The New CUNY Community College
&
The Health Professions:
Pathways, Partnerships & Possibilities

A White Paper
February, 2010

CUNY Office of Academic Affairs
New Community College Initiative
101 West 31st Street, 12th Floor
New York, NY 10001
212-652-2078
The New Community College Initiative

CUNY’s first new community college since 1972

Almost two years ago Chancellor Matthew Goldstein charged Senior University Dean for Academic Affairs John Mogulescu with developing an alternative model for community college education. The goal of opening a new community college at CUNY is to determine whether a differently designed community college model can increase degree attainment for community college students. The new college will, of course, ease some of the enrollment growth challenges at CUNY, but the University recognizes the importance of examining whether there are institutional factors that hinder the advancement and achievement of CUNY’s community college students—the majority of whom are from low-income and minority populations.

The first phase of the development process was exploratory in nature and resulted in the document, A New Community College Concept Paper. The concept paper is best described as a document that synthesizes the ideas and experiences of CUNY faculty and staff and of educators across the nation, historical and recent research on community college programs and performance, data from CUNY’s Office of Institutional Research, and advice from the project’s Advisory Board of nationally recognized educational professionals.

In the second phase various Working Committees and a planning team—with grants from the Bill & Melinda Gates Foundation and the Carnegie Corporation of New York—are developing the ideas in the Concept Paper into the design for a college that will accept its first cohort of students in 2012. With a generous planning grant from The Josiah Macy, Jr. Foundation, a meeting of prominent professionals and academics was organized on November 16, 2009 to explore the role a new model of community college education can play in providing pathways to health-related careers and in engaging its students in public health issues. This white paper describes that meeting in more detail and the issues and recommendations that emerged that day.

For more information about the New Community College Initiative and the November 16, 2009 meeting, visit our Web site at: www.cuny.edu/ncc.

Our thanks to Dr. Marc Nivet, the Chief Operating Officer of the Josiah Macy, Jr. Foundation, whose idea and support made the meeting possible and Stephanie Benjamin, an NCC planning consultant, whose extraordinary work made the day such a success and who authored this white paper.
THE NEW COMMUNITY COLLEGE AND THE HEALTH PROFESSIONS: PATHWAYS, PARTNERSHIPS AND POSSIBILITIES

In spring 2008, Matthew Goldstein, Chancellor of The City University of New York, initiated a process for the establishment of the first new CUNY community college in 37 years. Driving this effort was the projected growth in enrollment at CUNY’s six community colleges and concern to address the persistent challenges of improving retention and graduation rates and preparing students for further study or employment. A Planning Team was organized to serve as a coordinating entity, responsible for consulting with the larger CUNY community and education professionals across the nation and reviewing relevant research. A Steering Committee of Central Office administrators and community college leaders was established to guide the planning process. A concept paper, issued in August 2008, concluded the first, exploratory, phase of planning, and described how a community college, structured differently, might facilitate achievement of the Chancellor’s goals. In the second phase of planning the educational model is being further developed and refined.

The New Community College (NCC) Initiative has generated considerable interest locally and nationally. On November 16, 2009, with the support of the Josiah Macy, Jr. Foundation, the NCC Planning Team organized a meeting to consider the role that an innovative model of community college education might play in providing pathways to careers in medicine, public health and nursing, and in engaging its students in public health issues.

MEETING PARTICIPANTS

Approximately 90 invited guests, plus the New Community College Planning Team, participated in the meeting. Guests included faculty and administrators from CUNY as well as from other colleges, universities and professional schools in New York, California, Ohio, Maryland and Pennsylvania. Also represented were the New York City Department of Education, a variety of programs that work with high school students, and organizations from the metropolitan area that deal with health issues and health workers. The intent was to have professionals from a wide range of disciplines and organizations bring to bear their various perspectives on the role of community colleges, in particular CUNY’s new community college, in educating students for and about the health professions. (For the list of guests, see below following p. 18.)

Following a panel discussion (Facing the Issues), participants were assigned to one of five issue-specific working groups in the morning and one of three profession-specific working groups in the afternoon. Each group was led by a facilitator and provided with a set of questions to initiate discussion. Ideas were shared in plenary sessions throughout the day.
EDUCATING A HEALTH WORKFORCE

According to an article in the NY Times (10/20/09), “Almost 40% of the nation’s 18-24 year-olds in 2008 were enrolled in college, a record number, according to a Pew Research Center report.” This rise in college attendance has been driven largely by a surge, nationwide and at CUNY, in students attending community colleges. These students, especially in urban areas and in public institutions, are more likely to be minorities and to come from lower income families and underserved communities. All too often neither they nor their communities have been well served with respect to education or health care.

These issues cannot be separated. Making education work for all will contribute to healthier communities. It will also contribute a great deal to producing a representative population of health care professionals – a health workforce that can better relate to the nation’s increasingly diverse populations. As one participant expressed it, “We are not looking for more minorities in order to help minorities, but looking to educate a more representative population of students from our full demographic range…. We’re doing it to help the whole country use all its demographic resources.”

The distinctive demographics of public and urban community colleges make them pivotal to this effort. The issue is, however, complex. Many community college students are less well-prepared academically (and less well-off economically) than students their age who enter public 4 year colleges. The path to medicine, public health or nursing is demanding, and expensive, and the community college student often faces many obstacles. At the meeting, the question of how to help these students thrive and give them the confidence to tackle difficult pre-professional programs was examined by participants with a wide range of expertise and experience. The content of this paper is a summation of their ideas.

