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The library at the point of care: integrated resources and instruction in the third-year medical school curriculum

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The library at the point of care:

Integrated resources and instruction in the third-year medical school curriculum

Whitney A. Townsend, MLIS; Mark P. MacEachern, MLIS; Irina Zeylikovich, MSI. University of Michigan Taubman Health Sciences Library

	M1	M2	М3	M3 (IM)	M3 (Peds)	14
Scheduling	2 sessions 1: 1 hr optional (early August) 2: 2 hr required (mid-late August)	1 2 hr session October	1 2 hr session Early May	3 month intervals beginning in June	3 month intervals beginning in June	eginning in Aug.
Session description	MDM: Patients & Populations I	MDM: Patients & Populations II	MDM: Patients & Populations II (M3 Orientation)	IM Clerkship	Peds Clerkship	dvanced Medical herapeutics (AMT)
Session Focus	Foundational Resources: Background information resources, secondary literature	Evidence-based Practice Resources: Primary vs. secondary literature; systematic reviews; practice guidelines	Information Resources in the Clinical Environment: Drug databases; practice guidelines; patient education resources; mobile resources	Information Resources in the Clinical Environment: PubMed clinical queries; practice guidelines; drug databases; systematic reviews	Information Resources in the Clinical Environment: Evaluating systematic review quality for use in clinical practice	esearch Resources: inding the evidence ase in the primary terature; the omprehensive terature search
Medline	Medline via Pubmed Medline via Ovid + video tutorials (PubMed & Ovid basics; Accessing E-journals & MGetIt)	Clinical Queries: Therapy Systematic Reviews Guidelines		Clinical Queries: Clinical Studies Systematic Reviews	PubMed Clinical Queries (Systematic Reviews)	ntroduction to MeSH n PubMed; PubMed linical Queries
Cochrane		Cochrane DSR via Ovid		CDSR (clinical use)	CDSR (information evaluation)	
Guidelines		National Guideline Clearinghouse (NGC) UMHS Practice Guidelines ACP-PIER	Dynamed NGC ACP-PIER UMHS PGs	Dynamed NGC ACP-PIER UMHS PGs		
Textbooks	Video tutorial: Accessing E-books (Stat!Ref, MDConsult, AccessMedicine)					
Drug Databases			Micromedex Facts & Comparisons Natural Standard	Micromedex Facts & Comparisons		
Patient Education			UMHS Patient Ed site MedlinePlus	If time		
Misc.	Video tutorial: Intro to the THL homepage Psychosocial Databases		Clinical Calculators AccessMedicine (Diagnosaurus) AccessSurgery Mobile Device Access	If time	DARE JAMAEvidence	31 Web of Science copus mbase loogle Scholar

Current M3 Involvement

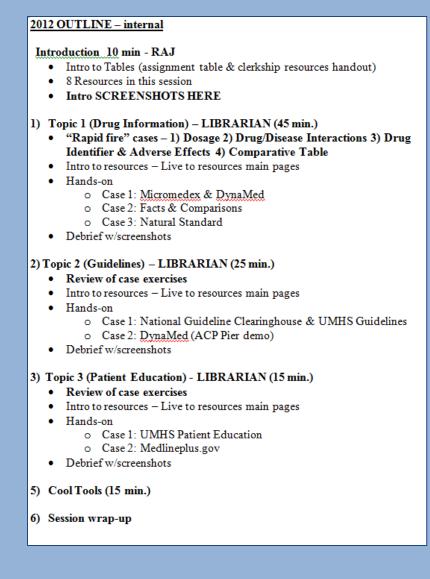
- •3 Curriculum-integrated information resources sessions
- LibGuide supplemental content
- CMS-integrated library page

One of the most pressing challenges clinicians face is effectively and appropriately utilizing online information resources at the point of care. The third year medical school curriculum is a prime place to teach tomorrow's physicians to incorporate library resources into their workflow as they begin their clinical clerkship rotations. This poster is an overview of the ways librarians integrate instruction and online resources into third-year medical student clerkship experiences within a large academic health system. Methods include: hands-on instruction during preclerkship orientation, targeted hands-on instruction co-taught with clinical faculty during two different clerkship rotations, and utilization of the medical school's online course management system to supply targeted point of care resources and relevant online instruction to designated clerkship rotations.

