PROTECTING HUMAN SUBJECTS

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Education and the challenges of unique IRBs

This issue of the *Protecting Human Subjects* newsletter reports on two important aspects of institutional review boards (IRBs). One is the effort by IRBs to undertake educational programs that assist in more effectively protecting human subjects. The second is the problems faced by some unique IRBs, including IRBs designed to protect special groups, such as Native Americans or research subjects in the workplace, and those in unusual situations, such as small community hospitals.

Navajo Nation IRB

A unique human research review board has three primary concerns: protecting its community, its people, and its heritage

The Navajo Nation has inherited a landscape with a legacy of more than 100 underground mines that often left behind waste materials contaminating ground and water.

Because the contamination has raised concerns about human health, researchers are especially interested in examining both the land and the people within the Nation's jurisdiction, which includes large parts of Arizona, Utah, and New Mexico.

Interest in conducting research in the region led the Navajo Nation to establish a Human Research Review Board (HRRB) in 1995. It did so with three goals: protecting the community, protecting its people, and protecting the Nation's heritage.

A presentation by HRRB chair Beverly Becenti-Pigman and administrator Carol Leonard at the DOE Human Subjects Working Group meeting discussed the genesis and operation of the HRRB.

The Nation knew there were unique challenges associated with reviewing and approving research on Navajo lands involving the tribe's population. Addressing these challenges resulted in a review board that operates in ways that set it apart from most such boards.

Special challenges resulted in a review board that operates in ways that set it apart from most such boards

Research code

Operating as part of the Navajo Area Indian Health Service, the board has the mandate to follow a research code enacted in 1995 by the Navajo Nation's Council.

The code is designed to protect the privacy and other interests of the members of the Nation and, among other things, requires that all data resulting from research in the nation remain the property of the Navajo.

The HRRB has 15 members. Five of these are community members, four are from medicine, one from public health, one from environmental

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Navajo Nation (Continued from page 1)

health, one from historic preservation, one from special populations, and two from math and science.

A rigorous process of application, review, and implementation is used to protect the vulnerable population from even the appearance of exploitation and abuse. One of the goals is to establish a rigorous model that could be followed by other vulnerable groups.

The HRRB's cautious approach reflects activism and concerns of the Navajo Nation Council, which last year established a moratorium on genetic research within its jurisdiction. The Council said the ban would be maintained until the nation's human research code could be amended to speak to issues of gene therapy and potential discrimination.

Rigorous approval process
Research involving human subjects in the Navajo Nation not only includes the application process but also entails support from the community, progress reports, a final report, presentation at an annual conference, and community feedback after the study is completed and prior to publication.

The process begins with the initial application and submission of an abstract. The HRRB requires that responses—approving or disapproving the proposal—be obtained from applicable entities, including the community, health services, and schools.

The research program staff reviews the protocol, consults with various committees, and then schedules a presentation by the principal investigator. The HRRB then approves or disapproves, and if it approves the study to proceed, it mandates specific conditions that must be met.

Once implemented, the study is monitored and observed by the HRRB, which also requires quarterly progress reports and annual renewals. When the final report is completed, it is submitted to the HRRB and to the Navajo Nation Council's Health and Social Services Committee.

Publication of the study's findings requires approval of the manuscript by the HRRB, largely because the Navajo Nation requires that all research data remain the property of the Nation.

Researchers must submit a proposed manuscript for consideration and must agree to make required changes before publication. A copy of the publication must also be submitted to the Navajo Data Resource Center.

Community feedback
Both the first and final phases of the project include informing the community about the findings and then getting feedback. This may include a presentation at the annual research conference conducted by the HRRB. Educational materials may also be developed to inform the community.

Many research projects within the Navajo jurisdiction require cooperative linkage with other agencies and their review boards. For example, when scientists from the Saccomanno Research Institute in Grand Junction, Colorado, want to conduct studies of former uranium miners in the region, it is necessary for the Institute's IRB to work with the Nation's HRRB to ensure that all involved understand the requirements. (See related story on page 8.)

A variety of special elements, such as language and customs, contribute to the uniqueness of the HRRB's task. For example, when the board considers research applications from scientists who want to study chromosomal abnormalities, they have to consider that the Navajo may have no word for chromosome. This means that the quality of interpretation is crucial to obtaining meaningful informed consent from potential subjects.

Cultural beliefs
Similarly, when considering research involving both human subjects and environmental conditions, it must be recognized that the Navajo people have special cultural beliefs about the environment. Four aspects—air, land, water, and fire—must all be in harmony. Disharmony is created when one area is disrupted, as sometimes occurs with mining or milling.

Respecting the Nation's beliefs requires attention be paid to the knowledge brought to the board and the application process by community members, as well as demonstrable community benefit, which is rare in community-based research.

