

# MUSC STRATEGIC PLAN

## Healthy Youth and Development Workgroup

### *Mission:*

*“Assist children and youth to meet their potential, through research, education, and clinical care.”*

### **Reducing Antecedents of Illness**

**Goal #1:** Identify and modify fetal and neonatal antecedents of disease or developmental disabilities which have particular impact on residents of South Carolina.

#### Rationale / Assumptions:

1. Understanding fetal and neonatal origins of disease will permit a shift in emphasis from symptomatic treatment toward prevention or early intervention, thereby reducing the burden of disease among residents of South Carolina.
2. Serious disorders such as hypertension, diabetes, heart disease, stroke, and obesity derive from metabolic dysfunction and / or alteration of gene expression that occur many years before symptoms develop.
3. Significant improvement in mortality and morbidity are dependent upon applying new tools (such as molecular genetics) to larger populations (such as residents genetically homogenous communities), rather than improving diagnosis and treatment for individual patients.

#### Objectives: Identify → Modify → Educate

1. Catalogue known fetal, neonatal, and infant antecedents of childhood disease and developmental problems that are prevalent in South Carolina.
2. Develop a long-term community-based, longitudinal cohort study to identify additional or new antecedents.
3. Initiate multi-disciplinary clinical interventions during the fetal or neonatal period to intervene and modify maladaptive development or genetic and metabolic foundations for disease.

Strategies / Actions: Establish a new direction for evidence-based investigation at MUSC, establishing long-term relationship with communities and groups of individuals, from which data are collected and outcome studies are conducted about aspects of major health issues that impact the state

1. Identify groups that have already developed or are presently developing community relationships.
2. Develop an interdisciplinary interest group among all MUSC Colleges and interested community-based programs, charged with exploring available model systems and emphasizing model-building.
3. Establish the necessary infrastructure to manage and maintain a long-term cohort for clinical and research activities.
4. Establish MUSC as a site for the planned National Children’s Study (<http://www.nichd.nih.gov/despr/cohort/> or [ncs@mail.nih.gov](mailto:ncs@mail.nih.gov)).
5. Review of relevant programs that may benefit the development of a cohort study (e.g. Southeastern Counties demonstration project for low birth weight infants, Charleston Heart Study)
6. Provide a framework for long-term continuity of care for the community-based cohort, with an emphasis on education and advocacy in modifying antecedents of disease.
7. Encourage basic science research to be focused on mechanisms and predictors of disease development, with an emphasis on hypothesis-driven studies to identify both genetic factors (markers of disease, risk factors) and environment factors (which can be changed).
8. Develop training opportunities and educational programs for students and residents with the longitudinal cohort.
9. Establish a multidisciplinary, intercollege Institute for Community Health to serve as the umbrella organization which mobilizes resources within the University to focus on health issues within the State.
10. Identify a corporate sponsor (as the Mayo Clinic has done with IBM [see: *Wall Street Journal* attachment]) to assist with development of an information system sufficient to support the long-term study.

## **Expected Outcome / Benchmarks:**

1. Creation of an established roster of clinicians and investigators collaborating on issues related to the prevention or modification of disease in children.
2. Approval by the MUSC Board of Trustees of an Institute for Community Health, with funding of leadership, development, and management positions.
3. Identification of a planning team for a creation of a cohort study based in a South Carolina community.
4. Determination of demographic and clinical information to be collected during the cohort study and how it is to be stored, reviewed, utilized, and expanded.
5. Formal participation in the National Children's Study organized by the National Institutes of Health.
6. IRB approval for proceeding with the cohort study and the NCS study.

## **Timeline:**

1. Determination of interest group for cohort study and related activities by Fall, 2002.
2. Identification of leadership for Institute of Community Health Initiative by Spring, 2003.
3. Establishment of relationship with community or communities selected for cohort by Winter 2003-4.
4. Selection by NIH to serve as a site for the National Children's Study by Summer, 2004, with follow-up period to conclude 2025.
5. Review of progress and update of strategic plan Goal #1 by Fall, 2004.

## **Barriers:**

1. Difficulty in centralizing the planning to focus scientific issues and coordinate cohort studies with related clinical and basic science research.
2. Developing sufficient credibility with community groups to cultivate effective long-term relationships.
3. Establishing effective rewards for participation in community-based and interdisciplinary research in an institution with a strong departmental structure and traditional academic incentive program.
4. Identifying adequate information technology resources to establish and maintain necessary databases.
5. Integrating necessary resources, such as molecular genetics (Greenwood Genetic Center) and epidemiology (USC School of Public Health), that may be stronger at state institutions other than MUSC.

