

## The University of Texas Southwestern Medical Center at Dallas UT Southwestern Family Practice Residency Program

# INTERNET WEB-BASED MATERIALS IN FAMILY MEDICINE EDUCATION: A NATIONAL SURVEY

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### Methods:

#### Study Population and Randomization

The 456 programs listed in the AAFP 2002, Directory of Family Practice Residency Programs are divided into five categories based on affiliation and structure of the residency program: community based (CB); community based and medical school affiliated (CBMSAF); community based and medical school administered (CBMSAD); medical school based (MS), and military. A random sample of programs within each of the first four categories were selected to participate in the study. Military programs were excluded. A total of 312 programs were selected: CB (24), CBMSAF (159), CBMSAD (73), and MS (56).

### Survey

For the selected programs, residency directors or coordinators were sent a survey packet containing a 14-item questionnaire for each resident and a letter of explanation regarding the study. Those contacted were requested to distribute the surveys to residents in the program and return completed surveys in a pre-addressed envelope. Residents reported on their own access to computers and personal digital assistants (PDAs) at home and in the office, their use of the Internet for personal use and clinical information, and their preferences for accessing information currently provided at teaching conferences, for national board exam preparation, and at clinical point-of-care.

After the initial mailing, contacts at programs not responding were sent reminders via e-mail and offered another survey packet to be sent if necessary. If a program not responding was in an under represented category, a phone call to the program coordinator was made by one of the study authors to further encourage their participation.

### Survey Response Rate

The response rate to the survey varied by program type. The CBMSAF programs returned 600 surveys (49.3%), and the CB programs returned 60 surveys (4.8%). The CBMSAD programs returned 300 surveys (25.5%), and the MS programs returned 240 surveys (20.4%). Due to the low response rate of CB programs, and the similarities between CBMSAF and CB programs and the similarities between CBMSAD and MS programs, the program categories were combined to produce two program categories for statistical analysis. The CBMSAF and CB programs were combined into a 'community centric' program type, and the CBMSAD and the MS programs were combined into a 'medical school centric' program type.



### Survey Results

- Resident access to computing and the Internet are very well established with no statistically significant difference between the Community Centric and Medical School Centric programs.
- Most residents have access to a home computer or laptop computer, and most residents have access to a personal digital assistant (PDA).
- The majority of residents have early experience with computers. Over 60% of survey respondents reported using a computer for the first time prior to reaching their 20s.
- Resident exposure to a Web-based curriculum during medical school ranged from 59.4 - 61.0%.
- The majority of residents (75%) from both programs report searching the Web for clinical information from 0 to 5 hours per week.
- Approximately 25% of residents from both programs report searching the Web for clinical information 6 or more hours per week.
- There is a statistically significant difference in self-reported Web search skills between the community centric residents and the medical school centric residents, but this difference disappears when residents are asked if they are able to find clinically useful information during their Web searches.

	Community Centric		Medical School Centric	
	n	%	n	%
<b>Access to Web-based Resources:</b>				
<b>Top 3 Reported by Residents</b>				
Medical Journals	526	82.6%	423	78.3%
Clinical Gateways (e.g. MDConsult)	490	76.9%	387	71.7%
Medical Textbooks	460	72.2%	355	65.7%
Drug Information	421	66.1%	353	65.4%
Patient education materials	372	58.4%	309	57.2%
<b>Access to PDA Resources:</b>				
<b>Top 5 Reported by Residents</b>				
Drug Information	542	94.1%	447	93.1%
Clinical Calculator	480	83.3%	378	78.8%
Medical Textbooks	405	70.3%	333	69.4%
Patient Tracker	156	27.1%	82	17.1%
Coding	140	24.3%	107	22.3%

Resident Computing Access	Community Centric		Medical School Centric		p value
	n	%	n	%	
Home access to desktop computer	564	89.4%	469	87.8%	0.40
Internet access from this desktop computer	542	97.0%	455	97.0%	0.93
Access to laptop computer	313	50.7%	245	46.9%	0.19
Possession of a PDA	576	93.8%	480	91.8%	0.26

Preference for accessing in-depth clinical information for patient care	Community Centric		Medical School Centric	
	n	%	n	%
Desktop/laptop computer	551	92.5%	466	92.3%
Traditional Print	481	84.2%	419	84.5%
Colleagues	417	74.2%	356	73.3%
Medical Library/Librarian	341	59.5%	276	57.1%

Preference for accessing clinical information at the point-of-care	Community Centric		Medical School Centric	
	n	%	n	%
Desktop/laptop computer	475	81.3%	424	84.0%
PDA	507	86.7%	425	85.3%
Traditional Print	408	70.9%	342	68.8%
Colleagues	499	87.2%	424	86.5%
Medical Library/Librarian	169	30.5%	117	24.3%

Preference of educational format offered at residency conferences	Community Centric		Medical School Centric	
	n	%	n	%
Traditional didactic conference	496	85.1%	417	83.7%
Web-based materials with conference	409	70.8%	371	74.5%
Self-study on the web	353	60.3%	304	61.3%

Search capabilities for Web-based clinical information	Community Centric		Medical School Centric		p value
	n	%	n	%	
Able to find useful information on the web	560	94.0%	471	92.4%	0.82
Quite skilled or Intermediate skills	497	79.3%	390	73.3%	0.01
Quite skilled	185	29.5%	129	24.3%	0.04
Instruction on web-based searches during residency	383	64.7%	342	68.0%	0.25

Percentages are based upon total available data for each question.

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