Abstracts are listed in order of presentation.

0007 - **Exploring alternative cancer paradigms**

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Cancer Information & Support Society, St Leonards NSW, Australia

Abstract: The increasing questioning of the current cancer paradigm needs to be addressed by exploring the evidence for the various alternative cancer paradigms. There are at least five main ones, most of which share many concepts. A workshop would discuss each of the hypotheses in turn and provide relevant evidence for their validity. This would be followed by an attempt to integrate the common features into a strong, evidence based cancer paradigm providing methods for testing the new hypothesis.
Objectives: To identify a valid paradigm of what cancer is from exploring treatments that have been shown to be effective, mainly from randomised controlled trials, and integrating them into a single comprehensive whole.
Method: Discuss and analyse the results from treatments based on different alternative cancer paradigms including cancer as a systemic disease caused by chronic stress, possibly affecting telomeres, traumatic emotional events, disturbances in the body's systems possibly resulting in reactivation of a primitive survival mechanism; or as a combination of local-systemic imbalances.

0098 - **Eating children: childhood obesity, schooling, parenting and doctoring feeding a hungry diagnostic market.**

Gloria S Wright
The University of Sydney, Sydney, Australia

Abstract: The global escalation of child obesity continues to alarm medical practitioners, sociologists, policy makers and those interested in child health, education and wellbeing. Comorbid illnesses considered the outcome of obesity are likewise on the rise provoking research, social debate and government action, being seen as a greater concern than starvation in developing economies. For the most part entirely preventable, child obesity and its related illness companions are now, however, feeding a hungry diagnostic market, beckoning a clear investigation into the social paramaters involved - that is, 'the why'. By making links with her original qualitative research from The University of Sydney in the overdiagnoses of children as having ADHD, Dr Gloria S Wright illuminates how flawed processes in schooling funding, parenting behaviours and pressures on doctors to 'deliver' diagnoses, creates a seemingly unstoppable 'system'. In this engaging presentation, Dr Wright presents a model showing how the 'diagnosis machine' works, indicates possible motivational factors driving the system and proposes ways to turn the trend for the betterment of child health, wellness and development.
Objectives: The processes and systems underpinning diagnoses of childhood obesity are uncovered with a focus on schooling, parenting and doctoring. Participants gain insight regarding the social construction of 'obesity' as an illness. Reasons why childhood obesity continues to rise are presented to stir discussion.
Method: Obesity and 'medicalisation' are presented as two key areas of interest and connectivity. Findings from research into the process of diagnosing children as having Attention deficit Hyperactivity Disorder show a fascinating interplay between parents, teachers and doctors to acquire 'resources' to help children. In this paper I argue that this model can be utilised to examine why childhood obesity and comorbid illnesses and social problems aligned with obesity such as forms of bullying, will not decline while the current drivers for diagnoses remain.
Results: Childhood obesity can be seen through a 'social' lens, not only in terms of the science of nutrition and mobility. A model showing how the system of diagnoses works is explained. Ideas obtained by reviewing the literature on childhood obesity together with the original thinking of Dr Wright based on her 3 decades of experience working across disciplines in Australia and Asia are presented.
Conclusions: Strong drivers in favour of diagnosing children with an array of illnesses pervade school and government systems in Australia and in many Asian countries. Strategies to arrest unnecessary diagnostic drivers relating to home, school and medical practices are presented for discussion and debate with a particular focus on the diagnostic market in childhood obesity.

0002 - **Written information for patients on the use of antibiotics in acute upper respiratory infections in primary care**

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Objectives: To systematically review the effect of written patient information about antibiotics for upper respiratory tract infections on a) subsequent antibiotic use b) reconsultation c) patient knowledge d) patient satisfaction and e) complications.
Method: We searched CENTRAL (latest issue), which contains the Cochrane Acute Respiratory Infections Group's Specialised Register, MEDLINE (1946 to current date), EMBASE (2010 to current date), CINAHL (1981 to current date), LILACS (1982 to current date) and Web of Science (1955 to current date) up to 17th August 2015. We also searched clinicaltrials.gov and the World Health Organization International Clinical Trials Registry Platform. Two review authors independently screened returned articles, extracted data and assessed risk of bias using the Cochrane Risk of Bias tool. Disagreements were resolved by a third author.

Results: We included two studies involving 34,350 children. One study of moderate quality demonstrated a reduced risk of *antibiotic consumption* (RR 0.53, 95% confidence interval (CI) 0.35 to 0.80) and an ARR of 20%. Two studies of low quality assessed antibiotic prescription from two comparisons: Their effects differed substantially. Comparison (1) showed a RR, varying between 0.47 (0.28 to 0.78) and 0.84 (0.81 to 0.86), comparison (2) showed a relative risk increase: RR 1.13 (95% CI 1.09 to 1.17). One study of moderate quality reported a RR 0.79 (0.47 to 1.32) for reconsultation and RR 1.78 (0.73 to 4.35) for satisfaction.
Conclusions: Moderate quality evidence shows providing written information to parents of children with URTIs in primary care can reduce *antibiotic consumption* without impacting reconsultation or satisfaction. Low quality evidence provides inconsistent findings on the effects of written patient information on antibiotic prescription for URTIs.

0005 - **Slow Medicine approach promoted by the Italian Society of Allergy, Asthma and Clinical Immunology (SIAAIC): choosing wisely in Allergology**

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[1]Italian Society of Allergy, Asthma and Clinical Immunology (SIAAIC), Firenze, Italy, [2]University of Catania, Catania, Italy, [3]National Health System, Torino, Italy, [4]Slow Medicine Italia, Torino, Italy, [5]"Change" Institute, Torino, Italy, [6]ICP Hospital, Milano, Italy, [7]ASL TO3, Pinerolo, Italy, [8]University of Genova, Genova, Italy

Abstract: One of the main problem health care systems are facis is the mis-use and over-use of medical resources (including useless exams, surgical interventions, medical treatments, screening procedures...) which may lead to high health care related costs without increased patients' benefit and possible harm to the patients themselves. The "Choosing wisely" campaign, in Italy denominated "Doing more does not mean doing better", tries to educate doctors and citizens at a correct use of medical resources.
Objectives: To create a list of 5 allergological procedures with the highest evidence of inappropriateness.
Method: A panel of experts in the field of Allergology discussed and chose, according to the most recent literature evidence, the 5 allergological procedures with the highest evidence of inappropriateness.
Results: The 5 recommendations were: "Do not perform allergy tests for drugs and/or foods when there are neither clinical history nor symptoms suggestive of hypersensitivity reactions"; "Do not perform the so-called "food intolerance tests""; "Do not perform serological allergy tests (i.e.: total IgE, specific IgE, ISAC) as first-line tests or as "screening" assays"; "Do not treat patients sensitized to allergens or aptens if there is not a clear correlation between exposure to that specific allergen/apten and symptoms suggestive of allergic reaction"; "Do not diagnose asthma without having performed lung function tests".
Conclusions: An important role scientific societies should play is to advise on correct diagnostic and therapeutical pathways. For this reason SIAAIC decided to adhere to the Slow Medicine Italy campaign "Doing more does not mean doing better" with the aim of warning the scientific community and the citizens/patients about some allergological procedures, which, when performed in the wrong clinical setting, may be not only useless, but unnecessarily expensive and even harmful for patients' health.

0016 - Multiparametric MRI: the new paradigm to avoid overdiagnosis & overtreatment in prostate cancer

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Abstract: To analyze the potential benefit to include multiparametric MRI in the work up for prostate cancer diagnosis and management. Prostate cancer is the second most common cancer in men. Prostate cancer represents a broad spectrum of diseases ranging from the indolent to the highly aggressive. Screening methods based on serum prostate-specific antigen (PSA) followed by random, blinded biopsies tend to overdiagnose small indolent tumors, and overlooks larger, aggressive lesions that are outside the typical biopsy template. The paradox of current methods is that they both overdiagnose low-risk disease and underdiagnose high-risk cancers. Recently, magnetic resonance imaging (MRI) using multiparametric (Mp) technique has been standardized with a reasonable accuracy to play a significant role to reduce both overdiagnosis and overtreatment. Mp-MRI represents a potential tool to address the limitations of blinded systematic biopsy.
The main challenges facing Mp MRI should be:
- Improve the risk stratification of men towards patient selection of men requiring Mp-MRI to detect significant disease and avoid to diagnose the insignificant cancer; for a better treatment selection
- To realize the clinical benefits of mpMRI-PB without overwhelming current resources.
- To achieve appropriate standardization of imaging interpretation and communication to improve the clinical management plans and patient outcome
- Improve urologic understanding of imaging uncertainties to facilitate selection of active surveillance or focal therapy rather than whole-gland treatment.

0051 - **What do we actually know about novel cancer therapies at the time of approval?**

Nicole Grössmann, Claudia Wild, Julia Mayer
Ludwig Boltzmann Gesellschaft for Health Technology Assessment, Vienna, Austria

Abstract: In the last decade an increasing number of high-prized new cancer treatments received marketing authorisation in Europe. But what is actually known about the clinical benefit at the time of approval of those therapies

needs to be elucidated in order to inform decisions about the use and reimbursement of these novel treatment options. To assess the benefit of new interventions, the median gain of the two study endpoints progression free survival (PFS) and overall survival (OS) was extracted. Information is based on approval documents provided by the European Medicine Agency. All cancer therapies in Europe approved between 2009 and 2015 were included. Cancer drugs for 114 new indications approved since 2009 were identified. In case of 26 (23%) indications no data was available neither for PFS nor for OS. A median gain in OS was reached by 51 licensed indications (44.7 %); 14 (13%) of them achieved a median gain of more than 3 months. Regarding the study endpoint PFS an increased median gain was shown in 67 indications (58.8%). Scarce knowledge regarding the clinical benefit of therapies is available at the time of approval and the survival benefit of the approved indications is less than 3 months in the majority of instances.
Objectives: In the last decade an increasing number of high-prized new cancer treatments received marketing authorisation in Europe. But what is actually known about the clinical benefit at the time of approval of those therapies needs to be elucidated in order to inform decisions about the use and reimbursement of these novel treatment options.
Method: To assess the benefit of new interventions, the median gain of the two study endpoints progression free survival (PFS) and overall survival (OS) was extracted. Information is based on approval documents provided by the European Medicine Agency. All cancer therapies in Europe approved between 2009 and 2015 were included.
Results: Cancer drugs for 114 new indications approved since 2009 were identified. In case of 26 (23%) indications no data was available neither for PFS nor for OS. A median gain in OS was reached by 51 licensed indications (44.7 %); 14 (13%) of them achieved a median gain of more than 3 months. Regarding the study endpoint PFS an increased median gain was shown in 67 indications (58.8%).
Conclusions: Scarce knowledge regarding the clinical benefit of therapies is available at the time of approval and the survival benefit of the approved indications is less than 3 months in the majority of instances.

