AAMC
Tomorrow's Doctors, Tomorrow's Cures®

Summary of Select Results from the 2014 Medical School Information Technology Survey Sponsored by the Group on Information Resources (GIR)

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Association of
American Medical Colleges

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Executive Summary

Background

Survey Background

The GIR Medical School IT Survey gathers information on leadership, financing, staffing, technologies and emerging trends to provide members with a baseline to view their organizations over time and with a directory of application trends. The GIR began surveying on IT topics in 1998, and the survey has evolved since then in response to changing needs. Starting in 2013, AAMC began alternating between a short and long version of the survey. The short version of the survey (which fields in odd years) collects information on which IT applications are used at medical schools and emerging technologies. The long version of the survey (which fields in even years) collects additional information about IT services at medical schools, such as leadership organization, reporting structure, strategic plans, budget, FTE staffing, funding of services, and provision of services.

Available Report Data

While this summary report presents a subset of aggregated findings from the long version of the survey, medical schools that participate in the survey can access all medical school responses for three years of surveys through the GIR IT Medical School Reporting Tool. This online tool includes medical school-level data for:

- Leadership organization
- Reporting structure
- Strategic plans, budget
- FTE staffing
- Technology products
- Funding of services
- Provision of services
- Future plans and technology priorities

To access the reporting tool, and for more information about other GIR-related resources, visit the GIR member page at https://www.aamc.org/members/gir/resources/ or contact Ethan Kendrick at ekendrick@aamc.org.

Methodology

The AAMC distributes the survey to the GIR representatives at each member medical school. At a given medical school, the GIR representatives collaborate on the submission for their institution. The 2014 survey was open from October 15, 2014 through December 4, 2014. AAMC emailed survey invitations to the GIR representatives at 158 medical schools (141 U.S. institutions and 17 Canadian institutions). Following data verifications and edits, there was usable information on 132 medical schools (115 U.S. institutions and 17 Canadian institutions), representing an 84 percent response rate (82 percent for U.S. institutions and 100 percent for Canadian institutions). Survey data for participating medical schools may not be comparable or generalizable to data for nonparticipants. All dollars reported in the survey are reported in U.S. dollars (non-U.S. currency was converted using the rate as of August 15, 2014).

Selected Findings

- Nearly half of survey respondents report having a hybrid IT organizational model that is characterized by having both centralized IT services at the medical school and decentralized services across departments. Fifteen percent of respondents had hybrid models involving one to five departments, and thirty-three percent had hybrid models involving six or more departments.

- Seventy-three percent of medical schools have a single designated person who has overall responsibility for the daily management and operational IT decisions.

- Fifty-six percent of medical schools have an IT services budget of five million dollars or less.

- Sixty-eight percent of medical schools have 30 or fewer IT full-time equivalents (FTEs) funded by the school of medicine IT budget (as opposed to, for example, by the hospital or practice plan or by a department).

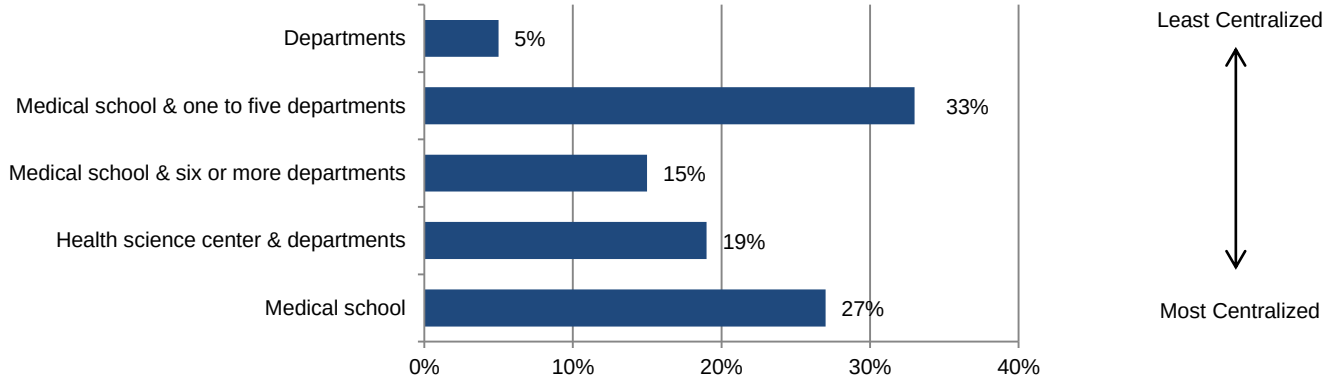
- When compared to open source or homegrown technology products, the majority of products are vendor products.

