

DREW/MEHARRY/MOREHOUSE CONSORTIUM CANCER CENTER: AN APPROACH TO TARGETED RESEARCH IN MINORITY INSTITUTIONS

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This article describes the process by which three private minority medical schools planned and developed a consortium cancer research center focusing on the prevention of cancer in the African-American population. Several lessons were learned that may have relevance as minority schools search for ways to improve the health status of blacks. (*J Natl Med Assoc.* 1992;84:505-511.)

Key words • minority institutions • consortium
• African-Americans • cancer research

The Drew/Meharry/Morehouse Consortium Cancer Center is a collaborative cancer research center involving Drew University of Medicine and Science (Drew), Meharry Medical College (Meharry), and the Morehouse School of Medicine (Morehouse). The center was developed as a result of a commitment on the part of the three institutions to conduct research specifically targeted toward reducing the high rate of cancer in African Americans, and it was made possible by a responsive attitude on the part of the National Cancer Institute. This article describes the process by which the center was planned and how it developed during the first cycle of funding. While developing the center, several lessons were learned that may have relevance

for future research efforts aimed at improving the health status of blacks.

BACKGROUND

The decision to develop a joint cancer research center was part of a larger commitment on the part of the college presidents at Drew, Meharry, and Morehouse to place a high priority on research into health problems where there was excess mortality among blacks. The college presidents were in frequent communication with each other individually and as members of the Association of Minority Health Professions Schools. The member institutions of this association have recognized their special obligation to the black community, and it was appropriate that these institutions should conduct research specifically directed toward addressing the existing disparities in health status. This decision antedated the 1986 *Report of the Secretary's Task Force on Black and Minority Health*.¹

Once the decision to create a cancer research center was made, funding was sought. The logical place to turn for support was the National Institutes of Health, whose mission is to conduct research to improve the health of the nation. Among other things the presidents decided to focus on individual institutes. At the highest levels of the National Cancer Institute (NCI), there appeared to be a consensus that minority institutions could play an important role in helping the NCI to achieve its primary goals.

When the President's Cancer Panel met in Los Angeles in 1984, the problem of cancer among blacks in the Los Angeles area was highlighted.² After the panel meeting, the director of the NCI visited Drew to

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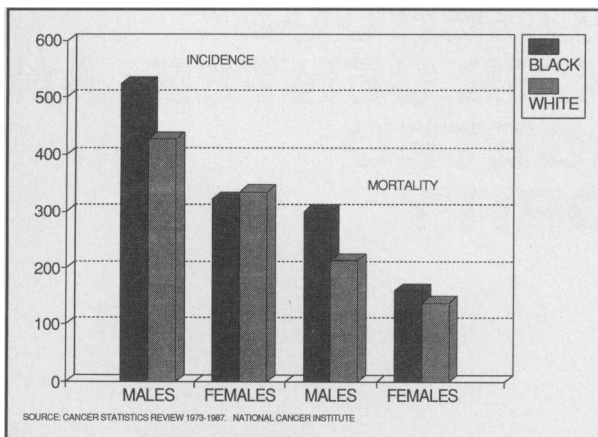


Figure 1. Cancer incidence and mortality rates, 1983-1987. Rates are per 100 000 population.

inspect the new research facilities that were under construction. During this visit, the idea of a consortium center was proposed. The director suggested outlining the proposal in a letter that would be discussed at the National Cancer Advisory Board. The response of the Board was encouraging, and this led to a meeting with the staff of the Division of Cancer Prevention and Control. Two issues were clarified at this meeting—the NCI would explore a mechanism to support the planning phase of a consortium center and the primary emphasis of such a center was to be on prevention and control.

Early in 1985, the Special Populations Branch of the Division of Cancer Prevention and Control presented the most recent statistics on cancer in minorities at a meeting involving black leaders. The excess mortality was striking and had been predicted in a presentation in 1967 at the centennial anniversary of Howard University.³ The institute meeting ended with the leaders setting a goal to reduce the gap in cancer mortality by the year 2000. This implied that the greatest emphasis would have to be placed on excess deaths. Focusing on blacks did not imply limiting research to that ethnic group, because one could understand the reasons for the excess only by exploring the general problem of the causes of ethnic differences in cancer rates. These considerations were later carried forward into the thinking that guided the development of the center.

