

University of South Carolina

MATCH Project

**Arnold School of Public Health and
The Institute for Partnerships to Eliminate Health Disparities**

Capstone Event – July 29 - 30, 2008

Atlanta, Georgia

Event summary

Table of contents:

Introduction - Pg. 2

Institutions operating at engaged levels of funding - Pg. 3

Institutions operating at Level 1 funding - Pg. 3

Institutions operating at Level 2 funding - Pg. 4

Institutions operating at Level 3 funding - Pg. 6

Institutions operation at Level 4 funding - Pg. 6

Forging the Path Ahead: Promoting Sustainability - Pg. 9

Forging the Path Ahead: Cornerstones of Success - Pg. 10

Evaluation of the Capstone Event - Pg. 14

Presentation - Dr. Adewele Troutman - Pg. 15

Presentation - Dr. Georges Benjamin - Pg. 18

Presentation - Trent Wakenight - Pg. 20

Compiled by Trent Wakenight - wakenight@hotmail.com

Introduction

The expanding threat of and new emerging infectious diseases (NEIDs) that can affect animal and human health is increasing the need for preparedness on local levels.

Our global community is connected as never before, resulting in the ability for disease to move from one part of the world to another. Growing human and animal populations and a growing proximity between both species is enabling disease transmission from animals to humans.

NEIDs have to be addressed in a global to local manner. Local communities must engage in activities to prepare for potential infectious disease outbreaks, and develop adequacy to respond and recover from catastrophic events.

Funded by the W.K. Kellogg Foundation, the Mobilizing Against Threats to Community Health (MATCH) Project at the University of South Carolina is committed to protecting public health on local and global levels now and in the future. MATCH is a joint initiative of the Arnold School of Public Health and the Institute for Partnerships to Eliminate Health Disparities at South Carolina.

In preparing for NEIDs and ensuring that communities – particularly underserved and disenfranchised communities – are able to effectively mobilize against threats to community health, MATCH has engaged the 1890 network of land-grant institutions to implement community-based projects to improve local preparedness.

The 1890 network, consisting of 18 land-grant institutions, has long been committed to community service. Coalescing the strengths and abilities of individual institutions is the best approach toward addressing disparities and preparing and responding quickly at a grass-roots level to public health emergencies, natural disasters and terrorist events.

Within the 1890 network, cooperative extension programs at each institution are familiar with and recognize populations vulnerable to health and wellness threats. Hurricane Katrina and similar events have exposed the need to organize communities to respond to threats and decrease the negative impacts that catastrophes can have upon the most vulnerable of those residing within our communities.

On July 29 – 30, 2008, MATCH hosted a capstone event to showcase the community efforts of its 1890 network partners, to share lessons learned in implementing NEID assessment, organizational and communication campaigns, and to describe a pathway for future action at the convergence of animal and human health.

More than 70 percent of new and emerging infectious diseases that affect human health originate within the animal population.

The increasing proximity of animal and human populations to one another mean that emerging infectious diseases have to be addressed in a global to local manner.

The partnership with the 1890 cooperative extension program has been phenomenal. This is the reason why the MATCH Project is successful.

1890 institutions operating at engaged institution levels of funding:

Tuskegee University

Cooperative Extension educators at Tuskegee University have been creating an awareness of the potential for NEIDs and integrating an NEID curriculum into existing community programs focused on health, nutrition, agriculture and families. In collaboration with the Alabama Department of Public Health, Extension Services has aligned with the Office for Womens' Health to capitalize the ability for women in households and families to serve as communicators and message bearers. Extension Services have also linked with the Community Care Network – a mobile service that travels throughout Alabama to meet the health care needs of under-served populations. Through the use of a resource guide that gives details on preparedness, the project has shown the benefits of integrating subject-specific messages into existing programs and finding key individuals to aid message dissemination.

Women, serving as caregivers, can be a key to successful message dissemination.

1890 institutions operating at Level 1 funding:

Alabama A&M University

Focused on delivering education about pandemic NEID preparedness and health to underserved audiences in two counties, Alabama A&M University more than tripled knowledge of how to prepare for and how to respond to an NEID pandemic. Through information sessions conducted in church settings in Madison and Lauderdale counties, University educators combined emergency response lessons with health messages such as proper handwashing and personal hygiene. Knowledge assessments and discussion during the sessions demonstrated that most participants possessed limited knowledge and were unprepared for a pandemic or NEID outbreak. In addition, most did not have a first aid kit or adequate food supplies for an emergency lasting more than 72 hours. Workshop participants received first aid kits and knowledge of what to have in hand in preparation for an emergency. Not only did knowledge of NEIDs increase, but educators reported more serious attitudes about planning and preparedness among recipients.

Communities need to be involved as participants in preparation, response and recovery planning and implementation.

Alcorn State University

As more than 70 percent of the NEIDs that affect the human population originate within the animal kingdom, Extension educators at Alcorn State University recognize the potential risks associated with human contact with animals. Accordingly, project leaders have communicated those risks with faculty, staff and students at Alcorn State, and community members and area high school students. Upwards of 77 percent of members of these key audiences expressed concern for the potential for outbreaks of avian influenza and other NEIDs in the United States. Only 18 percent viewed medical health professionals as having the capability to detect and adequately respond to NEIDs. Extension educators also concluded that further awareness is needed among these audiences and provided local audiences with community contacts and resource information. Recommendations shared with audiences also included proper hygiene practices and modifying public schools' policies relative to bringing animals into school settings.

Most people do not have a first aid kit or enough food to last through a 72-hour emergency. Knowledge is also limited and most people are unprepared, yet they do have a desire to learn more.

Tennessee State University

Preventing and preparing for potential NEID outbreaks requires community preparedness, say educators from Tennessee State University. In partnership with the Extension Disaster and Emergency Response Network and the U.S. Department of Homeland Security-funded Foreign Animal and Zoonotic Disease

Center at Texas A & M University, educators from Tennessee State focused on sharing critical disease management messages with feed retailers. In engaging this audience both as recipients of education and awareness as well as communicators to farmers, producers and other community members, educators developed fact sheets, educational sessions and low-cost survival kits to create and understanding of NEIDs. Information shared included details on detecting and managing avian influenza, water-borne illness, bovine spongiform encephalopathy, anthrax and West Nile Virus. Educators concluded that community partnerships are key to developing readily-accepted preparedness messages and ensuring sufficient message dissemination.

