NEWS AND NOTES

KIT Biomedical research Reports on Big Data in location based applications

At the start of the year 2014, worldwide a staggering amount of 6.9 billion cellular phones and 2.9 billion broadband data subscriptions were active around the globe. The explosive growth in the use of mobile devices combined with the emergence of location based applications has opened up a new era in the availability and use of personal location based information. The availability of enormous quantities of indistinct data on people’s locations, movements and behaviour, or “big data” are clearly valued for commercial purposes. Less obvious is the fact that this information is now increasingly being appreciated for its use in public health and epidemiological research. As new perspectives and ways of addressing disease prevention and care are constantly needed, the importance of location data to trace and track the occurrence of disease has become vital for disease control. Potential societal benefits as well as ethical implications and risks will be an important theme for the next decades.

WEARABLE TECHNOLOGIES

New wearable technologies developed to complement mobile devices such as smartphones or Personal Digital Assistants (PDA’s), have now presented the possibility to add information on people’s physical condition to the big-data cloud. In July, 2014, Novartis announced an agreement with Google X to license the smart lens technology developed by Google. The lens can be utilized to monitor body
glucose levels and might be deployed to detect cancer as well as monitor drug delivery, offering unique opportunities for both health monitoring and enhancement. In combination with high resolution locational data these innovations provide new opportunities to link health disparities with regional disease management systems and provide guidance for new intervention strategies.

THE GEOGRAPHY OF HEALTH

From the vast body of scientific literature on the subject it has become evident that epidemiology, public health and geography are closely linked. Many studies show the importance of location to address geographical variations in health outcomes, access to healthcare and to optimize intervention effectiveness.¹ The geographic context in which health phenomena occur, not only considering local conditions but recognizing the effect on a wider surrounding environment is, however, rarely taken into account. This is unfortunate as health phenomena are almost exclusively geographically patterned due to intrinsic properties of underlying exogenous geographically driven risk factors.² These geographical variations in the occurrence of disease as well as the underlying causes and mitigating actions provide essential information prevention, treatment and amelioration of disease.³

PUTTING THE DATA TO USE: GEOGRAPHIC INFORMATION SYSTEMS

Processing data using novel and continuously innovated geostatistical and spatial analysis techniques ensures that data coming from a variety and previously unavailable sources can be fully explored and utilized. New mobile and online applications are being continuously developed providing public access to large volumes of integrated personal, environmental and health data. Geographic Information Systems (GIS) have become the essential instrument to store, manage and process these data. As such GIS tools and methodologies can be successfully applied to guide policy considerations and support the allocation of resources. They can be instrumental for targeting of interventions to improve geographical healthcare disparities.¹

References


70 YEARS OF REVISTA DE LEPROLOGIA FONTILLES

On November 24th, 2014 at the Institute of Medical History in Valencia, The Association Fontilles Lucha contra la Lepra (SF) celebrated the 70th anniversary of its scientific journal Revista de Leprologia dedicated to leprosy. The event was chaired by the President of the Association, Mr. Ramon Trenor and the Dean of the local faculty of Medicine Dr. Federico V. Pallardó. The journal during all these years has contributed to the dissemination of the latest and most interesting medical and social information concerning leprosy mainly in the Spanish speaking world. Some of the most outstanding papers and reports on the disease published in the journal since the first issue appeared on July 1, 1944 were reviewed and discussed. At present the journal has established collaboration with Leprosy Review and is published every four months and distributed to 36 countries.