

# Inspiring and Teaching Pharmacy Students to Keep Up-to-Date

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# ***“ Nothing endures but change. ”***

-Heraclitus (540 BC - 480 BC), from *Diogenes Laertius, Lives of Eminent Philosophers*

- We need to deal with change because pharmacy is a dynamic profession with new drug- and pharmacy-related information emerging daily.
- We therefore owe it to our students, colleagues & patients to keep up-to-date.
- Keeping up-to-date can be very time consuming, as well as labor/paper intensive.



# The Challenge . . .

- The contemplation of keeping up-to-date can be daunting.
- We need to overcome feelings of being overwhelmed in order to:
  - Keep up-to-date ourselves
  - Inspire our students & colleagues to keep-up-to-date
- We have developed a philosophy for keeping up-to-date . . .



# The Philosophy

- Keeping up-to-date is a combination of **active, passive and active/passive**.
- **Active:** You need to **pursue** the news.
- **Passive:** You need to know who will **provide you with/send you** news.
- You need to **do something** with the news you gather and/or receive: **“Use the news.”**

# Active: You need to pursue the news

- Watch news on TV/listen to news on the radio for news items re drug- & pharmacy-related issues.
- Scan your local/regional/national newspaper in print or online.
- Scan an “international” newspaper online – e.g. *The New York Times* (From *NYT* homepage access Health section from sidebar.)
- Check [Reuters Health](#) website when you think of it.

# The Beauty of Reuters Health

- A subscription news service – selling news to other outlets.
- For one day only news items in 3 categories are freely accessible –
  - Medical news for professionals
  - Industry news
  - News for consumers
- News items are well referenced with enough info to find original documents – often hyperlinked to PubMed abstracts.

# Passive: You Need to Know Who Will Provide You with/Send You News in These Categories

- Professional Journals
- Medical/Pharmacotherapy News
- Canadian Content
- Industry/Regulatory News
- Government Departments
- Evidence-based Websites



# Professional Journals: Why?

- Information published in high impact medical/pharmacotherapeutics journals is what ends up in the news media.
- You may receive questions from students/colleagues/patients regarding topics originating in journals.
- All good “medical” journals will have info re pharmacotherapeutics.

# Professional Journals: How?

- Sign-up for table-of-contents pages (TOCs) from journals to be sent to your email when new issues are published.
- Or sign-up for RSS feeds (more about these later . . . )

# "Tried & True": You Cannot Go Wrong with Keeping Up-to-Date with These Journals\*

- *CMAJ*
- *Annals of Internal Medicine*
- *JAMA*
- *Archives of internal Medicine*
- *NEJM*
- *BMJ*
- *Lancet*
- *Annals of Pharmacotherapy*
- *Pharmacotherapy*
- *Nature Reviews Drug Discovery*

\*Please see our table for specific info re these ten journals.

# Websites that Will Provide You with News Updates

- We have selected nine “tried & true” websites in the following categories – all freely accessible:
  - Medical/Pharmacotherapy News
  - Canadian Content
  - Industry/Regulatory News
  - Government Departments
  - Evidence-based Websites

# Medical/Pharmacotherapy News

- [Medscape](#) – weekly updates of “processed” US medical news tailored to profile created when you register.
- [Physician's First Watch](#) – two or three “hot” news items with links to original documents, Monday – Friday (M – F) – from the Massachusetts Medical Society (publisher of *NEJM*).

# Canadian Content

- [Health Edition Online](#) – weekly newsletters covering provincial & federal health-related news – sponsored by Merck Frosst.
- [Pharmacy Gateway](#) – weekly updates with Canadian news and articles – publisher of *Pharmacy Practice* (archived on this website).

# Industry/Regulatory News

- [DIA Daily](#) – “hot” news having a industry/regulatory slant with links to originating new reports or documents (M – F) – a service of the Drug Information Association (Horsham PA).
- [TargetPharma Newsletter](#) – notices for updates from PMPRB, NIHB, Common Drug Review and provincial drug plans with links to original documents – a service of RTI Health Solutions (Ottawa).

# Government Departments

- [MedEffect](#) (Health Canada) – notices re Health Canada's health product advisories and new issues of *Canadian Adverse Reaction Newsletter*
- [CADTH](#) = Canadian Agency for Drugs and Technologies in Health – notices re new CADTH publications including their freely accessible HTAs
- [CDER New](#) (US FDA) – most relevant is FDA News – e.g. updates re adverse effects alerts & new issues of *Drug Safety Newsletter*.



# Evidence-based Websites

- [EvidenceUPDATES](#) – notices of recent evidence-based journal articles matched to your registration profile – a collaboration between BMJ Group and McMaster University's Health Information Research Unit.

# What We Do at Dal to Teach & Hopefully Inspire Our Students to Keep-up-to Date

- Give a news-based assignment in semester one of the first year Skills Lab
- Provide a lecture on keeping up-to-date in semester one of the second year Critical Appraisal Series (CAS)
- Publish fortnightly an ["In the News"](#) listing on the College's website.

