

UNIVERSITY OF WASHINGTON SCHOOL OF MEDICINE



26 April, 2002

Department of Medical Education

Robert Layne, M.A., Assistant Director of Community Programs
Worcester Pipeline Collaborative
University of Massachusetts Medical School
26 Queen Street
Jacques Building, Room 311
Worcester, MA 01610

E-312 Health Sciences Center
Box 357240
Seattle, WA 98195-7240
Phone: (206) 543-2259
Fax: (206) 543-3461

Dear Mr. Layne:

Greetings from Seattle. We wanted to thank you rather belatedly for your hospitality and the opportunity to meet with you, your collaborators, and participants in the Worcester Pipeline Collaborative (WPC) programs during our visit of May 16-18, 2001. Recognizing that our short visit gave us only a brief exposure to your program and that circumstances may have changed since then, we submit our observations with the understanding that they are necessarily based on a limited view and should be interpreted accordingly.

The following comments are based wholly on the discussions that occurred with you and WPC participants during our visit, focusing on the following themes:

- conditions for WPC's success,
- contributions of specific personalities
- relations between partners,
- community involvement,
- achievements,
- institutionalization, and
- potential areas for development.

To summarize briefly, we observed several positive conditions that led to the successful establishment of the WPC including, but not limited to, the following:

- A unique convergence of events, personalities, and interests,
- Enthusiastic individuals committed to finding ways they could help each other,
- Open, extensive communication between partners, both formally and informally,
- The commitment of both material and personnel resources to create innovative programs,
- Flexibility to respond quickly to favorable opportunities and to solve problems when necessary.

We wish you continued success and progress in working with your partners and using the WPC's solid foundation to achieve the goals of increased minority representation in health careers.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jan D. Carline".

Jan D Carline, Ph.D.

Cc: Aaron Lazare, M.D., Dean and Principal Investigator
Deborah Harmon-Hines, Ph.D., Co Principal Investigator
James Hamos, Ph.D.

HPPI Assessment Site Visit to the Worcester Pipeline Collaborative (May 2001)

Conditions for WPC's Success

The Worcester Pipeline Collaborative has benefited from a unique convergence of community needs, institutional priorities, and key leaders able to seize the moment and capitalize on opportunities. These key events and forces have included:

- **The need for a better fit between required job skills and workforce training:** The expanding Worcester healthcare system needed more skilled employees than it could find among the local population. The need for trained health workers had brought attention to the educational issues that the WPC was created to address. There was a pre-existing consciousness of the needs in Worcester that made the HPPI initiative seem like a natural fit.
- **The University of Massachusetts Medical Center (UMMC) and Medical School's (UMMS) priorities in education, community outreach, and diversity:** The Chancellor and other key personnel had embarked on numerous initiatives that paved the way for the WPC, creating the Office of Science Education in 1993 to involve medical school faculty, staff, and students in K-12 education; and sponsoring diversity training and events to overcome its elitist image and make UMMC a friendlier place for minorities. UMMS also had a ready-made educational outreach arm in the form of its recently incorporated Regional Science Resource Center
- **State education reform and school district restructuring:** WPC came into existence at a time when resources were being put into state-mandated standards and testing and Worcester Public Schools were involved in a system-wide restructuring. The superintendent instituted partnerships development between public schools and colleges. This included the founding of the relationship between the district's North Quadrant and University of Massachusetts Medical School (UMMS). As a component of school reformation, North High School (NHS) eliminated the less rigorous general track and implemented "block" scheduling which provided more flexibility for activities such as internships, and established professional pathways programs supported through the partnership. Although the medical center and NHS's Health Science Academy started working together in 1986, several partners told us that collaboration did not really gain momentum the advent of the WPC in 1996. It is noteworthy that the relationship goes beyond the Health Science Academy, the medical center provides all of NHS's professional pathways internships. At the time of our visit, the WPC was described as the "cornerstone" of recent 10-year accreditation review, impressing many on the review team.
- **The "right people" in place from top to bottom:** The school superintendent spoke at the beginning of our visit about a special convergence of personalities. This sentiment was echoed by others in a variety of ways at all levels of the partnership, from the openness of enthusiastic and talented school personnel interested in science education innovation, to the expertise in education and collegial relations at Assumption College, to the dedication of top UMMS leadership to WPC initiatives.
- **Clear goals but flexible strategies:** WPC had a clear vision of its aims and programs, but also has been able to respond and adapt to change. This included finding replacements for partners that were unable to sustain commitment and attracting new partners. WPC has proven itself able to enlist resources and avoid rigidity by cultivating alternatives rather than exclusive dependence on a single relationship or strategy. One principal spoke of the need for a certain amount of "subversiveness" for the kinds of new programs that a partnership entails in order to "work [around] the system."

