

## A SYSTEMATIC REVIEW OF THE DETERMINANTS OF HEALTHY AGEING

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Many papers have assessed which factors are associated with healthy ageing, yet this research area has not yet been summarised properly, partly due to the heterogeneity of the studies, and the scale of the task. During this talk, we will present findings from a systematic review of the determinants of healthy ageing (socio-demographic, biological, behavioural and psychological and social). We aimed to: 1-Identify the key determinants of healthy ageing; 2-Qualify and quantify the direction of associations; 3-Summarise research trends across the last decades; 4-Identify knowledge gaps. A review protocol was registered on Prospero before the start of the project (ID=CRD42016037935). Only longitudinal cohort studies were included. No language or time limits were used. The initial title & abstract screening included 92747 papers, whereas 2341 articles were retained for full text screening. Results will be presented, together with a discussion of the research and policy implications of this evidence synthesis.

## DATA HARMONIZATION OF LONGITUDINAL STUDIES ON HEALTHY AGEING: THE ATHLOS PROJECT

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Harmonizing datasets from existing research studies has many benefits: it increases sample size, improves the generalizability and comparability of results, and provides opportunities for collaborative research. However, this process is not always straightforward. Studies are usually very heterogeneous regarding study design, variables collected and follow-up time/number of waves. One of the aims of the ATHLOS project is to create of a harmonized dataset with over 341,000 individuals from 20 existing longitudinal studies of ageing using a rigorous process. This will include information on health status and functional limitations, lifestyles, social environment, among others. The harmonization framework is supported by Maelstrom-Research, an international research program who develops tools and platforms to ensure a systematic and rigorous harmonization activity. In order to explain this comprehensive process, during this symposium, we will present the challenges and successes of this phase of the project, together with a thorough explanation of the harmonization platform.

## DEVELOPING A SINGLE METRIC OF HEALTH USING MODERN DATA ANALYTICAL METHODS

D. Panagiotakos<sup>2</sup>, F. Caballero<sup>3</sup>, H. Arndt<sup>4</sup>, S. Chatterji<sup>5</sup>, G. Soulis<sup>2</sup>, M. Prina<sup>1</sup>, J. Haro<sup>6</sup>, 1. *King's College London, London, United Kingdom*, 2. *Harokopio University, Athens, Greece*, 3. *Universidad Autónoma de Madrid, Madrid, Spain*, 4. *Spring Techno, Bremen, Germany*, 5. *World Health Organization, Geneva, Switzerland*, 6. *Parc Sanitari Sant Joan De Deu, Barcelona, Spain*

One of the aims of the ATHLOS project is to develop a single metric of healthy ageing. Using as a paradigm the ELSA study – English Longitudinal Study on Aging (n= 11,906 participants, entry 1998–2001, last follow up 2011–12, 6 waves) - and applying the Item Response Theory (IRT) approach and multi-level Factor Analyses the metric of healthy aging was developed as a composite score of functioning measures. Exploratory Factor Analysis was conducted to detect the latent structure among items. After conducting the EFA and obtaining evidences for unidimensionality, a global health score was generated by means of IRT. Then, a Machine Learning (ML) approach was applied to explore patterns of healthy aging. Based on these modern analytical methods various socio-demographic and lifestyle behaviors revealed as determinants of healthy aging. Combining classical statistical approaches with machine learning methodologies, the derived pattern recognition is less biased and the conclusions more robust.

## POLICY AND KNOWLEDGE TRANSLATION IN THE ATHLOS PROJECT

M. Bobak<sup>1</sup>, J. Bickenbach<sup>2</sup>, I. Gheno<sup>3</sup>, A. Zaidi<sup>7</sup>, S. Chatterji<sup>6</sup>, M. Prina<sup>5</sup>, J. Haro<sup>4</sup>, 1. *Epidemiology and Public Health, University College London, London, United Kingdom*, 2. *Swiss Paraplegic Foundation, Nottwil, Switzerland*, 3. *Age Platform Europe, Brussels, Belgium*, 4. *Parc Sanitari Sant Joan de Déu, Barcelona, Spain*, 5. *Kings College London, London, United Kingdom*, 6. *World Health Organization, Geneva, Switzerland*, 7. *University of Southampton, Southampton, United Kingdom*

An essential part of the ATHLOS project is the translation of the ATHLOS findings, integrated with outcomes of previous research, into prevention and intervention measures. This work stream includes: (i) alternative scenario analysis and microsimulations to examine the economic and social consequences of policy decisions and to identify population-level or clinical interventions to alter ageing trajectories; (ii) exploration with stakeholders of the implications of different approaches to healthy ageing; (iii) identification of major barriers for the optimal implementation of the ATHLOS recommendation; (iv) policy recommendations for health and social policies, clinical practice and prevention and address inequalities in ageing outcomes. To achieve these ambitious goals, this work package includes multi-disciplinary and multi-sectoral team working closely with stakeholders (including policy makers, healthcare services, clinicians, public institutions, international partnerships and organisations, social care services, and the general population) and focusing on strengthening the clinical practice, public health and health care systems.

