

IT Engagement in Research at Medical Schools and Colleges: Survey Questionnaire

Thank you for participating in the study being conducted by the Association of American Medical Colleges and the EDUCAUSE Center for Applied Research (ECAR). This survey is a critical part of the study and seeks to understand the roles of information technology in research at medical schools and colleges. Our testing suggests that the survey will require 30-45 minutes to complete. If you wish to print a copy of the survey before completing it online, a .pdf version is available at <http://www.educause.edu/LibraryDetailPage/666?ID=ESI07B>.

This survey is part of research ECAR is conducting into the role of information technology in research at colleges and universities. It seeks to understand what those institutions have and how they manage the key components of their IT research infrastructure, including networks, computing, facilities, data storage, and support. ECAR researchers will identify trends in IT engagement in the research effort, as well as innovative practices for improving an institution's research capacity.

As you work on the survey, we encourage you to consult with other offices, such as Research, Deans, and the Provost.

Our survey software allows you to:

> **Print.** To **print a blank copy of the survey** before completing it, click "Printable version of this survey" in the header. Once you have completed the online survey, you should **print your responses** by clicking the "Review" button at the end of the survey. You may also download and print a blank survey by visiting <http://www.educause.edu/SurveyInstruments/1004>.

> **Save partially completed surveys.** The online survey need not be completed at a single sitting. To save and return to a partially completed survey, set a Favorite or Bookmark for the survey and then click the SAVE button at the bottom of the survey screen. If cookies are enabled in your browser, when you return to the survey you will be taken to the place you left off.

> **Review, revise, print, and save your responses.** You may review and revise your answers before clicking the "Finish" button to submit your response. On the last screen of the survey, select the "Review" button to review, revise, print, and save your responses. **Always print a copy of your completed survey and retain it for your records.**

Please complete this survey by **Monday, February 5, 2007**.

All data and information collected in this survey by the EDUCAUSE Center for Applied Research and the AAMC are used strictly for the purposes of research and analysis for the benefit of AAMC members and ECAR subscribers. EDUCAUSE and AAMC do not make personally or institutionally identifiable information or data available to their members, sponsors, contractors, or others.

We appreciate your time and participation. If you have any questions or concerns, please e-mail ecar@educause.edu.

Click the Next button to begin the survey. Once again, thank you for your input!

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EDUCAUSE CENTER FOR APPLIED RESEARCH

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Section 1: About You and Your Institution

1.1 Your institution [Required]

- Albany Medical College
- Albert Einstein College of Medicine of Yeshiva University
- Baylor College of Medicine
- Boston University School of Medicine
- Brown Medical School
- Case Western Reserve University School of Medicine
- Chicago Medical School at Rosalind Franklin U-Med & Sci
- Columbia University College of Physicians and Surgeons
- Creighton University School of Medicine
- Dartmouth Medical School
- Drexel University College of Medicine
- Duke University School of Medicine
- East Tennessee State University James H. Quillen College of Medicine
- Eastern Virginia Medical School
- Emory University School of Medicine
- Florida State U College of Medicine
- George Washington University School of Medicine and Health Sciences
- Georgetown University School of Medicine
- Harvard Medical School
- Howard University College of Medicine
- Indiana University School of Medicine
- Jefferson Medical College of Thomas Jefferson University
- Joan & Sanford I. Weill Medical College of Cornell University
- Joan C. Edwards School of Medicine at Marshall University
- Johns Hopkins University School of Medicine
- Keck School of Medicine of the University of Southern California
- Loma Linda University School of Medicine
- Louisiana State University School of Medicine in New Orleans
- Louisiana State University School of Medicine in Shreveport
- Loyola University Chicago Stritch School of Medicine
- Mayo Medical School
- Medical College of Georgia School of Medicine
- Medical College of Wisconsin
- Medical University of South Carolina College of Medicine
- Meharry Medical College
- Mercer University School of Medicine
- Michigan State University College of Human Medicine
- Morehouse School of Medicine
- Mount Sinai School of Medicine of New York University
- New York Medical College
- New York University School of Medicine
- Northeastern Ohio Universities College of Medicine
- Northwestern University The Feinberg School of Medicine
- Ohio State University College of Medicine
- Oregon Health & Science University School of Medicine

