# A Portal for the Canadian Virtual Health Library / Bibliothèque virtuelle canadienne de la santé (CVHL/BVCS):

# Accomplishments & Possibilities, Scope & Structure

Jim Henderson, Wendy Stark, Natalie Clairoux, Tom Flemming, Dean Giustini, & Vivian Stieda

CHLA/ABSC 2012 Annual Meeting, Hamilton, Ontario June 14, 2012



#### Where CVHL/BVCS is now:

- Web site managed with Drupal content management package
- Successful launch & development of free Virtual Library
- Library Locator, the data offering

## Where CVHL/BVCS wants to go:

- Authentication
- Question answering / referral
- Integration of best evidence
- Organization & structuring of clinical information
- Knowledge translation
- Communication & personalization

Definition (IBM):

"a single point of personalized, unified access to applications, content, processes, and people"

"A complete portal solution should provide users with convenient access to everything they need to get their tasks done anytime, anywhere, in a secured manner."

Stefen Liesche, IBM Portal Architect

- Control information glut
- Improve cycle times
- Empower knowledge workers
- Reduce complexity
- Enhance partner and supplier communication
- Streamline processes

from: Credle et al, IBM, 2006





>>



#### Topics

National Aboriginal Organizations

Economic Development and Business

Claims and Treaties

Education

Employment

Environment and Natural Resources

Health and Social Services

Housing and Infrastructure

Justice and Policing

Language, Heritage and Culture

Research Statistics



#### **Aboriginal Youth Art Contest**

The National Aboriginal Health Organization announces an art contest open to Aboriginal youth across Canada to increase awareness and empower audiences with information to address environmental health issues and to improve health.



Your single window to First Nations, Métis and Inuit online resources and government programs and services.



#### **Quick Search**

Advanced Search

#### **Audiences**



Elders



Women



 $\blacksquare \blacktriangleright \blacktriangleright$ 

Youth



Kids

#### Featured Tools

Bursaries

News

Events

Métis Card

Popular Links

Indian Status

CHVILOTHINETTE ALIU Natural Resources **4** ▶ ▶ Health and Social Services Your single window to First Nations, Métis and Inuit online Kids resources and government programs and services. Housing and Infrastructure Featured Tools Justice and Policing Bursaries Popular Links Language, Heritage and Culture News Indian Status Research, Statistics Métis Card Events and Maps Inuit Beneficiary Job Centre Searching for your Ancestor? Regions Community Map in Google Canada-U.S. Border Crossing Earth International Provincial and Funding Tool Territorial Virtual Trade Show A Collaborative Site Urban and Rural Connectivity Profiles Government of Canada Information Find a Community About Us A to Z Assembly Council for the Inuit Congress of of First Tapiriit Aboriginal National Women's Advancement Accessibility Help Province or Territory: Nations Kanatami Peoples Council Association of Native Development of Canada Choose a Province 2COODS Officers Community Type: Partner F-Tools All

Proactive Disclosure

Go

## Other examples:

- Alberta's Personal Health Portal
- Canadian Institute for Health Information / Institut canadien d'information sur la santé Portal
- NurseONE / INF-Fusion
- OCUL Scholars Portal Geospatial, health proposed
- DNA Learning Centre, Cold Spring Harbor Laboratory
- General
- Niche
- Enterprise specific (EIP or EKP)

Examples from definition of portal in the *Internet Dictionary* 

# CVHL / BVCS Virtual Library

- Free, high quality resources
- Individual documents as well as web sites
- Standardized terminology with hierarchical structure
- Model of collaborative development

About CVHL

Network Subscribers Virtual Library Library Locator Help

Français

**English** 

A Search health information sources

Search

#### **Virtual Library Search**

Keyword search Q With all of the words Search Cancel

#### Guided search

Click a term to initiate a search.