We need to move re-search done in laboratories out into the community level.

Virginia State University

Teaching and training others who can share disaster and response messages is critical to the mission of educators at Virginia State University. Deemed vital to sharing these messages, Extension Services Family and Consumer Science educators at both Virginia State and Virginia Technological University were the focus of preparedness training sessions. Early knowledge and awareness assessments pointed out a need for greater community preparedness training among Extension personnel. In enhancing existing knowledge, sessions dealt not only with community preparedness, but also developing partnerships within Extension and within communities. Virginia State specialists are following this up with additional resources to enhance training for their colleagues as well as those working within communities who have roles to play in identifying diseases and outbreaks. These include partnerships with the emergency responder community and 9-1-1 services.

Education is key and we need to reach those who are at the greatest risk.

1890 land-grant institutions operating at Level 2 funding:

North Carolina A & T University

Friends and partners are needed to adequately prepare for and respond to NEID threats and are the core of North Carolina A & T University's FRIENDS initiative. An acronym for Forwarding Reliable Information on Emerging and Novel Diseases, NC A & T educators organized a network of partnerships to enable enhanced understanding among minority and small livestock growers in North Carolina. The initiative leveraged the combined strength of the University's College of Veterinary Medicine, Departments of Public Health and Agriculture and Consumer Sciences at NC A & T, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, local health departments, a U.S. Department of Homeland Security Center of Excellence at Texas A & M University, and the County Animal and Health Security Network. Train-the-trainer programs for Extension agents, informational CDs, information cards and posters, a newsletter and workshops are products of this partnership. Assessments of FRIENDS' education and awareness efforts demonstrated that most farm families in North Carolina are now fully informed of disease threats.

There is a need for others to step in and fill the gaps.

South Carolina University

Situated in the county with the highest rate of stroke in the nation, rising HIV and cancer rates, and a population suffering from poverty, South Carolina University community educators are exposed to highly vulnerable populations. Inspired by a statewide program that recognizes good character among its citizens and a commitment for small, committed groups of people to make a difference, SCU is striving to overcome conditions that expose its clientele to disease and the impact that NEID outbreaks could have in the state. Extension educators launched a campaign of community forums to familiarize citizens and those in positions of authority with the threat posed by NEIDs. The forums pointed out

Preventing infection means having prepared people who can rapidly respond to disease threats.

two key challenges: 1) the need to improve communication capabilities and outreach mechanisms to address health and wellness concerns, and 2) the need to improve awareness of and mobilization against health threats. The forums also drew recommendations as to how best to reach populations in need. Extension specialists are developing culturally specific tactics that include placing information in places frequented by vulnerable citizens, such as supermarkets and community centers. Staging a health summit, printing health information on utility bills, integrating efforts with mobile health units, and designing familiar health and wellness icons for message delivery are additional recommendations under consideration.

Community partnerships are key to achieving our goals.

University of Arkansas – Pine Bluff

“Are you ready?” That is the question posed to residents, agricultural faculty at the University of Arkansas – Pine Bluff, emergency responders, county information directors and youth by those involved in the “Saint Francis Rural Emergency Project.” Through face-to-face informational sessions with these key audiences, educators in this project provided plans of action for both potential outbreaks of NEIDs, as well as natural disasters. Insights were also shared on how to prepare an emergency preparedness kit. Youth participating in the session developed their own kits to take home for their families. The informational sessions were a crucial first step in not only preparing residents living in the lower Mississippi Delta, but for organizing county and city officials, and emergency responders. Preliminary research pointed out that although county-wide plans for natural disasters would likely be adequate in dealing with disease outbreaks, many of those playing response roles had no prior knowledge of what county governments would do during an emergency and how best to coordinate with the county and one another. Additionally, mayors or other officials from smaller rural towns were not factored into county emergency response plans instead being forced into “yo-yo” (“you’re on your own”) status. The work done by the University not only ensured stronger preparedness on the part of residents and responders throughout the area served, but created stronger connectivity between all.

Be flexible when working Extension agents and others. You can use other events and opportunities to share your message and gain their involvement.

University of Maryland East Shore

Multiple methods of communication are helpful for reaching multiple audiences where they work, live and play. The team at the University of Maryland (UMD) East Shore put this knowledge into practice in delivering avian influenza preparedness messages to rural citizens and its own university workforce and students. In collaboration with Cooperative Extension, the American Red Cross and a charity organization, the Seton Center, the UMD team reached more than 505 people through health fairs and community events, one-on-one contact, informational meetings and workshops, and the distribution of flyers and brochures. Avian influenza is a significant concern in this part of Maryland. More than 2,000 poultry growers live in the region, elevating the need to ensure the capacity and resource preparedness for dealing with an outbreak. Preliminary research demonstrated that many exposed to this campaign were unprepared, with most suggesting that they simply had not thought about the issue. By linking to existing programs and events, the collaborative started by UMD East Shore increased awareness and knowledge of the threats of a pandemic outbreak and how to prepare and respond by 75 percent among target groups. Next steps include developing a family-based preparedness project to examine other threats and creating a Webpage that will include preparedness teaching materials, as well as displaying current GIS data on bird flu pandemics around the world.

So many families are concerned with daily survival that preparedness is the last thing on their minds. Working with women as home makers is a key to reaching audiences and families due to care giving responsibilities.

We need to build upon the strength and reputation of Extension as a trusted information source.

West Virginia State University

Having access to the right information when an emergency is at hand is critical. For citizens caught in emergency conditions, whether they are elements of an NEID outbreak or a natural disaster, knowing who to contact for information and help is key. Educators at West Virginia State University see themselves as a clearinghouse for disaster preparedness knowledge and through this project, have been determined to establish strong links between West Virginia residents and emergency officials. Fulfilling this dual role, project coordinators began by assessing existing data starting with their own WVSU maintenance department. Recognizing the need for this department to be at the ready when problems occur, it seemed a good starting point for building the knowledge dissemination activity that needs to occur. Results from this group illustrated a desire to be prepared but a lack of knowledge of how to achieve preparedness. Using this foundation, WVSU educators developed checklists for preparedness and an all-hazards approach, teaching citizens how to create emergency preparedness kits. The American Red Cross was one source of background information, sharing its “masters of disaster”-titled programming for evacuation procedures. Future venues for disseminating the WVSU campaign include media outlets, community events and the state fair, childcare centers, online outlets and local television. Efforts to gain public appreciation for these messages will not only focus on these outlets but will strive to communicate using games and entertainment to get people involved and engaged in preparedness.