- () Pennsylvania State University College of Medicine
- () Ponce School of Medicine
- () Rush Medical College of Rush University Medical Center
- () Saint Louis University School of Medicine
- () Sanford School of Medicine of the University of South Dakota
- () Southern Illinois University School of Medicine
- () Stanford University School of Medicine
- () State University of New York Downstate Medical Center College of Medicine
- () State University of New York Upstate Medical University
- () Stony Brook University Health Sciences Center School of Medicine
- () Temple University School of Medicine
- () Texas Tech University Health Sciences Center School of Medicine
- () The Brody School of Medicine at East Carolina University
- () The Texas A & M University System
- () The University of Oklahoma College of Medicine
- () The University of Toledo College of Medicine
- () Tufts University School of Medicine
- () Tulane University School of Medicine
- () UCLA/Drew Medical Education Program
- () UMDNJ--New Jersey Medical School
- () UMDNJ-Robert Wood Johnson Medical School
- () Uniformed Services U of the Health Sci F Edward Hebert SOM
- () Universidad Central del Caribe School of Medicine
- () University at Buffalo State University of New York School of Medicine & Biomedical Sciences
- () University of Alabama School of Medicine
- () University of Arizona College of Medicine
- () University of Arkansas for Medical Sciences College of Medicine
- () University of California Los Angeles David Geffen SOM
- () University of California San Diego School of Medicine
- () University of California, Davis, School of Medicine
- () University of California, Irvine, College of Medicine
- () University of California, San Francisco, School of Medicine
- () University of Chicago Division of the Biological Sciences, The Pritzker School of Medicine
- () University of Cincinnati College of Medicine
- () University of Colorado School of Medicine
- () University of Connecticut School of Medicine
- () University of Florida College of Medicine
- () University of Hawaii John A. Burns School of Medicine
- () University of Illinois College of Medicine
- () University of Iowa Roy J. and Lucille A. Carver College of Medicine
- () University of Kansas School of Medicine
- () University of Kentucky College of Medicine
- () University of Louisville School of Medicine
- () University of Maryland School of Medicine
- () University of Massachusetts Medical School
- () University of Miami Leonard M. Miller School of Medicine
- () University of Michigan Medical School

- University of Minnesota Medical School
- University of Mississippi School of Medicine
- University of Missouri-Columbia School of Medicine
- University of Missouri-Kansas City School of Medicine
- University of Nebraska College of Medicine
- University of Nevada School of Medicine
- University of New Mexico School of Medicine
- University of North Carolina at Chapel Hill School of Medicine
- University of North Dakota School of Medicine and Health Sciences
- University of Pennsylvania School of Medicine
- University of Pittsburgh School of Medicine
- University of Puerto Rico School of Medicine
- University of Rochester School of Medicine and Dentistry
- University of South Alabama College of Medicine
- University of South Carolina School of Medicine
- University of South Florida College of Medicine
- University of Tennessee Health Science Center College of Medicine
- University of Texas Medical Branch at Galveston
- University of Texas Medical School at Houston
- University of Texas Medical School at San Antonio
- University of Texas Southwestern Medical Center at Dallas Southwestern Medical School
- University of Utah School of Medicine
- University of Vermont College of Medicine
- University of Virginia School of Medicine
- University of Washington School of Medicine
- University of Wisconsin School of Medicine and Public Health
- Vanderbilt University School of Medicine
- Virginia Commonwealth University School of Medicine
- Wake Forest University School of Medicine
- Washington University in St. Louis School of Medicine
- Wayne State University SOM
- West Virginia University School of Medicine
- Wright State University Boonshoft School of Medicine
- Yale University School of Medicine

1.2 Your name [Required] _____

1.3 Your position [Required]

- Medical school/college CIO or equivalent <Go to 1.5>
- Other

1.4 Please describe “other.” _____

1.5 How many years have you worked at your current institution?

- Less than one
- 1
- 2

- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- More than 20

1.6 The senior-most IT leader in the medical school/college reports to:

- President/chancellor
- Provost/chief academic officer
- Dean
- Associate/assistant dean
- Chief business officer
- Chief officer responsible for research
- Medical school/college librarian
- Other administrative officer
- Other academic officer

1.7 Is the senior-most IT leader in the medical school/college a member of the dean's cabinet (or equivalent)?

- No
- Yes

1.8 Which statement best describes your medical school/college?

- Research and teaching are the primary missions, but research is what really drives faculty and institutional success.
- Research and teaching are both primary missions, and they are equally important for faculty and institutional success.
- Teaching is the primary mission, but faculty research is rewarded.
- Teaching is the primary mission, and faculty research does not factor heavily in faculty and institutional success.

1.9 Which statement best describes your medical school/college's aspirations for academic research reputation?

- Our leadership has made our overall reputation for research an explicit and funded priority.
- Our leadership has identified key areas for research excellence and is focusing attention and resources in these areas.
- Our research reputation is largely left to faculty motivation, innovation, and grantsmanship.
- Our leadership is currently not pursuing any specific strategies to enhance our academic research reputation.

1.10 How would you rate your medical school/college's reputation for academic research?

- World class
- Excellent
- Good
- Fair
- Poor
- Don't know

1.11 Which statement best characterizes the current overall organizational climate at your medical school/college?

- Stable (change is slow or rare)
- Dynamic (change is continuous, orderly, planned, and navigable)
- Volatile (change is episodic, discontinuous, and requires care)
- Turbulent (change is often driven by events, is unpredictable, and can disrupt ongoing operations)

1.12 Do you have an executive responsible for research?

- No
- Yes

1.13 How are IT services at your medical school/college organized?

- The school/college has no IT organizations of its own
- The school/college has only a central IT organization
- The school/college has only one or more departmental IT organizations
- The school/college has both a central IT organization and one or more departmental IT organizations
- Other

1.14 In the *past three years*, the level of research contracts and grants at my medical school/college has decreased/increased:

- Decreased more than 15%
- 15%
- 10%
- 5%
- 0%
- 5%
- 10%
- 15%
- 20%
- 25%
- 30%
- 35%
- 40%
- 45%
- 50%
- Increased more than 50%

1.15 In the *past three years*, computation-intensive research at this medical school/college has:

- Greatly decreased
- Decreased
- Stayed the same
- Increased



- Greatly increased
- Don't know

1.16_1.24 To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Don't know
1.16 My medical school/college places high priority on research.						
1.17 My medical school/college places high priority on the use of information technology for research.						
1.18 My medical school/college places high priority on recruiting faculty who will do research.						
1.19 My medical school/college places high priority on inter-disciplinary research.						
1.20 My medical school/college places high priority on multi-institutional research.						
1.21 My medical school/college places high priority on undergraduate research.						
1.22 My medical school/college does a significant amount of federal and state sponsored research.						
1.23 My medical school/college does a significant amount of corporate and foundation sponsored research.						
1.24 The head of my medical school/college is well-known in his/her field for his/her research.						