## SESSION 4925 (SYMPOSIUM)

### BUNDLED PAYMENT—THE GOOD, THE BAD, AND THE ALARMING

Chair: U. Ohuabunwa, *Emory University*

Co-Chair: W. Horn

The Bundled Payments for Care Improvement (BPCI) initiative was introduced in 2013 under the Affordable Care Act and over 1.500 providers voluntarily participated including acute care hospitals, skilled nursing facilities, physician

group practices and home health agencies. Building on the success of the program, in April 2016 CMS implemented the Comprehensive Care for Joint Replacement (CJR) model which requires over 800 hospitals nationwide to be financially responsible for the quality and care of patients undergoing lower extremity joint replacements (LEJR). This symposium will explore the care of older adults with both LEJR and hip fractures and the role of geriatrics in providing integrated comprehensive care across the continuum. The care of complex geriatrics patients requires development of multidisciplinary partnerships between the geriatrics team and other clinicians such as surgical specialists, physiatrists and post-acute care providers including certified home health agencies (CHHA) and skilled nursing facilities (SNFs).

The target audience includes:

1. Physicians- internists and subspecialists
2. Nurses, social workers, physical therapists, geriatrics case managers
3. Trainees in all of these fields- students, residents and fellows.

#### COMPREHENSIVE CARE FOR JOINT REPLACEMENT PATIENTS: HISTORY AND NEW ACHIEVEMENTS

U. Ohuabunwa<sup>1</sup>, E. Ng<sup>2</sup>, 1. *Emory University, Atlanta, Georgia*, 2. *Montefiore, New York, New York*

**Talk #1 Content Outline:** Bundle Payment Model is a mechanism to accelerate the health care system's transition to alternative payment model and value-based care. Bundle payment aims to align incentives between payers and the various providers and suppliers to improve quality, outcomes and reduce costs. The importance of coordinated care across provider settings is a critical component of care transformation. The session will provide insights as to the experience in the Montefiore Health system in the implementation of the Bundled Payment program and lessons learned.

**Talk #1 Speaker Expertise:**

Eliza Ng, MD, MPH is a Senior Medical Director, Care Management Organization, Montefiore Health System, Adjunct Professor New York University School of Medicine

Dr Ng provides leadership in medical and population health management of the ACO and Value Based Care Programs. She provides management leadership in Montefiore's BPCI for joint and the Oncology Care Model Program, a CMS demonstration project in oncology bundle payment,

#### A GERIATRICIAN'S PERSPECTIVE ON CARING FOR BUNDLE PAYMENT JOINT REPLACEMENT PATIENTS

U. Ohuabunwa<sup>1</sup>, W. Horn<sup>2</sup>, 1. *Emory University, Atlanta, Georgia*, 2. *Montefiore, New York, New York*

**Title Talk #2:** From preoperative evaluation to discharge and transition of care – a geriatrician's perspective on caring for bundle payment joint replacement and hip fracture patients.

**Talk #2 Content Outline:** The talk will focus on educating clinicians from different specialties on the utility of creating an interdisciplinary team for better outcomes of elderly hip and knee replacement patients under the The Bundled Payments for Care Improvement initiative (BPCI); Preoperative evaluation for hip fracture patients using the ACS National Surgical Quality Improvement Program® (ACS NSQIP®);

Hip and knee replacement patients and their multidisciplinary care from hospital to 90 days postoperative.- prehospital academy, inpatient management and disease management system centered around the home; Team approach and residents education for Comprehensive Care for Joint Replacement (CJR) model patients

**Talk #2 Speaker Expertise:** Dr. Horn is the Director of Geriatrics Inpatient Service and Director of Geriatrics Hip Fracture Service at Montefiore Medical Center, a busy urban academic hospital in the Bronx. Dr. Horn organized and moderated a session on orthogeriatrics co-management during the AGS 2013 Annual Meeting ("Rally the Troops: Optimizing Teams for Care of Hospitalized Elders").

Her main interest is in developing and implementing models of care that involve different medical and surgical specialties for complex hospitalized elderly patients.

#### SNF CARE FOR BUNDLE PAYMENT PATIENTS

U. Ohuabunwa<sup>1</sup>, L. Solberg<sup>2</sup>, 1. *Emory University, Atlanta, Georgia*, 2. *University of Florida, Gainesville, Florida*

**Talk #3 Content Outline:**

Discuss the role of the short-term rehabilitation stay in a SNF for patients involved in the bundled payment model for joint replacements in Medicare. Explain the expectations and limitations this program sets for patients and providers. Discuss the role of the geriatrician in the co-management model in the hospital and in the role of the transition of care to the SNF. Present our model of care and the ability to replicate the process in practices of the audience.

**Expertise of speaker in this topic:**

Dr. Solberg is the Chief of the Division of Geriatric Medicine at the University of Florida College of Medicine. He has successfully implemented several hospital to SNF programs focused on the co-management of patients partnering with surgery and medicine services to benefit the older hospitalized patients. He has assisted in the design and implementation of local guidelines for the bundled payments program at the University Of Florida College Of Medicine. Dr. Solberg is an educator in geriatrics and inter-professional education. He is well published in clinical practice models, education research, and clinical education projects.

#### POST-ACUTE CARE IN CJR-THE CRITICAL ROLE OF THE CERTIFIED HOME HEALTH AGENCY (CHHA)

U. Ohuabunwa<sup>1</sup>, A. Ehrlich<sup>2</sup>, W. Rymarowicz<sup>2</sup>, 1. *Emory University, Atlanta, Georgia*, 2. *Montefiore, New York, New York*

**Talk #4 Content Outline**

The speakers will outline the stages from design to implementation of a joint replacement program in a CHHA including collaboration with orthopedics, hospital leadership and discharge team; development of clinical pathways; staff education for RNs, PT, and HHA.

Montefiore Home Care has implemented an Elective Joint Replacement Program which cared for over 1,400 patients in 2015. Over 70 % of patients undergoing elective joint replacement are now discharged home compared with 30% before the program's initiation resulting in significant cost savings to the Montefiore network.

**Speaker Expertise**