Our communities need access to information and programs that build and reward character to overcome health deficiencies and challenges.

We need to get people face-to-face and make connections before the disaster hits.

1890 land-grant institutions operating at Level 3 funding:

Florida A&M University

Ensuring proper preparedness in the current generation of animal producers and educating future generations was the goal of the NEID awareness program at Florida A&M University. Recognizing the benefits of linking existing FAMU programs with a disease awareness curriculum, educators reached animal producers already invested in that occupation as well as students considering animal production and animal science as careers. If you have a great message but cannot get it out, it won't do any good, said FAMU, targeting its Master Goat Producers Certification Program as a way to teach producers how to identify NEIDs in animals, and what to do and who to contact when a disease is detected. The disease curriculum became a component of the exam that producers must pass in order to be certified, and around 90 farmers went through the program. As the future generation of animal producers and scientists, students were also a critical audience for disease management education. Through workshops on campus, 60 students learned how to identify diseases, how to handle an infected animal, and chose a specific disease to study in order to then teach farmers about the disease. Thirty students in FAMU's Ag-Discovery Program followed a similar curriculum. They also enjoyed the benefit of receiving lectures from guests from the U.S. Veterinary Medical Service. Students applied their knowledge through a guessing game that started with the phrase, “I'm a cow and my symptoms are...” Project efforts also extended outside of the classroom through the development of video public service announcements. These PSAs were disseminated through FAMU's own broadcasting services, by Extension agents, and at the Sunbelt Agricultural Expo. Materials can also be accessed at www.famu.edu/herds. FAMU plans to capitalize on its early success by continuing to engage current and future generations involved in animal production and integrating the disease management curriculum into its educational programming.

It's important to use partnerships to communicate and overcome community complacency to the challenges before us.

We must see ourselves as the “masters of disasters”. We can use games and entertainment to meet the informational needs of our citizens and help them become better prepared.

1890 land-grant institutions operating at Level 4 funding:

Kentucky State University

Equipping a state's citizens with information, resources and the tools to effectively mobilize against threats to community health means ensuring that everyone -- not just those communities that have higher levels of privilege -- are a part of this effort. This was the goal of Kentucky State University's (KSU) mission as it deployed its diseases preparedness curriculum, "Ready 101," to underserved and disenfranchised communities through Kentucky. African-Americans account for seven percent of Kentucky's overall population. The state's Hispanic population is around two percent of the total. Ensuring KSU's ability to reach these populations meant developing sufficient understanding of their needs and developing partnerships to communicate preparedness messages. In conjunction with KSU Extension, community partners, and public and private local and regional stakeholders, KSU brought its own team of Extension agents up to speed on the issue then turned to community forums and events to share the message. Public forums were held at the Mexican Consulate in Kentucky. In addition, information was shared at the Strengthening Kentucky Families Summit where attendees were parents whose children are in foster care. Information was also shared through KSU's Family Development Program, the Extension Disaster Emergency Response Network (EDEN), and Kentucky's "Longest Day of Play" community event. The next level of Ready 101 focused on African-American and Latino farmers in six counties. Through focus groups, discussions addressed the farmers' disease identification and management knowledge. KSU educators concluded that there is a vital need for more information within this group, ranging from finding the best ways to access information to determining how to develop a preparedness kit. A final level of the Ready 101 initiative strived to engage community partners in ensuring community preparedness. Thirty-five of the 91 community partners invited to organizational meetings worked with the university to examine the following question: "Are we being cooperative as opposed to being collaborative?" The audience included health departments, the U.S. Department of Homeland Security, the American Red Cross, faith-based groups, representative of migrant farm workers with disabilities, and the National Association for the Advancement of Colored People. This assembly generated strong first steps in aligning local, regional and state partners in ensuring preparedness among all levels of society. One outcome was the delivery of informational displays by KSU to community partners. This coincided with a media campaign that included information sharing through community television stations. KSU will reconvene this assembly in Fall 2008 to assess the level of collaboration that has been stimulated.

Langston University

University extension agents play an important role in advancing knowledge and transforming the lives of the citizens and the stakeholders whom they serve. Recognizing this role and the ability for agents to reach targeted populations, particularly the underserved and disenfranchised, Langston University educators focused on their own extension services as conduits for conveying emergency preparedness messages and information about the potential threat of NEIDs. An assessment of agents' knowledge was conducted with the preliminary assumption that knowledge of avian influenza, seasonal influenza and pandemic flu would be low as would an understanding of proper emergency preparedness. The assessment demonstrated, however, that 59 percent of respondents have some knowledge of these bird and seasonal flu. Sixty-two percent were also aware of the ability for animal diseases to transfer to humans. Knowledge of pandemic flu ranked low in the extension agent assessment, as

If you have a great message but can't get it out, it doesn't do any good.

There is an increasing need to spread information and seek collaboration.

Are we being cooperative as opposed to being collaborative?

did an understanding of proper preparedness procedures. Analysis of the results and discussions within the University and with extension personnel followed the assessment. While extension will continue to be an important conduit for conveying preparedness information and sharing knowledge of the impact of NEIDs, farmers and ranchers are also seen as having important roles to play in detecting disease and preventing the spread of disease throughout their farms and communities. The media is another key target audience listed by Langston University educators.