Section 2: Institutional Perspectives on IT Support for Research

2.1 Does your medical school/college's central IT organization(s) have a distinct unit with the explicit mission of supporting faculty, clinicians, or other researchers with their research needs?

- No
- Yes
- No medical school/college central IT organization exists
- Don't know

2.2 How many medical school/college central IT full time staff (FTE) are currently assigned to the support of research?

- Fewer than 1
- 1
- 2
- 3
- 4
- 5
- 6
- 7

- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- More than 25
- No medical school/college central IT organization exists

**2.3 Does your medical school/college have an officially-designated Office of Research?
[Required]**

- No <Go to 2.14>
- Yes
- Don't know <Go to 2.14>

2.4_2.12 What are the responsibilities of the Office of Research? <Select all that apply.>

- 2.4 Assistance to researchers on pre-award grant and proposal writing
- 2.5 Assistance to researchers on post-award grant management
- 2.6 Assistance to researchers on IT tools and methodologies
- 2.7 Assistance to researchers on the selection and use of technology
- 2.8 Assistance to researchers on regulatory affairs (including human and animal subjects)
- 2.9 Formation and promulgation of institutional policy on research
- 2.10 Management of relationships with other institutions and consortia on research issues
- 2.11 Other

2.12 Please describe "other." _____

2.13 How would you characterize the medical school/college central IT organization(s)' relationship with the Office of Research?

- We are integral to one another's success and work together at every opportunity
- We maintain a close working relationship and coordinate our activities on a regular basis
- We coordinate our activities as necessary when common issues arise
- We operate independently
- No medical school/college central IT organization exists

2.14 In the past three years, the number of medical school/college central IT staff who support research has:

- Greatly decreased
- Decreased
- Stayed the same
- Increased

- Greatly increased
- No medical school/college central IT organization exists
- Don't know

2.15 In the next three years, the number of medical school/college central IT staff who support research is expected to:

- Greatly decrease
- Decrease
- Stay the same
- Increase
- Greatly increase
- No medical school/college central IT organization exists
- Don't know

2.16 In the past three years, the number of IT staff in the medical school/college departments who support research has:

- Greatly decreased
- Decreased
- Stayed the same
- Increased
- Greatly increased
- No IT staff exist in departments
- Don't know

2.17 In the next three years, the number of IT staff in the medical school/college departments who support research is expected to:

- Greatly decrease
- Decrease
- Stay the same
- Increase
- Greatly increase
- No IT staff exist in departments
- Don't know

2.18 Improved collaboration, governance, and decision-making over total (medical school/college central and departmental) IT spending for research would lead to significantly higher quality research.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Don't know

2.19 2.29 How does your medical school/college central IT organization engage with researchers around the IT aspects of their work? <Select all that apply.>

- 2.19 No medical school/college central IT organization exists [Proceed to 2.30_240]
- 2.20 There is no formal engagement with faculty around research-related IT
- 2.21 A single formal research advisory or working group
- 2.22 Multiple advisory or working groups organized around shared research problems or methods
- 2.23 Multiple advisory or working groups organized around computing platforms
- 2.24 Ad hoc consultations on an as-needed basis

- 2.25 Open meetings for all researchers to provide input on research-related IT needs
- 2.26 Regular meetings with deans, chairs, and heads of institutes regarding research-related IT needs
- 2.27 Surveys to schools, departments, or researchers regarding research-related IT needs
- 2.28 Formal consultations supported by specific research grants
- 2.29 Regular and active informal networking by medical school/college central IT staff with researchers

2.30_2.40 If your medical school/college has a research advisory group(s) that addresses research IT issues, in which of the following activities does it engage? <Select all that apply.>

- 2.30 My medical school/college does not have such an advisory group(s) [Proceed to 2.41]
- 2.31 Identifying research-related IT needs of faculty and others
- 2.32 Setting priorities among competing research-related IT needs
- 2.33 Coordinating central and department IT resources related to research
- 2.34 Allocating medical school/college central IT resources for research support
- 2.35 Addressing policy issues, such as intellectual property
- 2.36 Establishing standards for research-related technologies
- 2.37 Establishing service levels for medical school/college central IT organization(s) for research-related IT support
- 2.38 Requesting funds for research IT from central administration
- 2.39 Providing oversight of consortia and partnerships related to IT
- 2.40 Other

2.41 Does your medical school/college engage in long-term planning exercises to determine researchers' needs for IT infrastructure and support services?