## **Responsible Parties:**

1. Director of the MUSC Institute for Community Health, appointed by the President at the time of creating a multi-disciplinary center for the study of developmental, medical, cognitive, and psychosocial issues that serve as antecedents to illness and disability.
2. Professional Advisory Committee for the Institute, consisting of individuals from interested MUSC colleges and key community leaders to develop a long-term strategy for development of the cohort and related research and clinical projects.
3. Board of Directors for the Children's Research Center, integrating ongoing plans for research development with expanded vision of the University in community-based, preventive research.

## **Evaluation:**

1. Review of the Institute's plan for program development by the President's Council.
2. Review of plans for the cohort study by the Institute's Professional Advisory Board.
3. Evaluation of specific measures relating to development of the cohort, identification of antecedents, useful interventions, and changes in morbidity are premature at this stage and can be established at the time of Strategic Plan update in two years.

## **Resources Needed:**

1. Seed money for the creation of the Institute of Community Health, with partial salary support for the Director and for an administrative staff.
2. Sufficient IT resources for creation and maintenance of database to support a long-term cohort.

## **Educating to Impact Behavior**

**Goal #2:** Increase health, vitality and quality of life for children and adolescents in South Carolina by increasing positive behavior and diminishing at-risk behaviors.

### **Rationale / Assumptions:**

1. Injuries surpass illness as the cause of morbidity and mortality among youth in South Carolina. The frequency of injuries is not reduced through traditional patterns of medical care but can be reduced by altering attitudes and behaviors among children and their parents.
2. Violence has become a major epidemic affecting all South Carolina citizens both directly and indirectly; it is a factor in juvenile crime, disruption of families, and child abuse / neglect. As children and their families become culturally more competent, violence is less likely to be adopted as a strategy for coping with stress.

### **Objectives:**

1. Identify or develop flagship programs in injury prevention and violence prevention as the first initiatives in modifying behavior of youth and families.
2. Develop a multidisciplinary group within the Institute of Community Health to integrate all MUSC-based programs and all state programs in which MUSC participates into a “clearinghouse,” so that programs can be developed jointly and reinforce each other’s impact on the behavior of child, parents, and community.
3. Clarify goals for existing programs and develop clear measures of effectiveness for each program, encouraging scholarly review of outcomes as basis for continuation or expansion of specific programs.
4. Develop an overall strategy for impacting health through changing behavior, characterizing the necessary processes rather than assuming responsibility for making the interventions.

### **Strategies / Actions:**

1. Identify and coordinate ongoing programs at MUSC focused on changing behavior of parents and children with regards to parenting, safety, and prevention of violence.
2. Create an organizational structure within the Institute of Community health to support community-focused activities targeted at youth, including support for developing information systems, establishing community partnerships, and designing and evaluating interventions that are sensitive to community needs.
3. Coordinate and integrate activities with other groups, e.g. Children’s Hospital Consortium (South Carolina Children’s Hospitals focusing on child abuse and neglect), Safe Kids (South Carolina Hospital Association focusing on injury prevention).
4. Identify strategies to facilitate communication and coordinate strategies between Colleges at MUSC, since several have some programs in relevant areas.
5. Develop and sustain community partners to build coalitions and advisory groups; define outcome objectives for specific programs; acquire knowledge of how to effectively work with communities.
6. Review nationally recognized models to reduce and prevent risky behaviors.
7. Institute a model intervention program for violence reduction and prevention in target communities.
8. Institute a model intervention program for injury prevention in target communities.
9. Insure well-developed cultural competence on the part of faculty, staff, and students at MUSC who work with communities.

### **Expected Outcomes / Benchmarks:**

1. Localization of all programs, data, and educational intervention within one agency at MUSC.
2. Reduction of injuries by 25% in community targeted by model intervention program.
3. Reduction of school dismissals for violence and of arrests of juvenile violent crime by 25% in community targeted by model intervention program.
4. Secondary benchmarks such as decrease in school drop-out rates and reduction in hospitalizations for child abuse, and tertiary benchmarks such as decrease in number of teenage pregnancies and higher reports of community satisfaction may be developed at a later time.

### **Timeline:**

1. Determination of interest group for cohort study and related activities by Fall, 2002.
2. Identification of community partnerships and agencies; establishment of plan for community intervention programs by Spring 2003, with subsequent formal contracts of agreement with community agencies.

3. With community input, quantification of baseline data in specific areas related to program goals; identification of funding sources and submission of grant applications by Fall, 2003.
4. Implementation of funded projects by Spring, 2004, with completion of pilot studies and review of preliminary data by Summer, 2005.
5. Review of progress and update of strategic plan Goal #2 by Fall, 2005.

Barriers:

1. Coordinating existing programs that may be service-oriented without clearly defined measures of success.
2. Focusing on programs that have highest yield in altering behaviors that target priorities of reductions in violence and in injuries.
3. Establishing effective partnerships with community groups, which may view strategies by MUSC to be self-serving or opportunistic.
4. Obtaining satisfactory data from schools or agencies that may be necessary for measuring outcomes.

