



6<sup>th</sup> International Conference on

# EPIDEMIOLOGY & PUBLIC HEALTH

October 23-25, 2017 | Paris, France

# Keynote Forum

# Day 1

Epidemiology 2017

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## *Ray M Merrill*

*Brigham Young University, USA*

### CONDITIONAL SURVIVAL AMONG FEMALE BREAST CANCER PATIENTS IN THE UNITED STATES

The relative cancer survival rate may be more meaningful to patients because it indicates the chance they will not die from the specific disease. This measure can be further tailored to patients by updating it according to time already survived and for selected personal characteristics. In the current study, conditional relative survival for female breast cancer is presented, based on cases diagnosed during 2000-2008 and followed up through 2013, using population-based data from the Surveillance, Epidemiology and End Results (SEER) program of the National Cancer Institute. Five-year relative survival improved from 89% at diagnosis to 93% (4.9%) for patients who had already survived 5 years. Five-year relative survival was 98% for local disease, 85% regional disease, and 30% for distant disease; 100% for Grade I, 94% for Grade II, 81% for Grade III, and 80% for Grade IV; 90% for Whites, 78% for Blacks, 82% for American Indians/Alaska Natives, and 91% for Asians; and 93% for married and 85% for singles. Improvement in 5-year relative survival from diagnosis to five years already survived was -1.1% for local disease, 3.2% regional disease, and 91.4% for distant disease; -0.9% for Grade I, -0.7% for Grade II, 11.4% for Grade III, and 14.2% for Grade IV; 3.9% for Whites, 13.4% for Blacks, 8.8% for American Indians/Alaska Natives, and 3.5% for Asians; and 2.8% for married and 6.8% for singles. Age and ethnicity had little influence on conditional relative survival. The association between 5-year relative survival and time already survived within stage groups remains similar after adjusting for age, race, ethnicity, marital status, and tumour grade.

#### **Biography**

Ray Merrill is a Professor in the Department of Health Science at Brigham Young University. He joined the faculty in 1998, following employment as a Mathematical Statistician in the Applied Research Branch at the National Cancer Institute. His research interests include chronic disease epidemiology, social determinants of health and program planning and evaluation.

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## Jean Caron

*McGill University, Canada*

### WHAT COULD IMPROVE THE QUALITY OF LIFE AND WELL-BEING OF THE POPULATION?

Mental health is more than the absence of mental illness or mental disorders. It constitutes a form of complete well-being and favors our capacity to enjoy life and to face the challenges we confront. Quality of life and well-being are important indicators of mental health, so it is important to know the parameters affecting them, in order to develop programs of mental health promotion. After more than 25 years of research on quality of life and well-being of different populations: general population, economically disadvantaged populations, people with mental disorders and their families, we will present the results of research on these populations. We will also present the main parameters related or that predict the quality of life and well-being through important research identified by a literature review.

#### Biography

Jean Caron studies the mental health of populations, the assessment of mental health services and the validation of psychometric instruments. He joined the Psychosocial Research Division of the Douglas Mental Health University Institute in 1998 and became an Associate Professor of Psychiatry at McGill University. He currently leads the Canadian Institutes of Health Research Team in Social and Psychiatric Epidemiology. He is also an associate researcher at the Institut de Santé Publique of the Université de Montréal and the Instituto de Saude Coletiva of the Federal University of Bahia in Brazil. His recent studies have identified determinants of psychological distress quality of life and well-being among different populations. Jean Caron's research has received national and international recognition. He was a visiting professor in the Department of Social Psychology at the University of Seville, in Spain. He is a consultant in social and psychiatric epidemiology to the Public Health Agency of Canada, Statistics Canada, the Quebec Department of Public Health, and the U.S. National Institutes of Health.

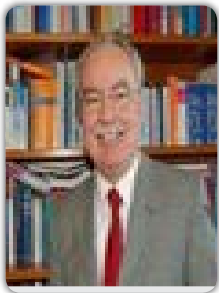
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## Wolfgang Seger

*Health Advisory Board, Germany*

### THE NEED TO ENRICH THE INSTRUMENT BOX OF PUBLIC HEALTH STATISTICS: MERGER THE BIO-MEDICAL AND THE BIO-PSYCHO-SOCIAL DISEASE MODEL!