As promised, the Division of Cancer Prevention and Control found a mechanism that was used to obtain support for the planning phase—a P20 grant proposal. However, the proposal could not be reviewed because there were no guidelines for review of a consortium

center support grant. These guidelines were issued in May 1985. The original proposal was revised and submitted for peer review. The guidelines had certain elements in common with the guidelines for any center support grant but other elements were unique. One of the differences was that the review committee was to be an ad hoc committee. There is always the risk that even an ad hoc committee could use the general center guidelines rather than the consortium guidelines but in this case, the committee clearly understood the new guidelines and enthusiastically endorsed the proposal. The 2-year planning effort was launched in June 1986.

CANCER IN BLACKS

The prevention and control of cancer was of special interest to these medical schools because of the contribution that cancer makes to excess deaths among blacks. According to the *Report of the Secretary's Task Force on Black and Minority Health*, cancer accounts for 16% of the excess deaths among black males and 10% among females.¹

Based on SEER data published by the National Cancer Institute, the incidence rate for cancer from 1983 to 1987 was 427.2 per 100 000 for white men and 523.2 for black men. For women, the cancer incidence rates was 334.5 for whites and 322.5 for blacks, showing a lower incidence rate for black women than for their white counterparts (Figure 1). These data emphasize the importance of focusing on black men.

The overall cancer mortality rates were 212.5 for white men and 137.6 for white women, and 299.7 for black men and 161 for black women. For black men, both the incidence and mortality rates are higher, while for black women the incidence is lower, but the mortality is higher than for their white counterparts. In this respect, the challenge is different for black men than for black women.

A consideration of the overall incidence and mortality is a first step, but in order to address the problem, it is necessary to examine the rates at specific sites. The ratios of the rates in blacks to the rates in whites give an indication of sites that could contribute to the excess. For example, the incidence and mortality rates for esophageal cancer in blacks are more than three times the rates in the white population. A list of 10 sites are given in the Table where the ratios of the incidence or mortality rates are greater than one. In the case of breast cancer, the incidence ratio is less than one (0.9) and the mortality ratio is greater than one (1.1), indicating that the incidence of breast cancer is slightly lower in blacks but the mortality is slightly higher.

TABLE. ESTIMATED 5-YEAR CANCER DEATHS, INCIDENCE RATIOS, AND MORTALITY RATIOS BY SELECTED SITES

Site of Cancer	Estimated Deaths (Over 5 Years)	Incidence Ratio	Mortality Ratio
Lung (men)	56 000	1.6	1.4
Prostate	19 000	1.5	2.2
Breast	17 000	0.9	1.1
Pancreas	12 000	1.6	1.4
Stomach	11 000	1.8	2.0
Esophagus	10 000	3.5	3.1
Oral cavity	6000	1.3	1.9
Multiple myeloma	5500	2.3	2.1
Cervix	5000	2.0	2.7
Liver	4000	1.8	1.7

These ratios must be taken into consideration along with the number of deaths that can be expected to occur over a period of time. In the Table, the estimated number of deaths over a 5-year period is rounded to the nearest hundred, and the sites are ordered in accordance with these expected numbers. These factors help to define the magnitude and severity of the problem but, in order to solve it, one must also be aware of the limitations of our present knowledge. Despite the large number of deaths from prostate cancer in blacks and the fact that the mortality is twice that for whites, we do not at present know much about the causes and prevention of this form of cancer. Such gaps in our knowledge help to define the agenda for prevention research.

THE PLANNING PHASE

The formal planning phase began with an attempt to reach consensus on the mission of the consortium center. This was an important step because the definition of goals and activities would be repeatedly examined in the light of the defined mission. The mission was derived from our understanding of the magnitude and urgency of the cancer problem and would set the boundaries of action. It had to be easily transmissible and consistent with what one would conclude from observing the activities of the center. It was not difficult to decide that our mission was to reduce the excess mortality from cancer in blacks but the exact wording was gradually refined so that the final version read "to conduct prevention research aimed at reducing the incidence and mortality from cancer in the black population."

Four specific goals for the 2-year planning period were identified but the overall strategic objective was to be able to compete successfully for core support by the end of that period. This would probably have been less difficult if any of the members of the group had had

previous cancer center experience, but as it was, all members of the team were learning together. The four goals were:

- to develop an information system that would enable us to determine what progress was being made in the reduction of cancer among African Americans in the immediate locations of the three institutions,
- to develop a fiscal and administrative structure that would permit effective functioning of the consortium,
- to achieve a level of funded research projects that would qualify the center for core support from the NCI, and
- to develop a 5-year plan that would serve to guide the long-range development of the center.

