

**2008 National
Electronic Laboratory Reporting (ELR)
Snapshot Survey**

Summary of Results

J.A. Magnuson, PhD, RS

Oregon State Public Health, Acute and Communicable Disease Prevention
800 NE Oregon St., Ste. 772, Portland, OR 97232
Tel. 971-673-1111, FAX 971-673-1100
j.a.magnuson@state.or.us

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Interpretation

Survey questions are listed in numerical order, each followed by data presentation. In some instances, the survey questions are abbreviated or slightly changed for readability in this summary context. The author has appended notes to some of the tables and graphs to enhance interpretation of data.

The 2008 survey consists of data gathered from:

- 39 states in the United States
- Federated States of Micronesia
- Five US Metropolitan Areas (alphabetically, by state): Los Angeles, CA; Denver, CO; Chicago, IL; Indianapolis, IN; New York City, NY.

The final page of this report acknowledges the 14 members of the 2008 ELR Survey Editorial Board.

Historic Participation in the Annual ELR National Snapshot Survey, 2004-2008

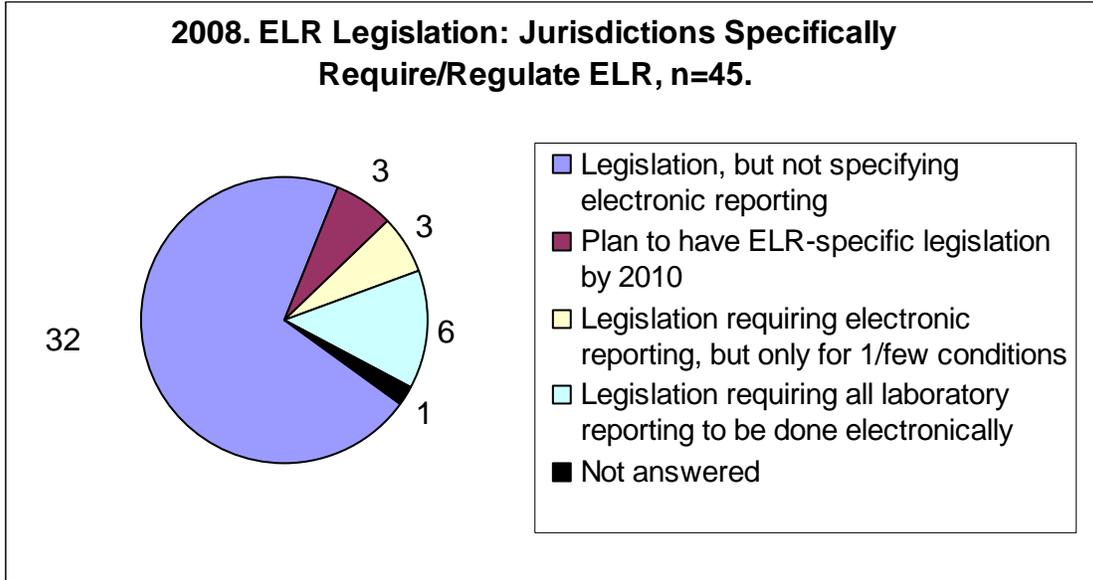
Legend	Not Included	
	Invited - No Response	
	Responded	

	2004	2005	2006	2007	2008
Chicago					
Denver					
FSM					
Indianapolis					
Los Angeles					
New York City					
Puerto Rico					
Washington DC					
Alabama					
Alaska					
Arizona					
Arkansas					
California					
Colorado					
Connecticut					
Delaware					
Florida					
Georgia					
Hawaii					
Idaho					
Illinois					
Indiana					
Iowa					
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland					
Massachusetts					

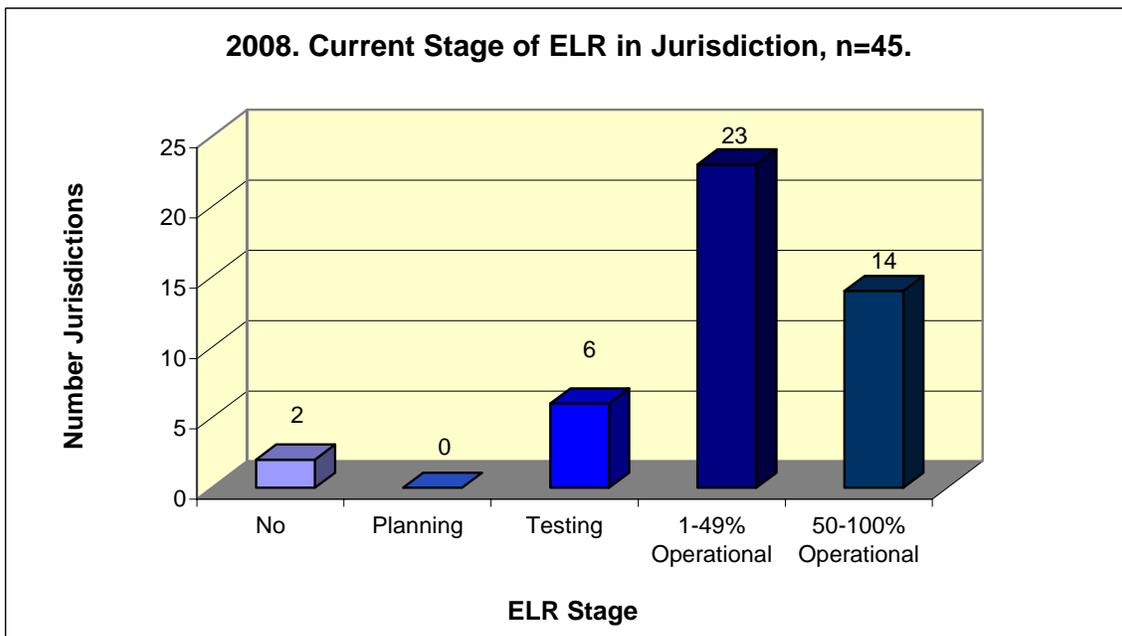
	2004	2005	2006	2007	2008
Michigan					
Minnesota					
Mississippi					
Missouri					
Montana					
Nebraska					
Nevada					
New Hampshire					
New Jersey					
New Mexico					
New York					
North Carolina					
North Dakota					
Ohio					
Oklahoma					
Oregon					
Pennsylvania					
Rhode Island					
South Carolina					
South Dakota					
Tennessee					
Texas					
Utah					
Vermont					
Virginia					
Washington					
West Virginia					
Wisconsin					
Wyoming					

SECTION: State and Scope of ELR

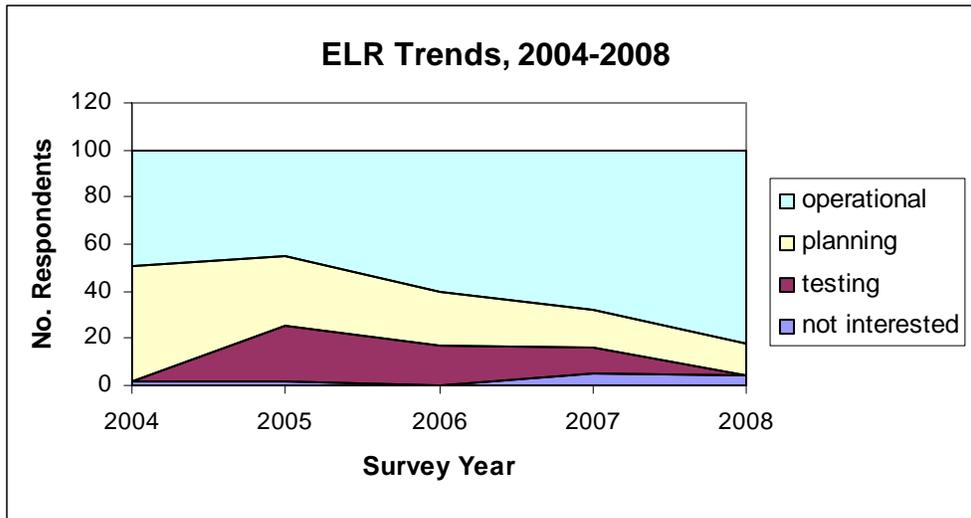
2. Does your state/jurisdiction have legislation specifically requiring/regulating electronic lab reporting?



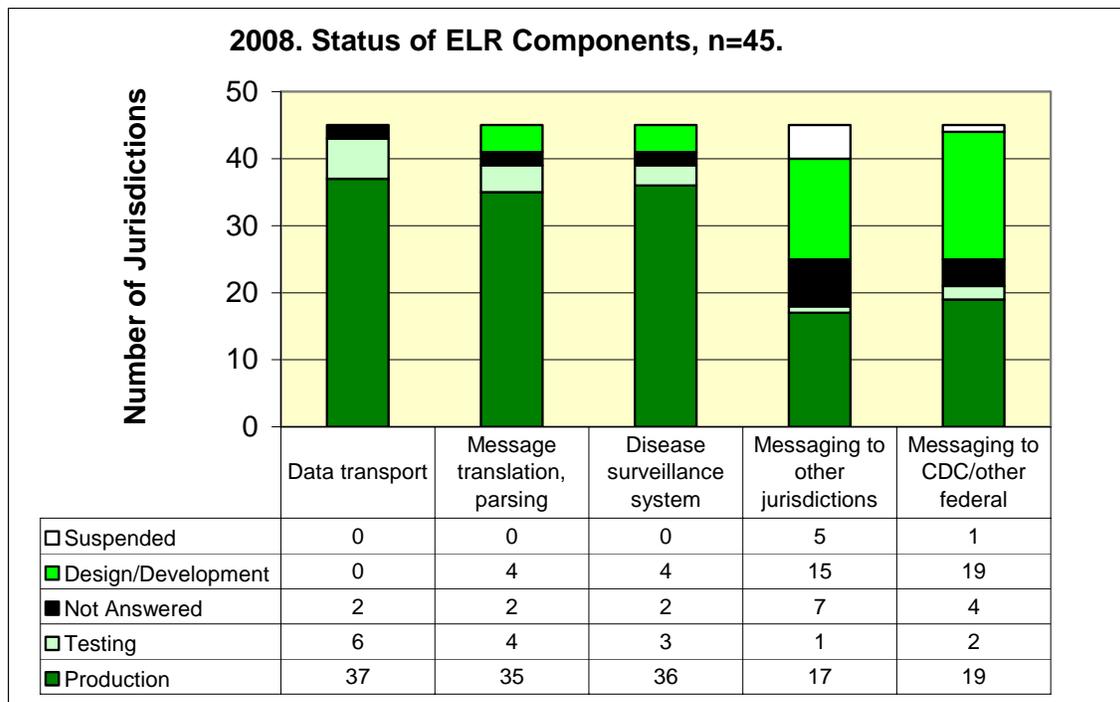
4. What is the current stage of ELR for your jurisdiction?