Leadership and Reporting

Based on past GIR surveys, three common types of IT organization models exist at schools of medicine: centralized, hybrid, and decentralized. In the centralized model, IT is administered as part of the school of medicine only or is organized as part of a centralized health sciences campus that supports several health professions schools. In the hybrid model, IT is organized in a centralized manner through the school of medicine or health science center but in conjunction with departments. In the decentralized model, the school of medicine has no central IT and has only departmental IT services. A few schools of medicine do not have their own IT organization, many of which receive IT services from a main campus and, therefore, have little control over IT. These medical schools are not included in the three aforementioned categories.

Thirty-three percent of respondents have a hybrid model that has both centralized IT services at the medical school and IT services through one to five departments. Fifteen percent of medical schools have a hybrid model of both centralized IT services at the medical school and IT services through six or more departments. Another 19 percent of medical schools have a centralized model with IT services organized by the health science center. Twenty-seven percent of respondents have a centralized model of all IT services being centrally organized in the school of medicine. Five percent of respondents have a decentralized model of all IT services organized across one or more departments. Twenty-two medical schools indicate other organizational models or that the medical school has no IT organization of its own—the graphic below excludes these 22 institutions.

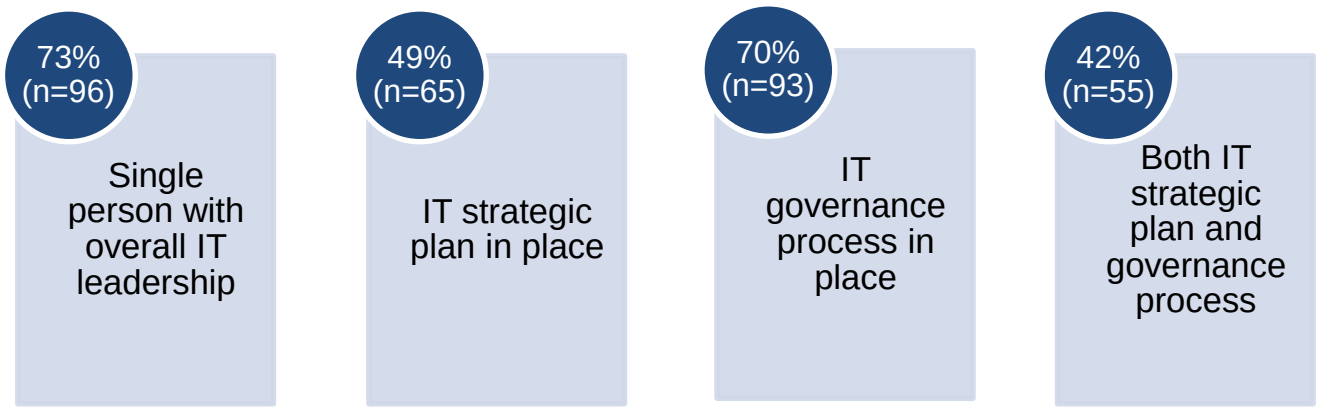
Figure 1. Models of How IT Services are Organized, 2014 (n=110)



Note: Schools without one of the above models were excluded.