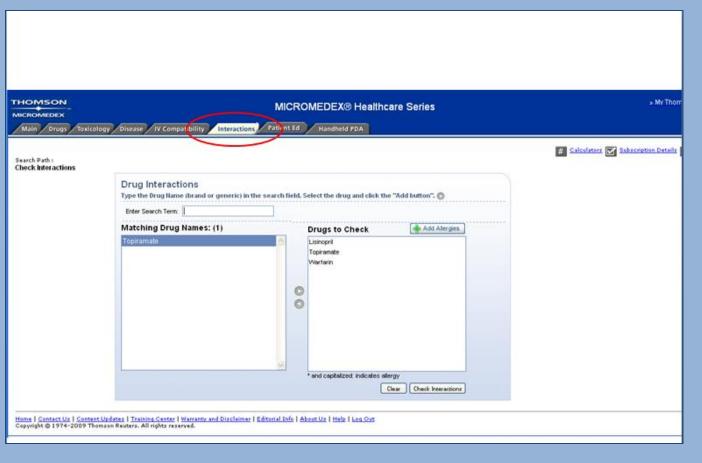
M3 Orientation

Orientation to PoC Resources

Taubman Health Sciences librarians have been involved in third year medical student orientation sessions for over a decade. Orientation to the wards takes place in early May, and marks a "tipping point" for students and their relationship to information resources. Students begin their clinical rotations and need rapid access to high quality information for medical decision making at the point of care. This two hour hands-on session is co-taught with a faculty physician and is arranged in a rapid-fire case-based format to simulate the clinical environment. Students are also briefly introduced to available mobile resources and the library's mobile resources guide.



Topic1: Finding Drug Information		Patients and Populations May 20
Source	Where to Go	Notes
<u>source</u>	where to do	Notes
1. Micromedex and Dynamed		
	URLfor clinical homepage:	
a) You are considering prescribing <u>Lisinopril</u> to	http://www.med.umich.edu/clinical	
a 53-year-old patient with hypertension. What	Notice III Notice II	
is the recommended dosage?	a) Clinical homepage → Micromedex	
b) What are the drug –drug interactions for:	Clinical Homepage → <u>Dynamed</u>	
(i) Lisinopril?		
(A CISHIODHII:	b) Clinical homepage -> Micromedex ->	
(ii) Warfarin?	Interactions tab (at top)	
(")	Clinical Homepage → Dynamed	
(iii) Topiramate?		
2. Facts & Comparisons		
Facts & Comparisons a) You see a new patient in clinic who has	Clinical homepage → Facts & Comparisons → Drug	
developed a rash. She just started taking a	Identifier (left navigation)	
new medication, but she doesn't remember	identiner (lerchavigation)	
what it is. She shows you a pillbox containing	Clinical homepage → Facts & Comparisons → enter	
the medication. It is not familiar to you. What	drug name in search → adverse reactions	
is it? Can it be causing a rash?	aragname in search 7 daverse reactions	
DOLOVAL		
500 mg. BRISTOL 6		
b) You see a 40-year-old pregnant patient who		
is post-MI (and has a history of asthma). You	Clinical homepage → Facts & Comparisons → Drug	
are considering prescribing carvedilol. Are	Interactions (left search box)	
there any interactions with carvedilol that you		
should be aware of <u>for this patient</u> ?		