Socio-political and economic Health Care decisions are often made on the basis of disease statistics alone. However, due to the changing panorama of diseases taking place in our century, especially healthcare of chronically diseased persons is often going along with impairing and cost-intensive, life-long concomitant personal and insurance-straining sequelae like rehabilitation, psycho-social assistance, sick-benefits, invalidity pension or long-term care. These impacts must be considered simultaneously for appropriate decisions. In social welfare states legislature is increasingly following the Bio-Psycho-Social Disease Model instead of the Bio-Medical Disease Model alone, aiming to achieve an inclusive society and putting into effect the Convention on the Rights of Persons with Disabilities. Therefore time has come to merger both disease models. A merger of the two underlying WHO classifications, ICD and ICF, is overdue to enrich the instrument box of public health statistics for political decision makers.

#### Biography

Wolfgang Seger has worked as a doctor of medicine at the Freie Universität Berlin in 1977 and received his license as a physician in 1978. Afterwards, he was initially a research assistant at the Institute of Clinical Radiology at Hanover Medical University. After working at various clinics, he opened his main practice in internal medicine/gastroenterology in Bad Pyrmont in 1985 and was a consultant for the operative therapy of two clinics. From 1989 to 1991, Seger was a senior physician at the Lorch Social Medicine Clinic, and until 1994 he was the senior physician of the Social Medicine Department of the LVA Oldenburg-Bremen. In 1994 Seger became a senior physician of the medical service of the health insurance of Lower Saxony (MDKN) and in 1997 his deputy managing director. In 1998 the University of Bremen was appointed honorary professor for rehabilitation medicine.

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## Henry Völzke

*University Medicine Greifswald, Germany*

### REFERENCE VALUES AND THERAPEUTIC CUT-OFFS - EPIDEMIOLOGISTS CAN HELP REDUCE CONFUSION OF CLINICIANS

It is a common error in thinking of clinicians to hope that a reference value could help finding the right treatment decision. In general, reference values are nothing else than distribution markers of a clinical test among a healthy reference population, as analysed from cross-sectional studies. The value distribution is highly dependent on factors affecting the population and the selection of the reference population. The question that can be answered by analysing reference intervals is only the question on what is high or low or, more in general, what is usual in a given population. Values outside a reference range indicate that there is a high probability that the patient is not “healthy”, which may require further diagnostic work-up. Reference values, however, are not sufficient to decide upon treatment initiation. Valid answers to the question on whether high or low values should be treated or not require 1) clinical information on symptoms, co-morbidities and other diagnostic findings and/or 2) longitudinal studies on outcomes related on a given baseline level. Current epidemiology increasingly comprises large-scale population studies with comprehensive information from medical examinations. These studies offer optimal conditions for reference and cut-off value analyses by 1) results generalizable to the population under investigation, 2) validity in selecting reference populations by not only considering clinical diseases but also subclinical disorders to define health, and 3) high precision by large study populations. Comprehensive statistical methods such as quintile regression allows establishing individual reference values by considering physiological factors influencing test values including, for example, sex, age, body weight and height.

#### Biography

Henry Völzke is Professor for Clinical-Epidemiological Research with basic training as Certified Internist. He has been involved in research projects funded by the European Union, the German Research Foundation and numerous other public and private funding bodies and is member of several large national and international research consortia. His broad research interests cover common population-relevant diseases including thyroid and other endocrine disorders, cardiovascular, metabolic and gastrointestinal diseases. In PubMed, he is listed with more than 620 publications in international peer-reviewed journals. He is PI of the Studies of Health in Pomerania and the Northeast German part of the German National Cohort as well as Co-PI of the GANI\_MED project and the Greifswald site of the German Centre for Cardiovascular Research. He coordinates the H2020 funded EUthyroid Consortium. He is past President of the German Society for Epidemiology (DGEpi) e.V and the German Representative in the Iodine Global Network.

