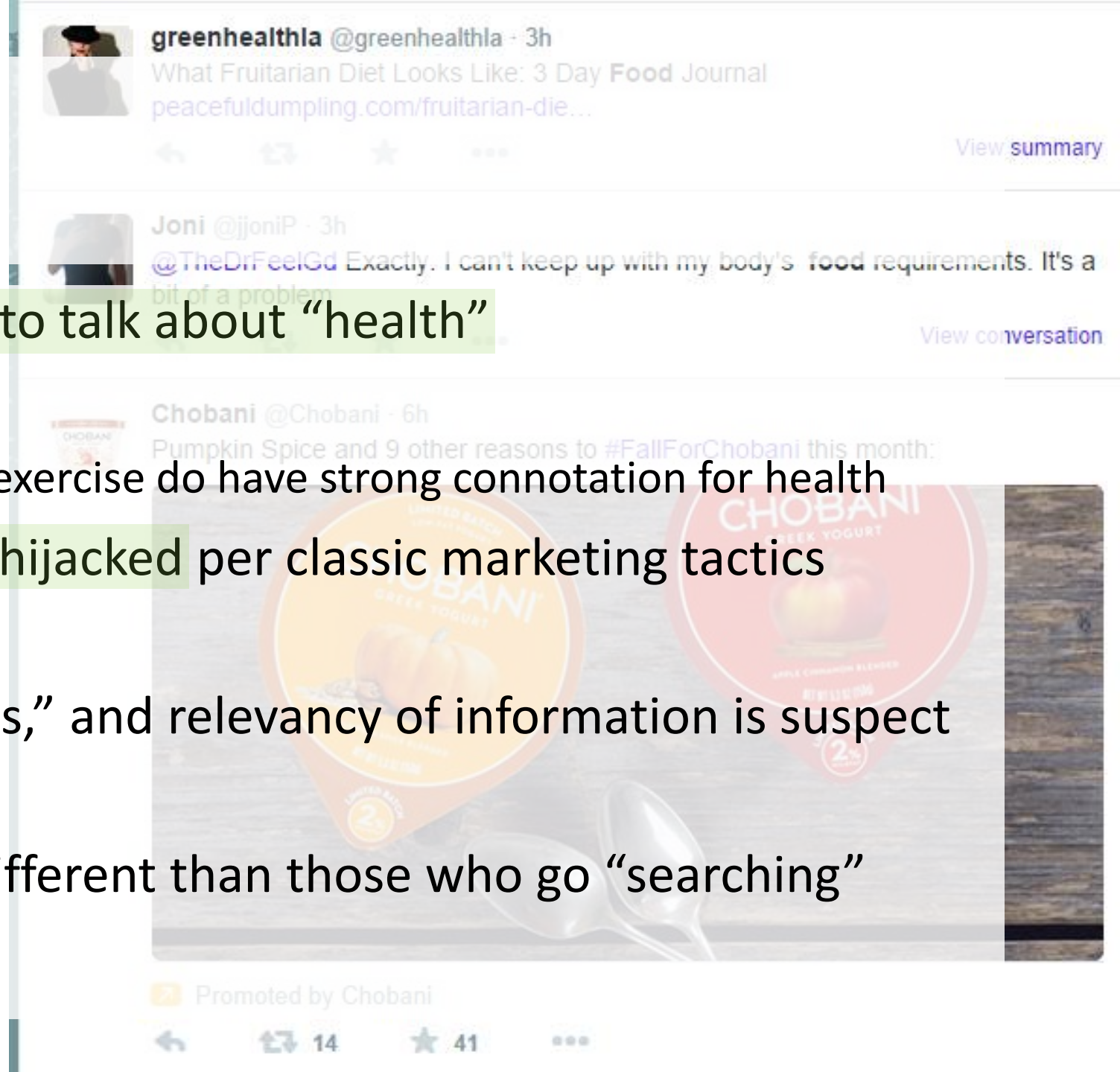
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Thoughts

- People don't always want to talk about "health"
 - Food, gym
 - Targeted terms: nutrition, exercise do have strong connotation for health
- High-frequency terms get hijacked per classic marketing tactics
 - Nutrition, Diabetes
- Accuracy, "appropriateness," and relevancy of information is suspect
 - All terms searched
- Those who go "sharing" different than those who go "searching"
 - All terms searched