DISCUSSION AND RECOMMENDATIONS: GENERAL THEMES

Many recommendations that emerged from the meeting would benefit all students in the new community college as well as those interested in careers in medicine, public health or nursing. Our experts considered the probable demographics of the student body of an urban community college and the issues that would likely be faced in helping these students achieve their goals. Quite a few of the recommendations are already considered best practices by those most familiar with these challenges.

A Critical Partnership

A pervasive theme in the working groups and the plenary sessions was the need for the NCC to reach out to high schools, middle schools and even elementary schools, to help lay a foundation for skills acquisition and career exploration. It was emphasized that students who complete middle school without critical basic skills encounter increasing frustration that will impact their performance in high school and their ability to think of themselves as professionals.
While there is a special need to reach back to the earlier grades, it is the high schools and colleges that must take responsibility for establishing the early pathways to careers in the health professions. While it is reasonable to be concerned with preparing students for New York State’s Regents exam, such preparation is limited if it takes place to the detriment of ensuring real college readiness.

Regular dialogue should be established between college and secondary level faculty to articulate academic expectations and requirements for college, in general, and for the health care fields in particular. The City University has invested substantial resources in preparatory programs for public school students and members of the NCC Planning Team have been very involved in those programs. Participants emphasized the importance of building on those structures now in place and developing new ones as well between the NCC and the Department of Education through which college faculty and high school faculty can work together. The NCC could also work with specific feeder high schools and teachers committed to higher education for their students.

Honest, frank conversations about what it will take to succeed in college should begin early, by 9th or 10th grade. Visits to colleges can help students gain early exposure and awareness, and programs that stimulate interest in science and research can raise interest in the health professions. Opportunities, such as internships or work with college students, can be created to inform and excite students about college and about the health professions. Students need to be aware of the broad range of possibilities. They need to be introduced to the concepts of public health and to learn about the opportunities that exist in the public health field. Students who show an interest in medicine or nursing need to be aware of what is involved in preparing for a rigorous science-centered program and for the costs of pre-med and medical education.

The sciences should be reinforced as a transition to the health professions. It was noted that we do not know where the general “tipping points” are, but there is some research that shows the importance of grasping algebra in middle school for future success in STEM subjects.

The community college can also work with high schools to align courses in ways that facilitate a smoother transition to college and to allow students in advanced high school intensive courses to earn some college credits.

A number of examples were provided in which high schools and middle schools partnered with colleges, and even medical schools, with faculty and staff meeting regularly to discuss curricular and training needs, and with professionals going into the schools to speak and work with students. A participant described how one medical school provides information to parents on the specialized high schools and the tests needed for careers in healthcare.

It was noted that although CUNY is a major source of health care personnel for NYC, the fuel for growth in the numbers of nursing graduates has been incumbent workers, and the majority of these were not born in the United States. The University has doubled (from 800 to 1600) the number of nursing graduates in the last 5 years, and 2/3 of those are members of minority
groups. However, relatively few students who enter CUNY colleges directly from high school pursue nursing. Also, CUNY (like the rest of the country) is lagging in the numbers of Latino nurse graduates. These might be particular niches for the new college.

Use the Summer

All students accepted into the NCC will be required to attend a summer bridge program prior to enrollment. This will be a time to learn more about the NCC and its expectations. Participants suggested a range of other possibilities for the summer program. A study skills course could provide practice in test-taking as well as in reading comprehension and critical thinking. A class in the sciences, with accompanying lab work, would reduce the intimidation that low-performing students often feel in science labs and create interest in health careers. A career exploration component could introduce students to possible careers in public health.

Several CUNY summer programs, offered prior to matriculation, were described including one at the Sophie Davis School of Biomedical Education which focuses on an introduction to the sciences, writing, and to working in small groups. The NCC should look at existing summer programs to ascertain what works and what hasn’t worked.

Summer programs are available from non-academic organizations as well. The Bronx-Westchester Area Health Education Center (AHEC) and the Manhattan-Staten Island AHEC conduct Summer Health Internship Programs—“paid summer placement opportunit[ies]” that target “junior/senior high school and freshman/sophomore college students who have expressed an interest in the health field.” The NCC needs to find ways to make students and prospective students aware of these and other programs and to help them apply.

Entry and Engagement

Like the other community colleges in the CUNY system, the NCC will be an open admissions institution. Unlike the other community colleges, however, prospective students will meet with NCC personnel as part of the admission process to ensure that they understand NCC expectations. As in existing CUNY community colleges, some programs (e.g., nursing) may have limited enrollment capacity and may require separate application. While the student’s academic record at the NCC would be an important criterion in assessing the application, it was suggested that consideration also be given to a holistic approach to identify students likely to succeed. Such an approach might consider, for example, community involvement, leadership and characteristics such as perseverance and motivation.

For students who are undecided about a program of study, exploration of health careers might begin by connecting prospective professions to what young people care about. Exposure to the health professions because of personal experience, or the experience of a friend or relative can be a good jumping off point. Also, young people are often eager to “make a difference,” and so another starting point may be examination of health issues in their neighborhoods.
An inquiry into the determinants of human health, or how health issues are addressed, can lead to exploration of the professions that address these issues and would broaden students’ knowledge about health care and public health. As one participant stated, while students believe they know what doctors and nurses do, few realize that “public health is about community and population, not about the examining room.”