# First Year Skills Lab Assignment

- Purpose is to get pharmacy students familiar with identifying original documents on which questions from patients & colleagues may be based.
- Collect Vital Signs\* articles published weekly in Health section of online *New York Times* (2 or 3 published weekly).

\*Vital Signs are short “blurbs” on health topics mostly based on recent journal articles.

# First Year Assignment. . . continued

The chosen articles:

- must contain “searchable clues” – i.e. primary author, affiliation, title of journal, etc.
- have to do with drugs or other topics of interest to pharmacists.
- Those not identifiable via PubMed are rejected.
- Usually end up with 50 usable Vital Signs articles each year.

# First Year Assignment. . . continued

- 90 students so only two are randomly assigned the same Vital Signs article.
- Assignment is to identify original journal article on which Vital Signs article is based.
- Assignments are marked by Library staff; a few marks are assigned by Skills Lab Coordinator.

# Second Year CAS

- Goal is to impart importance to pharmacy students and excitement involved with keeping up-to-date.
- Content is based on what we will tell you today about recommended resources.
- Tried to pick best resources as we don't want to "pre-frustrate" students by overwhelming them with too many suggestions.

# Second Year CAS. . . continued

- We are planning to learn about and incorporate new technologies that will hopefully make it easier/more seamless for pharmacists to keep-up-to date
  - e.g. RSS feeds, podcasts, blogs, etc.

# Second Year CAS: A Failed Attempt

- We had the brilliant idea that our students should be able to identify a journal article from a short TV health-related news item.
- We bought a number of videocassettes (the pre-DVD days) – recorded many *Lifeline* features from the ATV evening news.





# Second Year CAS: A Failed Attempt . . . cont'd

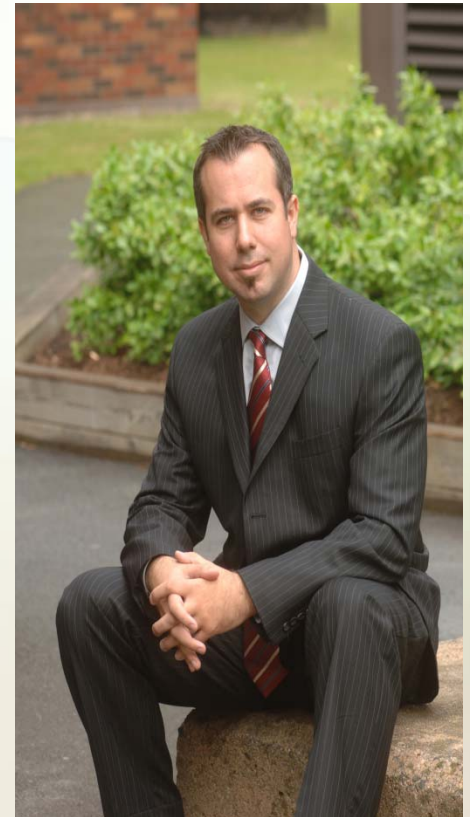
- Spent many hours viewing these to find the few that had “searchable clues”.
- Only found enough to have the second year CAS students identify the originating journal articles as a group assignment – too easy!
- Stopped doing this as “cost outweighed the benefit”.



# Mini-Bright Idea: Video Assignment Rides Again



- A better plan for a video assignment would be to make our own brief video with searchable clues for a specific drug- or pharmacy-related journal article.
- Present video in class for each student to take notes on searchable clues; pass in answer at later date.
- We would ask Neil MacKinnon for help as he is "King of Videos" @ the College.



# Teaching Pharmacists to Keep-up-to-Date

- We were encouraged by Harriet Davies, College of Pharmacy Coordinator of Clinical Education, to design an online interactive module for pharmacy preceptors with respect to keeping up-to-date.



# Teaching Pharmacists to Keep-up-to-Date . . . cont'd

- A module was written and designed in 2008 to be placed on the Dal Continuing Pharmacy Education (CPE) Community of Life Long Learners password-protected BLS website where it will be available for CPE credit.
- It also is freely accessible on the Dal Libraries' website in the Subject Specific area of [Libcasts/Online Tutorials.](#)

*Libcasts*  
what you want to learn,  
when and where you want it

## “In-the-News”

- Listing of citations to drug- and pharmacy-related literature: Journal articles, announcements, press releases, news items, reports, etc.
- Collected, researched, categorized, compiled, hyperlinked and proofread by the Pharmacy Library People.
- Published fortnightly on the College’s website – Resources section.

# **“In the News” – How Accessible Are the Items We List to Persons NOT Affiliated with Dal?**

- Sarah Weatherby (2010) was assigned to try to access fulltext documents of items listed in 7 consecutive issues of “In the News” from a non-Dal computer.
- We were pleasantly surprised by how much was freely accessible to everyone – on average more than 40%.