0114 - **Defining a research agenda to identify and combat overdiagnosis in children**
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Abstract: Recognition of overdiagnosis for adult conditions has gained a great deal of traction over the last few years. In 2014 we introduced many in the pediatrics community to the concept of overdiagnosis in children (Coon et al, Pediatrics 2014). While there have been several recent studies further elucidating this phenomenon in pediatrics (e.g. bacteremia in UTI, head imaging in mild TBI, hypoxemia in bronchiolitis), overdiagnosis continues to be poorly characterized in our field. The notion that a child could be harmed by a correct diagnosis is rarely appreciated by clinicians, families, and policy makers. We will explore how a recent approach using the Pediatric Health Information Systems (PHIS) database to identify overdiagnosis in traumatic brain injury can be applied to other conditions.We will discuss how to prioritize various research endeavors. We hope to foster international collaborations with a goal of better defining the prevalence and impact of overdiagnosis, and possible strategies to combat the problem.
Objectives: 1.) Discuss how current methods for identifying overdiagnosis can be applied to common pediatric conditions. 2.) Develop a research agenda that prioritizes projects based on agreement over the potential impact of overdiagnosis for given pediatric conditions. 3.) Consider ways to disseminate information to patients, families, healthcare providers, and policy makers about the extent of overdiagnosis and the potential harms in children.
Method: The workshop should be of interest to all child health advocates, even those who do not primarily do research.

0117 - Routine deferred computed tomography for patients with suspected urolithiasis is low-value health care.
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Objectives: To investigate the benefit of deferred routine computed tomography of the kidneys, ureters and bladder (CT KUB) for patients with a self-limiting episode of suspected urolithiasis. The guideline recommendation of imaging diagnostics for all patients with suspected urolithiasis is not evidence based.
Method: A case-series of consecutive patients examined with deferred routine CT KUB for control of suspected urolithiasis. Patients examined with CT KUB at the University hospital of North Norway, between 2010 and 2013, were included. Final analysis included 189 CT KUBs (response rate 48%). All data were extracted from the patient case files.
Results: At the time of CT KUB 171 (90 %) patients were asymptomatic, of whom three (1.8 %) were treated. Urolithiasis was confirmed on CT KUB in 58 (31 %) patients. Surgical treatment was provided for 15 (7.9 %) patients. **Conclusions:** Deferred CT KUB did not alter clinical outcome for the great majority of asymptomatic patients. The majority of patients that received adequate pain relief in primary care remained asymptomatic, and did not need specialized health care. To refrain from CT KUB involves little risk. Deferred CT KUB for patients with suspected urolithiasis is a low-value health care service.

0126 - Evaluation of the main factors related to hip fracture in people over 64

Cristina Colls[1], Saúl Barreales[2], Emili Vela[3], Anna Garcia-Altés[1]

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Abstract: Hip fracture is one of the main causes of acquired disability and mortality in older people. Epidemiologic studies have associated several drugs, diagnoses and other factors with an increased risk of hip fracture**.**

Objectives: The aim is to evaluate the effect of a selection of drugs, diagnoses and other factors in the risk of hip fracture in people over 64.

Method: A population based case-control study. Data were obtained from the Minimum Datasets of Acute, Primary, Mental Health and Long-term Care and from the Catalan Pharmacy Database. The study included 7,154 patients aged over 64 discharged from an acute care hospital with a first time hip fracture (2013). A random selection of three controls per case was made considering sex, age, morbidity level, residence area and socioeconomic status as matching variables. Conditional logistic regression models were fitted to assess the adjusted effect of the exposure of these factors: corticoids, proton pump inhibitors (PPIs), bisphosphonates, antihypertensive drugs, antidepressants, antipsychotics, anxiolytics, opioid analgesics and polymedication, dementia and nursing home residence. The duration of the exposure and its intensity were also evaluated.

Results: We observed that exposure to mental health drugs increased the risk of hip fracture: Antipsychotics (OR_{adj}: 1.87, CI95%:1.66-2.12), antidepressants (OR_{adj}: 1.36, CI95%: 1.28-1.45), and anxiolytics (OR_{adj}: 1.17, CI95%:1.1-1.25). In all these drugs, the new consumers are those more at risk. Other factors associated to a higher risk of fracture were opioid analgesics, (OR_{adj} : 1.27, CI95%: 1.16-1.38) and corticosteroids in cases with over three years of treatment (OR_{adj}:1.35, CI95%: 1.10-1.66).Living in a nursing home or having dementia increased the risk of fracture, with a respective OR adjusted of 1.40 (CI95%: 1.27-1.53) and 1.42 (CI95%: 1.31-1.55) Fracture risk among bisphosphonates consumers was significantly lower than in non-consumers (OR_{adj}:0.83, CI95%: 0.73-0,94). **Conclusions:** The study highlighted the risks associated with the consumption of drugs for mental health among the elderly population. Nowadays, many patients take these drugs concomitantly and some of them have dementia or live in a nursing home, so the risks are accumulated. Actions aimed at improving the prescription profile of these patients may have a very significant effect in terms of reducing the number of hip fractures. Bisphosphonates have a protective effect, although less significant than the negative effects resulting from the medication with drugs for mental health.

0134 - Markers of overdiagnosis and overtreatment in routinely collected data: application to the potential for MRI to cause overdiagnosis and overtreatment of knee and hip pathology

Leon Smith[1], Rachelle Buchbinder[2], Ian Harris[3], Alexandra Barratt[1]

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Objectives: To apply a set of indicators of overdiagnosis and overtreatment to changing diagnostic and treatment patterns in early osteoarthritis (OA) of the knee and hip. The indicators have previously been used to assess overdiagnosis and overtreatment of breast, thyroid and prostate cancer.

Method: A 6-item framework was applied to assess the impact of Magnetic Resonance Imaging (MRI) on the early diagnosis and subsequent treatment of knee and hip OA. We conducted a retrospective analysis of routinely-collected, publicly available data on knee and hip MRI utilization, OA prevalence, arthroscopic procedures and joint replacement surgery in Australia 1994-2014.

Results: Use of MRI to detect early OA of the knee and hip met all applicable indicators of overdiagnosis and overtreatment potential:

Marker 1 Emergence of a new technology with incremental sensitivity: Met - MRI is a sensitive technology that visualises all tissues within the knee and hip joints. **Marker 2 Expanding uptake following introduction of the test:** Met - Utilization of knee MRI increased strongly over time, from 16/100,000 population per year to 915/100,000 per year. Hip MRI increased from 14/100,000 to 140/100,000 per year. **Marker 3 Increasing incidence of the condition especially of small, localised, and /or early stages of the condition:** Met - 90% of adults over 50 years have MRI detectable knee abnormalities and 70% have MRI detectable hip abnormalities that are consistent with early or pre-OA changes, creating a large reservoir of diagnosable “conditions”. **Marker 4 Improved case-fatality rates:** Not applicable to non-fatal conditions such as OA. **Marker 5 No change in long term outcomes or proxy:** Met - Patient reported, doctor diagnosed OA prevalence did not change to 2011, despite a modest increase in obesity. **Marker 6 Increasing treatment rates & complications:** Met - Arthroscopic knee and hip procedures and knee and hip joint replacements increased steadily in adults aged 55 years and over.

Conclusions

Although our analysis has limitations due to use of routinely collected data, it nonetheless revealed changes in diagnostic and treatment patterns consistent with considerable potential for overdiagnosis and overtreatment of early or pre-OA of the knee triggered by increasing MRI utilization. We observed an identical pattern unfolding for hip OA, with lower absolute event rates. These indicators are useful for identifying patterns consistent with overdiagnosis and overtreatment of early OA.

0162 - The impact of a behavioural intervention on rates of inappropriate antibiotic prescribing.

Shanay Daham, Magdalena Anna Jachowicz, Mathias Toth, Ali Bokhari
Darent Valley Hospital, Kent, UK

Objectives: Over treatment with antibiotics is a serious problem in health care systems. Our project aims to intervene in this system to reduce the over treatment in the setting of an acute secondary care provider in NHS in UK. Inappropriate antibiotic use leads to increased drug resistance, longer hospital stays and preventable morbidity and mortality. The long-term sequelae include increased rates of *Clostridium difficile* and methicillin-resistant *Staphylococcus aureus*, and emerging resistance to available substitute antibiotics, highlighting the need for an overall reduction in antibiotic use. Several studies have demonstrated that antibiotics are ineffective treatments for most acute respiratory tract infections, yet this remains the most common reason for antibiotic prescribing in acute care settings. A common reason is misdiagnosis at the time of admission to hospital and mislabelling of e.g. viral upper respiratory tract symptoms with "chest sepsis", in the absence of clinical or other evidence. In addition, there is evidence to support that effective antibiotic stewardship decreases duration of treatment without compromising patient safety. The authors therefore hypothesise that over diagnosis of sepsis is still a significant problem and that it can be managed through using behavioural-type interventions in the acute secondary care sector.
Method: We embarked on a Quality Improvement Initiative in a District General Hospital in England and conducted our own baseline audit to confirm our suspicion that over-diagnosis was a significant problem leading to inappropriate parenteral antibiotic administration. We then initiated a behavioural intervention programme to reduce this problem, focusing on the adult population in the acute care setting. The project assessed the impact of a behavioural intervention on rates of inappropriate antibiotic prescribing and discontinuing of antibiotics once started. The appropriateness of antibiotic prescribing and discontinuation was assessed based on clinical signs and fulfilment of laboratory and radiological sepsis criteria.
Results: Here we present our journey to date and results of our Quality Improvement Project.
Conclusions: A reduction in inappropriate antibiotics being prescribed and an early curtailment of inappropriate initiation using this behavioural intervention would imply a simple and cost-effective method of reducing antibiotic-associated morbidity and mortality in secondary care.