- No
- Every year
- Every 2–3 years
- Every 4–5 years
- Every 6–10 years

2.42_2.47 What are the two strongest drivers for your medical school/college's overall investment in IT related to research? <Select up to two.>

- 2.42 No drivers for IT investment in research [Proceed to 2.48_2.55]
- 2.43 Current demand for research support from the faculty
- 2.44 Projected demand for research support from the faculty
- 2.45 Medical school/college CIO interest in supporting research
- 2.46 Medical school/college goals, priorities, and strategic directions
- 2.47 Economic development (e.g., regional growth and employment)

2.48_2.55 What are the most significant barriers to overall investment in research-related IT? <Select up to two.>

- 2.48 No barriers to IT investment for research [Proceed to 2.56_2.65]
- 2.49 Lack of medical school/college funding
- 2.50 Lack of external funding (e.g., grants)
- 2.51 Higher IT priorities
- 2.52 No internal faculty constituency
- 2.53 Lack of staff expertise in medical school/college central IT organization
- 2.54 Lack of staff expertise in departments
- 2.55 Lack of alignment with the medical school/college mission

2.56_2.65 In the *past three years*, the following activities at your medical school/college have:

	Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Don't know
2.56 Interdisciplinary research						
2.57 Multi-institutional research						
2.58 Computational research in traditionally non-computing-intensive disciplines						
2.59 The number of faculty engaged in research						
2.60 Partnerships with the private sector						
2.61 Use of remote instrumentation						
2.62 Use of high-performance computing						
2.63 Use of high-performance networking						
2.64 Amount of data storage						
2.65 Use of online library resources						

2.66_2.75 In the *next three years*, the following activities at your institution are expected to:

	Greatly decrease	Decrease	Stay the same	Increase	Greatly increase	Don't know
2.66 Interdisciplinary research						
2.67 Multi-institutional research						
2.68 Computational research in traditionally non-computing-intensive disciplines						
2.69 The number of faculty engaged in research						
2.70 Partnerships with the private sector						
2.71 Use of remote instrumentation						
2.72 Use of high-performance computing						
2.73 Use of high-performance networking						
2.74 Amount of data storage						
2.75 Use of online library resources						

2.76_2.85 In the *past three years*, which three disciplines have displayed the fastest *growth* in demand for medical school/college central IT infrastructure and support services for research? <Select up to three.>

2.76a No medical school/college central IT organization exists [Proceed to 2.86_295]

2.76 Primary care (medicine, family medicine, pediatrics, OB/GYN)

2.77 Surgical specialties (general surgery, plastic surgery, neurosurgery, orthopedics, anesthesiology, etc.)

2.78 Medical specialties (internal medicine, tropical medicine, dermatology, neurology, otolaryngology, etc.)

- 2.79 Radiology (diagnostic radiology, radiation oncology, etc.)
- 2.80 Psychiatry
- 2.81 Neuroscience (neuroanatomy, neurophysiology, etc.)
- 2.82 Molecular Biology (biochemistry, microbiology, immunology, etc.)
- 2.83 Molecular Medicine (pharmacology, pathology, genomics, proteomics, genetic counseling, etc.)
- 2.84 Informatics
- 2.85 Other

2.86_2.95 Currently, which three disciplines generate the greatest demands for medical school/college central IT infrastructure and support for research? <Select up to three.>

- 2.86a No medical school/college central IT organization exists [Proceed to 2.96_2.105]
- 2.86 Primary care (medicine, family medicine, pediatrics, OB/GYN)
- 2.87 Surgical specialties (general surgery, plastic surgery, neurosurgery, orthopedics, anesthesiology, etc.)
- 2.88 Medical specialties (internal medicine, tropical medicine, dermatology, neurology, otolaryngology, etc.)
- 2.89 Radiology (diagnostic radiology, radiation oncology, etc.)
- 2.90 Psychiatry
- 2.91 Neuroscience (neuroanatomy, neurophysiology, etc.)
- 2.92 Molecular Biology (biochemistry, microbiology, immunology, etc.)
- 2.93 Molecular Medicine (pharmacology, pathology, genomics, proteomics, genetic counseling, etc.)
- 2.94 Informatics
- 2.95 Other

2.96_2.105 Which disciplines regularly provide the medical school/college central IT organization with input and guidance on their research-related IT needs for infrastructure and support services? <Select all that apply.>

- 2.96a No medical school/college central IT organization exists [Proceed to 2.106]
- 2.96 Primary care (medicine, family medicine, pediatrics, OB/GYN)
- 2.97 Surgical specialties (general surgery, plastic surgery, neurosurgery, orthopedics, anesthesiology, etc.)
- 2.98 Medical specialties (internal medicine, tropical medicine, dermatology, neurology, otolaryngology, etc.)
- 2.99 Radiology (diagnostic radiology, radiation oncology, etc.)
- 2.100 Psychiatry
- 2.101 Neuroscience (neuroanatomy, neurophysiology, etc.)
- 2.102 Molecular Biology (biochemistry, microbiology, immunology, etc.)
- 2.103 Molecular Medicine (pharmacology, pathology, genomics, proteomics, genetic counseling, etc.)
- 2.104 Informatics
- 2.105 Other

2.106 To what extent is medical school/college central IT consulted in the pre-award process of contracts and grants to identify IT needs and resources?

- No medical school/college central IT organization exists
- Never
- Rarely
- Sometimes
- Often
- Always
- Don't know



2.107 To what extent is medical school/college central IT consulted in the faculty and researcher hiring process to identify their IT needs and resources?

