



HEALTHCAP

PROJECT NEWSLETTER No. 2 / 2015

HEALTH RESEARCH CAPACITY AND WATER-RELATED DISEASES

The Government of the Republic of Uzbekistan pays great attention to environmental health issues. However, it is necessary to strengthen the capacities of health research and administration in order to improve the surveillance and monitoring for evidence-based decisions. Even though environmental health research institutions have been strengthened and equipped with national and international programs and projects, there is a big demand for qualified personnel with advanced research skills.



Environmental health issues are a priority in the Uzbekistan national context. Attempts can be made to build health research capacity at various levels (individuals, organizational and institutional) by strengthening the health information system,

improving the surveillance and monitoring, and developing improved risk assessment strategies.

HEALTHCAP uses a combination of disciplinary and interdisciplinary approaches to improve risk assessment strategies for improving health-care strategies, with specific reference to water-borne diseases. Together, these offer added values and for decision-makers useful information for the prevention of water-borne diseases. The findings from the research will be used to strengthen water and health data bases, offer insights for public health policy, and build health research capacity. These themes will facilitate overall coordination and promote dialogue to empower stakeholders to undertake, interpret and disseminate high quality research in this area.

This newsletter, which is published twice a year, contains information on the progress of the HEALTHCAP project and includes news, reviews, articles etc.

- *HEALTHCAP Team*

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CLIMATE AND HEALTH IN UZBEKISTAN—CASE OF TASHKENT PROVINCE AND LESSONS LEARNED

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Climate conditions has influence on the development of various pathogens, including causative agents of acute intestinal diseases and bacterial dysentery. The article examines the spatial coincidence of monthly temperature, water quality (Coli-index and Total Microbial Counts) and water-borne diseases (bacterial dysentery and acute intestinal infections), drawing on a five year (2006-2010) data set for districts in Tashkent province.

Comparative study of the incidence rate of acute intestinal infection and bacterial dysentery across the districts for the period reveal, relatively high rates of acute intestinal infections being reported in Tashkent and Yangiyul districts, and in the Angren and Olmalyk towns. Relatively high rates of bacterial dysentery were reported in Parkent, Tashkent and Yangiyul districts, and in Angren, Olmalyk and Chirchik towns in comparison with other districts and towns the Province.

Integrating the temperature, water quality and acute intestinal infections diseases reveal high spatial coincidence in Yangiyul district (0.801 -0.9), comparatively lower correlation (0.101 and 0.200) was reported in Parkent, Angren, and Urtachichik districts (Fig. 1).

The analysis shows that Yangiyul district is the most vulnerable area regarding the incidence of acute intestinal infections. It can be explained, that geographically Yangiyul district is located in downstream area of the Chirchik River basin. Canals in this district accept dscharges of biological treatment plants of Tashkent city. The efficiency of

these plants equals to 55-65%, due to old facility constructed at the beginning of 70s of the last century.

The analysis is only indicative of the growing links with climate related variables. It demands to explore the role of complex influence of various environmental (including climatic conditions), socio-hygiene, institutional and other factors, taking part in forming of water-borne diseases. Although the complexity of these processes is being increasingly realized, current research and management approaches include only a subset of the considerations and interdisciplinary exchanges needed to approach and realize sustainable solutions for prevention of such diseases.

This study proves the need for new integrated approaches to address the challenges of water-related infectious disease. Interventions to reduce infectious disease incidence, particularly those that are water-related, are those efforts are generally directed against proximal causes of infection transmission, paying less attention to the more distal causal factors. This proximal focus comes from an individual-based approach to etiology and epidemiology that emphasizes the immediate and short-term risk factors. Incorporating more distal processes into analyses and designs of interventions will result in more sustainable interventions. This approach requires both systems-level thinking and an interdisciplinary approach to research and intervention design.