#### Audience

Nurses, Nurse General Public (549) Practitioners and All Health LPNs (205) Professionals (450) Naturopaths (9) Acupuncturists (2) Occupational Hygienists (6) Audiologists (10) Occupational Biomedical engineers and Therapists (34) physicists (5) Optometrists (2) Chiropractors (4) Orthotists and **Dentists and Dental** Prosthetists (15) Hygienists (26) Paramedics (1) Dietitians and Pharmacists (52)

#### Type

Software (13)  Association (44)  Association of Patients (68)  Bibliographic  Database (40)  Bibliography (18)  Blog (19)  Congresses (3)  Government  Agencies (110)  Health Services (64)  Documents (273)  Encyclopedias (19)  Journal Article (13)  Video  Recording (10)  Government  Publications (129)  Health  Facilities (15)  Reports and  Health Services (64)  Studies (236)	Application	Table (3)
Association of Foundations (17) Patients (68) Journal Article (13) Bibliographic Video Database (40) Recording (10) Bibliography (18) Government Blog (19) Publications (129) Congresses (3) Health Government Facilities (15) Agencies (110) Reports and	Software (13)	Documents (273)
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Congresses (3) Health Government Facilities (15) Agencies (110) Reports and	Bibliography (18)	Government
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Agencies (110) Reports and	Congresses (3)	Health
	Government	Facilities (15)
Health Services (64) Studies (236)	Agencies (110)	Reports and
(200)	Health Services (64)	Studies (236)

**Library Locator** 

#### Subjects

- **⊞** Analysis, Diagnosis and Treatment (94)
- **⊞** Disciplines (380)
- Diseases (260)
   Diseases (260)

- Sciences (142)

#### Audience

Recent posts

CONTOLIC	r njorotnorapiete (00)	rommologj (v)	(11)
Counselors (14)	Phytotherapists (2)	Training (44)	Legislation (4)
Health Sciences	Psychologists (37)	Association of	Statistics (159)
Librarians (88)	Researchers (180)	Health	Medical
HIM Managers (27)	Respiratory	Professionals (191)	Dictionaries (11)
Homeopaths (9)	Therapists (2)	Biography (3)	Medical
Hospital	Social Workers (43)	Business	Libraries (23)
Administrators (76)	Sexologists (3)	Enterprise (12)	Toxicological Data
Interprofessional	Speech-Language	Consensus and	Sheet (2)
Relations and	Pathologists (9)	Guideline (46)	Museums (10)
Co-operation (17)	Veterinarians (1)	Database (54)	Periodicals (12)
Laboratory		Figure (1)	Problems and
Technologists (11)		Hospitals (21)	Exercises (2)
Massage		Image	Research
Therapists (12)		Database (16)	Structure (49)
Medical Radiation		Regional	Scientific and
Technologists (11)		Agency (8)	Technical
Midwives (25)		Teaching	Information (103)
		Materials (40)	Scientific
Coverage		Charitable	Society (17)
Alberta (23)	Newfoundland and	Organization (77)	Teaching
Australia (5)	Labrador (12)	Consumer Health	Structure (5)
British	Northwest	Information (291)	Education (134)
Columbia (46)	Territories (6)	Critical Appraisal	Exhibits (16)
Canada (639)	Nova Scotia (16)	or Critical	Forum and Mailing
France (6)	Nunavut (6)	Reading (27)	List (4)
Germany (7)	Ontario (93)	Maps (3)	Image (4)
International (200)	Prince Edward	Poison Control	Organizations (35)
Italy (7)	Island (8)	Centers (3)	Registries (21)
Japan (1)	Quebec (53)	Community	Resource
Manitoba (16)	Saskatchewan (12)	Networks (54)	Guides (30)
New Brunswick (8)	United	Drug	Wiki (13)
New Drunswick (0)	Kingdom (26)	Information (24)	
	United States (74)	Educational	
	Yukon (6)	Courses (16)	
	rukon (u)	, ,	

# Authentication

- Integrity of website vs.
   Vehicle for collaboration & communication
- Access to licensed resources for affiliated & unaffiliated health professionals
- For individuals, integration of access gained via various affiliations

# Authentication

- Trust vs. identity
- Access control for licensed resources
- Shibboleth vs. open source solutions
- SAML Security Assertion Markup Language
  - Open source
  - "Federation" of trusted sources for authentication
- Canadian Access Federation (CANARIE)

# The Clinical Journal of Pain



Search Jobs

Journal Info

Recognized as McGill Univ 23726 Official Journal of the Eastern Pain Association

• Login • Register • Activate Subscription • Subscribe • eTOC • Help

For Authors

**Recent Searches** 

Enter Keywords All Issues Advanced Search Saved Searches Search Published Ahead-of-Print Current Issue Previous Issues Home Home > Current Issue > Adverse Events Attributable to Nocebo in Randomized Controll... < Previous Abstract | Next Abstract > You could be reading the full-text of this article now... if you become a subscriber (I am a subscriber ?) · if you purchase this article If you have access to this article through your institution, you can view this article in OvidSP.