Historic Representation of ELR Stages from Surveys 2004-2008.

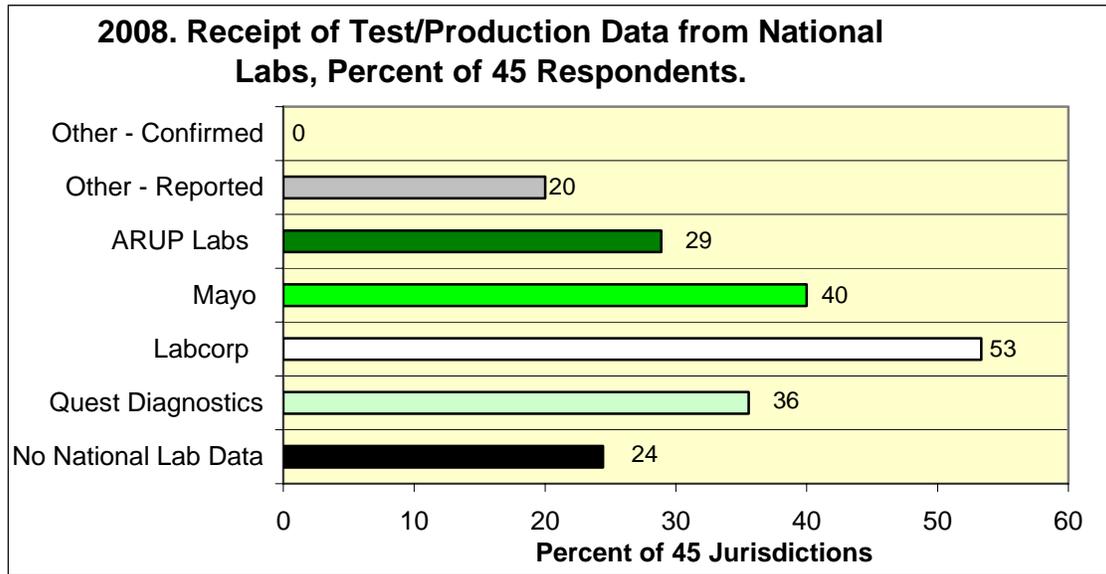


5 Specifically, what is the status of the individual components of ELR in your jurisdiction?



SECTION: ELR Data Sources

6 Laboratory reportable condition data are being received electronically in TEST or PRODUCTION from which of these national labs (check all that apply). Also please indicate the format of these lab data in the drop-down boxes:



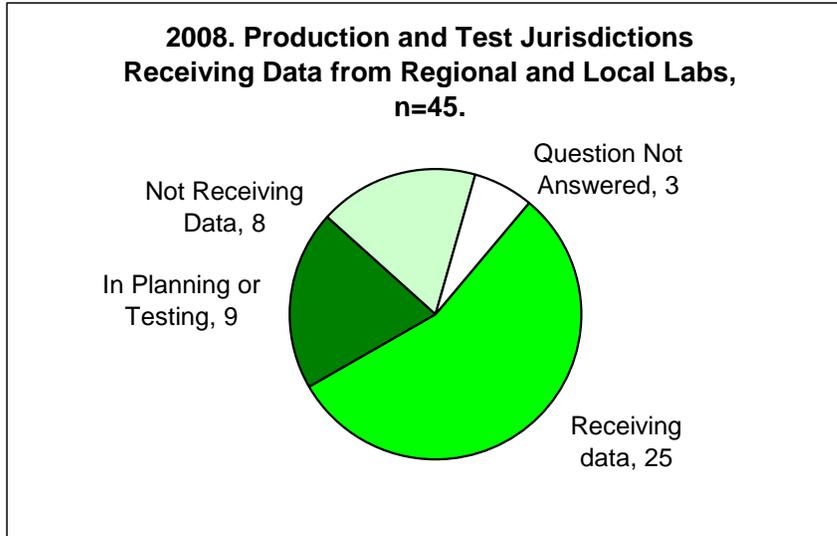
National Laboratories – Data Format

Format	Quest	Labcorp	Mayo	ARUP
HL7 version 2.3.Z	8	9	0	0
HL7 version 2.3.1	7	19	19	10
HL7 version 2.4.x	0	0	0	0
HL7 version 2.5.x	0	0	1	0
Non-HL7 (ex. dBASE)	1	0	0	7
Web Data Entry	0	0	0	0
Not answered	29	17	25	28

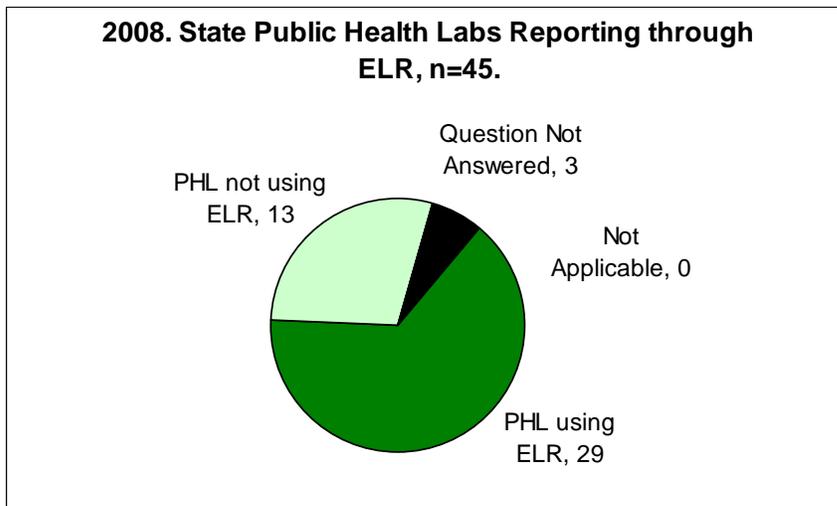
National Laboratories – Data Coding

Coding	Quest	Labcorp	Mayo	ARUP
LOINC only	6	5	2	5
SNOMED only	0	1	0	0
Both LOINC and SNOMED	4	20	16	5
No LOINC or SNOMED received	4	0	1	6
Not Applicable - Web data entry	0	0	0	0
Not answered	31	19	26	29

7 Are laboratory-reportable condition data being received electronically from regional (ex., SE United States) or local commercial/hospital labs? This question is intended for both Test and Production sites.



8 Our state public health lab(s) is/are reporting through ELR

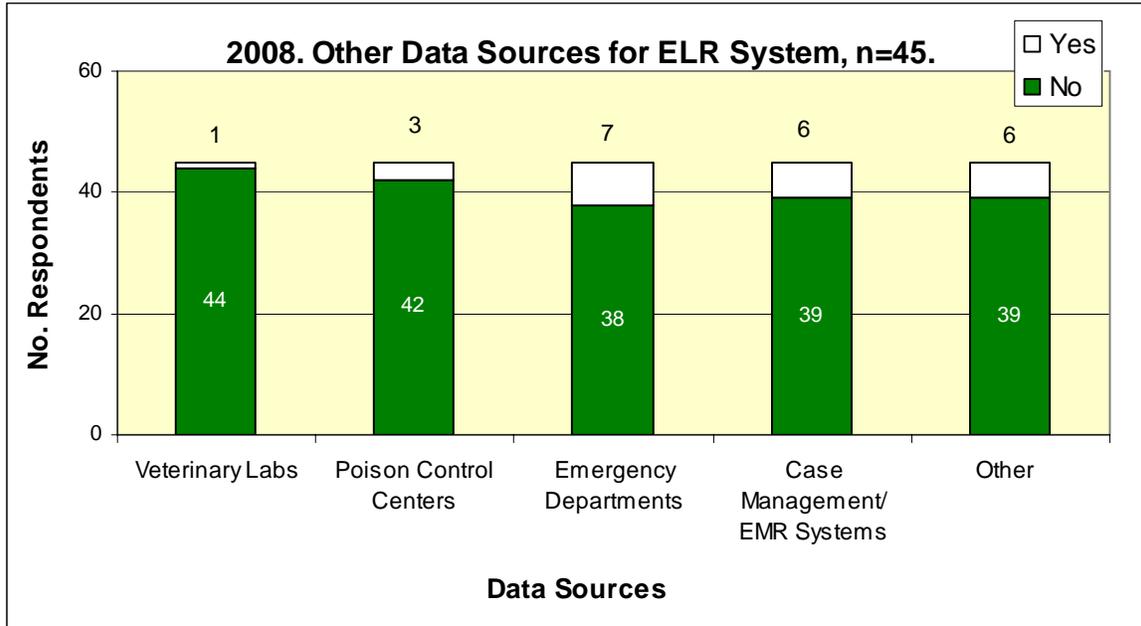


PHL Reporting via ELR		
LIS/LIMS		
	Chemware	1
	Cohort/EPIC	4
	Horizon LIMS	1
	LabCorp LIMS	1
	LabWare	1
	LITS+/LITS+ enhanced systems	4
	Orchard	2
	PowerLab	1
	STARLIMS	7
	Sunquest	2
	System developed in-house	5
	Sysware	1
	Not Answered	15
Bidirectional		
	Yes	6
	No	24
	Not Answered	15