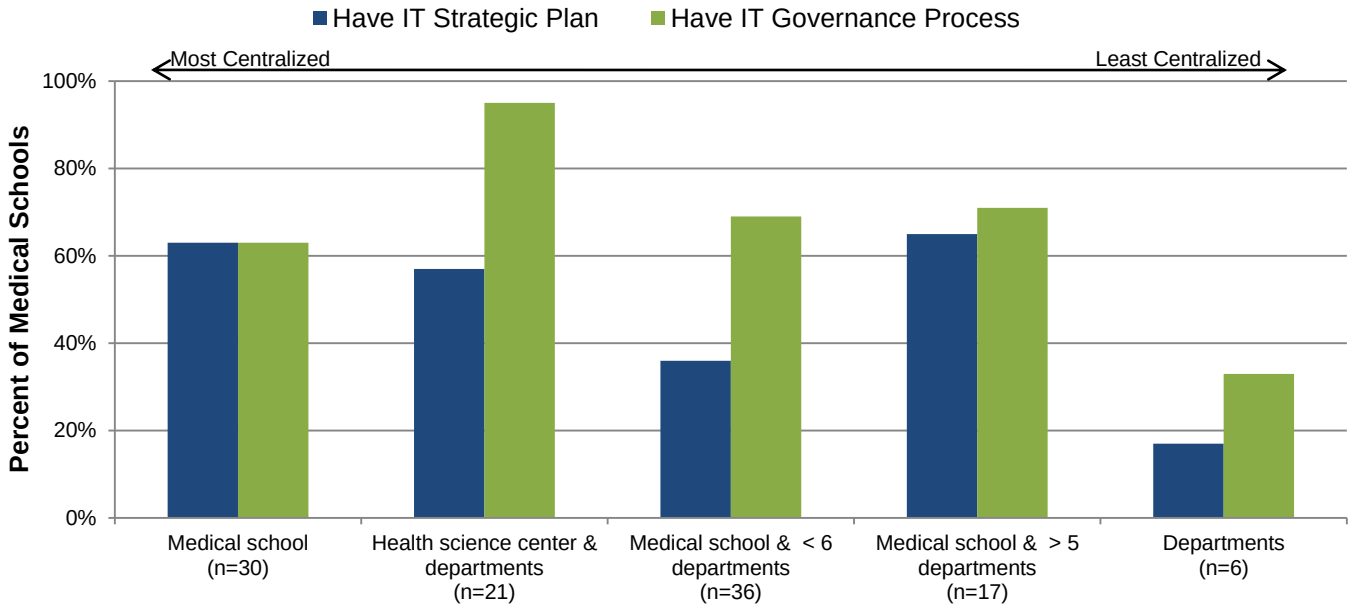
Seventy-three percent of medical schools have a single designated person who has overall responsibility for the daily management and operational IT decisions. Almost half (49 percent) of medical schools have developed an IT strategic plan. Seventy percent of medical schools have a governance process in place to aid in decision-making for IT-related issues or projects. Forty-two percent of medical schools have both a strategic plan and governance process in place (these 55 medical schools are a subset of the 65 medical schools that have IT strategic plans in place).

Figure 2. Leadership and Governance at Schools of Medicine, 2014



The graphic below shows the percent of medical schools in a given organizational model that indicate having IT strategic plans or IT governance processes. Of medical schools with a model of all IT services being centrally organized in the school of medicine, 63 percent have an IT strategic plan, and 63 percent have an IT governance process. The graphic includes the medical schools in Figure 1 that also provided information on their strategic plans and governance processes.

Figure 3. IT Strategic Plan & Governance by How IT Services are Organized, 2014 (n=110)