Contributions of Specific Personalities

The talent and dedication of all of the people who make up the WPC impressed us greatly. Although we could easily cite a much longer list of important collaborators, for the sake of brevity we limit ourselves here to discussing the contributions of the three school principals we met:

- Grafton Street Elementary School Principal Frances Arena's strong commitment to parents and non-native speakers of English was evident in the enthusiasm of the diverse participants in the Parent Involvement Project.
- Roosevelt School Principal Mary Murchison, with a degree in chemistry, demonstrated an unusual openness to work with Assumption College and Sandy Mayrand to improve math and science instruction in creative ways.
- North High School Principal Betsy Drake has embraced change and the opportunities that the relationship with the WPC could provide, setting high expectation and holding her school accountable.

All three principals were enthusiastic, effective, committed to improvement, and open to innovation rather than taking a rigid or territorial stance about their schools. They were exemplary of the spirit that characterized WPC's staff and other partners as well.

Relations between Partners

We heard reports of numerous examples of the collaborative spirit that imbues relationships between partners. Lines of communication and cooperation are multi-directional:

- WPC governance: Steering and Executive Committee meetings revolve through the sites, fostering a sense of equality among partners.
- Significant resources allocated to services and activities: Significant contributions of resources are allocated to supporting staff who coordinate student activities, such as internships and science enrichment are supplied by the medical school and medical institutions themselves. This compensation of personnel, rather than relying strictly on volunteer participation or solely on grant support, is one way that WPC communicates that it values its partners' contributions.
- WPC input into public school staffing decisions: WPC staff members sit on interview committees for new school staff. This access is one way to encourage curriculum continuity through the grades.
- Faculty development: WPC worked to achieve buy-in at all levels of the school system, rather than working only with teachers or only from above. Principals agreed to release time for teacher development activities, and schools shared staff for coverage of teachers involved in training. The teachers also felt they were part of the decision-making process, that they too had ownership. "Leadership teachers" were responsible for coordinating a school's participation. It was felt that working "on the ground" with teachers and principals, in addition to securing commitments from above, had helped establish school ownership.
- Integration of the community college: Quinsigamond Community College (QCC) appeared to be an integral piece of the pipeline in Worcester, compared to other sites we have visited. QCC showed responsiveness to community needs by recognizing its necessary role as the main provider of health career training to fill positions in the UMMC system. Likewise, WPC staff recognized that underrepresented minorities do not always pursue four-year or advanced professional degrees, and that QCC's two-year programs fulfilled a critical part of the mission to increase the presence of minorities in the health professions. QCC leaders indicated their satisfaction with WPC by commenting that they would like to create a similar kind of pipeline for technology careers.
- Collaboration across the pipeline involving multiple institutions: Undergraduate, graduate, and medical students mentored or instructed public school students from elementary to high school. High school students participated in internships sponsored by the UMMC system where they could

learn from a variety of health care professionals. Teachers learned from Assumption College students doing science in their classrooms, while Assumption students were paired with UMMC mentors in the "Visiting Scientist Program." A North High School teacher was teaching a 7th grade accelerated science course at Worcester East Middle School (WMES). In these and other ways, partner institutions appeared to freely share their resources with one another to create new learning opportunities for all.

Community Involvement

There is a baseline expectation at UMMS that senior leaders will engage with the community. The UMMS has incorporated the support of community economic growth and K-12 science education into its mission statement, a strong sign of commitment to the Worcester community. Programs were designed to bring community members onto the UMMS campus. A case in point was the medical school's hosting of the science fair, generating strong enthusiasm among children and parents. WPC staff spoke of their "insidious" presence that had become expected at community meetings and events—the need to become a part of the fabric and build relationships that did not always exist. Project staff spoke of the size advantage of Worcester as a community of "manageable" scale, small enough to allow for personal and informal connections between staff and community institutions.

One of the main difficulties encountered in working with community organizations was their instability. Project staff reported that most community organizations mentioned in the original grant had experienced multiple changes in leadership and had been unable to sustain any strong ongoing program (rather, WPC had perhaps contributed more stability to the community organizations than vice versa).

A important community linkage in the partnership was Plumley Village. We highlight Plumley Village here because it is a unique type of community organization that has proven to be extremely valuable to the WPC as a strong community organization:

- Plumley Village Community Builders had established several educational programs, such as a homework center, and science, reading, and math clubs, prior to its involvement with WPC. Plumley Village staff members were also involved in monitoring academic performance and activities, helping students with school counseling, job finding, and career counseling. The staff felt that these experiences would prepare students for success at WEMS and NHS. In addition, case managers were reaching out to parents, looking at families as units rather than focusing only on individuals in programs. The Plumley Village's management company was trying to replicate these successful non-profit programs in its Springfield residential community.
- Community Builders staff valued inclusion in decision-making bodies such as the WEMS council and the WPC Executive Committee. These memberships provided access to important resources and information through helpful relationships with principals and other school leaders. For example, Community Builders staff received student records, lists of seniors living in Plumley to target with scholarship information, and resources for the science club and summer program. Staff noted the importance of feeling connected to the larger enterprise.
- Being residential, Plumley Village gave WPC the opportunity to build an ongoing relationship with a coherent community of a manageable scale to work on common goals.