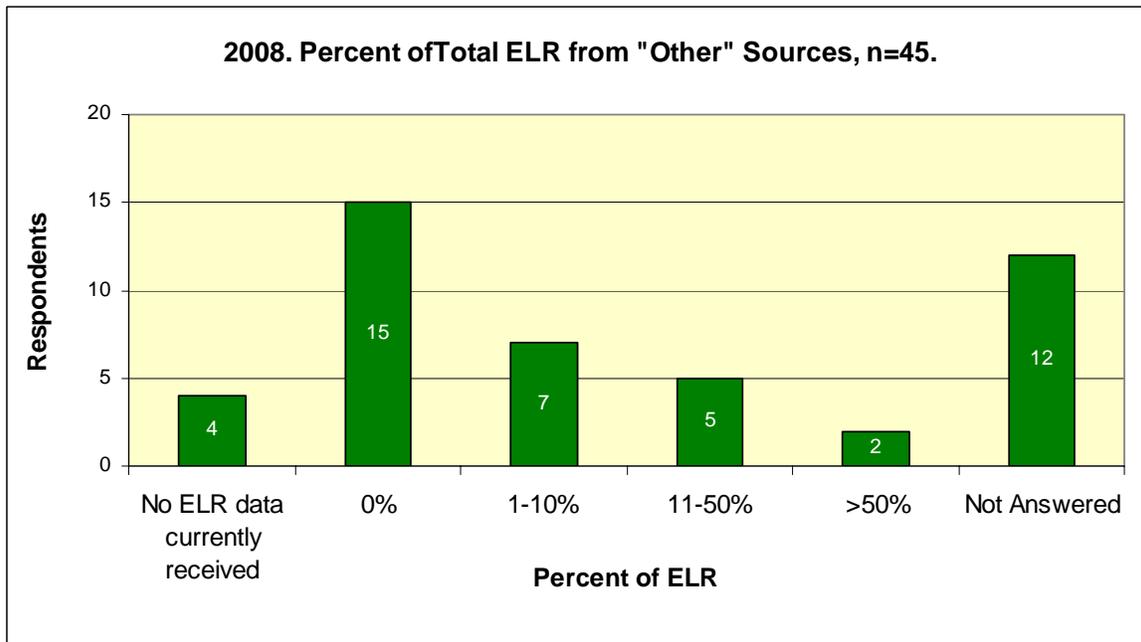
9 If your PHL is not reporting through ELR, check the reasons why (may select >1 box):

PHL Not Reporting via ELR		
Reason Not Reporting		
	LIMS not capable of producing HL7 message	5
	Messaging transport not set up	7
	No one has completed programming to be able to send HL7	8
	Test and/or result coding is not completed or is problematic	4
	Other	5
	Testing/Development stages	4
	Not prioritized	1

10 What other data sources are transmitting data through your ELR system?

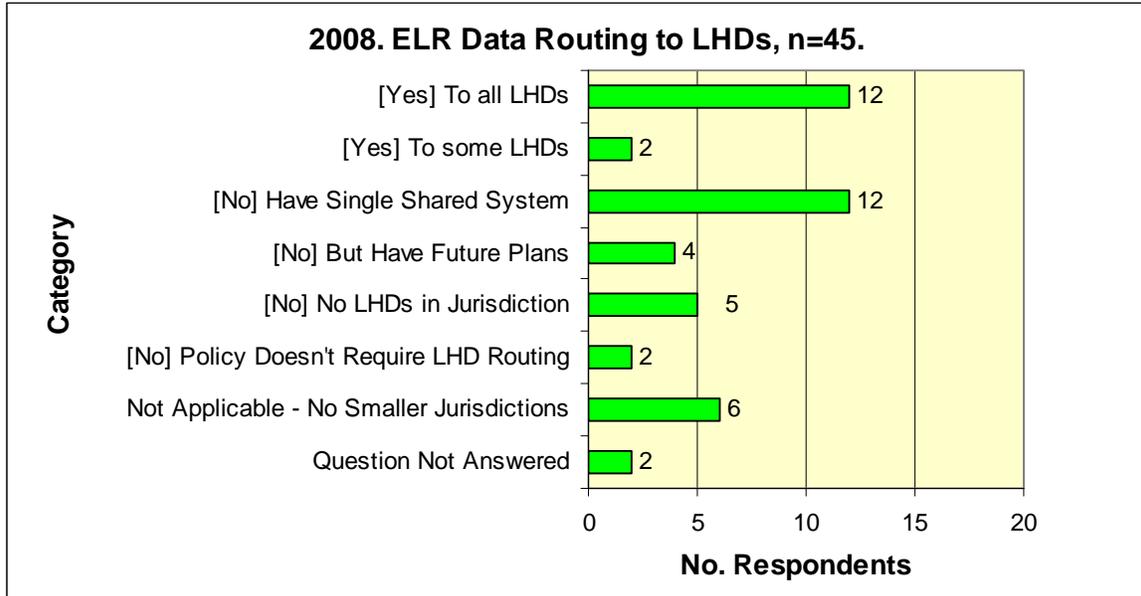


11 What is the overall percentage of the total data passing through your ELR system that is attributable to the data sources in question 10?

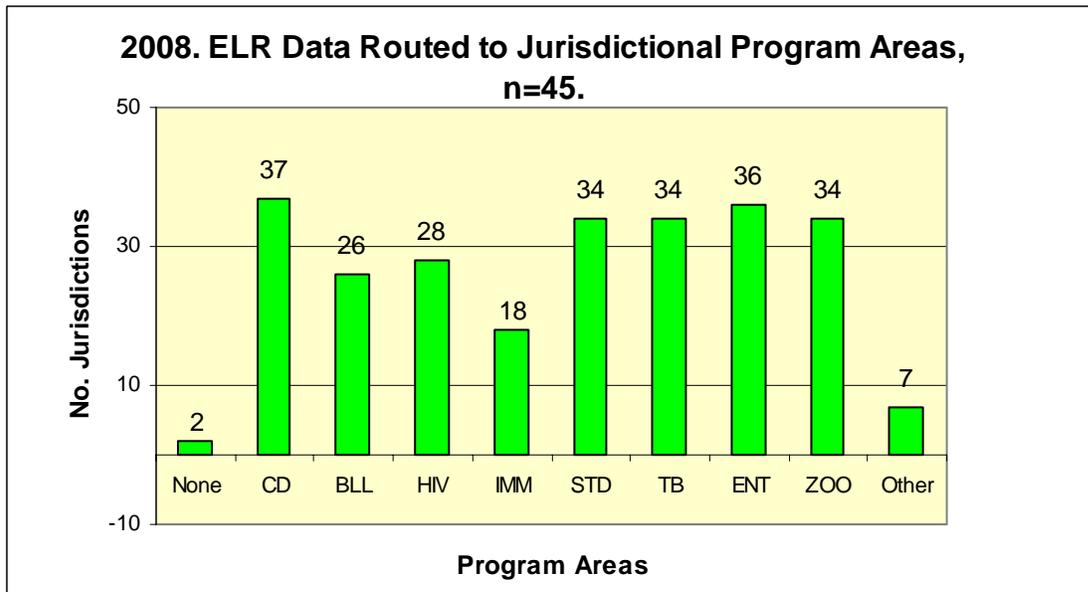


SECTION: Use of ELR Data

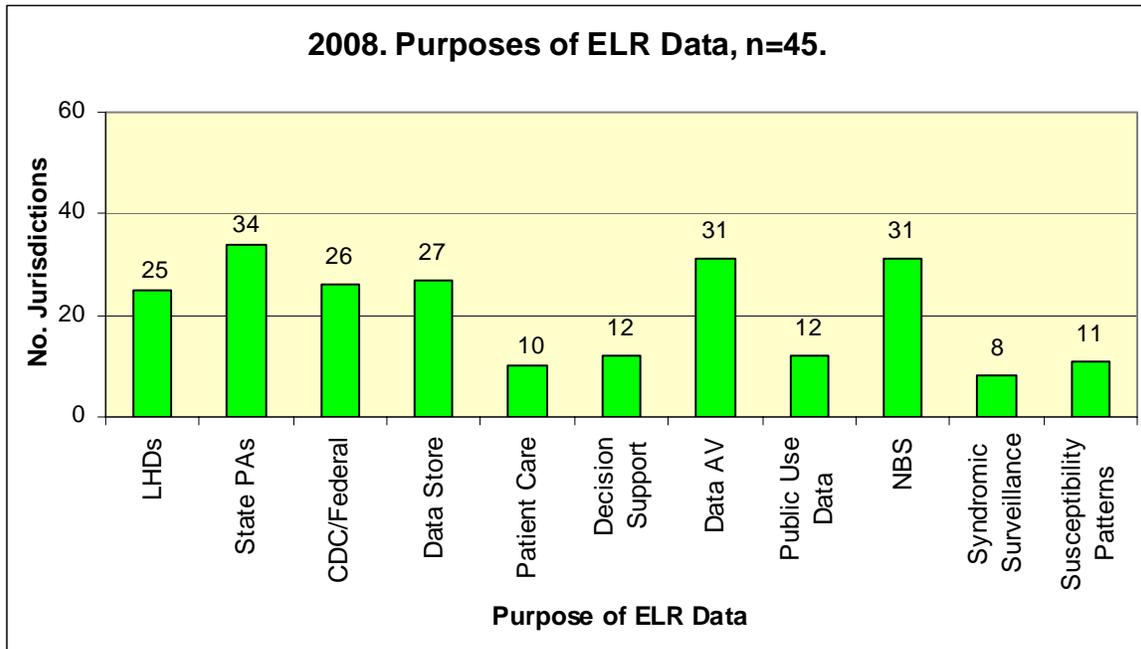
12 Does your ELR system route lab data to appropriate county/local public health organizations (LHDs=Local Health Departments)?



