

Recommendations for an Equitable Environment for Women Faculty

Executive Summary

Goal:

The goal of this report and the attendant recommendations is to improve the environment for women faculty at the Medical School.

Recommendations:

- 1. Replace the Commission on Women Faculty with a new appointment, the Faculty Director of the Office for Women in Medicine.**
- 2. Strengthen the Status of Women in Medicine (SWIM) Committee by reconstituting it with a faculty member from each department. SWIM would review newly-defined departmental databases to assess the status of faculty women in key areas that determine faculty well being.**
- 3. Institute several new policies (as detailed within this report) from the Dean's Office to engage department chairs as more active partners in the process of improving the environment for women faculty.**

Recommendations for an Equitable Environment for Women Faculty in the Yale School of Medicine

Executive Summary

Goal:

The goal of this report and the attendant recommendations is to improve the environment for women faculty at the Medical School.

Background:

The environment for women at the Medical School is determined by many factors including salary, space, resources, recognition, mentoring, as well as by recruitment and retention patterns. Currently, within the Medical School, there is one office and one committee dedicated to monitoring the environment for women faculty and advancing the careers of women faculty - the Office for Women in Medicine (OWM) and the Status of Women in Medicine committee (SWIM), respectively. This office and committee are described in Appendix 1. Equally important, however, is the role of the department chairs in creating an environment that is supportive of women faculty.

Suggested New Structure

The following structure is suggested in order to increase the participation of women in key areas of the Medical School and increase the accountability of those who can facilitate a positive environment for women faculty.

1. Replace the Commission on Women Faculty with a new appointment, the Faculty Director of the Office for Women in Medicine. The Faculty Director would work collaboratively with Merle Waxman, who will become the co-director of that office. Each will report to the Dean and the Associate Dean for Faculty Affairs.

The Commission recommends that a list of candidates for this new position be prepared by the Associate Dean for Faculty Affairs and the Commission with input from the senior women faculty. This list would then be presented to the Dean for final selection of a candidate. The Faculty Director of the Office of Women in Medicine would receive 50% salary support to perform the functions listed below. She would report to the Dean and the Associate Dean for Faculty Affairs, and would be a liaison to the women faculty.

The New Faculty Director would:

- A. Participate in the selection of women faculty for search committees charged with recommending new department chairs and for policy-determining committees, such as task forces convened by the Dean. When a department chair search

- committee or policy-determining committee has insufficient women faculty on that committee, she will recommend women faculty to sit on that committee.
- B. Meet with department chair search committees, present information regarding gender-equitable recruitment, present Yale School of Medicine statistics on distribution of women faculty (e.g. number of women in each department and number of women who are department chairs) and review pipeline data indicating faculty in the field who might be recruited.
 - C. Review the actions of search committees in order to assess their efforts in recruiting from a diverse faculty pool prior to final offers.
 - D. Review offers given to potential new women faculty members to examine whether offers appear equivalent to those for male faculty members.
 - E. Review counteroffers given to male and female faculty members who have job offers elsewhere.
 - F. Review gender databases, as defined by the Status of Women in Medicine (SWIM) committee, for each department in order to assess progress, or lack of progress, in key areas that determine faculty well being, such as salary, space, other resources, mentoring, attitudes toward advancement of women, recruitment and retention patterns.
 - G. Sit on external review panels of department chairs.
 - H. Hear potential grievances. The Faculty Director will not oversee the grievance procedure as does Dr. Lawrence Cohen, Special Advisor to the Dean.
 - I. Meet at least annually with the women faculty to update them on the efforts of the Office of Women in Medicine and SWIM.
 - J. Review annually the allocation of endowed chairs (and associated dollars).
 - K. Participate in the Yale University Women Faculty Forum, thereby staying aware of gender-related policy development elsewhere in the University.

2. Strengthen SWIM by reconstituting it with a faculty member from each department. SWIM would review newly-defined departmental databases to assess the status of faculty women in key areas that determine faculty well being.

The composition of SWIM should be changed so that it is composed of a liaison from every department who will be chosen by the Associate Dean for Faculty Affairs, the Faculty Director of the Office of Women in Medicine, and the Ombudsperson. Suggestions from the department chairs and the Medical School Council Steering

Committee will be solicited. The Chair of SWIM will also be chosen by this group, and will serve a 3-year term.

SWIM will be responsible for:

- Recommending the department database that must be maintained by each department in order to review faculty well being.
- Reviewing the above data collected from the department chairs annually, as well as the data supplied by a questionnaire on faculty well being to be distributed to all faculty members in each department (Appendix 2).
- Establishing minimum standards for a faculty mentoring system.
- Reviewing and advocating daycare needs for faculty with children.

The size of SWIM would increase, thus enabling subcommittees to be formed and allowing the effort of SWIM to be more equitably disbursed. This would prophylax against responsibility for the work of SWIM to be placed on a single individual, such as the chair of SWIM. Each subcommittee would report to SWIM monthly. Subcommittees should be considered on topics such: Day Care for Children, Mentoring, Department Gender Databases, and Faculty Well Being Surveys. A subcommittee could elect to include an expert outside of SWIM, if necessary.

3. Institute several new policies from the Dean's Office to engage department chairs as more active partners in the process of improving the environment for women faculty.

- A. Search committees for department chairs and policy-determining committees (including task forces convened by the Dean):
 - Women must be well represented on these committees, and more women should be engaged as chairs of search committees.
 - The Faculty Director of the Office of Women in Medicine will meet with the search committees, and provide materials to them that educate and inform the committee about the recruitment of women.
- B. The policy of no regular departmental and extra-departmental meetings before 8 a.m. and after 5 p.m., or on weekends, will be enforced. This policy will be overseen and maintained by the department chairs. Faculty will be encouraged to inform the Dean's Office if standing department meetings are consistently off-hours.
- C. A questionnaire on faculty development and gender-based obstacles for women faculty (Appendix 2) will be collected from each department as a baseline (within one year of the appointment of the new structure for SWIM) and 2-3 years thereafter to assess change subsequent to the various interventions implemented as a function of this report.