0172 - **Where does Overdiagnosis fit in a Multi-Criteria Decision Analysis?**

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Abstract: The growing concern with overdetection, overdiagnosis and overtreatment in individual healthcare, especially in medicine, has occurred simultaneously with rapidly increasing interest in Multi-Criteria Decision Analysis (MCDA) as a way of supporting the preference-sensitive decisions that must be taken.
Objectives: We sought to establish whether the growing literature on, and applications of, MCDA in individual healthcare reflect the rising attention to the 'over' phenomena which is observable in individual decision support (e.g. patient decision aids), group-level policy support analyses (e.g. Health Technology Assessments (HTAs) and stated preference studies (e.g. Discrete Choice Experiments (DCEs)).
Method: We reviewed publications introducing, advocating or surveying the use of MCDA in individual health care, to establish whether the terms 'overdetection', 'overdiagnosis' or 'overtreatment' (and their hyphenated variants) appeared. We searched for 'MCDA' coupled with these terms in Google Scholar. To provide a contrast, we reviewed selected decision support tools not based on MCDA, and selected papers reporting on DCEs and Conjoint Analyses, to see whether these terms and concepts appeared.
Results: There was very little use of the terms 'overdetection', 'overdiagnosis' or 'overtreatment' in the emerging set of 30 MCDA publications from 2006-2016. Two published papers used one of them as a criterion and a presentation at a Preventing Overdiagnosis conference reported on the importance attached to 'overdiagnosis' as a criterion in a trial of an MCDA-based decision aid for prostate cancer screening. This absence contrasted with the frequent mention of their possibility, or indeed likelihood, in decision support tools (Option Grids, Healthwise decision aids), HTAs, and stated preference studies. However, few of these quantified the extent of the 'needless' or 'unnecessary' 'over' phenomena.
Conclusions: Few of those introducing, surveying or advocating the use of MCDA in healthcare have given overdetection, overdiagnosis or overtreatment explicit attention. Why might this be? The hypothesis explored here is that once the key requirements for specification of criteria in an MCDA are met, especially non-redundancy, there is little need for their inclusion. The proper modelling of the treatment pathway for each option in an MCDA incorporates the effect of both 'over' and 'under' in the performance rates for all specified criteria, such as mortality, morbidity, quality of life, and test/treatment burdens. Establishing how the 'over' and 'under' phenomena should be incorporated in an individualised MCDA might benefit all interested in dealing more effectively with them in person-centred practice. This necessarily involves establishing the optimal trade-off between them for the individual.

0218 - **Overdiagnosis and the political economy of diagnostic innovation - setting a new research agenda**

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Objectives: The aim of this workshop is to develop a network of researchers interested in understanding the political economy of diagnostic innovation and the social, political and economic drivers of overdiagnosis. There is now an

extensive body of interdisciplinary research on the political economy of *pharmaceutical* innovation and the role of drug companies as corporate "engines of medicalisation". This burgeoning field of scholarship encompasses such topics as the globalisation and corporatisation of clinical research, the impact of regulation on innovation, corporate marketing practices, the costs of R&D, declines in productivity and the impact of biotechnology on R&D. Yet we know relatively little about the political economy of diagnostic innovation, the role of diagnostics firms in bringing new technologies into routine clinical practice and their impact on the creation of new disease categories and the redefinition of the boundary between health and sickness. Further, such research promises new insight in debates about medical screening, which often centre on whether or not early detection is warranted, rather than how and why such capacities have become possible and available in the first instance. Outcomes will include development of research collaborations, and identification of potential contributors to a proposed special issue of Social Science & Medicine on this topic.
Method: This workshop will be of interest to all those interested in understanding the social, political and economic drivers of overdiagnosis. It will be of particular interest to those who wish to develop research collaborations or explore methodological challenges in this emerging field.

0242 - **Engaging Patients and Clinicians in Shared decison making process to mitigate unnecessary harm**
Violeta Rabrenovich, Ronald Loo
Kaiser Permanente, Oakland, USA
Objectives: With the evolution of new medical technologies, treatments, and care delivery models, both clinicians and patients frequently face the challenge of understanding and appropriately utilizing the complex scientific evidence in self-care or care delivery. Through dialogue clinicians and patients identify a patient's individual needs and preferences, and the patient frequently makes the final selection of the most appropriate care alternative. Shared decision making (SDM) is the process of describing in an unbiased way the benefits and risks of screening, diagnosis or treatment, and considering the patient's values and unique circumstances, thus enabling and empowering a patient to decide about their future course of care. Clinicians discuss the appropriateness of screening, diagnostic workup, and treatment, ultimately helping avoid harm associated with over-diagnosis or overtreatment. Kaiser Permanente's objective is to develop and implement evidence-based tools to facilitate the clinician-patient dialogue and successful engagement in the SDM process.
Methods: Kaiser Permanente (KP) is an integrated health care delivery system that provides care to over 10.5 million members in nine states and the District of Columbia. KP's clinical experts collaborated to identify and prioritize the key screenings and clinical conditions to develop evidence-based SDM tools (e.g., for prostate cancer, breast cancer, lung cancer). Each KP region appointed a Clinical Leader to oversee the clinical content development. We have engaged member marketing and communications to help design the tools to meet the linguistic and diversity needs of our patients. Patients were involved in the co-design of the actual SDM tools (e.g., booklet, SMD video). In addition, access to the tools for clinicians was improved through their integration with the electronic medical records, KP HealthConnect. Patients are able to access videos and booklets online by accessing the kp.org website. Periodically, KP regional experts and leaders meet to discuss the program design, share learnings from their work with patients and clinicians, and share examples of technical solutions that improve workflows and data collection. The group collaborates closely with the organizational development and research department to ensure that appropriate research questions are addressed, and research findings are translated into clinical practice.
Results: Following the implementation of multiple SDM tools, our clinical leaders were interested in conducting an evaluation by designing focus groups of patients and by surveying physicians. The main objective of this evaluation was to gather qualitative input from patients regarding changes in the level of understanding of the complexities of screening, their diagnosis, and the treatment options following review of the SDM tool. The physician survey focused on assessing individual physicians' perception about an impact of the SDM process on patients' understanding of both the benefits and harms associated with a specific clinical service. The results of the evaluation are shared internally within organization. Our learning from an evaluation of prostate cancer treatment SMD tools, resulted in additional content development for Spanish speaking patients, and work to develop content for that addresses complications such as impotence and incontinence. In addition, our learning was leveraged to assist patients in selection of the most appropriate breast reconstruction option.
Conclusions: An appropriately designed and implemented shared decision making program can improve patients' understanding about the benefits vs. the harms associated with screening, diagnosis or treatment. As such, SDM may help mitigate the unnecessary harms of over-diagnosis, over treatment, and mistreatment.

0243 - On Successfully Implementing Medical Guidelines for Breast Cancer Screening: A Role for Agent-Based Simulation Analysis in Mitigating Overdiagnosis
Luciana Garbayo[1], James Stahl[2]
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Abstract: This study presents a methodological strategy for contributing to the successful implementation of breast cancer screening with minimal overdiagnosis based on the development of agent-based simulation models, with a special focus on health communication.
Objectives: This study aims at simulating breast cancer screening medical guideline implementation health communication strategies.
Method: Agent-based simulation of health communication is used under a modified D.E.E.P framework (Stahl, 2008) to predict uncertainty effects in patients' decision-making strategies regarding breast cancer-screening and breast cancer prevention in clinical setting.
Results: Preliminary agent-based simulation results point to a learning-curve reduction of agent uncertainty regarding

the implementation of medical guidelines for breast cancer screening overdiagnosis based on the projected simulation and revision of distributed results in communication models in clinical setting and in the noise reduction of competing guidelines.
Conclusions: Agent-based simulation may play a relevant role for policy-makers and implementers in predicting and reducing confusion in the information flow for patients contemplating the decision of doing a breast cancer screening, while avoiding overdiagnosis, and thereby contribute to reduce harm and strengthen patient autonomy and participation in the medical decision-making process.