Pathways

In much the same way that secondary schools must take major responsibility for ensuring that students are ready for college, the new community college must take responsibility for helping students thrive and complete their degrees, whether they choose to earn an A.A.S. and go directly into the workforce or transfer to a senior college.

The institution must adapt to the needs of the students it expects to attract. That adaptation may range from providing low student-teacher ratios, to rewarding faculty for mentorships and advising, to scheduling classes to meet student needs, to providing ancillary services such as child care. While the significance of the sciences, especially in medicine and nursing, needs to be reinforced as early as possible, the role of the institution is not to weed out students who are having difficulty in these areas, but to find ways to help them succeed. Although participants acknowledged the benefits of full-time study, some recommended greater flexibility. They also recommended that the institution continually reexamine its own cultural beliefs to ensure that they encourage learning and that the general culture of the institution is such that students can see others succeed and model that behavior.

The NCC must not only reach out to the high schools. It must also take on the challenge of aligning work with senior colleges, so that students who want to earn a baccalaureate degree are helped to make a smooth transition to a successful junior year. The colleges must work together to develop effective articulation agreements, ensure that communication remains open between them to promote transparency, and eliminate barriers to the articulation process as NCC students move into four-year programs. Dual degree or joint degree programs are preferable in many areas and may be structured to allow students to earn senior college credits in transition courses within the community college. The institution should provide strong associations between prospective career opportunities and its own role in moving students toward those opportunities; students need to see the community college experience as a means to get them to where they want to be. In this context several participants spoke of the need to make students aware of multiple pathways, with multiple measures of success. Many students do not realize there are a range of occupations that can help people enhance their health and that, for example, not all of these occupations require study in the hard sciences. It was suggested that the NCC not think in terms of a linear pipeline into specific health professions, with some standard of perfection, but rather think in terms of the range of possible professions – with different fits for different skills and abilities.
It was noted that while funding agencies had moved away from supporting “pipelines” to the health professions, in part because of insufficient data in documenting success, this approach is being revisited at the postsecondary level. Several participants described dual degree and/or pipeline programs in place, or in process, in their institutions. The Commonwealth Medical College is involved in a pipeline project to promote seamless pathways to medical school for first generation students in northeast Pennsylvania. In Howard Community College, in Maryland, there has been a focus in public health on articulation and dual-degree programs with transfer to the University of Maryland senior college system. Hunter College and Queensborough Community College, at CUNY, are working through the issues of a dual degree nursing program.

**Family and Community**

“Going to college is a family affair.” Families may have to make sacrifices—college students need study space, for example, and they may need to renegotiate home responsibilities. Women in particular are often disproportionately affected by family expectations. The NCC can help families understand the demands of achieving a college degree, and provide information about the opportunities available to college graduates and how to support their students as they pursue those opportunities.

Students do not want to be burdens to their families. Low income families may be fearful of the financial and time commitments involved in college and in health careers. The NCC should reach out to families to help them see educational loans as an investment and consider ways to manage the resulting debt.

The entire support system for students, particularly for non-traditional students, must be considered, including social and community support as well as family support. The connection to the community is extremely important as the institution needs to understand the students’ environments, and the expectations and support provided by those environments.

**Financing an Education**

Structural factors, such as family poverty and lack of information on resources and opportunities, have been identified as barriers to higher education in research conducted by one of the morning panelists, Professor Diana Romero (*Disparities in Public Health: Increasing Latino and Immigrant Professionals in the Field*). The prospect of carrying a large debt is a huge barrier for students and their parents, many of whom have had no college education themselves. If higher education institutions (community colleges through professional schools) are concerned about diversity in degree completion, not just college access, they must face the issue of student financial support.

Concern about this issue was reinforced by a recent Public Agenda Report, *With Their Whole Lives Ahead of Them*, which found that that many students leave college because of the stress
of juggling work and study. This is particularly relevant given the NCC requirement for full-time study: low income students may choose economics over going to school.

Institutions must find ways to reduce or eliminate challenging costs, such as tuition, and incidental costs such as books and travel expenses. The NCC should involve financial aid officers as planning proceeds and must ensure that all eligible students receive appropriate financial aid. It was suggested that small amounts of money spread widely are not always helpful; students should receive an amount that really enables them to stay in college.

Participants suggested promising practices that can help students in need of income sustain themselves. A high school/college relationship, for example, might address the need for remediation before high school graduation, enabling students to complete remedial sequences without using college financial aid. Other suggestions included targeted scholarship programs (the Ronald E. McNair program was cited), community engagement scholarships and college work-study programs. Paid internships and/or service learning experiences have the dual advantage of providing funding while allowing students to experience a range of health careers and engage in real world problem solving. At Bronx Community College an agreement with Jacobi Medical Center and 1199 SEIU allowed student nurses to work three days a week and spend two days in school in return for a commitment to Jacobi upon graduation.

**Advisement, Mentoring & Support**

Ideally, career exploration and assessment of student skills and interests should begin in high school and, as there needs to be dialogue between high school and college faculty, there needs to be dialogue between high school and NCC counselors. The NCC should also develop avenues for counselors and advisors to connect and collaborate with their counterparts in senior colleges, whether face to face or through new technologies.

If students are to be informed about possible careers in the health professions, the advisors must understand the breadth of opportunities, as well as the pathways to careers in nursing, medicine or public health, and how to advance along those pathways.