Feruz Alimova, PhD Candidate

Correlation between Climate, Water Quality and water-borne diseases

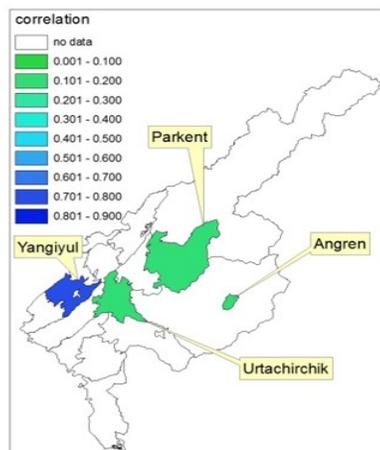


Fig. 1 Acute Intestinal Infection

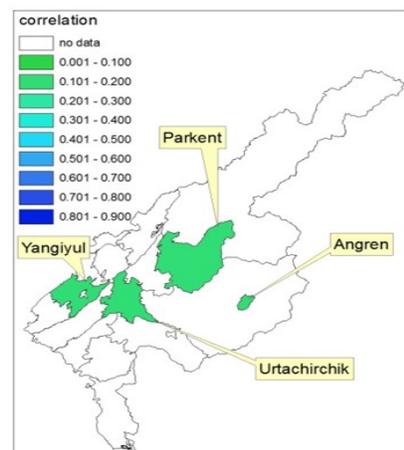


Fig. 2 Bacterial Dysentery



ACCESS TO DRINKING WATER IN UZBEKISTAN

Lack of drinking water is the harsh reality for many Uzbeks

Improvements of the provision of potable water in remote regions of Uzbekistan in process

Water supply remains a critical issue in Uzbekistan. Even in areas with sufficient natural resources, the water supply systems cannot provide enough drinking water for all its inhabitants.

There are many discussions about the adequacy of the water supply in Uzbekistan, and the Ministry of Agriculture and Water Resources admits that the country's water system is extremely run-down and requires an overhaul. The government is promising to modernize water supply systems in cities in 2014-2016 and then move on to rural and remote areas.

Note: Information is drawn from Uznews.net, Society: <http://www.uznews.net/en/society/26670-clean-drinking-water-is-a-luxury-for-most-uzbeks> (accessed: 26/11/2014)

In February, the Cabinet of Ministers in the Republic of Uzbekistan issued a decree "on additional measures to provide the settlements of the republic with drinking water". The document was adopted in order to improve the coverage of settlements of the country that have no piped water supply with drinking water, including remote and sparsely populated rural areas.

The government planned to transfer special equipment of domestic production for transportation of drinking water, including water carriers, tractors with a special trailer and cisterns to remote areas of the country.

Note: Information is drawn from UzReport, Society: http://news.uzreport.uz/news_3_e_117108.html (accessed: 26/11/2014)

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CONFERENCE NEWS

ICEPPHI 2015 : XIII International Conference on Environmental Pollution, Public Health and Impacts

Istanbul, January 26-27th, 2015

The interdisciplinary forum focuses on Environmental Pollution, Public Health and Impacts.

2015 UN-Water Annual International Conference. Water and Sustainable Development

Zaragoza, January, 15-17th, 2015

More than 300 participants from United Nations Agencies and programmes, experts, representatives of the business community, governmental and NGOS will meet to discuss the post-2015 international agenda for water.

Conference on Urban Health for a Sustainable Future: Post 2015 Agenda

Dhaka, March 9-12th, 2015

Scientists, practitioners, policy makers and community organizations will exchange ideas and advance research and practice that promote the health of individuals who are in urban regions, including those individuals who belong to disadvantaged groups.



RESEARCH NEWS

Estimating Diarrheal Illness and Deaths Attributable to *Shigellae* and Enterotoxigenic *Escherichia coli* among Older Children, Adolescents, and Adults in South Asia and Africa

2014

PLOS Neglected Tropical Diseases

Lamberti, L., A.; Bourgeois, A. L.; Fischer Walker, C.L.; Black, R.E.; Sack, D.

2015

2016

While *Shigellae* and strains of enterotoxigenic *Escherichia coli* (ETEC) are important causes of diarrhea-associated morbidity and mortality among infants and young children (<5 years of age), their health impact in older age groups is unclear. This paper shows an attempt to quantify the overall burden of shigellosis and ETEC diarrhea among older children, adolescents, and adults in Africa and South Asia, the two regions with the highest levels of diarrhea-related morbidity and mortality worldwide by using to methodological approaches. The study underscore the importance of *Shigellae* and ETEC as major causes of morbidity and mortality among older children, adolescents, and adults in Africa and South Asia. It calls for understanding the epidemiology of these pathogens for the development and use of future vaccines and other preventative interventions.

Influencing factors for household water quality improvement in reducing diarrhea in resource-limited areas

January-March 2013, 2(1)

WHO South-East Asia Journal of Public Health

Zin, T.; Mudin, K., D.; Naing, D., K., S.; Sein, T.; Shamsul, B.S.

This paper focuses on water and sanitation as major public health issues, especially in areas with limited resources. The research was undertaken to study the influencing factors for household water quality improvement for reducing diarrhea in resource-limited areas. The methodological approach was the collection of data from articles and reviews from relevant randomized controlled trials, new articles, systematic reviews and meta-analyses from PubMed, WHO, UNICEF and WELL Resource Center for Water, Sanitation and Environmental Health. Examined was the influence of water quality on diarrhea prevention, focusing on: Water storage, water collection and the point-of-use of water. As point-of-use water treatment is the most cost-effective method for prevention of diarrhea, five household water treatment methodologies for resource-limited areas are being studied and discussed. These include: chemical disinfection, filtration, thermal disinfection, solar disinfection and flocculation.



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RESEARCH NEWS

Cultural Patterns of Health Care Beliefs and Practices among Muslim Women in Uzbekistan

2014

Vol 6 No 1

Health, Culture and Society

Tursunova, Z., Kamp, M., Azizova, A., Azizova, L.

The purpose of this ethnographic study is to describe and analyse the meanings and uses of health promotion practices and beliefs, healing practices and folk medicine for Uzbek Muslim women. Contemporary healing practices can be seen as combining shamanic and Islamic concepts about disease and healing. The research questions the participants decisions to seek remedies through healing practices, and how and whether they experience these choices and actions as empowering. The research also asks about what sorts of conditions women seeks to address through traditional healing practices; those in this study discussed seeking out such healing for colds, bronchitis, heartdisease, arthritis, as well as emotional and economic distress.

Household survey data for research on well-being and behavior in Central Asia

2013

Journal of Comparative Economics

Brück, T., Esenaliev, D., Kroeger, A., Kudebayeva, A., Mirkasimov, B., Steiner, S.

Due to the lack of accessible and primary survey data, Central Asia is vastly understudied. This paper presents an overview of existing individual and house-hold level surveys and corresponding research from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. Due to its dual experience of transition and development, Central Asia is argued to be a fascinating area to study. Additionally, research and knowledge gaps are being identified, as the authors assume that research in Central Asia should be strengthened. Also, a novel individual panel survey from Kyrgyzstan called “Life in Kyrgyzstan” is introduced. This survey provides open access data for academic research and policy analyses.



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RESUP MEETUP

The ResUp MeetUp community is designed to help research and communication professionals keep up-to-date with this rapidly evolving field. The ResUp MeetUp community is money of research (and research uptake) activities and to be able to monitor and evaluate them.

Emerging from the health sector in the mid-90s, the evidence-informed policy movement has evolved significantly over the last decade. There has been significant emphasis placed on shifting incentives and building capacities for researchers to better communicate their research findings and engage in policy processes. There have been a number of attempts to strengthen the role of ‘knowledge intermediaries’ to facilitate the process.

At the same time, technological leaps have changed information flows, access to data, trends and evidence and communication mechanisms. The financial crisis starting in 2008 also brought on new requirements to demonstrate impact and value for

These activities have all coalesced under the broad tent of ‘research uptake’ – and though the term is not new, in this context there is not a strong sense of what it means in practice. The ResUp MeetUp community advances thinking on the next generation of research uptake, shares learning and best practice, and builds capacity for up-and-coming research uptake professionals.

The next ResUp MeetUp Symposium and Training Exchange will take place from 9-12 February in Nairobi, Kenya.

Note: Information is drawn from ResUp MeetUp: [http://www.resupmeetup.net./](http://www.resupmeetup.net/)

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www.zef.de/healthcap.html

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