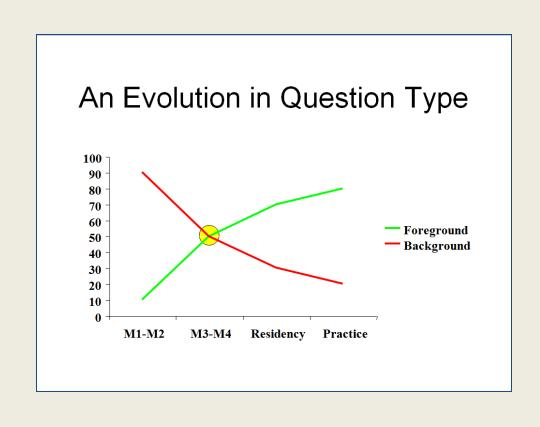


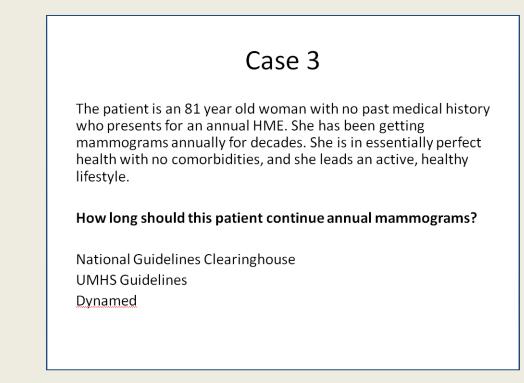
Online Resource	s to Know for M3 Clerkship Rotations
Internal Medicine	AccessMedicine Dynamed ACP-PIER UptoDate
Surgery	AccessSurgery (includes Schwartz's Principles of Surgery) Surgery Clerkship Guide
Pediatrics	Red Book Online AccessPediatrics (1 concurrent user limit; includes Rudolph's Pediatrics) Pediatric Care Online
Obstetrics/Gynecology	Williams Obstetrics Williams Gynecology LactMed
Neurology	Adams & Victor's Principles of Neurology Clinical Neurology
Psychiatry	PsychiatryOnline (includes DSM-IV TR)
Family Medicine	Textbook of Family Medicine (McWhinney & Freeman Textbook of Family Medicine (Rakel) Current Diagnosis & Treatment in Family Medicine
Need help with resources? Contact y	our librarian!
Whitney Townsend whitneyt@umich.	<u>edu</u>
Mark MacEachern markmac@umich.e	<u>edu</u>

Internal Medicine Clerkship

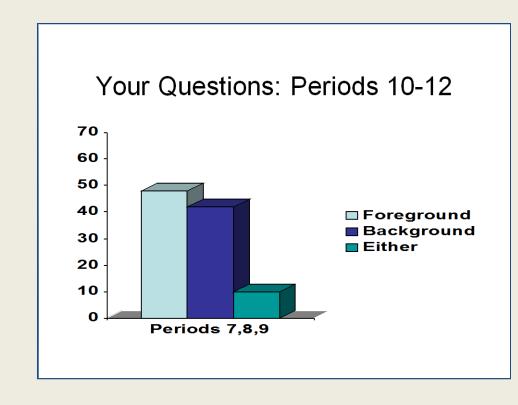
Real-Case/Real-Time EBM

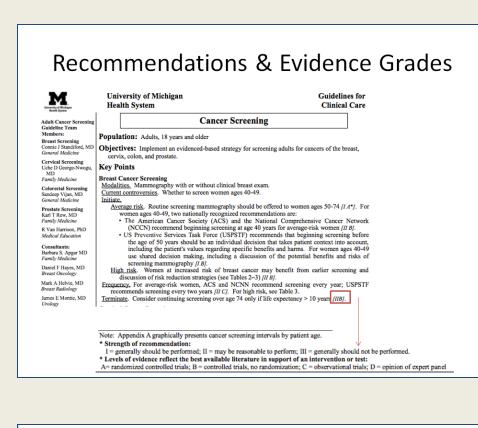
The third-year Internal Medicine Clerkship session requires students to submit a challenging clinical question they encountered recently during the rotation. The instructors review the student-submitted questions and identify four that best illustrate the tools and features of four major categories of resources: primary literature, systematic reviews, practice guidelines, and drug databases. For each of the four clinical questions selected, the students are directed to two resources and given five minutes to answer the question. The faculty instructor leads a discussion about the clinical significance of their findings. Finally, a librarian walks the students through each resource, again highlighting key features and functionalities. [1]





