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THE QUESTIONNAIRE

MEDICAL TESTS

1. Do you use any metrics to measure how many medical tests your laboratory conducts, the technical and scientific labor time needed to conduct these tests, or the direct and indirect costs of such tests? If so, have you developed these metrics? How useful are they?

2. Does the laboratory outsource _____?

    A. Gene sequencing
    B. DNA preparation
    C. Pathological analysis
    D. The housing and feeding of lab animals

EQUPIMENT SHARING

3. What was the laboratory's total spending for the lease or rental of equipment in the past year?

4. What was the laboratory's total spending for the purchase of equipment in the past year?

5. What was the laboratory's total spending—including both purchase and lease/rental—for equipment in the past year?

6. How would you evaluate the support your lab receives from the university (or other parent organization) concerning the _____?

    A. Availability of funds for needed lab equipment and information technology
    B. Timeliness of delivery of needed funds
    C. Efficiency of repairs and maintenance support for lab equipment and information technology
    D. Quality of training offered or funds for training on new equipment and new software
    E. Ease of applying for funds and payment for vendors of new equipment
    F. Influence over choice of vendors
    G. Timely and significant access to equipment shared with other labs

7. What do you think needs to be changed about how your organization goes about purchasing and deploying information technology, lab equipment, and supplies?

COST STRUCTURE

8. Approximately what percentage of total laboratory costs is accounted for by each of the following?

    A. Salaries and benefits
    B. Instruments and equipment
    C. Animal and biological materials
    D. Overhead (facilities, administration, marketing, utilities, etc.)

9. What percentage of the funds for your lab (for all purposes, including salaries and overhead) come from _____?

    A. Your institutional budget
    B. Outside grants
    C. Special grants from within your institution

10. How would you describe your laboratory's outlook for funding?

    A. Excellent
    B. Good
    C. Fair
    D. Poor
    E. Dire

11. If you have had to make cuts in your budget over the past five years, which areas (i.e. equipment, supplies, lab or office space, salaries and personnel, etc.) have suffered the brunt of these cuts? To what degree?

ADMINISTRATIVE TIME MANAGEMENT

12. Who would you say handles _____ in your lab?

    A. Ordering supplies
    B. The maintaining of the animals
    C. The inventory of chemicals, reagents, and other supplies
    D. Installing equipment
    E. Paying invoices
    F. The supervision of time off and sick leave
    G. The budgeting and accounting
    H. The communications with building or facilities management

PROCUREMENT

13. How does the laboratory purchase most of its equipment?

A. Through the university, company, or other main institution
B. Through a consortium
C. Directly purchased by the lab from manufacturers
D. Directly purchased by the lab from distributors

14. How does your organization monitor its inventory of chemicals, biological agents, and other key supplies in order to maintain stocks but not to accumulate excessive stocks? What kind of stock level reporting procedures do you have?

PERSONNEL

15. What was the total number of full-time equivalent employees of your lab(s) in 2012, including clerical staff, scientists, doctoral students, technicians, and all other employees?

16. How many _____ are on your overall laboratory staff?

A. Scientists
B. Technicians
C. Custodial, clerical, security, or other such employees that aren't scientists or technicians

17. How much flexibility do you have in devising job descriptions and defining the responsibilities and training practices of the technicians, office personnel, and other support staff who work in the lab?

A. Pretty much have complete freedom to hire who I want and train them the way I want
B. Have some freedom but administrators determine some of this
C. Don't have much freedom and feel a bit hemmed in
D. It's a real problem and we are often stuck with personnel we can't use or who don't meet our needs

18. How would you evaluate the total number of meetings held by the researchers in your lab?

A. Too many meetings
B. The right number of meetings
C. Not enough meetings

19. What is the prevailing attitude in the lab about socializing with your peers after work?

A. Interferes with work and wastes time
B. Helps build relationships and is a productive use of time

20. How much control do you have over the salary and bonuses of your staff? Should you have more or less control? If the current set-up were changed more to your liking, what might be the impact on lab productivity and effectiveness?

LABORATORY WASTE, TOXICITY, AND ENVIRONMENTAL PRACTICES

21. How easy has it been to follow environmental and safety procedures in your lab over the past five years?

    A. Very easy, not a big problem for us
    B. Relatively easy with occasional glitches or problems
    C. Not always easy but we get done what we have to get done
    D. It's been problematic and we have safety or productivity issues as a result

22. How well trained is the laboratory staff in environmental and safety procedures?

    A. I would call our lab dangerous
    B. Not very well trained
    C. As well trained as we need to be
    D. Well trained
    E. Exceptionally well trained

STAFF TIME

23. Approximately what percentage of the lab budget for salaries is dedicated to individuals primarily involved in equipment maintenance, ordering and stocking supplies, and routine waste removal?

24. How would you rate the effectiveness of your institution's handling of _____?

    A. Budgeting and cost analysis
    B. Purchasing
    C. Accounting
    D. Reimbursements
    E. Inventory control
    F. Capital equipment acquisitions
    G. Equipment maintenance
    H. Billing and collection
    I. Contract negotiation with lab suppliers
    J. Safety and environmental regulation compliance
    K. Lab employee job training
    L. The documentation of experiments

25. What are the biggest two or three administrative headaches you experience that waste the time of your scientists or consume a higher-than-necessary portion of their budgets?

