

GET A GRIP: MANAGING RSI AT MIT

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ABSTRACT

Repetitive strain injuries (RSI), stemming from a combination of intensive computer work and improper posture and work habits, are on the rise in universities as they are in the world in general. In the last 18 months at MIT, an Ad Hoc RSI Task Force has undertaken to coordinate the various Institute services that address this health and safety issue and extend information about RSI and MIT services to students. This paper describes the accomplishments of the Task Force convened in the spring of 1993.

HISTORY AND EARLY EFFORTS

By the time the current Ad Hoc RSI Task Force convened in April 1993 MIT had already acknowledged the increasing number of reports of repetitive strain injuries.

1. As early as 1985, an Institute Committee, the Working Group on Support Staff Issues, published a document that was intended to raise awareness of the full range of health issues then associated with video display terminals; RSI was not the leading perceived danger at the time.
2. Meanwhile in 1987 Training Services (in Information Systems) began to offer an ergonomics course through its quarterly catalog of courses. An outside consultant was hired to teach an entertaining class filled with sound advice and practical, low cost solutions to accommodate workstation and user. Although anyone in the MIT community was welcome to attend, the principal audience for training classes at that time was Institute staff. Since these classes were neither free nor compulsory, attendance was hardly stunning.
3. In the late '80s the Orthopedic Services in MIT Medical began to get referrals from primary care physicians. The number of cases continued to rise, and with the arrival in 1990 of a new occupational physician with a particular interest in ergonomic issues, the Medical Department and the Industrial Hygiene Office (IHO) of Environmental Medical Services (EMS) began to take a more pro-active role in both treatment and efforts at prevention.
4. About 1988, the Safety Office, which handles claims for Workers' Compensation, noted a rise in referrals from physicians in Medical. As traffic to the Safety Office increased, the claims specialist began to give talks to working groups and administrators, urging them to take complaints seriously as well as to take preventive measures.
5. Similarly in 1989, the IHO began to get calls from people referred by Medical or the Safety Office, or who had discovered them by word of mouth, or found them in the phone directory. This office, among its other services, was on call to evaluate worksites for their ergonomic correctness, as well as to participate in the design phase of remodelling efforts.
6. In 1990, the Purchasing Department hired a new agent who arrived with experience and interest in ergonomic furniture and apparatus; she soon became the local specialist.
7. About this time, at the instigation of the EMS, a Task Force was assembled including members from the offices already involved with RSI cases. Its mission was to raise awareness in the community and to this end it updated the first document with more specific design information so that individuals were empowered to make changes at their own workstations. The Senior Vice President supported this effort by covering the costs of producing and distributing the new version,

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now entitled *Guidelines for the Use of Video Display Terminals at MIT* (12/91). The *Guidelines* were sent to all Department Heads, Administrative Officers, and Safety Coordinators, and made electronically available in TechInfo, MIT's public information system.

8. The IHO began an outreach program presenting awareness training to departments upon request. Approximately 250 people per year attended these sessions. By word of mouth more requests for these services resulted.
9. In addition, EMS with Purchasing put together presentations on ergonomic issues and worksite furnishings, which were scheduled during MIT's Independent Activities Period (IAP) in January 1992.
10. A significant service was added in 1992. A consultant in Computing Support Services (Information Systems) almost single-handedly set up the Access Technology for Information and Computing (ATIC) Lab. The ATIC Lab, established to assist both students and university staff who had special computing needs, (e.g., vision impairment, physical/mobility disabilities, learning disabilities) gradually became both an entry and a referral point for people suffering from RSI symptoms. By the spring of 1993 the coordinator was seeing many cases of RSI, both academic and staff, and also hearing complaints - about the dearth of information warning about the injury, and about the lack of coordination among the array of services available on campus.

So, while all these departments and offices were responding individually, or informally with some other office, the uncoordinated service and lack of communication among all the groups had two significant results. In her report to Information Systems in May of 1993, the ATIC coordinator said:

- 1) *Clients spend weeks or months trying to find the services they need, often not finding all the people who could provide service, and often wasting valuable resources because they were unaware of services available to them. This has left clients angry, frustrated, and feeling "abandoned" by the Institute.*
- 2) *Service providers like me often spend valuable time rehashing what was already told to/done for clients, in order to try to get a clear understanding of the case. Additionally, and perhaps more importantly, since we were not all "in the loop" on all cases, our recommendations often conflicted with advice/instructions clients received from other MIT service providers.*

ASSEMBLING THE TASK FORCE: ITS MEMBERSHIP AND MISSION

As in its earlier version, the current Task Force is NOT a committee called into being by the administration, but instead is a spontaneous effort on the part of all of its members, this time spearheaded by the coordinator of the

ATIC Lab. The Task Force members are from all those areas of the Institute that traditionally deal with health issues, especially RSIs, and computer users:

- Environmental Medical Service: Industrial Hygiene Officer, Radiation Protection Officer.
- Information Systems: ATIC Coordinator.
- Medical: Occupational Physician, Orthopedic Physician Assistant, Eye Service Coordinator, Director of Health Education Services.
- Personnel: Personnel Officer.
- Planning Office: Associate Planning Officer.
- Purchasing: Purchasing Agent.
- Safety Office: Director, Assistant to the Director and Workman's Comp specialist.
- Student Affairs: Dean of Student Assistance Services.