	Auc	ditional Co	nsi	de	era	itic	n		
M Birks Syst	University of Michigan Health System		Studies 734) 936-9771 734) 232-2484					74. Older v	
December	9 2011							ncer. Howeve included in	
Memorano	.,							breast cance	
To:		Primary Care Obstetricians/Gynecologists, and Prinistants	nary Care	S	creening creened p	by detecti opulation.	on of ear However	n shown to lier stage le- r, cost effect	sions in iveness n
From:	GUIDES (Guideline Utilization Imple Connie Standiford, MD, GUIDES Van Harrison, PhD, GUIDES Co- Grant Greenberg, MD, MA, MHS		i ti	decrease by age 75 to 80, due to lower life expectane over-diagnosis (since screening detects cli- insignificant cancers). The decision to screen a wor- this age group should be based on her general heal					
Subject:	UMHS Clinical Care Guideline Upo	late: Cancer Screening 2011 Update			onsiderati ife expecta		orbidities t	that may seven	rely limit
	reast cancer screening Age to initiate: Some professional or recommend starting at age 50, with account patient context (e.g. risk) and	ganizations recommend starting at age 40 for all v individual decision-making for women age 40-49 patients values regarding specific benefits and har n, American Cancer Society and the National Comi	that takes into	nces of breast	-cancer-relate	d outcomes amo	ng 1000 women	screened annually o	r biennially.
NEW!		year and US Preventive Services Task Force recom		start	ing at age 40 o	or 50 and contin	uing through ag	e 69 or 74	-
		ge 74 if life expectancy is greater than 10 years.	Scre	ening program	ı	Cum	ulative conseque	nces of screening pro	ogram
			Mammogram frequency	Starting age	Ending age	Lives saved, number	Life-years gained, number	False-positive mammograms, number	Unnecessary biopsies, number
			Annual						
				40	69	8.3	164	2250	158
				50	69	7.3	132	1350	95
				40	74	10.5	188	2470	173
			L	50	74	9.5	156	1570	110
			Biennial						
				40	69	6.1	120	1250	88
			1	50	69	5.4	99	780	55
			1	40	74	8.2	142	1410	99