To assist in ensuring that the research benefit the Navajo Nation, the HRRB requires that researchers hire staff from the community. These and other efforts are partly the result of a feeling in the community that in the past, when research was conducted, it was used to benefit others, but seldom helped the Navajo. (Information from Beverly Becenti-Pigman and Carol Leonard) Δ

NIH grant helps NJ IRB education

Barbara LoDico is trying to create a model IRB education program because she believes people want to do the right thing

"Mostly, when there's a problem," says Barbara LoDico, "people just don't understand what they're supposed to do. If you teach them in a way they understand, they'll do the right thing."

Barbara LoDico

LoDico is executive director of human subjects protection at the University of Medicine and Dentistry of New Jersey (UMDNJ). The university is one of many academic centers that obtained a National Institutes of Health (NIH) grant to help ensure that the university fully honors its obligation to the ethical treatment of human subjects.

"If you teach them in a way they understand, they'll do the right thing."

LoDico is in a unique position to understand both the problems IRBs face and the way a focused education program can try to correct them.

The UMDNJ is the largest medical educator in the country, comprising three medical schools, a college of public health, a college of nursing, a college of dentistry, a graduate school, and college of health-related professions.

The university has 10 IRBs, four at the Newark campus, five at the New Brunswick campus, and one at the Stratford campus. Each IRB has its own director and staff, and includes between 10 and 20% community (non-affiliated) representation. LoDico said education has been one of the strongest focuses on each of the 10 IRBs she oversees.

With oversight of more than 2000 protocols among the 10 IRBs, it is important that nothing be overlooked in the commitment to protecting human subjects. "There's too much at stake," LoDico said.

LoDico's concrete efforts to improve the human subjects protection program, along with the winning of grant funds, has led to development of a web-based training program, extending a community education program, and organizing staff retreats.

One of the things that has helped make the university human subjects protection program so visible, she said, is that it has strong support from the system's administration.

"We've got a commitment from the president on down," LoDico said. "The president understands the need for a strong protection program, partly because he is involved in multiple sclerosis research. He was one of the first at the university to take the web-based training."

With oversight of more than 2000 protocols among the 10 IRBs, it is important that nothing be overlooked.

An important component of the educational effort is the community outreach program. It has worked largely because one of the university's long-time IRB community members, Isaac Hopkins, spends an enormous amount of time at it.

Hopkins goes to churches, school systems, and other places to explain how research is conducted, how the IRB works, and what rights research subjects have.

"He is retired, and so he has time to spend hours and hours and hours every week talking to people, scheduling meetings, conducting programs, and answering questions," she said. "He's been a member of the IRB for about 13 years, and so he understands how it works."

LoDico said the university had been getting a message from the community that people were

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"A program's educational efforts must not only protect people in research settings, they must also help create an atmosphere of trust."

afraid to participate in research because they didn't understand it, were afraid of what might happen to them, and could see no reason to be involved.

"That changed because of Isaac's work," she said. "He has spent so much time talking to people that now we're hearing from principal investigators (PIs) that people are more interested in participating and that they're asking a lot more questions about the research and about their roles as human subjects. Now when someone declines to participate, it is because they really understand the project but do not wish to be involved."

It's much better if you educate people to do what's needed. There is no satisfaction for anyone in shutting down programs.

In the perinatal program, she said, "research subjects are telling the PIs that they already know their rights as a result of what they're learned at past informal group meetings. And not only that, they're bringing in their friends to the program."

Atmosphere of trust

These are the best indications, LoDico said, that a program's educational efforts must not only protect people in research settings, they must also help create an atmosphere of trust.

"In the long run," she said, "if we can earn the community's trust and if we fully honor that trust, everyone will be better off."

The presentations in the community are informal, she said. They are mostly question and answer sessions. They are not designed to promote research, only to educate. They focus on what is research, what is the IRB, and what are the rights of a research participant.

"Many people thought we had ulterior motives. When we went to our first group of ministers, they were suspicious. But once we got started, they asked us to come back and they led us to other groups that wanted to hear what we're doing."

Key to compliance

"We've learned that education is the key to compliance. You can audit people and sometimes you have to shut down programs. But it's much better if you educate people to do what's needed. There is no satisfaction for anyone in shutting down programs."

An indication that more people are taking that message seriously, she said, is the significant increase in numbers of people attending meetings where they can learn about human subjects protection. For example, a recent meeting in Newark drew more than 200 paying participants because the topic was about how to protect people involved in research studies.

"People really are interested in learning," she added. "That's why you see so many people at the Public Responsibility in Medicine & Research (PRIM&R) and Applied Research Ethics National Association (ARENA) meetings. I remember when they'd be lucky to get 300; now they get a thousand or more."

Details on the Web site

Information about the human subjects protection program at the University of Medicine and Dentistry of New Jersey is available on its Web site: http://www.umdnj.edu/hsweb/.

The site includes details about educational initiatives, including an example of a departmental educational session, an IRB orientation outline and student ethics outline, and the standard IRB 101 that is done for IRB orientation for IRB members, for affiliates, and for anyone who asks. Also on the Web site is information about the NIH grant LoDico obtained for human subjects protection program support.Δ

"In the long run, if we can earn the community's trust and if we fully honor that trust, everyone will be better off."

When research subjects are workers . . .

