Introduction
At the request of NIEHS, a community forum was held in Eastern Kentucky to gain an understanding of health concerns among people in the rural Appalachian region. The forum was organized through a joint effort among the University of Kentucky’s Superfund Research Program project cores. The Research Translation Core (RTC), Community Engagement Core (CEC) and local community leaders invited citizens from five surrounding Appalachian counties to attend. The forum connected people to raise awareness about on-going regional efforts promoting a healthier more resilient Appalachia, as well as, learning citizens’ concerns surrounding health.

Methods
The forum included a four member expert panel that shared success stories and highlighted local, state, and national efforts intended to promote health and well-being in Eastern Kentucky. During the two-hour forum, panel members responded to questions posed by attendees asked via notecards and read by the master of ceremony.

The forum was audio and video recorded then transcribed verbatim. A general inductive approach with grounded theory principles was used to guide data analysis of forum transcripts. Codes were identified independently by two coders, of which one was immersed in both data collection and analysis. Themes were identified using the thematic open-coding scheme. The open codes were collapsed into higher-level axial codes to identify patterns and relationships within the data and to identify salient themes.

The analysis of submitted questions and responses of panel members, revealed 6 major themes: reducing health disparities, community engagement, impact of environment on health general health, community needs, and health advocacy. However, only the 3 most frequently referenced themes are highlighted.

Theme 1: Reducing health disparities
Subtheme 1.1: Health education and access to healthy foods
A number of comments made by panel members explained the resources available to community members in response to their questions and concerns pertaining to overcoming health disparities in their community. Mountain Comprehensive Health Corporation (MCHC) and the Center of Excellence in Rural Health are both healthcare facilities located in the Appalachian region of Kentucky that work towards decreasing the health disparities their residents face.

Health education and access to healthcare and healthy foods are two important ways these healthcare facilities try to improve the health disparities that afflict this region. One example of improving access to healthy foods is the FARMACY program implemented by MCHC. The FARMACY program provides a prescription for fresh fruits and vegetables to low-income residents suffering from a chronic disease. Among panelists, health education was the most agreed upon method for improving health disparities of this region, many stating that health education should start earlier in life. An important point being that kids can be change agents as well and intervening in the school system has the potential to be most effective because it provides a captive audience in a learning environment.

Subtheme 1.2: Access to health services associated with oral and mental health, and drug abuse
Forum participants also highlighted access issues to oral and mental health services as well as drug abuse treatment programs in this region of Kentucky. The Center of Excellence in Rural Health have programs established to improve many of these issues. The center has multiple mobile dental vans that operate in the schools throughout the county to improve oral health status in school-age children. They have also started a program that allows Community Health Workers to provide assessments of school-age children to determine if they qualify for Medicaid, Kentucky Children’s Insurance Program (KCHIP), and other resources. Mental health and drug abuse are more complicated issues to address, and the panel of experts believe that changes in policy are necessary to address them, largely through insurance reimbursement.

Subtheme 1.3: Water quality
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Twelve trainees representing UK, Louisiana State University and Duke University assisted with staffing the forum, which allowed them to directly interact with community participants.

Results
Approximately 52 citizens attended the forum of which the average age was 49 years. Approximately 17 questions were submitted to the panel during the forum. The analysis of submitted questions and responses of panel members, revealed 6 major themes: reducing health disparities, community engagement, impact of environment on health general health, community needs, and health advocacy. However, only the 3 most frequently referenced themes are highlighted.

Theme 2: Community engagement as a change agent
Subtheme 2.1: Community engagement and program development
Panelists recognized the need for the buy-in of community members in order to implement effective programs. A panelist stated “we are involved in the community, we are seeking ways to improve it.” Another panelist commented “I want to talk a little bit about how we use community engagement, it is a part of everything that we do, we want the community to be on our advisory boards, talk about the needs that they have in their community and across the state, and how can we work with that community to come up with solutions for those things that they identify.”

Rural communities are known for their tight knit communities and the Appalachian region is no exception. Focusing on the community and its needs is crucial for improving the issues that plague it.

Theme 3: Impact of environment on health
Subtheme 3.1: Water quality
The environment and its impact on health was one of the largest concerns of forum attendees. Specifically, water quality being the greatest concern. The Kentucky River has been contaminated from the coal mines, as well as, straight piping in older homes. This contamination has left the residents with a sense of loss; the river is no longer safe for them to go swimming, boating, or even drink from the creeks on their family farms. When the contamination reaches dangerous levels the residents are advised to boil any water they will ingest or to purchase bottled water. This creates an issue for the impoverished that do not have the money to purchase bottled water. Forum attendees were also concerned if the environmental contamination and pollutants they face could contribute to the region’s higher rates of chronic diseases.

Subtheme 3.2: Healthy diet to help protect against environmental contaminants
The importance of healthy diet, specifically one high in fruits and vegetables, was stressed to the audience because “fruits and vegetables contain components that can help detoxify these different chemicals that you are exposed to.” This provides a simple personal action for community member to protect themselves. These conditions have left many residents feeling helpless but panelists assured community members these situations can be improved and that it takes community action. “So I think, there’s no simple answer but you all have to work together, in other words, it’s a problem for everybody.”

Conclusion
The challenges identified by attendees of the Appalachian Health and Well-being Forum held in Eastern Kentucky included access to affordable healthcare and healthy foods, disparate levels of chronic illnesses, and concerns pertaining to mental health, drug abuse and exposure to environmental pollution and contaminants.

The healthcare facilities established in Eastern Kentucky have existing programs to address many of the identified challenges. The forum identified several positive attributes of organizations in Eastern Kentucky in that 1) community leaders are working to change the mindset of people to one of being proactive about their health to prevent or ameliorate the progression of chronic disease, 2) community programs are developed with the input and active engagement of community members because they are valued, and 3) community leaders are able to collaborate to leverage funding sources to improve the health of citizens.

Continued funding is needed in these areas to support ongoing health education, reduction of environmental pollution, particularly air and water, and to enhance the built environment to provide healthy food and physical activity opportunities for rural residents.

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