- No medical school/college central IT organization exists
- Never
- Rarely
- Sometimes
- Often
- Always
- Don't know

Section 3: IT Infrastructure and Support for Research

3.1 What is the total bandwidth available on your medical school/college's *campus* network backbone(s)?

- Don't know
- Less than 10 Mbps
- 10 to 99 Mbps
- 100 to 499 Mbps
- 500 to 999 Mbps
- 1 Gbps to 4.99 Gbps
- 5 Gbps to 10 Gbps
- More than 10 Gbps

3.2 If your medical college or school is part of a larger institution (e.g., a university), what is the total bandwidth available on that institution's *campus* network backbone(s)?

- Not part of a larger institution
- Don't know
- Less than 10 Mbps
- 10 to 99 Mbps
- 100 to 499 Mbps
- 500 to 999 Mbps
- 1 Gbps to 4.99 Gbps
- 5 Gbps to 10 Gbps
- More than 10 Gbps

3.3 What is the total *commodity Internet* bandwidth available to your medical school/college?

- Don't know
- Less than 10 Mbps
- 10 to 99 Mbps
- 100 to 499 Mbps
- 500 to 999 Mbps
- 1 Gbps to 4.99 Gbps
- 5 Gbps to 10 Gbps
- More than 10 Gbps

3.4 What is the total *high-speed network* bandwidth (Internet2, NLR, etc.) available to your medical school/college?

- Don't know
- Less than 10 Mbps
- 10 to 99 Mbps
- 100 to 499 Mbps

- 500 to 999 Mbps
- 1 Gbps to 4.99 Gbps
- 5 Gbps to 10 Gbps
- More than 10 Gbps

3.5 At your institution does any entity above the department level offer data storage capacity to researchers?

- No <Go to 3.8>
- Yes
- Don't know <Go to 3.8>

3.6 Central IT at the larger institutional level (e.g., a university) offers researchers a standard data storage capacity of:

- There is no larger institution of which my medical school/college is part.
- The larger institution does not provide research data storage services centrally.
- Up to 100 GB
- 101 to 500 GB
- 501 GB to 1TB
- More than 1TB

3.7 Central IT at my medical school/college offers researchers a standard data storage capacity of:

- No medical school/college central IT organization exists
- The medical school/college does not provide research data storage services centrally.
- Up to 100 GB
- 101 to 500 GB
- 501 GB to 1TB
- More than 1TB

3.8 How would you rate your medical school/college IT infrastructure in terms of its ability to support medical school/college research?

- World class
- Excellent
- Good
- Fair
- Poor
- Don't know

3.9 How would you rate your larger institution's (e.g., a university) IT infrastructure in terms of its ability to support medical school/college research?

- No larger institution central IT organization exists
- World class
- Excellent
- Good
- Fair
- Poor
- Don't know

3.10a Does any entity at your medical school/college publish supported platform standards for the research infrastructure?

- No <Go to 3.13_3.27>
- Yes
- Don't know <Go to 3.13_3.27>



3.10 Which of the following best describes your medical school/college's approach to IT platform standards for the research infrastructure?

- Medical school/college central IT publishes supported platform standards and is rigorous in enforcing them.
- Medical school/college central IT publishes supported platform standards and hopes that faculty and researchers will adhere to them.
- An entity other than medical school/college central IT publishes supported platform standards related to research infrastructure.

3.11 In the *past three years*, the difficulty of enforcing IT platform standards for research has:

- Greatly decreased
- Decreased
- Stayed the same
- Increased
- Greatly increased
- Don't know
- Not applicable

3.12 In the *next three years*, the difficulty of enforcing IT platform standards research is expected to:

- Greatly decrease
- Decrease
- Stay the same
- Increase
- Greatly increase
- Don't know
- Not applicable

3.13_3.27 Which of these IT infrastructure elements and support services are provided to researchers primarily by the *medical school/college central IT organization*? [Skip if your medical school/college has no central IT organization.] <Select all that apply.>

- 3.13 Networking
- 3.14 High-performance computation
- 3.15 Data storage
- 3.16 Selection and use of standard research applications such as SPSS, research databases, etc.
- 3.17 Software application programming and development
- 3.18 Selection and use of research tools (e.g., visualization, data mining, statistical analysis, etc.)
- 3.19 Providing collaboration tools (e.g., videoconferencing, whiteboarding)
- 3.20 Data archive migration through media and software evolution
- 3.21 Software lifecycle management (e.g., upgrades, version control)
- 3.22 Training classes (e.g., on database use, security, digital video)
- 3.23 IT consulting services (e.g., issue-specific problem-solving)
- 3.24 Hosting services for individual researchers' servers
- 3.25 Development and maintenance of Web sites that are related to their research
- 3.26 Maintaining vendor contracts for hardware and software purchases
- 3.27 Planning for IT infrastructure for research in new facilities

3.28_3.42 Which of these IT infrastructure elements and support services are provided to researchers primarily by IT staff in the researcher's department or center? <Select all that apply.>