"be sure that even the appearance of coercion is avoided"

The National Institute of Occupational Safety and Health (NIOSH) is concerned with work-related hazards and their effect on worker safety and well being. This includes physical, biological, psychological, and ergonomic hazards. NIOSH's IRB therefore is responsible for issues related to research on workers, safeguarding their autonomy, preventing coercion, and protecting their confidentiality.

The responsibilities of the NIOSH IRB are different from most in that there are unique sensitivities when dealing with research on a worker population rather than those in standard clinical trials.

"In workplace studies," Michael Colligan said, "you're dealing with an intact population. They know one another and have enduring, pre-existing relationships. They were together before the study and will be together after the researchers are gone."

Michael Colligan

Colligan, who chairs NIOSH's IRB, said this means there may be different kinds of pressures to participate or not participate in a study, depending upon the nature of the study. For this reason, the principal investigator must be sure that even the appearance of coercion is avoided.

"The PI has to emphasize that there will be no repercussions from participating or not. And this

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IRBs face more complex task, need more training

Research protocols are becoming increasingly complex. So are regulations governing privacy, safety, and consent.

"The combination," says Michael Colligan, "is stretching thin the resources of IRBs everywhere. Which means that training of IRB members is more important than ever."

Colligan is a veteran of more than two decades on the NIOSH IRB, as a member since 1980 and chair since 1991. He is also a member of DOE's Central Beryllium IRB and has been a NIOSH psychologist since 1975.

"Everything about the IRB process is becoming more and more complex," he said. "The new HIPAA (Health Insurance Portability and Accountability Act) rule will stretch IRBs even more thinly as they try to understand and implement HIPAA's requirements for confidentiality of medical records for research use, as well as when the IRBs double as privacy boards."

IRB members, Colligan explained, will have to be fully aware of the new privacy rules, as well as the various other regulations governing research involving human subjects. "The required level of knowledge is continually placing many demands on IRB members to stay current with the regulations, science, and evolving ethical and professional standards," he said.

Accreditation

Expectations of IRBs will be even greater as the nation moves toward IRB accreditation, a direction that Colligan argues is a mostly good idea because it will force more institutional support for the IRB process.

"The key to IRB training and effectiveness is time and money. And yet it's universally recognized that IRBs are understaffed and underfunded."

Lack of institutional support has been noted by both the National Bioethics Advisory Commission and the Government Accounting Office. "In many organizations, IRB oversight is an ancillary program. IRB members have other responsibilities and are donating their time to be on the board. They often get little support and almost no funding for training or attending conferences."

If IRB accreditation becomes mandatory, Colligan explained, "the institutions are going to be held responsible for the level of support they provide.

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takes a selling job to management, unions, and workers."

In addition, Colligan said, when a study is completed, NIOSH believes that all relevant findings should be provided to the study participants. "Workers have to be forewarned that not only should NIOSH protect the privacy of the information, the workers themselves have to guard information they are given.

"For example," Colligan said, "if it is found that a worker has a biomarker that is a precursor of a disease, the worker has to keep that information private. If it becomes widely known, it could mean removal from a job, reassignment, fewer health care benefits, or other adverse consequences.

"So workers have to be forewarned that the results can have unintended risks if the information is not protected."

For some agencies, such as DOE, workplace studies present additional ethical problems when on-site occupational medicine physicians are researchers or subject recruiters. This ethical dilemma is called "the double hat."

Communicating

Another problem inherent to workplace research is understanding that it is research; it is not medical surveillance or monitoring, which can be merely a front for research. "The findings are very speculative," he said. "A lot of early genetic research, for example, has produced findings that turn out not to have significance. Workers need to understand the speculative nature of some research findings. They also need to know when and why results will not be provided."

Hence, IRB members must be educated about issues related to uncertainty, how people deal with it, and how that can be effectively communicated, he said.Δ

Colligan: More complexity requires training (From page 5)

If it's not sufficient, that will influence the accreditation decision."

"There are potential down sides to accreditation; it could become merely a cumbersome bureaucratic process, and it could be expensive for small IRBs. But the potential advantages of a level playing field are significant."

Colligan said NIOSH is a good example of an organization that tries hard to ensure that its IRB is effective."Nobody is perfect, but NIOSH has provided strong support for its IRB process. The board's decisions aren't undermined.

NIOSH investigators recognize that it is a good way to conduct research. The process is an integral part of the organization's culture. We've now got a modest budget that is enough to support some training. There could be more, but it's a good start."

CDC ethics requirement

Ethics training increasingly is recognized as necessary for a broad range of organizations. The Centers for Disease Control and Prevention (CDC), for example, has for at least five years required ethics training for all its principal investigators and associated research staff and IRB members.

Because NIOSH is under the administrative control of the CDC, it is subject to its training and regulatory requirements. Colligan said CDC "developed a Web-based program that includes a testing system. CDC doesn't allow you to serve on the IRB or to engage in human subjects research until you've passed the Web-based education program. When a protocol is submitted for IRB review, it must include verification that those involved have completed the training and passed the test."