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## *Carolina M Borges*

The College of New Jersey, USA

### **INDIVIDUAL SOCIAL CAPITAL AND THE USE OF HEALTH SERVICES AMONG ELDERLY IN A DEVELOPING CONTEXT**

**Statement of the Problem:** The way we connect to each other can affect our health status and other health related outcomes. Broadly, social capital refers to the characteristics that emerge from social connections among individuals in a given society that can be used for a common goal. Health related outcomes have been linked to lack in Social Capital such as high mortality rates, poor mental health, low well-being, poor oral health, poor maternal health weak adherence to health promotion policies, and obesity prevention.

**Methodology & Theoretical Orientation:** This cross-sectional study sought to test the association between social capital, health status, and use of health services, among Brazilian non-institutionalized elderly living in an industrialized area. Sample was composed by 2,052 respondents aged 60 or older, living in Sete Lagoas county in 2012 (Jan-Jul). Social Capital (SC) was measured by The World Bank Integrated Questionnaire (SC-IQ) dichotomized in “low Social Capital” and “high Social Capital”. Use of health services (11 variables), health status, community engagement, familiar functionality, and social demographics were assessed.

**Findings:** Out of total respondents, 68.6% belonged to the group of low social capital. Lack in social capital was associated to poor health status (69.5%), > medical treatment (70.7%). When controlled, Low SC increased chances to medical appointment within 6 months [OR=1.78; 95%IC=1.22-2.60], decreased chances to be assisted by Public Health Family Program [OR=0.77; 95%IC=0.59-0.99], of community engagement [OR=0.12; 95%IC=0.09-0.15], and good familiar functionality [OR=0.56; 95%IC=0.36-0.86].

**Conclusion & Significance:** Individual Social Capital affected health status and the pattern that elderly used health service in this population.

#### **Biography**

Carolina M Borges is a Social Epidemiologist and currently working as an Assistant Professor of Public Health at The College of New Jersey. She holds a PhD in Dental Public Health, Master's in Public Health focused on Oral Epidemiology. Her research line includes social determinants of health, health inequalities, technology and health and social capital. Additionally, she has experience in planning, building and implementing undergraduate and graduate programs; experience as Administrative and Academic Coordinator.

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## *Roberto Antonio Flores*

*National University of Santiago del Estero, Argentina*

### **CONTROL AND FOLLOW UP FOR 7 YEARS AND 9 MONTHS OF PATIENTS WITH ARTERIAL HYPERTENSION IN THE COMMUNITY OF THE NATIONAL UNIVERSITY OF SANTIAGO DEL ESTERO, ARGENTINA**

**Introduction:** The intention of this work was to obtain complementary information regarding patients suffering from Hypertension, and to observe as the presence of some risk factors for cardiovascular disease, impacts on the tension figures of said hypertensive patients of the Community of the National University Of Santiago del Estero.

**Objectives:**

**General:** To control and follow up the hypertensive population and investigate the presence of some risk factors for cardiovascular disease.

**Specific:**

1. Describe the hypertensive population of the University Community of the National University of Santiago del Estero.
2. Demonstrate how the presence of some risk factors for cardiovascular diseases, such as obesity, sedentary lifestyle, smoking, impact on the tension figures in the hypertensive population of the University Community of the National University of Santiago del Estero.

**Development:** This is a quantitative, descriptive and cross-sectional study, which began in December 2008, recording blood pressure figures and controlling for risk factors and their modifications in the Primary Care Unit of health. The variables studied were age, sex, obesity, sedentary lifestyle, smoking habits. At the beginning of the study, patients were advised to perform walks of at least 30 minutes daily, to continue with a hyposcltic and hypolipid diet.

**Outcome:** Total visits were 6314.1 times per month during the 7 years and 9 months of the study. There were 6314 controls of blood pressure, and weight, and questioned about smoking and physical activity. Tension figures averaged at the start of the study were 150/90 mm Hg, at the end was 135/80 mm Hg in 40% of hypertensive patients, during the first 5 years, at the end of the study 134/78 mm Hg In 40% of patients.