- D. Three- and five-year reviews of department chairs should include a report on the status of women and racial/ethnic minorities in their departments. This report should include the following data by gender and racial/ethnic status:
- Salary patterns by year.
 - Number of faculty by rank over the past 10 years.
 - Number of faculty in administrative positions over the past 10 years (and the title of the positions, e.g. Director of the Residency Program, Vice Chair of Finance).
 - List of recruits over the past 10 years.
 - Internal search committees for new department faculty should include the number of women and male faculty members on the committee, their racial/ethnic status, their rank, the chair of the committee (male or female) and a ranked list of the candidates considered.
 - Distribution of space, research assistants and administrative assistance by total funding (direct and indirect costs).
 - Counteroffers (to whom and what) for faculty retention.
- E. There should be an annual department chairs' lunch with the Deans which exhibits and discusses the above data, thereby creating a partnership with the chairs to involve them further in the process of improving the environment for women faculty. A few important key papers regarding recruitment and retention of women could be disseminated beforehand as background reading.
- F. Each department will have a faculty member (chosen by the Faculty Director of the Office of Women in Medicine, the Associate Dean for Faculty Affairs, and the Ombudsperson) who will sit on the newly designed SWIM committee. This faculty member will be helpful to the department chair in assembling the department's gender database and informing the department chair with regard to the deliberations of SWIM.
- G. Department chairs will be advised that:
- There should be an annual meeting between each faculty member and her/his department chair that sets clear-cut expectations for each faculty member and clarifies who serves as her/his mentor.
 - There should be an annual faculty meeting in each department held by the chair and liaison from SWIM to discuss the department's gender database, and to discuss the questionnaire results that will be collected every 2-3 years.
 - Women should be suggested as members of committees that are policy-making committees. See current distribution of women and men on the Medical School Standing Committees (Appendix 3).
- H. The Dean should replace faculty administrators who knowingly practice or permit discriminatory practices against women.

Appendices to report on Equitable Environment for Women Faculty:

- 1. Current Structure dedicated to monitoring the environment for women faculty and advancing the careers of women faculty**
- 2. Johns Hopkins Questionnaire on the Well Being of Faculty**
- 3. School of Medicine committees (as compiled by Marie Landry, M.D.)**

Appendix 1

1. CURRENT STRUCTURE

A. The Office for Women in Medicine (OWM)

The OWM has multiple functions at the School:

- Provides students (including medical, epidemiology and public health, and physician associate students), postdoctoral fellows and faculty in the School of Medicine access to advisors and mentors.
- Provides counseling and referral services. Gives opportunities for discussing personal, professional and academic concerns on an individual, confident basis.
- Brings distinguished women in the medical sciences to the school as lecturers, role models, and teachers.
- Facilitates access by students to professional women in an informal setting.
- Sponsors workshops and/or seminars on professional development and career opportunities for women in medicine and the sciences.
- Teaches women faculty negotiation skills and conflict resolution.
- Serves as Women Liaison Office to the AAMC and solicits other schools for women as candidates for Yale positions. Notifies faculty of AAMC Women Development Programs and solicits nominations for Executive Leadership in Academic Medicine (ELAM).
- Advises search committees on enhancing the search process by identifying women and minority candidates.
- Title IX Coordinator for the School of Medicine.
- Serves as a resource to students, fellows and faculty in regards to sexual harassment, gender discrimination and other forms of discrimination. Encourages the academic community to develop awareness of how gender, gender role socialization and gender bias may have an impact on professional conduct.
- Encourages and facilitates development of student and faculty capabilities to respond appropriately and effectively to gender issues.
- Convenes and trains the Dean's Board on Sexual Harassment.
- Teaches workshops to students, fellows, and faculty on issues related to negotiation and prevention of sexual harassment.
- Heightens awareness of, and increases responsiveness to, the particular challenges facing women faculty members across disciplines.
- Organizes the Leah Lowenstein Award, which is presented to a faculty member who the students believe most clearly provide a positive image of women.
- Meets with interested women medical students during the interview process at Yale University School of Medicine via the Prospective Student Program.
- Serves as an advisor and mentor to Yale undergraduate women who are interested in careers in medicine and science.
- Encourages high school girls to pursue careers in science and medicine by visiting area high schools.

- Maintains a resource library that features books and periodicals on career and academic opportunities, the history of women physicians and scientists, and research related to women in medicine and science.
- Organizes orientation sessions for new faculty. Is currently assisting in developing an orientation for Postdoctoral Fellows.
- Serves as an advisor and Board Member for the Phyllis Bodell Childcare Center.
- Serves as coordinator for the Child Care Committee among the Medical School, YNHH and Nursing School. This Committee sponsors workshops throughout the year for students, faculty and staff.
- Serves as ex officio on the Committee on the Status of Women.
- Prepares and distributes the Annual Salary Report of the faculty.
- Serves as an advisor to the following student groups: Women's Health Action Group, Families in Medicine, Women in Science at Yale, Undergraduate Women in Science at Yale, Committee on the Well Being of Students.
- Interacts with the Yale University School of Medicine Alumni Association, Office of Multicultural Affairs, Office of Equal Opportunity Programs at the University, Office of Diversity and Equal Opportunity at the Graduate School, Office of International Students and Scholars.

In addition, the Director serves as Ombudsperson for the School of Medicine.

The current Director, Merle Waxman, received 281 calls in the past academic year, in addition to innumerable meetings and conferences. These addressed a broad range of issues including career management, academic development, research management, sexual harassment, and discrimination. This office also offers options to the complainants and may seek help via shuttle diplomacy or by mediation or formal recourse inside or outside the institution. Cases can be referred elsewhere within the University and, hence, the office functions also as a triage center. As a consequence, one of the strengths of the office is that it serves as a liaison between the medical center constituents and the Deans. However, an inherent limitation of the Office for Women in Medicine, as it is currently configured, is that the Director, as Ombudsperson, is not an advocate, but must remain neutral. Additionally, since the Director does not have experience as a member of the faculty, there is concern that she cannot identify with some of the issues important to women faculty. These concerns have been summarized in the senior women faculty document "Recommendations for Addressing Gender Equity Issues at Yale Medical School" (Appendix A).

B. SWIM

This standing committee has long served as an advocacy group for increasing the number of women faculty, achieving salary equity, improving child day care and promoting mentoring of all faculty. Its major accomplishments have been to document and publish annual salary data by gender and to survey counteroffers and mentoring. Its strengths arise from the fact that it is faculty-based and its agenda is flexible. This is also a weakness in that the Chair and the membership regularly change and, thus, its direction, effectiveness and accomplishments are very dependent on the composition of the

committee. Furthermore, the committee membership is not a uniform representation of all the Medical School departments. Finally, the committee has no power to institute policy change; it can only make recommendations to the Dean, and these recommendations may or may not be enacted. Because of these issues, the efforts of this committee have been overshadowed and displaced by the senior women faculty.

C. Dean Positions

The current Deans have the responsibility to serve as a support structure for the development of women faculty. The personality and philosophy of the individuals in these positions are much more important than the actual job title in determining how their offices are viewed by the women faculty. The fact that the individuals change means that these positions are not reliable sources of support and, thus, there is an ongoing need for institutional policy and other structures dedicated to gender issues.

D. Departmental Chair

The well being of an individual faculty member is primarily determined by his/her Department Chair who sets the tone regarding gender issues in his/her department, and is largely responsible for salary, resources, promotion, and recognition. Unfortunately, the Department Chairs have not uniformly provided an effective institutional structure for the advancement of women's careers. Women faculty generally hold that there have been limitations in leadership at the chair level with regard to gender issues, and that most of the gender issues that have been chronically raised have not been consistently corrected at the chair level. Therefore, there is a continued need for oversight by higher institutional structures that will also engage department chairs in the process of advancing women faculty.