Training provided by the CDC program covers the basic tenets of human subjects protection, including federal regulations, informed consent, privacy, and other elements. In addition to that, the NIOSH IRB encourages its members to obtain additional training by attending conferences and workshops. "And then, of course, much of the actual hands-on training occurs in the real discussions held during IRB meetings," he said. "Formal training provides the theoretical and foundational understandings.

"The deeper understanding comes in the process of being IRB members and working their way through protocols as they consider the risks and benefits, as they formulate ways to ensure people are protected."Δ

DOE Central Beryllium IRB

A single-issue IRB oversees human subjects protection at a variety of sites across the United States

The new DOE Central Beryllium Institutional Review Board (CBeIRB), established in early 2001, is unusual in that it is responsible for only one area of research but its scope is nationwide.

Established to protect human subjects, the CBeIRB reviews protocols that involve current and former workers at any U. S. Department of Energy (DOE) site where beryllium-related research or workplace studies are conducted. This includes projects funded by DOE or any other agency.

Shirley Fry

Effective, consistent, continuing protection
Chaired by Shirley Fry, the CBeIRB's task is to assist DOE in assuring effective, consistent, and continuing protection of human subjects involved in research on the effects of exposure to beryllium. It is administered by Oak Ridge Associated Universities under a U.S. Department of Health and Human Services assurance.

the board provides advice on bioethics issues in beryllium communications to workers, researchers, and local IRBs.

Additionally, the board provides advice on bioethics issues in beryllium communications to workers, researchers, and local IRBs.

This is an especially significant contribution because the potential for beryllium-related disease is not confined to a specific site but exists at any site where beryllium has been present and mis-information or misinterpretation are rampant.

Follows National Cancer Institute model
The concept of a central one-topic IRB is unique in DOE's human subjects community. It follows a concept used by the National Cancer Institute to review clinical trials that are conducted at hundreds of sites nationwide.

Among the challenges faced by a single-issue IRB is trying to work with a variety of projects at many different sites involving many different organizations. As everywhere, the support and authority of upper DOE managers is needed to back up and enforce decisions.

The culture of each organization tends to be unique, with its own way of doing things, its own history, and its own priorities. The CBeIRB must be especially sensitive to these differences and at the same time be able to meet its obligations to research subjects.

At times, difficulties arise when a research project involves other agents (exposures, potential hazards, etc.) as well as beryllium. This requires additional coordination with local IRBs so that all aspects of the project are addressed.

Approval required before work starts
The board's approval of the research protocol is required before work on any new study of beryllium effects involving DOE workers can start.

the CBeIRB's responsibility is further complicated by the wide geographic distribution of the many sites at which workers are subjects in beryllium-related research.

The 16 board members represent all stakeholders in beryllium exposure and disease, including unions, ill workers, and experts in occupational and clinical medicine. They also have expertise in industry, ethics, law, science, and industrial hygiene.

The membership also includes a member from each of the IRBs that oversee human subjects research at three of DOE's major beryllium sites.Δ

St. Mary's Hospital IRB

A small community hospital-based IRB has advantages as well as unique problems in efforts to protect human subjects

Protecting human subjects at a small community hospital and research institute has advantages as well as presenting unique problems.

St. Mary's Hospital in Grand Junction, Colorado, is a 300-bed facility founded in 1896 in the western desert region of the state. It is affiliated with the Saccomanno Research Institute, famous for its work involving former uranium miners.

Mary Crumbaker
Administrative Director

The 10-member IRB that oversees human subjects protection at the hospital and institute faces the usual challenges of not enough staff and inadequate funding.

But there are also more unusual aspects to the task. These include the challenges in reaching out to communities like the Navajo Nation, aging uranium miners, and in working in an extraordinarily large geographic area of Southwestern deserts. (See related article about the Navajo Nation, page 1.)

Some of the difficulties it faces include

- limited local research collaborations
- personnel with multiple responsibilities
- insufficient opportunities for training, and
- lack of daily exposure to cutting-edge issues.

Advantages

But there are advantages as well. IRB administrative director Mary Crumbaker said, "The thing I think the IRB does have is a real sense that, as a community hospital, patients do not come to us with an expectation that we will use their information for research.

The institute has been a leader in examining the health impact of uranium mines in the region.

"This is a very different atmosphere from a health sciences center or other large research institution," she said. "The IRB is very protective of the patients and their information. This is carried out through requiring thorough consent documents and very carefully scrutinizing projects in which investigators are requesting a waiver of informed consent. When waivers are granted, the IRB looks seriously at what other protections are in place for the subject and his or her health information."

The IRB includes a balance of representatives from the hospital, medical, and research components, and a strong contingent of community representatives.

Crumbaker says the community representatives include a college administrator, a local realtor, an Hispanic woman who has a background in public health and working with immigrant farm workers, and a religious sister who served native populations in South America for over 20 years and has also worked with immigrant farm workers here from Mexico.

Maze of rules

The IRB encounters special difficulty in trying to follow the maze of rules and regulations required of researchers. However, the work of the IRB also involves developing an intimate knowledge of the human subjects communities with which it is involved.