Clinical Journal of Pain:

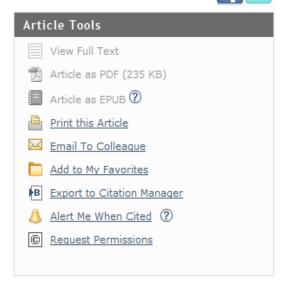
June 2012 - Volume 28 - Issue 5 - p 437-451

doi: 10.1097/AJP.0b013e3182321ad8

Review Articles

Adverse Events Attributable to Nocebo in Randomized Controlled Drug Trials in Fibromyalgia Syndrome and Painful Diabetic Peripheral Neuropathy: Systematic Review

Häuser, Winfried MD\*,†: Bartram, Claas\*,†: Bartram-Wunn, Eva\*,†: Tölle, Thomas MD







# Question Answering & Referral

- Question referral for unaffiliated professionals
- Combination of coordination and directory services
- Crowd-sourcing of questions:
  - quora.com
  - stackoverflow.com
  - ATTRACT
  - doc2doc & TILT in TRIP
  - Chasing the Sun

# Register now for FREE access to a host of extra features....

SIGN UP!





(swallowing disorders)

Search

Advanced Search History Search Tips



#### **FILTER SEARCH** Order By: Date Relevance (Showing all results - Only show new) EVIDENCE 1,644 All Secondary Evidence 247 Evidence Based Synopses 23 Systematic Reviews 69 Guidelines Aus. & NZ 11 Canada UK 51 USA 83 Other Clinical Q&A Core primary research Extended primary research 265 eTextbooks 854 Patient Decision Aids 0 Patient Information More 26

11

News

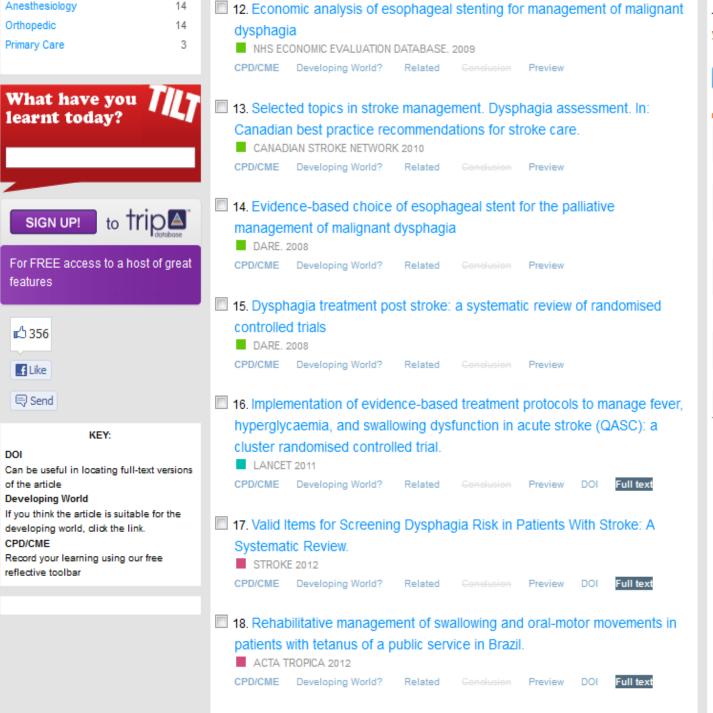
#### SEARCH RESULTS Select All Choose Your Action 1. Bedside screening tests vs. videofluoroscopy or fibreoptic endoscopic evaluation of swallowing to detect dysphagia in patients with neurological disorders: systematic review DARE. 2009 CPD/CME Developing World? Related Conclusion Preview 2. Swallowing Disorders (Treatment) ■ EMEDICINE.COM 2011 CPD/CME Developing World? Related Conclusion Preview 3. Swallowing Disorders (Overview) ■ EMEDICINE.COM 2011 CPD/CME Developing World? Related Preview 4. Swallowing Disorders (Follow-up) EMEDICINE.COM 2011 CPD/CME Developing World? Related Genelusion Preview