Recommendations to Achieve and Maintain Gender Equity in Salaries in the Yale University School of Medicine

Executive Summary

Goal: The goal of this report and list of recommendations is to achieve and maintain gender equity in salaries at the Medical School. The suggestions below include steps that are currently implemented and should be continued, as well as new steps that should be implemented. New steps are noted with an asterisk (*). More detail is provided after the Executive Summary.

Recommendations:

- 1. Continue the yearly regression analysis of salary patterns by gender. Compare to previous years to determine progress. Give graphical information on salary data to the department chairs.**
- 2. Continue the yearly faculty-by-faculty analysis of salaries. Seek redress from department chairs or redress directly from the Dean's office for those found to be paid less than their merits dictate.**
- 3. *Ensure that female "rising stars," and acknowledged stars in their fields, are paid accordingly and not only when the faculty member obtains a counteroffer.**
- 4. * Make salary guidelines clear, specific, readily available, and well-known to department faculty. See attached memo.**
- 5. Have in place an infrastructure that allows women to seek information, advice and redress regarding their salary.**
- 6. Make information available regarding overall salaries by rank separated by MD/PhD, gender and, when possible, by department.**
- 7. * Ensure that starting salaries of comparable assistant professors are equal by gender, otherwise it is very difficult to achieve parity with only percentage changes in salary over time.**
- 8. Offer back pay to women who historically have been paid less than merited.**

Note. *Salary cannot be considered in isolation. Consider the importance of enhancing non-salary aspects (environment, promotions, space, colleagues, etc.) and how they relate to productivity and, thus, salary.*

Recommendations to Achieve and Maintain Gender Equity in Salaries in the Yale University School of Medicine

Goal:

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Background

During the last five years, the Yale School of Medicine's (YSM) administration has made significant strides toward increasing gender equity in salaries. These efforts to address a problem that has faced the YSM for many years have been productive and appreciated by women faculty. Since 1983, the committee on the Status of Women in Medicine (SWIM) and the Office for Women in Medicine (OWM) have compiled and distributed data on average salaries by rank, separating MDs and PhDs. For the 1998/99 academic year to the present, the Office of Institutional Research, at the request of the Dean of YSM, has estimated salary regressions controlling for gender and relevant factors. In the SWIM and OWM tabulations and in the regression results, there historically has been a systematic difference by gender favoring men. In the regressions, these differences were found to be significant. Thus, there is ongoing concern that women faculty are not being paid equitably. There are many possible reasons why this may occur; it seems to be occurring at other universities as well. This report suggests methods that could be implemented to help achieve and maintain gender equity in salaries at YSM.

Recommendations:

1. **Continue the yearly regression analysis of salary equity by gender. Compare to previous years to determine progress.**

Who: Chief Financial Officer of YSM, Associate Dean for Faculty Affairs in conjunction with the Office of Institutional Research and the proposed new Faculty Director of the Office of Women in Medicine.

How: Follow the Guidelines for Regression Analysis of Salaries (Appendix 1).

- Give each department a scatter plot of the salaries in their department by gender and rank, and provide a graph of the residuals from the earnings regressions by gender. The chairs should be informed regarding how to interpret the data to ensure appropriate use of the information. The plots would give the chairs a visual indication of the salary ranges and possible disparities.

- Continually work to improve the database. Two areas of particular concern are: measures of scholarly productivity and appropriate parsing of grant funding across Principal Investigators and investigators. Regarding the first point, we experimented with the citation index, but it required a significant expenditure of time and effort to assemble this information, and it was not significant in any of the regressions. Consequently, use of this variable does not seem worth pursuing. With regard to allocation of percent effort from a grant to each person, this can be done fairly easily and should be considered as an alternative specification

How often: yearly

2. Continue the yearly faculty-by-faculty analysis of salaries. Seek redress from chairs or redress directly from the Dean's Office for those found to be paid less than their merits dictate.

2a. Outliers. Examine those who receive relatively low salaries, and those who are "outliers" in the residuals from the regression analyses; that is, those who are paid less than their characteristics and measures of productivity would suggest. Look at faculty members' annual reports to examine faculty members' productivity. * Consider notifying faculty that they were selected to be examined. By notifying individuals, they may be better able to pursue salary equity for themselves.

***2b. Faculty group comparisons.** In cases in which it is difficult to assess equity, a woman's salary can be compared to a group of approximately five similar faculty matched on as many characteristics as possible. This technique has been used elsewhere (e.g. University of Wisconsin).

***2c. Record keeping.** Keep a record of the number of salaries changed and the dollar amount adjusted per year; this is evidence of change and improvement.

Who: Chief Financial Officer of YSM, Associate Dean for Faculty Affairs, and proposed new Faculty Director of the Office of Women in Medicine.

How: **2a.** Use current procedure.

2b. Make comparisons using existing data and knowledge of the specific fields.

2c. Ask business office, proposed new Faculty Director of the Office of Women in Medicine or Co-Director of the Office of Women in Medicine to keep track of salaries.

How often: 2a. and 2c. yearly. 2b as needed.

3. ***Stars. Make sure that females who are “rising stars” and acknowledged stars in their fields are paid accordingly.**

Who: Chief Financial Officer of YSM, Associate Dean for Faculty Affairs and proposed Faculty Director of the Office of Women in Medicine, in consultation with chairs and faculty.

How: Consult with others internally and externally to make a list of women who are considered to be stars or rising stars. Make sure that they are paid accordingly. For comparisons, one may use males of similar rank, department, specialty, etc. and/or compare to stars in other top schools in our geographic region to ensure that the salary paid reflects the star quality. On a practical basis, specific salaries of equivalent “stars” may not be available. Therefore, another check is to ensure that the person is paid a given percentage more than the discipline average at Yale or at similar institutions.

Note: The regression analyses revealed that the biggest difference for MDs by gender occurred for those who brought in the most research funds. This suggests that the “stars,” e.g. those bringing in the most research funds, may be those who experience the greatest bias for their measured productivity.

When: ongoing

4. ***Make salary guidelines clear, specific, readily available, and well known to department faculty.**

Who: The Associate Dean for Faculty Affairs should request that the chairs provide yearly faculty salary guidelines to all their faculty members and to the Office of Faculty Affairs. The Associate Dean for Faculty Affairs should follow-up on compliance.

How: See the recommendations on guidelines provided in a separate document.

When: ongoing

5. **Have in place an infrastructure that allows women to seek information, advice and redress regarding their salary.**

Who: There should be several avenues to seek advice and redress. The proposed new Faculty Director of the Office of Women in Medicine, the Medical School Ombudsperson, and the Associate Dean for Faculty Affairs should be available for private, confidential meetings. The Chairs should be approachable for formal requests for salary redress. Then, if the request is not satisfactorily met, the proposed new Faculty Director of the Office of Women in Medicine should be available for consultation and redress.

How: Keep the current structure and add the proposed new Faculty Director of the Office of Women in Medicine.