- 3.28 Networking
- 3.29 High-performance computation
- 3.30 Data storage
- 3.31 Selection and use of standard research applications such as SPSS, research databases, etc.
- 3.32 Software application programming and development
- 3.33 Selection and use of research tools (e.g., visualization, data mining, statistical analysis, etc.)
- 3.34 Providing collaboration tools (e.g., videoconferencing, whiteboarding)
- 3.35 Data archive migration through media and software evolution
- 3.36 Software lifecycle management (e.g., upgrades, version control)
- 3.37 Training classes (e.g., on database use, security, digital video)
- 3.38 IT consulting services (e.g., issue-specific problem-solving)
- 3.39 Hosting services for individual researchers' servers
- 3.40 Development and maintenance of Web sites that are related to their research
- 3.41 Maintaining vendor contracts for hardware and software purchases
- 3.42 Planning for IT infrastructure for research in new facilities

3.43_3.57 Which of these IT infrastructure elements and support services are provided to researchers primarily by the individual researcher's staff? <Select all that apply.>

- 3.43 Networking
- 3.44 High-performance computation
- 3.45 Data storage
- 3.46 Selection and use of standard research applications such as SPSS, research databases, etc.
- 3.47 Software application programming and development
- 3.48 Selection and use of research tools (e.g., visualization, data mining, statistical analysis, etc.)
- 3.49 Providing collaboration tools (e.g., videoconferencing, whiteboarding)
- 3.50 Data archive migration through media and software evolution
- 3.51 Software lifecycle management (e.g., upgrades, version control)
- 3.52 Training classes (e.g., on database use, security, digital video)
- 3.53 IT consulting services (e.g., issue-specific problem-solving)
- 3.54 Hosting services for individual researchers' servers
- 3.55 Development and maintenance of Web sites that are related to their research
- 3.56 Maintaining vendor contracts for hardware and software purchases
- 3.57 Planning for IT infrastructure for research in new facilities

3.58_3.72 Which of the following IT infrastructure elements and support services are provided to researchers primarily by the larger institution's IT organization? [Skip if your medical school/college is not part of a larger institution.] <Select all that apply>

- 3.58 Networking
- 3.59 High-performance computation
- 3.60 Data storage
- 3.61 Selection and use of standard research applications such as SPSS, research databases, etc.
- 3.62 Software application programming and development
- 3.63 Selection and use of research tools (e.g., visualization, data mining, statistical analysis, etc.)
- 3.64 Providing collaboration tools (e.g., videoconferencing, whiteboarding)



- 3.65 Data archive migration through media and software evolution
- 3.66 Software lifecycle management (e.g., upgrades, version control)
- 3.67 Training classes (e.g., on database use, security, digital video)
- 3.68 IT consulting services (e.g., issue-specific problem-solving)
- 3.69 Hosting services for individual researchers' servers
- 3.70 Development and maintenance of Web sites that are related to their research
- 3.71 Maintaining vendor contracts for hardware and software purchases
- 3.72 Planning for IT infrastructure for research in new facilities

3.73_3.86 Which of the following research-related IT services does the larger institution's central IT organization actively coordinate with departments? [Skip if your medical school/college is not part of a larger institution.] <Select all that apply.>

- 3.73 Selection and use of standard research applications (e.g., SPSS, research databases, etc.)
- 3.74 Software application programming and development
- 3.75 Selection and use of research tools (e.g., visualization, data mining, statistical analysis, etc.)
- 3.76 Providing collaboration tools (e.g., videoconferencing, whiteboarding)
- 3.77 Data archive migration through media and software evolution
- 3.78 Software lifecycle management (e.g., upgrades, version control)
- 3.79 Training classes (e.g., on database use, security, digital video)
- 3.80 IT consulting services (e.g., issue-specific problem-solving)
- 3.81 Hosting services for individual researchers' servers
- 3.82 Development and maintenance of Web sites that are related to their research
- 3.83 Maintaining vendor contracts for hardware and software purchases
- 3.84 Planning for IT infrastructure for research in new facilities
- 3.85 Other

3.86 Please describe "other." _____

3.87_3.100 Which of the following research-related IT services does the medical school/college central IT organization actively coordinate with departments? <Select all that apply.>

- 3.87 Selection and use of standard research applications (e.g., SPSS, research databases, etc.)
- 3.88 Software application programming and development
- 3.89 Selection and use of research tools (e.g., visualization, data mining, statistical analysis, etc.)
- 3.90 Providing collaboration tools (e.g., videoconferencing, whiteboarding)
- 3.91 Data archive migration through media and software evolution
- 3.92 Software lifecycle management (e.g., upgrades, version control)
- 3.93 Training classes (e.g., on database use, security, digital video)
- 3.94 IT consulting services (e.g., issue-specific problem-solving)
- 3.95 Hosting services for individual researchers' servers
- 3.96 Development and maintenance of Web sites that are related to their research
- 3.97 Maintaining vendor contracts for hardware and software purchases
- 3.98 Planning for IT infrastructure for research in new facilities
- 3.99 Other

3.100 Please describe "other." _____

3.101_3.112 For which IT support services is your medical school/college central IT organization(s) experiencing the fastest growth in demand from researchers? <Select up to three.>

- 3.101 Selection and use of standard research applications (e.g., SPSS, research databases, etc.)
- 3.102 Software application programming and development
- 3.103 Selection and use of research tools (e.g., visualization, data mining, statistical analysis, etc.)
- 3.104 Providing collaboration tools (e.g., videoconferencing, whiteboarding)
- 3.105 Data archive migration through media and software evolution
- 3.106 Software lifecycle management (e.g., upgrades, version control)
- 3.107 Training classes (e.g., on database use, security, digital video)
- 3.108 IT consulting services (e.g., issue-specific problem-solving)
- 3.109 Hosting services for individual researchers' servers.
- 3.110 Development and maintenance of Web sites that are related to their research
- 3.111 Maintaining vendor contracts for hardware and software purchases
- 3.112 Planning for IT infrastructure for research in new facilities

3.113 How satisfied do you think researchers are with the IT support services provided by the larger institution (e.g., a university) central IT organization(s) for their research activities?