#### ASSOCIATED RESULTS

Therapy Etiology	1,419
Etiology	
	1,202
Diagnosis	520
Prognosis	1,129
Systematic Reviews	366
CLINICAL TRIALS Clinical Otrials	alTrials.go
BNF RESULTS	bnf.org
BOTULINUM TOXIN TYPE B	
DOTULNIUM TOVIN TYPE A	
<ul> <li>BOTULINUM TOXIN TYPE A</li> </ul>	
RISEDRONATE SODIUM	

View full results on bnf.org...

Name		EMEDICINE.COM 2011	
News	11	CPD/CME Developing World? Related Conclusion Preview	
	0		RELATED ARTICLES
MEDICAL VIDEOS	1	5. Swallowing Disorders (Diagnosis)	Choose some articles on the left to see
		EMEDICINE.COM 2011	related
USA	0	CPD/CME Developing World? Related Conclusion Preview	
UK	0		CLINICAL CALCULATORS
		6. Swallowing Disorders	
Suitable for the Developing V	World	MEDLINEPLUS	We found no calculators related to this search - can you recommend any?
BY CLINICAL AREA What does th	nis mean?	CPD/CME Developing World? Related Genelusion Preview	can you recommend any:
Gastroenterology	308	7 Persutanceus andecesaria gestroctomy versus necesaritis tuba feeding	RESULTS FROM BLITTER
Otolaryngology-ENT	266	7. Percutaneous endoscopic gastrostomy versus nasogastric tube feeding	
Neurology	235	for adults with swallowing disturbances  COCHRANE DATABASE OF SYSTEMATIC REVIEWS 2012	speechieLO: Looking forward to the next  #aleohat #th a #aleoha 0.8 A session! June
Pediatrics	133		#slpchat- it's a #slp2b Q & A session! June 4th, 8:30pm Sydney time. More info at:
Cardiology	113	CPD/CME Developing World? Related Genelusion Preview DOI	in, c.copii dyandy and, more and at.
Oncology	98	8. Does looped nasogastric tube feeding improve nutritional delivery for	More from Blitter, TRIP's social media search
Pulmonology	91	patients with dysphagia after acute stroke? A randomised controlled trial	tool
Surgery	91	NHS ECONOMIC EVALUATION DATABASE. 2010	
Infectious Disease	89	CPD/CME Developing World? Related Genelusion Preview	IMAGES
Rheumatology	69		
Hematology	57	9. Non-pharmacological therapies for dysphagia in Parkinson's disease	
OB-Gyn	53	COCHRANE DATABASE OF SYSTEMATIC REVIEWS 2009	
Endocrinology	51	CPD/CME Developing World? Related Conclusion Preview DOI	
Geriatrics	41		
Psychiatry	34	■ 10. Supratentorial Regions of Acute Ischemia Associated With Clinically	
Dentistry	33	Important Swallowing Disorders. A Pilot Study.	
Radiology	25	STROKE 2008	
Ophthalmology	22	CPD/CME Developing World? Related Conclusion Preview DOI Full text	
Dermatology	21		
Allergies and Immunology	20	■ 11. Swallowing Disorders as a Predictor of Unsuccessful Extubation: A	
Urology	19	Clinical Evaluation.	
Critical Care	16	AMERICAN JOURNAL OF CRITICAL CARE 2008	
Emergency Medicine	15	CPD/CME Developing World? Related Conclusion Preview Full text	None available - Search Google images
Physical Medicine	15		DOC2DOC
Anesthesiology	14	■ 12. Economic analysis of esophageal stenting for management of malignant	TRIP is working with Doc2Doc to help connect
Orthopedic	14	dysphagia	you with clinical colleagues



TRIP is working with Doc2Doc to help connect you with clinical colleagues



TRIP and doc2doc: connecting you with clinical colleagues

Artificial Pacemakers: Basic Pacing Concepts Part- IV

MDR, XDR-TB

Is a patient with tuberculous pleural effusion infectious?