0073 - ENFERMEDAD POLIQUÍSTICA RENAL AUTOSÓMICA DOMINANTE EN NINÕS: OBREDIAGNOSTICADA?
Joana Fernandes[1], Ana Carina Sá[2], Sara Évora[3], João Girão[4], André Jordão[5]
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Abstract : La enfermedad poliquistica renal autosómica dominante (ADPKD -en inglés-) es la enfermedad hereditaria renal más común, aunque considerada una patologia de personas mayores, no hay que olvidar que su formación y evolución se inicia en la edad pediátrica. En los niños esta enfermedad es muchas veces un hallazgo cuando se hace un examen de imagen por otro motivo, una vez que lo normal es que en edades tempranas no presenten sintomas y que la función renal se mantenga estable hasta la cuarta década de vida
Objectives : Evaluar cual la mejor orientación en los cuidados de salud primarios de la enfermedad poliquistica renal autosómica dominante en los niños y cuál su impacto en los recursos económicos y psicosociales.
Method : Búsqueda de articulos publicados en MedLine/PubMED, Uptodate y KDIGO con las palabras clave *autosomal dominant polycystic kidney disease, ADPKD in children y overdiagnosis.*
Results : La resonancia magnética y el TAC, presentan una gran sensibilidad en la detección de los quistos en niños asintomáticos con familiares enfermos, sin embargo, el costo elevado, la radiación y la menor disponibilidad hacen que la ecografia sea el examen de primera linea para el diagnóstico. En niños y jóvenes, la realización de exámenes para la detección y prevención de la ADPKD es polémico y está asociada a muchas cuestiones éticas, por lo que aun no hay protocolos de como hacerlo. Sin embargo, es conocido que en la edad pediátrica presentan más complicaciones, sobretodo cardiovasculares, por lo que un diagnóstico temprano es necesario.
Conclusions : El papel de los cuidados de salud primarios es hacer la vigilancia de los sintomas observadas en la ADPKD pediátrica, monitorizar las complicaciones y referenciar a cuidados hospitalarios en el caso de enfermedad sintomática. Cuanto a la intervención precoz, la monitorización es aún polémica y todavia no es seguro que los tratamientos actuales impidan la evolución hasta la enfermedad crónica renal. Concluimos entonces que no hay ventaja hacer la monitorización de un niño asintomático hasta los 18 años, aunque con familiares con la enfermedad, por motivos psicosociales y económicos.

0075 - Cómo influye el conocimiento sobre los beneficios y riesgos relacionados con el programa de cribado en la decisión de participar: Enfoque deliberativo
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Abstract: Cada vez hay más pruebas de que el cribado mamográfico puede constituir un low-value service donde el grado de beneficio no supera a sus daños y costes. La situación actual es de controversia en la balanza entre riesgos y beneficios. Hemos diseñado, llevado a cabo y analizado un estudio de democracia deliberativa tipo jurado popular en el que un grupo de ciudadanos son elegidos al azar para deliberar sobre un tema en particular. Durante tres dias son expuestos a información y a opiniones sobre dicho tema provenientes de testigos que han sido seleccionados por su experiencia. Con un moderador capacitado para garantizar un procedimiento justo, los miembros del jurado tienen la oportunidad de interrogar a los testigos y, después de un proceso de deliberación, toman una decisión y formulan recomendaciones para las autoridades responsables de la organización de este tipo de procesos.
Objectives : Hemos diseñado este estudio para comprobar si esta metodologia es aplicable en la población andaluza y conocer si las mujeres, cuando están bien informadas, son capaces de responder a la pregunta de si el sistema sanitario público andaluz (SSPA) debe ofrecer mamografia de cribado a mujeres entre 50 y 69 años. Se conocerán también las razones de la decisión y las recomendaciones de las participantes para las autoridades politicas.
Method : Una muestra de 70 mujeres entre 50 y 69 años fue seleccionada de los listados de invitación del Programa de Cribado. Reunidas el primer dia, el moderador expuso una presentación que pretendia capacitarlas para comprender las exposiciones a favor y en contra presentadas el segundo dia por las expertas. El tercer dia el jurado deliberó, votó y registró las razones de su decisión asi como recomendaciones para los politicos.
Results : De las 70 mujeres que se seleccionaron al azar de los listados de participantes en el programa de cribado (PC), 52 fueron contactadas con éxito (74%), aceptando participar en el estudio 20 (38%). Finalmente, solo 13 mujeres acuden a las tres reuniones planificadas y votaron con un resultado de 11 votos a favor y 2 en contra de que el SSPA ofrezca mamografias de cribado a las mujeres entre 50 y 69 años. Los votos en contra correspondieron a mujeres que, previamente a recibir la información, estaban a favor del programa de cribado.
Conclusions : Las mujeres españolas tienden a sobreestimar los beneficios del PC y desconocen el impacto de sufrir efectos adversos como el sobrediagnóstico o los falsos positivos.

Los jurados ciudadanos han sido propuestos como instrumento para suscitar un posicionamiento poblacional en cuestiones de salud sobre las que hay controversia o incertidumbre, así como para la toma de decisiones políticas. Las ayudas para la toma de decisiones en el PC podrían conducir potencialmente a una decisión informada de las participantes, incluso cambiando la percepción de las mismas sobre el PC tras proporcionar la suficiente información.

0094 - A PATIENT-CENTERED PRESCRIPTION MODEL ASSESSING THE APPROPRITENESS OF CHRONIC DRUG THERAPY IN OLDER PATIENTS

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Abstract: Polypharmacy is often associated with overdiagnosis and over-prescription, and consequently with poor quality of prescribing. In this context, we propose the use of a model which combines both the clinical judgment and the scientific evidence in a pragmatic and systematic approach. The main objective is to assess drug regimens of older persons with the goal of achieving the best-tailored pharmacotherapy according to care goals of each patient. Care goals are established through the application of the Patient-Centered Prescription (PCP) Model, which is based on a shared decision-making process including patient, physicians and a clinical pharmacist. Each patient's pharmacotherapeutic plan should be assessed through application of the PCP Model, a systematic three-step process carried out by geriatricians and a clinical pharmacist:

Step 1 - Patient Centered Evaluation:

The main objective of this step is to determine the global care goal of each patient: survival, improving or maintaining function or symptomatic control. A holistic review of the patient, by means of a Comprehensive Geriatric Assessment (CGA), determines his care goal.

Professionals and patients establish a cooperative process to identify needs and agree on objectives. This first evaluation sets the stage for the second and third steps.

Step 2 - Diagnosis Centered Evaluation:

Health problems of the patient along with the drugs prescribed for each diagnosis are listed. Drug purpose should fit with the main care goal previously agreed upon with the patient. Special attention is paid to prevalent conditions (Diabetes Mellitus, arterial hypertension, dyslipidemia, Pain and EOL situation).

Step 3 - Medication centered assessment:

Based on the goals of care derived from step 1, the purpose of step 3 is to assess the indication of high risk medications (NSAID, antiplatelets, anticoagulants, hypoglycemics, insulin, digoxin and opioids) or high risk combinations

Proposed therapeutic plan

At the end of the process, an individualized therapeutic plan is proposed. Drug therapy regimens were modified in 93.44% (89.05-97.84) of cases with inappropriate prescription (see abstract detailing results of the application PCP model in older patients: A patient-centered prescription model assessing the appropriteness of chronic drug therapy in older patients). The PCP model is a framework that helps to identify frail patients on potentially inappropriate prescriptions by means of a holistic review of each patient's situation. This methodology may be a suitable approach to individualize a pharmacotherapeutic plan in a shared decision making process between patient, physician and clinical pharmacist.

0155 - Breast cancer mortality after a diagnosis of ductal carcinoma in situ from 1985 to 2013 in Girona province.

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Abstract: Ductal carcinoma in situ (DCIS) accounts for approximately 20% of mammographically detected breast cancer. The incidence rates rises every year probably due to breast cancer screening programs (PDPCM). Many cases of DCIS might warrant less aggressive treatment but it is not clear what factors predict better outcome. The aim of our study is to estimate the mortality from breast cancer following the diagnosis of DCIS and to establish whether it is influenced by PDPCM and treatment. That is an observational study of woman who received the diagnosis of DCIS from 1985 to 2013 in the Girona Cancer Registry. Clinical and pathologic features, second primary breast cancer and treatment are collected. The overall risk of breast cancer-specific mortality was 2%. Risk factors for death from breast cancer following a DCIS diagnosis will be presented.

Objectives: To estimate the mortality from breast cancer following the diagnosis of DCIS and to establish whether it is influenced by breast cancer screening program (PDPCM) and treatment received.

Method: Observational study of women who received the diagnosis of DCIS from 1985 to 2013 in the Girona Cancer Registry. Age at diagnosis, pathologic features, second primary breast cancer and type of treatment are collected. Their risk of dying from breast cancer is compared with these women in general population. Cox proportional hazard ratio is performed to estimate the hazard ratio (HR) for death from DCIS by age and clinical features and treatment.

Results: From 1985 to 2013, 788 received a diagnosis of DCIS in the Epidemiology Unit and Cancer Registry of Girona. The mean age at diagnosis was 55.78 years (±SD 11.5). During this time, 91 patients died. The most common histology was ductal carcinoma (82,6%), including 6.3% comedocarcinomas. The overall risk of breast cancer-specific mortality was 2% (n=16). From 1999 to 2013, when the PDPCM started, 33% of cases of DCIS were diagnosis by the screening program. Incidence increased by 20.1% (95% CI: 12,7-27,9%) per year until 1997 and thereafter the increment was 3,6%and no longer statistically significant (CI: -1,3% to 8,7%).
Conclusions: For ductal carcinoma in situ incidence rate rises every year.The overall risk of breast cancer-specific mortality was 2%. Risk factors for death from breast cancer following a DCIS diagnosis will be presented.

0184 - Dyslipidemia, statin use and lipid profile in epilepsy patients and general population: EPIVASMAR-REGICOR comparative study

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Objective: The recently published American College of Cardiology and American Heart Association guidelines for the treatment of dyslipidemia expand the indications for statin therapy to prevent cardiovascular disease and have raised some controversy about appropriate identification of at-risk patients. Nonetheless, all current guidelines highlight the importance of excluding secondary dyslipidemia during patient assessment. It has been described that patients with epilepsy (PWE) can present an altered lipid profile, considered as a side effect of antiepileptic drug (AED) treatment (a secondary dyslipidemia). There is a lack of information about the dyslipidemia diagnosis prevalence and the use of statins in this population. The aim of the present study was to describe serum lipid profile, dyslipidemia prevalence, and statin use in patients with epilepsy (PWE), compared to general population, and to analyze possible associations between any observed differences in dyslipidemia prevalence and statin treatment and use of any antiepileptic drug (AED).
Methods: We included 815 PWE from Hospital del Mar outpatient clinic and a random sample of 5,336 general population participants from the REGICOR study. Dyslipidemia prevalence, cholesterol concentrations (total, LDL- and HDL-c) and statin use were compared between the two cohorts. In a stratified analysis of PWE receiving AED monotherapy, we analyzed the association between lipid characteristics and enzyme-inducing AEDs(EIAEDs), valproic acid (VPA), and levetiracetam (LEV). A sensitivity analysis excluded PWE also taking statins.
Results: After adjusting for age and sex, PWE showed lower levels of total and LDL-c(125mg/dl vs 138 mg/dl, $p<0.01$) and higher levels of HDL-c (46.6mg/dl vs 42.1 mg/dl, $p<0.01$), compared to general population. PWE also had a higher prevalence of dyslipidemia (40.2% vs 34.6%, $p<0.01$) and a higher proportion were treated with statins (19% vs 12%, $p<0.01$). PWE receiving only EIAEDs had the highest prevalence of dyslipidemia (44.5%); those taking VPA or LEV showed lower total cholesterol levels, EIAEDs were associated with higher HDL-c,and VPA with lower LDLc,compared to general population ($p<0.01$). The EIAED group received significantly more statins ($p<0.05$).
Conclusion: PWE have higher prevalence of dyslipidemia and statin treatment than general population. They also have a better lipid profile,which could be explained by the higher proportion of lipid-lowering treatment, compared to general population. We cannot rule out an excess treatment with statins in PWE taking EIADs or VPA related to secondary dyslipidemia diagnosis.