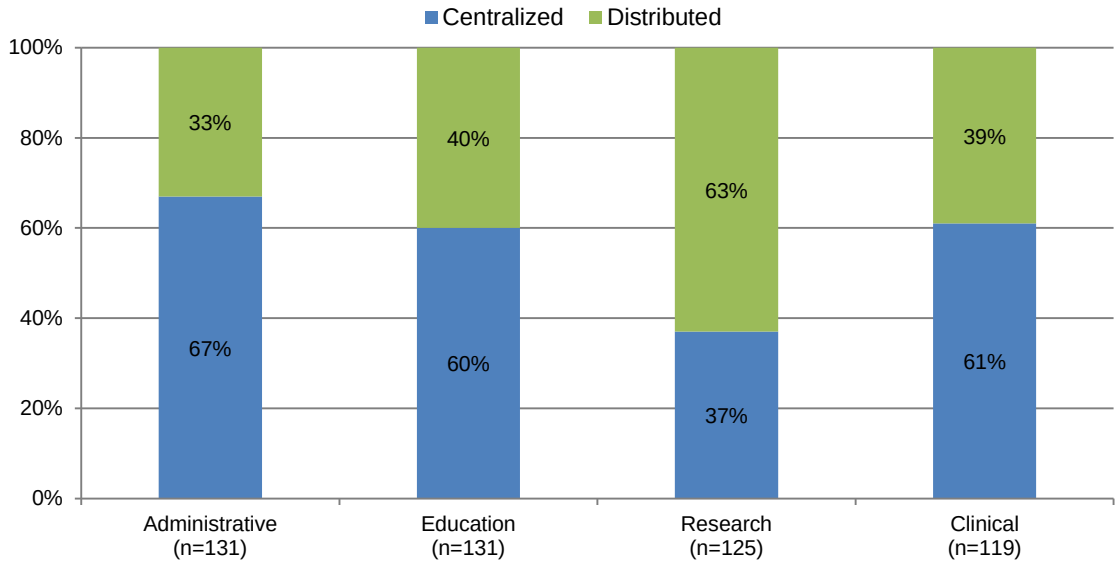


Note: Schools without one of the above models were excluded.

IT Organization

Medical schools were asked questions about the organization of administrative, educational, research, and clinical IT utilized by the school of medicine that are either under its direct control or provided by a direct affiliate. "Centralized" indicates that the respective services are managed entirely from one location, regardless of where it may be. "Distributed" indicates that its management is not located in a single location. For administrative, educational, and clinical IT services, over half of medical schools (67 percent, 60 percent, and 61 percent, respectively) report having centrally organized services for each. By contrast, over half of medical schools (63 percent) report having distributed research services.

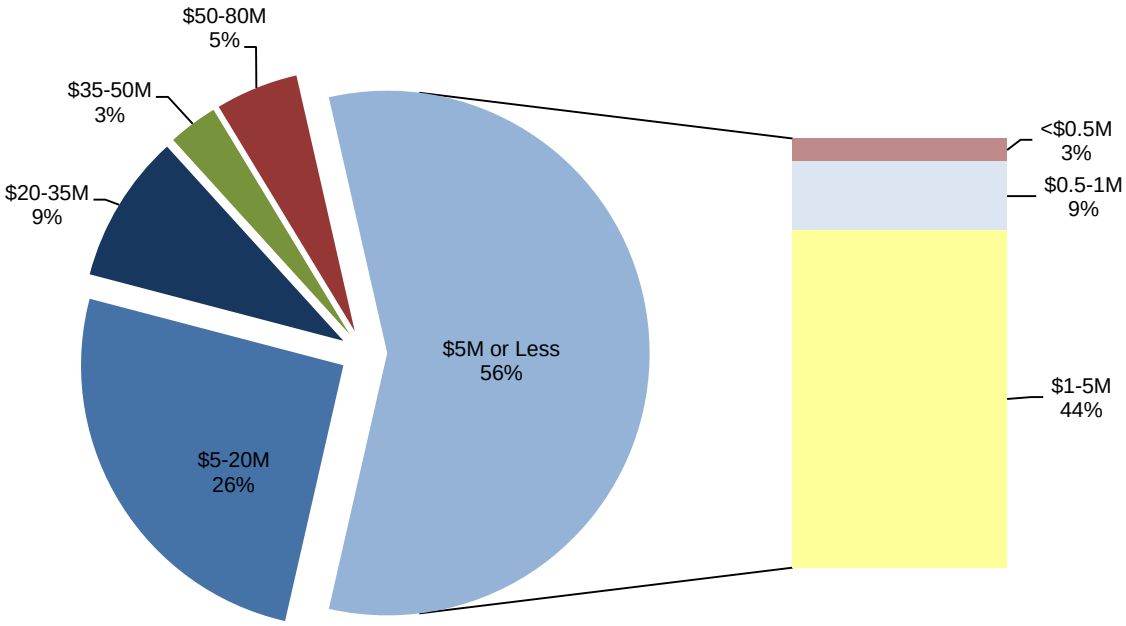
Figure 4. IT Organization at Medical Schools, 2014