**Depending on the age:** 20 - 29: 06, 30-39: 22, 40-49: 07, 50-59: 11, 60-69: 18, 70-79: 01, 80-89: 01, with a total of 66 hypertensive patients, these figures were at the beginning of the study. Sixty patients were terminated, two men and two women retired, two men died.

**According to sex: Men:** 41, 62.12% of the total population. **Women:** 25, 37.87% of the total population.

**Number of obese:** 57, which represents 86.36% of the total sample at the beginning of the study. At the end of 26, they reduced their weight, thanks to the programmed physical activity and the hyposódic and hypolipid diet.

**Number of sedentarians:** 66, representing 100% of the total sample, at the beginning of the study, at the end of 26 performed scheduled physical activities.



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**Number of smokers:** 18, representing 27.27% of the total sample, at the beginning of the study. They completed 17, 1 died, the 2 who proposed to reduce the amount of cigarettes daily achieved their goal, smoking only 10 of 20 cigarettes a day, and 12 of 40 cigarettes a day. It was recorded that 01 patient suffers from Cardiometabolic Syndrome. There are 04 patients suffering from type 2 diabetes. One patient suffers from hyperthyroidism. One patient had acute myocardial infarction with posterior stenting and pacemaker placement, 01 suffering from osteoporosis and osteoporosis. Only 40% of hypertensive patients usually follow the treatment.

**Conclusions:** It was demonstrated that when hypertensive patients perform physical activities and lose weight, it is possible to reduce tension figures. Smoking is a toxic habit that denotes a great psychic dependence for those who suffer from it, which is why patients were advised of psychological consultations and controls that would help overcome this addiction.

## Biography

Roberto Antonio Flores has been Graduated from the National University of Tucuman, Argentina as Medical Doctor, with the specialties including Internal Medicine, Social and Community Medicine. He did diploma in Cardiology from the National University of Tucuman and Medical Clinic National Academy of Medicine Argentina. Later on he obtained his post-graduation from National University of Cuyo with subjects Pharmacology & Biology and then started working at The Nurses School, Faculty of Humanities, Social Sciences and Health, National University of Santiago del Estero, Argentina where he has continued his research. Presently he has been working at the at the Regional Hospital Dr. Ramon Carrillo, Santiago del Estero City.

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## *Cristina Stasi*

*Regional Health Agency of Tuscany, Italy*

### GLOBAL BURDEN OF CHRONIC HEPATITIS B VIRUS INFECTION IN PRISON

**Statement of the Problem:** Despite a vaccine against Hepatitis B Virus (HBV) has been available since 1982, the prevalence of adult with chronic HBV infection in sub-Saharan Africa and East Asia was estimated to be 5–10%. High rate of chronic infections is also found in the Amazon and the southern parts of eastern and central Europe. In the Middle East and the Indian subcontinent, the prevalence is of 2–5%. Less than 1% of the population of Western Europe and North America was chronically infected. Given the high prevalence of infections such as human immunodeficiency virus (HIV), HBV, and Hepatitis C Virus (HCV) among inmates, particularly those with a history of injection drug use, prison is considered reservoir facilitating these infections. The prevalence of HBsAg in prisoners in west and central Africa was very high (23.5%). High levels of chronic HBV infection were also reported in east and southern Africa (5.7%) and in Eastern Europe and central Asia (10.4%).

**Purpose:** The purpose of this review is to analyse the most recent data on HBV prevalence and vaccination in prison.

**Methodology:** Relevant studies were searched on PubMed database. The Centres for Disease Control and Prevention (CDC) has highlighted the importance of HBV blood screening and the subsequent anti-HBV vaccination in the prison population. The vaccination was recommended to all inmates and it represents an opportunity to prevent HBV infection in persons at high risk. In these subjects, an accelerated hepatitis B immunization schedule may result in a rapid seroconversion and practically in an early short-term protection.