## Percentage of Freely Accessible Documents Cited in Seven Consecutive 2009 Issues of "In the News"

Date of Issue	Count Accessible/Total # of Documents	Percent Freely Accessible
January 3-16	61/159	38.3%
January 17-30	48/111	43.2%
January 21- February 13	103/226	45.6%
February 14-28	94/195	48.2%
February 28-March 13	62/166	37.3%
March 14-27	97/102	48.0%
March 28-April 10	89/208	42.8%
Overall Average		43.3%

# Producing “In the News” Has Crystallized Ideas about Keeping Up-to-Date

- Keeping up-to-date is challenging; can be overwhelming so try to find shortcuts or realize/be honest about time constraints.
- Identify your “desert island” resources and be happy with these.
- Learn about and try new technology that may make keeping up-to-date easier.



# Our Personal Desert Island Resources for Keeping Up-to-Date

- Access to TOCs of favourite journals
- Email updates from *Physician's First Watch*
- Access to the online *New York Times*
- Access to PubMed.



# PubMed: My NCBI

- My NCBI = PubMed's saved search/stored search feature.
- My NCBI is a non-intuitive name.
- NCBI = National Center for Biotechnology Information.
- Free registration.
- Save PubMed searches on topics of interest.

# PubMed: My NCBI . . . cont'd

- Request email notifications when new citations are added to PubMed that match your search strategy(ies).
- Or check your my NCBIs any time to see what's new.
- For detailed instructions, see Tutorials link from the blue sidebar on the PubMed homepage.

# PubMed: My NCBI – an Example

- Four pharmacists we know are interested in methadone programs.
- Currently in PubMed there are almost 19,500,000 citations/records for journal articles.
- More than 10,000 of these include the word methadone somewhere in the record.
- Could be as a medical subject heading (MeSH) or as a textword used by author(s) in article titles or abstracts.

# PubMed: My NCBI – an Example . . . cont'd

- We saved our methadone search; we receive via email about one dozen new citations weekly; a manageable amount to consider/deal with.
- Per Sarah's research, some of the citations will be accessible to non-Dal affiliated persons.
- More complicated searches can easily be saved.
- Store as many searches as you wish.

# Google Alerts



- “. . . are email updates of the latest relevant Google results (web, news, etc.) based on your choice of query or topic.”
- Enter search terms.
- Choose “type”: Comprehensive (all Google), News, Blogs, Web, Videos or Groups.

# Google Alerts . . . cont'd

- Choose frequency of updates sent to your email address: As-it-happens, daily or weekly.
- We chose to save the word Apotex as we wanted to keep up with reported activities of this company.
- More complicated searches can be saved, although we do not have much experience with this in Google.

# RSS Feeds



- Stands for “Really Simple Syndication”.
- Acts as a content delivery vehicle.
- Free to sign up for RSS feeds from numerous websites and important journals.
- RSS feeds are collected by an aggregator such as Google Reader or Bloglines for convenience (but can be sent directly to email if preferred).
- A great way to receive and scan the latest articles without having to actively search/refresh websites.



# Podcasts

- Audio and video files available on the Internet that can be downloaded to a computer or MP3 player.
- Sign-up to receive podcasts from various journals and listen to them at your convenience.
- Many high impact journals, such as *NEJM*, *BMJ* and *Lancet*, publish freely available podcasts on a weekly to monthly basis.
- An easy way to catch up on the latest news from your favourite journal.

# Blogs

- “Weblog”; a website maintained by an individual, group, business, etc. that may contain personal opinions, recent news items, discussion about current events, etc.
- May be interactive; may be moderated.
- Has the potential to facilitate communication & interaction among pharmacists around the globe.

# Blogs: An Example

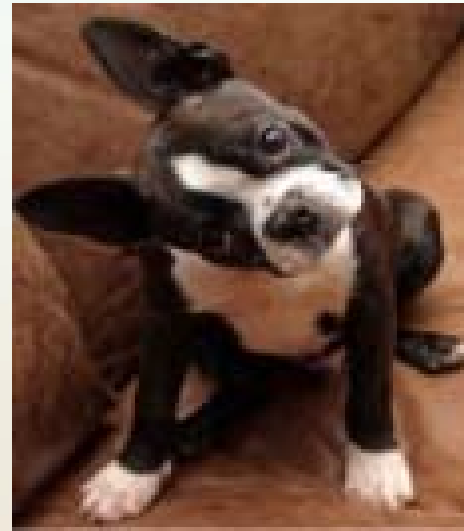
- Blogs can be useful if you find one that coincides with your interests as a pharmacist
  - eg: A blog devoted to compounding, containing helpful news, information and tips from other professionals, might prove to be very useful to a compounding pharmacist.

# This Is All We Have Today

- We hope that we have inspired you and given you some suggestions for keeping up-to-date in the pharmacy world.
- Do you have any questions for us?



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Kenzie

- If that is everything, thank you very much for your time  
– Liz & Meghan.