Understand Dissemination

Presenter:
Heiko Spallek, DMD, PhD, MSBA(CIS)
Dentists Trust Dentists

adapted from @David // Armano darmano.typepade.com
Agenda

1. Find information

2. Disseminate information


Understand Dissemination

PublicBundle
Companion resource for the presentation "Understand Dissemination" given at the 2014 Evidence Based Dentistry Champion 2.0 Conference by Dr. Heiko Spallek.

PDF of my slides.
dl.dropboxusercontent.com/u/2994391/Spallek_ADA Champions Conference.pdf
Added by heikospallek 2 minutes ago
Finding EBD Information

Scientific Evidence

Clinical Expertise

Patient’s Preferences & Values
Finding EBD Information

Scientific Evidence
- Systematic Reviews/Meta-analysis
- Randomized Controlled Trials
- Cohort
- Case-Control
- Cross-sectional
- Case Series
- Narrative Review
- Opinion

Clinical Expertise
- dentaltown
- Dental Products Report
- ADA News
- Clinicians Report (G. Christensen)
- Glasgow’s Law

Patient’s Preferences & Values
- News/Media
- TV
- Family
- Friends
- Read on the Internet that …
- Woman next door said that …
Glasgow’s Law

“one half-cooked observation by myself is worth more than five randomized, controlled studies in the literature”

from a book review of “Practical aspects of antibiotic review” by Calvin M. Kunin, 1979
Eminence-based Information

Storytelling is the individual account of an event to create a memorable picture in the mind of the listener.

Kirkpatrick, 2007

1902 by E. Irving Couse, A. N. A.; The Historian (in the public domain)
Our Brains

Nicholas Carr: “Is Google Making Us Stupid?”

Serious thought gives way to skimming and multitasking.

*Thanks to Google and Mapquest, the human brain will completely atrophy by 2018.* (Andy Borowitz)
How do we find good information?

Joe McNally

“if you want your pictures to be better, stand in front of more interesting stuff”

© 2006, Heiko Spallek
Information Overload
voluminous & ambiguous

1) There is just toooooo much to read!

Dental Publications Indexed by National Library of Medicine

John Rugh, University of Texas HSC, San Antonio
EBD Champions Conference, 2013

Beta-carotene & cardiovascular mortality

Elliot Abt, Advocate Illinois Masonic Medical Center
EBD Champions Conference, 2013
Information Overload

Medical crisis of knowledge

Bryan Vartabedian, MD
33charts, medicine. health. (social)media
Information Overload?

"there is no such thing as information overload, there's only a filter failure"

Old Paradigms

There’s a lot of information out there

- “Caries Research” has been published monthly* for over forty years
- Caries is the most prevalent disease in the world
- *S. mutans is the second most popular organism in all of the scientific literature

Brian Novy, DDS, FADI
EBD Champions Conference, 2013
Old Paradigms
Old Paradigms

Keeping up with the literature

Elliot Abt, Advocate Illinois Masonic Medical Center
EBD Champions Conference, 2013
Old Paradigms
Old Paradigms

C = Candor
H = Honesty
A = Accountability
I = Information Quality
N = Neighborly
T = Timeliness
R = Relevant
U = Unbiased
S = Scope
T = Trustworthy

Chain of Trust

Question/Topic > Criteria (Inclusion / Exclusion) > Seeking > Chain of Trust > Level of Evidence > Results/Discussion > Conclusion

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CHAIN of TRUST

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Level of Evidence

This ranking shows how accurately the findings of the article apply to people in general. The higher the level of the article in the pyramid (the smaller the number), the more likely that the article will be true for most people most of the time.

1a. Systematic Reviews and Meta-analyses
1b. Randomized Controlled Double Blind Studies
1c. Randomized Controlled Studies
1d. Cohort Studies
1e. Case Control Studies
1f. Case Series
1g. Case Reports
1h. Animal Research
1i. Ideas, Editorials, Expert Opinions
1j. In vitro (test tube) research

1. Peer-reviewed or refereed research articles in the scholarly journals (see above).
2. While papers, review/overview/synthesis articles. Includes standards, specifications, and clinical guidelines.
3. Technical and government reports
4. Grant reports, research study progress updates
5. Scholarly books
6. Textbooks
7. Encyclopedias
8. Special interest but non-technical or non-scholarly press
9. Newspaper and popular press
10. Personal experience accurately reported

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Sorting Evidence into Types

Epistememonikos

EVIDENCE-BASED HEALTH CARE
We connect different types of articles using this methodology in order to provide the more reliable information.

SEARCH THE ANSWER FOR YOUR QUESTION
Search in your own language, or in English. As easy as searching in Google.