One example of a community with values and issues which are not widely understood is the Navajo Nation. The Navajo are proactive and have developed a program involving an extensive series of meetings in order to ensure that the research community and the Navajo understand each other's concerns and priorities.

Crumbaker said that Teresa Coons, senior scientist for the Saccomanno Research Institute, attended some of those meetings to learn more about how the Navajo view researchers, what problems might evolve, and how the relationship can both gather important data and honor the beliefs and concerns of the community.

The IRB itself has never met with the Navajo Nation, Crumbaker said, but the Institute does sometimes

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partner with members of the Nation who do research in some projects.

Limitations
There are, however, some limitations as to how much a small IRB can do. The St. Mary's Hospital IRB is chaired by a practicing physician, Joel Bechtel, and it includes people from the hospital and from the community who are fully employed in other work.

The IRB meets once a month. Despite limitations in personnel, financing, and other resources, it has found ways to ensure that human subjects are well protected in the research projects that fall under the hospital's jurisdiction.

A unique resource and an exceptional reputation has meant its importance is not reflected by its size.

Crumbaker said the IRB's training in human subjects protection, "is pretty much on-the-job, with memos outlining regulations on a project by project basis and discussions about regulations that are impacting any particular decision during the meetings."

For a relatively small community, St. Mary's Hospital and the research institute conduct an unusually significant amount of research. Many researchers are interested in the locale because of its access to former uranium miners, Native Americans, and community residents who may have had hazardous occupational exposures. St. Mary's has been a health care provider for these populations and has earned their trust.

Geno Saccomanno
The institute has been an important leader in examining the impact of uranium mines in the region, beginning with a series of studies conducted by its namesake, Geno Saccomanno, a much-loved pathologist.

He and his colleagues, working on studies of Colorado Plateau uranium miners, demonstrated excess rates of lung cancer. They also established

- causal relationships between mining exposure to radon progeny and development of malignant and nonmalignant lung diseases, and
- factors modifying these relationships (smoking, intensity of radon exposure, time since last exposure, exposure to diesel exhaust, silica dust, heavy metals.)

More recently, the Saccomanno Institute has been involved in a pilot study of an early lung cancer detection protocol developed by Joel Bechtel.

Pathology samples
An additional advantage for researchers at St. Mary's is that decades of studies have created an extensive collection of pathology samples, especially lung samples. The uniqueness of this resource, along with the institute's exceptional reputation, has meant that its importance is not reflected by its size.

The institute also conducts a community-based health and risk assessment for Navajo Nation communities impacted by uranium mining and milling activities.

The institute is working in collaboration with the local Mesa State College in Grand Junction to investigate hantavirus, especially in developing diagnostic tests, defining immune responses in humans, studying treatment and disease management, and conducting seroprevalance studies.

The common element among all the institute's research efforts is that all are designed to make progress in getting information about genetic, environmental, and occupational disease, and to improve public health in areas specific to needs of its intake community.

Being a small, community-based program, the institute is in a unique position to develop creative ways to protect its human subjects and to identify the concerns of the local residents.Δ

Web sites

Protecting Personal Health Information in Research: Understanding the HIPAA Privacy Rule
http://privacyruleandresearch.nih.gov/pr_02.asp

The DOE Human Subjects Research Database updated to include information for FY 2002
http://www.eml.doe.gov/hsrd/hsr02/hsr2002.cfm

National Human Research Protections Advisory Committee
http://ohrp.osophs.dhhs.gov/nhrpac/nhrpac.htm

Creative solutions: research subject advocates

Increase in reports of human subject protection deficiencies brings scrutiny as well as more efforts at education and support

The past five years have seen a striking increase in reports of human subject protection deficiencies at some of the nation's most prestigious research institutions.

The Food and Drug Administration and the Office of Human Research Protection temporarily halted research at some of these institutions until compliance with current regulations was assured.

Theresa O'Lonergan

Responding to scrutiny

Consequently, oversight and draft guidance focused upon the ethical and safe conduct of research have increased in complexity.

Response from research institutions to this increased scrutiny and pressure has included allocating more resources to amplify human subject protection efforts, reduction of IRB workloads, and establishment of new staff positions.

By Theresa A. O'Lonergan, The Children's Hospital, Denver, Colorado

Among the solutions from the National Center for Research Resources (NCRR) of the National Institutes of Health (NIH) was the creation of a program establishing a network of Research Subject Advocates (RSAs).

The RSAs, located in NIH's 82 General Clinical Research Centers (GCRCs), are responsible for protection of human subjects within their institutions. Five-year NIH grants fund the GCRCs, a network that supports 7,000–10,000 active protocols.

Guidance and regulations have increased in both number and complexity.

The purpose of the RSA program is to ensure that IRB-approved monitoring plans are fully imple-mented and that protocols and the consent process are actually carried out according to IRB mandate.

Further, RSAs ensure that investigators submit adverse and serious adverse event reports to IRBs and federal agencies in a timely fashion. RSAs are responsible directly to the principal investigator of the GCRC grant, which in most cases is the Dean of the School of Medicine because most GCRCs are associated with medical schools.