0219 - THE EFFECTIVINESS OF A STRATEGY TO DEPRESCRIBE LIPID LOWERING TREATMENT IN A LOW/MIDDLE RISK PATIENT: A RANDOMIZED CLINICAL TRIAL

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Background: The risk to have a first cardiovascular event is related to many factors (age, sex, weight, smoking, cholesterol levels, etc). However, it is frequent to see people diagnosed as a high risk based on isolated factors, such as the total cholesterol levels. This overdiagnosis results in overuse of lipid-lowering therapies. According to the guidelines of the Catalan health Institute (ICS), in primary prevention, the prescription of lipid-lowering is adequate when the REGICOR score of cardiovascular risk index is ≥10 % (high or very high risk) or when LDL cholesterol ≤240 mg/dl.
Objectives: To study the effectiveness of electronic feedback for general practitioners (GPs) on deprescribing lipid-lowering therapies in a population at low/middle risk of having a first cardiovascular
Method: *Design:* Non-blinded cluster randomized clinical trial. *Population:* Patients registered in 279 primary care centers in Catalonia (Spain), aged 35 to 74 years, with no history of previous cardiovascular disease, which started lipid-lowering therapies the previous year of the intervention. *The Intervention was* performed between 01/09/2012 and 31/09/2013. General Practitioners (GPs) in the intervention arm received an electronic feedback about inadequate patient lipid-lowering prescriptions, defined as: 1. LDL cholesterol ≤240 mg/dl, 2. cardiovascular risk index ≤10% (estimated using the Spanish calibration of Framingham tool), or 3. No information about the cardiovascular risk index. *Main outcomes:* Withdrawal of inadequate lipid-lowering treatments prescribed in the previous year. *Statistical analysis* aggregated at health professional level was performed.

Results: 91764 people from 35 to 74 years old started lipid-lowering therapies in primary prevention prior to the intervention. In 89.1% (81733/91764) of the cases, the prescription was inadequate (69.9% because the cardiovascular risk was equal or under 10% and 30.1% because they did not have the risk calculated). The intervention group deprescribed 42% of these inadequate lipid-lowering therapies compared to the control arm 39% (p=0.001). The risk ratio of withdrawal of inadequate therapies for the intervention group was 1.10 (CI%95: 1.07-1.14). **Conclusions:** Infraregsitration, overdiagnosis of cardiovascular risk and the consequent overprescribing of lipid-lowering is common in primary care settings. A simple intervention with electronic feedback can helps GPs to reduce inadequate lipid-lowering therapies.

0221 - Sobrediagnóstico asociado a los programas poblacionales de cribado de cáncer en la Comunidad Autónoma del País Vasco

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Abstract : El sobrediagnóstico asociado al cribado de cáncer de mama se estima entre un 6% y un 20%. Por cada 1000 mujeres cribadas se sobrediagnostican entre 4 y 15 casos. No hay evidencia de sobrediagnóstico atribuible al cribado de cáncer de cuello uterino ni al de cáncer colorrectal. En la CAPV hay programas poblacionales de cribado de cáncer de mama para mujeres entre 50 y 69 años y de cáncer colorrectal para hombres y mujeres entre 50 y 69 años.
Objectives : Describir los patrones de realización de cribado frente a cáncer de mama, cuello uterino y colorrectal en personas de la Comunidad Autónoma Vasca mayores de 15 años y estimar el sobrediagnóstico asociado al cribado.
Method : Se examina la tasa de realización de pruebas de cribado para los cánceres mencionados según la autodeclaración recogida en la encuesta de salud de la CAPV los años 2002, 2007 y 2013. Mediante un muestreo aleatorio multietápico se seleccionan 5000 viviendas para la realización de la encuesta de salud. Se aplica un cuestionario familiar a todos sus miembros y de cada unidad familiar 2/3 de los sujetos mayores de 15 años completan además el cuestionario individual. Se realiza un análisis descriptivo de la salud percibida y de los procedimientos preventivos de cáncer realizados.
Results : La tasa de respuesta de la encuesta de salud es del 75-85%. En 2002 contestan la encuesta familiar e individual 8398 sujetos, 7410 en 2007 y 8036 en 2013.
El 68.4% de las mujeres declara haberse hecho una mamografía en los 2años anteriores a la encuesta (64.2% en 2002; 68.7% en 2007 y 72.1% en 2013) y un 47.3% una citología en los 3 últimos años (33.0% en 2002; 38.4% en 2007 y 71.6% en 2013). En 2013 el 55.9% de los sujetos encuestados dice haberse realizado un test de sangre oculta en heces.
Conclusions : En una población de unas 75.000 mujeres susceptibles de cribado, con las tasas declaradas de realización, se estarían evitando unas 30 muertes anuales por cáncer de mama, con la contrapartida de 15 casos sobrediagnosticados , según la estimación más conservadora. Debería explorarse un cribado con criterios de selección más restrictivos para evitar este efecto indeseable. El incremento en los sujetos que se realizan pruebas de detección precoz de cancer de mama y colorrectal, están justificadas desde el punto de vista de la salud pública y deberían seguir promoviéndose con los criterios actuales.

0224 - Prevalence of attention deficit/hyperactivity disorder in children and influence of relative age and socioeconomic status on diagnosis and treatment.

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Abstract: ADHD is revealed as a phenomenon of variable and increasing prevalence, with no clear aetiology, without consistent biomarkers and questionable assumptions in favour of organic origin. Considering the neurobiological factor as the main explanation leads the medicalization of patients as the main response. Systematic referral to specific units created ad hoc, different criteria (DSM IV vs. ICD 10), social pressure to start treatment, increased demand initiated from school are causes of increased diagnoses. Recent studies reported the date of birth (relative age effect) was a predictor of diagnosis and treatment of ADHD. Inadequate evaluation and societal pressure for treatment may cause overdiagnosis.
Objectives: To determine the prevalence of ADHD in children of age 15 or less years old and drug prescriptions Determine whether there is an association between prevalence by health centres and population socioeconomic status. Determine if there is an effect of children's relative age within a grade on the treatment and diagnosis of ADHD.
Method: We conducted a cross-sectional study involving 7818 children who were less than 15 years of age in a urban Primary Care Management Unit (UGAP) compromising 3 primary health care centres belonging to Institut Català de la Salut in the north of Sabadell (Spain) at February, 1, 2016. Administrative and electronic health records were used to get all the information. We extracted the proportion of patients in whom the diagnosis of ADHD was (F90, F90.0 , F90.1 , F90.8 , F90.9 / ICD- 10 codes) in the list of active diagnostics in medical records. For our analysis of prescribed medications, we included methylphenidate, dexamphetamine, and atomoxetine. In our town, the diagnosis is mainly made at a hospital unit dedicated to the diagnosis, treatment and monitoring of this disorder.
Results: 603 individuals with ADHD were evaluated, 70% of whom were boys. The average age of boys was 11.09 years, girls 11.27 .The overall prevalence of ADHD registered was 7.7% (5.4% in boys and 2.3% among girls). The prevalences for each centre were: centre (A) 9.8%; centre (B) 7.3%; centre (C) 5.2%. The higher the socioeconomic

deprivation, the higher the prevalence of ADHD. 22.2% receive treatment being the drug methylphenidate the most prescribed. Children born in December are diagnosed and treated in greater proportion than those born in January. **Conclusions**: According to literature, prevalence of diagnosis for ADHD remains considerably high. We observe a relative-age effect and a socioeconomic status effect in the diagnosis and treatment of ADHD in children under 15 years.