13 Which of the following state/jurisdictional public health personnel/programs use ELR data? (may check >1 box)

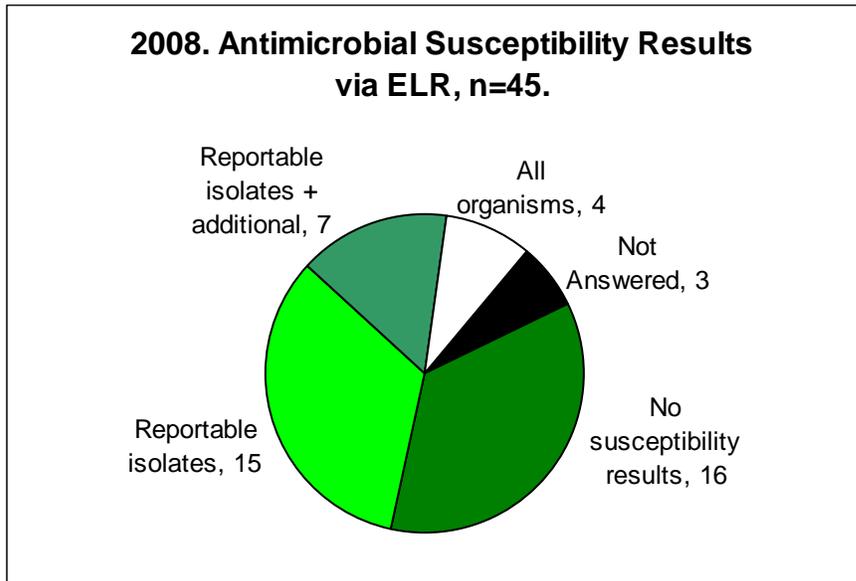


14 For which purposes are data received via your ELR system currently used? (may select >1 box)

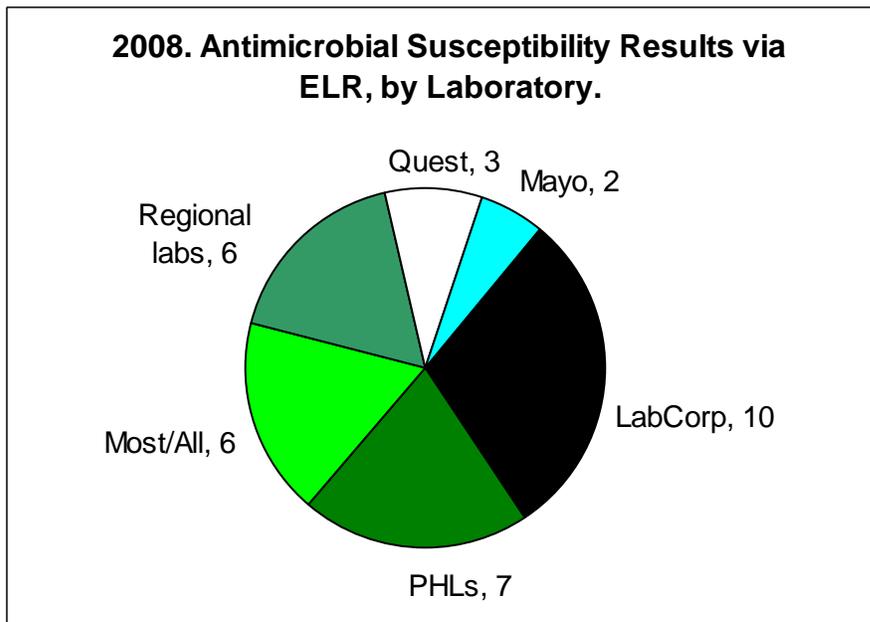


Jurisdictions	Category	Full Description
25	LHDs	Provide data to county/local health departments
34	State PAs	Provide data to state program areas
26	CDC/Federal	Provide data to CDC or other federal agencies
27	Data Store	Populate an integrated, centralized data store
10	Patient Care	Assist in patient care (test ordering and result posting)
12	Decision Support	Offer health care decision support
31	Data AV	Contribute to data analysis and visualization
12	Public Use Data	Contribute to public use data available on the web
31	NBS	Integrate ELR with NBS or similar system
8	Syndromic Surveillance	Contribute to syndromic surveillance (lab test order patterns)
11	Susceptibility Patterns	Detect antimicrobial susceptibility patterns

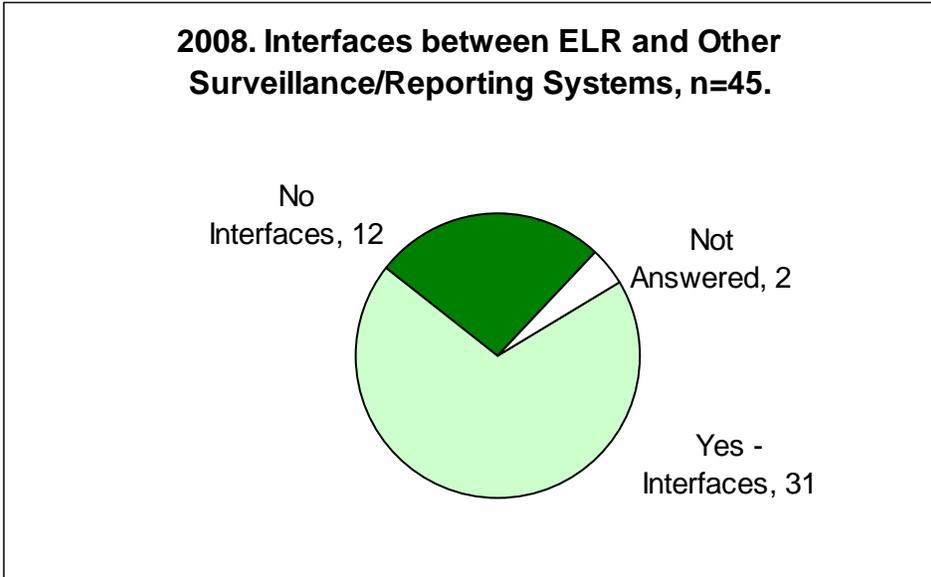
15 Does your jurisdiction receive antimicrobial susceptibility results via ELR?



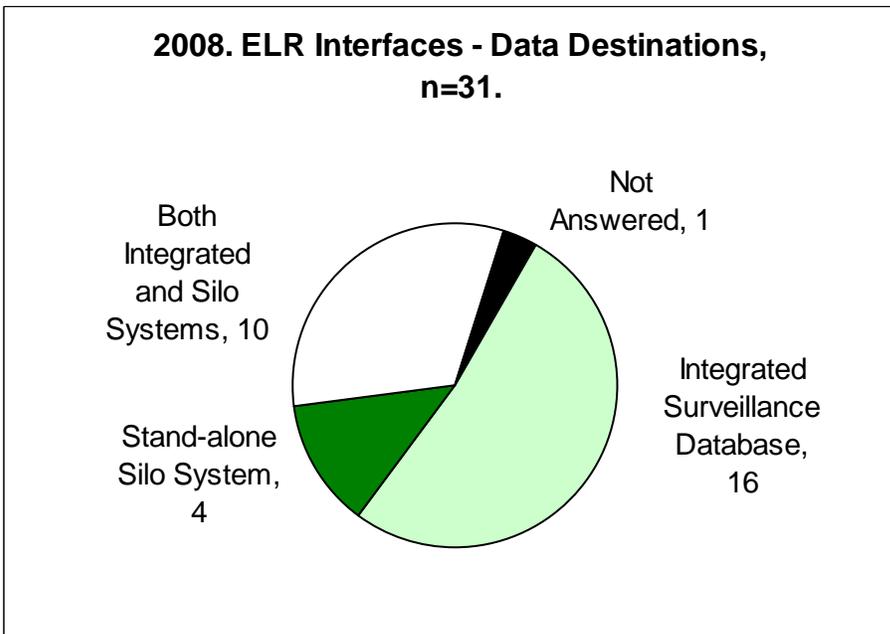
16. If you answered "Yes" to the antimicrobial susceptibility question above, what lab(s) is(are) sending you these data?