Note: Some members of the Ad Hoc Task Force also served on a Disabilities Advisory Committee (DAC), appointed by the administration in 1992. The DAC committee met in the summer/fall of 1992 to propose ways that MIT could assure compliance with the requirements of the Americans With Disabilities Act. The work of the Task Force is separate from but related to the work of the ADA Committee.

Others individuals, comprising a group as numerous as the formal task force, were tapped as their expertise was needed. These people came from within Information Systems, from academic departments, and from the ranks of RSI clients.

The Task Force first identified its goals.

1. Coordinate existing services and set up links among the groups to ensure smooth, efficient services to clients.
2. Improve case management procedures.
3. Identify gaps in service and types of products needed.
4. Create and document standards and guidelines for the safe, healthy design and use of computing environments at MIT; and provide clear information on resources available both to people with RSI symptoms and to those who have responsibility for providing safe computing for students and employees at the Institute.
5. Create a plan for the ongoing dissemination of information.
6. Create a program for managing new policies regarding computing (e.g., job structuring, planning/purchasing policies for renovated work space, new equipment).
7. Provide safety training for students in computer intensive courses and employees entering computer intensive positions on the proper use of computing equipment.

WHAT THE TASK FORCE DID

Consolidated the team. One major and immediate benefit of the newly convened Task Force was that all the "players" met regularly together. Thus they got to know each other, increase their knowledge of the separately held pieces of the solution, and share their varying perspectives on the RSI

problem. This made it possible to work out coordinated services across departments.

Developed materials. This entailed developing printed materials. These materials, needed to educate about potential overuse injuries, explain ways to avoid injury, and lay out the reporting and treatment paths for community members who have RSI symptoms. Three documents emerged:

- *Health and Safety Guidelines for Computer Use at MIT.* This is a heavily revised, renamed, and shortened edition of the earlier *Guidelines for the Use of VDTs at MIT*. Its table of contents covers the same topics as the earlier version, but all the information has been updated. Published in 8.5x11, photocopied, and stapled format, this document was considerably less expensive to produce than its predecessor.
- *Repetitive Strain Injuries.* This 6 page (8.5x11) publication was an extensive revision of an existing reprint that Information Systems had first published in October 1991. The publication gives a brief description of RSI, its symptoms and how you can get it; provides a succinct checklist that the reader can use to analyze his/her workstation; and concludes with numbered steps describing the treatment and management of RSI at MIT. Although this is a standalone publication, it is also distributed as an attachment to the *Health and Safety Guidelines*.
- *Computers and Health: Resources at MIT.* This chart is a checklist in alphabetic order of all the offices and departments that provide an RSI related service with a brief description of that service. It is published on one side of one page of 8.5x11 inch paper. It is suitable for posting, is distributed as the last page of *Repetitive Strain Injuries*, and therefore is also an attachment to the *Health and Safety Guidelines*.

Drafted Recommendations. This document was delivered to the Senior Vice President in early December 1993. The transmittal memo summarizes the requests of the Task Force as follows:

- That the RSI problem be “officially” recognized by MIT’s administration.
- That the Recommendations be adopted by the Academic Council as MIT policy.
- That the Ad Hoc Task Force be recognized as an ongoing entity to continue to develop MIT’s response to this epidemic.
- That a specified amount of additional funding be given to constituent members of the Task Force in order to effect the Recommendations.

The Recommendations (abbreviated) are as follows:

- Distribute the *Guidelines* to Department Heads and Administrative Officers; make them available electronically on TechInfo, MIT’s public information system.

- Inform MIT faculty of the widespread occurrence of RSI in students and staff; provide faculty with the *Guidelines* and, through the faculty, provide *Guidelines* and ergonomic training to students in computer intensive courses.
- Adopt Institute Policy and Procedures that ensure that all computer workstations adhere to the *Guidelines*, beginning with new installations and renovated space.
- Track incidences of RSI in employees and students so the Task Force can develop responses.
- Increase awareness/recognition of RSI among clinical providers; educate them on managing RSI in the MIT Community.
- Educate personnel officers about RSI and the reasonable accommodations that can be made for affected employees.
- Enforce ergonomic standards for new equipment purchasing.
- Extend services of ATIC to RSI sufferers; offer prevention information through training classes and posters in public computing areas.

Proposed an equipment loan service. The ATIC Coordinator wrote a proposal entitled *RSI Short Term Access Technology (STAT) Loan Service* describing the eligibility requirements, mechanics, and costs of providing alternative equipment and software to RSI patients. This proposal was delivered to the Senior Vice President as an attachment to the Recommendations.