Appropriate assessment tools should be used to measure core competencies, study skills, math and science aptitude and career interests. The NCC should consider at what point these instruments will be most useful for career advisement and program selection. Not every student will be admitted to her program of choice; assessment should be paired with intensive counseling.

Community colleges must be prepared to provide adequate student support structures (including appropriate referral services), to ensure student development and to help, not discourage, students who are struggling. Some students may need not only academic support but intensive counseling to fully understand the expectations and demands of achieving degrees and also to sustain the confidence and self-esteem needed to meet the demands of the
professions. If necessary, counselors must be prepared to have tough conversations with students about their skill levels and prepare action plans where improvement is necessary. It was suggested that the NCC provide two kinds of advisors for each student: an academic advisor and another who addresses non-academic issues, including the transition from high school to college and later from the NCC to a senior college. Cohort groups and peer support groups can also provide support.

Mentors play a critical role in helping students overcome difficult obstacles and work toward a goal. The NCC should be ready to coach faculty in how to act as mentors and should reward faculty for playing a mentoring role. Mentoring should begin early.

Faculty

Hiring the right faculty, faculty who embrace the NCC mission, may be a challenge but will be critical to achieve NCC goals. Teachers must understand the population and be well trained to teach that population; prior experience with community colleges, either as a student or faculty member would be a plus. Since most faculty are not taught how to teach in community colleges a strong staff development program will be essential. There are many good models for staff development programs at CUNY, including some in the existing community colleges. A good faculty development program will create awareness regarding competencies and how to build them and will include discussions on how to support students. It was suggested that staff development not be limited to faculty but include everyone who comes in contact with students—the bursar, the cafeteria staff, security guards, etc.

Every effort should be made to attract and support quality minority faculty in all areas of the curriculum. Faculty will be role models and it is important that students see “professionals who look like them.” The faculty development program should address cultural competencies for all faculty to help them engage effectively and support community college students.

Pedagogy and Curriculum

High Impact Educational Practices

The transition to college can be challenging for any student and more so for the high school graduate who may not be college-ready. The NCC must address the need for both content and skills development for students from a wide range of backgrounds and with a multiplicity of learning styles.

High impact educational practices have proven successful in engaging students, especially students from underrepresented groups, and enabling them to make solid advances. A number of these practices are recommended in the NCC Concept Paper including: learning communities; a special first year experience; a core curriculum combining broad themes; service learning and community- or field-based learning with hands-on opportunities; and internships.
Faculty working in health care areas noted that retention is high once students engage in clinical experiences and recommended that hands-on opportunities in the field begin as soon as possible. Students seem to benefit from experiential and workplace learning, from an interactive curriculum which quickly applies what is learned, and from connecting healthcare with serving the community. Simulation labs and other uses of new media and technology also raise interest and increase engagement with the subject matter. Narrative pedagogy is a promising practice and has been used in some nursing and pre-med programs (and in CUNY’s Disability Studies Master’s Program). In narrative pedagogy teachers and students share and interpret stories of their lived experiences and read about the lived experiences of others relevant to the discipline they are studying.

Two concerns were raised repeatedly: the student-teacher ratio (it should be low – as low as one to seven in difficult areas such as the hard sciences) and the need to allow students time to develop the skills they didn’t bring to college and master difficult, new content.

**Cross-cutting Content for the Health Professions**

All students interested in health care should understand the health delivery system and the core principles of public health—health disparities and how health is impacted by social class, race, etc. Curriculum should address, as well, the future of the health system, what it will look like and how it is going to change, and how these changes will impact future practitioners, whether in nursing, public health or medicine.

Students interested in the health professions need to be good consumers of research and should be able to use and apply research. Evidence-based understanding cuts across many disciplines and a strong research component at the NCC will improve students’ occupational opportunities.

Other cross-cutting themes that could be anchored in the curriculum include: issues related to an aging population; genetics; nutrition; informatics; cultural and global differences; and ethics, human rights, and social justice.

The community connection was reiterated again and again. Coursework should connect to the community. Courses should be created – including perhaps a community health seminar—that will enable students to navigate and be engaged in the community and to examine community issues critically.

The importance of English skills was emphasized for all students. Writing is a core competency and Writing Across the Curriculum and Writing in the Disciplines are high impact educational practices in place at CUNY and elsewhere. It was suggested too that epidemiology, with its focus on risk and prevention, is a good arena for teaching quantitative literacy and has in fact been introduced at the high school level.
Specific attention was, unsurprisingly, focused on the importance of science and math for the health professions. It was suggested that the NCC look at the work of Estela Mara Bensimon\(^1\) “gateway” courses and the outcomes of underrepresented students in these courses. In many colleges gateway courses are particularly challenging for minority students. These courses need to be reviewed not only for their differential impact by race and ethnicity but to ensure that all struggling students are provided effective academic assistance and counseling to improve their persistence.

Health care programs differ in some of the core sciences that are required. It was noted for example that anatomy and physiology is the “make or break” course for many nursing students. For premed students chemistry seems to be the biggest problem. Some chemistry professors feel that they have been given the task of “thinning the herd”—so students do not hold unrealistic aspirations. In addition, many chemistry courses tend to focus on what the student needs to do in the course without much connection to the value of those skills in different contexts. Some colleges have begun to examine this issue and to design courses such as “Chemistry for the Health Professions.” Others have tried introducing chemistry at a slower pace with a low student–teacher ratio and substantial student support.

Although the intense math requirement in the NCC was commended there was some concern that students would be put off by it. It was noted that the course content would vary depending on whether the student was in a STEM program.