Southern University

Knowledge is power, and nowhere is that more true than in knowing enough to prepare for and respond to an emergency. In deploying their NEID curriculum, educators at Southern University have followed this principle. Through an assessment of the University's organizational capabilities as well as knowledge assessment surveys of University and non-University personnel, SU has taken initial steps to develop a foundation for empowering those best able to convey preparedness information and underserved populations within communities who need the information the most. Echoing the MATCH Project through which they are sponsored, project coordinators at Southern chose a similar acronym to identify their community efforts. Entitled "SUATCH," Southern University Addressing Threats to Community Health, the program examined capabilities in areas such as sustainable agriculture, forestry, economic and community development, nutrition and health programs, and youth and family development activities. The assessment also gathered an understanding of resources outside of the school such as Louisiana State Government departments, the U.S. Department of Homeland Security within Louisiana, and wildlife and fisheries organizations. The second stage of SUATCH engaged participants in a number of events to understand their knowledge of NEIDs and preparedness. Surveying was conducted through the Future Farmers of America, a livestock show, an SU health fair, a parent educator public health conference, a conference of SU alumni, and at a retreat center. The questionnaires, more than 250 of them, covered 28 parishes throughout Louisiana. Sixty-one to 78 percent of all respondents consider NEIDs a threat to their health. Sixty-nine percent, however, are unaware of how their community will react during a crisis. A qualitative approach was also used, as SUATCH led eight focus groups within various communities. Nearly all participants felt that their families were unprepared for an emergency event and did not have a plan. In addition, just one out of eight participants had an emergency preparedness kit. Only three participants had searched for information for emergency preparedness. Feedback as to how best to communicate such information was also solicited. Attendees suggested that print media may not be the best way -- that messages could be communicated electronically through Websites such as Myspace or Facebook, and that churches could be helpful collaborators in getting messages out into communities. Consequent activities undertaken by SUATCH have included presenting seminars for faculty and staff, delivering information as a public health conference, and presenting information on SU's campus radio station. The next step in SUATCH's plans is the formation of community partnerships to make greater gains in empowering communities through preparedness knowledge.

We need to understand where people are in terms of preparedness.

There is a need for more information, sources of information and direction.

There is a need for more preparedness kits and information as to what to put in the kits.

Forging the Path Ahead: Promoting Sustainability

Menia Lee, University of South Carolina

Building a successful and sustainable program is not unlike building a house. One needs a firm foundation before adding furniture, decorating and moving in.

Partnerships, like adding furniture to a house, are a component of sustainability. For those working at a community level, partners can aid the pursuit of community-based participatory research. Acquiring such research can be vital to the sustenance of programs or projects such as those being funded by the MATCH Project. Equitable recognition of all of the partners and having them participate in defining and conducting the research are components of successful partnering that can aid sustainability.

Building trust is an additional component that can encourage the creation of new partnerships and sustain collaboration among existing partners. Recipients of MATCH Project funding should seek out new partnerships and consider building relationships with trusted organizations such as the W.K. Kellogg Foundation, Gates Foundation, Robert Wood Johnson Foundation, Annie E. Casey Foundation, the Centers for Disease Control and Prevention, the National Center for Zoonotic and Vector-Borne Diseases, and the National Institutes of Health. Building trusted community partnerships is the first step in successfully courting these other organizations and providers. Collaborative proposals may be another way to encourage their support. A recent AAAS report on research and development encourages collaboration among organizations, indicating that funding from agencies such as the National Institutes of Health are increasingly taking factors such as this into account.

Trends in funding also show that funding amounts are not getting bigger. When viewed as a pie, one may recognize that the pie itself is not getting any bigger and just having a slice should be appreciated.

Critical to receiving this slice of the pie is the establishment of partnerships. From this one is able to build stronger and more sustainable programs.

Carolyn Perkins-Frank, Prairie View A&M University

One venue for soliciting funding support is through the U.S. Department of Agriculture's (CSREES) program. Getting to know national U.S.D.A. leaders and understanding CSREES are steps to then introducing community-based challenges to which CSREES can then respond and support.

Components of winning CSREES proposals include involving research, education and / or Extension Services. Having a connection with the E-Extension Network is also helpful. CSREES proposals must also include the logic model as a way to deploy and evaluate the project. Keeping tabs on CSREES funding opportunities is easiest through www.grants.gov. Much like the saying with the lottery -- "If you don't play, you can't win" -- if you don't seek funding opportunities, you cannot receive them.

Billy Oglesby, University of South Carolina

Recognizing the needs of a community means understanding that individuals and individual organizations are part of the larger whole. In preparing for best ways to manage emerging infectious diseases, realization must be achieved as to the potential roles on local levels that community infrastructure can play. This understanding may vary from community to community, requiring the assessment of issues such as the areas of priority within a community, the status of existing community-based programs, and the current levels of "readiness" and "information uptake" within a locale.

From a public health perspective, the characteristics of a disaster that have public health implications occur after the event. However, planning must start before hand to ease the institutional barriers and the acceptance of programmatic efforts within an organization that could collaborate to play a role.

Creating an environment for change within a community requires strong leadership. This is true both in dealing with disaster preparedness and recovery as well as challenging existing paradigms that stimulate health disparities. Doing the right thing as a leader is essential to localized management of prepar-

edness and prevention and meeting the needs of a community to encourage positive community development.

Sustainability discussion

Asking the audiences whom we serve about their needs is the first step in building a sustainable discussion. The implementation of this discovery provides a starting point for organizations and individuals to engage one another and develop a collaborative mission and goals. Getting beyond hidden agendas and focusing on the goals of the citizenry enable collaborative teams to then establish credibility and rapport with those they seek to serve.

From the perspective of those working to prevent and prepare for NEIDs, taking this community need-based focus will also serve to address social injustices common in localities throughout the U.S. Investigating societal needs and then implementing solutions to meet these needs are value-laden efforts that can lead to an enhanced public infrastructure and improvements to services provided to those most in need.

Forging the Path Ahead: Cornerstones of Success

Building Successful Community Partnerships

1a. Engaging communities: Key strategies for engaging communities include taking advantage of existing partnerships within one's university and community, and building upon relationships where leadership has already been demonstrated. Doing so requires establishing trust in both formal and informal ways.

1b. Building coalitions: A balance of individual and group integrity is critical when building coalitions. There must also be a consensus around a service goal of providing help to the community.

1c. Developing community partnerships: A focus on a collaborative mission and a sense of urgency are drivers behind the development of successful community partnerships. Staying aligned around a shared vision or passion is a core component to partnering that is more important than money or other resources.