0227 - Atención primaria y cirugía de la próstata en el sur de Brasil

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Abstract: La Atención Primaria (APS) tiene función protectora del paciente en contra de intervenciones innecesarias o innecesariamente dañinas, lo que parece ser el caso del rastreo poblacional del cáncer de próstata. Se puede esperar así una menor ocurrencia de dichas intervenciones donde la APS presente mejores resultados. Fue objetivo del estudio probar la hipótesis (nula) de no-asociación entre un indicador de efectividad de la APS, las *Condiciones Sensibles a la Atención Primaria/Ambulatory Care Sensitive Conditions -- CSAP* y las hospitalizaciones para procedimientos quirúrgicos de la próstata con diagnóstico no-maligno en los municipios del estado de Santa Catarina, sur de Brasil, 2012. Población: hombres de 40 años o más de edad usuarios del *Sistema Único de Saúde*, residentes en el Estado de Santa Catarina, Brasil. Unidad de análisis: municipio. Fuentes de datos: bases de datos de las hospitalizaciones en el *Sistema Único de Saúde* de Brasil (*BD-SIH/SUS*), y estimativas oficiales de la población residente (DATASUS). Variables: dependiente: tasa de hospitalización para procedimientos quirúrgicos de la próstata con diagnóstico no maligno (CIE D07.5, D29.1, D40.0, N40); independientes: tasa estandardizada de hospitalización por CSAP, tamaño del municipio (dicotómica, corte en 50 mil habitantes), presencia de hospital en el municipio. Análisis: regresión binomial negativa. La tasa de hospitalización para procedimiento quirúrgico de la próstata con diagnóstico no maligno varió de zero a 116,3/1000 habitantes, con mediana en zero, P75 en 13,8 y P97,5 en 56,7. El 51,2% de los municipios no presentaron casos. El aumento en las hospitalizaciones por CSAP se corresponde con un aumento en 2,25*hab^{-5} ingresos para el suceso en estudio (AIC=806, p=0,01). El tamaño del municipio se asocia con p=0,08, mejora el modelo (AIC=805) y aumenta el efecto y la signicación estadística de las CSAP (2,66*hab^{-5}; p=0,004). La presencia de hospital en el municipio no contribuye con el modelo. En el Estado de Santa Catarina, sur de Brasil, la efectividad de la Atención Primaria, se asocia inversamente a los procedimentos quirúrgicos de la próstata posiblemente innecesarios. Aunque el tamaño del municipio no se asocie con p<0,05, se debe considerar la variable en el modelo, para mayor estabilidad y ajuste. La no asociación con la presencia de hospital en el municipio puede significar equidad en el acceso a la hospitalización. El modelo linear es insuficiente para estimar el efecto, y un modelo de Poisson sin corrección es insuficiente para estimar la variabilidad estocástica. **Objectives :** Probar la hipótesis (nula) de no-asociación entre un indicador de efectividad de la APS, las *Condiciones Sensibles a la Atención Primaria/Ambulatory Care Sensitive Conditions -- CSAP* y las hospitalizaciones para procedimientos quirúrgicos de la próstata con diagnóstico no-maligno en los municipios del estado de Santa Catarina, sur de Brasil, 2012.

Method : Población: hombres adultos usuarios del *Sistema Único de Saúde*, residentes en el Estado de Santa Catarina, Brasil. Unidad de análisis: municipio. Fuentes de datos: bases de datos de las hospitalizaciones en el *Sistema Único de Saúde* de Brasil (*BD-SIH/SUS*), y estimativas oficiales de la población residente (DATASUS). Variables: dependiente: tasa de hospitalización para procedimientos quirúrgicos de la próstata con diagnóstico no maligno (CIE D07.5, D29.1, D40.0, N40); independientes: tasa estandardizada de hospitalización por CSAP, tamaño del municipio (dicotómica, corte en 50 mil habitantes), presencia de hospital en el municipio. Análisis: regresión binomial negativa.

Results : La tasa de hospitalización para procedimiento quirúrgico de la próstata con diagnóstico no maligno varió de zero a 116,3/100.000 habitantes, con mediana en zero, P75 en 13,8 y P97,5 en 56,7. El 51,2% de los municipios no presentaron casos. El aumento en las hospitalizaciones por CSAP se corresponde con un aumento en 2,25*hab^{-5} ingresos para el suceso en estudio (AIC=806, p=0,01). El tamaño del municipio se asocia con p=0,08, mejora el modelo (AIC=805) y aumenta el efecto y la signicación estadística de las CSAP (2,66*hab^{-5}; p=0,004). La presencia de hospital en el municipio no contribuye con el modelo.

Conclusions : En el Estado de Santa Catarina, sur de Brasil, la efectividad de la Atención Primaria, se asocia inversamente a los procedimentos quirúrgicos de la próstata posiblemente innecesarios. Aunque el tamaño del municipio no se asocie con p<0,05, se debe considerar la variable en el modelo, para mayor estabilidad y ajuste. La no asociación con la presencia de hospital en el municipio puede significar equidad en el acceso a la hospitalización. El modelo linear es insuficiente para estimar el efecto, y un modelo de Poisson sin corrección es insuficiente para estimar la variabilidad estocástica.

0240 - Encuesta para conocer el grado de acuerdo de los médicos con las recomendaciones locales para reducir prácticas de poco valor clínico, en un hospital de tercer nivel

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Objectives: Conocer el grado de acuerdo de los médicos con las recomendaciones para reducir prácticas de poco valor clínico que han generado sociedades científicas a nivel de Cataluña y España.

Method : Se llevó a cabo una encuesta electrónica entre los médicos y residentes del Hospital Universitario Vall d'Hebron de Barcelona (n=655), enviada a través del correo electrónico, durante los meses de enero-marzo de 2016. La encuesta incluyó todas las recomendaciones generadas en el marco de las iniciativas Essencial y Compromiso por la calidad de las sociedades científicas españolas, las cuales son generadas por profesionales de diversas sociedades científicas. Se incluyeron algunas recomendaciones de otras iniciativas de otros países. Las preguntas estaban dirigidas a conocer si estaban de acuerdo o no con la recomendación, los motivos de desacuerdo, en qué porcentaje consideraban que cada recomendación se seguía en nuestro hospital y si consideraban útil la recomendación.
Results : La tasa de respuesta fue mayor entre los médicos especialistas que entre los residentes. Entre los médicos especialistas la tasa de respuesta fue 25%. Entre las recomendaciones relacionadas con pruebas diagnósticas (n=87), el grado de acuerdo fue en general favorable (82%), 81% de las recomendaciones fue considerada útil o muy útil. 67 médicos (40%) de 20 especialidades consideraron que 45 recomendaciones (52%) tenían un grado de cumplimiento inferior al 50%. Se identificaron algunos motivos por los cuales los médicos no están de acuerdo con las recomendaciones.
Conclusions : La generación de recomendaciones para reducir el uso de pruebas diagnósticas en situaciones en que pueden tener poco valor clínico es un punto de partida para reducir el sobrediagnóstico. Sin embargo, lo más importante es la implementación de las mismas. Este estudio nos ha permitido identificar aquellas recomendaciones en que los profesionales están de acuerdo pero consideran que existe poca adherencia. Así como aquellas en las que los médicos no están de acuerdo y los motivos. A partir de estos resultados, podremos generar estrategias para reducir el uso de pruebas diagnósticas en situaciones en las que tendrían poco valor clínico y reducir la posibilidad de sobrediagnóstico.

0053 - The Balint Movement: Historical Solutions to Prevent Overdiagnosis

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Abstract: In 1957 the psychiatrist Michael Balint published *The Doctor, his Patient and the Illness.* This contributed to a revolution in the concepts of illness and medical education (Marinker). Howie described the development of three models of General Practice: the biomedical (traditional), the humanist (psycho-social) and the public health/preventative models. The significance of Balint's humanist model has been neglected. Balint explored doctor-patient communication and that between doctors. Of particular relevance to this conference, Balint addressed the over diagnosis of somatic disease and the failure to diagnose and treat psychological problems. A new approach was conceptualized with deeper "levels of diagnosis" to avoid the "collusion of anonymity" between doctors. By this he meant that overall responsibility for patient care could be abrogated by the individual clinicians who encounter the patient, with each feeling they had fulfilled their duty, but leaving the patient with their original symptoms and deep anxiety. He encouraged primary care doctors to take control of their patient's management. Where Balint's work is recognized in the literature, it is usually attributed solely to one man, rather than recognizing the major contribution made by the other members of the group. His wife, Enid Balint, was a psychoanalyst who had contributed to the development of social work. The many GPs, psychiatrists and some gynaecologists who made up the early Balint groups had varied and interesting backgrounds. The movement crossed disciplinary boundaries and was the richer for doing so. It was groups, not one individual that shaped the theories, published over twenty books and challenged the received wisdom. This work addresses the psycho-social and historical aspects of Overdiagnosis. By looking back to a movement that achieved fundamental change to medical thinking and education, we can learn approaches that will help tackle Overdiagnosis. It suggests solutions lie not just in disseminating expert opinion downwards, but in local, small scale, practical changes, multidisciplinary group work and improved communication. It suggests we need to reach out to other academic disciplines: History, Cultural Studies and Media Studies and Information Technology. **Objectives:** 1. To explain the work and relevance of the Balint movement; 2. To discuss practical solutions to Preventing Overdiagnosis arising from the Balint movement; 3. To analyze the process of changing medical beliefs and education with reference to Balint as a case study; 4. To extrapolate ideas to the present day and how the Preventing Overdiagnosis movement might involve other academic disciplines to challenge prevailing medical and public belief and practice.
Method: Oral presentation of original research Q&A: the relevance of historical method, evidence and its application with reference to this work. Small group discussions dividing up issues of doctor - patient communication, Dr-Dr communication, medical discourse and the limits to imagination, the involvement of other academic disciplines and top down/bottom up dissemination of ideas. Plenary session to share findings and make recommendations
This seminar should be of interest to anyone attending the conference, as it is focussed on solutions, not just describing the problem. It is of particular relevance to those involved in medical education, primary care, mental health and health care management.

0097 - Drivers for low-value practices in primary care setting: a qualitative study.

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Objectives: Low-value practices in primary care (PC) are very frequent in our context. In Catalonia, as part of the implementation of the Essencial project which promotes actions toward avoiding overdiagnosis and overtreatment, has begun a pilot experience in the PC care sector promoting changes in clinical practice toward reducing unnecessary

care. Before the implementation phase, qualitative approach was used to explore which are the drivers for low-value clinical practices in PC and to identify the barriers for uptake of recommendations to avoid them.
Method: Qualitative study with a phenomenological approach using focus groups was conducted in January 2015. The study was addressed to healthcare professionals from primary care teams (PCT). A representative sample included 12 professionals varying by gender, profession and workplace in different provinces in Catalonia. They were leaders in their PCT and they were motivated and interested in the Essencial Project. The discussion guide included the following topics: identification of drivers of low-value practices (individual, organizational and external level). Data analysis was supported by the computer software Atlas.ti and developed according to the framework analysis perspective.
Results: 12 PC health professionals participated: 7 were women (58.3%), 10 general practitioners, 1 paediatrician and 1 nurse, from PCTs in different regional communities. Professionals identified five groups of barriers: 1) practitioners' behaviour (such as lack of knowledge, disagreement among team members or clinical inertia), 2) physician-patient relationship (mainly confidence and trust), 3) lack of integrated pathways between hospital and PC settings (proximity between PCT and hospital, care continuity of processes or alliances), 4) industry pressure and 5) external factors (for ex. insufficient visiting time) and lack of resources (equipments).
Conclusions: This is the first study exploring the barriers for implementation in our context. This exploration allowed to identify barriers at micro, meso and macro levels. These findings may help in fine-tuning the strategy for implementing the recommendations aiming at low-value practices avoidance. It should be highlighted that the strategy is focused mainly on meso and macro levels than on individuals. Therefore, not only healthcare professionals should be involved in its implementation but also the decision makers.