**Interdisciplinary Curriculum**

The core program in year one at the NCC is planned as a series of case studies that integrate developmental and content work and that require exploration in different disciplines to solve problems. Participants stressed the importance of content coverage in developing and delivering interdisciplinary curriculum in the core program and in the majors.

It was suggested that a module in “Determinants of Human Health” might be a part of the first year City Seminar – it could introduce social inequality and at the same time introduce the health professions. Students could be presented with human health issues (e.g., noncompliant patients, neighborhood health disparities) and begin to learn about the health professions that address those issues. Such a course would also broaden the students’ knowledge about public health, which is itself an interdisciplinary field.

The Harvard undergraduate life sciences curriculum is an example of an interdisciplinary curriculum that can lead to a medical career. Undergraduates enter the life sciences through a set of interdisciplinary foundational courses and then pursue a more specialized plan of study in

---

\(^1\) Estela Mara Bensimon is the Co-Director of the Center for Urban Education, University of Southern California’s Rossier School of Education.
one of nine concentrations. The program, a joint endeavor of several departments, recognizes that research and discovery in the life sciences is, today, more and more interdisciplinary.

**DISCUSSION AND RECOMMENDATIONS: THE PROFESSIONS**

**Public Health**

The NCC should be able to expose all students to the issues and perspectives of public health and at the same time encourage some portion of those students to become public health professionals. These goals resonate with the mission of the college which includes both preparation of citizens and the development of a workforce.

It was suggested that it is not necessary to offer a major in public or community health to accomplish these goals. Public health is less about a particular major than about educated citizens who can take responsibility for their own health and can promote the health of their families and communities.

Almost any major can produce people who go on to become public health professionals as long as the college and the faculty have a clear vision of the multiple pathways to those careers. The college should consider what students in each of the majors need to know about public health. The understandings that should be developed include the core values of public health: it is population-based, it addresses prevention, justice and equity, and understanding among different groups; it is evidence-based; and it involves working with the community.

Almost any major, as well as the NCC first-year core, can be designed so that it engages students in public health issues. The City Seminar, for example, in the first-year program, can engage students in considering their own or family health problems (the CUNY diabetes campaign offers a good model), or public health issues in their neighborhoods. Problem based exploration, such as environmental health problems in NYC, can also be built into the curriculum.

Although public health issues can be infused into many of the proposed NCC majors, the planning team should also be aware that while programs in public health were previously limited mainly to graduate school, they are now becoming more popular in senior colleges. A community college could provide the first two years of a public health major. Since public health issues and problems call on a range of expertise, a program in this area would have a significant interdisciplinary perspective. Some general course recommendations for such a program included: public speaking, biostatistics (as a subset of numeracy skills), and a research component so that students can read and understand articles that include data and technical terms. Courses should provide ample opportunity to engage in critical thinking - reading and writing to solve problems, not to memorize facts.
Public health is about community. To engage students in issues of public health, either within a major or as part of other majors, students need the tools to be active in their communities. To develop these tools every NCC program should include an action component—experiences supported by reflective courses. To develop these experiences the NCC should work in partnership with community organizations.

**Nursing**

In developing a nursing program the NCC must consider if the degree is a route to a job or to further education. Several nursing faculty, and practitioners, emphasized the importance of providing pathways to the baccalaureate degree. They suggested that the BSN is becoming the professional standard in nursing and expressed concern that some AAS graduates are finding it difficult to stay competitive in the marketplace. Their concern resonates with a new report from the Carnegie Foundation, *Educating Nurses: a Call for Radical Transformation*, which calls for entering the profession from the baccalaureate level and for reframing the curriculum to meet the demands of current nursing practice. It was suggested that the NCC look at the “Oregon Model,” a dual degree program in which community and senior colleges agreed to a common curriculum, making it easier for nursing students, who are dually admitted, to earn a bachelor’s degree. At the very least, clear articulation agreements between community and senior colleges should eliminate systemic obstacles and give students flexibility and transferability. Innovations, such as having the last course at the community college be the first course at the senior college, should be explored.

While state requirements force certain constraints, curriculum innovation is nevertheless possible and desirable in nursing programs. An interdisciplinary curriculum could help nursing students better understand the interdependence of the health professions. Classes in urban health, global health, genetics, and environmental issues would all add value to the degree. Classes in business and financial and organizational management would be helpful to nurses with advanced degrees who might want to start home health services. Crossover areas, relevant to all the health professions include patient care and technology.

An interdisciplinary curriculum might also be helpful for nurses looking for employment in specialty areas—a growth area for nursing. Hunter is addressing this issue by working with a hospital to arrange a senior year course in the hospital that would introduce the student to a specialty and would count as the orientation program.

It was suggested that nurses might train with physicians in foundation courses in science (e.g., biology) and math as well as in simulation labs, an innovation that would help both nurses and doctors learn to work together as team. Other curriculum innovations include use of case studies and narrative pedagogy and various high impact practices focused on practice and performance. Partnerships with potential employers and organizations can provide mentors for the students. A Student Success Counselor could provide short term, personal counseling and referrals.
Faculty recruitment is a challenge in nursing education everywhere. Suggestions included: an affiliation model in which individuals on the service end are mentored to teach; over scale salaries to attract individuals from the service end to teach; school/hospital partnerships to share faculty; programs that help students become educators; and joint appointments between institutions in the same system.