Achievements

It is difficult to assess precisely what WPC has achieved through its own unique efforts. WPC came on the scene at the same time as other major changes were occurring, such as the school restructuring in response to the Education Reform Act of 1993 and the "High Schools That Work" program. The tight coordination and complementary between these processes seems to have made for a win-win situation

where credit for successes can and should be shared. The fact that participants gave credit to WPC is once again evidence for a truly successful, functioning partnership, which is perhaps what matters most. Listed below are some of the accomplishments of the WPC and its partners that we observed or were reported to us:

- Parent involvement: Grafton Street Elementary School's Parent Involvement Project impressed us with its enthusiastic staff and involved parents, particularly for its success in reaching out to non-English speakers.
- Student experiences: North High School students spoke highly of their internships. They felt that the programs had taught them professional work ethics, helped them with career choices, made school more interesting, motivated them to study harder, and had given them a head start into college and getting a job. They felt respected by teachers at NHS and supported in furthering their education. As a group, more senior NHS health pathway students reported having an interest in health careers after being in the pathway than before. They felt that all their health courses had helped them prepare for the advanced placement exam they had taken the day before our visit.
- Student outcomes: Since the establishment of WPC a variety of positive student outcomes had occurred at NHS. Attendance had increased, the dropout rate decreased, academic performance and tests scores had improved, student participation in community service and internships had increased, and more had plans for post-graduate education. The school had also been designated a "Pacesetter" site in the High Schools That Work program.
- Teacher outcomes: We saw more evidence that teachers were involved in and committed to professional development activities to improve curricula and instruction than at other sites we have visited.

Institutionalization

Perhaps the greatest achievement of the WPC is the extent to which it has become established throughout the partner institutions. Besides the important financial commitments of partners, other signs of institutionalization we observed included the following:

- The principal of NHS stated that the missions of NHS and WPC were "the same," and that the pipeline and restructuring process were completely parallel. Indeed, the new physical structure of the high school was planned to incorporate office space for WPC.
- The superintendent noted that the term "pipeline" was part of the Worcester Public Schools vocabulary now. We observed this firsthand when a student made reference to the pipeline: this is the only site we have visited where everyone spoke about "the pipeline" or WPC. One teacher spoke of a clear "before" and "after" 1996, the first year of the grant. The superintendent also commented that people naturally think about K-16 and beyond now. Both the WPC as an organization and the pipeline as a concept seemed firmly established in people's minds.
- Having met its stated minority enrollment goals for the medical school, UMMS has been able to focus its energies on trying to improve the quality of life and education in the community more generally through initiatives such as the WPC. The direct lines of communication—as opposed to layers of bureaucratic separation—between project staff and the chancellor also underscored the importance of WPC activities. The baseline expectation of community involvement in the medical school mentioned previously is further evidence of UMMS's institutional commitment to the WPC and similar initiatives.
- Partners stepped in to fund the WPC when the original HPPI grant funds ran out. Besides the planned space for WPC in NHS, Roosevelt School's new building design also incorporated space to support improved science instruction. The partners have contributed significant resources to give WPC a tangible, material presence.

Areas for development

- Post-high school outcomes: QCC representatives noted that very few students were academically ready upon admission to QCC to enter health programs directly. QCC leaders could not tell us how NHS graduates fared in relation to other students, but most students entering QCC must complete basic coursework in the general program before they can enter the health programs. Clearly, NHS had experienced significant and commendable academic gains, but it would be helpful to begin monitoring student performance post-high school in order to determine what kinds of academic improvements are still needed. Given that local colleges are part of the partnership, tracking students who enter those programs would seem to be a reasonable strategy for obtaining this type of data.
- Leaks in the pipeline: The superintendent championed the idea that this program was for everyone, not just the cream of the crop. The "lift all boats" philosophy, rather than exclusive focus on the most promising students, has clearly been one of WPC's greatest strengths. WPC may now have reached a level of maturity and stability that it can begin to look at targeting specific populations. For example, QCC representatives mentioned the need for an alternative pipeline for those who drop out of high school. WPC may be ready to further fine-tune its approach to ensure that it addresses the special needs of students at risk as well as those with exceptional potential.

Summary

We learned several lessons from our visit to Worcester. The WPC's success appears to have been a result of critical factors including but not limited to the following:

- A unique convergence of events, personalities, and interests,
- Enthusiastic individuals committed to finding ways they could help each other,
- Open, extensive communication between partners, both formally and informally,
- The commitment of both material and personnel resources to create innovative programs,
- Flexibility to respond quickly to favorable opportunities and to solve problems when necessary.

In short, it was obvious that those involved in the partnership trusted each other, communicated with each other frequently, and indeed, *liked* each other. This mutual high regard, combined with consensus on important goals, was backed up by an essential commitment from the top leadership of the partner organizations. The Worcester Pipeline Collaborative has benefited from having the right people, at the right time, doing the right thing.