DukeHealth

# BACKGROUND

Infobuttons are context-specific links from one information system, such as an electronic health record (EHR) to some other resource, such as library resources. Over five years ago, the Library integrated infobuttons into the health system's EHR.

The infobuttons primarily link out to UpToDate. The black search bar at the top represents the clinical search tool:

Medical Center Library Clinical Search Show results from other resources -	Q As	k a Librarian				
UpToDate®       Search UpToDate       Q	🎒 Duke	Health $\vee$				
Contents V Calculators Drug Interactions	Register	Log In				
Search Results for professional level information on (pneumonia).						

A custom configuration enabled providers to access six additional information resources and library services through a small clinical search navigation bar. When a user clicks any of those information resources, the same search is run in that resource.

Medical Center Library Clinical Search	Show results from other resources -		Q Ask a Librarian	
UpToDate® Search UpToDate	UpToDate ACP Journal Club	Q	創 Duke	Health $\vee$
Contents V Calculators Drug Interaction	ClinicalKey 🗹 Cochrane Library		Register	Log In
Search Results for professional level information or				
Treatment of community-acquired	Lexicomp MedlinePlus 🗗 PubMed		Coll	apse Results
pneumonia in adults in the outpatient setting				

While UpToDate is used more than 350,000 times per year in the EHR, other resources have minimal use.

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5	0							_
•	July 2018	August 2018	Septemb	er 2018 October 2018	3 Novembe	er 2018		
Prima	ary Dimension: Event Action Event Label Other -							
	ot Rows Secondary dimension 👻 Sort Type: Default 👻				Q	advanced	E C	Ē
	Event Label ③	Total Events ②	$\downarrow$	Unique Events 🕐	Event Value	Avg. Value	0	
		% of Tota	<b>351</b> al: 100.00% (351)	<b>306</b> % of Total: 100.00% (306)	<b>0</b> % of Total: 0.00% (0)		Avg	for Vi
	PubMed		<b>67</b> (19.09%)	<b>57</b> (18.63%)	0 (0.00%)			
	Dynamed Plus		<b>62</b> (17.66%)	<b>50</b> (16.34%)	0 (0.00%)			
	Cochrane Library		<b>46</b> (13.11%)	34 (11.11%)	0 (0.00%)			
	ClinicalKey		<b>45</b> (12.82%)	<b>42</b> (13.73%)	0 (0.00%)			
	Lexicomp		<b>43</b> (12.25%)	40 (13.07%)	0 (0.00%)			
	ACP Journal Club		<b>33</b> (9.40%)	32 (10.46%)	0 (0.00%)			

The team hypothesized that the providers were potentially unaware of the other resources and services provided.

## METHODS

- Library staff partnered with a team from the health system that included a hospitalist/EHR champion and two MD Clinical Informatics fellows.
- Team developed a plan to redesign the results display of the clinical search navigation bar based on the analysis of infobutton tool usage data.
- Redesign included changing the clinical search tool behavior, labels and naming, and colors.

# INFOBUTTONS IN THE ELECTRONIC HEALTH RECORD: IMPROVING USAGE AND VISIBILITY Sarah Cantrell, MLIS; Beverly Murphy, MLS, AHIP, FMLA; Megan von Isenburg, MSLS, AHIP Duke University Medical Center Library & Archives, Durham, NC

## **USABILITY TESTING TEAM**

- > Developed a usability testing script.
- > Used Morae usability software to build out the tasks from the script in order to record and observe user interactions.
- $\succ$  Conducted the testing by walking through the tasks and taking notes.
- $\succ$  Took approximately 15 minutes to complete tasks.
- Recorded and later analyzed usability sessions.
- > Conducted four usability tests as well as a group discussion with the Medical Library Advisory Council.

Medical Center Library Clinical Search	Show results from other resources -
Search UpToDate	UpToDate Contents Patient Education What's New Practice Cl
Search Results for professional level information on	ClinicalKey 🗹
	Cochrane Library
	Dynamed Plus
Treatment of community-acquired pneumoni	Lexicomp nt setting
Management of healthcare-associated pneum	
Summary and recommendations	PubMed Clipping fr
Community-acquired pneumonia in children:	Outpatient treatment
Summary and recommendations	
Diagnostic approach to community-acquired p	pneumonia in adults
Nonresolving pneumonia	
Summary and recommendations	
Pneumonia in children: Inpatient treatment oxy.lib.duke.edu/login?url=http://www.dynamed.com/resultlist?filter=	r=all9

## **NEW INTERFACE MOCK-UPS**

- > Color changed to increase visibility of the clinical search tool. Two color options were offered.
- > Option created to list the resources already opened once a user entered UpToDate, the default tool.

### **Option 1**: Dark Blue

Medical Center Library Clinical Search	○ Ask a Librarian  Show results from
<b>Option 2</b> : Light Blue	
Medical Center Library Clinical Search	○ Ask a Librarian  Show results from
Showing the drop-down options expanded	Chat Now! Email Close X





### om other resources 🔻





UpToDate ACP Journal Club ClinicalKey 🗹 Cochrane Library Dynamed Plus Lexicomp MedlinePlus PubMed Close X

## RESULTS

### **Infobutton Usability Results**

- > Users did not notice the clinical search tool, confirming the data in Google Analytics.
- > Test subjects accurately guessed what types of resources were available in the menu of options once it was brought to their attention.
- Users accurately assumed that the "Ask a Librarian" link would allow them to chat with a librarian.
- Some users mentioned that while they would use the chat service, it would be challenging to instant message with a librarian via the EHR due to a lack of time.
- Some test subjects expressed that the need to "dig deep" into the literature would have to be done later in the day, outside of the EHR.
- Some users expressed concern that they might be bothering the librarian by chatting with them or emailing them.

### **Mock-up Preferences**

- > Light blue was the more popular choice. Most felt the dark blue was too similar to the current clinical search tool.
- Most liked the option to have the resources box open with the option to close.
- > Most liked the option to both chat with or email the librarian. It was suggested we add a text message option; the library currently offers this but it was not on the mock-up.
- It was suggested to better brand the clinical search tool to **include "Duke,"** which had been previously missing.

## **NEXT STEPS**

- > Make the recommended changes to the existing clinical search tool bar.
- Examine the Google Analytics after implementing the changes in order to explore trends.
- Conduct additional usability testing in six months.

## ACKNOWLEDGEMENTS

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