Met with the Senior Vice President. A few weeks after delivering the Recommendations, the Task Force met with its staunch ally, the Senior Vice President. The group was gratified by his response. He felt that the recommendations were within reason, and expressed his appreciation for the team’s determination to proceed, where they were able, within individual departments and without requiring additional resources.

He felt, however, the message was sufficiently important that the *Guidelines* should be distributed (via campus mail) to all MIT personnel. He agreed to mail them under a cover memo from his office and to cover the costs.

Continued to meet. The Task Force continues to meet periodically to check on progress toward its goals.

GETTING THE WORD OUT (as of 6/94)

Progress towards goals continues to be made through cooperative as well as individual efforts of Task Force members.

Events. Each year since 1992, at least one presentation on ergonomic issues has been scheduled for the Independent Activities Period. This year, under the catchy title *Wrist Watch*, a two-hour session featured talks and demonstrations by members from ATIC, Purchasing, Medical, Safety, EMS, and the Dean’s Office. Attendance was gratifying if not overwhelming. The Health Education Office put on two other events, including a presentation by a hand therapist.

Ongoing services. Throughout the year, IHO is available upon Medical Department referral or user request to inspect worksites and recommend changes. Over 300 such site visits have been made. The IHO also continues its educational outreach with a slide show and talk.

Publications:

- *Repetitive Strain Injuries*, the short document, was published in August of '93. After some experimentation with distribution schemes, the document is now available for pickup in a display rack outside the ATIC Lab on MIT's main corridor, and in the Health Education publication room in Medical. It is included in the New Computer Owner's Kit given to everyone who buys a computer from the MIT Computer Connection (campus computer store). The Occupational Physician also keeps a supply to give to patients. And EMS has a supply for distribution to people who call them for worksite evaluations.
- The February 1994 issue of *i/s*, our computing newsletter, had computers and health as its theme. The lead article leveraged the information in *Repetitive Strain Injuries*, printed the chart of MIT services related to RSI, and ran related articles on HANDEZE gloves, DataHand, internet mailing lists on the topic, and ergonomic telephone accessories.
- *Health and Safety Guidelines*. was printed and distributed in early June via campus mail under a memo from the Senior Vice President to all MIT employees. The original printing of 10,000 copies resulted in 3000 extra copies that were distributed to EMS, the Safety Office, ATIC, and Medical for distribution similar to that of the short publication. In addition, the text of this document is available on TechInfo under computing and safety headings.
- A sticker, showing proper workstation posture, will be printed on standard Avery round labels. We haven't decided how we will deploy the sticker, but we would like to see it stuck on every computer monitor on campus.

Furnishings. Purchasing has set up a furniture showroom where customers can try out six different chairs, two kinds of computer tables, a monitor stand, and an assortment of foot rests, wrist rests, and articulating keyboards. All these items are available on loan for testing or until an item on order is received.

Adaptive equipment and training:

- Because ATIC staff have been testing alternative keyboards and voice systems for a long time, their expertise is already in place for advising clients with RSI looking for temporary respite from keyboarding and mousing. Referrals can try out alternative equipment (and HANDEZE gloves) in the ATIC Lab.
- ATIC staff are also educating students who work on the academic and microcomputing helplines so they can advise people with RSI questions how and where to enter

the care system; some of this information has been included in online stock answers.

- The STAT loan proposal is in the hands of someone appointed by the Senior Vice President, though no action on it is yet in sight.

Space renovations:

- Many public computing clusters were designed before the potential health hazards had been recognized. As clusters are scheduled for renovation, Task Force members are consulted to ensure that ergonomic standards are met.
- As part of design review, Physical Plant now solicits input from EMS and the Safety Office when computing activity will occur in any new or renovated space.

Therapy. Medical is actively working to get occupational therapists on-site to reduce expense and commute times for RSI patients.

Supplies. The MIT Computer Connection (computer store) stocks HANDEZE gloves and wrist rests.

STILL TO DO

While good progress continues to be made, there is still a vast amount of work to do. Open issues being pursued both through the Task Force and in the departments are:

Case evaluation:

- How to establish that an injury is work-related, or primarily results from work.
- Who determines reasonable accommodation.
- What will be the impact of new OSHA ergonomic standards not yet out.
- How to implement new procedures for using outside services.
- How to track successful solutions, including access technology ones, and make use of what has been learned.

Case management:

- How to decrease time lags in treatments for and consultation with clients (Medical, EMS, ATIC).
- How to educate the client/patient up front on the treatment process and the intricacies of paper work, to complement improved case management.
- Need to develop patient followup procedure. How does the patient know she's better? How do the providers know she's better?

Education:

- Supervisors need to be educated to take complaints seriously; to help injured staff members get into the care system; to make every effort to supply ergonomically sound workstation and job design accommodations.
- Faculty need to be educated to take student complaints seriously, and to make reasonable accommodations for injured students.

Financial.

Who pays for adaptive equipment and furnishings needed to accommodate the RSI patient?