There was specific interest in being able to monitor the trends in incidence, mortality, and survival among blacks compared with other groups. This proved to be a different challenge at each of the sites. In southern California, the Cancer Surveillance Program at the University of Southern California became the source of incidence data for Los Angeles. In Atlanta, a link was established with the SEER program at Emory University for incidence data in the Atlanta area. Nashville did not have a population registry during this phase of center activities but mortality data were obtained from the Health Department in an ongoing arrangement. It was decided that the consortium center would use available data from these three sources to form its own database, which would be maintained for the purpose of following trends.⁴ The information system was maintained at Drew with all sites having electronic access through a wide area network.

The fiscal and administrative structure of the consortium had to be such as to permit persons at different institutions operating under different administrative settings to function as a single unit. Some of these

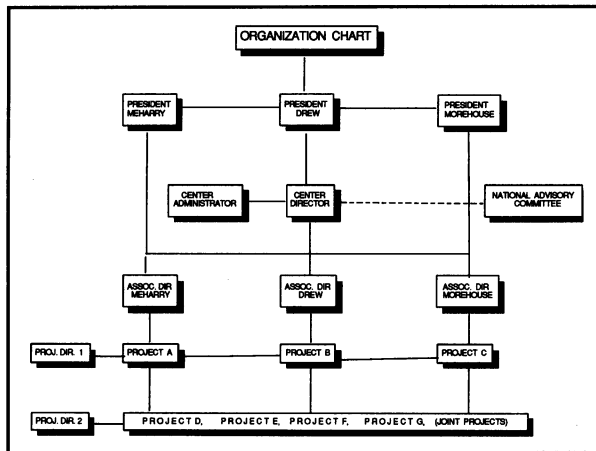


Figure 2. Organizational chart for the Drew/Meharry/Morehouse Consortium Cancer Center.

arrangements were outlined in the consortium agreement under which the institutions operated. Others had to be specified in an administrative manual. Building an effective communication system was also a part of this goal. Many of the arrangements were developed at Drew, the lead institution, in consultation with the other members of the consortium. The development of a wide area network was one element of a communication system that included electronic mail and telephone conferences. Planning conferences were held in rotation at the three sites.

Being eligible for core support required a minimum level of \$300 000 of peer-reviewed funded research projects. Starting from zero, the level of funding was reached and exceeded during the 2-year planning period, largely because the three sites were able to respond successfully to initiatives from the NCI that were targeted to minority populations, but it was also the result of a carefully planned strategy. In addition to targeting certain cancer sites and the associated risk factors, the three institutions are uniquely situated to study and develop appropriate techniques for implementing prevention programs in minority populations. The consortium institutions are themselves models of cultural, ethnic, and professional diversity serving a wide spectrum of ethnic groups. Two special projects were started during the planning phase, one funded by the Office of Minority Health and the American Cancer Society and another funded by the Kaiser Family Foundation.⁵

Another challenge to the developing center was to understand the underlying reasons for ethnic differences in cancer incidence and mortality. The most

common explanation for such differences is a difference in socioeconomic status leading to differences in access, but this certainly cannot explain the generally lower rate of cancer in the Latino population. This has sparked a special line of investigation into what the center calls social epidemiology, which is an attempt to explore the contribution of socioeconomic and socio-cultural factors to the difference in cancer rates of different ethnic groups.

A long-range plan for the center was developed by the end of the planning period, largely as a result of the planning sessions of the executive committee. The development of the center was not entirely one of planned growth. Planning did play a major role, but what actually happened was also the result of responding to chance opportunities and accepting the advice of a strongly supportive national advisory committee. It was originally planned to develop programs along the areas of programmatic interest delineated by the NCI but these programs did not develop as planned, largely because the necessary depth of resources were not present either in the individual institutions or collectively. There were just not enough persons who could commit the research time to implement the most desirable plan. This lack of resources is common to all three institutions and continues to be the greatest barrier to achieving the highest level of productivity and competence in research.

The planned amount of peer-reviewed research was achieved during the planning phase without the development of joint projects among the three institutions. In retrospect, this may have been partly the result of the center's organization (Figure 2). The center follows a matrix organization, which is difficult in a single institution and even more difficult in a consortium. The center director was located at the lead institution and was the principal investigator of the planning grant. During the first part of the planning grant, the director was the president of the lead institution, and the presidents of the other two institutions were co-principal investigators. Associate directors were located at each institution, and an administrator was located at the lead institution. The director, associate directors, and the administrator comprised the executive committee. The associate director at each site reported to the director of the center and the president of the respective institution. At each site, the associate director was charged with implementing the mission and goals of the center.