Staffing and Finance

Medical schools are asked to indicate an operational IT budget category that best describes their level of funding. Over half of medical schools (59 percent) have a budget of five million dollars or less for IT services. Moreover, nine percent of medical schools have a budget from one-half million dollars through one million dollars. On average, medical school IT budgets are estimated to be four percent of total medical school budgets.

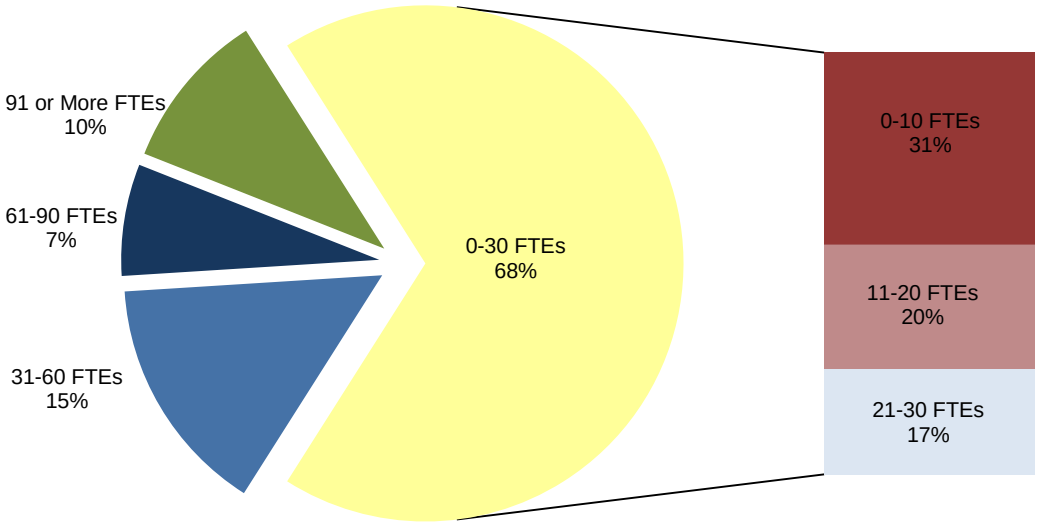
Figure 5. Approximate School of Medicine IT Budget
In $US Million, 2014 (n=129)



Note: The wedges in the pie graph are mutually exclusive, even though the labels overlap. For example, the $5-20M wedge includes budgets from $5,000,001 through $20,000,000 and the $20-35M wedge includes budgets from $20,000,001 through $35,000,000. Due to rounding, the total percentage may not equal 100 percent.

Medical schools are asked to indicate the FTE category that best describes their range of full-time equivalents (FTEs) supported by the medical school budget. Sixty-eight percent of medical schools have 30 or fewer FTEs that are funded by the school of medicine's IT budget. Moreover, 17 percent of medical schools have 21 through 30 FTEs that are supported by the medical school budget.

Figure 6. Number of FTEs Funded by the School of Medicine's IT Budget, 2014 (n=128)