INFORMATION IN YOUR OWN LANGUAGE
We are different from any other site, since all the information is translated in all languages.
Sorting Evidence into Types

- **Wide Coverage and Reliability**: Epistemonikos gathers information from multiple sources, using transparent methods.
- **Professional Team**: We are supported by multiple experts that help us deliver accurate information always.
- **Related Evidence**: Epistemonikos can suggest related evidence with more precision than any other resource.
Sorting Evidence into Types

etching and "enamel decalcification"
Effects of sealant and self-etching primer on enamel decalcification. Part II: an in-vivo study.

Authors: Ghiz MA, Ngan P, Kao E, Martin C, Gunel E

Journal: American journal of orthodontics and dentofacial orthopedics: official publication of the American Association of Orthodontists, its constituent societies, and the American Board of Orthodontics

Year: 2009

Links: PubMed, Publisher Site

This article is included in 1 Systematic Review

Weak evidence suggests higher risk for bracket bonding failure with self-etch primer compared to conventional acid etch over 12 months.

Authors: Elkhadem A, Orabi N

Journal: Evidence-based dentistry

Year: 2013

Links: PubMed, Publisher Site

Acid etching of human enamel in clinical applications: A systematic review.

Authors: Zhu JJ, Tang AT, Matinlinna JP, Hägg U

Journal: The Journal of prosthetic dentistry

Year: 2014

Links: PubMed, Publisher Site
New Paradigms: Human Filters

Dentists trust dentists.

- free micro-blogging, remarkably simple
- messages = tweets: < 140 characters
- include links to blogs, articles, web pages, images, videos
- anytime; from computer, smart phone or tablet
New Paradigms: Human Filters

Can anything of professional value ever be said in just 140 characters?

• Web 2.0: undeniably change how we share & distribute information

• 2 more Twitter features:
  – hashtags (#) allow for grouping of related posts
  – Follow:
    • experts in your field
    • medical bloggers
    • medical journalists
    • colleagues
American Dental Association Dentists Tweet Tooth Tips for National Children's Dental Health Month

FRI, FEB 24, 2012 15:40 EST

Sharecare Hosts “Chat-n-Chomp: Kid’s Dental Health,” Feb. 28, noon-2 p.m. Eastern Time

CHICAGO, FEB. 24, 2012 – In celebration of National Children’s Dental Health Month, dentists from the American Dental

How to join the chat

To join the chat, search Twitter using the hashtag #CavityFightrs and bring up all tweets containing this hashtag, including questions, answers, retweets, mentions and promotional tweets. All tweets need to have the #CavityFightrs hashtag so participants will easily be able to identify the tweet as part of the Twitter chat. If you do not have a Twitter account, you can create one at www.twitter.com.

Sharecare’s editorial advisory board.

“An infant’s teeth are valuable and need as much attention as adult teeth,” said Dr. Shenkin, who practices in Augusta, Maine. “Infants should visit their dentist no later than their first birthday. Oral health is such an important part of a child’s overall health and well-being.”

American Dental Association
America’s leading advocate for oral health

If Michelangelo had Twitter, the Sistine Chapel ceiling would still be white.

[Andy Borowitz]
#cdaANA

- example for hashtags (#) in right column
- Conference for the California Dental Association in Anaheim
- Tweetdeck = Twitter application: left column for own tweets

If Michelangelo had Twitter, the Sistine Chapel ceiling would still be white. (Andy Borowitz)
New Paradigms: Human Filters

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  – Follow:
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    • medical bloggers
    • medical journalists
    • colleagues

If Michelangelo had Twitter, the Sistine Chapel ceiling would still be white. (Andy Borowitz)
Medical futurist, geek medical doctor with PhD in genomics, founder of http://Webicina.com, speaker, blogger, university lecturer, book author, consultant. 37,719 Followers

Mobile medical app reviews and analysis by Physicians and #mHealth analysts. Founder and Editor-in-Chief: @iltifatMD | Editors: @MisraSatish, @thomasllewis

Retweet by P.F. Anderson, emerging technologies medical librarian, Ann Arbor, Michigan

Healthcare Communications and Social Media (#hcsm), the first global health care Twitter chat. Sundays at 8pm CT. Moderated by @danamlewis. Started Jan 2009.

Retweet by P.F. Anderson, emerging technologies medical librarian, Ann Arbor, Michigan
New Paradigms: Human Filters

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*If Michelangelo had Twitter, the Sistine Chapel ceiling would still be white.* (Andy Borowitz)
SOCIAL MEDIA EXPLAINED

TWITTER  I'M EATING A #DONUT

FACEBOOK  I LIKE DONUTS

FOURSQUARE  THIS IS WHERE I EAT DONUTS

INSTAGRAM  HERE'S A VINTAGE PHOTO OF MY DONUT

YOUTUBE  HERE I AM EATING A DONUT

LINKED IN  MY SKILLS INCLUDE DONUT EATING

PINTEREST  HERE'S A DONUT RECIPE

LAST FM  NOW LISTENING TO "DONUTS"

GU  I'M A GOOGLE EMPLOYEE WHO EATS DONUTS.
Disseminating Information

“… disseminate information about EBD to their colleagues.”