The intention is clear: RSAs are to be given enough authority within the research structure of institutions to be able to effectively impact human subject issues.

Each center can configure the position in a way that best meets its needs.

The effective-ness of each GCRC's RSA program is determined by intra- and inter-institutional relationships and interactions, as well as by the authority invested in the RSA.

There are 125 RSAs in the network, with all GCRCs having appointed one. Of the 125 RSAs, 47% have M.D.s, 19% have Ph.D.s (5% have both), 18% have masters degrees, 9% have bachelors degrees, and 7% hold registered nursing degrees.

However, 27% of the RSAs have multiple degrees, with M.D. combined with other degrees being the most common. The range of experience and background represented among RSAs is extremely broad, including physicians, nurses, biostatisticians, bioethicists, informatics specialists, dieticians,

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RSAs ensure that monitoring plans are fully implemented and that protocols and the consent process are carried out according to IRB mandate.

pharmacists, public health specialists, and educators.

Shortly before the first RSAs were appointed, the NIH issued a requirement that all NIH-funded or NIH-supported research must contain a written data- and safety-monitoring plan (DSMP) in the research protocol.

There are 125 RSAs across the GCRC network centers with all GCRCs having appointed one

Initial focus
Large portions of RSAs' time have subsequently been devoted to bringing protocols into compliance with this requirement. Thus, many RSAs initially focused efforts on monitoring and oversight activities, which included creating systems for reporting and tracking serious adverse events, as well as serving as IRB members to maximize their effectiveness.

They also concentrated on the informed consent process. Some of the activities pursued in this regard include performing surveys of medical records for the presence of informed consent documents, being present during the consenting process as an impartial observer, and personally conducting the consent process.

In addition to safety monitoring activities and informed consent issues, individual RSAs have determined other important areas of focus for their specific institutions. Thus, some RSAs spend a great deal of their time interacting with research subjects, others work almost exclusively with investigators, still others act in more administrative capacities.

An account of progress at Children's Hospital
The following is an account of the progress I have experienced as the RSA for the Pediatric General Clinical Research Center of the University of Colorado Health Sciences Center at The Children's Hospital of Denver.

Like many RSAs, I came on board with a general job description and the expectation that I would determine what needed to be done and then set about doing it. The first task was bringing protocols into compliance with the DSMP requirement.

To maximize resources and minimize time-commitment, a cooperative data and safety monitoring board (DSMB) was organized around a set of core members that included a bioethicist, a clinician(s), a biostatistician, and a pharmacist.

Sharing DSMB members and their expertise across institutions is especially important because it decreases conflicts of interest and increases DSMB independence.

Education
We instituted a program for supervising independent studies for graduate students interested in research ethics. This program should provide a growing number of people who may be available to serve on IRBs, ethics committees, and DSMBs. It is also expected to increase the expertise and interest of the community in the bioethics of clinical research.

Building on the work of others, I produced a research subject education pamphlet which presents parents with appropriate questions to ask of investigators seeking their children's participation in research.

Large portions of RSA time have been devoted to bringing protocols into compliance with data- and safety-monitoring plans.

Summary
The RSA program is a novel federal approach to solving a pervasive problem. It extends beyond providing a regulatory blanket that covers the research enterprise into providing the salary support needed for implementation.

It addresses the problem from both a top-down and bottom-up perspective. The unifying effect of regulation is coupled with the practical advantage of local implementation.

While the RSA position was created by NCRR at a federal level for local GCRCs, it is being custom built from the ground up at each institution.

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"Sharing DSMB members and their expertise across institutions is especially important because it decreases conflicts of interest and increases DSMB independence."

Human subject database updated for 2002

Compilation consists of 294 projects, 68% of which were at DOE facilities. Dramatic increase results from adding epidemiological studies

The FY 2002 update of the DOE Human Subjects Research Database (HSRD) is now on the World Wide Web at http://www.eml.doe.gov/hsrd/. Initiated in 1994 and updated annually, the database contains information on research projects that involve human subjects and that were funded by the DOE, conducted at DOE facilities, or performed by DOE personnel.

The FY 2002 database consists of a total of 294 projects of which 68% were conducted at DOE facilities and 32% at non-DOE facilities (such as hospitals and universities). There are 46 reporting research facilities, 13 are DOE laboratories and 33 are non-DOE facilities.

1,534,123 human subjects

The funding from DOE that was directly associated with tasks or portions of projects involving the use of human subjects was about $49 million while funding from other federal and private sources at DOE facilities was about $13 million. A total of 1,534,123 human subjects were reported however about 99% are from records collected in registries, questionnaires, surveys and epidemiological studies.

Figure 1 presents trends in the number of reporting facilities, the funding that is directly associated with tasks or portions of projects involving the use of human subjects (in millions), the total number of human subjects (in thousands), and the number of projects reported. Most evident in these trends is the explosive increase in the number of human subjects reported after 1998.