2a. Building trust: Central to building trust with partners and communities is acting and communicating transparently and laying out expectations from the beginning. Trust is something that, however, cannot be built overnight. A positive history, previous community involvement and encouraging partners and target audiences to be part of the process figure in to building trust and furthering your individual institution's identity.

2b. Establishing expectations: Within successful partnerships, each organization involved must have an equal voice at the table. This requires putting effort into articulating a democratic process to permit this to happen.

Benefits and Lessons Learned

3a. Key benefits of this program for Cooperative Extension Programs: Through engagement in the MATCH Project, Cooperative Extension Programs (CEP) have been better able to establish a direction for projects and understand gaps in their own research, education, outreach and community resilience programming. By conducting readiness assessments, CEPs were also able to understand existing levels of community capacity and changes in levels of learning due to the dissemination of information and implementation of programs in communities over time. Higher levels of trust were also achieved in communities and on campuses, as CEP agents were empowered to interact in both settings and create activity that had not previously existed.

3b. Key benefits of this program for community partners: In some instances, Extension agents

themselves were the community partners. In such cases, agents became acclimated to the wealth of preparedness, prevention and recovery resources that were available to them and for distribution to the communities that they serve.

4a. Barriers or limitations encountered by participants: MATCH project participants identified the short timeframe for conducting projects and the inability to accept funding during the middle of the fiscal year as challenges encountered during the project. Procedural limitations notwithstanding, challenges also occurred in working with constituencies. Some target populations were hard to reach, particularly Hispanic audiences who may wish to keep their personal identities private due to concern about immigration regulations. In addition, some project administrators found it challenging to create urgency and concern about a disease that has not already occurred, or to dissuade naysayers who claim that the government is trying to hide true information and details from citizens.

5a. The most important lessons learned about new and emerging infectious diseases: Inevitability and a need to take ownership at local levels are descriptors MATCH project participants use when thinking of the potential impact of NEIDs in their communities. There is clear understanding that the barriers and geographic borders that once sheltered us from the transmission of diseases have dissipated to the point that an outbreak in one part of the world can become a global dilemma.

5b. The most important lessons learned about organizational (CEP) preparedness: Preparedness within organizations is required to succeed in our goal of being as well as equipped as possible to confront disasters and empowering our constituents to do the same. Previously, just one person within CEP has been the center of expertise in disaster preparedness and disaster management. Clearly, however, training must be done at all levels of CEP organizations and across program areas. A key is the communication of the resources available during a crisis and how to communicate with one another during an event to avoid the confusion of multiple calls to multiple response agencies. Use of the 2-1-1 emergency response system is also an important communication tactic in times of need.

5c. The most important lessons learned about community preparedness: By the very nature of their mission, Cooperative Extension Programs are called upon to serve varied and diverse communities of constituents. With this in mind, it is vital to recognize variances in the strategies that CEP needs to implement in order to empower people who need to be prepared for emergency situations.

5d. The most important lessons learned about communication channels: There can never be enough communication before, during and after a disaster or emergency incident. The challenge is how best to reach diverse audiences within single communities and to measure the complexities of communication coming from different sources. A single, trusted entity may be the best communication source for a particular audience or an entire community, while taking into consideration the differences between the “i-pod generation,” the “hard copy” generation, and senior citizens or persons with disabilities or special needs.

5e. The most important lessons learned about cultural sensitivity: Community organizers, educators and those sharing important information must recognize that a tactic, approach or style of delivery that works in one place with a particular group may not work well in another place or with another type of constituency. Languages, background and culture all influence this acceptance of a message and the messenger. People need to be met “where they are” and thought about in a broad context that includes literacy levels, age, and varying levels of suspicion regarding governments and universities.

Sustainability

6a. Cooperative Extension Programs can extend the impact of their efforts by undertaking the following: Cooperative Extension Programs can draw strength not only from forging sustainable alliances with non-institutional partners, but can look to institutional partners as well. Sharing the results of work done through the MATCH Project with internal audiences can lead to support and the development of new programs on campus.

6b. Community partners can extend the impact of their efforts by undertaking the following: A lapse in funding should not be a barrier to continued conversation and investment in finding ways to advocate community policies for better health and preparedness. Extending outreach to non-traditional partners could provide new resources and ways to share the message. A private-sector manufacturer, for instance, could provide funding and a space by which to share messages, having been provided some understanding of how disaster preparedness and infectious diseases can affect its employees. Outcomes could also include developing a geographic understanding of where employees live and how an emergency could affect the operation of that private sector employer. Informational campaigns could also fall into place to serve both the private sector and public sector. In summary, continued focus should be placed on how to move forward information that is vital to society with a focus on how they should personally interest in preparing for an event.

7a. The resources that are needed to continue working with current community partners: To continue working with community partners beyond the initial scope of funding for a project, needs ranging from staffing to equipment to maintaining a spirit of engagement must be met. Ideally, a project of the scope of those carried out by the MATCH Project participants needs a full-time staff member to coordinate relationships with current community partners and to expand to incorporate other community partners. Technical needs would include printing equipment and other communication supplies. Project partners also need incentives, such as offering partners something to support their work and recognition for their participation. A spirit of engagement must also be maintained. The upside is that growing this engagement to include multiple organizations and campus departments could provide expertise when it is needed most. Examples include utilizing the skills of partners who are from a university communication department when the need for a public service announcement or marketing piece requires development.

7b. The resources that are needed to continue extending the reach of a community project: Having a complete strategic plan describing short-term and long-term goals for a project can provide an important basis for knowing when, where and how to expand the reach of a project. From here, an organization might be able to best understand when to bring in community organizations and expand a project's knowledge base by working with faith-based groups, school systems, health organizations, university extension services, and potential partners throughout a university. Planning can also provide insights and a strategic basis for knowing when to connect with non-traditional partners who might otherwise be overlooked. Technology and the transfer of technology is another vantage point that can permit project reach. Knowing how to frame that transfer and how to use technology itself to reach as many people as possible through external sources are key questions to be addressed. Lastly, needs as simple as having transportation are not so simple when it may be holding back a project from its potential.