When: ongoing

- 6. Make information available regarding overall salaries by rank separated by MD/PhD, gender and, when possible, by department.**

Who: The Status of Women in Medicine Committee, the proposed new Faculty Director of the Office of Women in Medicine, and the Co-Director of the Office of Women in Medicine in conjunction with the Office of Institutional Review.

How: Using current methods.

How often: Yearly

- 7. *Ensure that starting salaries of assistant professors, and others, are similar by gender, otherwise it is very difficult to achieve parity with only percentage changes in salary over time.**

Who: The proposed new Faculty Director of the Office of Women in Medicine and the Chief Financial Officer of YSM should work together as suggested below.

How: The proposed new Faculty Director of the Office of Women in Medicine should: 1) meet with department chairs at Request for Faculty Position (RFP) meetings to indicate to them the importance of gender equity in initial offers, to inform them of the range of new salary offers from last year and the expected range of offers for the upcoming year, and 2) obtain data (from the Medical School finance office) on offers to incoming faculty over the last year to use for the following year. The Chief Financial Officer of YSM should approve salaries for new appointments. In addition, every year, the Chief Financial Officer of YSM should calculate averages of salary offers by department and discipline from the previous year. This information (adjusted for increases by year) and information on current offers should be used to monitor offers by gender. Offers should be approved only if equitable. This information should be given to the proposed new Faculty Director of the Office of Women in Medicine to be used for meeting with the chairs.

When: ongoing

- 8. * Offer back-pay for women who historically have been paid less than merited.**

Note : Salary cannot be considered in isolation. Consider the importance of enhancing non-salary aspects (environment, promotions, space, colleagues, etc.) and how they relate to productivity and, thus, salary.

Recommendations for Departmental Salary Guidelines **April 22, 2003**

Goal. The goal is to have departmental guidelines for determination of salary that are clear, specific, fair, well-known, and meet listed criteria. The appropriate use of guidelines will help to increase gender equity, and overall fairness, in salary.

Current situation regarding guidelines. Currently, each Department establishes salary guidelines that are available in the Office for Faculty Affairs. The degree of specificity and usefulness of these guidelines varies greatly by department. In some cases, great detail is included in the guidelines, and, in other cases, very little specificity is offered. There is also a great deal of variation in how these guidelines are used and how helpful they are. Even in some departments in which the guidelines are detailed, they are not well known to faculty members. Consequently, there appears to be substantial room for improvement.

Recommended Guideline Criteria.

Guidelines should:

1. **reflect the mission, needs and requirements of the department and the Medical School;** included would be scholarly activity, teaching, funding, clinical service, and citizenship to the school and department; the relative importance of each would depend on the department.
2. result in remuneration that reflects **merit and effort**.
3. be **specific** enough to provide direction and **flexible** enough to allow for variation in needs.
4. **guide faculty members as to how to allocate their time** in a way that is reflective of the relative value of different aspects of faculty members' activities.
5. be **indicative of how salaries will be determined**.
6. be **specific and detailed**.
7. be developed with some **consensus** from departmental faculty. Guidelines should be **discussed at faculty meetings** and revised according to feedback from faculty.
8. be **well disseminated and widely available**; should be on-file in the Office for Faculty Affairs (as it is currently) and either online in a school-only access section and/or a hard copy should be handed out yearly; best to be handed out in the spring and given to all new faculty.
9. be well **explained to all, especially incoming faculty members**.
10. be **useful to faculty members for benchmarking** their expected salary in advance and later, their actual salary.
11. be based on **accurate and timely data**. Faculty members should be encouraged to fill out annual reports fully and carefully, mindful of how the data will be used.
12. be provided with the **feedback** to faculty that is necessary for a well functioning salary process. **Chairs and/or section chiefs should meet with faculty members to explain salaries.**
13. be supplemented with a well articulated and **fair grievance procedure**.

Steps to encourage widespread and appropriate use of the guidelines:

1. The Dean, Deputy Dean, and Chief Financial Officer should meet with the chairs to explain the importance of guidelines, articulate criteria for good guidelines, describe the best practices in use of the guidelines, and establish accountability. The Deans could meet with the chairs as a group and individually, especially in those departments that need to show improvement in the use of guidelines.
2. The proposed new Faculty Director of the Office of Women in Medicine, in conjunction with SWIM, should monitor the establishment and use of the guidelines. Feedback from SWIM should be given to chairs and accountability established. A survey of faculty could provide feedback on the use of the guidelines by department. Such a survey could be conducted by SWIM.

Appendices to salary report:

1. **Outline of Statistical Analyses: Guide for future analyses**
2. **Memo on Salary Studies and Changes at other Medical Schools and Universities**
3. **Analysis of Salaries and Gender at Yale Medical School**
4. **Memo from Sarah Horwitz, Ph.D. to Fran Holloway regarding salary guidelines**
5. **Memo from Anna Maria Hummerstone to Carolyn Mazure, Ph.D. regarding department faculty compensation criteria summary (May 2002)**

Outline of Statistical Analyses : Guide for future analyses
February 10, 2003

Methods. Ordinary least squares regression using the log of salary. Regressions with all faculty combined and with separate regressions for Ph.D.s, and M.D.s (plus M.D./Ph.Ds). Plots of residuals. Examination of “points of influence.”

Interpretation and Limitations.

- Results should be interpreted carefully and used with caution. Although the regressions tend to explain a large percentage of the variance in salaries, there is still a considerable amount of unexplained variance. There can be important unmeasured factors that might explain additional variance, including international reputation, school or department citizenship, professional impact of research, teaching quality, history of productivity, differences in pay by sub-field, clinical expertise, etc. Scholarship measures currently are omitted as they are difficult to measure (e.g. reputation, research quality and quantity, and professional, citizenship). We used citations for Pediatrics, but 1) it is very time consuming to gather the information, and 2) use of this measure did not change the results.
- These regressions analyze only salary issues, not other important labor market issues such as hiring, promotion, rank, offering of retention packages, and decisions to leave the school.
- Individuals may experience inequitable situations even when the group as a whole does not.
- Inequities may not be visible by merely comparing raw salaries; e.g. in some cases of underlying inequities, the salaries may appear to be similar, but the qualities of individuals may differ.

Independent variable. Log of total yearly salary.

Variables typically included in regressions:

- Gender
- Years Since Degree
- Years Since Degree Squared
- Endowed Chair
- Administrative Duty indicators – e.g., departmental chair, section head
- Rank indicators - assistant professor, associate without tenure, associate with tenure, full professor
- Degree - M.D. Only, M.D./ Ph.D., Ph.D. and other (e.g., D.V.M.).
- Previous year’s Research Income associated with individual (Direct and Indirect - logged)
- Previous year’s IDX and APS Collections associated with individual (logged)
- Department (grouped)

Variables tried but excluded because of lack of significance and lack of conceptual basis:

- Years in Rank
- Retention Increase in last three years
- Membership in National Academy of Sciences or Institute of Medicine
- Percent of salary from GA
- Percent of salary from Grants and Contracts

(Also previously analyzed variables such as: ‘Clinical Days’ for Anesthesiology and Citation information for Pediatrics)

Needs. A difficult area to develop is measures of academic productivity and reputation.