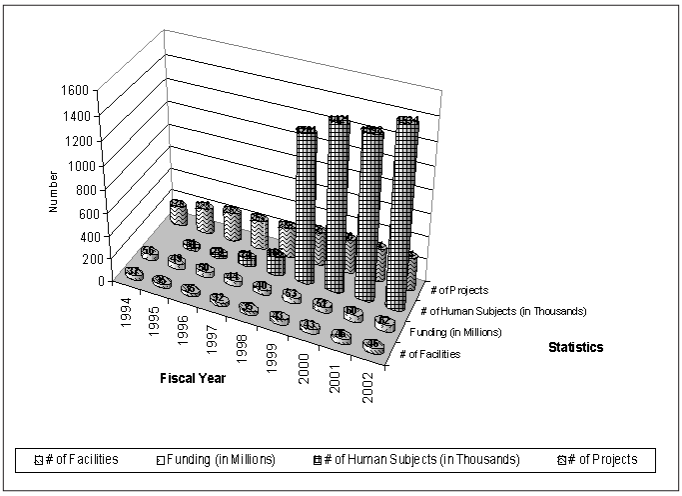

Fig. 1. Trends in the number of reporting facilities, funding, number of human subjects, and projects reported.

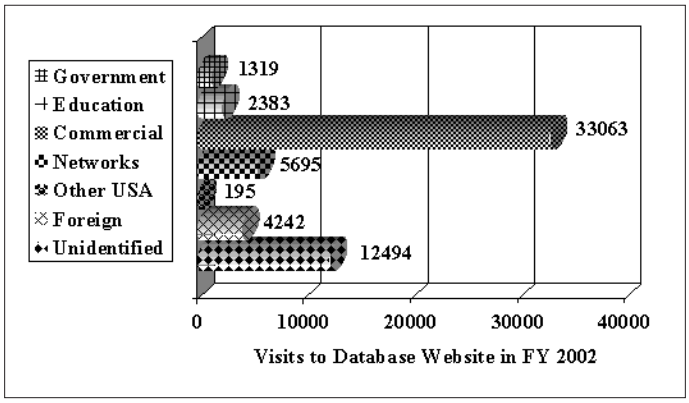

Fig. 2. Visits to the database in FY 2002 classified by visitor type.

Additional epidemiological studies

This dramatic increase resulted from the addition of large epidemiological studies from the Former Worker Projects and from the National Institute of Occupational Safety and Health.

Since these projects are beginning to terminate, it is expected that the number of subjects will begin to return to the pre-1999 levels. There was also a slight increase in the funding for human subjects research reported this year.

55,475 visits

Figure 2 presents the visits to the database in FY 2002 classified by visitor type. The total visits to the database website in FY02 was 55,475 (112,499 hits). The database receives the most hits from the commercial sector, but this largely consists of the general public accessing the site via internet providers such as AOL.com.

(From Richard Larsen, Ethel Jacob and Camille Marinetti, DOE Environmental Measurements Laboratory.)

Excellence: education role models in DOE

DOE Chicago Operations' Marcantonio goes above and beyond requirement

The benefits of IRB training are obvious for those directly involved in IRBs. Debra Marcantonio in DOE's Chicago operations office decided it may also be helpful to everyone involved in human subjects research.

Debra Marcantonio

In an internal memo sent to all DOE-Chicago human subjects research contacts, Marcantonio went above and beyond the letter of DOE's training requirements.

She said in the memo that although human subjects protection training was developed for researchers, IRB members and IRB staff, the benefits are widely applicable to others as well.

She recommended that each of the DOE-Chicago contacts that have active human subjects projects at their sites take the CITI Web-based training program provided by DOE. Δ

Los Alamos adopts tough training notification system

DOE's Human Subjects Program has welcomed a new training plan developed by Los Alamos National Laboratory (LANL) because it includes an expectation that more sitewide rigor and commitment be brought to protecting human subjects.

The plan created at LANL is designed to provide specific and timely information about the human subjects protection training that the site requires its researchers, managers, and staff to complete. To ensure that all employees are aware of the plan, each received an E-mail copy of it, along with a cover memo from the associate director of operations, James Holt.

Holt's memo gives dates by which training modules must be completed. It provides the information in a chart that shows what is required of each category of personnel and is accompanied by a memo from LANL's institutional official for the human subjects IRB.

Marilynn Thullen

The memo is also on the laboratory's Web page and has been publicized in its news bulletin.

The plan includes a training tracking program by which personnel will automatically be reminded of deadlines. It will also notify personnel when training requirements have not been fulfilled and emphatically states that when requirements are not fulfilled, research will be suspended.

The plan has generated an impressive response. The IRB has received many questions and requests for assistance, along with reports from employees who completed the training. Both DOE and the LANL IRB are pleased with the response received so far.

LANL IRB chair Laurie Wiggs and IRB administrator Marilynn Thullen say they believe the new system, along with expectations set by the laboratory's management, will make their oversight efforts dramatically easier. Δ (From Laurie Wiggs, chair, LANL IRB.)