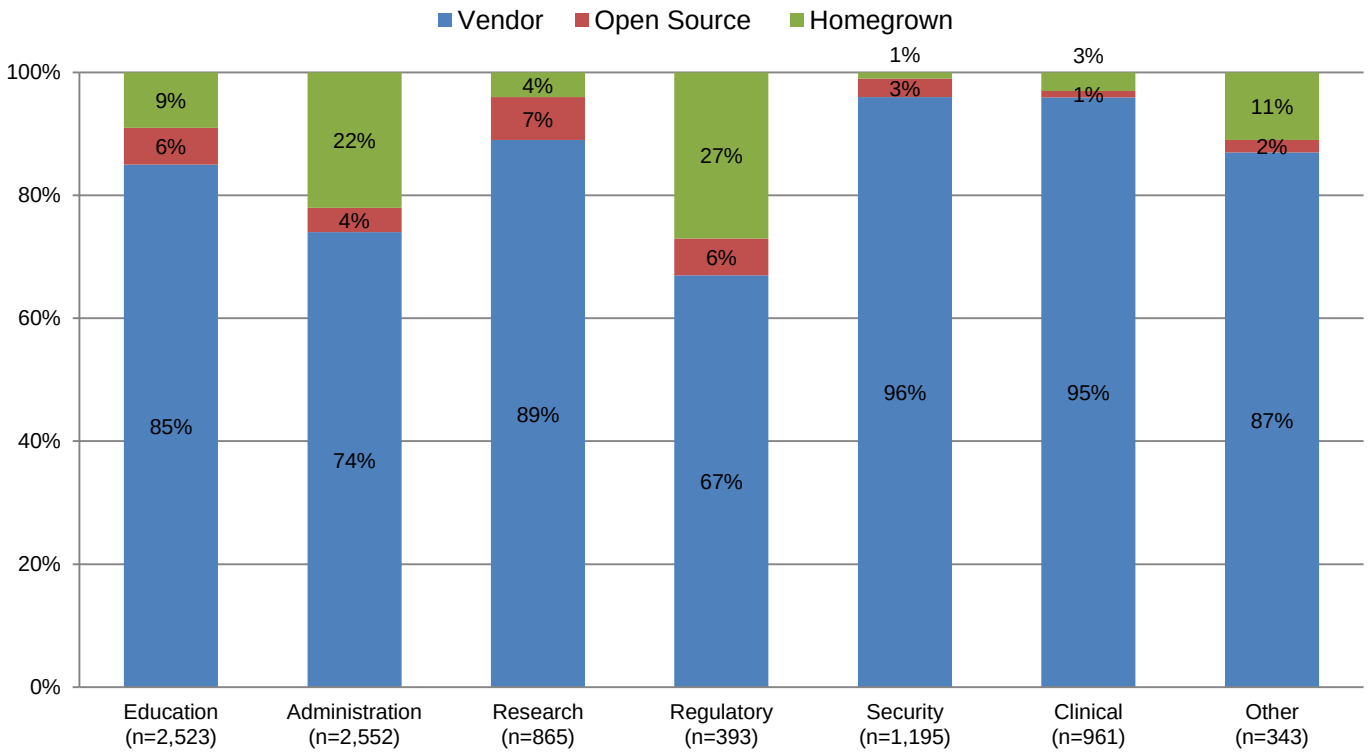


Technologies

Medical schools are asked to indicate which technologies are currently employed or will be employed in the next 12 months. The survey categorizes technologies (such as specific software, applications, or systems) by whether they are used in education, administration, research, regulatory affairs, security, clinical practice, or other areas. In addition, the survey asks respondents to indicate whether each technology is a vendor product, an open source product, or a homegrown product.

Vendor products comprise most of the products in each technology category. The security category and the clinical category show the highest proportion of vendor products (at 96 and 95 percent respectively). The homegrown products tend to be the next most common product type in each category. For example, homegrown products account for 27 percent of the regulatory category and 22 percent of the administration category. At seven percent, the research category has the highest proportion of open source technologies.

Figure 7. Technology Product Type, 2014



Note: The percentages reflect the number of technology products of a specific type (vendor, open source, homegrown) divided by the total number of products used in the category (education, administration, etc). The sample size for the number of products reported in each category is displayed.

Services

Developing, funding, and providing IT services are a significant infrastructure investment. Table 1 and Table 2 summarize funders and providers across a series of IT service categories. For example, Table 1 shows that 10 percent of medical schools reported their administration of IT organization is funded, at least in part, by departments. When comparing Tables 1 and 2, the results indicate that the entity that funds an IT service also tends to provide the service. Schools of medicine and universities appear to provide the majority of services. Schools of medicine tend to provide educational support and IT administration services while universities tend to provide the majority of operational services (such as enterprise and infrastructure services). In Table 1, the highlighted cell in each row shows the most common source of funding for each technology system.

