

How are *per diem* rates (daily animal maintenance charges) established?

Per diem rates are established in accordance with the document *NIH/NCRR Cost Analysis and Rate Setting Manual for Animal Research Facilities*. The manual breaks animal research costs into three main categories: a) Direct (includes items such as food, bedding, direct labor, etc.), b) Internal Support (includes facility administrative costs, cage washers, animal health care, operations and maintenance, utilities and depreciation for service space, etc.), and 3) Institutional Facilities and Administrative (F&A; includes research space costs, institutional general administration costs, regulatory compliance costs).

Direct and Internal Support costs must be recovered via *per diem* charges.

The allocation and recovery of animal research-related Institutional Facilities and Administrative (F&A) costs are more complex. Regulatory compliance costs (IACUC, etc.) must be recovered via the institution's F&A rate or other mechanisms. Space costs (utilities, depreciation, etc.) associated with "service" space (e.g., cage wash, storage space, offices) must be allocated to the animal research facility and recovered via *per diem* charges. Costs associated with "research" space located within the animal facility (e.g., behavioral testing rooms or other procedure/housing rooms dedicated to specific research protocols) can be included in the Institution's F&A rate and are not recovered via *per diem* charges.

Once identified, Direct, Internal Support, and appropriate Institutional F&A costs are allocated to specific species. Methods of allocation vary depending on the type of expense and include effort/time studies, direct usage, animal care days, and space. An estimate of the total cost to maintain a given species for a fiscal year is determined. This total cost is divided by the estimated animal care days for that species. The resulting number is the total cost per day to care for an animal/cage.

How do our *per diem* rates compare with other top 20 institutions?

One must use caution when comparing rates between institutions. While all institutions must follow the general principles outlined in the NIH/NCRR rate setting manual, there can be substantial differences in what institutions attempt to recover via the *per diem* rate. For example, at some public institutions building depreciation is handled through a different mechanism and the salaries of faculty veterinarians are not included in the animal facility budget. Consequently, these items are not recovered via *per diem* charges. Census can also greatly influence the *per diem* rate since economies of scale are seen with large populations. Surveys of the top 20 NIH funded institutions consistently show UVA's mouse *per diem* rate to be competitive with our peer institutions.

There is federal pressure to shift more of the cost of research to universities. Institutions are moving these costs into animal charges as other sources of institutional funds shrink, and the overall demand for F&A dollars exceeds the amount available. UVA however does not recover space costs [e.g., Depreciation and Operations and Maintenance (O&M)] for service space via *per diem* charges.

I've always heard that mice subsidize the other species. Is this true?

No, mice do not subsidize the other species. Serious attention is given to making sure that costs are allocated to the appropriate species. When determining rates, the expenses associated with each species and the projected animal care days are reviewed carefully. Each year, the actual expenses for the previous 12 months are reviewed to determine the accuracy of earlier projections.

Since mice comprise the preponderance of animals used at UVA, they bear most of the cost of required space investments. Similarly, the bulk of depreciation and O&M costs allocated to CCM are assessed to mice since this species occupies the vast majority of CCM service space.

What husbandry and veterinary care services does the standard *per diem* cover?

Currently, the *per diem* rate covers routine veterinary care, which includes:

- a. Daily observation by a member of the veterinary staff
- b. Diagnosis of and recommended treatments for diseases of all animals
- c. Humane euthanasia of *moribund* mice and rats
- d. Cost of quarantine including personal protective clothing, and medication (i.e., ivermectin food for pinworms)
- e. Administration for oversight of compliance (i.e., maintaining AAALAC accreditation, USDA regulations, appropriate licensing, etc.)
- f. Health monitoring, and clinical records on all USDA regulated species
- g. Health monitoring for the racks and rooms of mice and rats. This includes serology for common murine pathogens, monthly parasitology (ecto- and endo-parasitology), bacteriology, gross necropsy, and histologic evaluation of gross lesions)
- h. Purchase of mice and rats (or environment filters) for sentinel health monitoring
- i. Veterinary consultation regarding health issues, care and experimental use of animals, species specific care
- j. Veterinary pathology: research project consultation & histopathology slide review

Currently, the *per diem* rate also includes the following animal husbandry activities:

- a. Twice daily observation of animals
- b. Sanitation of cages, pens, equipment, and animal rooms
- c. Provision of standardized food, bedding, caging, and cage changing intervals
- d. Provision of special needs as required by research (i.e., increased cage changes for diabetic animals)
- e. Investigator initiated internal transfers of animals
- f. Microbiological monitoring of animal housing environment, cagewasher, and autoclave effectiveness
- g. Routine animal enrichment
- h. Facility upkeep and management
- i. Maintenance of appropriate environmental parameters at the facility, room and cage level
- j. Identification and notification of overcrowded cages

The institution receives indirect costs to pay for space and utilities, yet these costs are also included in the *per diem* rates. Isn't this "double-dipping"?

It is a common misperception that animal facility costs are included in both the Institutional F&A rate and *per diem* rates. Institutions are required to allocate animal care costs in accordance with the Uniform Guidance (UG 2 CFR 200): *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* and *NIH/NCRR's Cost Analysis and Rate Setting Manual for Animal Research Facilities*. Indirect cost negotiations with UVA and the federal government (which occur approximately every 3-4 years) include an extensive review/audit of all indirect cost allocations including the allocations for Animal Care.

UG 2 CFR 200 requires animal research facilities to separate costs associated with research space from costs associated with service center space. The associated costing method is incorporated in UVA's most recent indirect cost rate negotiation with the NIH. Research space costs include utilities and depreciation associated with space that is dedicated to research activities (e.g., behavioral testing laboratories). These costs are included in the F&A (institutional indirect) calculation. Service center costs include space costs associated with general animal housing and support areas. Costs associated with service center space must be recovered through *per diems* and are excluded from the F&A (institutional indirect) rate.

To establish an indirect cost rate, all institutional costs must be gathered in a complex, multi-layered allocation method to assign all appropriate costs to research activities. The components of the indirect rate are:

- a. Administration: sponsored project administration (grants offices), department administration, general administration, and student services
- b. Facilities: operation and maintenance, building and equipment depreciation, library and interest

UVA negotiated the current Federal F&A rate of 61.5% which is only partial reimbursement of the institutional research and administrative cost. The current Federal rate understates the institution's true cost of doing research.

Why can't we know what the rates will be ahead of time so we can put the new rates in our grants?

Since it is reasonable to expect costs (personnel, food, bedding, etc.) to rise on an annual basis, one should always anticipate the rates to increase by **at least 3% annually** and budget accordingly. Increasing regulatory pressures, investments in new facilities, and economic factors (e.g., inflation, labor shortages, supply chain issues) are likely to result in higher increases for some species in some years. If you have questions about what rate to include in your research proposals, **contact the CCM Director and administration team prior to submission of your grant/contract.**