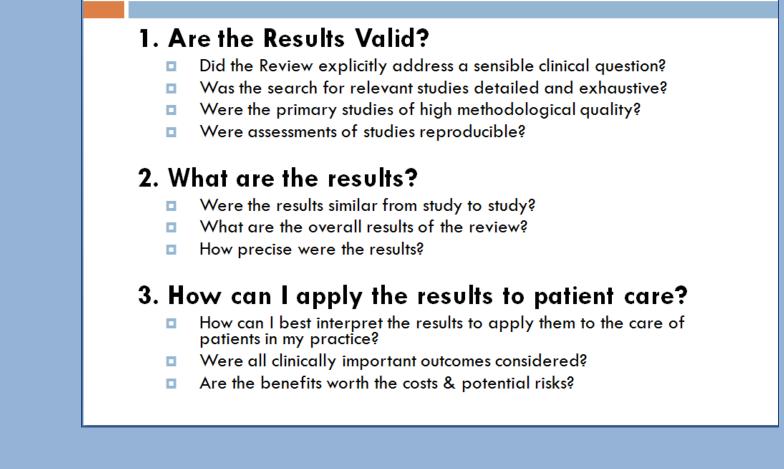
Collapse All Coll		DynaMed
Recommendations United States Preventive Services Task Force (USPSTF) American College of Districticians and Gynecologists (ACOS) American College of Radiology and Society of Breast Tanging American College of Radiology and Society of Breast Tanging American College of Districticians and Gynecologists (ACOS) American College of Radiology and Society of Breast Tanging American College of Radiology and Society of Breast Tanging American College of State Preventive Services Task Force (USPSTF) recommended Services Task Force (USPSTF) recommendations repaired against routine screening for breast cancer for women aged 40-49 years but instead suggests individualized decision-making (USPSTF) Grade (O) o annual mammography stories recommended by American College of Radiology and Society of Breast Tanging American College of Station Services or Services Task Force on Preventive Health Care (CTFPHC) recommends against routine screening for breast cancer in women aged 40-49 years o screening mammography stories recommended every 2 years by USPSTF (USPSTF Grade B) or screening mammography recommended annually by ACS, ACOG, and ACR/SBI or Women aged 50-74 years or screening mammography recommended every 2 years by USPSTF (USPSTF Grade B) or women aged 40-99 years	ome Recent Updates E-Ne	wsietter Mobile Calculators ~ Send Comment Abou
Breast cancer screening Overview: Overview:	DynaMed B	
United States Preventive Services Task Force (USPSTF) American College of Obstetricians and Gynecologists (ACOG) American College of Expensions American College of Expensions American College of Dataster Preventive Services Task Anner College on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality (level 2 [mid-level] evidence) on tassociated with decreased overall mortality in women aged 40-49 years to united the screening for breast cancer for women aged 40-49 years and tassociated with decreased overall mortality in women aged 40-49 years and tassociated with decreased overall mortality in women aged 40-49 years and tassociated with decreased overall mortality in women aged 40-49 years and tassociated with decreased overall mortality in women aged 40-49 years and tassociated with decreased overall mortality in women aged 40-49 years and tassociated with decreased overall mortality in women aged 39-69 years (level 2 [mid-level] evidence) on tassociated with decreased overall mortality in women aged 39-69 years (level 2 [mid-level] evidence) on tassociated with decreased overall mortality in women aged 39-69 years (level 2 [mid-level] evidence) on tassociated with decreased overall mortality in women aged 39-69 years (level 2 [mid-level] evidence) on tassociated with decreased overall mortality in women aged 39-69 years (level 2 [mid-level] evidence) on tassociated with decreased overall mortalit		4Result List
Preventive Services Task Force (USPSTF) American Colege of Obstetricians and Oynecologists (ACOG) American Colege of Radiology and Society (ACS) American Colege of Badiology and Society of Breast Imaging American Colege of Physicians American Colege of Radiology and Society (ACS) American Colege of Radiology and Society (ACS) American Colege of Radiology and Society (ACS) American Colege of Physicians	☐ Recommendations ▲	Breast cancer screening
	Preventive Senices Task Force (USPSTF) American College of Obstetricians and Gynecologists (ACOG) American Cancer Society (ACS) American College of Radiology and Society of Breast Imaging American College	mammography for breast cancer screening

Pediatrics Clerkship

Systematic Reviews at the PoC

In contrast to the frenetic pace of the Internal Medicine Clerkship session, the third-year Pediatrics Clerkship session focuses less on finding and more on evaluating information and integrating that information into clinical practice. During the session, students are given a PICO question and asked to search for a relevant systematic review using PubMed's Clinical Queries. Once a relevant review is identified, they are asked to use the DARE (Database of Abstracts of Reviews of Effects) review structure to evaluate it, and then report their conclusions to the class. This session is held during the 12-week Pediatrics rotation. [1]