Responsible Parties:

1. Director of the MUSC Institute for Community Health and Program Leader for community intervention programs to be appointed by the President.
2. Community Advisory Committee for the Institute, consisting of individuals from interested community agencies (e.g. United Way, churches, NAACP, YMCA, YWCA, Mayor's Commission on Youth and Families, County Departments of Mental Health, School Boards), invested in collaborating with MUSC faculty and staff in the development of targeted programs.
3. Interested representatives from the Departments of Health Administration and Policy, Pediatrics, Psychiatry, Family Medicine, and the constituent Colleges of MUSC, and Educational Technology Services.

Evaluation:

1. Review of the Institute's plan for program development by the President's Council.
2. Review of plans for model programs in targeted communities by the Institute's Community Advisory Board.
3. Review of outcomes data by the Program Leader for model programs in injury reduction and violence reduction.
4. Survey of satisfaction with MUSC interventions among leaders in targeted communities.

Resources Needed:

1. Those identified above for creation of the Institute for Community Health.

## **Providing Specialized Pediatric Services**

Goal #3: Providing specialized or multidisciplinary medical services to children during gestation and development that are not elsewhere available in the State and which are necessary to optimize the health of at-risk children.

Rationale / Assumptions:

1. Limited financial resources make it necessary to avoid duplicating pediatric services that can be provided in the community.
2. Previous experience with development of University-based primary care networks suggest that MUSC Children's Hospital should develop services that complement and expand upon those available in the community.
3. Coordination of services between all Children's Hospitals within South Carolina should permit regionalization of specialized services and optimal utilization of resources.

Objectives:

1. Integrate goals and objectives for MUSC Children's Hospital, the Children's Research Center, and the current MUSC Strategic Plan.
2. Complete a comprehensive plan to guide program development, facilities planning, budgeting and marketing for Children's Services at MUSC.
3. Integrate Children's Hospital / Department of Pediatrics plans for clinical services and research activities with those of the Institute for Community Health.

#### Strategies / Actions:

1. Identify priority needs among South Carolina children and identify related support services that only MUSC is capable of providing.
2. Measure adequacy of patient access, facilities, equipment, staffing, information technology, student education, research support, research productivity, and customer satisfaction for the provision of priority specialized services.
3. Establish effective representation and coordination of activities with the Institute for Community Health.
4. Clarify the apparent conflict between the mandate by the American Academy of Pediatrics to establish a “medical home” for all pediatric patients and the need to focus resources in specialty areas.
5. Review access to students from all Colleges to teaching environments for both community-based primary care and MUSC-based specialty care.
6. Develop effective working relationship with Greenwood Genetic Center and the Institute for Community Health in the development of DNA database for patients followed in cohort studies.
7. Identify special populations and specific diseases that warrant particular attention in the development of community-based cohort studies.
8. Coordination of clinical activities with Children’s Rehabilitation Services and DHEC programs targeted for special pediatric populations.

#### Expected Outcome / Benchmarks:

1. Clear statement of priorities for development of pediatric specialty services at MUSC, developed in consideration of evolving priorities for each Children’s Hospital within South Carolina.
2. Blueprint for creation of a free-standing MUSC Children’s Hospital that collaborates with the Institute for Community Health and individual departments in pursuit of the above-stated goals.
3. Timely access to essential specialty services for all children within South Carolina, regardless of ability to pay.
4. Identification of 3 to 4 disease-focused research initiatives, based upon existing strengths and healthcare priorities identified as part of Goal #1.

#### Timeline:

1. Completion of organizational, clinical service, and facility plans for MUSC Children’s Hospital by Fall, 2002.
2. Coordinate with Institute of Community Health in developing a Child and Family Injury Prevention Center by Spring, 2003.
3. Formalize collaborative plans with Greenwood Genetic Center by Summer, 2003.
4. Review progress and update strategic plan for Goal #3 by Fall, 2003.

#### Barriers:

1. Inadequate funding for specialty services provided to indigent pediatric patients.
2. Absence of strong primary care resources for many children in South Carolina, limiting effective collaboration between pediatric and specialist and placing excessive burden on MUSC for primary pediatric care.

#### Responsible Parties:

1. Academic pediatric leadership (Lyndon Key, Phil Saul, Inderjit Singh, and Mike Bowman) and administrative leadership (Carol Dobos, Dave Neff)
2. Children’s Hospital Steering Committee (with representatives appointed by the President, the Dean, and the Chair of Pediatrics)
3. Children’s Research Center Board of Directors

#### Evaluation:

1. Review of the Children’s Hospital plan for program development by the President’s Council.
2. Survey of satisfaction with MUSC Children’s Hospital programs by leadership of Institute for Community Health, MUSC and community leaders involved in children’s health.

#### Resources Needed: