The Impact of Social Media in Patient Care Decisions

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Disclosures

• Social Media Medical Editor – American Academy of Allergy, Asthma and Immunology
• Associate Editor – Annals of Allergy, Asthma and Immunology
• Consultant – ARS Pharmaceuticals
• Honoraria – ACAAI, AAP, AAAAI
• Royalties – Springer Publishing
• Non-financial:
  • Member - Board of Regents, ACAAI
Objectives

- Appreciate the various ways in which patients are influenced by outside sources of information
- Understand the origins surrounding misconceptions specific to asthma
- Develop tools to proactively combat misinformation
My Main Goal

Take you down the rabbit hole

Offer practical tips for helping out
Google, as one of the world's leading technology companies, has had a significant impact on patient care in various ways. Some of the key areas where Google's influence is notable include:
Mis-in-fer-mey-shuh-n

noun

1. false information that is spread, regardless of whether there is intent to mislead

Dictionary.com ‘Word of the Year’ in 2018

https://apnews.com/article/entertainment-north-america-ap-top-news-religion-fake-news-e4b3b7b395644d019d1a0a0ed5868b10
Misinformation BEFORE COVID-19

- Anti-vaxxers
- Flat Earthers
- 4G Technology
- Big Pharma
- MMS
- QAnon
- Naturopaths
- Anti-GMO
- Homeopathy
COVID-19: An ‘Infodemic’

There MUST Be Something Wrong…
how can I treat asthma

how can I treat asthma without an inhaler

how can I treat asthma cough

how can I treat my asthma on my own

how can you treat asthma

how treat asthma attack

how can I permanently cure asthma
Chronic disease
No known cause or cure
Desperation
Here’s the Playbook…

1. Medical expertise or celebrity testimonial
2. Pseudoscientific explanation
3. Provide list of “research”
4. Discuss why everyone else is wrong
5. Make broad claims
6. **Sell, sell, sell!!!!**
# Natural Remedies for Asthma

Medically Reviewed by *Carmelita Swiner, MD* on November 12, 2022 | Written by *WebMD*

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<th>Acupuncture</th>
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<td>Papworth method</td>
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[https://www.webmd.com/asthma/natural-cure-asthma#1-2](https://www.webmd.com/asthma/natural-cure-asthma#1-2)
Can eliminate asthma by 99%...if you follow my advice

Remove your food sensitivities
- Gluten
- Dairy

Avoid phlegm foods:
- Sugar!!!
- Milk
- Bananas

Bone broth & omega-3’s reduce inflammation

SUPPLEMENTS!!!!

If you’ve ever struggled with asthma, you know that it can be really a debilitating
The Best Defense…is a Good Offense
What Constitutes Evidence?

Hierarchy of Scientific Evidence

- Meta-analyses & systematic reviews
- Randomized controlled trials
- Cohort studies
- Case-control studies
- Cross sectional studies
- Animal trials & in vitro studies
- Case reports, opinion papers, and letters

Not Scientific Evidence

- Youtube videos
- Personal anecdotes
- Gut feelings
- Parental instincts
- Some guy you know, websites like Natural News, Info Wars, Natural Health Warriors, Collective Evolution, Green Med Info, Mercola.com, Whale.to, etc.
Essential oils for asthma

https://www.medicalnewstoday.com/articles/314245#essential-oils-for-asthma
Some studies have suggested that substances in some essential oils may offer health benefits for people with asthma. These essential oils include the following:

**Lavender:** People use this essential oil for a variety of purposes. A mouse study published in 2014 showed that lavender essential oil has natural anti-inflammatory characteristics. It may help people with bronchial asthma by reducing the inflammation of the airways.

**Eucalyptus:** Research suggests that eucalyptus oil may have anti-inflammatory properties.

**Tea tree oil:** In a small study published in the British Journal of Dermatology, findings showed that tea tree oil could reduce skin inflammation that occurs in response to histamine. Histamine is a chemical that the body produces in an allergic reaction. Allergens trigger asthma in many people, and tea tree oil might help reduce the inflammation that occurs as a result.

However, the study involved only 27 people, and there is currently no further evidence to support its findings.

**Roman chamomile:** Chamomile is another essential oil that studies have shown to have anti-inflammatory properties.

Research has also found that chamomile can help relax the bronchi, which are the airways linking the windpipe to the lungs. As a result, it may also relieve coughing.

**Pistacia integerrima:** Also known as karkatshringi, people in India use this plant to treat asthma, bronchitis, and other conditions.

In a study published in 2014, scientists used laboratory tests to demonstrate that the essential oil from Pistacia integerrima may help treat bronchial asthma. It may be beneficial due to its antihistaminic activity.

https://www.medicalnewstoday.com/articles/314245#essential-oils-for-asthma
## Pseudoscience Bingo!!!

<table>
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<tr>
<th>Inflammation</th>
<th>Free radicals</th>
<th>Detox</th>
<th>Celebrity endorsement</th>
<th>Energy</th>
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<td>Cleanse</td>
<td>Fatigue</td>
<td>Crystals</td>
<td>Naturopathic</td>
<td>All natural</td>
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<tr>
<td>Chemical free</td>
<td>Ancient Wisdom</td>
<td>FREE SPACE</td>
<td>Instinctively know best</td>
<td>Organic</td>
</tr>
<tr>
<td>Conspiracy</td>
<td>Molecules</td>
<td>Toxins</td>
<td>Cure</td>
<td>‘Western’ Medicine</td>
</tr>
<tr>
<td>Pharma shills</td>
<td>“Science doesn’t know everything”</td>
<td>Government/ mind control</td>
<td>Miracle</td>
<td>Magnetic</td>
</tr>
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</table>
The main culprit of asthma lies in the water vapors that dance around in our room as they are filled with allergens like smoke odor, mold, germs, dust, pollens, pet dander as well as viruses.

Surface of this pink salt attracts moisture or water particles from the air is because of its astounding hygroscopic properties.

They constantly purify the air.

Surrounded by negative ions.
The Plural of Anecdote…is NOT Data

- Logical fallacy
  - *Post hoc ergo propter hoc* = “after this, therefore because of this”
  - X happened before Y…therefore, X caused Y
- True representation is lacking
  - How many others tried and failed?
  - No control → placebo effect

https://thelogicofscience.com/2016/02/10/5-reasons-why-anecdotes-are-totally-worthless/
Asthma in Movies and Television

Please Stop Giving All Nerdy Pop Culture Characters Asthma

Why do all nerds have inhalers?

By Kate Gardnier
August 24, 2018

https://www.self.com/story/stop-giving-nerdy-pop-culture-characters-asthma
Correlation Does NOT Equal Causation

https://www.tylervigen.com/spurious-correlations
Study tries to see whether child vaccines and asthma are linked
Anti-Vaxxers Exploit Damar Hamlin’s Crisis With Unfounded Covid-19 Vaccine Claims


Dr. Drew @drdrew

So disturbing. Another athlete who dropped suddenly. 🙏🙏🙏

Adam Housley @adamhousley · Jan 2

Prayers for Hamlin. Not sure if ur watching the game...but whatever you believe...send it his way. This doesn’t look good.

9:08 PM · Jan 2, 2023 from Newark, NJ · 5M Views
GMO Effects on Asthma, Allergies and Eczema

"toxins" = 8 times

"inflammation" = 4 times

https://www.enaturalawakenings.com/2013/07/02/232815/gmo-effects-on-asthma-allergies-and-eczema
CONFIRMATION BIAS

Objective Facts

What Confirms Your Beliefs

WHAT YOU SEE
“Research”

YOU KEEP USING THAT WORD

I DO NOT THINK IT MEANS WHAT YOU THINK IT MEANS
“Research” in 2023

Preconceived Notions
- Beliefs
- Family
- Support system

Internet Search
- Social media
- Echo chambers
- Misinformation

Confirmation Bias
- Focus on information that supports beliefs
- Cherry pick data
- Ignore opposing data
Google University of Medicine

This certifies that Dr. _________________________ on recommendation of
the faculty of the Google University of Medicine has conferred the degree of:

Internet Doctor of Medicine

Who has honorably fulfilled all the requirements prescribed by
the university for that degree.

[Signature]
President

[Signature]
Director
What’s the Harm?

People don’t know who to trust anymore
Here's How We Fight Back
What Health Professionals & Organizations Can Do

• Proactively engage with patients and the public

• Use technology and media platforms to share evidence based information

• Partner with community groups and local organizations
Acknowledge our online world
Address all the noise
Provide quality information

Destroy the internet!!!!
The Number 1 Thing YOU Can Do to Help

- why am i
- why am i so tired
- why am i always tired
- why am i always cold
- why am i dizzy
- why am i so gassy
- why am i peeing so much
- why am i always hungry
- why am i not losing weight
- why am i so thirsty
- why am i so tired all the time
Become an Asthma Myth Buster

TELL ME MORE ABOUT YOUR "HYPOALLERGENIC" DOG
Milk, mucus and myths

Ian M Balfour-Lynn

CONCLUSIONS
While certainly the texture of milk can make some people feel their mucus and saliva is thicker and harder to swallow, there is no evidence (and indeed evidence to the contrary) that milk leads to excessive mucus secretion. Milk is an important source of calories, calcium and vitamins for children. The milk–mucus myth needs to be rebutted firmly by healthcare workers.

https://adc.bmj.com/content/104/1/91
Caffeine Treats Asthma?

- Meta analysis: 6 trials → 55 people
- 5-12% improvement in $\text{FEV}_1$ for up to 2 hours
- 5 mg/kg body weight


Equivalent ~4 cups of coffee

95 mg

Equivalent ~4 cups of coffee
Discuss Harmful Aspects

- Delayed time to improved symptoms
- Cost
- Anxiety
- Decreased quality of life
• Encourage questions
• Listen to replies
• Offer logical explanations
• Admit when you don’t know the answer
• Make yourself available for follow up questions
The Simplest Way to Spot Coronavirus Misinformation on Social Media

A digital literacy expert shares his method

He sums it up with the acronym SIFT:

1. Stop.
2. Investigate the source.
3. Find better coverage.
4. Trace claims, quotes, and media to the original context.
Shared Decision Making

WE discuss evidence, options, risks

+ PATIENTS discuss preferences & values

+ WE help PATIENTS make decisions based upon “what matters most”
Learn, Anticipate, Address

1. Provide anticipatory guidance at every opportunity
2. Ask permission to discuss
3. Make it a normal part of every encounter...especially the hard topics
4. If we don’t understand how our patients are being influenced, you won’t be able to help them
Conclusions

While Google's impact on patient care has been substantial and transformative in many ways, it is crucial to recognize that there are challenges and concerns, such as maintaining patient privacy and ensuring the accuracy and reliability of health information available online. The use of Google's tools and services should always be complemented with professional medical advice and should not be considered a replacement for healthcare consultations.
Conclusions

It's essential for both patients and healthcare professionals to approach social media with critical thinking and verify information from reliable sources. While social media can offer valuable support and information, medical decisions should ultimately be based on evidence-based practices and advice from qualified healthcare providers.
Thank You