**Medicine**

Community college students who are interested in medicine should be presented with the realities they face. Some medical schools do not value the community college experience. According to the Association of American Medical Colleges (AAMC), less than 1% of students in medical school come with a community college background. (It was suggested that real data may be difficult to come by as some students transfer from a community college before earning the associate degree.)

As NCC personnel hold conversations with senior colleges, they should also be talking to medical schools that would likely receive students. The medical schools will need hard proof that students graduating from alternative programs are “just as good.”

The NCC may need to address concern about “dumbing-down” the curriculum. If there is a substantive change to curriculum, especially in science, or pedagogy, some will say that standards are being lowered. To address these critiques, the college will need evidence based on comparative research over time showing that the new pedagogy leads to real, authentic learning.

The good news is that the AAMC has developed a holistic admissions process that looks at a variety of factors. For the NCC, the MCAT may be a bigger factor in admissions because of questions about students’ community college backgrounds. But holistic admissions also look at students’ socioeconomic backgrounds and challenges they have overcome. It asks, “What are the things that got this applicant this far?” Some medical schools have adopted this approach.

First though, the student has to get to the point where he or she is eligible to apply to medical school. Recommendations focused on curriculum and pedagogy, particularly in math and science, and on advisement.

Many community college graduates, even when they have the ability and motivation, “crash and burn” in a premed program at the baccalaureate level. In many instances they do not have the science content and skills that students who began at a four-year school have acquired. Or they may have trouble keeping up with a faster, more competitive learning environment. Chemistry at any level seems to be a distinct problem. Many faculty and students see chemistry as a “weeding-out” process. (Biology can also be a “weeding-out” course in a community
college.) As Donald Barr\textsuperscript{2} noted, the process the establishment of courses such as calculus, organic chemistry and physics as pre-med requirements is “intentional, institutionalized, and more than 100 years old.” But although the experience of taking chemistry is very different than being a physician, it often causes students to put their goals aside, assuming if they can’t do chemistry, they can’t be a physician.

These traditional filters can be avoided. Colleges, including the NCC should be able to communicate the realities of being a doctor in other ways, not through Chemistry 101 (or other science or math courses). The Harvard Life Sciences curriculum for undergraduates (described in the section on “Pedagogy and Curriculum”) is an example of creative curriculum reform.

At the very least, science and math could be a more positive experience, and the challenge for the NCC is to find ways to engage its students, many of whom may have been intimidated by their prior academic work in these fields. One possibility is to reconsider the time allotted to teaching and learning certain subjects. This is already being done in certain pre-med programs at elite colleges in which the traditional one year of chemistry is being reexamined. Similarly, the NCC could develop a more flexible timeline that would allow a greater focus on student learning, not just on the time it takes to teach a range of concepts and competencies and the courses that cover this material. Since students from underrepresented groups are overwhelmingly women in many of the CUNY community colleges, differential impact by gender should also be considered and teaching and learning strategies devised to address those differences.

Other curriculum innovations can also inform change. One suggestion that resonates with the NCC’s New York City theme is teaching the sciences with a community perspective. The SENCER program (Science Education for New Civic Engagements and Responsibilities) connects science learning in the classroom to civic engagement and action.

With respect to pedagogy, the NCC needs to help students understand that their experiences in high school are not necessarily an indicator of success in college. For example, incoming freshmen need to understand the level of detail the instructional staff will require, and to know that they must be able to communicate in detail, in order to show that they’ve learned the material. Perhaps upperclassmen can help teach this to incoming freshmen.

Dyad pedagogy has been shown to be useful in organizing classes. Dyad pedagogy is a practical, goal-directed, learning method that is carried out by two individuals, randomly assigned to each other, who develop knowledge and skills as they work together to solve a problem. Students learn from each other and develop workplace-relevant skills as they learn critical content.

Appropriate advisement and mentoring is particularly important for underrepresented minorities interested in medicine. The role and training of advisors is critical. Advisors need to

\textsuperscript{2} Donald Barr, MD is an Associate Professor (Teaching) of Pediatrics at Stanford University.
accept and validate that there are multiple pathways that can lead to a career as a physician. A pre-health advisor is often the gatekeeper and may discourage students. On the other hand students who do get into medical school often say that their pre-health advisors encouraged them.

Individual mentors and special mentoring programs at the community and senior college levels are valuable. Some years ago Bronx Community College had a program of directed minority biomedical research support. In this program, students had traineeships in a biomedical research lab, which triggered a desire in many to go to medical school. To qualify for funding it was necessary to have faculty conducting research projects at community colleges. Similar programs (such as MARC and MBRS) can be found now in CUNY senior colleges. Students who are not accepted at medical school on graduating from a senior college do not have to give up their dreams. They need help in finding other programs that can give them the foundation in the sciences so they can eventually apply. If he or she can catch up, a student who begins medical school at 25 can still have many productive years as a physician.

**PARTNERSHIPS**

Another pervasive issue was the importance of developing partnerships – with high schools and senior colleges, with medical schools, clinical sites, community-based organizations, public health services, parents, minority health care workers and faculty. The new community college will be working on this goal through its Office of Partnerships.

Many of the area medical colleges are active in the community and welcome partnerships with middle schools, high schools and colleges. Medical school faculty and staff described some of the benefits that accrue from these partnerships including: generating information for parents; visits by students to health care facilities and visits by health care workers to the schools; and relationships with medical students who perform tutoring and other community service.