Lawrence Livermore's entry for database: "Outstanding"

Lawrence Livermore National Laboratory's (LLNL) entry for the DOE human subjects research database is being cited as an outstanding model of coverage and thoroughness.

The database, maintained by Richard Larsen, at the Environmental Measurements Laboratory in New York City, contains abstract information on research projects that involve human subjects and that were funded by DOE, conducted at DOE facilities, or performed by DOE personnel.

⇛

Excellence: education role models in DOE

"Outstanding" entry

(Continued from page 13)

Larsen said LLNL and its new IRB administrator, Judith Lairsmith, "went beyond our required information in many cases and provided extra text about the research results/conclusion or about expected results.

"**The DOE sites** that conduct human subjects research are required to submit entries to this database yearly. It was nice to see a site put a little more work into their entry and at the same time provide the public with additional information."

The LLNL entry is at http://www.eml.doe.gov/HSRD/Hsr02/LLNL.htm.

The database (see related article, page 12) is at http://www.eml.doe.gov/hsrd/hsr02/hsr2002.cfm. ∆

ARENA certification for IRB professionals

The Council for Certification of IRB Professionals , an affiliate of the Applied Research Ethics National Association (ARENA), provides a certification program for professionals participating in and overseeing the daily activities associated with an IRB.

Since the first exam in October 2000, more than 425 people have earned the designation of Certified IRB Professional (CIP).

Examinations evaluate knowledge of ethical principles, historical events, regulatory requirements, and operational and functional issues relating to IRBs and human subjects protection programs.

About half of CIPs work in academic institutions. Others work in medical centers and for independent IRBs. CIPs are also found in industry, business, and the government, including the Veteran's Administration and military medicine. The majority of CIPs work with IRBs that review both biomedical and behavioral/social science research.

The certification process was developed, validated, and administered under contract with Professional Testing Corporation (PTC) in New York City. The validity and appropriateness of individual test questions continue to be authenticated by certified professionals.

PTC provides independent oversight and scoring of the tests, which are administered at least twice yearly at about 25 locations across the United States and Canada. Arrangements may also be made for special test sites, including overseas sites. Taking the exam costs $300 for ARENA members, $400 for nonmembers.

More about certification is at http://www.arena.org.

To obtain a candidate handbook, contact PTC directly at http://www.ptcny.com/.

(Marianne M. Elliott took office as ARENA's new president on January 1, succeeding Dan Nelson.) ∆

Web sites

HIPAA: Office of Civil rights Summary of the Health Insurance Portability and Accountability Act (HIPAA) privacy rule
Guidance on specific provisions of the regulation, including research rules is at:
http://www.hhs.gov/ocr/hipaa/privacy.html

Certification as an IRB professional
Information is at the ARENA Web site:
http://www.primr.org/arena.html

Certification testing
Information about how to prepare for certification testing is at the Professional Testing Corporation Web site: *http://www.ptcny.com/*

The consortium to examine clinical research ethics
http://csmeh.mc.duke.edu/cecrelndex.htm

Bioethics resources on the Web, from the National Institutes of Health
http://www.nih.gov/sigs/bioethics/index.html

Protecting Human Subjects

This newsletter is designed to facilitate communication among those involved in emerging bioethical issues and regulatory changes important to both DOE and the human subjects community.

DOE Human Subjects Program Manager
Susan L. Rose, Ph.D.

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This newsletter is available at no cost to anyone interested or involved in human subjects research at DOE. Please send name and complete address (printed or typed) to the address below. Please indicate whether information is to
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(3) remove name from mailing list.
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Meetings

AMERICAN SOCIETY OF LAW, MEDICINE AND ETHICS
September 12–13, 2003
For information, contact ASLME Annual Meeting, Dorothy Quincy Suite, 200 Berkeley Street, Boston, Massachusetts, or see http://aslme.org/conferences/index.php

SRA INTERNATIONAL ANNUAL MEETING
October 18–22, 2003
Pittsburg, PA.
For information, see http://www.srainternational.org/NewWeb/meetings/annualmeeting/03/posters/index.cfm

AMERICAN SOCIETY FOR BIOETHICS AND HUMANITIES
October 23–26, 2003
Wyndham Hotel, Montreal, Quebec Canada
This is a joint meeting of the ASBH and the Canadian Bioethics Society.
For information, http://www.asbh.org/annual_meeting/index.htm

OFFICE FOR HUMAN RESEARCH PROTECTIONS
OHRP sponsors a series of workshop on responsibilities of researchers, Institutional Review Boards (IRBs), and institutional officials for the protection of human subjects in research. The workshops are open to everyone with an interest in research involving human subjects. The meetings should be of special interest to those serving or about to begin serving as a member of an IRB. Issues discussed at these workshops are relevant to all other public health service agencies.
For information, including dates, see http://ohrp.osophs.dhhs.gov/wrkshp.htm

PRIM&R/ARENA ANNUAL IRB CONFERENCE
December 4–7, 2004
Washington, D.C.
For information, see http://www.primr.org/conferences.html

Past newsletters are available at
http://www.science.doe.gov/ober/humsubj/newslett.html

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