TECHNOLOGY

26. Does the lab use a Laboratory Management System or some form of commercial lab management software package?

27. If the lab does use a Laboratory Management System (or some form of commercial lab management software package), which package do you use and why? If not, why not and what do you use in its place?

28. How many _____ computers does the lab maintain?

    A. Tablet
    B. Laptop
    C. Desktop

29. Has the increasing use of tablets, laptops, and other mobile computing devices significantly affected your lab's computer procurement and use practices? If so, how?

DOCUMENTATION OF EXPERIMENTS

30. How does the laboratory keep records and document the development of experiments? Does it use any kind of online system for lab documentation? Are descriptions of procedures kept on a computer network? How is access restricted?

31. What are the most problematic areas at your institution regarding its laboratory management?

PARTING THOUGHTS

32. Has your laboratory or your parent organization ever conducted workflow or a best practices formal study to improve your laboratory productivity or work effort?

33. To the best of your knowledge, how much has your laboratory spent over the past five years on conferences, publications, and other information resources on laboratory management?

34. What does you institution do best in terms of laboratory management?

SURVEY PARTICIPANTS

Arizona State University
Braintree Hospital
Brandeis University
Converting Biophile Laboratories
Eastern Gateway Community College
Faculty of Medicine of the University of Porto
The Hebrew University of Jerusalem
Illinois College
Interfaith Community Clinic
Northwestern University Feinberg School of Medicine:
Department of Pediatrics and Lurie Children's Hospital
Omdurman Ahlia University
Peninsula College of Medicine & Dentistry
Pontificia Universidad Católica de Chile
South African National Blood Service
Texas A&M Health Science Center
Trident Technical College
University of Miami
University of Minnesota
University of Nebraska
University of New England
University of North Texas Health Science Center
University of Washington
University of Western Australia

CHARACTERISTICS OF THE SAMPLE

Overall sample size: 23

By Country

United States	15
Other[1]	8

By Total Square Footage of the Lab(s)[2]

1,500 square feet or less	11
More than 1,500 square feet	10

By the Lab's Total Number of Full-Time Equivalent Employees in 2012[3]

Les than 10	11
10 or more	11

By the Lab's Primary Focus[4]

Research	9
Education	6
Both	7

[1] Australia (x2), Chile, England, Israel, Portugal, South Africa, and Sudan
[2] Two survey participants did not answer this question
[3] One survey participant did not answer this question
[4] One survey participant did not answer this question

Country, broken out by the total square footage of the lab(s).

Square Footage	United States	Other
1,500 square feet or less	72.73%	27.27%
More than 1,500 square feet	70.00%	30.00%

Country, broken out by the lab's total number of full-time equivalent employees in 2012.

Total Employees	United States	Other
Less than 10	90.91%	9.09%
10 or more	45.45%	54.55%

Country, broken out by the lab's primary focus.

Focus of Lab	United States	Other
Research	88.89%	11.11%
Education	50.00%	50.00%
Both	42.86%	57.14%

* * * * *

Total square footage of the lab(s), broken out by country.

Country	1,500 square feet or less	More than 1,500 square feet
United States	53.33%	46.67%
Other	50.00%	50.00%

Total square footage of the lab(s), broken out by the lab's total number of full-time equivalent employees in 2012.

Total Employees	1,500 square feet or less	More than 1,500 square feet
Less than 10	63.64%	36.36%
10 or more	40.00%	60.00%

Total square footage of the lab(s), broken out by the lab's primary focus.

Focus of Lab	1,500 square feet or less	More than 1,500 square feet
Research	55.56%	44.44%
Education	50.00%	50.00%
Both	40.00%	60.00%

Lab's total number of full-time equivalent employees in 2012, broken out by country.

Country	Less than 10	10 or more
United States	66.67%	33.33%
Other	14.29%	85.71%

Lab's total number of full-time equivalent employees in 2012, broken out by the total square footage of the lab(s).

Square Footage	Less than 10	10 or more
1,500 square feet or less	63.64%	36.36%
More than 1,500 square feet	40.00%	60.00%

Lab's total number of full-time equivalent employees in 2012, broken out by the lab's primary focus.

Focus of Lab	Less than 10	10 or more
Research	66.67%	33.33%
Education	50.00%	50.00%
Both	16.67%	83.33%

* * * * *

Lab's primary focus, broken out by country.

Country	Research	Education	Both
United States	57.14%	21.43%	21.43%
Other	12.50%	37.50%	50.00%

Lab's primary focus, broken out by the total square footage of the lab(s).

Square Footage	Research	Education	Both
1,500 square feet or less	50.00%	30.00%	20.00%
More than 1,500 square feet	40.00%	30.00%	30.00%

Lab's primary focus, broken out by the lab's total number of full-time equivalent employees in 2012.

Total Employees	Research	Education	Both
Less than 10	60.00%	30.00%	10.00%
10 or more	27.27%	27.27%	45.45%