Community partnerships provide an opportunity to develop grant-funded projects and innovative models to engage and teach students. Community-based organizations, such as the area health centers, can expose students to career information and professional opportunities, teach students how to work effectively in the community and provide opportunities for hands-on experience.

Partnerships with clinical sites are critical for providing internships and, where necessary, actual clinical experience that enables students to meet program requirements. The NCC should begin now to look into affiliations with health care facilities. The NCC should also take advantage of connections within New York’s health field infrastructure to promote awareness within the public health field.

There are a number of special programs which the NCC could explore at area health centers and at medical colleges and community organizations. As planning proceeds it is hoped that this
meeting will turn out to be the first step toward developing partnerships that are fruitful for the organizations and for the NCC.

A FINAL WORD

One participant observed that in the coming months and years the new community college will have to “make sure that it is really new.” To remain new, and innovative, it will need to continually adapt and reframe teaching methods, support services, curriculum – just about every facet of the college—to maximize student success. As we go forward, the planning team, and future faculty and staff, need to keep this in their own minds and to let all prospective students know, as well, that this is a community college that is not doing things the same old way.

______________________________
The New Community College Planning Team

John Mogulescu – Chair & Senior University Dean for Academic Affairs, & Dean of the School of Professional Studies
Tracy Meade - Project Director
Stephanie Benjamin - Consultant
Stuart Cochran - Deputy to the Project Director
Lyn Cooperman - Senior Director for Enrollment Management
Toni Gifford - Associate Director
Laurence Mucciolo - Consultant
Dolores Root - Senior Director for the Education Program
Paul Russo - Project Manager
Angie Sadhu - Program Assistant
Julian Haynes - Research Associate

______________________________

CUNY Collaborative Programs Staff
(Facilitators or Recorders in the Breakout Group)

Eric Hofmann - University Director of Collaborative Programs
Jeanette Kim - Associate Director of College Now and Director, the NYC Science and Engineering Fair
Lee Schere - Senior Program Coordinator, College Now
Ciji Gardner - Director, Middle Grades Initiative/GEAR UP
Rana Emerson - Program Coordinator, College Now and Affiliated Campus Schools.
Daniel Voloch - Director, At Home in College
Drew Allen - Senior Coordinator for Collaborative Programs Research & Evaluation
Rosa Solano - Program Coordinator, College Now
THE NEW CUNY COMMUNITY COLLEGE AND THE HEALTH PROFESSIONS:
PATHWAYS, PARTNERSHIPS AND POSSIBILITIES

List of Participants

Marilyn Aguirre-Molina
Professor
Public Health Program
Lehman College

Susan Albertine
Senior Director
LEAP States Initiative
Association of American Colleges & Universities

Marie Ankner
Assistant Vice President of Nursing
Division of Medical & Professional Affairs
NYC Health & Hospitals Corporation

Lois Augustus
Professor & Chair
Department of Nursing and Allied Health Sciences
Bronx Community College

Donald Barr, M.D.
Associate Professor (Teaching) of Pediatrics
Stanford University

Samantha Bernardine
Program Manager
Manhattan Staten Island Area Health Education Center

John Bihn
Professor
Department of Natural Sciences
LaGuardia Community College

Fran Boren-Gilkenson
Director of Education
1199 SEIU United Healthcare Workers East

Jo Ivey Boufford, M.D.
President
New York Academy of Medicine

Caroline Breitenberger
Director
Center for Life Sciences Education
Ohio State University

Gary Butts
Associate Dean
Diversity Programs, Policy and Community Affairs
Mount Sinai School of Medicine

Laura Castillo-Page
Director of Research
Diversity Policy and Programs
Association of American Medical Colleges

Ida L. Castro
Vice President
Social Justice and Diversity
The Commonwealth Medical College

Valli Cook
Director
Health Professions Advisory Services
Queens College

Jessie Daniels
Professor
Department of Urban Public Health
Hunter College School of Health Sciences

Denise A. Davis
Program Officer
Health Care Group
The Robert Wood Johnson Foundation
John W. Davis
Professor Emeritus &
Director of Accelerated Study in Associate
Programs (ASAP)
Bronx Community College

Elliott Dawes
University Director
CUNY Black Male Initiative
The City University of New York

Jonathan Deutsch
Professor
Department of Tourism and Hospitality
Kingsborough Community College

William Ebenstein
University Dean
Health and Human Services
The City University of New York

Pyser Edelsack
Director, Field Education,
Department of Community Health
and Social Medicine
The Sophie Davis School of Biomedical
Education

Joanne DeSimone Eichel
Director
Office of School Health Programs
New York Academy of Medicine

Arlene Farren
Professor
Department of Nursing
The College of Staten Island

Ann Feibel
Professor & Chair
Department of Natural & Applied Sciences
LaGuardia Community College

Rodney Fisher
Principal
Marie Curie High School for Nursing,
Medicine and Applied Health Professions

Richard Forman
Principal
Clara Barton High School

Keville Frederickson
Professor & Director
Doctor of Nursing Science Program
Lehman College and the CUNY Graduate Center

Nicholas Freudenberg
Distinguished Professor & Director, Doctoral
Program in Public Health
Hunter College School of Health Sciences
and the CUNY Graduate Center

Robert E. Fullilove
Associate Dean for Community and
Minority Affairs
Professor of Clinical Sociomedical Sciences
Columbia University Mailman School of
Public Health