17 Do you have any interfaces between your ELR system and other disease surveillance/reporting systems?



18 If you answered "Yes" to the interface question above, then select the type.

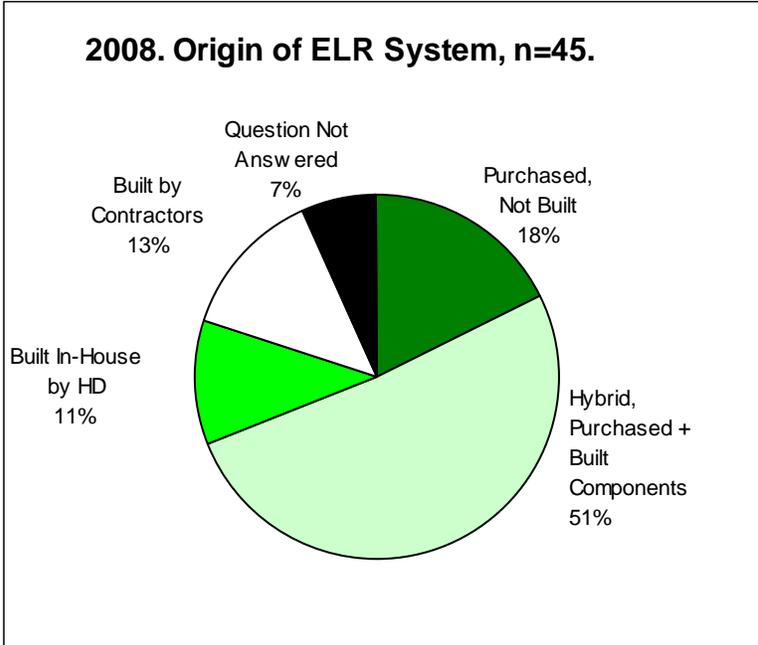


20. What do you think are the biggest challenges in creating such interfaces? (may select >1 box)

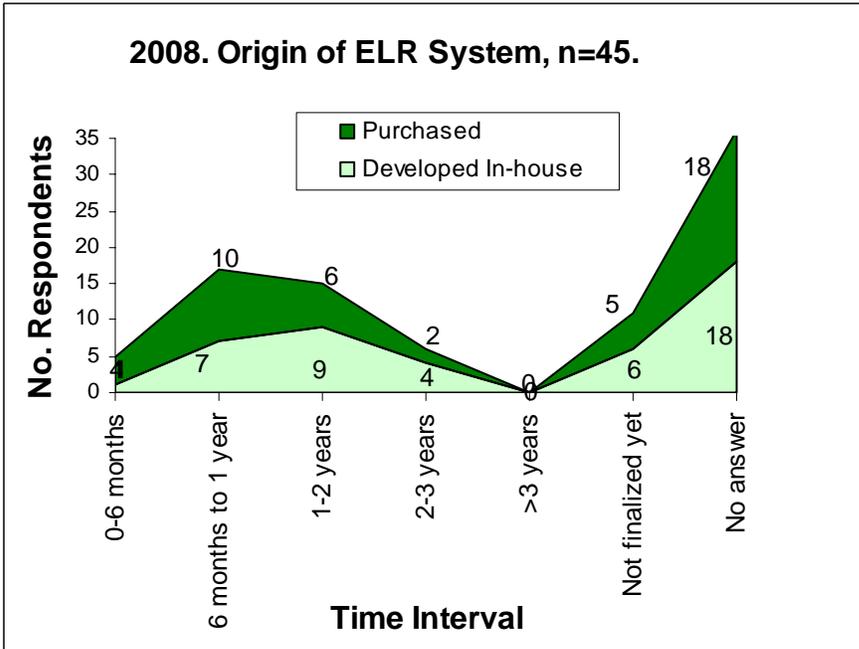
2008. Biggest Challenges in Creating Interfaces between ELR and other Surveillance Systems (could select >one option)	
Lack of person-hours available to work on interfaces	34
Difficulty parsing values out of free text blocks or blobs	19
Lack of skills available to work on interfaces	18
Data variables not comparable	14
Inability to modify commercial data systems/applications	9
Other - "Funding Problems"	3

SECTION: ELR System Info

21 Did you build your own ELR components/system?



Length of time to operationalize



2008. Length of Time Required to Operationalize ELR System, n=45.		
Time Interval	Developed In-house	Purchased
0-6 months	1	4
6 months to 1 year	7	10
1-2 years	9	6
2-3 years	4	2
>3 years	0	0
Not finalized yet	6	5
No answer	18	18

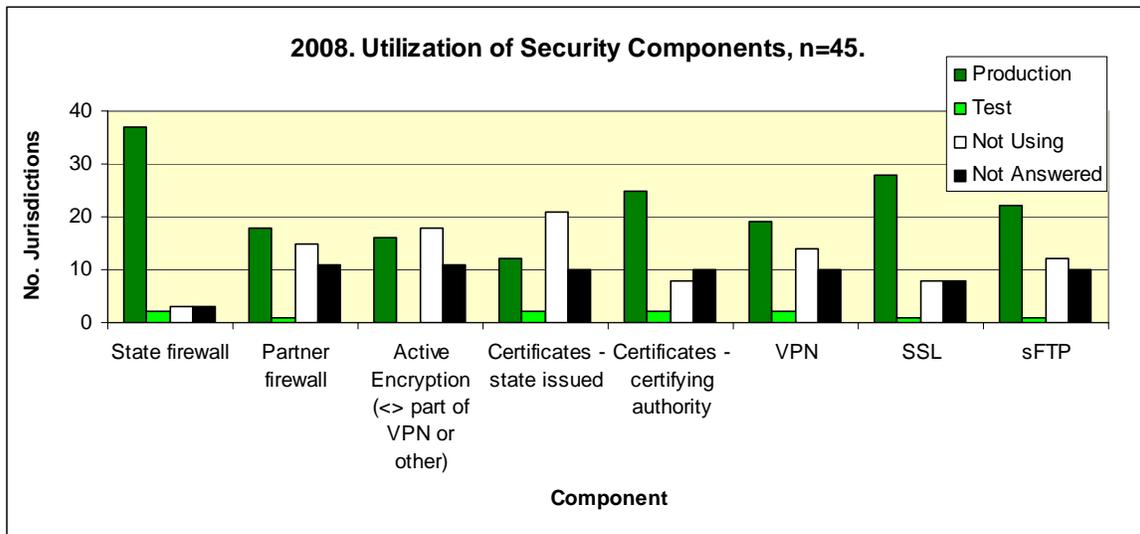
22 If you purchased your ELR components/system, please indicate the vendor and system.

2008. Primary Vendors of Purchased ELR Systems, n=45.	
Atlas	2
CDC	10
DiagnosisONE	1
Eclipsys	2
IBM	1
Microsoft	2
NeoTools	1
Orion	5
Other - specify:	8
Quovadx	1
Sybase	1

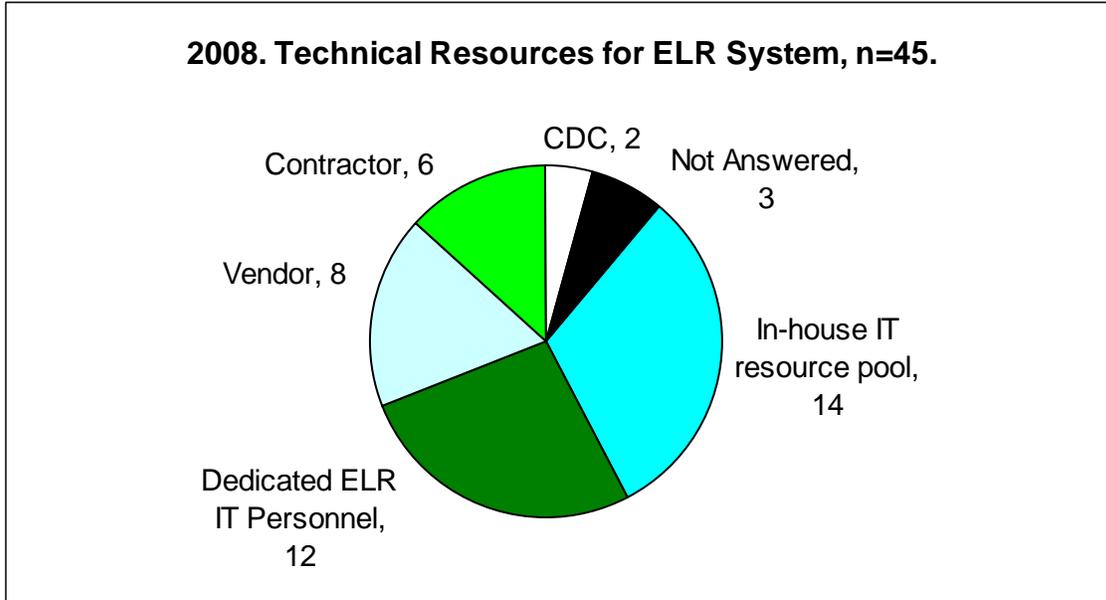
23 Which NEDSS/PHIN components are you currently utilizing in your ELR system? For each, indicate Production or Test status.

	eWebi t	NEDSS Messaging Subscriptio n Service (MSS)	PHIN MS	PHIN VADS	Rhapsod y (Orion)
Not Using this component	26	23	4	22	12
Production - using in our production system	11	3	27	9	12
Test - we are testing this component	0	10	9	5	15
No answer	8	9	5	9	6

24 Which of these security components are you currently utilizing in your ELR system? For each, indicate Production or Test status.