Memo on Salary Studies and Changes at other Medical Schools and Universities February 11, 2003

Overview

Universities and medical schools around the country have undertaken studies of gender equity in salaries. They also have examined hiring and promotion practices as well as environment. MIT is best known in this regard as it is a very prominent institution and the report received much publicity. Several schools within MIT conducted self-studies and found significant differences by gender in salary and environment. The prominence of the MIT case may have spurred other universities to conduct further studies. The broad number of universities and schools that have conducted self-studies seem to come to a consensus. There often can be gender bias in salaries, hiring, promotion, and retention and these problems tend to be 'fixed' on an ad hoc basis. There are relatively few examples of well-documented policies that are established in response to findings. Stanford University, for example, addressed some individual problems with disparities in faculty salaries and has tried to establish a better environment for women faculty by speaking with Deans of Schools and Chairs of Departments to raise awareness of the problems and obtain cooperation. However, overall policies have not been set. For some universities, the studies and problems are relatively well documented, but the steps that they took to redress the problem are not as well articulated. In general, the main form of redress is to improve the salaries of individual women faculty who were paid less than their merits and markets warranted, but these schools stopped short of developing new pre-emptive policies. Several schools have sought National Science Foundation (NSF) funds to advance the careers of women faculty through a program called ADVANCE. This program provides a fair amount of support to address university-wide issues in gender equity. See below. Reoccurring themes in the ADVANCE programs include issues such as: salary, promotion and retention, mentoring, environmental friendliness, family support and education at the senior level of administration to encourage change.

Below are some notes on what has taken place at a few universities and schools in the US. These have been selected either because they are somewhat comparable to Yale (e.g. MIT, University of Pennsylvania and Stanford) or are well documented on the web (e.g. Wisconsin). Many other schools and universities are undertaking studies and efforts to achieve gender equity, but space does not permit all to be mentioned, nor are they all documented in publicly available materials.

Schools and Sites

MIT is the best-known case of a university documenting and attempting to redress gender inequities. The MIT efforts generated considerable press coverage and controversy, and there is much information on their web sites. The School of Science was the first school to study gender equity and respond with changes. Four other professional schools followed, such as The Sloan School of Management.

In brief, the study on the School of Science found:

- Salary and space differences by gender in the recent past;
- wide-spread sense of marginalization of senior women; lowest moral and some of the most egregious differences were found in the tenured and senior women, not in the junior faculty;
- little advancement of women, in general, over the years.

The findings at the School of Science resulted in the establishment of a “Gender Equity Project” and committees on equity were established at each of the other four schools at MIT (Architecture and Planning; Engineering; Humanities, Arts, and Social Sciences, Sloan School of Management). The findings of each committee relating to gender equity can be viewed at <http://web.mit.edu/faculty/reports>. The administration took steps and made suggestions to improve the number of women, and the salary, status and working conditions of women faculty.

Suggestions included:

- continually review primary data on gender differences;
- establish closer communication between senior women and department heads;
- obtain outside funding to further the cause of equity;
- implement efforts to attract more women.

<http://web.mit.edu/fnl/women/women.html><http://web.mit.edu/gep/about.html>

Stanford University conducted a study of salaries at the University by department and by professional schools. They found an overall difference in salaries by gender of 1-2.5 %, favoring men. There were changes in structure ongoing at the Medical School and thus the studies could not assess the current situation in the Medical School at the time of these studies. In 1993, Stanford found a need to:

- ensure salary equity by gender;
- increase the number and percentage of women faculty;
- develop programs for retention of women faculty;
- evaluate and revise current policies affecting faculty members’ ability to meet family and career obligations;
- create a culture of faculty support.

In 1998, Stanford found little change had occurred, and released another study with suggestions for change. These suggestions included, but were not limited to:

- maintain annual records on the number and percentage of women and minority faculty by rank, tenure status, and faculty line and report progress

annually to the Senate whereby regular accrual of this information will provide a benchmark of accomplishments;

- establish criteria for selection of deans, chairs, and other high level administrators that should include a demonstrable commitment to issues of equity;
- promote strong mentoring of junior faculty and outline clear guidelines and expectations.

University of Pennsylvania's Provost Robert Barchi responded to a recent internal study of Gender Equity by admitting that gender equity is a problem at Penn. In response to the issues unearthed in *The Gender Equity Report*, some of the following recommendations were suggested:

- Policies should be developed that assure that women achieve leadership positions and scholarly rewards in schools and departments consistent with their interests and capabilities;
- Equity of faculty salaries should be reviewed with special attention to salaries of women faculty as women were found to have slightly lower salaries than men in most of the groupings;
- The University and deans should work together to find ways to alter the environment in which many women and some men perceive men to be advantaged (this sentiment was particularly strong within the School of Medicine) and to make a major, visible commitment to efforts intended to create an environment friendly to women;
- Increase hiring of women faculty on a departmental basis and rectify the low numbers of senior faculty women.

A 1992 **University of Wisconsin** study found that there was a significant gap in salaries between male and female faculty members on campus and set a plan into action to review the salaries of female faculty on an individual basis. This review resulted in 372 salary increases totaling \$830,000. A follow-up study was completed in 1995 and revealed no aggregate gender gap. However, continued monitoring of the situation was suggested, and a 1998 study revealed the same results as in 1995. While these studies revealed no aggregate gaps, individual inequities were still a possibility. In order to address any cases of gender pay inequity, the provost's office completed an exercise in which:

- Deans and department chairs were asked to nominate women whose salaries should be reviewed. Women could also request their own review;
- The school or college then compared the female faculty member's salary with three male faculty members with similar education, training, academic rank, years since degree, specialization, and academic unit. Academic units were also asked to consider a faculty member's merit, based on performance and ability to obtain grants, market demands for specialties, and administrative

duties. The Provost's Office then reviewed each case to ensure academic units closely followed these guidelines.

As a result, 8% of the University's female faculty received pay adjustments. The pay adjustment was retroactive to the beginning of the 2000-01 school year and the median was \$5,000. The University of Wisconsin reports that it is committed to ensuring gender equity is a routine consideration and part of the annual performance and salary review process.

From: "**Campus addresses salary inequity**", posted 02/14/02, Wisconsin Week, February 27, 2002, Kent Barrett, <http://www.news.wisc.edu/view.html?get=7115>

National Science Foundation's program ADVANCE. In consideration of the widespread issue of gender equity among academic institutions, the NSF instituted the ADVANCE program. The goal of the ADVANCE program is to increase the participation of women in the scientific and engineering workforce through representation and advancement of women in academic science and engineering careers. NSF seeks to support new approaches to improving the climate for women in the U.S. academic institutions and to facilitate women's advancement to the highest ranks of academic leadership. In 2001, eight universities were awarded multiyear grants of between \$3-4 million each.