Challenges

- Population bias – what population is twitter representative of?
- Hiding sensitive information from the internet -- some people won't engage in health discourse at all, let alone about sensitive topics
- Accuracy of the information...
- Set bounds / time course
 - “Hotter” topics have tweets more concentrated around the search time
 - Time of day most likely impacts who is saying what
- Using behavior analysis “for good” while still targeting subgroups
 - How to make a topic “go-viral” instead of sticking-out like a promotion



greenhealthla @greenhealthla · 3h

What Fruitarian Diet Looks Like: 3 Day Food Journal
peacefuldumpling.com/fruitarian-die...



[View summary](#)

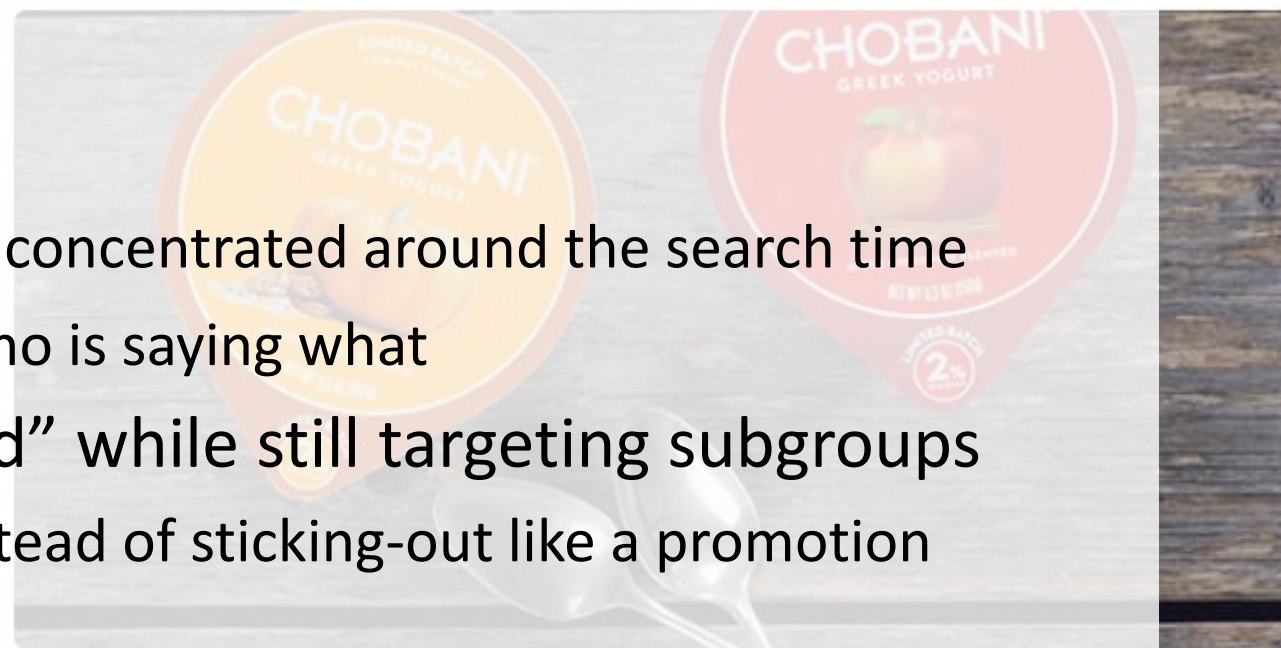


Joni @joniP · 3h

@TheDrFeelGd Exactly. I can't keep up with my body's food requirements. It's a bit of a problem



[View conversation](#)



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Recommendations

- If an organization's mission is to lift health-understanding, access, or improve care of a community, it is important to understand audience
- Twitter and other sources of online, social-networking provide communities of engagement that people actually use – low-cost to obtain
- To use it effectively as a health-tech start-up, public health organization, payor, provider, pharmaceutical, or government agency you have to:
 - Target populations and associated networks while maintaining credibility
 - Balance intrusion of topics in which people don't necessarily want to talk about health as a main focus
 - Inspire campaigns to take-off by having target populations be directly involved, show passion, or create discussion

#Questions?

Thanks!