25. For both Production and Test systems: In general, if you require technical changes made to your ELR system, do you request this from



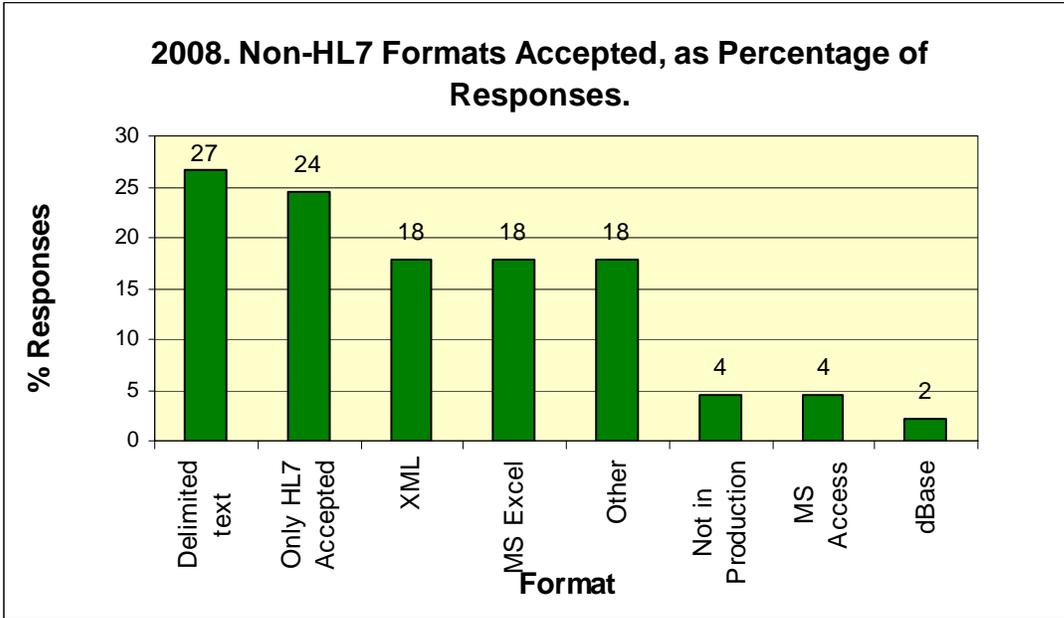
SECTION: ELR Formats

26 Which of the following Health Level 7 (HL7) formats will your ELR system ACCEPT and SEND (only indicate those currently accepted/sent, not formats that you COULD accept/send if you were to spend some time setting it up)

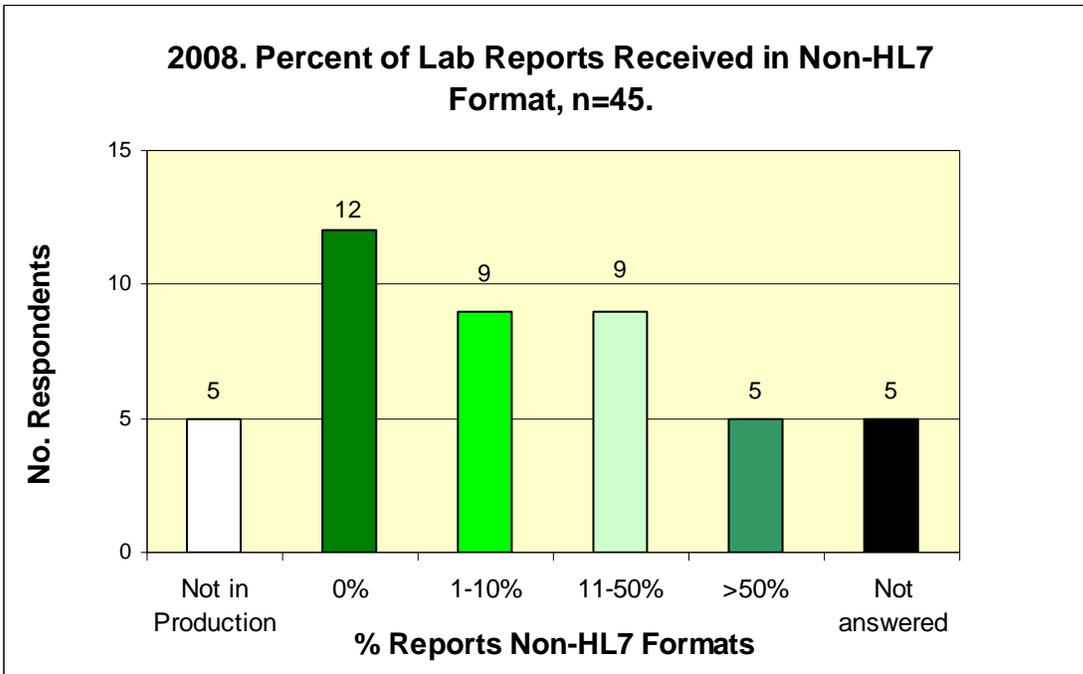
HL7 Versions		Accept					
		2.2	2.3.z	2.3.1	2.4	2.5	2.5.1
Receiving in our production system		3	20	32	3	1	0
Receiving in testing/development stages		1	4	6	2	7	0
Not working with this		19	5	1	17	15	0
Not answered		22	16	6	23	22	45
Message Types							
		ORU	OUL	ADT	ORM	CDA R1	CDA R2
Receiving in our production system		31	2	6	5	0	0
Receiving in testing/development stages		7	0	4	1	0	0
Not working with this		0	18	13	15	20	20
Not answered		7	25	22	24	25	25

HL7 Versions		Send					
		2.2	2.3.z	2.3.1	2.4	2.5	2.5.1
Receiving in our production system		0	3	10	1	2	0
Receiving in testing/development stages		0	0	4	1	4	5
Not working with this		21	19	16	19	17	16
Not answered		24	23	15	24	22	24
Message Types							
		ORU	OUL	ADT	ORM	CDA R1	CDA R2
Receiving in our production system		9	1	3	1	0	0
Receiving in testing/development stages		9	3	1	1	0	0
Not working with this		11	19	17	19	21	21
Not answered		16	22	24	24	24	24

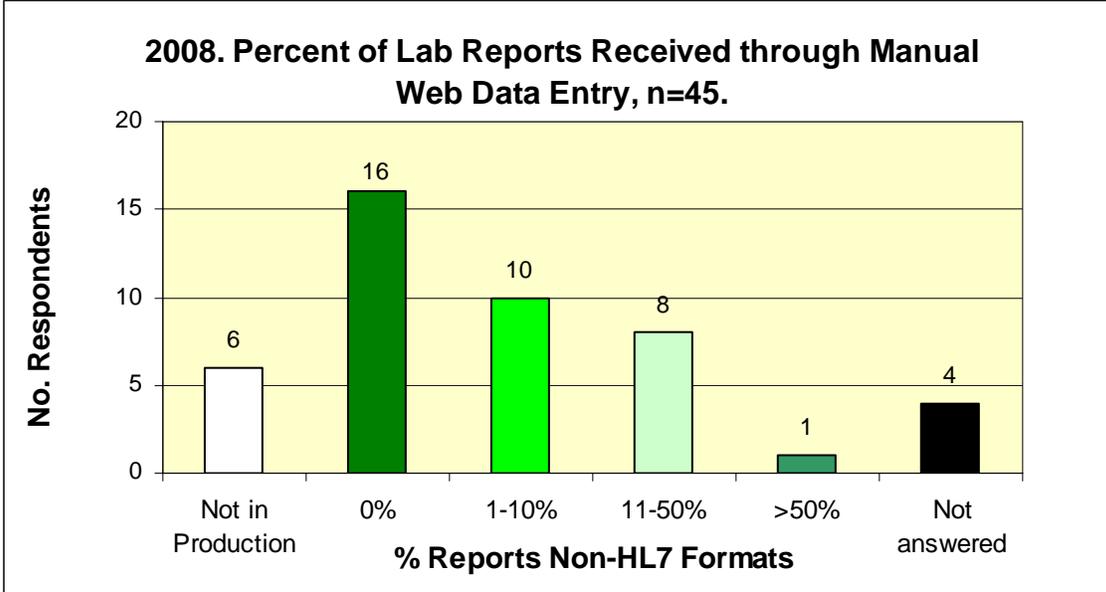
27. Which of the following non-HL7 formats does your ELR system currently accept? (Only indicate those currently accepted, not formats that you COULD accept if you were to spend some time setting it up)



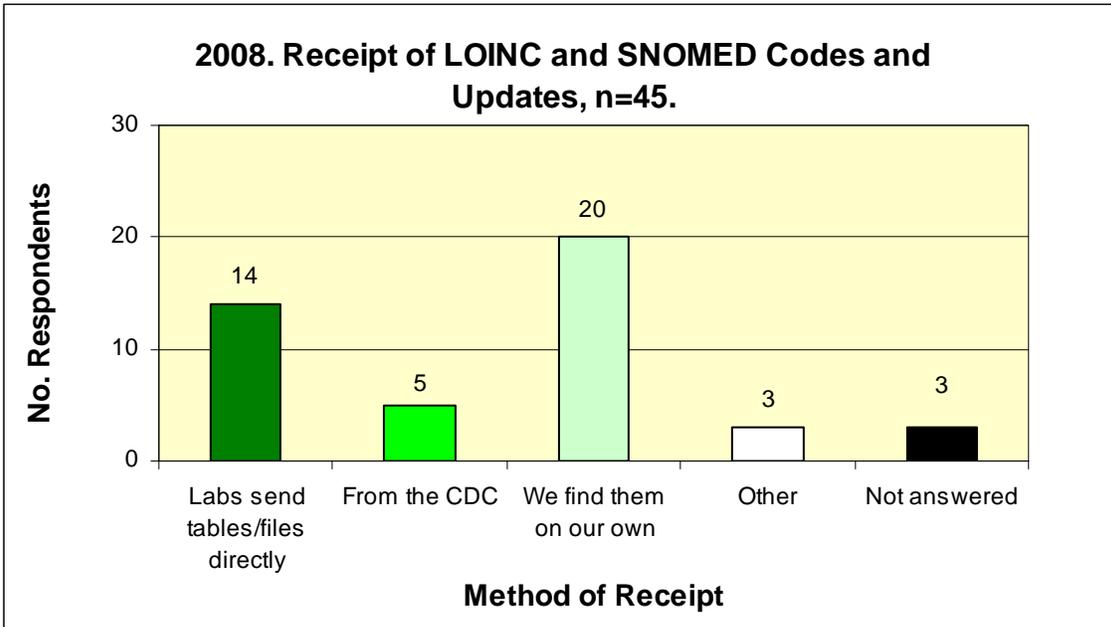
28. What percentage of the lab reports you currently receive are non-HL7 format?