Some of the award recipients of ADVANCE funds developed goals such as those proposed by **The University of Washington**:

- increase the number of women faculty in the Science, Engineering and Mathematics (SEM) departments;
- increase advancement of women faculty in the SEM departments;
- increase leadership by women faculty in the SEM departments.

To accomplish this, with the assistance of ADVANCE funding, the plan is to develop a Center for Institutional Change (CIC) that will focus on implementing programs designed to eliminate existing barriers and to encourage cultural change at both the departmental and institutional levels. The CIC will focus on:

- leadership development for the current chairs, deans, provost, and president;
- SEM departmental cultural change;
- examination of UW policies for equity and policy transformation;
- mentorship of women in SEM for leadership;
- transitional support for women faculty in SEM;
- increased leadership by women faculty in the SEM departments.

From: <http://www.engr.washington.edu/advance/about.html>

A list of the ADVANCE sites and a brief discussion of the program can be found at: <http://www.nsf.gov/od/lpa/news/press/01/pr0179.htm> and at <http://www.nsf.gov/home/crssprgm/advance/start.htm>

Links to the university programs can be found at:

<http://www.nsf.gov/home/crssprgm/advance/itwebsites.htm>

The following site links to a variety of information regarding salaries and gender at universities. <http://www.utexas.edu/faculty/fwo/fwolinks.html>

**Analysis of Salaries and Gender at Yale Medical School
Report of the Subcommittee on Salary and Gender
December 11, 2001**

1. Overview of issues:

Our subcommittee was assigned to investigate the impact of gender on salaries at the Medical School. We addressed several questions. Are there unexplained residual impacts of gender on salaries that occur even after controlling for relevant explanatory factors? What are the magnitudes of these effects and are they significant? We found significant differences and went on to explore where and why these differences occur.

2. Meetings and process:

The subcommittee on Salaries for Women in the Medical School first met in the summer with Associate Dean for Administration Ruth Katz attending part of the initial meeting, along with Dr. Russell Adair, Associate Director, Office of Institutional Research; Dr. John Hartigan, Eugene Higgins Professor of Statistics, Department of Statistics; Dr. Sarah Horwitz, Associate Professor of Public Health, LEPH, and Dr. Jody Sindelar, Associate Professor of Public Health, LEPH. Dr. Adair brought his laptop loaded with the Medical School salary data. We first talked about the results that he had presented previously to the Committee on Women's Salaries, and then generated further ideas to explore empirically. Dr. Adair analyzed the data during the meeting allowing immediate review of the results.

We continued to meet several times in the fall, following the same procedures. Each time we explored additional ideas and estimated specifications based on previous results and discussions. Dr. Adair always came prepared with analyses and, after examining these, we generated more ideas for analysis. After much analysis and several meetings, we believe that further empirical analysis using the salary data files would not greatly advance our grasp of the Medical School's gender and salary issues.

3. Methods:

Sample: The data came from the Medical School Finance Office, which obtained the information from BMS, Grants and Contracts database, Clinical Reporting System, and accounting statements. The data include only teaching faculty; research faculty are not included. Some individuals with special characteristics are omitted from the study: retiring faculty, voluntary faculty, emeritus faculty, faculty with zero salary for the prior year, and faculty hired in the current year. There are 821 observations overall, with 244 Ph.D.s (as well as a few 'other' degrees such as D.V.M.) and 577 M.D.s or M.D./Ph.D.s. In the final results, seven faculty members were omitted from the sample based on the statistical issue of points of influence; that is, these outliers may have influenced the results away from the true underlying relationship.

Regressions: There is a vast body of literature prescribing how salary regressions should be estimated. This knowledge comes from various disciplines, including labor economics and statistics. We followed this extant literature in how we organized our analysis. We followed the established conventions, adapting the methods to meet the realities of the Medical School and extending the analysis to explore issues specific to the Medical School. We wanted to present a parsimonious model, excluding those variables that either did not influence the results significantly or were not deemed appropriate on conceptual grounds. We have indicated in the Appendix all variables that we included in the regressions.

Variables: The dependent variable is the log of salary (total of base, supplement, external, and estimated bonus). See the Appendix for the full set of independent variables.

4. Findings:

The overall results conform to the general findings that are typical in such salary regressions. Compensation is positively associated with: years since degree, promotion through the ranks, administrative positions, clinical collections, and external funding. Further, M.D.s are paid more, holding other factors constant, than are Ph.D.s. That these general results conform to the existing literature reassures us that the model makes sense. We do not discuss these results, as they are standard findings.

Beyond the standard, confirmatory results, we found the following revealing and important results.

- a. **Overall gender impact.** For the three years that the Office of Institutional Research (OIR) has analyzed Medical School faculty salaries, there has been a significant unexplained residual associated with females. This residual on gender has been declining over time, according to the analyses performed by OIR. The estimated impact, however, depends on how the model is specified. Nevertheless, when we estimate regressions for the full sample, we still find a negative and significant impact of female gender on salary, even when we control for other relevant factors.
- b. **Gender Differences for M.D.s.** There are important differences between those with Ph.D. and M.D. degrees. To reflect these differences, we estimated regressions separately for Ph.D.s and M.D.s plus M.D./Ph.Ds. There is very little difference by gender among the Ph.D.s (less than one percent; not statistically significant). In contrast, there is a significant difference of approximately 5% by gender for M.D.s, including M.D./Ph.D.s, when controlling for other factors. That is, on average, women M.D.'s salaries are 5% less than those for men when controlling for other factors. This difference is concentrated among faculty who have some research income. For those without research income, there is no difference between M.D. men and women (see below).

- c. **Reward for Research.** Overall, faculty members are rewarded for bringing in external research funding. However, on the margin, women are not rewarded as much as men for bringing in extra funding, and there is some evidence that the more that they bring in, the greater the discrepancy holding all else constant. Clinical collections also get rewarded, but there is no difference by gender in this area.
- d. **Difference by Departments.** Departments have significantly different average salaries. We explored gender differences by department. The number of women in each department vary, and using a separate variable for each department is not reliable since some departments have few women. Thus, we pooled some departments into groups. However, there is no clear way to organize departments into homogenous groups. Thus, although we explored the issue of differences in impact of gender by department, we cannot offer precise estimates of the impact. The data, however, suggest that there may be differences in the impact of gender by department. Detailed inspection of the data by department may reveal these differences. We used the department-gender interactions as controls in the regressions. See Appendix B.

5. Interpretation:

It is important to interpret these findings carefully. The analysis indicates the residual impact of gender on salary, after controlling for relevant, measurable factors. Points to consider include:

- There can be important unmeasured factors, such as international reputation, school or department citizenship, professional impact of research, teaching quality, history of productivity, differences in pay by sub-field, clinical expertise, etc.
- Individuals may experience inequitable situations even when the group as a whole does not.
- Inequities may not be visible by merely comparing raw salaries; e.g. in some cases of underlying inequities, the salaries may appear to be similar, but the qualities of individuals may differ.