8. Realistic funding sources to be considered include the following: A long list of potential funding sources is available and should be considered for the continuation of projects within MATCH. The list includes the following:

- The Centers for Disease Control and Prevention
- State departments of health
- The Extension Disaster and Emergency Response Network (EDEN)
- The U.S. Department of Homeland Security and its Centers of Excellence, such as the Foreign Animal and Zoonotic Disease Center
- Rural development funds
- The Ford Foundation
- The W.K. Kellogg Foundation
- The U.S. Department of Education
- In-kind funds
- Grants that focus specifically on minority-serving institutions
- The Horizon Foundation
- Local community foundations that address specific health issues
- Interdisciplinary funding found within university systems

- University departments can open new doors to funding. These departments can include speech, education and physical therapy
- The Robert Wood Johnson Foundation, the Duke Foundation, Casey Foundation and the Gates Foundation
- Money from city municipalities and community block grants
- Public and private sector funders
- Non-traditional sources of funding

Future plans

9a. Ways to leverage the experiences and results of the community projects to extend them beyond this funding cycle include the following: A variety of internal and external means exist to leverage the knowledge gained and outcomes of the community project. Internally, the development of strategic plans could serve many purposes. Externally, tools for outreach and continued communication could extend projects. A report from the MATCH Project, for instance, could better position individual projects to approach potential funders, to gain the favor and support of local community leaders, and to gain prestige within their own universities. There is a belief that having tools like this at one's disposal could initiate in-roads that would also lead to the opportunity to acknowledge the value of a potential partner's resources in advancing one's own project and gaining the ability to share resources with another organization.

9b. Ways to leverage experiences and results of the community projects to extend them to other communities include the following: Collaboration is about creating win-win situations with another organization or initiative. Linking to existing educational activities, events or resources is one way to accomplish project goals while providing value to a partner. Harnessing the interests and abilities of students in a university environment is another way to extend a project. Some students may need to complete community service requirements and could eagerly participate in a well-established project that provides enrichment to a community.

9c. Ways to leverage experiences and results of the community projects to extend them to other Cooperative Extension Programs include the following: There is a wide variety of ways to align with other Cooperative Extension Programs (CEP) to create mutually beneficial situations. The list of possible ventures includes:

- Offer training opportunities for CEP personnel or their audiences
- Jointly write publications
- Integrate proposals
- Share presentation opportunities
- Integrate with other departments on campus

10a. Next steps that should be undertaken by Cooperative Extension Programs include the following: Integration and collaboration are keys to bringing projects up to their full potential on a university campus. Workshops and other forms of teaching and outreach are ways to gain interest and include new partners. These partners could participate in the development of a second phase of activity that involves the original stakeholders and collaborators. This inclusion could open new doors to expanded activities and additional funding opportunities that may have been overlooked in the past. Within a university setting, project leaders may also approach administrative representatives to incorporate emerging infectious disease prevention and planning exercises in to campus-wide policy. A university preparedness statement could be a policy statement that is renewed on an annual basis.

10b. Next steps that should be undertaken by the 1890 Cooperative Extension Programs as network include the following: The 1890 network was originally established to share new information and new ideas. This network should continue to honor this goal and should consider multi-institutional research among its network-based activities.

10c. Next steps that should be undertaken by the MATCH Project include the following: Planning,

continuity and communication are essential to sustaining the system that the MATCH Project has established within the 1890 network. A universal strategic plan that engenders the support of all of the 1890 schools that participate in the MATCH Project could serve to continue the foundation that has been built and take advantage of the combined strength of this consortium of schools. By creating something like a task force across the 1890 network, collaborative partners could be viewed as a more viable and attractive funding candidate versus separate programs at individual schools. Establishing a unified network could also be attractive to associations and other organizations that could be important partners for the effort, such as the American Public Health Association, the National Association of State Universities and Land Grant Colleges, and the Association of Extension Administrators.

Maintaining the continuity of this effort is also important for building upon relationships that have already begun within the communities that projects have served. Should 1890 project administrators discontinue the relationships and then attempt to reunite with community partners, these collaborators could reject the opportunity due to inconsistency.

Maintaining communication linkages among South Carolina MATCH Project administrators and the 1890 institutions is also desired. Providing expertise and broadcasting funding opportunities are seen as key benefits of ongoing communication. Participants would like to have a system-wide conference in 2009 as a way to maintain the effort that has been started and further the impact of individual projects within the communities that they serve.

Evaluation of the MATCH Capstone Event

From this point forth, the MATCH Project administrators should strive to:

- Develop a training curriculum based on information shared at this event
- Collaborate to find and apply for larger amounts of funding
- Integrate the NEID curriculum into multiple Extension programs
- Communicate the public health benefits of this program to legislators
- Collectively share our intellect and financial resources
- Partner with the National Association of Community Health Officials (NACCHO)
- Produce a report that effectively describes what this Project has accomplished
- Collectively seek funding sources to avoid competition and animosity
- Integrate the materials presented at the conference by Dr. Troutman, Dr. Benjamin and Mr. Wakenight

Dr. Adewele Troutman
Director, Louisville Department of Health

Growing up in Bronx, New York, Dr. Adewele Troutman experienced first-hand health inequities. In a setting lacking an adequate health infrastructure built upon foundations of social injustice, Troutman was able to see inequities played out in his own community.

The setting and the era in which he grew up was also a seat for the cultural nationalist and black power movement. Experiencing this phenomena at the age of 19 created in Troutman a desire to study and understand culture and African American history.

These experiences and interests have lead him to a career in health and pointed him toward the goal of eliminating health inequities through the improvement of social justice throughout the world. As the director of the Louisville, Kentucky, Department of Public Health, Troutman has started this effort in his own community.

Troutman's department hosts the first center for health inequity in the United States. Examples of inequity in Louisville are very prevalent, with a stark contrast between poor African Americans and poor whites versus suburban dwellers with higher incomes, higher levels of education, greater access to resources such as supermarkets, and distinctly higher levels of access to health care.

Louisville is a case study of the connection between occupation, education, income and health. Most living in urban centers in Louisville die prematurely at a rate of three to 10 years earlier than their counterparts living in suburban areas. Those in the wealthier eastern section of Louisville have a life expectancy of 80 years. Downtown Louisville residents are mostly African American, and the conditions in which most adults live are marked by a history of having grown up in poverty, having an income of under \$20,000, and having higher rates of lung cancer, heart disease and infant mortality. There is also a link between lower high school graduation rates and rates of death, prompting the notion that education policy should be linked with health policy.