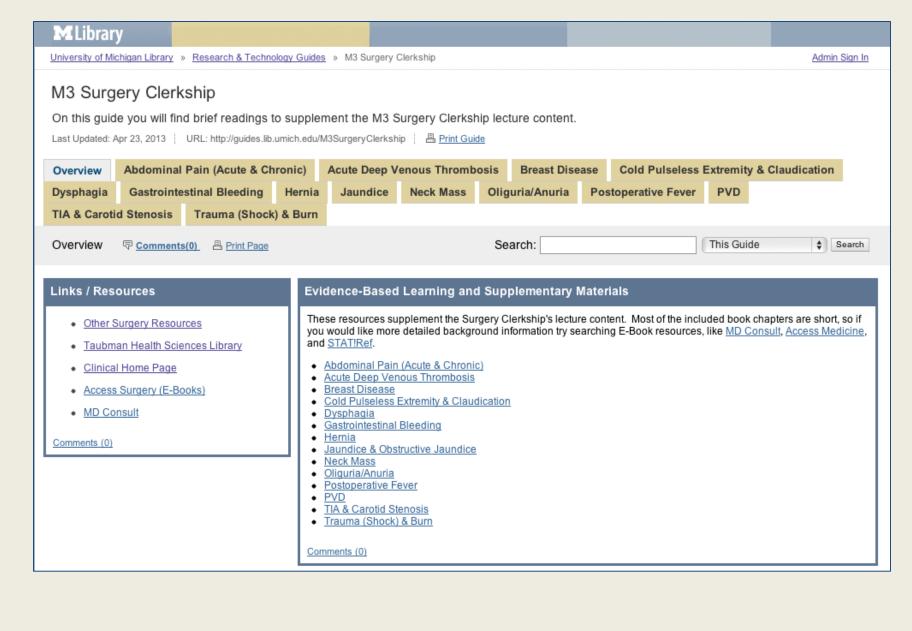
Group by IVIG	Study Name	Stati	stics for	Each Stu	dv		MH OF	and 95% C		
		MH OR	Lower Limit		P					
No	Shinohara et al,28 1999	0.599	0.245	1.467	.262					Ī
No	Kato et al,24 1979	0.481	0.023	9.942	.636	- 1	\rightarrow	-		
No	Kan and Hasino,19 1999	0.542	0.284	1.035	.064	- 1		-	- 1	
No	Sone and Suzuki,29 1987	0.732	0.337	1.587	.429	- 1		-		
No	Neudorf.36 1993	0.359	0.016	8.253	.522	- 1	-	-	—	
	ASA alone	0.601	0.392	0.921	.019	- 1		•		
Yes	Sundel et al.39 2003	0.667	0.180	2.463	.543			-	-	
Yes	Okada et al,27 2003	1.308	0.075	22.933	.854	- 1	+	-	-	-
Yes	Shinohara et al,28 1999	0.052	0.006	0.459	.008	-		— I		
	ASA+IVIG	0.352	0.136	0.909	.031	- 1	-	-		
-	All studies combined	0.546	0.371	0.803	.002					
Fig 3. Overall	meta-analysis ($n = 8$) and	d meta-analy	yses of a	Sumr		/	0.1 A combine		G(n=3)	100 therapy subgroups.

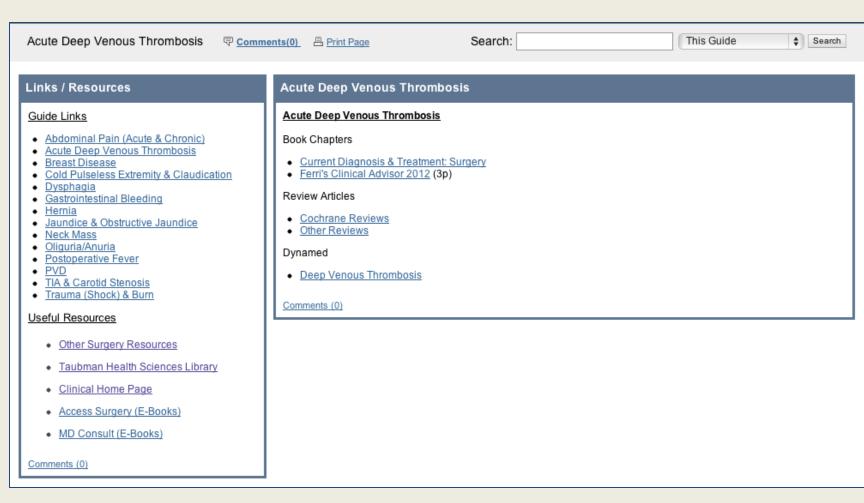
Surgery Clerkship

Online Surgical Resources

In late 2011, an author (WT) attended a Clerkship director meeting to discuss how the library supports clerkship rotations. After the session the surgery clerkship director expressed interest in developing a website of supplemental readings for that rotation's lecture content. The director and the surgery librarian (MPM) met to discuss E-Book content and website platforms. ultimately deciding on a Libguide comprised of short E-Book chapters, review articles, and Dynamed entries. The Libguide was instituted as a pilot in September

2012 (http://guides.lib.umich.edu/M3SurgeryClerkship).





[1] MacEachern, M., **Townsend, W**., Young, K., & Rana, G. (2012). Librarian integration in a four-year medical school curriculum: a timeline. *Medical Reference Services Quarterly*, 31(1), 105-114. doi:10.1080/02763869.2012.641856