- There is no larger institution of which my medical school/college is part.
- Extremely dissatisfied
- Somewhat dissatisfied
- Neutral
- Somewhat satisfied
- Extremely satisfied
- No larger institution central IT organization exists
- Don't know

3.114 How satisfied do you think researchers are with the IT support services provided by the medical school/college central IT organization(s) for their research activities?

- Extremely dissatisfied
- Somewhat dissatisfied
- Neutral
- Somewhat satisfied
- Extremely satisfied
- No medical school/college central IT organization exists
- Don't know

3.115 How satisfied do you think researchers are with the IT support services provided by the departments for their research activities?

- Extremely dissatisfied
- Somewhat dissatisfied
- Neutral
- Somewhat satisfied
- Extremely satisfied
- No departmental IT services exist
- Don't know

3.116 How satisfied do you think researchers are with the IT *infrastructure* provided by the larger institution's central IT organization(s) for their research activities?

- There is no larger institution of which my medical school/college is part.
- Extremely dissatisfied
- Somewhat dissatisfied
- Neutral
- Somewhat satisfied
- Extremely satisfied
- No larger institution central IT organization exists
- Don't know

3.117 How satisfied do you think researchers are with the IT *infrastructure* provided by the medical school/college central IT organization(s) for their research activities?

- Extremely dissatisfied
- Somewhat dissatisfied
- Neutral
- Somewhat satisfied
- Extremely satisfied
- No central IT organization exists
- Don't know

Section 4: External Relationships and Consortia

4.1_4.9 To which of the following does your medical school/college connect through an arrangement with the larger institution (e.g., a university)? [Skip if your medical school/college is not part of a larger institution.] <Select all that apply.>

- 4.1 Larger institution campus network
- 4.2 University system network (multi-campus)
- 4.3 Other multi-institutional network
- 4.4 Regional research and education network
- 4.5 State research and education network
- 4.6 National research network (e.g., Internet2/Abilene, National LambdaRail, Canarie)
- 4.7 Regional gigapop
- 4.8 Other

4.9 Please describe "other." _____

4.10_4.18 To which of the following does your medical school/college directly connect? <Select all that apply.>

- 4.10 Medical school/college campus network
- 4.11 University system network (multi-campus)
- 4.12 Other multi-institutional network
- 4.13 Regional research and education network
- 4.14 State research and education network
- 4.15 National research network (e.g., Internet2/Abilene, National LambdaRail, Canarie)
- 4.16 Regional gigapop
- 4.17 Other

4.18 Please describe "other." _____

4.19_4.24 Does the larger institutional (e.g., a university) central IT organization(s) participate in any consortia, partnerships, or shared services arrangements that provide IT support for faculty research in any of these? [Skip if your medical school/college is not part of a larger institution.] <Select all that apply.>

- 4.19 Infrastructure (networks, computation, and data storage)
- 4.20 Applications and tools (e.g., visualization, display, data mining, statistical analysis)
- 4.21 Research support (e.g., training and consulting)
- 4.22 Operations (e.g., security, data protection, licensing support, facility management)
- 4.23 Other

4.24 Please describe “other.” _____

4.25_4.30 Does the medical school/college central IT organization(s) participate in any consortia, partnerships, or shared services arrangements that provide IT support for faculty research in any of these? <Select all that apply.>

- 4.25a No medical school/college central IT organization exists [Proceed to 4.31_4.42]
- 4.25 Infrastructure (networks, computation, and data storage)
- 4.26 Applications and tools (e.g., visualization, display, data mining, statistical analysis)
- 4.27 Research support (e.g., training and consulting)
- 4.28 Operations (e.g., security, data protection, licensing support, facility management)
- 4.29 Other

4.30 Please describe “other.” _____

4.31_4.42 If applicable, what are the three greatest benefits from participating in a consortium, partnership, or shared services arrangement for IT research infrastructure and services? <Select up to three.>

- 4.31 We have yet to see any benefits from participation
- 4.32 Cost savings
- 4.33 Access to greater range of expertise in IT related to research
- 4.34 Lowered barrier to entry for researchers
- 4.35 Opportunity to use new research methods and tools
- 4.36 Opportunity for research in a wider range of disciplines
- 4.37 Opportunity for inter-disciplinary research
- 4.38 Opportunity for inter-institutional research
- 4.39 Better positioned for securing NIH, NSF, and other grants
- 4.40 Greater prestige to the institution
- 4.41 Opportunity for professional development for IT staff
- 4.42 Not applicable

Section 5: Funding

5.1 Independent of infrastructure that is multi-purpose, (e.g., network and e-mail services), approximately how much money does the medical school/college central IT organization(s) spend on infrastructure and services related to research?