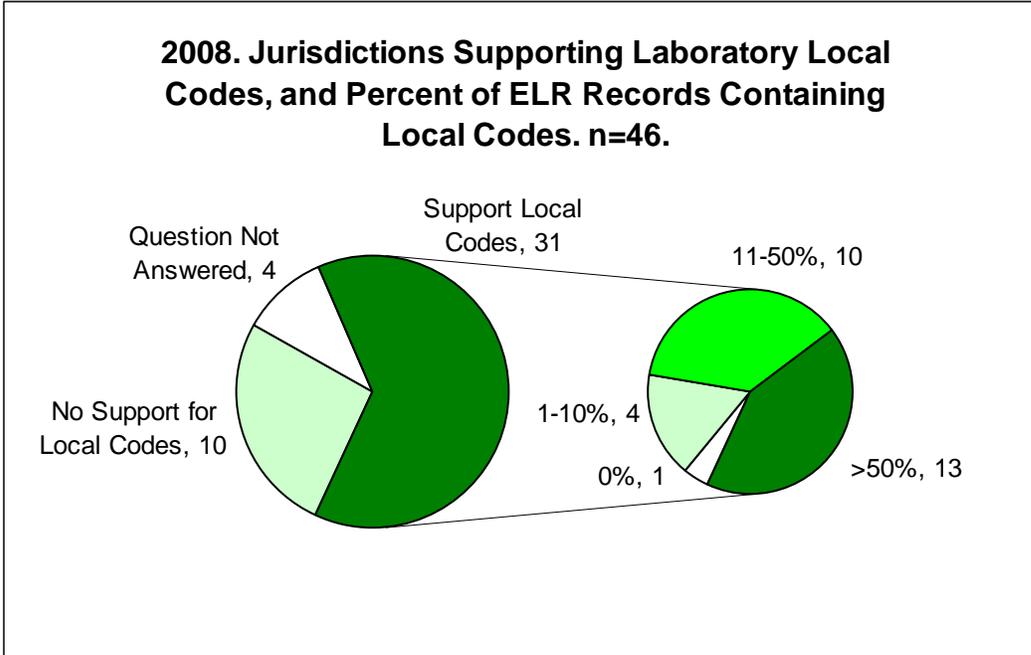
29 What percentage of the lab reports you currently receive are transmitted to you through manual Web data entry?



30. How do you receive your LOINC and SNOMED codes/information and updates?

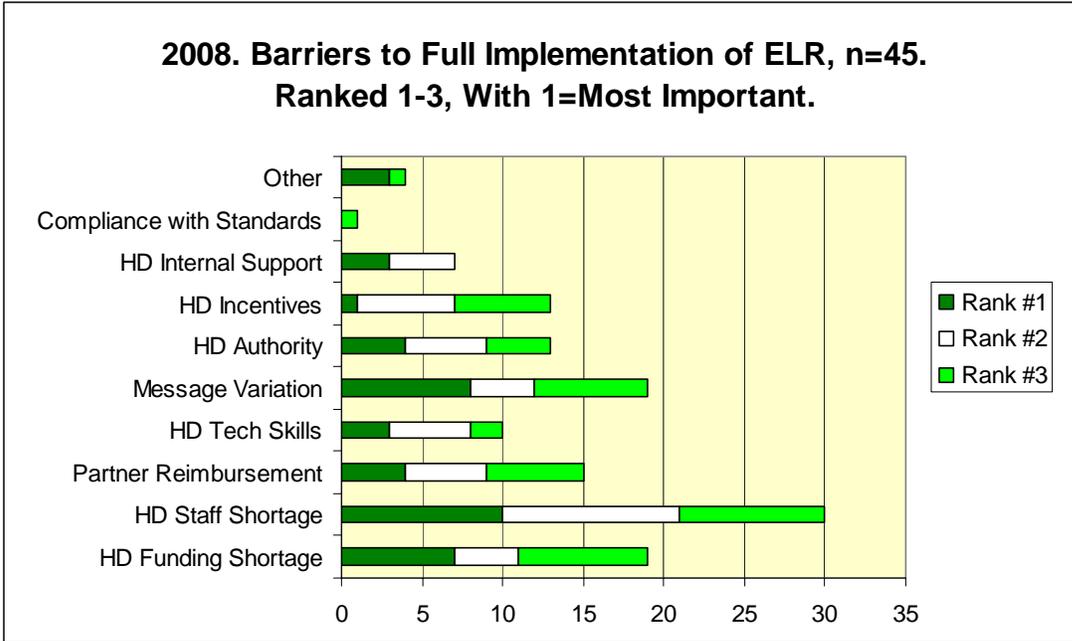


31. Do you support lab local codes (i.e., not LN or SNM)?



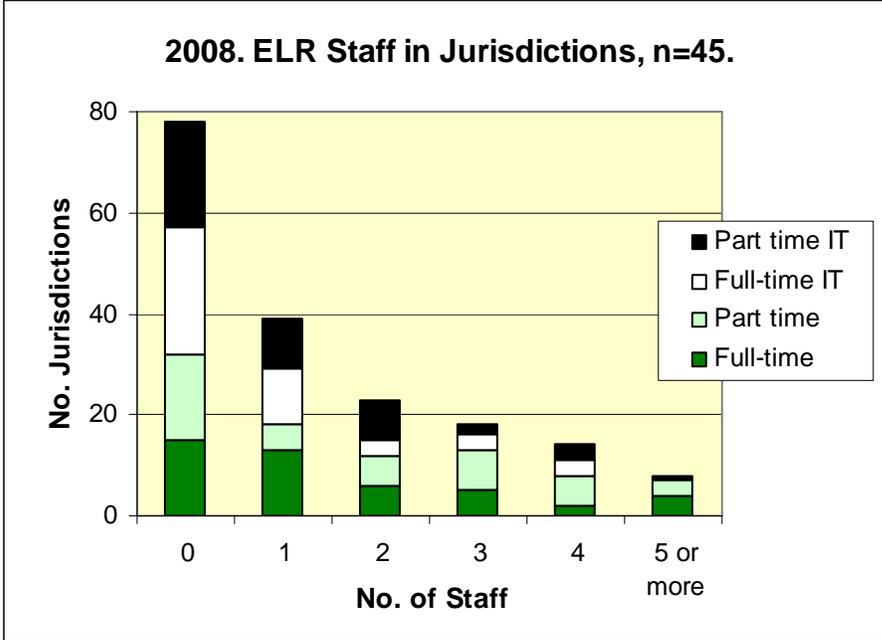
SECTION: Opinions

33. What are the three most important barriers to full implementation of ELR in your jurisdiction? Please rank three options from 1 (most important) to 3 (less important) by entering numbers in the corresponding cells.

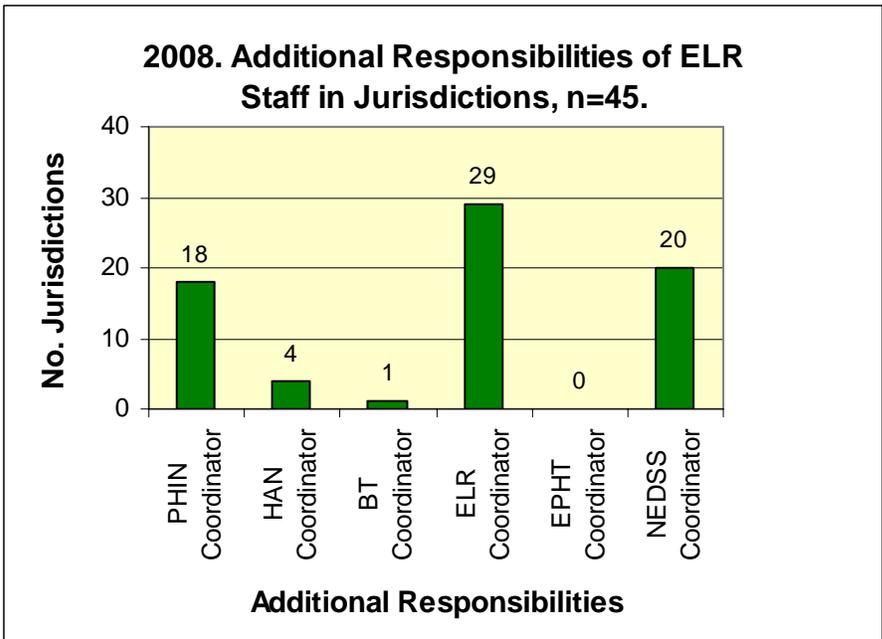


Other - specify
All the above are important
Laboratories have limited resources., both technical and financial
Labs lack technical skill and knowledge at hospitals and labs
Support from our IT department
Too many other concurrent IT activities, especially at sending facilities

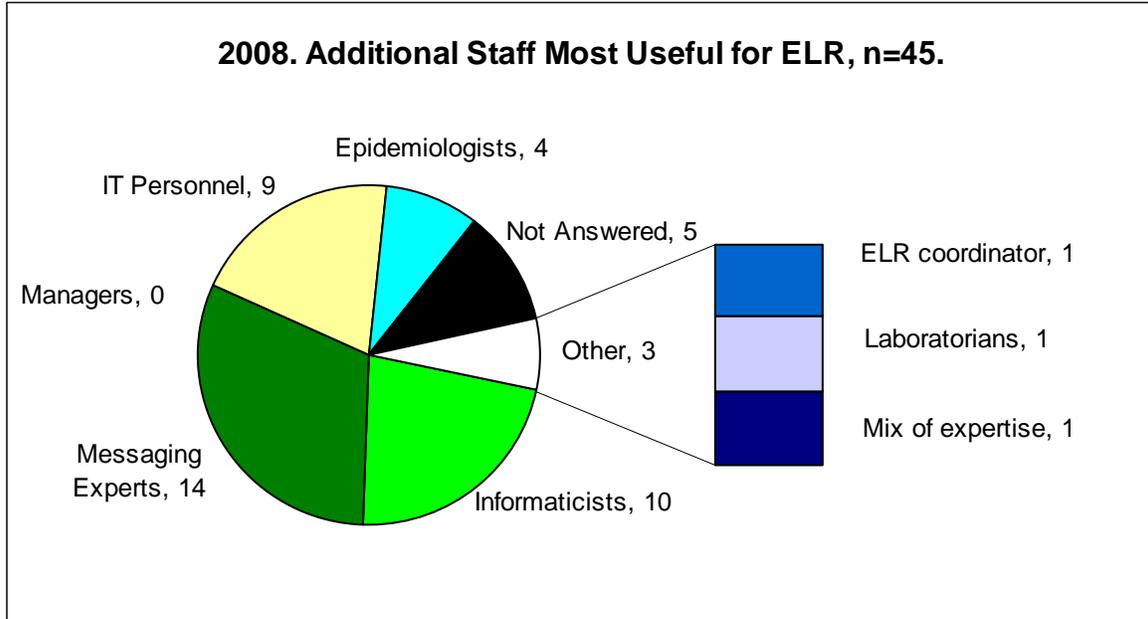
34. How many staff (government or contractors) are responsible for ELR in your jurisdiction?