0105 - Russia's experience with overdiagnosis during 'dispanserization'
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Objectives: Since Soviet time, Russian health care system is obliged by law to be based on prevention. 'Dispanserization' is the system of early diagnosis of diseases and health risk states, early treatment, and continuous observation of the people with diseases/conditions found. Proclaimed in 1950s, it was not fully developed in USSR. Since this time there were number of times the dispanserization was tried. During last 20 years the dispanserization was converted mostly to the multiphasic screening of different content. Since 2006 it is connected to some funding, and since 2012 it is directly paid from the compulsory health insurance fund.
Method: We used the official data of Russian Ministry of Health, data of State Committee of Statistics and The Russian Fertility and Mortality database for mortality.
Results: Due to early (1990s) efforts of 'children dispanserization', which was not supported by funding, we found the sharp increase in incidence of the anomalies of refraction. We found the increase in incidence of prostate cancer since 1990, before PSA testing was introduced (1996) and further unabating increase, accompanied with the very slow increase in the mortality ascribed to prostate cancer. Incidence of the cardiovascular diseases is increasing progressively through 2000-2015 with temporary increases in 2006 and 2013 - years of the new programs ordered. During this period mortality from cardiovascular diseases is slowly decreasing.
Conclusions: While health care system in Russia is under press of insufficient funding, even reducing during last three years, and when majority of patients with life-treating conditions do not have access to the modern health care, the multiphasic screening program 'dispanserization' produce additional thousands of patients increasing the demand for care.

0141 - Specialized health service in mental health care - allocation by patient's zip code?
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Background: Equal and correct access to health care is an organizing principle within health care in Norway. However, geographical differences in access to services have been shown to exist, and consumption of health care services seems unevenly distributed. This study examines distribution and variation among the local municipalities for outpatient treatment sessions within selected diagnostic groupings in adolescent and child psychiatry (CAPs) and in adult psychiatry in a rural county with 109 000 inhabitants in Norway (Sogn & Fjordane). We also looked at the correlation between the amount of referrals from family doctors and subsequent volumes of outpatient treatment. The study was conducted as part of the initiating and establishing of a Norwegian Atlas of Variation.
Method: Data were obtained from descriptive reports generated by the electronic patient record system for four-year period (2012-2015). For the 26 different municipalities in the county, we constructed age- and sex-adjusted rates for completed outpatient consultations and patient rates. Several important and common psychiatric diagnostic groups were examined. For CAP the following groups were examined: ADHD-conditions, anxiety disorders and conduct disorders. For adults the following diagnoses were examined: depressive disorders, psychotic disorders, bipolar disorders and personality disorders.
Results: The analysis shows that all diagnostic groups show marked variation in both patient rates and consultation rates among the different municipalities. Variation in consultation rates ranged from 0 to 3842 per 10,000 inhabitants in adult psychiatry, and from 0 to 4992 per 10,000 child inhabitants in CAPs. The correlation between referral rates and consultations rates related to all diagnosis types and referral rate in CAP was 0.72. When the patients were divided

into the three different geographical (institutional) regions of responsibility, the consultation rate varies from 3061 to 4958 between these regions.
Discussion: The marked geographical variability suggests that its inhabitants do not have equal access to specialized psychiatric health services. Relationship between the numbers of outpatient consultations and primary referrals indicates that different referral practices between the municipalities may be an important driver of the variation we observe in consultation rates. The descriptive uncontrolled design limits our ability to conclude strongly or normatively from particular results in this study. However, one valid conclusion is that variability in specialized mental health care services exists as a major concern. This warrants future well-designed interventions and studies to ensure the aim of equal and correct access to health care for psychiatric patients.

0152 - Practices of no net benefit
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Objectives: Research surrounding overdiagnosis is still in its infancy; without an encompassing and clear definition, policy makers, clinicians, researchers, and patients are left confused and disengaged. The aims of this workshop are:
1. Critically discuss the term 'overdiagnosis'
2. Invite debate on a new proposed term: practices of no net benefit
3. Refine the drivers and mechanisms of practices of no net benefit.

The envisioned outcomes are a group of stakeholders interested in moving forward to refine, publish and disseminate drivers and mechanisms practices of no net benefit.
Method
Currently, the identification and elimination of harmful practices is a significant focus of healthcare. With an understanding of the drivers and mechanisms of practices of no net benefit clinicians, researchers, patients and policy makers can intervene appropriately to mitigate these harmful practices.

0212 - Total cardiovascular risk assessment in humanitarian medical settings: implications and improvements for statin therapy in the prevention of cardiovascular diseases
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Objectives: We conducted a clinical audit of Médecins Sans Frontières (MSF) non-communicable disease mission for Syrian refugees in the Jordan. First, we sought to assess the concordance of clinical practice with MSF guidance based on the World Health Organisation's Package of Non-Communicable Disease Interventions for Primary Health Care in Low-Resource Settings. Second, to determine the diagnostic accuracy of laboratory-independent WHO/ISH CVD risk assessment relative to laboratory-dependent WHO/ISH CVD risk assessment with respect to need for statin therapy. Third, to quantify the degree of statin over- and under-use, and the degree to which this would change if laboratory-independent, rather than laboratory-dependent risk assessment, was used.
Method: We used routinely collected clinical data from an electronic database maintained by MSF. All patients 40 years or older were eligible for inclusion, in addition to adult (≥18) patients under 40 who smoked, were diabetic, had a history of CVD or diabetes in a first degree relative, or a high waist circumference. We calculated CVD risk scores for all patients and compared them to documented risk scores. Eligibility criteria for statin therapy were either previous history of CVD, age ≥40 and type two diabetes, total cholesterol over 8 mmol/L, or WHO/ISH risk ≥ 20%.
Results: The patient database contained 3,087 patients and 2,907 patients were eligible for inclusion—of which 23% (n=608) had a documented CVD risk score, but only 39% (n=237) were correct (K=0.178; p<0.05). The sensitivity and specificity for prescription of statins, relative to true eligibility for statin therapy, was 0.48 (95% CI 0.46, 0.51) and 0.84 (95% CI 0.81, 0.86), respectively. With respect to classification for need for statin therapy the sensitivity and specificity of the laboratory-independent assessment was 0.71 (95% CI 0.60, 0.80) and 0.99 (95% CI 0.99, 1.00), respectively, relative to laboratory-dependent WHO/ISH CVD risk assessment.
Conclusions: The poor documentation of risk scores may help explain discordant statin prescribing. Although laboratory-dependent WHO/ISH risk assessment is generally regarded as superior, relative to the current discordance of statin prescribing, switching to laboratory-independent WHO/ISH risk assessment would yield a net improvement in sensitivity and specificity. In natural frequencies, this increase in performance would result in 230 more patients prescribed statins per 1,000 who are eligible, and 150 fewer patients prescribed statins per 1,000 who are not eligible. The simplified workflow of the laboratory-independent process may improve adherence to guidance and therefore reduce over- and under-treatment.

0214 - Precison Medicine and Overdiagnosis – Friend or Foe?
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Abstract: The progress in basic biological ageing research as well as its clinical applications has the potential for successful intervention. While ageing itself is the strongest risk factor for development of chronic diseases as well as chronic diseases accelerate ageing the growing knowledge may give the opportunity for earlier effective prevention and better treatment. This possibilities create new questions and include the risk for overdiagnosis and overtreatment as this new developments are not fully understood yet and effective strategies for pre-empting and prediction, prevention and countermeasures must be tested biologically and clinically. Questions which must be addressed are: 1.

If aging is not a disease itself but a lifelong process there is the need for clear definitions to define who is at risk. 2. On the individual as well as on the societal level there is the need for discussion and consenting about what and when to do including well-balanced risk-benefit- ratios and cost-benefit calculations. 3. The development of deeper sequencing of states at risk and of pre- and sub-clinical diseases may lead to the situation that RCTs and systematic reviews become only one – besides others – solution for hypothesis testing in highly diverse persons.
In biological research the goal is to prolong health span including morbidity compression at the end of life instead of prolonging lifespan. The concept of biological precision medicine as a holistic strategy involves comprehensive patient-centred integrated care and multi-scale, multi-modal and multi- level systems approaches and will shift the current paradigm of 'diagnose and treat' to 'predict and pre-empt'. This include the risk of overdiagnosis and overtreatment in a manifold way und must be outweighed against the risk and burden, individual and societal costs. On the other side the promise of precision medicine include also a more targeted therapy which may reduce overdiagnosis and overtreatment as well as underdiagnosis and undertreatment as most of the non-communicable diseases have had long states of development before clinical manifestation become evident.
Objectives: The goal of the presentation is to adress and risks of precision medicine in the context of overdiagnosis and overtratment.
Method: Review and discussion.
Results: The concept of biological precision medicine will shift the current paradigm of 'diagnose and treat' to 'predict and pre-empt' which includes, espec. at the moment, the risk of increasing overdiagnosis and overtreatment, but offer new possibilities to increase healthspan in humans.
Conclusions: There is a need for critical discussion about healthcare delivery in the future including a new definition of disease beyond clinical manifestation and risk factors.