6. Limitations and cautions:

Estimating compensation equations is a science and an art. Although well-established procedures were used, there is still some room for disagreement. Results should be interpreted carefully and with caution. The regressions tend to explain a large percentage of the variance in salaries (R-squared about 66%). This is a relatively high percentage, especially when using cross-sectional data. The relatively high ability to 'explain' salaries may occur due to the fact that there is a substantial amount of variance across the salaries. However, there is a considerable amount of unexplained variance. As stated

above, there are qualities that affect salaries that are not available in this data set; some omitted variables are so difficult to measure that they would likely never be available in a compensation data set (e.g. reputation, research quality, and citizenship). Further, we are only able to explore salary issues, not other important labor market issues such as hiring, promotion, rank, offering of retention packages, and decisions to leave the Medical School.

7. Appendix A: list of variables, included and excluded.

Variables typically included in regressions:

- Gender
- Years Since Degree
- Years Since Degree Squared
- Endowed Chair
- Administrative Duty indicators – e.g., departmental chair, section head
- Rank indicators - assistant professor, associate without tenure, associate with tenure, full professor
- Degree - M.D. Only, M.D./ Ph.D., Ph.D. and other (e.g., D.V.M.).
- Previous year's Research Income associated with individual (Direct and Indirect - logged)
- Previous year's IDX and APS Collections associated with individual (logged)
- Department (grouped)

Variables tried but excluded because of lack of significance and lack of conceptual basis

- Years in Rank
- Retention Increase in last three years
- Membership in National Academy of Sciences or Institute of Medicine
- Percent of salary from GA
- Percent of salary from Grants and Contracts

(Dr. Adair had also previously analyzed variables such as: RVU's, 'Clinical Days' for Anesthesiology, Citation information experiment for Pediatrics.)

8. Appendix B: Regression Results. Attached

Submitted by:

Dr. Russell Adair, Ph.D., Office of Institutional Research

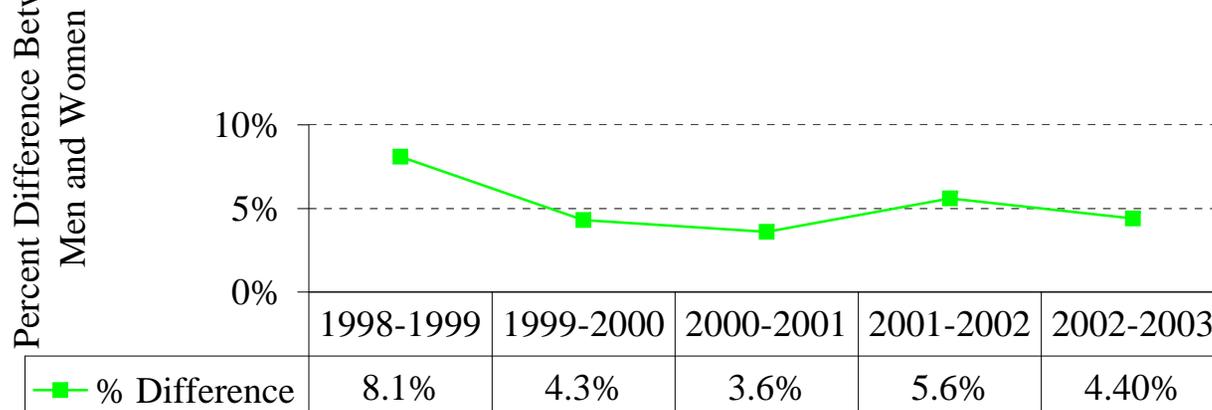
Dr. John Hartigan, Ph.D., Statistics Department

Dr. Sarah Horwitz, Ph.D., LEPH

Dr. Jody Sindelar, Ph.D., LEPH

N R-Square	PhD and other non-MD's 244 0.77		MD and MD/PhD's 577 0.66	
	Estimate	Pr > t	Estimate	Pr > t
Intercept	11.5356	<.0001	11.6595	<.0001
Years Since Degree	-0.0018	0.7195	0.0097	0.0707
Years Since Degree Squared	0.0001	0.2047	-0.0002	0.0369
Gender – Female	-0.0079	0.7232	0.1413	0.0558
Gender - Male (comparison group)	0.0000	.	0.0000	.
Rank - Associate Prof w/o Tenure	-0.3364	<.0001	-0.2089	<.0001
Rank - Associate prof with Tenure	-0.2562	<.0001	-0.1532	0.0076
Rank - Assistant Prof	-0.4786	<.0001	-0.3583	<.0001
Rank - Professor (comparison group)	0.0000	.	0.0000	.
admingroup - administrative duty, not chair	0.0296	0.3915	0.1664	<.0001
admingroup - administrative duty, chair	0.3085	<.0001	0.6055	<.0001
admingroup - no administrative duty (comparison group)	0.0000	.	0.0000	.
Degree - MD Only			0.0632	0.0423
Degree - MD/PhD (comparison group)			0.0000	.
Department - group1	-0.0669	0.0639	0.0901	0.0089
Department - group2	-0.2245	0.0176	0.1945	<.0001
Department - group3	-0.0265	0.3389	-0.0497	0.3716
Department - group4	-0.0646	0.2032	-0.2227	<.0001
Department - group5	-0.3007	0.0598	0.3416	<.0001
Department - group6	-0.0446	0.2498	0.2270	<.0001
Department - group7 (comparison group)	0.0000	.	0.0000	.
FY00 IDX and APS collections (logged)	-0.0177	0.0359	0.0206	<.0001
FY00 Research - direct and indirect (logged)	0.0190	<.0001	0.0044	0.2069
Female*Department Group1			-0.0127	0.8477
Female*Department Group2			-0.1670	0.0312
Female*Department Group3			-0.0946	0.3988
Female*Department Group4			0.1299	0.0311
Female*Department Group5			-0.0622	0.6217
Female*Department Group6			0.0311	0.7062
Female*Department Group7 (comparison group)			0.0000	.
Female*FY00 Research - direct and indirect (logged)			-0.0226	0.0009

Chart 1*
 Yale Medical School Teaching Faculty
 Percent Difference in Total Compensation Between Men and Women
 By Year



*The model changes slightly year-to-year. The 2001-2002 and 2002-2003 models control for years since degree, type of degree, academic rank, department group, administrative

These results come from regressions of Medical School salaries estimated by the Office of Institutional Research. In these regressions, PhDs and MD are pooled to provide an estimate of the overall impact of gender, controlling for the variables indicated above. A positive number indicates that men are paid more than females. All of the coefficients listed above are significantly different at standard levels.

Recommendations to Achieve and Maintain Gender Equity in Space Allocation at the Yale Medical School

Executive Summary

Goal: The goal of this report and these recommendations is to assure suitable and equitable space distribution for all male and female faculty members. This will be accomplished through space evaluation and re-assignment of space when appropriate, and by providing mechanisms for redress of individual grievances.