Although programmatic areas were conceptualized, there were initially no program directors, and there were

too few people at that time to avoid duplication. As a result, site development took priority over program development. It is possible that program development might have been stronger if program directors were identified first and given consortium-wide responsibility for program development. It is hard to tell since, in the case of a consortium, both are necessary. The administrator of the center played a very important role during the planning phase, performing both administrative duties and research and, in the case of a consortium, the responsibilities include assuring compliance with the consortium agreement established with each institution.

The absence of interinstitutional projects clearly understated the amount of interinstitutional collaboration that occurred during the planning phase. Attempts were made to develop joint projects but such projects were not as cost-competitive because of additional administrative costs. By the end of the planning phase, the most important result of the consortium effort was that all three institutions were involved in prevention research where none had been so involved previously. It is doubtful that this research would have been achieved without the formation of the consortium, which served to mobilize the three institutions around a common cause.

Application for core support was delayed 4 months beyond the original plan, but in retrospect, the 2-year planning phase was overly ambitious and reflected our own ignorance about what was involved in developing a cancer center. By 1988, we had developed the essential characteristics for core support, and the proposal for core support was approved and funded in October 1988.

THE FIRST CYCLE OF CORE SUPPORT

This cycle brought new challenges and some new priorities. It was necessary to strengthen the primary and secondary prevention research activities and to continue the epidemiological studies, but it was also planned to initiate clinical trials and behavioral research. There were considerable internal and external pressures to develop joint projects. In addition, the center would have to prepare for a planned change in leadership. Meharry assumed leadership for developing the clinical trials program. The importance of this activity stems from the disproportionately small number of blacks who are currently enrolled in clinical trials and the need to increase the number of blacks who receive state-of-the-art treatment.

In developing this program, Meharry was strongly

supported by the cancer centers at the University of Alabama and Duke University. Meharry was the first to enroll patients, and it also laid the foundation for the other two components, in the manner that is expected of a consortium.

The question of involvement in clinical trials requires special sensitivity in relating to the black community where there is often a strong suspicion of being used, in the worst sense of the term, purely for experimental purposes. Unless there is a feeling of trust, the idea of being placed in a trial is often not welcomed. This must also be taken in the context that minorities are often treated with a lack of respect in their interactions with the dominant segment of society. In many instances, blacks are still guided by the negative experiences of their parents and grandparents. The perceived lack of respect and the feeling on the part of the patient that the researcher is more concerned with the results of the research than the welfare of the patient will explain some of the reluctance to participate in trials. Informed consent may be no consent at all if the wording is above the reading level of the patient and, even when the words are clear, many otherwise informed patients may not really understand that participation in the trial offers a better chance of survival than no participation.

Behavioral research grew during this cycle and is largely based on the research funding from the tobacco tax in California. Understanding how to effect behavior change in the black population offers greater hope for improvement in cancer rates than understanding the effects of low socioeconomic status. This kind of research is therefore likely to have a special and continuing role in the center.

During this cycle, the center also assumed a leading role for the National Black Leadership Initiative on Cancer. This is an advocacy rather than a research program but the research base serves to add legitimacy to the advocacy effort and the advocacy contributes to the prevention research activities of the center. Assuming such responsibility for this national program was administratively more time consuming than was initially anticipated.

The pressure for joint projects was understandable. To most people, the concept of a consortium implied the conduction of joint projects. In fact, the consortium could be equally justified if each institution were emphasizing different but complementary aspects of the same problem and simultaneously contributing toward a reduction in the cancer rates in blacks. The whole would still be greater than the sum of the parts. The consortium sought to do both independent and joint

projects. During the first year of the first cycle, a joint contract was started involving both Meharry and Morehouse. All three sites had participated in the planning but, to reduce cost and remain competitive, one component was eliminated from the final offer. The contract focuses on historically black colleges as a resource in cancer prevention.