The income of the wealthiest one percent in Louisville, mostly residing in the eastern section, have a level of wealth that is greater than the lower 99 percent combined. Louisville reflects studies conducted in the United Kingdom that link lower levels of employment with lower levels of health in almost every category of illness. The conditions in Louisville also fit with a 2002 study that projected that millions of Americans have died prematurely due to unnatural causes.

Race and discrimination, says Troutman, must also be part of the discussion. Overcoming racism is still a challenge in 2008, particularly the societal view among some who view past history as someone else's burden and that proclaims, "I had nothing to do with that." While this statement is true, each of us have grown into positions of white privilege or been among those who have been left out for hundreds of years.

Inequities as defined by Troutman can take the form of chronic and acute diseases, as well as exposure to emerging infectious diseases. He is particularly concerned about changing climate conditions and the move northward of bugs and other disease carriers to colder climates. True to disease pandemic situations being played out globally and locally, those who will suffer most in the U.S. when we have pandemic diseases will likely be those who are already struggling with health inequities.

Troutman also views greater exposure to the impact of natural and manmade disasters a characteristic of inequities, and points to those populations who generally were affected more significantly by Hurricane Katrina than other groups.

As is played out in Louisville, where one lives can contribute to one's level of disease exposure. Access to adequate health care is a very critical issue, and refers not just to the location of facilities, but the type and quality of practitioners that are available, whether or not a facility accepts Medicaid or any type of

payment, the hours during which a facility operates, and the distribution of resources that permit a facility to stay in business. All, says Troutman, are social determinants of health.

Troutman is confident that we are at the beginning of a great social revolution. He feels that in the United States, some are starting to consider health as a basic human right, yet have not matched other countries and their constitutions that reflect this basic health as a tenet. The U.S. Constitution urges life, liberty and the pursuit of happiness as inalienable rights, yet all are unachievable, says Troutman, without including health.

Troutman reflects on the teachings of Rev. Martin Luther King, Jr., and his statement, "Of all the injustices, inequities in health are the most shocking and inhumane." Overcoming these health inequities through social justice must include freedom from bias. Troutman cites the "redline" program that provided monthly mortgage subsidies to G.I.s following World War II as an example of institutionalized racism and efforts that established a culture of haves and have nots.

Advancing the United States' ability to overcome health inequities requires a reframing of issues and restating of questions in a way that modifies focus and direction in resolving the issues, says Troutman.

Health vs. health care: The World Health Organization definition of health talks about community empowerment and having access to goods and services. In the U.S., we spend most of our time addressing symptoms – not the causes of the symptoms such as conditions within our urban centers.

Personal choice vs. structural and systems change: In many communities, such as urban environments, there are a lack of systems that prevent citizens from making health personal choices. "If they'd just eat right, the community would be better," remark those unfamiliar with the plight of getting five to nine servings of fruits and vegetables per day in urban settings. In many cities in the U.S., there are few supermarkets within walking distance. The same is true in rural settings with limited or no access to transportation. Those living in urban and rural environments consequently face the very definition of a food desert. One example of systems failing people is that of a 56 year-old woman who died due to advanced carcinoma. A papsmear two years earlier revealed lumps under her skin, yet presented conditions that made the carcinoma 97 percent curable. Upon hearing of her death, doctors could not understand why the woman had not sought medical attention. It was recognized later that the woman lived in the housing projects. This was a place where the elevators were often broken, where the mailboxes were broken, and where the postal carriers were scared to deliver mail to the neighborhood. There were also thugs controlling her building who charged residents money to leave the building. For the woman to visit the doctor, she would have had to take three buses to reach the hospital, and likely would have been visited by a foreign doctor beset with seeing 50 patients per day. In the specific instance when she did receive the papsmear exam, the chief physician attending her was male and had left her at one instance to be exposed in the examination room. The wait staff at front desk were of little help as they were underpaid and overworked. The questions that we ask then are about the systems that failed this woman and that prevented her from getting care. Understanding this woman's life — one of inequity, poverty, and affected by teen pregnancy and incredible stress — help us understand the systems that need to be fixed.

Upstream vs. downstream: Typically, the issues with which we are dealing in health care are "downstream" stuff. Responding to health symptoms and struggling to gain access to healthy foods are examples. The causes of these examples and others are upstream and constitute system issues such as a lack of access to health care and institutionalized racism. A metaphor for viewing this situation is told in the story of two fishermen sitting by the riverbank. The fishermen suddenly notice a baby floating past them. Suddenly, a second baby floats past. The first man jumps into the river to save the babies, while the second man walks away. The first man asks the second where he is going. The second answers, "I'm going upstream to find the person who's throwing babies in river."

Individual action vs. social movements: We must reframe the issues confronting society and strive to

be active and committed to creating change through social movements and collective action.

Programs vs. policy change: Focus needs to be shifted to the policies that will make a difference in driving health equity and social justice. Education policies and economic development policies must be recognized as having influence upon community health and the distribution of inequities within local settings.

Creating health equity vs. eliminating health disparities: Equity is not the same thing as equality. Lowering the health status of those in the upper levels of society might make things equal but would not be equitable.

Market justice vs. social justice: This conflict represents a philosophical disconnect in our national view of health. Our current health care delivery systems are market driven. It contends that the individual must take advantage of benefits and deal with the burdens of society, and if you cannot do so successfully then it's your poor luck. The current view represents a social Darwinism based on factors in society that impede the fair distribution of benefits and burdens.

Key to the questions we must ask is the fundamental query, "But why?". Doing so gets us moving upstream to address the causes of the causes versus repeatedly treating the symptoms only. It overcomes being caught in a cycle of insanity, defined by doing the same thing in the same way and getting the same result.