Should circumcision of both sexes be outlawed unless medically indicated?

Can a Hospital Say, 'Only Thin Doctors Can Work Here'?

Will the Queen die from anything other than old age?

What possible problems/challenges do you see/guess during London Olympics?

Tennis elbow

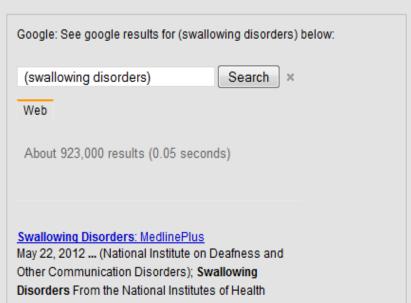
Are the pressures to prescribe too high?

More discussions >>



#### Not found what you're looking for?

While we try to answer all your information needs, we acknowledge that we're not always successful! Therefore, to help our users we have teamed up with a number of other resources to help you get the answers you need. These range from other search tools, clinical forums and even a clinical Q&A service (via Univadis for UK health professionals only).



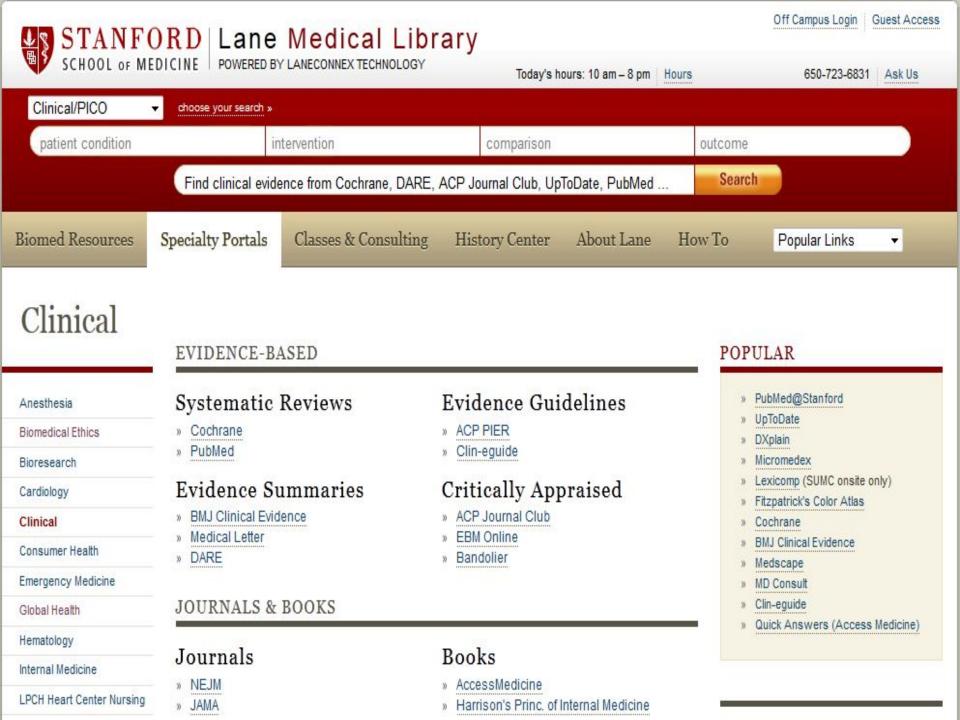


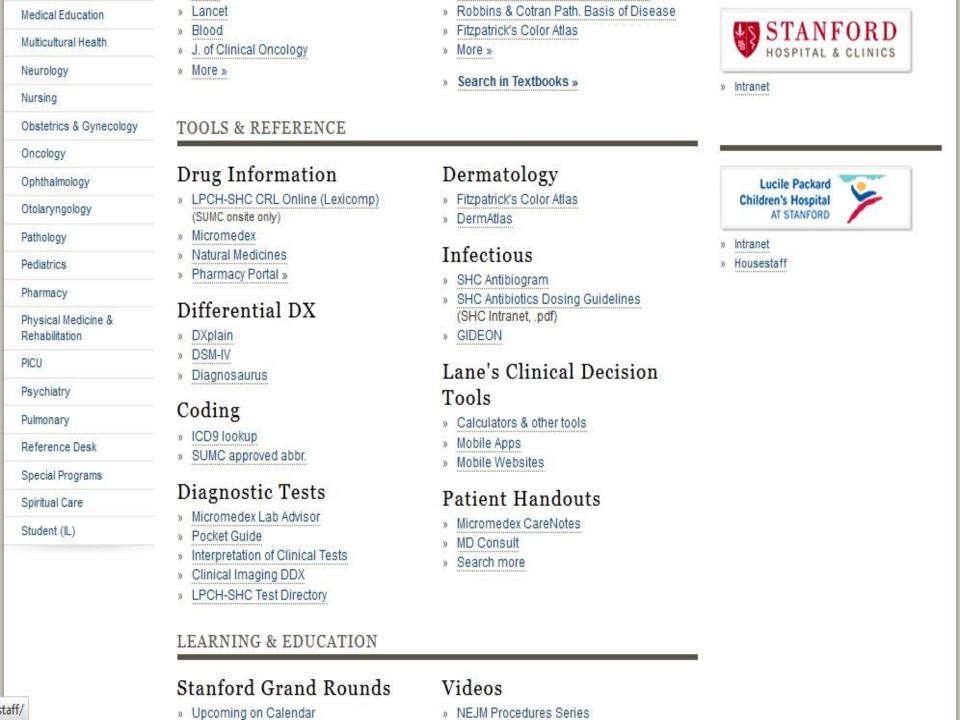
# **Best Evidence**

- Specialist "branch libraries" highlighting best evidence and providing organized collections of resources and services for specific disciplines and topics
- TRIP database cross-resource searching

# Integration

- Commercial resources integrated into the Virtual Library
- Federated searching → Cross-resource searching
- Apache SOLR
  - Open source option compatible with Drupal





#### LEARNING & EDUCATION

#### Stanford Grand Rounds

- » Upcoming on Calendar
- » Medicine Videos

#### Learning Tools & Texts

- » Lange Basic Science
- » AccessMedicine Collection
- » Stat!Ref
- » MD Consult Texts
- » JAMA Rational Clinical Exam

#### **Images**

- » Springerlmages
- » ANATOMY.TV
- » More »

#### Videos

- » NEJM Procedures Series
- » More »

#### Continuing Medical Education

- » MD Consult (info)
- » Clin-eguide (info)
- » NEJM Clinical Practice Series)
- » Medscape (info)
- » EXAM MASTER Online (info)
- » Harrison's Grand Rounds Lectures (info)
- » The Medical Letter (info)
- » Natural Medicines (info)
- » Lane's Practicing Info. Literacy »

#### ABOUT THE PORTAL



To suggest additions and changes to this portal or if you have questions, please contact Rick Zwies, 650-736-0334 or rzwies@stanford.edu.

#### BIOMEDICAL RESOURCES

Journals

Books

Databases

Images

Clinical Decision Tools

ALL »

#### SPECIALTY PORTALS

Pediatrics

Clinical

LPCH Heart Center Nursing

Pharmacy

PICU ALL »

#### ABOUT LANE

Hours

Directions & Maps

Contact Us

Study Spaces

Liaisons

Library Affiliations

#### STANFORD

Stanford Libraries

Stanford Authors in PubMed

Highly Accessed Articles @Stanford

Scope Blog







## Structured information

- Infrastructure to enable search access via EHR and decision support systems
- Identification & highlighting / "pushing" of "best evidence"
- Presentation in format suiting application, and including tools for analysis & for expediting application

# Focusing on Key Information

- Knowledge translation tools, such as highlighting of best evidence / of most popular resources
- Information structured according to clinical, not research, needs
- ☐ Checklists
- Dashboards



PATIENT HAS CONFIRMED

SITE MARKED/NOT APPLICABLE

DOES PATIENT HAVE A:

KNOWN ALLERGY?

NO

YES

NO

ANAESTHESIA SAFETY CHECK COMPLETED

DIFFICULT AIRWAY/ASPIRATION RISK?

RISK OF >500ML BLOOD LOSS (7ML/KG IN CHILDREN)?

AND FLUIDS PLANNED

YES, AND EQUIPMENT/ASSISTANCE AVAILABLE

YES, AND ADEQUATE INTRAVENOUS ACCESS

PULSE OXIMETER ON PATIENT AND FUNCTIONING

SIGN IN

IDENTITY

CONSENT

SITE
 PROCEDURE

## SURGICAL SAFETY CHECKLIST (FIRST EDITION)

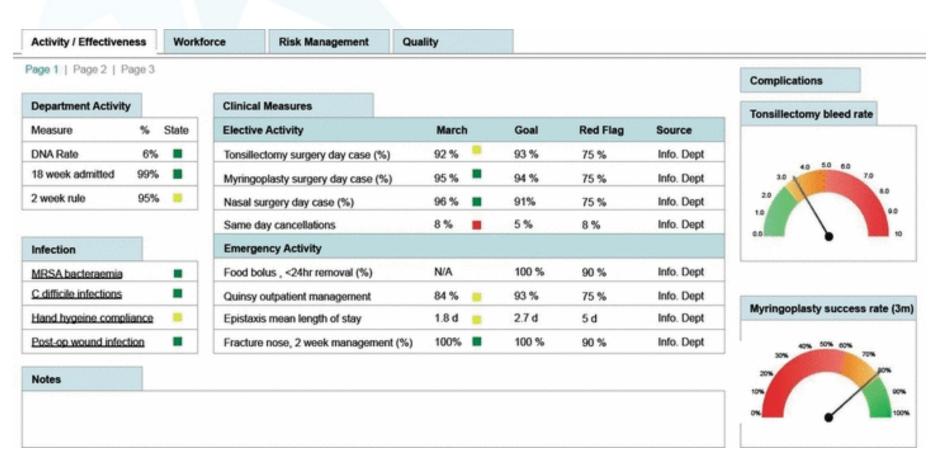
Before induction of anaesthesia

TII	ME OUT
	CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE
	SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM • PATIENT • SITE • PROCEDURE
	ANTICIPATED CRITICAL EVENTS
	SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?
	ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS?
	NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?
П	HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES? YES
	NOT APPLICABLE
	IS ESSENTIAL IMAGING DISPLAYED? YES NOT APPLICABLE

SIGN OUT NURSE VERBALLY CONFIRMS WITH THE TEAM: THE NAME OF THE PROCEDURE RECORDED THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE) HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME) WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT

Before patient leaves operating room

# Clinical dashboards in otolaryngology



#### Khemani et al. Clinical Otolaryngology

<u>Volume 35, Issue 3, pages 251-253, 23 JUN 2010 DOI: 10.1111/j.1749-4486.2010.02143.x</u> http://onlinelibrary.wiley.com/doi/10.1111/j.1749-4486.2010.02143.x/full#f1

# **Data & Statistics**

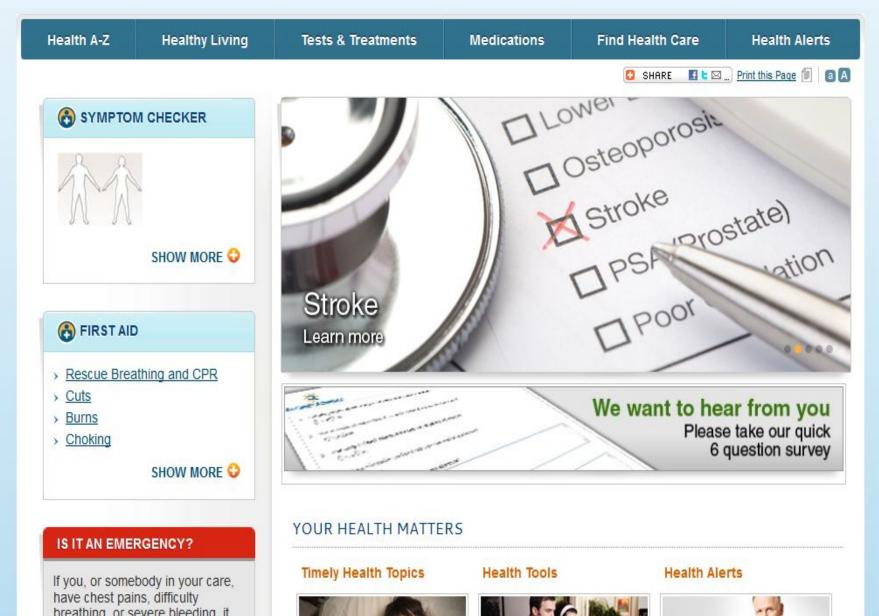
- Patient data as well as knowledge (Strachan, 2011)
- Integrated access to health systems statistics & other data with bibliographic resources
- Bring together CIHI portal, OPHID via OCUL Scholars Portal, and other Canadian sources
- Quality assurance & audit / comparison with "best practice"
  - Dashboards (NHS, 2008)



All MyHealthAlberta



SEARCH



#### IS IT AN EMERGENCY?

If you, or somebody in your care, have chest pains, difficulty breathing, or severe bleeding, it could be life-threatening. Call 911 or the local emergency number immediately.



#### PHONE NUMBERS

HealthLink Alberta 1-866-408-5465

Poison & Drug Information Service (PADIS) 1-800-332-1414

Mental Health Help Line 1-877-303-2642

Kids Help Phone 1-800-668-6868

SHOW MORE \*\*



#### **OUR PARTNERS**

Government of Alberta



#### YOUR HEALTH MATTERS

#### **Timely Health Topics**



- Influenza Info
- Influenza Immunization Clinics
- > Find a Doctor
- Find a Pharmacy
- Allergies: Avoiding outdoor triggers
- Allergies to Insect Stings
- Migraine Headaches
- > Shin Splints
- > Heart Attack
- > Eye Injury
- Scrapes
- > Bedbugs

MORE TIMELY HEALTH TOPICS

#### Health Tools



- Are you at risk for a heart attack?
- > Are you at risk for osteoporosis?
- > Are you ready to quit smoking?
- > From Embryo to Baby in 9 Months
- > What Is Your Child's BMI?
- > How Well Do You Bounce Back from Stressful Situations?
- > How Many Calories Did You Burn?

#### MORE HEALTH TOOLS

#### Health Alerts



- Boil Water Advisory remains in effect for six northwest Calgary communities
- Boil Water Advisory issued for seven NW Calgary Communities
- Hantavirus confirmed in rural Albertan; important precautions urged (North Zone)
- Hantavirus confirmed in rural Albertan: important precautions urged (Edmonton Zone)
- > Boil Water Advisory lifted for City of Fort Saskatchewan (Edmonton Zone)

MORE HEALTH ALERTS

# Communication & Personalization

- Relationship to authentication
- Outside the box choices
  - Discussions on clinical together with non-clinical topics
  - Specialized forums with critical mass to be sustained
  - Virtual participation of librarians alongside health professionals
- Constituent Relationship Management (CRM) solution identified fulfilling CVHL/BVCS needs: CiviCRM

# Social Media

- Personalization
- Current awareness / Veille
- Shared evaluation
- Rewards for participation

# Conclusion

"The following tools and techniques should be priorities in organizations interested in developing successful computer-based provider order entry (CPOE) and clinical decision support (CDS) implementations:

- A multidisciplinary team responsible for creating and maintaining the clinical content.
- An external repository of the organization's clinical content with a web-based viewer that allows anyone in the organization to review it.
- An online, collaborative, interactive, Internet-based tool to facilitate content development.
- An enterprise-wide tool to maintain the controlled clinical terminology concepts."

From: Sittig et al (2010), Summary points box, p. 54

# Conclusion

- Key: Collection & integration of various resources
   [Note existing Virtual Library of free resources!]
- Key: Authentication to coordinate various professional roles & affiliations
- Open source over commercial seems best
- Importance of customized approach for clinicians
- Knowledge translation Dashboards and checklists
- Make best advantage of existing health library resources & skills – question referral; crowd-sourcing
- Data integrated with knowledge; access to analysis tools
- Social approach to clinical material & clinicians

# Merci!

# Thank you!

We need & welcome your input -

Comments & Questions, Please

Nous avons besoin de votre participation et nous apprécions votre suggestions –

Vos questions et commentaires, s'il vous plaît

# Canadian Virtual Health Library / Bibliothèque virtuelle canadienne de la santé

Presentation & bibliography available upon request

jim.henderson@mcgill.ca wstark@rogers.com