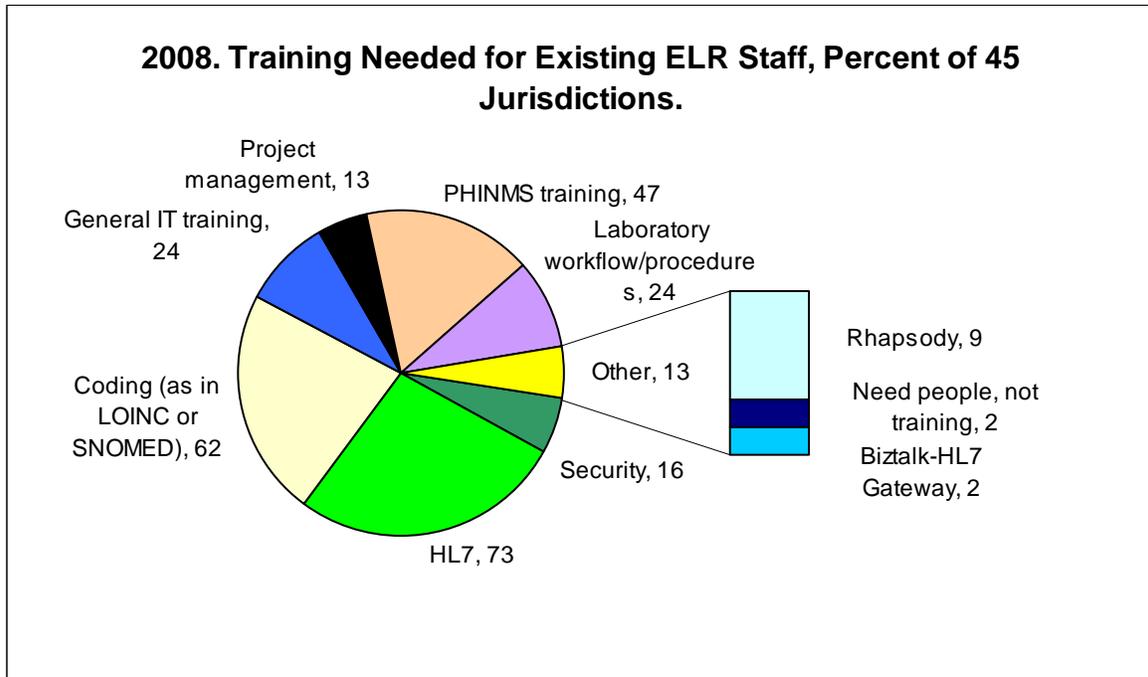
35. Do any of the staff from question 34 also have any of the following responsibilities? (check all that apply)



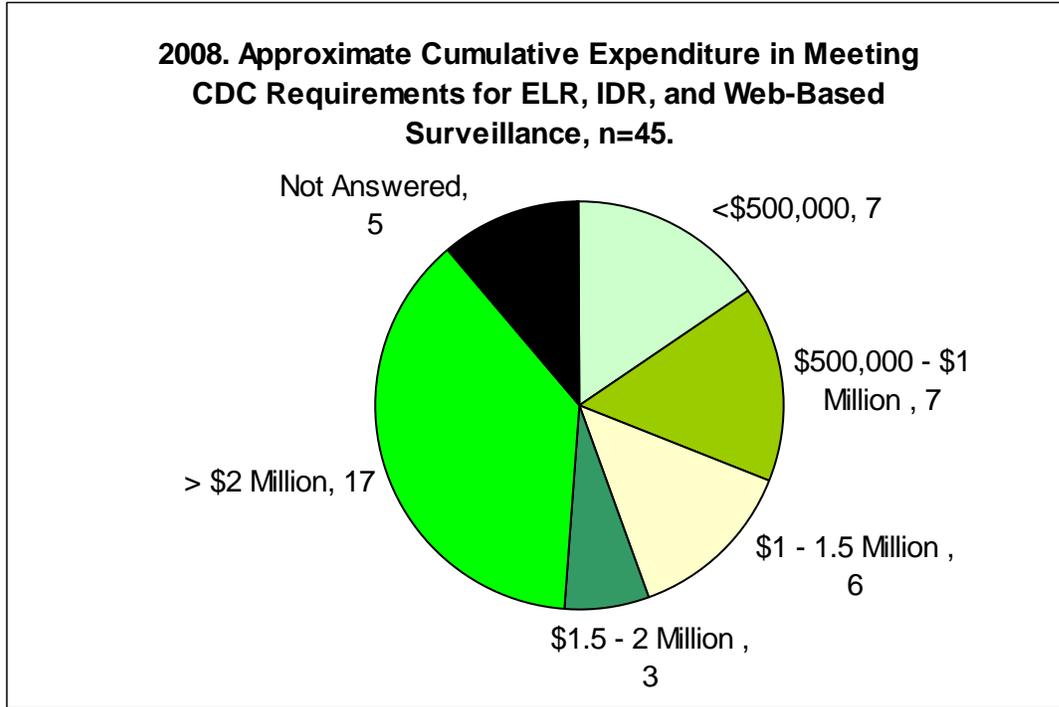
36. Addition of what type of staff would be most useful for your state in implementing or maintaining ELR?



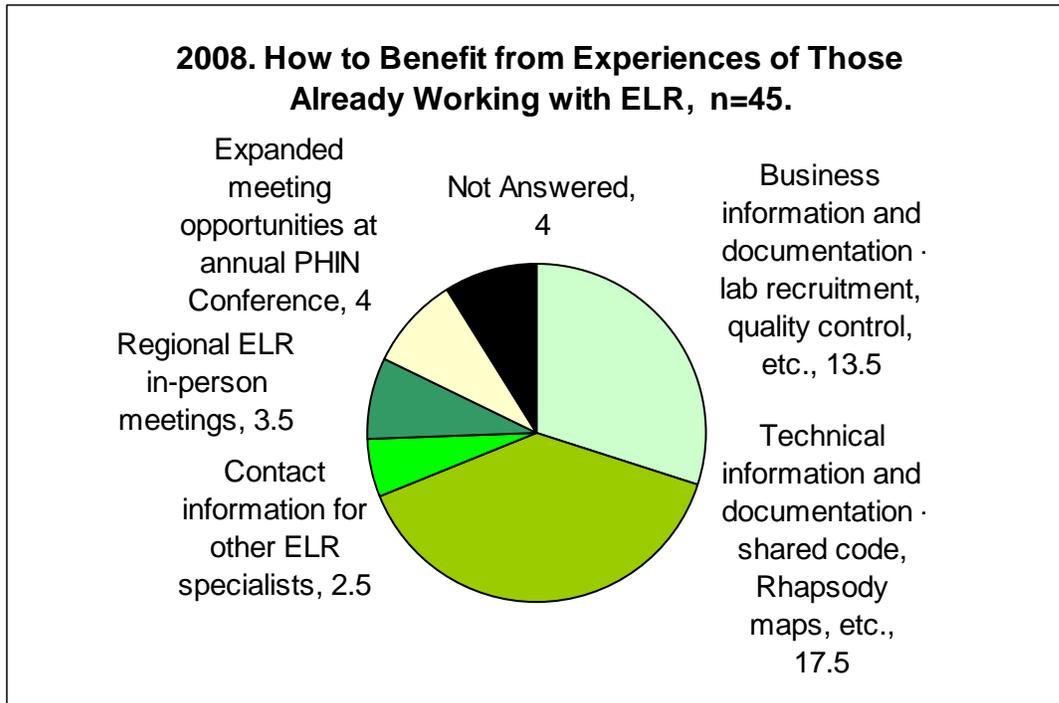
37. What kind of training for existing staff would be most helpful in implementing or maintaining ELR? (may choose >1 option)



38. What is the approximate cumulative amount your state has invested in meeting CDC requirements for ELR, IDR, and web-based disease surveillance systems?



39. How could you best benefit from the experiences of those already working with ELR? (free text, but please try to be somewhat brief)



2008 ELR Survey Editorial Board

The author gratefully acknowledges the contributions of the 2008 survey editorial board. The 14 board members are listed below (alphabetically, by last name):

STATE	METRO	LAB	FEDERAL/NATIONAL
Rita Altamore (WA)	Ray Aller (LAC)	Nancy Heidman (ARUP)	Richard Hopkins (CSTE)
Nancy Barrett (CT)	Josh Jones (CH)	Julie Luepke (MAYO)	Arun Srinivasan (CDC)
Hwa-Gan Chang (NY)			Jennifer Ward (CDC)
Mike Davisson (WA)			
Bill Frank (AZ)			
Tom Safranek (NE)			
Eileen Troutman (NJ)			