0238 - Stop fever phobia to reduce antibiotic prescribing in children and unnecessary GP consultations and pediatric admissions.
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Abstract: Parents lack confidence to care for their feverish child. The following two myths are (indirectly) maintained by health professionals:

1. that fevers can get too high and you die
2. that when the fever gets too high this can result in a febrile convulsion.

Reiterate to the parent that fevers cannot get too high and febrile convulsions, usually happen with a sudden rise in the temperature.
Explain the fever process. "Running a temperature is like running a distance": heart rate is up, the breathing is faster and the child is lethargic, lying on the sofa. As such the "laboured breathing" that parents notice, is due to the body exerting itself to raise its temperature. During this fever process the body is heating itself up from the head and chest into the hands and feet.
In summary:

1. Physiological fever temperatures cannot get too high
2. Febrile convulsion do not happen "when the temperature get too high" but in general come out of the blue: when there is a sudden rise from a normal body temperature
3. Running a temperature is like running a distance: the heart rate is up and the breathing is quicker and the child will be listless until the body has managed to heat itself up into the hands and into the feet, when the child perks up again and will be running around the house until, often 4pm in the afternoon the temp goes up again and often also 11 pm at night, when the parent wants to go to bed...
4. Keep checking for meningeal signs (sitting upright and looking down) and non-blanching rash (anywhere on the body) to rule out a dangerous underlying bacterial illness - in which case the parent dials 999
5. Review with GP if fever episodes happen over more than 5 days
6. Review with a urine sample if the temperature is constantly over 39 for 24 hours rather than an up and down pattern, to check for a urine infection.
7. Children under 6 months best seen by GP anyway when having a fever and children under 3 months to be seen by the pediatrician.
8. Paracetamol and Ibuprofen are painkillers and "read the NICE discharge advice leaflet: no need to treat the fever, use analgesics for pain control (earache, throat ache etc). don't use ibuprofen when the child might be a bit dehydrated as they might end up with kidney failure and needing dialysis due to Ibuprofen damaging the kidneys.

0014 - **Mis-diagnosis of lower airway obstructive diseases (asthma and COPD) and under-utilization of spirometry in primary setting.**
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Abstract: Spirometry is an easy, rapid, cheap and widely diffused diagnostic tool for assessing lung function and it is mandatory to make a correct diagnosis of lower airway obstructive diseases such as asthma and COPD. Scientific literature data shows that spirometry is under-utilized even in patients with suspect lower airway obstructive diseases.

Objectives: This abstract reports data collected through a no-profit organization ("Ricerca & Respiro ONLUS") the purpose of which is to facilitate the access to spirometry for symptomatic patients. Therefore, this can be considered a "real-life" study. The aims of the study are: 1) to analyze demographic, clinical and functional data of enrolled patients, putting this data in relation with the number and the frequency of spirometric measures done in the past; 2) to check the knowledge the patients have about their respiratory diseases and comparing it with a functional diagnosis made through the spirometric measures.
Method: All consecutive patients attending the spirometry lab of "Ricerca & Respiro ONLUS" in a 4 months period were enrolled into the study, were enquired by their demographic data and clinical history (in particular, data about the diagnosis received by their general practitioner, the type and frequency of symptoms, and the frequency of spirometric measures were recorded) and underwent to a spirometry plus a bronchodilator test with salbutamol 400 mcg. **Results:** 78/115 enrolled patients (67,8%) had a doctor-diagnosis of at least one lower airway obstructive diseases: 66 (57,4%) asthma, 32 (27,8%) COPD, and 2 (1,7%) bronchiectasis. Spirometry was previously done in 54 (47%) patients (on average 11,25 +/- 0,75 months before), 14,8% of whom received the advice to regularly assess spirometry. Patients with a doctor-diagnosed asthma have done at least one spirometry in the past in 61,2% of cases (significantly higher than in doctor-diagnosed COPD: 46,9%, p=0,008). 12/49 (24,5%) and 4/32 (12,5%) patients respectively with doctor-diagnosed asthma and COPD had typical pre- and post-bronchodilator spirometric patterns of the the doctor-diagnosed disease.
Conclusions: Spirometry is still under-utilized in primary care. Relying only on clinical presentation without assessing lung function lead to a great proportion of mis-diagnosis of asthma and COPD.

0153 - The first appraisal of Choosing Wisely recommendations showed disappointing results. Here are some good reasons
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Objectives: To understand the reasons why the population-based analysis of seven early recommendations[1] from the Choosing Wisely Campaign showed no net change, with the results equally distributed between two desired but minimal decrease, two minimal unintended increase, or null effects. What is not working?
It may be some ambiguous wording of the recommendation itself that allows to continue business as usual without feeling called into question[2].We think however that the main reason such poor results is the rewarding system of physicians in the USA, and almost everywhere, and in the financing system of the health care organizations. The physician's financial interests (and career, prestige, etc.) thrive when prescribing/dispensing services.
Method: In our opinion this happens because of

- fee-for-service (or equivalent) payments, to react to a disease's signs and symptoms, or to provide "preventive" services, to extend/anticipate/exaggerate its diagnosis;
- the requests of their health care providers, who are funded according to outputs, and not to comprehensive health outcomes), which translate into financial and career incentives;
- defensive medicine;
- Expectations/pressures of patients/clients, uneducated by the technological myths promoted by media, under pressure by the technologies producers and the doctors themselves.

The structural problem is that the health systems "pay for the disease": the market and the doctors adapt their behavior and "sell the disease", overdiagnosing/overtreating and medicalizing it even unconsciously.
Results: Paying for the disease puts the physicians and the whole medical care system in structural conflict of interests with health and wellbeing.[3] To dismiss low-value practices, health systems regulators should undertake two main actions. They should act much more boldly and issue clear-cut recommendations, mentioning the risks and adverse effects of many health technologies, for both the individual and the community, rather than simply claiming that "there is not sufficient evidence" to recommend/pay for them. This shy attitude justifies the accusation that "it's only a matter of cost", to save money, so discrediting the health authorities.
Conclusions: Even more important, governments should reform their health organizations' financing systems and the professionals' remuneration schemes, to align them to the patients' and community health (expressed as unequivocal outcomes, as longevity) rather than to their diseases. Coherently, fee-for-service incentives should be avoided, because they increase technological abuse and profitable services irrespective of their effectiveness, even despite sound recommendations.
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0131 - Identifying overutilization of diagnostics and the financial impact on patient pathway costs. Julie Konfortion, Ayodele Kazeem, Epaminondas Sourlas *Bupa, London, UK*

Objectives: Bupa is the largest health insurer in the UK and is committed to making high-quality healthcare affordable. In alignment Bupa Healthcare Analytics have created a predictive model which identifies variations in care management in medical and surgical specialties. The model predicts the expected total cost of a patient's care pathway. The total cost of care is both a reflection of the cost and frequency of interventions given within a defined time period. The aim is to determine the drivers of higher than expected cost in complex cardiac procedures and to identify overutilization which may result in unnecessary morbidity.
Method: We identified 44,124 cardiology-related patient pathways in claims data across four years.
Patient pathways were grouped by the most complex procedure that took place and the expected cost of the pathway was predicted using the multivariable regression linear model, adjusting for case-mix factors including age, sex and medical history. A total cost of care ratio was calculated by dividing the observed cost by the predicted expected cost determined by the model. For every specialist the cost for each procedure performed was calculated and compared to the average costs observed across the risk-adjusted peers who carried out the same pathway type.
Results: The most frequent complex procedures related to patient pathways were identified as cardiac catheterisation and angioplasty. We also observed great variation in the total cost of care of cardiology specialists carrying out these procedures with ratios ranging from less than 1 and up to 45 times higher than expected. The total cost of care was higher than expected in 51%, 2,352 out of 4,636, patient pathways relating to cardiac catheterisation and angioplasty. We estimate that diagnostic procedures, including pathology and electrocardiography, made up the largest proportion by frequency and cost contributing to the higher cost observed in these patient pathways.
Conclusions: By making appropriate risk-adjustment and peer comparisons we identified unexplained variations in cardiology care provision. The analysis suggests that diagnostics are one of the key drivers that contribute to the higher than expected total cost of care by cardiologists in the provision of cardiac catheterisation and angioplasty. This is either related to variation in the pricing for these procedures or frequency. Our preliminary finding supports a relationship between cost and utilization of diagnostics in cardiology. This will be further explored to determine the extent to which diagnostics are overcharged and/or overutilized and the impact on outcomes and patient safety.

0174 - Integrating genomics into screening programme to reduce overdiagnosis
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Objectives: Screening for prostate cancer is a double-edged sword. Abandoning screening could prevent the harms of screening but at a cost of failing to identify the subset of men with prostate cancer that would benefit from early diagnosis and treatment. The harms of greatest concern are overdiagnosis and treatment of overdiagnosed cancers. An overdiagnosed cancer is the one that would not have presented symptomatically or clinically in a person's lifetime in the absence of screening. A personalised or risk-stratified screening promises to improve the efficiency of the screening programme. Genetic profiling could be used for risk-stratification. Then the screening test, PSA, would be offered only to strata of men above a certain risk threshold. The question remains whether a personalised screening strategy could reduce overdiagnosis.
Method: Two studies in prostate cancer have examined whether and how overdiagnosis varies by genetic risk profile. Polygenic risk score was calculated based on the known prostate cancer susceptibility genetic variants. For each polygenic risk group, the probabilities of overdiagnosis were derived by comparing the observed to expected number of prostate cancers.
Results: Overdiagnosis varied inversely with an individual's polygenic risk. Targeting screening to men at higher risk could reduce overdiagnosis. Targeting screening to men with polygenic risk above the average population risk could reduce screening episodes by half, reduce the proportion of overdiagnosed cancers by two-fifths, but at a cost of failing to identify one-fifth of non-overdiagnosed cancers in men at lower than average risk.
Conclusions: Integration of genetic profiling into screening programme could reduce overdiagnosis and improve the benefit-harm trade-off of screening.