Recommendations:

- 1. Review new space allocation in The Anlyan Center (TAC) and the “back-fill”.**
- 2. Assure all faculty members equitable access to on-campus space.**
- 3. Review initial space assignments for new faculty members.**
- 4. Expedite requests for new or additional space.**
- 5. Make redress available to faculty dissatisfied with assigned space.**
- 6. Create a comprehensive accounting of all information relevant to space.**
- 7. Review annually the Medical School database comprised of departmental space parameters.**
- 8. Reallocate space that is not used productively or is outside of an acceptable range for cost recovery for 5 consecutive years.**
- 9. Develop written policy for space assignment at the Medical School to be provided to all departments and made available to all faculty members.**
- 10. Make a summary of the results of aggregated yearly data analysis available to the entire Medical School faculty.**

Recommendations to Achieve and Maintain Gender Equity in Space Allocation at the Yale Medical School

1. Review existent and new space allocation in The Anlyan Center (TAC) and the “back-fill”.

Who: The Deputy Dean for Academic and Scientific Affairs and the Commission on Women Faculty until the proposed Faculty Director of the Office of Women in Medicine is appointed.

Why: Many, although not all, issues of departmental space distribution and inequity have been rectified by the opening of The Anlyan Center. Final allocation of new and back-fill space, however, is determined by the department chairs and/or their representatives. This review is meant to ensure space equity for faculty members within individual departments, for both current and new space assignments.

When: This must begin immediately before back-fill space is allocated.

2. Assure all faculty members equitable access to on-campus space.

Who: The Department Chair and the Deputy Dean for Academic and Scientific Affairs. Women faculty members who are dissatisfied with space assignment can also seek assistance from the proposed Faculty Director of the Office for Women in Medicine.

Why: Off-campus space can limit productivity and success by impeding access to information, seminars, informal collegial discussion and formal collaborations.

When: This must begin immediately before back-fill space is allocated.

3. Review initial space assignments for new faculty members.

Who: The Deputy Dean for Academic and Scientific Affairs, the Chief Financial Officer, and the Director of the Office of Planning and Budget in conjunction with the Department Chair.

Why: To assure space equity for all new faculty members and preempt the need for re-allocation.

When: Prior to final offer.

4. Expedite requests for new or additional space.

Who: The Department Chair and the Deputy Dean for Academic and Scientific Affairs. Women faculty members who are dissatisfied with the outcome or timeliness of space assignment can also seek assistance from the proposed Faculty Director of the Office of Women in Medicine.

5. Make redress available to faculty members dissatisfied with assigned space.

Who: Complaints should be made to the Department Chair, and/or the Deputy Dean for Academic and Scientific Affairs, and/or the Associate Dean for Faculty Affairs, and/or the Faculty Director of the Office for Women in Medicine.

What: Problems to be addressed would include inadequate amounts of space as well as space which is inappropriate, antiquated, or isolated from colleagues.

6. Create a comprehensive accounting of all information relevant to space.

Who:

- Department Chairs and Business Managers
- Faculty members who are part of SWIM should monitor and verify accuracy of space and personnel for their department.
- The information should be provided to the Dean of the Medical School and the Deputy Dean for Academic and Scientific Affairs.

What: This information currently includes:

- rank,
- number of personnel,
- net square footage of laboratory and office space,
- net square footage of shared space and its use,
- direct and indirect funds including,
- all sources of funding, such as grants or contracts, as Principal Investigator,
- funds from program projects or similar multi-component grants.

Additional information should include:

- funds from grants for which the individual is an investigator,
- faculty development (location and proximity to other department members and collaborators, if appropriate),
- unusual needs (e.g. animals, large or specialized equipment).

Off-Campus space information should include:

- an individual's distribution of on-campus and off-campus space,
- type of space (laboratory or office)

- number of personnel in both on-campus and off-campus space,
- type of research (wet or dry bench, clinical trials, public health)
- research funds (direct and indirect dollars) available for on-campus and off-campus space.
- cost of leased space.

When: Annually

7. Review annually the Medical School database comprised of departmental space parameters.

Who: The Deputy Dean for Academic and Scientific Affairs, the Associate Dean for Faculty Affairs, and the Faculty Director of the Office for Women in Medicine shall review the database.

How: Continue the regression analyses of space initially conducted by the space representative of the Commission on Women Faculty. Identify individuals whose space allocation is significantly different than would be predicted by the regression model (as described below) based on an examination of the residuals.

Dependent variable: log total space

Independent variables to include in regressions:

- gender
- log direct dollars,
- log indirect dollars,
- rank (professor, associate professor, assistant professor)
- degree (Ph.D. and M.D./Ph.D or M.D)
- personnel
- department (medical, surgical, or basic science)

Separate regression equations should be conducted with personnel as the dependent variable to identify individuals whose space constraints potentially limit the number of people in a laboratory.

When: Annually

8. Review and reallocate space that is not used productively or is outside of an acceptable range for cost recovery for 5 consecutive years.

Who: The Dean of the Medical School, the Deputy Dean for Academic and Scientific Affairs, the Chief Financial Officer, and the Director of the Office for Planning and Budget will set the acceptable range for cost recovery and conduct the review.

How: Those individuals who consistently have more space than predicted by the regression analysis should be the subject of review. Assessment should also

consider comparisons with others conducting similar activities, e.g., basic or clinical research, wet or dry bench research. Consideration should be made for special use of space, such as teaching or unusual research needs.

9. Develop written policy for space assignment at the Medical School to be provided to all departments and made available to all faculty members.

Who: The Dean of the Medical School, the Deputy Dean for Academic and Scientific Affairs, and the Faculty Director of the Office for Women in Medicine.

What: Research space assignment should be based on the overall needs of the various departments and divisions. While individual space allocation is the responsibility of the individual department chairs, general guidelines should be established to assure fairness for all faculty members.

Space assignment should ensure:

- dedicated work and desk space for all full-time personnel;
- available space for student research;
- potential space for expansion;
- adequate space for equipment;
- shared space for common needs;
- space for unusual research requirements;
- proximity to other department members with common interests

Considerations for research space allocation should include:

- present amount of funding, including all direct and indirect dollars;
- consistency of research dollars;
- numbers of full-time research personnel
- numbers of students

How: The Dean and/or Deputy Dean should meet individually with the department chairs to explain the methods that are used to allocate departmental research space and to guide them in individual space allocation. Individual deviations based on the regression analysis of space for departments should be provided to the department chairs in order to document inequities.

10. Make a summary of the results of aggregated yearly data analysis available to the entire Medical School faculty.

Who: The Deputy Dean for Academic and Scientific Affairs.

What: Space allocation by gender and rank as tabular format (e.g. Table 1, Analysis of Space).

Appendix to space report:

Analysis of Space Allocations with Regard to Gender Equity at the Yale Medical School