Judy Garcia
Consultant
New Visions for the Public Schools

Kristine Gebbie
Dean
Hunter-Bellevue School of Nursing
Hunter College

Mekbib Gemeda
Assistant Dean
Diversity Affairs and Community Health
NYU Langone Medical Center

Catherine Alicia Georges
Professor & Chair
Department of Nursing
Lehman College

Marcia Gerber, M.D.
Dean for Admissions
SUNY Downstate Medical Center
Heather Gibson
Assistant Professor and Chair
Department of Nursing AAS/PN
Medgar Evers College

Karen Goldman
Professor
Department of Health, Physical Education & Recreation
Kingsborough Community College

Jacqueline Grant
Associate Professor
Department of Nursing
York College

Joyce Griffin-Sobel
Associate Dean
Director of Undergraduate Programs
Hunter-Bellevue School of Nursing

Barbara Grumet
Dean of Professional Studies
New York City College of Technology

Constance Hill, M.D.
Associate Dean
Minority Affairs
SUNY Downstate Medical Center

Lydia Isaac
Assistant Professor
Department of Urban Public Health
Hunter College

Florence Jackson
Senior Director
Career & Technical Education
New York City Department of Education

Jeanette Jeffrey
Associate Professor
Division of Health Sciences
Howard Community College

Gabrielle Kersaint
Executive Director
Brooklyn Queens Long Island Area Health Education Center

Deborah King
Executive Director
1199 SEIU United Healthcare Workers East

Beatrice Krauss
Professor of Urban Public Health
Executive Director, Center for Community and Urban Health
Hunter College School of Health Sciences and the CUNY Graduate Center

Francisco Lucio
Program Director
Manhattan Staten Island Area Health Education Center

Sandra Maldonado
Principal
Community Health Academy of the Heights

Maria Marzan
Assistant Professor
Department of Family & Social Medicine & Co-Director, Health Careers Opportunity Programs
Albert Einstein College of Medicine

Dani McBeth
Associate Dean
Student Affairs
The Sophie Davis School of Biomedical Education

Anne Marie Menendez
Professor & Chair
Department of Nursing
Queensborough Community College

Iris Mercado
Assistant Professor
Department of Education
Hostos Community College
Mary Mitchell
Executive Director
Manhattan Staten Island Area Health Education Center

Carlos Molina
Dean for Special Programs
Hostos Community College

Jean Moore
Director
Center for Health Workforce Studies

Renee D. Muri
Director of Health Programming
World Academy for Total Community Health High School

Ouida P. Murray
Professor & Director
Department of Nursing
York College

José Nanin
Associate Professor
Department of Health Physical Education & Recreation
Kingsborough Community College

Maija Neville
Administrative Director
Center for Clinical and Translational Science
Rockefeller University

Marc Nivet
Chief Operating Officer
Josiah Macy Jr. Foundation

Mary O'Donnell
Professor & Chair
Department of Nursing
The College of Staten Island

Kenneth Olden
Founding Dean
CUNY School of Public Health

Ann-Gel Palermo
Associate Director of Operations
Center for Multicultural and Community Affairs
Mt. Sinai School of Medicine

Norma Iris Poll-Hunter
Director
Diversity Policy & Programs
Association of American Medical Colleges

Hila Richardson
Associate Dean
Undergraduate Programs
New York University School of Nursing

Kathryn Richardson
Professor & Chairperson
Department of Nursing
New York City College of Technology

Diana Romero
Associate Professor
Department of Urban Public Health
Hunter College School of Health Sciences and the CUNY Graduate Center

Judy Schneider
Consultant

Patricia Schneider
Professor
Department of Biological Sciences & Geology
Queensborough Community College

Lloyd Sherman
Director
Center of Excellence for Youth Education
Mt. Sinai School of Medicine

Steven B. Silbering
Director
B.A. – M.D. Program
Brooklyn College
Gail Simmons  
Dean  
Science and Technology  
The College of Staten Island

Judith Simmons, M.D.  
Director  
Division of Healthcare  
Navigant Consulting, Inc.

Mort Slater  
Director  
Gateway Institute for Pre-College Education

Belinda Smith  
Director  
Premedical Studies  
The City College

Nilda Soto  
Assistant Dean  
Office of Diversity Enhancement  
Albert Einstein College of Medicine

Yvonne Stennett  
Executive Director  
Community League of the Heights

Adam Stevens  
Assistant Principal  
Community Health Academy of the Heights

Lorna Thorpe  
Deputy Commissioner  
Division of Epidemiology  
NYC Department of Health and Mental Hygiene

Lorraine Tiezzi  
Assistant Clinical Professor  
Columbia University Mailman School of Public Health

Michelle Van Noy  
Research Associate  
Community College Research Center  
Teachers College, Columbia University

Kim Lawrence Wanliss  
Principal  
World Academy for Total Community Health High School

Darrell Wheeler  
Associate Dean for Research &  
Associate Professor  
Hunter College School of Social Work

Lolita Wood-Hill  
Director  
Pre-Professional Office  
Hunter College

Jermaine Wright  
Associate Director  
CUNY Black Male Initiative  
The City University of New York

John Xavier  
Frederick Douglass Academy

Arthur Zeitlin  
Professor & Chair  
Department of Biological Sciences  
Kingsborough Community College
THE NEW CUNY COMMUNITY COLLEGE
&
THE HEALTH PROFESSIONS:
PATHWAYS, PARTNERSHIPS AND POSSIBILITIES

The New York Academy of Medicine
November 16, 2009

With generous support of the
Josiah Macy, Jr. Foundation