- No medical school/college central IT organization exists
- None
- Less than \$100,000
- \$100,000–\$250,000
- \$250,001–\$500,000
- \$500,001–\$1,000,000
- \$1,000,001–\$2,000,000
- \$2,000,001–\$3,000,000

- () \$3,000,001–\$4,000,000
- () \$4,000,001–\$5,000,000
- () More than \$5 million
- () Don't know

5.2_5.7 What is the primary source of funding for the following?

	Do not provide	Larger institution (e.g. university) central IT budget	Medical school/college central IT budget	Other central budget	Chargebacks to users for usage	Set fee for set scope of services	Other
5.2 High-bandwidth networking							
5.3 High-performance computing							
5.4 Data storage							
5.5 Applications and tools (e.g., visualization, display, data mining, statistical analysis)							
5.6 Research-related IT support (e.g., training and consulting)							
5.7 Operations (e.g., security, data protection, licensing support, facility management)							

5.8_5.13 In the past three years, how has medical school/college central IT funding changed for the following? [Skip if no medical school/college central IT organization exists.]

	Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Don't know
5.8 High-bandwidth networking						
5.9 High-performance computing						
5.10 Data storage						
5.11 Applications and tools (e.g., visualization, display, data mining, statistical analysis)						
5.12 Research-related IT support (e.g., training and consulting)						
5.13 Operations (e.g., security, data protection, licensing support, facility management)						

5.14_5.19 In the next three years, how is medical school/college central IT funding for the following expected to change? [Skip if no medical school/college central IT organization exists.]

	Greatly decrease	Decrease	Stay the same	Increase	Greatly increase	Don't know
5.14 High-bandwidth networking						
5.15 High-performance computing						
5.16 Data storage						
5.17 Applications and tools (e.g., visualization, display, data mining, statistical analysis)						
5.18 Research support (e.g., training and consulting)						
5.19 Operations (e.g., security, data protection, licensing support, facility management)						

5.20 This medical school/college has a sustainable budget model for maintaining and evolving key components of the research IT infrastructure such as the high-performance networks, high-performance computation, and data storage.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Don't know

5.21 This medical school/college has a sustainable budget model for maintaining and evolving services related to research IT, such as applications, tools, training, consulting, and operations.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Don't know

5.22 If medical school/college central IT had more money to allocate to research-related IT support, in which area would you invest?

- No medical school/college central IT organization exists
- Expanding infrastructure (e.g., networks, computation, and data storage)
- Offering applications and tools (e.g., visualization, display, data mining, statistical analysis)
- Providing research-related IT support (e.g., training and consulting)
- Enhancing operations (e.g., security procedures, licensing support, facility management)

5.23 Are any indirect cost recovery funds from federal research grants allocated to medical school/college central IT? [Required]

- No <Go to 5.25_5.31>
- Allocated to IT infrastructure such as networking, high-performance computing, data storage
- Allocated to IT support services for research
- Allocated to both IT infrastructure and to IT support services for research
- No medical school/college central IT organization exists
- Don't know <Go to 5.32_5.36>



5.24 Who is the primary decision-maker regarding the specific use of those funds within medical school/college IT organizations? <Go to 5.32_5.36>

- President/chancellor
- Vice president/chancellor
- Provost
- Medical school/college dean
- Associate/assistant dean for research (or equivalent)
- Associate/assistant dean for business and administration (or equivalent)
- Medical school/college CIO
- Other medical school/college IT officer
- Medical school/college research committee
- Other medical school/college IT committee
- Other

5.25_5.31 Why has your institution chosen not to use indirect cost recovery funds for central medical school/college IT infrastructure or services? <Select all that apply.>

- 5.25 The added cost would make grants uncompetitive.
- 5.26 Funding agencies do not allow it.
- 5.27 Researchers do not see the benefits of funding central medical school/college IT infrastructure.
- 5.28 There is cultural resistance among researchers to sharing grant money in this way.
- 5.29 Central IT organization has never explored this possibility.
- 5.30 Other

5.31 Please describe “other.” _____

5.32_5.36 Does the medical school/college central IT organization(s) engage in any of the following activities that bring in external dollars and resources to the institution? <Select all that apply.>

- 5.32 Participation in grants and contracts
- 5.33 Partnering with technology companies
- 5.34 Partnering with non-technology companies and organizations
- 5.35a Don't know
- 5.35 Other

5.36 Please describe “other.” _____

Section 6: Conclusion

6.1 EDUCAUSE and AAMC plan to conduct telephone interviews with some medical schools or colleges to probe further into the support issues related to faculty use of information technology. Would you be willing to participate in a follow-up telephone interview?

- No <Go to 6.3>
- Yes

6.2 If yes, what is your e-mail address? _____

6.3 Do you wish to receive a copy of the key findings from this study?

- No
- Yes

6.4 If you have any other comments or insights about IT engagement in research, please share them with us._____

6.5 We are committed to continually improving our surveys. All comments are welcome and will be considered._____

You have reached the end of the survey. Thank you! Please submit this survey by clicking the “Finish” button now or, if you wish to review, print, or save your responses, click “Review.”

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If you have any questions or concerns, please e-mail ecar@educause.edu .

– END SURVEY –