A change in leadership had been originally planned for the end of this cycle but the change occurred a year earlier than originally planned. The established process involved a recommendation by the executive committee and a decision by the three presidents. The executive committee recommended the appointment of the retiring dean of the school of medicine at Meharry. This meant that the leadership of the center would be located at other than the lead institution. The feasibility of this arrangement was the subject of considerable debate, but the presidents chose the individual they considered most qualified to fill the position of director, regardless of site. The fiscal and administrative headquarters remained at Drew. It is felt that the communication network established in the earlier stage of development will make it possible to maintain the unity of the consortium regardless of where the director is located. At the same time, it demonstrates that institutional barriers will not stand in the way of what is considered best for the consortium and that no component institution would seek to wrest the institutional leadership away from another member of the consortium.

LESSONS LEARNED

Several lessons were learned in the course of the development of the center. The most important lessons were related to cooperation, commitment, sharing of control, training, communications, collaboration, and timing.

Cooperation

The success of the consortium depended in a large measure on the willingness of the component institutions to cooperate with each other and with the goals of the consortium. This was much less of a problem than would ordinarily be anticipated. The major explanation appears to be that all three of the institutions shared a common purpose and great willingness to contribute toward the improvement of the health of the African-American population. This is a natural consequence of the origins of the institutions. Cooperation did not completely eliminate competition, except against each other, and some competition is healthy. It was as if each institution had to demonstrate that it could successfully

compete on its own merits before it could truly earn full membership in the consortium.

Commitment

The continuing commitment of the three presidents to the consortium was a key element in its development but commitment at another level seems necessary for growth. A critical mass of investigators who can commit a substantial portion of their time and effort to research is required. This can be a major problem in institutions that are already desperately trying to do too much with too little.

Sharing Control

Closely associated with the concept of cooperation is the willingness to share control. The control of the center was shared among the director and an associate director at each of the three sites. In such a situation, it is important for the control to be truly shared and for the director to be seen as truly neutral. The most important mechanism for sharing control was in the executive committee where decisions were made jointly. The most critical test for the sharing of control came with the selection of a director to replace the first director who was retiring. When the presidents of the three institutions chose the second director from Meharry, that decision demonstrated the willingness to share control even though Drew remained the lead institution for the consortium grant. This arrangement was possible only because an adequate administrative infrastructure had been established by the center administrator.

Training

Experience has made it quite clear that, under present circumstances, training in prevention research must be given a higher priority than was originally planned. It may be necessary to recruit persons active in other fields of research so that they can address the most pressing problems facing the black community, but it may not be possible for such persons to take advantage of the opportunities offered at the NCI by taking a year or more of training. Short and intensive courses on site are necessary to acquire the additional skills.

Communication

Frequent and easy communication is an important element in any consortium and can in part substitute for the great distances between institutions. It was planned quite early to use modern technology to facilitate the process of communication and to supplement the

regular face-to-face meetings, but what had not been fully anticipated was the difficulty that many people had adapting to such forms of communication. Making use of the latest technology is not necessarily assured by making the technology available. One has to be willing to learn to use it.

Collaboration

Collaboration among the component institutions was easily achieved even though joint projects were slow in developing. However, it was also hoped that there would be stronger collaboration with other nearby centers in majority institutions. Personal collaboration was more easily achieved than institutional collaboration. This is perhaps the natural course of events. The majority institutions are not quite sure what the minority institutions have to offer and as yet appear to have little respect for the contribution that minority institutions can make, especially in view of the relative poverty of resources.

Timing

The role that timing played in the development of the consortium cannot be overlooked. June Caldwell of the National Institutes of Health had been promoting the concept of a research consortium among the black institutions at that time. The Association of Minority Health Professions School was already an active consortium, although not formed for the purposes of research. Dr DeVita was director of NCI at the time and was willing to present the concept to the National Cancer Advisory Board, which was receptive. The NCI was developing the goals for the year 2000 at this time.⁶ The Division of Cancer Prevention and Control under Dr Greenwald and the Special Populations Branch under Dr Baquet were gathering momentum at that time, and research projects to reduce cancer in minority populations were being strongly promoted. The division had recently published its seminal paper on

prevention research.⁷ There was a perfect confluence of circumstances that made it timely to proceed and to capitalize on such opportunities.

SUMMARY

The development of the Drew/Meharry/Morehouse Consortium Cancer Center has demonstrated that minority institutions can work collaboratively to focus research on the critical health problems of African Americans. These institutions are the only national resource committed to this goal, and the common purpose that they share make it possible for them to cooperate with rather than to compete against each other. The Cancer Consortium model has been modified and used extensively in the development of the AIDS consortium involving all members of the Association of Minority Health Professions Schools. This mechanism can be used in other areas to accelerate the improvement of the health of our people.

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