Objectives

2) To recruit and train selected dentists throughout the United States to become Evidence-Based Dentistry Champions to disseminate information about EBD to their colleagues.
Global Societal Struggle

“We are now witnessing a global societal struggle to assure universal delivery of our know-how. We in medicine, however, have been slow to grasp why this is such a struggle, or how the volume of discovery has changed our work and responsibilities.”

Atul Gawande, 2011 commencement address at Harvard Medical School
Barriers to Dissemination

Time, Resources, Tools

Trends

- **Longer-term Results on Impact of EBD**
  - >70% in 2008; >86% in 2010-2012
  - Quality of patient care
  - My knowledge
  - My treatment decisions
  - Advancement of science of dentistry
  - Continuing Education

- **Longer-term Results on Implementation**
  - 88% of respondents are implementing EBD/98% in 2010
  - Barriers to implementation
    - Time
    - Resources – can I find an answer to my question?
    - Tools to disseminate EBD
CREATIVE ROUTINES

“In the right hands, it can be a finely calibrated mechanism for taking advantage of limited resources... a solid routine fosters a well-worn groove for one’s mental energies....” -Mason Currey, author of the inspiring book, DAILY RITUALS

Ludwig van Beethoven
(c. 1822-1827)

Wolfgang Amadeus Mozart
Vienna, c. 1781

Thomas Mann
(c. 1943)

Sigmund Freud
(c. 1910)

Immanuel Kant
(c. 1794-1804)

Maya Angelou
c. 1983

Gustave Flaubert
while writing Madame Bovary
c. 1851-1856
Wolfgang Amadeus Mozart
Vienna, c. 1781

Sigmund Freud
c. 1910

Time

Compose: “I often go on writing until one - and am up again at six”

Courting Constanze

Compose or concerts

Supper and card games, walk with wife or daughter

Reading, writing for journals

Sleep

Compose

Dressing

Lectures

Sleep

Breakfast, trim beard

Freud
Barrier: Resources

“What ultimately makes the difference is how well people use technology. We have devoted disastrously little attention to fostering those abilities.”

Atul Gawande: Top athlete and surgeon, The New Yorker, 10/3/2011
Barrier: Tools to Disseminate EBD

Dissemination:
The active and targeted distribution of information and interventions to a specific public health or clinical practice audience via determined channels using planned strategies. The intent is to spread knowledge and the associated evidence-based interventions in order to enhance the adoption and the implementation of the information and/or intervention.
Knowledge insufficient

**Sealants and dental caries**

Insight into dentists’ behaviors regarding implementation of clinical practice recommendations

Jean A. O’Donnell, DMD, MSN; Adriana Modesto, DDS, MS, PhD, DMD; Marnie Oakley, DMD; Deborah E. Polk, PhD; Benita Valappil, MPH; Heiko Spallek, DMD, PhD, MSBA

**Barriers**

- Personal Clinical Experience
  - Recurrent caries
  - Technique sensitive
  - Reapplication

- After reading the clinical recommendations, 68% would not place sealants.

- Knowledge alone was insufficient to create changes in practice behavior.
Knowledge insufficient

Sealants and dental caries
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Barriers
• Personal Clinical Experience
  • Recurrent caries
  • Technique sensitive
  • Reapplication
• Lack of reimbursement

• Acceptance of the recommendations by their colleagues -> moderate to high influence
• Colleagues were an important source of information

J. Leslie Winston, DDS, PhD
Procter & Gamble Oral Health
EBD Champions Conference, 2013
Peer influence!

• change in provider behavior through peer influence: Dr. Partha Mukherji

• pilot study supported by NIDCR
  Implementing Research Findings and Evidence-based Interventions into Real-World Dental Practice Settings (1R21DE021494-01)

• next stage: large cluster RCT
  compare the effectiveness of complex, social interventions involving technology-enabled, peer-to-peer coaching
Understanding Dissemination

1. Technology to overcome professional isolation

2. Story telling techniques to persuade.
Peer influence!

- story telling for dissemination
- behavior change through peer influence, social norms, peer pressure
Peer influence!

"Each time, those who espouse only evidence—without narratives about real people—struggle to control the debate. Typically, they lose.”

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- Fen Zheng, PhD
- many more…

Q/A or Break?

The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.