Next steps in addressing these systemic breakdowns is initiating action at the level of national and community health. It recognizes that health inequities are systemic, avoidable, unfair and unjust. We cannot change social structures but need to work in policy development, community engagement, and establish a social movement. These next steps must therefore include:

- A mosaic of people and partners who must come together to make vision a reality
- Citizens taking political action beyond issues such as eating healthy
- Empowering communities and improving the social conditions that drive the health of populations
- Pursuing certain things because it's the right thing to do — not just because it's of self-interest — recognizing that a right to health is the most important social goal

Troutman concludes that the foundation for ensuring everyone has a right to better health is based upon the existence of universal principles. This gives this mission a spiritual base and not just a pragmatic base. Health, by Troutman's definition, is a balance of mind, body and spirit. When the spirit is out of whack then one is unhealthy. This can be seen in individuals and in communities. The spirit of both can be either healthy or unhealthy. Achieving spiritual balance and consequently better health is a basic human right — not just a privilege.

Dr. Georges Benjamin
Executive Director, American Public Health Association

Responding to a disaster at a community level quickly and efficiently requires a mindset to anticipate what could happen and rapidly enact ways to manage those unanticipated events. The events of September 11, 2001 and the anthrax – letter attacks were both examples of events that were previously unanticipated and required quick action of the part of those in positions of responsibility and emergency response. The letter contamination incident revealed barriers to rapid action. Communication within the response community is one example. Decision-making was stymied by an inability for those involved to exchange accurate information and determine the most appropriate sources of information.

The first incidence of contamination occurred in Washington, D.C., affecting a man from Maryland who was then hospitalized in Virginia. As this man's job was to transport mail from a single post office to BWI Airport near Baltimore, there was fear that he may have been exposed by a release within the airport. Only later was it determined that he dropped off mail outside the airport, decreasing the potential effects of the event.

In all, the event led to 5 deaths, more than 33,000 people were prescribed antibiotics and millions of dollars were spent to address this conflict. The event exposed our nation's misconceptions about its level of preparedness and demonstrated the potential that a bioterrorism disaster could have on our shores.

The event has fueled the American Public Health Association's drive to build a campaign to strengthen the preparedness of the public health sector and our nation. The measure of this strength and ability to respond to disasters is measured by community resilience and the capacity to mitigate the effects of a disaster. For a small community, a disaster could be a fire at the only local supermarket. For other communities, a disaster could be of a different scale, such as an earthquake. Either could be a major disaster for a community, particularly if preparedness, prevention, response and recovery plans are not in place.

Anticipating the next disaster and preparing accordingly is a never-ending quest. As soon as a community thinks that it is prepared for what they believe is going to occur, another disaster comes along. The integration of planning and practice into communities and individual lives are keys to making this cycle more efficient. An individual mindset could be putting enough supplies into place to last two days. Getting this right in the short-term then could make it feasible for individuals and communities to get it right for three days and then six days and beyond.

With funding from the W.K. Kellogg Foundation, the APHA is enhancing community resiliency by enabling its affiliates to prepare for and respond to disasters. With at least one affiliate in every state in the U.S., many are being helped to link with other organizations and officials on a variety of levels to prepare for incidents. The APHA hopes that this will also position the Association to be seen as one that can be more involved in planning and preparation activities, and specific events such as a pandemic flu outbreak, an earthquake, tornado or similar incident.

One barrier that the APHA is striving to overcome is the dissemination of accurate disaster-response information to communities that could be affected by an incident. The Association is a self-described media advocate, working to move information to reporters. The challenge rests in media outlets focusing on the reporting of events versus sharing public health advice and direction that is vital to citizens' needs during that event.

The APHA's Annual Meeting is a time where those working in public health gather to understand how best to serve the communities in which they work and live. At the 2008 session, guest speaker Michael Mamot will address the connection between health and wealth. Mamot works on the social side of health, examining social class and money as factors leading to or preventing one's ability to receive needed medical care and health support. Mamot's research is particularly relevant to parts of the U.S. such as New Orleans, still reeling from the effect of Hurricane Katrina. The incident has pointed out the

differences between those who have access to health care through social and economic privilege and those who do not. It has also emphasized the recovery stage of an event, and the preparation for post-event needs such as disaster insurance and rebuilding one's home.

Additional sessions at the Annual Meeting will include a special session on "spanning borders" and the factors that are in place that are enabling the transmission of zoonotic diseases from local settings to other parts of the world. The MATCH Project will also take center stage, featuring outcomes from the Project's investment in the 1890 land-grant institutions throughout 2008.

Trent Wakenight
Project Coordinator, Local Action Global Health
Michigan State University

Managing the convergence of humans, animals, the environment and disease

Local Action Global Health seeks to establish an awareness of the trends and challenges within the convergence of humans, animals and the environment, and an understanding of strategies for the management of dilemmas within the convergence

Factors working at the convergence of humans, animals, the environment and microbes are increasing the potential impact of new and emerging infectious diseases in ways never before seen.

- Our human population is estimated to reach 9 billion by 2050
- Environmental health is being threatened by increasing animal production to feed a growing world
- Technology is increasing the ability with which animals, humans and products can move across collapsed spaces bringing disease from one part of the world to another
- There are more than 1,400 known pathogens with three to four more being discovered every year

A tool used to convey the connectivity between disciplines and sectors, and trends is the Convergence Map. It allows individuals and organizations to identify their place and role in the convergence context, those areas and sectors operating around them, and other sectors and groups with whom they should be collaborating.

Local Action Global Health also seeks to create communities of practice within the convergence issue. Four workshops held in Salzburg, Austria, in 2007, and at the University of Minnesota, Michigan State University, and Earth University in Costa Rica in early 2008, have united animal health and public health professionals from industry, government and academia.

These workshops have formed lessons learned, such as the premise that this interdependence between species requires a dilemma management view operating across multiple sectors. This differs from the traditional problem / solution mode of thinking and isolation of these challenges to single disciplines.

1st Lesson Learned:

Science and society are increasingly interacting and interdependent in managing the threats facing human and animal health

2nd Lesson Learned:

Managing dilemmas within the convergence will require collective action by many

3rd Lesson Learned:

From local to global, the biggest beneficiary for animal health activities is public health

4th Lesson Learned:

We must motivate leaders at all levels including those at the grass-roots to address convergence policies and resources

5th Lesson Learned:

Partnership across diverse sectors is critical to sustaining action at the convergence

6th Lesson Learned:

Injecting passion into what we do is a key part of the personal commitment needed to manage disease dilemmas

7th Lesson Learned:

Social movement on local levels is necessary to cultivate attention and affection for convergence issues