Table 1. Percentage of Funding Sources for Information Technology Systems, 2014 (n=130)

Technology System	Department	Medical School	Health Science Center	University	Practice Plan	Hospital	Other
Administration of IT Organization	10%	47%	21%	**68%**	8%	15%	1%
Administrative Systems	22%	**75%**	25%	31%	18%	17%	2%
Application Development	25%	**75%**	21%	34%	11%	13%	3%
Audiovisual Services	20%	**74%**	22%	32%	5%	9%	2%
Clinical Systems	10%	22%	15%	8%	35%	**55%**	3%
Data Center Operations	16%	**61%**	22%	52%	12%	25%	3%
Educational Technology	22%	**80%**	17%	40%	2%	8%	1%
Enterprise Technology	16%	**51%**	21%	58%	12%	18%	4%
Help Desk/Desktop Support	24%	**65%**	20%	47%	12%	21%	3%
Infrastructure	21%	**62%**	24%	57%	14%	25%	4%
Instructional Design	18%	**71%**	15%	33%	2%	4%	2%
Library Systems	7%	47%	25%	**55%**	5%	12%	4%
Public Student Computing	12%	**69%**	22%	43%	0%	5%	4%
Regulatory Compliance	8%	50%	30%	**52%**	9%	19%	2%
Research Computing	36%	55%	23%	**58%**	4%	10%	13%
Security Services	15%	50%	24%	**62%**	12%	21%	2%
Student Systems	8%	65%	16%	**66%**	3%	3%	1%
Telephony	18%	42%	19%	**54%**	12%	18%	5%
Videoconferencing	19%	**68%**	23%	46%	6%	18%	3%
Web Development	0%	**74%**	23%	47%	10%	16%	5%

Note: Because there maybe multiple sources of funding for systems at an institution, row and column totals exceed 100%

In Table 2, the highlighted cell in each row shows the most common provider for each technology system. For example, seven percent of medical schools reported their administration of IT organization is provided, at least in part, by departments.

Table 2. Percentages of Service Providers for Information Technology Systems, 2014 (n=131)

Technology System	Department	Medical School	Health Science Center	University	Practice Plan	Hospital	Other
Administration of IT Organization	7%	37%	23%	**72%**	3%	8%	2%
Administrative Systems	18%	**61%**	24%	38%	8%	10%	3%
Application Development	23%	**69%**	21%	38%	6%	8%	5%
Audiovisual Services	18%	**65%**	21%	37%	1%	4%	2%
Clinical Systems	9%	15%	18%	8%	24%	**52%**	7%
Data Center Operations	10%	44%	23%	**57%**	5%	19%	4%
Educational Technology	14%	**77%**	20%	46%	0%	5%	1%
Enterprise Technology	11%	38%	22%	**60%**	5%	15%	3%
Help Desk/Desktop Support	20%	**61%**	24%	53%	9%	18%	3%
Infrastructure	8%	40%	20%	**63%**	5%	18%	3%
Instructional Design	21%	**66%**	14%	35%	0%	3%	3%
Library Systems	6%	37%	24%	**53%**	1%	5%	6%
Public Student Computing	13%	**64%**	21%	47%	0%	2%	4%
Regulatory Compliance	8%	45%	29%	**51%**	6%	18%	5%
Research Computing	31%	48%	24%	**57%**	2%	8%	10%
Security Services	9%	45%	22%	**66%**	7%	19%	3%
Student Systems	11%	64%	15%	**68%**	0%	2%	2%
Telephony	4%	18%	18%	**61%**	3%	16%	2%
Videoconferencing	15%	**58%**	21%	45%	3%	11%	3%
Web Development	0%	**67%**	21%	46%	6%	13%	5%

Note: Because there maybe multiple sources of funding for systems at an institution, row and column totals exceed 100%

Any questions or suggestions for enhancing the survey or report can be directed to:

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