**Conclusion & Significance:** Although hepatitis B vaccination of inmates has been recommended since the vaccine first became available in 1982, only some state vaccinate inmates routinely. Therefore, it is necessary to have collaboration between public health, clinicians and correctional authorities to implement vaccination program.

#### Biography

Cristina Stasi graduated in Medicine and Surgery at the Catholic University of "Sacro Cuore", Rome (2001). In 2006 she specialized in Gastroenterology at the University of Pisa. From 2006 to 2009 she took part in Clinical Research Projects at the University Hospital "Careggi", Florence. At the same time, she improved her knowledge in Study Design, Management of Clinical Research Project, Statistics and Epidemiology. In 2013, she received her PhD in Experimental and Clinical Medicine from the University of Florence. She has published about 50 papers in reputed international journals and has been serving as an Editorial Board Member of some international journals.

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## Fontaine G H

*Universite Pierre et Marie Curie, France*

### ATRIAL DYSPLASIA AND THE HIGH FREQUENCY OF ATRIAL FIBRILLATION IN ARVD PATIENTS

**Introduction:** Tonet et al. from Paris were the first to demonstrate a susceptibility of ARVD patients to supraventricular tachyarrhythmias. This concept was confirmed on larger series of ARVD patients from the USA and Switzerland. It was also observed by the senior author that atrial fibrillation/tachyarrhythmias (AF/AT) could be the first presentation of the disease. It was therefore logical to study the atrial pathology of three ARVD patients who died of a non-cardiac cause. This abstract is the first to present the atrial histology of ARVD patients with comparison to healthy controls considering the typical histologic changes known in the RV in ARVD.

**Methods:** Histology of the right atrium (RA) was available in only 3 cases from a series of 73 ARVD patients, in whom ARVD was confirmed by pathology. The observed anomalies were adipocytes in two cases, interstitial fibrosis in all, associated with replacement fibrosis in one case. This prompted us to study the RA structure in four subsequent control patients without cardiovascular disease. Light microscopic examination with Leica digital image processing was performed. Staining was performed with HPS in ARVD to improve identification of fibrosis, and HE in the control group.

**Results:** The atrial pathology of all of these so-called normal individuals presented anomalies, which can be interpreted as the background of an atrial arrhythmogenic substrate similar to the recently reported pathology of the RV in ARVD (GF Editorial AJC 2014). As such, we found adipose tissue, interstitial and replacement fibrosis including one case of lymphocytic infiltration in the atria of these healthy controls, like histologic changes of the RV observed in ARVD. Furthermore, we identified a perpendicular orientation of atrial myocardial fibres.

**Discussion:** The interface between the two perpendicular layers can be a zone of weakness leading to fat and fibrosis, particularly if increased loading conditions are present. Desmosomal variants may enhance this remodelling. However, since desmosomal mutations have not been observed in the normal heart, it is therefore possible to consider other genes or posttranslational modification to underlay these changes. The unexpected results of this preliminary study need further confirmation. However, we propose new mechanisms including the role of active as well as healed myocarditis which may precede the development of AF/AT and explain why these arrhythmias are the most frequent in the human species.

**Conclusions:** The same pathological substrate of ventricular myocardium in ARVD is also extending to the atrium explaining the high frequency of AF in ARVD patients.

#### Biography

Fontaine G H has made 15 original contributions in the design and the use of the first cardiac pacemakers in the early 60s. He has serendipitously identified ARVD during antiarrhythmic surgery in the early 70s. He has developed the technique of Fulguration to replace surgery in the early 80s. He has been one of the 216 individuals who have made a significant contribution to the study of cardiovascular disease since the 14th century and one of the 500 greatest geniuses of the 21st Century (USA Books), one of the 100 lifetime of achievement (UK Book). He has > 900 publications including 201 book chapters. He is a reviewer of 17 scientific journals both in basic and clinical science. He has given 11 master lectures of 90 minutes each in inland China in 2014. He is now developing new techniques for brain protection in OHCA, stroke and spinal cord injury by hypothermia.

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